Chapter 6 Results using OCA Criteria

Utilizing the conceptual framework and the methodology explained respectively in Chapters 4 and 5, this chapter delivers the findings upon accomplishing the objectives using OCA criteria, toward addressing the research questions highlighted in Table 6.1. The second question involves the Maastricht criteria and the findings will be discussed in the next chapter, Chapter 7. The final chapter, Chapter 8 will explain how the research questions would have been satisfied by the results.

The organization of this chapter is depicted in Figure 6.1. The chapter begins with preliminary analysis of the data in Section 6.1. The discussion continues with the hierarchical cluster analysis (HCM) findings in Section 6.2, the fuzzy cluster analysis (FCM) findings in Section 6.3, and the model-based cluster analysis (MBC) findings in Section 6.4. Each of these clustering results sections contains classifications; classifications using weighted criteria; assessment of preparedness using original unweighted criteria and using weighted criteria; and a recapitulation. In each of them, comparisons are made across reference countries and periods.

The results from the clustering methods are then compared and contrasted in

Section 6.5. The original cluster solutions are also evaluated against Principal Component Analysis (PCA) results in Section 6.5.1. Other subsections assess the rest of the earlier findings, also over the methods. Section 6.6 on subsidiary analysis delivers the results on criterion dominance and variable selection. The chapter is concluded in Section 6.7.

	Specific Research Question	Specific Research Objective
1	How would the grouping configuration differ under different monetary anchor?	To evaluate and compare the results when different monetary anchors, namely dollar, currency basket, yen, euro, and yuan anchors are alternatively assigned.
2	How different are the partitions when different sets of criteria are used?	To explore and compare the results by OCA with those by Maastricht criteria.
3	How would the results differ across different clustering methods?	To assess and compare the results by hierarchical, fuzzy, and model- based cluster analysis methods. Results are also compared with those of principal component analysis.
4	How would the arrangements vary if benefits and costs of monetary integration are treated equally?	To inspect and compare the solutions when the sum of 'benefit' OCA criteria and the sum of 'cost' OCA criteria are weighted equally.
5	How prepared are generated country clusters for exchange rate fixation and for monetary union?	To infer the degree of readiness for fixed exchange rate and for monetary union by evaluating the groupings of East Asian countries with dollarized and euroized countries respectively.
6	How dominant are some criteria in representing the rest of the criteria?	To detect and examine subsets of OCA criteria which are most representative of the rest in generating the results.
7	How important are certain criteria in producing the best partitions?	To detect and assess subsets of OCA criteria which produce the most data-fitting partitions as indicated by particular statistical measures.
8	How would the results vary over different economic periods?	To compare the results across pre-crisis, crisis, and post-crisis periods.
9	How do the findings compare with the actual HongKong-Macau and Singapore-Brunei fixed exchange rate arrangements?	To evaluate the results against the existing fixed exchange rate arrangements of HongKong-Macau and Singapore-Brunei.



Figure 6.1 Structure of Chapter Six

6.1 Preliminary Analysis

This section concisely comments on the features of the countries with respect to the OCA dimensions. The features are explored across reference countries and across precrisis, crisis, and post-crisis periods. Some remarks are also given to economies associated with fixed exchange rates, namely Hong Kong, Macau, Singapore, and Brunei. At the end of this section, conclusions and implications from this cursory analysis are provided. For the first 5 criteria that are measured relative to a reference, the respective references are the US, the weighted-group of G3 (with the country weights of US 0.47, Japan 0.23, and Germany/EMU 0.30), Japan, Germany/EMU, and China. Hence, the values for currency basket are actually weighted averages of the US, Japan, and Germany/EMU values. Given the heaviest weight of US in the basket, it is straightforward that the values for G3 would resemble those for US.

Trade Openness (TRA)

The first OCA dimension to be examined is bilateral trade intensity, the ratio of total exports and imports (of goods) of a country with a reference country to the country's total exports and imports. The ratio measures the trade openness criterion. The higher the ratio, the greater the level of trade linkage with the reference country. For Germany/EMU reference, the values represent trade linkages with 11 founders of eurozone including Germany.

The ratios by reference countries and periods are exhibited in Figure 6.2. By and large, for each reference country the data pattern over the countries is fairly stable across the periods in spite of the change in the levels of trade linkage. Amongst the countries, the highest trade openness is exhibited by Canada with US and the second highest one is shown by Brunei with Japan.

Since the crisis period, there had been a general reduction in trade linkages with Japan and EMU whilst on the contrary a stark increase in trade linkages with China. The prolonged recession in Japan and the liberalizations taken by China, both began around the 1990s could have contributed to this trend.

The charts also exhibit the dominance and the stability of trade with US through the periods. Meantime, trade openness with EMU had been the most symmetrical over countries for the periods. Trade openness with G3 had also been fairly similar over

countries across the periods. In this regard, the Germany/EMU and the G3 reference might be slightly advantaged to be monetary anchor as far as symmetry in trade openness is concerned.



Note: The order of the bars in the charts follows that of the legend, that is, the first bar represents China, the second bar Hong Kong, and so forth.

Figure 6.2 Bilateral trade intensity (%)

For the effective dollar areas of Hong Kong and Macau, there had been a rise in relative importance of China over other reference countries, more so for Hong Kong, consistent with the return of these small territories to their motherland after the Asian catastrophe. For the monetary union constituents of Singapore and Brunei, they have also shown a decline in relative importance of US, Japan, and Germany/EMU as trading partners, to a larger extent for Brunei.

Business Cycle Synchronization (BUS)

In Figure 6.3, correlation coefficients representing the degrees of business cycle symmetry with each of the reference countries are exhibited.

Before the Asian crisis, the levels of business cycle synchronicity/asynchronicity with any of the reference countries had been relatively small but despite this the general degree of symmetry with China had been somewhat larger. In the crisis period, the levels of business cycle symmetry with Japan and with China had been much dominant, with high and homogenous correlations with Japan. At the same time there had been high degrees of business cycle asymmetry with US. After the crisis period, the region's business cycles had been comparatively synchronous with the US, the Japanese, and the Chinese cycle. In terms of homogeneity over countries, the China reference is slightly advantaged.

In the meantime, though both Hong Kong and Macau have been maintaining effective dollar pegs, their levels of business cycle symmetry with the reference countries by period had been quite asymmetric. For instance, for the post-crisis period Hong Kong displays high levels of symmetry with US, Japan, and China but Macau shows somewhat high degree of symmetry with Germany instead.

The same is also true for Singapore and Brunei which share common currencies in practice. For the post-crisis period, for example, the Singapore business cycle is highly synchronous with the US, the Japanese, and the Chinese cycle but the Bruneian cycle is synchronous with neither of the reference cycles.



Figure 6.3 Real business cycle correlation

Inflation Convergence (INF)

The third dimension is convergence of inflation quantified by inflation differentials exhibited in Figure 6.4.

Immediately, one can see a general rise in inflation convergence represented by lower differentials toward the reference levels since the Asian crisis. The greatest difference is shown by that toward the Chinese level, which is not surprising given the ever parallel Chinese inflation to the US, Japanese, and German levels. A closer inspection would reveal that the inflation levels are even more convergent to the US and German levels for the post-crisis period. Nevertheless, dispersion in the rate of inflation had remained high in Indonesia which was badly hit by the Asian turmoil and in Laos and Myanmar the two least liberalized economies.



Figure 6.4 Inflation differential

For Hong Kong and Macau, their degrees of inflation convergence with US and with China had been increasing and even converged in the post-crisis period, in line with their dollar pegs. This is clear because the inflation in China had also been converging toward that in US, coherent with the yuan-dollar rate fixation for most of the post-crisis period. For Singapore and Brunei, their levels of inflation convergence with the G3 reference had been rising before converging in the post-crisis period, consistent with their prevailing common currency basket peg led by Singapore.

Real Exchange Rate Volatility (RER)

Figure 6.5 charts the standard deviations quantifying the degrees of real exchange rate volatility with each of the reference countries.

At first glance, one can notice the much higher real exchange rate stability with US throughout the periods. It is also apparent that in the crisis period, the real exchange rates had been distinctly variable, most probably due to increased variability in the nominal exchange rates during that period. Nevertheless, the rates had since become ever stabler, particularly against the US dollar and the Chinese yuan. This is probably due to the stable nominal rates since the Chinese renminbi had been fixed to the US dollar in 1995–2005 which encompasses the crisis period and most of the post-crisis period (McKinnon & Schnabl, 2008).

Amidst the stabler rates in the post-crisis period however, the Indonesian rupiah rates had been highly variable. Meantime, the dollar rates of Australia and New Zealand had consistently been highly volatile over the periods.

For Hong Kong and Macau, their levels of real exchange rate volatility had been fairly parallel to each other over the periods. Aside from maintaining the greatest levels of real exchange rate stability with US, their real exchange rates against the yuan had also become as stable as those against the dollar. Though their volatility with Japan had been relatively high throughout the periods, it had nevertheless been decreasing.

For Singapore and Brunei, their levels of real exchange rate variability with each of the reference countries are virtually the same for each of the period.



Figure 6.5 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate

Real Interest Rate Cycle Synchronization (INT)

The fifth criterion is synchronization in real interest rate cycle, operationalized through correlations of real interest rate cycles with each of the reference cycles, as depicted in Figure 6.6. To an extent, the measure can be interpreted as a proxy for the degree of monetary policy symmetry.

While the countries were divided in the pre-crisis and crisis periods, virtually all countries had their interest rate cycles significantly synchronized with the Japanese and the Chinese cycle in the post-crisis period. Notice also that the cycles of China and Japan had been highly parallel to each other but divergent from the US cycle since the crisis period.

Despite having a fixed dollar rate since the 1980s, Hong Kong and Macau only show high degrees of interest rate cycle synchronicity with US for the pre-crisis period but high levels of synchronicity with every other reference countries for rest of the periods.



Figure 6.6 Real interest rate cycle correlation

For Singapore, it had enjoyed high degree of symmetry with US over the pre-crisis and crisis periods but with Japan and China subsequently. For Brunei whose interest

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data are not available for the pre-crisis period, it had experienced high level of synchronicity with US in the crisis period and low levels of synchronicity with Japan and with Germany in the post-crisis period.

Export Diversification (EXP)

The sixth dimension, export diversification measured by diversification indexes are graphed in Figure 6.7. Higher indexes correspond to greater degrees of variety in exports.

Obviously, the most diversified exports are from Indonesia and Australia and the least diversified ones are from Cambodia, Macau, Brunei, and Japan. Looking at the changes in the levels, about half of the countries had increased their range of exports over the periods while others had not.

For Hong Kong and Macau, Hong Kong reports higher and consistently rising levels of diversification whereas Macau displays lower and constantly falling levels of diversification. For Singapore, its exports had been least varied in the crisis period but for Brunei, its exports had been most varied in the same period and the Singapore levels of diversification had always been higher than the Bruneian levels.



Figure 6.7 Diversification index

External Indebtedness (DEB)

The ratios ⁵³ measuring external indebtedness, the seventh criterion are depicted graphically in Figure 6.8. The higher the ratio, the higher the degree of foreign borrowing over the main source of foreign income. On the whole, a regional downward trend in foreign indebtedness can be observed. Nonetheless, amongst the poorer economies Laos is the most indebted country for all the periods which is seconded by Myanmar. Exceptionally, Brunei has not officially reported any foreign debt as far as publicly available sources are concerned.

If one looks at the indebtedness levels of Hong Kong and Macau, except in the crisis period Macau had been more indebted than Hong Kong. As for Singapore and Brunei, obviously Singapore appears to be more indebted since Brunei has not reported any foreign borrowings for any period.



Figure 6.8 Gross external debt over exports of goods and services

⁵³ As explained in Chapter 4, this variable is not computed for Australia, New Zealand, Japan, and Canada.

Flexibility in the Labor Market (LAB)

Lastly, the eighth criterion is labor market flexibility and the indexes measuring this dimension are depicted in Figure 6.9. The greater the indexes, the more flexible the labor markets. Due to data constraints, only the post-crisis period could be examined.

From the graph, it is apparent that the Singapore labor market had been the most flexible, followed by the New Zealand and the Bruneian one. This finding seems to support the common currency union between Singapore and Brunei. The labor market in Hong Kong had also been highly flexible, compatible with its fixed dollar peg. Since the data for Macau are not available, inference cannot be made for Macau. Meantime, the least flexible labor markets are from Taiwan and Indonesia.



Table 6.2 presents the averages over countries of the first 5 reference-dependent variables by reference and period (PRE=pre-crisis period, CRS=crisis period, PST=post-crisis period).

Table 6.2 OCA variable averages

		US			G3			Japan		Ger	many/El	MU		China	
	PRE	CRS	PST	PRE	CRS	PST	PRE	CRS	PST	PRE	CRS	PST	PRE	CRS	PST
TRA	18.535	18.625	17.415	16.122	14.429	13.449	18.554	12.556	11.147	11.166	9.662	9.273	5.882	9.806	11.739
BUS	.109	039	.211	027	.106	.130	111	.462	.212	157	.052	.016	.197	.138	.246
INF	6.017	8.154	3.485	6.694	8.494	3.906	7.619	8.700	4.931	6.479	8.011	3.645	10.6	8.971	4.061
RER	2.576	4.193	1.972	3.854	6.581	2.473	6.469	6.529	2.956	3.865	10.348	2.922	4.833	4.514	2.202
INT	.238	026	349	.136	023	.016	228	082	.520	.145	004	.185	.025	.141	.487

Based on the preceding graphical analysis and the averages above, the following generalizations can be made. With respect to bilateral trade linkage, US and Japan had been the most important trade partners whilst China has risen to be as important as Japan. In terms of business cycle symmetry, only China had been consistently dominant while other reference countries had been influential in some but not all the periods.

When it comes to inflation convergence, the region's inflation rates had been increasingly convergent toward each reference level and in particular to the US and the German level in the post-crisis period. In respect of the variation in the real exchange rates, the rates had been extremely volatile in the crisis period but throughout the periods the real dollar rates had been relatively stable. Lastly, the region's real interest rate cycles had become significantly synchronous with the Japanese and Chinese cycles but asynchronous with the US cycle.

In addition to the above analysis, it may also be informative to look at the distributions of the data visualized through scatter matrices as collected in Figure 6.10. The plots are based on the US reference, for those using other reference countries, see Appendix D. The scatter matrices simply display the distributions of the variables in a matrix format.

It is clearly apparent that for nearly all of the variables there are no obvious groupings of the countries by just 'eye-balling' the data. The exceptions here are the pre-crisis RER and INT variables where there are apparent 1 and 2 clear groupings respectively. For the crisis period, once again there are no obvious groupings in general except again for RER and INT which maintain the same patterns as before. For the post-crisis period, TRA and BUS separate the cases into roughly 2 packs whilst DEB isolates one observation from the rest. Similar findings can be observed from those using other reference countries.



Figure 6.10 OCA-dollar scatter matrices

The discussions in this section have provided a general picture of the region in terms of the OCA features and the distributions of the variables. The following are the observations and implications.

First, no single reference country is consistently superior to be the monetary anchor country for all the countries across all the criteria. Hence, no clear evidence can be detected to answer which countries should jointly peg to which reference country.

Second, pairs of economies with similar exchange rate policies in practice, that is, Hong Kong and Macau, and Singapore and Brunei are not consistently parallel across all dimensions. This makes assessment of these existing regimes in terms of the OCA theory difficult.

Third, the grouping of data varies for each variable, so there is no easy way to

classify the data according to simple classifications such as high/medium/low groups across all variables.

All this directly justifies the use of multivariate clustering methodology as discussed in the preceding chapter, Chapter 5. And, since the distribution of the data varies across variables with some very close groupings in certain cases with some outliers, in the following analyses all data are normalized. The implications here also apply to the analysis using Maastricht criteria in Chapter 7.

In another aspect, for variables such as business cycle symmetry, exchange rate volatility, and real interest rate cycle symmetry, the data patterns for crisis period are noticeably different from those of other periods. Besides the reasons given in the previous chapter, this further justifies the segmentation of a separate crisis period so that differences in that period can be accounted for.

The subsequent section presents the results from hierarchical cluster analysis.

6.2 Hierarchical Clustering Results

The results by hierarchical cluster analysis are categorized into 4 main sections: classifications, classifications using weighted criteria, assessment of preparedness, and a recapitulation.

6.2.1 Classifications

The section is divided into 3 parts: cluster validation; findings by each monetary anchor; and comparisons of findings across the anchors.

Cluster Validation

To restate, the agglomerative algorithms used for hierarchical cluster analysis are the group average, the centroid, and the Ward's linkage method. Solutions from the linkage method yielding the highest cophenetic correlation coefficients are selected. Cophenetic correlation measures the correlation between the distances generated by the linkage

method and the inherent dissimilarities (Euclidean distances) between the objects in the data.

Table 6.3 displays the coefficients by monetary anchor and period. For pre-crisis and crisis periods, 7 variables are used. For post-crisis period, results using 7 variables excluding the labor criterion are shown in columns '7V' and those using 8 variables including the labor criterion are shown in columns '8V'.

The table shows that Ward's method consistently produces the lowest coefficients. Thus, the solutions from this method are not used. As for the centroid method, for almost all the cases the between-cluster distances are not monotonically increasing (those marked with *), making the results confusing and difficult to interpret. For this reason, the average linkage solutions are used even when the centroid method generates larger coefficients. This should not affect the findings since the coefficients from both methods are equally high. The selected coefficients are shaded.

Table 6.3 Cophenetic correlation coefficients using OCA criteria

	Dollar Currency Bas				y Basl	ket		Y	'en		Euro				Yuan					
	PRE	CRS	P	ST	PRE	CRS	Р	ST	PRE	CRS	P	ST	PRE	CRS	P	ST	PRE	CRS	Р	ST
			7V	8V			7V	8V			7V	8V			7V	8V			7V	8V
A	.804	.909	.928	.925	.835	.894	.915	.905	.846	.892	.924	.918	.800	.878	.925	.907	.927	.850	.878	.858
С	.810*	.918*	.924*	.924*	.841*	.906*	.916	.892*	.860*	.882	.919*	.920*	.798*	.870*	.912*	.897	.916*	.842*	.869*	.857*
W	.611	.840	.784	.770	.550	.837	.788	.817	.709	.737	.893	.841	.625	.703	.751	.848	.799	.745	.738	.763

Note: A=Average, C=Centroid, W=Ward linkage method.

Upon selecting the right solution which best represents the data structure, the next step is to ascertain the appropriate number of clusters and hence the groupings. Table 6.4 displays the values of the stopping indexes, namely the Calinski-Harabasz Index (CHI) and the C-index (C) which are used to indicate the appropriate number of clusters. For CHI, higher values correspond to more distinct partitioning and better clustering whereas for C-index, lower values are more desirable. Selected solutions are highlighted. In cases where there is no definite number of clusters within a reasonable range of clusters (about 10 clusters), the number of clusters indicated by the CHI which has

^{*}Distances between clusters are not monotonically increasing; the centroid method may not be appropriate. Source: Hierarchical cluster analysis. See Appendix A for data description.

'peaked' or risen significantly is used. Generally, the solutions indicated by CHI are corroborated by C-index.

The most distinct partitions, signified by the selected CHI and C-index are present in the yuan post-crisis solutions (the results beyond what is shown are no better). The smallest number of clusters (4 clusters) is indicated by the yen crisis period solution, suggesting that the data structure is the most homogenous when Japan is the reference and when the period is the crisis period.

				Do	llar				Currency Basket								
	Pre-cr	isis	Cris	is		Post-	crisis		Pre-cr	isis	Cris	is		Post-	crisis		
					7V		8V						7V		8V		
k	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	
2	69	.50	11.27	.49	5.87	.49	7.75	.48	1.20	.50	19.88	.47	10.29	.48	5.54	.48	
3	7.58	.46	5.40	.49	3.42	.50	4.52	.49	5.07	.48	9.45	.46	6.49	.46	3.78	.46	
4	22.26	.33	3.32	.50	2.87	.49	3.57	.47	3.20	.47	5.93	.48	5.31	.45	3.46	.45	
5	16.02	.32	3.88	.47	6.23	.41	4.63	.42	13.86	.31	9.15	.40	12.98	.33	8.15	.34	
6	20.52	.25	3.73	.44	16.34	.28	10.47	.33	10.90	.33	9.06	.37	9.75	.35	6.37	.35	
7	25.96	.22	13.98	.27	13.30	.27	11.14	.28	9.27	.30	15.90	.28	9.72	.32	6.57	.31	
8	29.45	.18	15.84	.25	10.54	.28	8.98	.29	9.97	.24	12.50	.27	7.64	.31	9.86	.27	
9	23.90	.19	14.06	.25	28.79	.17	8.16	.30	8.57	.24	13.33	.25	6.98	.31	16.88	.19	
10	31.60	.17	17.68	.22	27.42	.16	28.29	.16	8.94	.20	54.97	.13	8.60	.28	16.18	.16	
11	33.85	.17	16.49	.24	22.35	.16	23.07	.18	7.17	.22	47.12	.14	7.92	.27	13.05	.18	
			~ ~					-					× 1				

Table 6.4 CHI and C-index using OCA criteria

				Y	en							Εı	iro							Yu	an			
	Pre-c	risis	Cris	sis]	Post-	crisis		Pre-c	risis	Cri	sis]	Post-	crisis		Pre-c	risis	Cris	sis]	Post-	crisis	
					71	V	81	V					71	V	81	1					71	/	81	V
k	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С	CHI	С
2	2.2	.50	10.9	.49	3.1	.49	17.6	.47	26.3	.44	10.6	.49	14.1	.46	10.0	.48	4.5	.49	8.5	.49	10.6	.47	14.3	.47
3	2.5	.50	9.3	.48	1.8	.47	10.0	.44	22.6	.39	5.7	.49	9.9	.44	7.1	.46	12.9	.38	4.1	.47	9.0	.45	6.8	.45
4	5.7	.44	14.0	.39	3.1	.47	6.3	.45	14.6	.39	3.3	.48	10.7	.37	8.0	.41	8.1	.38	3.4	.47	14.5	.30	9.0	.35
5	4.1	.46	10.5	.41	2.8	.48	8.4	.34	14.2	.35	4.2	.45	8.2	.38	7.5	.41	15.6	.29	16.0	.26	11.5	.29	20.7	.25
6	6.9	.36	7.9	.42	2.2	.48	6.1	.35	11.7	.35	3.7	.45	8.4	.33	8.4	.36	18.9	.27	19.7	.21	74.0	.14	21.3	.24
7	5.6	.36	6.1	.40	1.7	.47	13.0	.25	8.8	.35	17.8	.24	21.7	.25	8.3	.33	14.5	.28	31.6	.15	58.1	.14	31.1	.18
8	8.7	.29	9.6	.32	1.6	.49	19.5	.20	15.4	.25	29.9	.17	19.8	.24	9.3	.31	38.0	.17	32.5	.13	47.2	.14	33.0	.18
9	6.9	.27	9.8	.28	3.3	.43	27.2	.18	13.7	.27	28.6	.16	48.2	.16	20.8	.23	30.5	.16	27.8	.13	41.9	.17	26.9	.18
10	40.2	.11	7.8	.29	2.7	.44	24.0	.19	21.2	.22	50.9	.12	39.4	.17	16.1	.22	31.9	.15	24.0	.17	44.2	.17	24.1	.18
11	32.7	.12	6.4	.28	2.3	.44	19.2	.20	47.6	.15	64.9	.11	33.3	.16	14.9	.13	58.6	.11	19.3	.17	183	.10	34.9	.16
12	21.3	.14	21.1	.19	2.0	.40	21.7	.21	38.3	.16	60.2	.11	35.6	.16	12.8	.11	52.0	.13	29.2	.17	149	.12	72.2	.14

Note: In general, an effective representation of data requires that the number of clusters be neither too small nor too large. The number of clusters considered here should suffice for meaningful interpretations. Source: Hierarchical cluster analysis. See Appendix A for data description.

Dollar Anchor Results

This section presents the classification results using the US as the reference for the precrisis, crisis, and post-crisis periods. Figure 6.11 exhibits the dendrograms which illustrate the merging process for the periods. Post-crisis results based on 7 and 8 dimensions are also shown.



Figure 6.11 OCA-dollar dendrograms

In each dendrogram, the horizontal axis represents the countries and the vertical axis indicates the distances between the countries. The vertical lines represent the distances at which objects are linked, with taller lines indicating farther distances and shorter lines indicating closer distances.

Table 6.5 exhibits the cluster compositions, the average silhouette widths (SW)⁵⁴, and the OCA features of the clusters. Average silhouettes of the clusters are given so that comparisons can be made as to which cluster is more tightly formed. The first 5 OCA variables are measures against the reference, the US. The number of most supportive OCA features for exchange rate fixation is shown in the last column (with label 'N'). Average values over all objects are given in the 'All Cases' rows.

Based on CHI and C-index, 8 clusters each for the pre-crisis and crisis periods; and 9 clusters for post-crisis period without labor variable and 10 clusters for post-crisis period with labor variable are indicated. According to the average silhouettes over all objects, the pre-crisis cases with the average silhouette of 0.39 are the best classified.

When one looks at the heights of the vertical links in the pre-crisis dendrogram, the most homogenous countries are Hong Kong and Singapore which are merged first. They are immediately joined by Taiwan, the Korea-Malaysia pair, and Macau to constitute the first group, as shown in Table 6.5. Displaying the group silhouette at 0.57, its group members ought to be the most tightly classified. The group also shows high degrees of real exchange rate stability, convergence of inflation, and real interest rate cycle symmetry with the US—consistent with the prevalent dollar standard amongst the Asian emerging markets prior to the 1997–98 turmoil (see McKinnon & Schnabl, 2004a).

Canada is the most prospective one for dollar peg. It enjoys the greatest levels of trade linkage, real business cycle symmetry, inflation convergence, and export

⁵⁴ As in Artis and Zhang (2002), silhouette width is set to zero when a cluster contains only a single object.

diversification. Its real dollar rate is also one of least volatile and its interest rate cycle highly synchronous with the US cycle. Meantime, the most indebted group is made up of the less liberalized countries of Laos and Myanmar.

					Averages					
Cluster	SW	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N^2
Chuster		(%)		(%)						
Pre-crisis										
All Cases	.39	18.535	.109	6.017	2.576	.238	3.290	3.011	-	
1 HKG, SGP, TWN, KOR, MYS, MAC	.57	20.418	.106	2.777	1.154	.959	3.187	1.020	-	1
2 PHL	.00	33.506	237	8.930	3.353	.982	4.854	2.804	-	1
3 CHN, IND, AUS, NZL	.36	14.086	.454	5.450	4.442	.494	4.340	1.964	-	0
4 KHM, IDN, JPN, THA	.53	14.985	076	2.884	2.624	972	2.629	3.434	-	0
5 BRN	.00	7.867	624	5.303	1.444	-	1.099	.000	-	0
6 LAO, MMR	.39	2.497	016	15.279	3.458	046	2.228	10.048	-	1
7 VNM	.00	15.261	.360	24.109	3.310	998	3.346	4.925	-	0
8 CAN	.00	70.274	.571	1.445	1.303	.784	5.038	n.a.'	-	4
Crisis										
All Cases	.27	18.625	039	8.154	4.193	026	3.164	1.495	-	
1 KOR, MYS, THA, NZL, PHL, BRN,										
TWN, SGP, VNM	.39	17.524	116	2.558	4.141	.603	2.753	.866	-	0
2 CHN, HKG, MAC, JPN	.45	18.592	448	3.193	1.423	737	2.388	.698	-	1
3 KHM	.00	25.003	.799	6.694	2.415	993	1.546	2.014	-	0
4 MMR	.00	4.034	560	24.586	3.340	353	3.412	3.261	-	0
5 IND, AUS	.57	12.828	.704	3.269	2.984	753	5.233	1.951	-	0
6 CAN	.00	73.515	.922	.596	1.547	.832	4.456	n.a.	-	4
7 IDN	.00	11.197	482	21.576	16.519	826	6.390	2.416	-	1
8 LAO	.00	1.013	028	67.298	11.101	159	2.674	5.252	-	1
Post-crisis 7V										
All Cases	.29	17.415	.211	3.485	1.972	349	3.411	1.094	-	
1 TWN, MYS, THA, CHN, HKG, SGP,										
IND, JPN, VNM	.39	16.014	.610	2.207	1.315	594	3.514	.631	-	1
2 KHM, PHL, MAC	.50	23.687	.246	2.552	1.110	726	1.565	1.200	-	1
3 IDN	.00	10.045	.100	6.663	3.931	685	6.159	1.722	-	1
4 KOR	.00	14.897	556	.975	2.023	.985	2.508	.660	-	1
5 BRN	.00	7.604	653	2.511	1.460	081	1.197	.000	-	0
6 AUS, NZL	.45	12.551	229	.657	5.453	.213	5.223	n.a.	-	1
7 LAO	.00	.729	.310	6.162	1.308	.213	2.442	4.457	-	1
8 CAN	.00	71.818	021	.882	2.333	565	5.025	n.a.	-	1
9 MMR	.00	2.913	729	23.681	2.307	.251	4.119	2.009	-	0
Post-crisis 8V										
All Cases	.33	17.415	.211	3.485	1.972	349	3.411	1.094	73.0	
1 MYS, THA, CHN, TWN, IND, VNM	.33	16.691	.457	2.002	1.189	543	3.941	.579	64.2	0
2 KHM, PHL, MAC	.48	23.687	.246	2.552	1.110	726	1.565	1.200	58.0	1
3 HKG, SGP, JPN	.63	14.659	.916	2.618	1.567	697	2.658	.787	90.6	1
4 IDN	.00	10.045	.100	6.663	3.931	685	6.159	1.722	48.4	1
5 KOR	.00	14.897	556	.975	2.023	.985	2.508	.660	55.6	1
6 BRN	.00	7.604	653	2.511	1.460	081	1.197	.000	94.0	1
7 AUS, NZL	.68	12.551	229	.657	5.453	.213	5.223	n.a.	91.8	1
8 LAO	.00	.729	.310	6.162	1.308	.213	2.442	4.457	69.4	1
9 CAN	.00	71.818	021	.882	2.333	565	5.025	n.a.	90.9	1
10 MMR	.00	2.913	729	23.681	2.307	.251	4.119	2.009	-	0

Table 6.5 OCA-HCM-dollar cluster	rs
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Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Hierarchical cluster analysis. See Appendix A for data description.

How stable are the groupings in the crisis period setting? While no full clusters are stable over the periods, the pre-crisis subclusters of Korea-Malaysia-Taiwan-Singapore, HongKong-Macau, and India-Australia are still intact in the crisis period solution.

In the post-crisis solution using 7 variables, Malaysia, Taiwan, and Singapore still

retain their link since the pre-crisis setting. The first group in which they belong maintains one most conforming attribute, the highest degree of business cycle symmetry with US. Nonetheless, the second group of Cambodia-Philippines-Macau trio with the silhouette 0.50 exhibits the most symmetric intra-group structure.

When labor criterion is added into the post-crisis analysis, the arrangement is slightly not as symmetrical as before; there are fewer countries in the largest group as Hong Kong, Singapore, and Japan form a separate group. These more advanced economies should be predominantly linked by similar levels of labor market flexibility. As in the post-crisis solution without the labor, Malaysia and Taiwan share the same grouping as for previous periods. Maintaining silhouette at 0.68, the most tightly formed group now is Australia-NewZealand. Unlike findings of previous periods, no cluster is especially conforming to the OCA criteria in both post-crisis results.

Based on the findings, some insights can also be gained. First, since Malaysia and Taiwan are consistently placed in the same grouping, they could have consistently shared the OCA features throughout the periods.

Second, as revealed by their merging sequences, Laos, Myanmar, Canada, and Brunei are relatively idiosyncratic. Meantime, Korea which stands alone in the postcrisis solution might have been more distinct in the post-crisis period.

Third, those economies that are put together with Hong Kong, an effective dollar area might be relatively ready for a dollar peg. For example, Japan which shares the same cluster with this Chinese territory in the crisis and post-crisis findings regardless of the labor criterion could have been more potential for dollar peg since the crisis period.

Finally, China and India, the foreign-reserves rich countries which congregate fairly early in both of the post-crisis dendrograms may imply greater feasibility for integration in the post-crisis period.

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Currency Basket Anchor Results

The agglomeration based on weighted group of G3 countries (the weights: US, 0.47; Japan, 0.23; Germany/EMU, 0.30) is depicted in Figure 6.12 and the groupings and features are displayed in Table 6.6. Five and ten clusters are respectively detected for pre-crisis and crisis periods. The increase in the number of clusters in the crisis period solution suggests a rise in regional divergence vis-à-vis the G3 group in the crisis period.

For post-crisis period, without labor criterion 5 clusters are indicated and with labor criterion 9 clusters are found. In this regard, the countries might have been highly divergent in the labor flexibility dimension. The all-object average silhouettes suggest that the post-crisis 7V solution with the silhouette at 0.52 is most tightly partitioned.

The dendrogram shows that the earliest merged countries for the pre-crisis period are Korea and Malaysia, acting as the center of convergence for the first group. As shown in Table 6.6, the first group only exhibits moderately conforming attributes.

Of all the pre-crisis clusters, the most indebted Laos-Myanmar pair with silhouette 0.57 is best-classified. Since US is given the heaviest weight in the G3-weighted features, Canada once again is the best candidate for a hard peg. Interestingly, Vietnam maintains the most synchronous business cycle with the G3 cycle but also the most dispersed inflation from the G3 level.

HongKong-Cambodia, Macau-Brunei, and Singapore-Korea-Malaysia-Taiwan carry forward their pre-crisis linkages to the crisis period solution. Canada is still the best candidate in the crisis period setting.



Figure 6.12 OCA-basket dendrograms

					Averages					
Cluster	SW	TRA	BUS	INF	RER^1	INT	EXP	DEB	LAB	N^2
Cluster		(%)		(%)						
Pre-crisis										
All Cases	.37	16.122	027	6.694	3.854	.136	3.357	3.011	-	
1 KOR, MYS, SGP, IND, TWN, PHL, CHN,										
NZL, AUS	.35	16.964	014	4.788	3.936	.259	4.085	1.240	-	0
2 HKG, IDN, MAC, BRN, KHM, THA	.45	14.590	133	4.318	2.630	029	2.365	2.412	-	1
3 LAO, MMR	.57	7.153	029	15.734	3.768	011	2.228	10.048	-	1
4 VNM	.00	15.710	.239	24.510	3.990	001	3.346	4.925	-	1
5 CAN	.00	36.071	.230	2.209	10.503	.290	5.038	n.a. ³	-	4
Crisis										
All Cases	.22	14,429	.106	8.494	6.581	023	3.227	1,495	-	
1 HKG SGP KHM KOR MYS TWN	27	13,950	454	3.039	5.897	080	2,437	940	-	0
2 THA IND	60	12 831	177	4 702	6 4 1 9	- 029	4 108	1 655	-	Õ
3 CHN VNM	17	17 346	- 527	2 867	6 258	030	3 555	1 084	-	ň
4 PHL MAC BRN	43	15.046	- 144	3 071	5 165	087	1 513	622	-	1
5 MMR	.40	5 428	- 537	24 978	5 668	022	3 412	3 261	-	ò
6 AUS	.00	13 203	296	1 647	1 153	- 602	6 173	0.201 n a	_	1
7 NZI	.00	12/22	- 133	1 150	5 262	- 368	3 717	n a	_	0
8 CAN	.00	36.864	753	0/3	3 954	0.000	1 156	n a	_	1
0 IDN	.00	12 878	- 087	21 085	17 345	- 11/	6 300	2 / 16	_	- -
	.00	12.070	007	68 106	10 100	- 199	2 674	5 252	_	1
Post crisis 7V	.00	4.070	.127	00.100	12.122	100	2.074	J.2J2		<u> </u>
Fost-crisis / v	E 0	12 4 4 0	120	2 006	0 470	016	0 477	1 004		
All Cases	.52	13.449	.130	3.906	2.473	.016	3.477	1.094	-	
1 IWN, MYS, IHA, CHN, HKG, SGP,										
PHL, MAC, VNM, IND, KHM, KOR,	01	10 501	000	0.070	1 000	070	0.010	710		~
BRN ALIG NET	.61	13.531	.232	2.376	1.930	.078	2.913	./16	-	2
2 IDN, AUS, NZL	.62	12.026	166	3.466	5.016	.062	5.535	1.722	-	1
3 CAN	.00	36.082	.264	1.216	2.522	364	5.025	n.a.	-	2
4 LAO	.00	3.441	.490	/.151	1.961	284	2.442	4.457	-	2
5 MMR	.00	4.023	799	24.559	2.364	238	4.119	2.009	-	0
Post-crisis 8V										
All Cases	.26	13.449	.130	3.906	2.473	.016	3.477	1.094	72.3	
1 MYS, THA, CHN, TWN, VNM, KOR,										
PHL	.24	14.708	.134	2.341	2.015	.187	3.375	.634	61.9	1
2 KHM, MAC	.57	16.244	.387	2.875	1.772	091	1.156	1.065	58.4	1
3 HKG, SGP, IND	.39	9.816	.646	2.323	1.888	066	3.579	.915	83.7	1
4 BRN	.00	11.005	632	1.786	1.773	.089	1.197	.000	94.0	1
5 IDN	.00	11.537	.141	7.663	4.123	.024	6.159	1.722	48.4	1
6 AUS, NZL	.52	12.270	319	1.367	5.462	.080	5.223	n.a.	91.8	0
7 CAN	.00	36.082	.264	1.216	2.522	364	5.025	n.a.	90.9	2
8 LAO	.00	3.441	.490	7.151	1.961	284	2.442	4.457	69.4	1
9 MMR	00	4 023	- 799	24 559	2 364	- 238	4 119	2 009	-	0

Table 6	6.6 OC	CA-HC	CM-ba	sket c	lusters

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Hierarchical cluster analysis. See Appendix A for data description.

The linkages above still hold in the post-crisis finding without labor criterion. Indeed, the linkages have come together in one group in the highly convergent configuration in the post-crisis 7V solution. When labor variable is added, however, only Korea, Malaysia, and Taiwan retain their grouping since the pre-crisis setting. In both of the post-crisis findings, Australia and New Zealand share high silhouettes and Canada maintains 2 most conforming features.

Over the periods, Malaysia, Taiwan, and Korea are constantly placed in the largest groups. Laos, Myanmar, and Canada always lag in the merging progression whilst Australia and New Zealand have since the crisis period drifted farther from the pack. More importantly, without the labor criterion, the region could have been highly homogenous in the pre-crisis and the post-crisis period against the weighted G3 countries.

Yen Anchor Results

The dendrograms in Figure 6.13 illustrate the merging processes using Japan as the center country. The characteristics of the clusters are placed in Table 6.7. The stopping rules suggest 10, 4, 9, and 9 clusters for pre-crisis, crisis, post-crisis 7V, and post-crisis 8V solutions respectively. The significantly fewer clusters for the crisis period may imply highly symmetrical relationships amongst the countries against Japan during the crisis period. Correspondingly, the greatest average silhouette over all cases, at 0.44 is obtained by the crisis period solution.

The pre-crisis dendrogram illustrates that the mergers of Taiwan-Singapore and Korea-Malaysia are established at the shortest distances. They make up the foundation for the first and largest group for pre-crisis period. However, based on the silhouettes, the most tightly classified cluster is the Indonesia-Thailand pair with the silhouette at 0.64. Based on this and the pair's features, Indonesia and Thailand should have closely shared high degree of monetary policy symmetry with Japan before the Asian crisis.

Only singletons have shown more highly conforming attributes; Vietnam, Brunei, and Canada each display 2 best attributes. Nevertheless, other features of them are somewhat inappropriate insofar as the criteria are concerned.

Moving to the crisis period solution, remarkably the largest group of 13 economies enjoys the greatest silhouette at .49, signifying highly symmetrical group structure. Taiwan, Singapore, Korea, Malaysia, and the Philippines retain their pre-crisis leading position. India and Australia also share the same grouping as before. Notably, the highly tightly clustered China-Indonesia pair exhibits four attributes most favorable for yen peg.



Figure 6.13 OCA-yen dendrograms

					Averages					
Cluster	SW	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N^2
Pre-crisis		(70)		(70)						
All Cases	27	18 554	- 111	7 619	6 4 6 9	- 228	3 357	3 011	-	
1 TWN SGP KOP MYS PHI IND AUS	30	18 0/0	011	1.010	3 783	- 745	4 154	1 212		0
2 HKG MAC	.02	9 392	- 337	6 397	3 320	- 975	2 287	2 085	_	0
3 IDN THA	.52	27 769	079	5 059	3 992	953	3 367	1 777	_	0
4 CHN	.04	20.683	- 601	11 070	18 367	- 442	1 356	771	_	0
5 KHM NZI	.00	13 203	- 582	5 179	10.007	672	2 554	6 7/9	_	0
6 LAO	.01	13 02/	067	17 107	5.017	.072	1 0 2 7	10 621	_	1
7 MMP	.00	17 619	- 128	15 800	3 1 3 7	- 9/6	2 529	9.475	_	0
8 VNM	.00	20.626	407	26 0/5	1 813	998	3 3/6	1 925	_	2
0 BBN	.00	17 816	10/	5 068	2 823	.550	1 000	4.525	_	2
10 CAN	.00	5 / 95	- 010	2 9/1	2.023	- 782	5.038	.000 n a ³	_	2
Crisis	.00	0.400	010	2.544	50.505	.102	5.000	11.a.		
All Cases	44	12,556	462	8,700	6.529	- 082	3,227	1.495	-	
1 VNM NZL THA KOR PHL MYS		12.000		0.700	0.020	.002	0.227	1.100		
SGP. TWN, CAN, HKG, MAC, KHM,										
BRN	49	13.064	643	2.842	4,798	- 278	2,701	944	-	1
2 MMR IND AUS	. 10	9 282	- 536	11 665	4 318	236	4 626	2 606	-	i
3 CHN IDN	48	18.834	690	12.021	18,443	704	4.821	1.535	-	4
4 LAO	.00	3.221	639	69.312	11.836	- 063	2.674	5.252	-	1
Post-crisis 7V		0.22.		00.0.2				0.202		<u> </u>
All Cases	.31	11.147	.212	4.931	2,956	.520	3.477	1.094	-	
1 CHN, TWN, MYS, HKG, SGP, THA,										
VNM. PHL	.33	13.115	.475	2.979	2.617	.955	3.368	.669	-	1
2 KHM, MAC,	.86	3.819	.453	3.478	2.685	.954	1.156	1.065	-	0
3 IND. CAN	.36	3.019	.470	3.669	2.580	.540	4.967	1.170	-	Ō
4 KOR	.00	13.562	442	3.318	2.503	586	2.508	.660	-	Ō
5 IDN, AUS	.35	16.188	.109	6.455	4.759	.571	6.386	1.722	-	1
6 NZL	.00	10.852	525	2.844	5.437	.072	3.834	n.a.	-	0
7 BRN	.00	30.361	647	1.073	2.135	.199	1.197	.000	-	3
8 LAO	.00	1.644	.489	9.059	2.432	838	2.442	4.457	-	2
9 MMR	.00	4.401	720	26.361	2.674	739	4.119	2.009	-	0
Post-crisis 8V										
All Cases	.24	11.147	.212	4.931	2.956	.520	3.477	1.094	72.3	
1 CHN, MYS, TWN, THA, PHL, VNM,										
IND	.32	13.060	.413	3.661	2.707	.957	3.718	.707	63.2	0
2 HKG, SGP, KHM, MAC	.31	6.040	.647	2.514	2.556	.947	2.035	.926	81.8	1
3 CAN	.00	3.012	.167	2.446	2.294	.142	5.025	n.a.	90.9	0
4 KOR	.00	13.562	442	3.318	2.503	586	2.508	.660	55.6	0
5 IDN	.00	17.503	.200	9.631	4.434	.998	6.159	1.722	48.4	2
6 AUS, NZL	.58	12.863	254	3.061	5.260	.108	5.223	n.a.	91.8	0
7 BRN	.00	30.361	647	1.073	2.135	.199	1.197	.000	94.0	4
8 LAO	.00	1.644	.489	9.059	2.432	838	2.442	4.457	69.4	1
9 MMR	.00	4.401	720	26.361	2.674	739	4.119	2.009	-	0

Fable 6.7	OCA-HCM-yen cl	usters
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Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Hierarchical cluster analysis. See Appendix A for data description.

Similar to the solutions by the previous periods, Taiwan, Singapore, Malaysia, and the Philippines are placed in the largest group in the post-crisis 7V setting. Cambodia-Macau reports very high silhouette at 0.86. Hence, amongst others, Cambodia and Macau should have strongly shared moderate level of business cycle symmetry and high degree of interest rate cycle symmetry against Japan in the post-crisis era.

When labor criterion is added, Hong Kong and Singapore join Cambodia and Macau to constitute an independent group. Australia and New Zealand come together and make up the best classified cluster. The labor criterion should have been dominant in linking these cases together. For both post-crisis results, Brunei is most potential for yen peg with the highest number of most compliant attributes.

The markedly convergent layout for the crisis period could in a way imply significantly higher influence from Japan during the period of distress in relation to other periods.

Euro Anchor Results

The dendrograms by the Germany/EMU anchor are collected in Figure 6.14. The attributes that characterize the 11 pre-crisis, 11 crisis, 9 post-crisis 7V, and 9 post-crisis 8V clusters are listed in Table 6.8. Recall that while trade is measured against the founding EMU members, the other four reference-based variables are measured against Germany. The post-crisis 7V all-object average silhouette is the highest at 0.31.

The pre-crisis dendrogram shows that Korea-Malaysia and Taiwan-Thailand, both in the first group, are combined at the shortest distances. Containing also Canada, this leading cluster of 5 economies maintains the most parallel inflation toward the German level. Interestingly, China and New Zealand possessing the group silhouette of 0.59 make up the best-classified group. Hence, before the Asian crisis China and New Zealand, two very different economies, could have been the most symmetrical countries relative to Germany in the region. Nonetheless, they do not exhibit any conforming features for a German mark peg. The same is also true for other clusters.

In the crisis period solution, only Korea, Malaysia, and Thailand retain their previous linkage. The more potential countries would be Singapore and Canada which share high degree of business cycle symmetry with Germany and convergence of inflation toward the German level.



Source: Hierarchical cluster analysis. See Appendix A for data description.

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Figure 6.14 OCA-euro dendrograms

	Averages									
Cluster	SW	TRA	BUS	INF	RER^1	INT	EXP	DEB	LAB	N ²
Cluster		(%)		(%)						
Pre-crisis										
All Cases	.26	11.166	157	6.479	3.865	.145	3.290	3.011	-	
1 KOR, MYS, CAN, TWN, THA	.33	9.869	139	2.343	3.328	.131	4.053	.799	-	1
2 IDN	.00	11.466	119	5.829	4.681	.654	2.904	2.220	-	0
3 HKG, SGP	.12	7.442	386	3.486	3.082	480	3.022	.128	-	0
4MAC	.00	15.407	389	3.725	3.250	525	1.678	4.001	-	0
5CHN, NZL	.59	10.469	597	7.870	5.843	.120	3.841	.771	-	0
6PHL, IND, AUS	.38	17.485	219	6.933	4.579	.288	4.844	2.980	-	2
7 KHM	.00	15.206	211	3.023	2.917	.928	1.782	6.749	-	1
8 BRN, JPN	.53	7.286	.370	3.086	2.880	.063	1.550	.000	-	1
9LAO	.00	7.597	.282	16.624	5.226	.617	1.927	10.621	-	1
10VNM	.00	12.670	077	23.962	4.424	.794	3.346	4.925	-	0
11 MMR	.00	8.772	044	15.020	2.807	567	2.529	9.475	-	1
Crisis										
All Cases	.30	9.662	.052	8.011	10.348	004	3.164	1.495	-	
1 HKG, JPN, KHM, TWN	.42	9.850	.515	3.152	10.128	.721	2.273	1.082	-	0
2 CHN, PHL, MAC	.53	12.291	464	3.060	9.911	.571	2.187	.840	-	0
3 IND	.00	15.704	.223	6.168	10.145	.736	4.294	1.951	-	2
4KOR, MYS, THA	.40	9.358	.132	2.555	11.386	565	3.077	.865	-	0
5 SGP, CAN	.38	5.593	.792	.695	9.801	502	3.322	1.161	-	2
6VNM, NZL	.48	10.894	495	2.236	7.433	785	3.788	1.516	-	0
7BRN	.00	2.777	197	1.365	10.077	808	1.229	.000	-	0
8 MMR	.00	5.980	823	25.197	10.075	.291	3.412	3.261	-	0
9AUS	.00	11.553	.431	1.629	4.462	676	6.173	n.a. ³	-	1
10 IDN	.00	10.402	224	22.092	19.395	.382	6.390	2.416	-	1
11LAO	.00	9.512	023	68.446	13.940	330	2.674	5.252	-	1
Post-crisis 7V									-	
All Cases	.31	9.273	.016	3.645	2.922	.185	3.411	1.094	-	
1 CHN, TWN, HKG, MYS, KOR, JPN,										
MAC, KHM, SGP	.45	9.508	.196	1.792	2.507	.361	2.462	.688	-	0
2 PHL, THA	.32	10.711	824	2.456	2.514	.528	3.326	1.017	-	1
3 IDN	.00	9.299	.159	7.720	4.187	.389	6.159	1.722	-	1
4 VNM, IND	.33	12.466	.532	3.996	2.793	.360	5.007	.885	-	1
5CAN	.00	5.448	.786	.796	2.992	436	5.025	n.a.	-	2
6 BRN	.00	1.494	586	1.196	1.985	.270	1.197	.000	-	1
7 AUS, NZL	.37	11.376	509	1.181	5.630	148	5.223	n.a.	-	0
8LAO	.00	9.068	.772	7.239	2.625	639	2.442	4.457	-	1
9 MMR	.00	5.473	970	24.554	2.215	620	4.119	2.009	-	0
Post-crisis 8V									-	
All Cases	.20	9.273	.016	3.645	2.922	.185	3.411	1.094	73.0	
1 MAC, JPN, KOR, KHM, CHN, TWN,										
VNM, IND	.16	11.012	.347	2.501	2.640	.346	2.909	.761	61.4	0
2HKG, MYS, THA, SGP	.34	7.886	161	1.383	2.304	.448	3.293	.628	85.2	0
3 PHL	.00	12.285	955	3.488	2.836	.466	2.382	1.471	57.5	2
4 IDN	.00	9.299	.159	7.720	4.187	.389	6.159	1.722	48.4	1
5CAN	.00	5.448	.786	.796	2.992	436	5.025	n.a.	90.9	2
6BRN	.00	1.494	586	1.196	1.985	.270	1.197	.000	94.0	2
7 AUS, NZL	.60	11.376	509	1.181	5.630	148	5.223	n.a.	91.8	0
8LAO	.00	9.068	.772	7.239	2.625	639	2.442	4.457	69.4	1
9 MMR	.00	2.913	729	23.681	2.307	.251	4.119	2.009	-	0

able 0.8 OCA-IICIVI-euro clusiers	Fable 6	6.8 OC	A-HCM	-euro	clusters
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Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Hierarchical cluster analysis. See Appendix A for data description.

In the post-crisis 7V solution, only Korea and Malaysia retain their linkage since the pre-crisis setting. They belong to the best classified group with silhouette of 0.45 which is also the largest cluster. When labor criterion is also included, Malaysia and Thailand are the only ones that retain their pre-crisis links. In both post-crisis results, notably Canada possesses 2 most supportive attributes: the highest degree of business cycle symmetry and inflation convergence with Germany. In fact, despite having close

geographical proximity with US, Canada has not shown business cycle symmetry in the US-based post-crisis findings.

The leading cluster which is significantly larger for the post-crisis period regardless of the labor criterion may signify increased convergence against Germany/EMU in that period.

Yuan Anchor Results

The China-centered aggregations of the countries are portrayed in Figure 6.15. Table 6.9 layouts the cluster attributes. 11, 8, 11, and 12 clusters are suggested by the validation indexes for the pre-crisis, crisis, post-crisis 7V, and post-crisis 8V configurations. The largest average silhouette over all objects at 0.35 is obtained by the pre-crisis solution.

The dendrogram shows that Korea, Taiwan, Singapore, and Indonesia are the more closely clustered objects in the pre-crisis configuration. Having joined by Malaysia, they constitute the largest group which maintains the most parallel real interest rate cycle to the Chinese rate before the Asian crisis. Displaying silhouette at 0.60, the most tightly classified cluster is made up of Hong Kong and Macau. This seems logical given their geographical proximity with China.

Amongst the countries, Cambodia stands out with 2 features close to China: the greatest degree of business cycle symmetry and the least variable real exchange rate.

The arrangement is slightly more convergent for the crisis period. Taiwan-Singapore, Australia-Canada and HongKong-Macau retain their pre-crisis links. Interestingly, during this period of turbulence New Zealand's inflation and real interest rate cycle had been the most parallel with the Chinese ones.



Source: Hierarchical cluster analysis. See Appendix A for data description.

Figure 6.15 OCA-yuan dendrograms

	Averages									
Cluster	SW	TRA	BUS	INF (%)	RER ¹	INT	EXP	DEB	LAB	N^2
Pre-crisis		(,0)		(,0)						
All Cases	.35	5.882	.197	10.600	4.833	.025	3.233	3.160	-	
1 KOR TWN SGP IDN MYS	52	2 890	258	8 861	4 554	607	3 4 9 0	834		1
2 AUS CAN	56	1 800	406	9.316	5 024	497	5.087	n a ³	-	1
3NZI	.00	1 800	681	10.8/3	5 320	270	3 3 2 7	n.a.	_	0
APHI THA IND	59	2 850	.001	8 167	1 853	- 786	1 100	2 / 32	_	ň
5HKG MAC	60	19 120	586	7 9/18	4.000	337	2 287	2.402	_	1
6BPN	.00	237	- 320	11 996	4.020	.007	1 000	000	_	0
7 IPN	.00	4 947	- 601	11.000	5 565	560	2 001	.000 n a	-	ň
81 40	.00	8 611	- 177	16 614	6 139	- 086	1 927	10 621	-	1
OMMP	.00	27 154	060	10.014	5 465	- 654	2 520	0.475	_	4
10 VNM	.00	1 755	- 100	23.264	5 760	-1 000	2.323	1 025	_	· م
	.00	2 /10	733	11 / 22	2 401	- 000	1 792	6 7/0	_	2
	.00	2.413	.755	11.452	2.401	332	1.702	0.743	-	2
	20	0.906	100	0.071	4 5 1 4	1 4 1	2 1 5 0	1 551		
1 MVS THA UNIM DDN	.30	9.000	.130	0.9/1	4.010	.141	0.071	1.001	-	0
TWITS, THA, VINN, DKIN	.40	6.003	.090	0.050	4.019	//0	2.0/1	.033	-	1
2 I WIN, KHIM, SOP	.27	0.824 4 E 4 E	529	3.352	2.4/8	.399	2.121	1.13/	-	1
SINZL	.00	4.545	.291	1.852	0.715	./22	3./1/	1.051	-	2
4IND, AUS, CAN	.41	10,000	824	4.048	2./15	.332	4.9/4	1.951	-	1
SHKG, KOK, PHL, MAC, JPN	.35	18.330	.522	3.104	3.495	.698	2.212	.911	-	1
6 MMR	.00	15.993	.470	25.923	3.325	.096	3.412	3.261	-	0
	.00	8.030	.700	23.022	10.015	.011	6.390	2.410	-	2
8LAU	.00	5.679	.217	69.459	11.224	724	2.674	5.252	-	<u> </u>
Post-crisis / v	0.4	11 700	0.40	4 001	0.000	407	0.400	1 100		
All Cases	.24	11.739	.246	4.061	2.202	.487	3.422	1.138	-	
I VNM, IND, TWN, MYS, THA	.35	7.674	.522	2.590	1.397	.945	4.089	.609	-	0
2 KHM, SGP, JPN	.45	10./14	.703	2.092	1.804	.957	1.968	1.121	-	1
3HKG, PHL	.30	25.332	.592	3.132	1.335	.985	2.797	.929	-	0
4 KOR	.00	18.214	262	2.160	2.275	628	2.508	.660	-	0
SBRN	.00	4.1/9	254	2.001	1.604	.092	1.197	.000	-	1
6MAC	.00	27.834	562	2.399	.858	.997	1.171	1.074	-	3
7 IDN	.00	9.997	.363	7.336	3.980	.974	6.159	1.722	-	1
8 AUS, NZL	.44	7.724	355	2.253	5.742	172	5.223	n.a	-	0
9CAN	.00	2.394	139	2.147	2.607	.053	5.025	n.a	-	0
10LAO	.00	6.981	.662	7.225	1.471	841	2.442	4.457	-	1
11 MMR	.00	16.824	325	23.901	2.501	606	4.119	2.009	-	0
Post-crisis 8V									-	
All Cases	.20	11.739	.246	4.061	2.202	.487	3.422	1.138	73.7	
1 MYS, THA, VNM, IND	.36	9.235	.536	2.816	1.380	.946	4.339	.677	69.5	0
2 TWN, KHM	.20	5.619	.555	2.169	1.349	.938	2.114	.696	51.7	0
3HKG, SGP, JPN	.36	14.537	.738	2.022	1.705	.977	2.658	.787	90.6	1
4 IDN	.00	9.997	.363	7.336	3.980	.974	6.159	1.722	48.4	1
5 PHL	.00	29.388	.433	3.823	1.735	.977	2.382	1.471	57.5	1
6MAC	.00	27.834	562	2.399	.858	.997	1.171	1.074	-	2
7 KOR	.00	18.214	262	2.160	2.275	628	2.508	.660	55.6	0
8 BRN	.00	4.179	254	2.001	1.604	.092	1.197	.000	94.0	2
9 AUS, NZL	.43	7.724	355	2.253	5.742	172	5.223	n.a	91.8	0
10CAN	.00	2.394	139	2.147	2.607	.053	5.025	n.a	90.9	0
11LAO	.00	6.981	.662	7.225	1.471	841	2.442	4.457	69.4	1
12 MMR	.00	16.824	325	23.901	2.501	606	4.119	2.009	-	0

Table 6.9 OCA-HCM-yuan clusters

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Hierarchical cluster analysis. See Appendix A for data description.

In the post-crisis dendrograms, in the leading position Vietnam-India and Malaysia-Thailand are the closest subclusters. When labor criterion is included, Taiwan is merged with Cambodia while Hong Kong is combined with Singapore and Japan. Macau, maintaining the stablest real yuan rate and the highest degree of real interest rate synchronicity, is the closest country to China in both post-crisis findings. The fewer clusters for the crisis period may signify greater degree of regional homogeneity relative to China during the crisis period. Over the periods, no countries are consistently placed together in the same group.

6.2.1.1 Comparisons across Anchors

Here, results by each of the reference countries are compared. The groupings are collected in Table 6.10.

Based on the average silhouettes over all objects, the following reference countries produce the most fitting solutions: for pre-crisis period the US anchor; for crisis period the Japan anchor; for post-crisis 7V period the weighted-G3 anchor; and for post-crisis 8V period the US anchor once again. Thus, the reference country associated with best partitioning differs depending on period.

Indicated by the smallest number of clusters, the reference compatible with the most symmetrical configuration is also different by period. For pre-crisis period, the G3 reference generates the fewest clusters; for crisis period the Japan reference; and for post-crisis 7V the G3 reference again. For post-crisis 8V, while all reference countries generate similar numbers of clusters, the Germany/EMU configuration should be more convergent since its dominant cluster is the largest when compared to those by other reference countries.

To evaluate how the levels of convergence might have changed, it is best to look at the 7-variable findings over the periods. With the dominant cluster getting somewhat larger in the post-crisis solution in relation to the pre-crisis one, the levels of convergence might have increased for the dollar, basket, and euro anchors.

Based on the above, on the whole the G3 reference appears to be relatively compatible with more convergent cluster configurations.

Whilst no full groupings are consistently stable over the periods, one can find subgroups which are robust in the rows labeled 'All Periods'. Based on 7 variables,
Singapore, Taiwan, and Malaysia are consistently placed together for the dollar, basket, and yen anchors while Korea and Malaysia are always linked for basket and euro anchors over periods. When labor criterion is included for the post-crisis period, Malaysia and Taiwan are still robust by each of those anchors.

How stable are the groupings of economies which implement fixed exchange rates in practice? Hong Kong and Macau, the effective dollar areas are, amongst others, placed together in the pre-crisis and crisis period clusters for dollar, yen, and yuan anchors. Using 7 variables for the post-crisis period, they are placed together for basket and euro anchors. When labor criterion is included for the post-crisis period, they are linked under the yen anchor. Hence, despite maintaining fixed dollar rates, they are not indicated to be consistently parallel vis-à-vis US over the periods.

Singapore and Brunei which share common monetary standards are rarely put together in the results. They are seen together for crisis period dollar and yen solutions and post-crisis 7V basket solution only. Thus, Singapore and Brunei do not constantly share the same grouping by any reference country.

The bottom part of Table 6.10 displays two features of the solutions from the postcrisis period, the most recent period. The first row shows the groups with the greatest silhouettes and the second row displays the highly closely linked subclusters as depicted by the dendrograms. These countries could have been more homogenous in the postcrisis era. Using 7 variables, Cambodia and Macau consistently share the largest group silhouette over dollar, yen, and euro anchors. Similarly, using 8 variables Australia and New Zealand are tightly classified for all anchors except for the basket anchor.

With respect to the closely linked subclusters, using 7 variables Malaysia and Taiwan are indicated by the dendrograms as closely linked for dollar, basket, and yen anchors. Using 8 variables, Malaysia-Thailand, China-Taiwan, and HongKong-Singapore are closely connected subgroups over three of the anchors. Subclusters which are present across different anchors are listed in Table 6.11 (D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan/Renminbi). No countries consistently share the same grouping regardless of anchor and period.

Nevertheless, by and large more cross-anchor subclusters are present by the postcrisis period, the most recent period. For this period, based on 7 variables Taiwan-Malaysia is stable over all anchors. With 8 variables including the labor criterion, the subgroups are Malaysia-Thailand, HongKong-Singapore, and Australia-NewZealand.

	Dollar	SW Currency Basket	SW Yen	SW Euro	SW Yuan	SW
	1 HKG, SGP, TWN.	.57 KOR, MYS, SGP.	.35 TWN, SGP, KOR.	.32 KOR, MYS, CAN.	.33 KOR, TWN, SGP.	.52
	KOR, MYS, MAC	IND, TWN, PHL,	MYS, PHL, IND,	TWN, THA	IDN, MYS	.02
		CHN, NZL, AUS	AUS			
	2 PHL	.00 HKG, IDN, MAC,	.45 HKG, MAC	.52 IDN	.00 AUS, CAN	.56
		BRN, KHM, THA				
	3 CHN, IND, AUS,	.36 LAO, MMR	.57 IDN, THA	.64 HKG, SGP	.12 NZL	.00
	NZL					
Pre-crisis	4 KHM, IDN, JPN,	.53 VNM	.00 CHN	.00 MAC	.00 PHL, THA, IND	.59
	5 BDN	00 CAN	00 KHM NZI	31 CHN NZI	50 HKG MAC	60
	6 LAO MMR	30 CAN	LAO	00 PHI IND AUS	28 BRN	.00
	7 VNM	00	MMR	00 KHM	00 IPN	00
	8 CAN	.00	VNM	.00 BRN, JPN	.53 LAO	.00
	9		BRN	.00 LAO	.00 MMR	.00
	10		CAN	.00 VNM	.00 VNM	.00
	11			MMR	.00 KHM	.00
Average		.39	.37	.27	.26	.35
		00 HWG GGD WHD/	07 XXXX XXX 771 4			40
	I KOK, MYS, IHA,	.39 HKG, SGP, KHM, KOP MVS TWN	.27 VNM, NZL, IHA,	.49 HKG, JPN, KHM, TWN	.42 MYS, IHA, VNM, PDN	.48
	TWN SGP VNM	KOK, WITS, TWIN	SGP TWN CAN	1 9919	DKN	
	1010,001,1101		HKG, MAC, KHM,			
			BRN			
	2 CHN, HKG, MAC,	.45 THA, IND	.60 MMR, IND, AUS	.39 CHN, PHL, MAC	.53 TWN, KHM, SGP	.27
	JPN					
	3 KHM	.00 CHN, VNM	.17 CHN, IDN	.48 IND	.00 NZL	.00
Crisis	4 MMR	.00 PHL, MAC, BRN	.43 LAO	.00 KOR, MYS, THA	.40 IND, AUS, CAN	.41
	5 IND, AUS	.57 MMR	.00	SGP, CAN	.38 HKG, KOR, PHL,	.35
	6 CAN	00 4115	00	VNM N7I	48 MMR	00
	7 IDN	00 NZL	.00	BRN	00 IDN	.00
	8 LAO	.00 CAN	.00	MMR	.00 LAO	.00
	9	IDN	.00	AUS	.00	
	10	LAO	.00	IDN	.00	
	11			LAO	.00	
Average		.27	.22	.44	.30	.30
			Of CHINE TWINE MYO	OO GUNI TWNI UKG		
	I IWN, MYS, IHA,	.39 IWN, MYS, IHA,	.61 CHN, IWN, MYS,	.33 CHN, I WN, HKG,	.45 VNM, IND, IWN, MVS THA	
	IND IPN VNM	PHI MAC VNM	VNM PHI	MAC KHM SGP	W15, 111A	
		IND, KHM, KOR,	, , , , , , , , , , , , , , , , , , , ,			
		BRN				.35
	2 KHM, PHL, MAC	.50 IDN, AUS, NZL	.62 KHM, MAC	.86 PHL, THA	.32 KHM, SGP, JPN	.45
Post crisis	3 IDN	.00 CAN	.00 IND, CAN	.36 IDN	.00 HKG, PHL	.30
7V	4 KOR	.00 LAO	.00 KOR	.00 VNM, IND	.33 KOR	.00
	5 BRN	.00 MMR	.00 IDN, AUS	.35 CAN	.00 BRN	.00
	6 AUS, NZL	.45	NZL DDN	.00 BKN	27 IDN	.00
	8 CAN	.00		00 LAO	00 AUS NZI	.00
	9 MMR	00	MMR	00 MMR	00 CAN	00
	10				LAO	.00
	11				MMR	.00
Average		.29	.52	.31	.31	.24
	1 SGP, TWN, MYS	SGP, KOR, MYS,	TWN, SGP, MYS,	KOR, MYS	-	
All Periods 7V	2	HKG KHM	PHL			
/ •	3	MAC BRN				
	5	Mille, Billy				
	1 MYS, THA, CHN.	.33 MYS, THA, CHN.	.24 CHN, MYS, TWN.	.32 MAC, JPN, KOR.	.16 MYS, THA, VNM.	.36
	TWN, IND, VNM	TWN, VNM, KOR,	THA, PHL, VNM,	KHM, CHN, TWN,	IND	
		PHL	IND	VNM, IND		
	2 KHM, PHL, MAC	.48 KHM, MAC	.57 HKG, SGP, KHM,	.31 HKG, MYS, THA,	.34 TWN, KHM	.20
			MAC	SGP		
	<u>3 HKG, SGP, JPN</u>	.63 HKG, SGP, IND	.39 CAN	.UU PHL	.UU HKG, SGP, JPN	.36
Post-crisis	4 IDN 5 KOP	.00 BRN	.00 KOK	.00 IDN	.00 IDN	.00
8V	6 BRN	00 AUS N7I	52 AUS N71	58 BRN	00 MAC	.00
	7 AUS NZL	68 CAN	00 BRN	00 AUS NZL	60 KOR	.00
	8 LAO	.00 LAO	.00 LAO	.00 LAO	.00 BRN	.00
	9 CAN	.00 MMR	.00 MMR	.00 MMR	.00 AUS, NZL	.43
	10 MMR	.00			CAN	.00
	11				LAO	.00
	12				MMR	.00
<u> </u>						
Average		.33	.26	.24	.20	.20
A11 D '	1 MVC TWAT	VOD MVO TUN	MVC TWAL DUE	MVC TIL		
All Periods	2 1 10115, 1WN	KOK, MYS, IWN	HKG MAC	M15, 1HA		
	-		mo, mae			

Table 6.10 OCA-HCM summary

Post-crisis findings	Do	ollar	Currenc	y Basket		Yen	E	uro	Yı	ıan
	7V	8V	7V	8V	7V	8V	7V	8V	7V	8V
1 Highest silhouette	KHM-PHL- MAC	AUS-NZL	IDN-AUS- NZL	KHM-MAC	KHM-MA	C AUS-NZL	CHN-TWN HKG-MYS- KOR-JPN- MAC- KHM-SGP	- AUS-NZL	KHM, SGP, JPN	AUS-NZL
2 Highly closely linked subclusters indicated by dendrograms	TWN-MYS CHN-HKG	,MYS-THA, CHN-TWN, HKG-SGP	TWN-MYS	MYS-THA, CHN-TWN, HKG-SGP	CHN-TWN MYS	N-CHN-MYS, HKG-SGP, KHM-MAC	CHN-TWN, HKG-MYS, KOR-JPN	MAC-JPN, KOR-KHM, CHN-TWN, HKG-MYS	VNM-IND, MYS-THA	VNM-IND, MYS-THA

Table 6.10 OCA-HCM summary (continued)

Table 6.11 OCA-HCM cross-anchor subclusters

	PRE	CRS	P	ST	A	A11		PRE	CRS	P	ST	A	A11
			7V	8V	7V	8V				7V	8V	7V	8V
DB	1 SGP, TWN, KOR, MYS	SGP, TWN, KOR, MYS	TWN, MYS, THA, CHN, HKG, SGP, IND, VNM	MYS, THA, CHN, TWN, VNM	SGP, TWN, MYS	TWN, MYS	DY	SGP, TWN, KOR, MYS	KOR, MYS, THA, NZL, PHL, BRN, TWN, SGP, VNM	TWN, MYS, THA, CHN, HKG, SGP, VNM	MYS, THA, CHN, TWN, IND, VNM	SGP, TWN, MYS	TWN, MYS
	2 CHN, IND, AUS, NZL	PHL, BRN	KHM, PHL, MAC	KHM, MAC			-	HKG, MAC	HKG, MAC	KHM, MAC	KHM, MAC		
	3 KHM, IDN, THA		AUS, NZL	HKG, SGP			_	IND, AUS	IND, AUS		HKG, SGP		
	4 HKG, MAC 5 LAO, MMR			AUS, NZL			-	IDN, THA			AUS, NZL		
	,												
DE	1 TWN, KOR MYS	, KOR, MYS, THA	TWN, MYS, CHN, HKG, SGP, JPN	CHN, TWN, IND, VNM	-	-	DR	SGP, TWN, KOR, MYS	MYS, THA, VNM, BRN	VNM, IND, TWN, MYS, THA	MYS, THA, VNM, IND	-	-
	2 HKG, SGP	CHN, MAC	KHM, MAC	MYS, THA			-	HKG, MAC	TWN, SGP	SGP, JPN	HKG, SGP, JPN		
	3 CHN, NZL	HKG, JPN	AUS, NZL	HKG, SGP			-		IND, AUS	AUS, NZL	AUS, NZL		
	4 IND, AUS	VNM, NZL		KHM, MAC			_		KOR, PHL				
	5			AUS, NZL					MAC, JPN				
DV	1 KOD MVS	UKC SCD	TWN MVC	MVC THA	MVC	TWN	DE	TWN KOD	UKC KUM	CUN TWN	CIDI TWN	VOD	
ы	SGP IND	KHM KOR	THA CHN	CHN TWN	SGP	MYS	DE	MYS	TWN	HKG MYS	VNM KOR	MYS	-
	TWN, PHL, AUS	MYS, TWN	HKG, SGP, PHL, VNM,	VNM, PHL	TWN	10110		1115	1,010	KOR, MAC, KHM, SGP	vitili, non	1110	
	2 HKG, MAC	PHL, MAC, BRN	IDN, AUS	КНМ, МАС			-	PHL, IND, AUS	KOR, MYS	PHL, THA	MYS, THA,		
	3 IDN, THA		KHM, MAC	HKG, SGP			-	CHN, NZL	PHL, MAC	VNM, IND	KHM, MAC		
	4			AUS, NZL			_			AUS, NZL	HKG, SGP		
	5										AUS, NZL		
DD	1 KOD MYS	SCD TWN	VNM IND	MVC THA			VE	TWN KOD	KOD MVC	CUN TWN	CINI TWN		
БК	SGP, TWN	KHM	TWN, MYS, THA	VNM	-	-	IE	MYS,	THA	MYS, HKG, SGP	VNM, IND	-	-
	2 PHL, IND	HKG, KOR	KHM, SGP	HKG, SGP			-	PHL, IND, AUS	HKG, KHM TWN	, KHM, MAC	MYS, THA,		
	3 HKG, MAC	PHL, MAC	HKG, PHL	AUS, NZL			-		VNM, NZL		HKG, MAC		
	4		AUS, NZL				_		SGP, CAN		AUS, NZL		
	5								PHL, MAC				
YR	1 TWN, SGP, KOR MYS	MYS, THA, VNM BRN	CHN, TWN, VNM IND	MYS, THA, VNM IND	-	-	ER	KOR, MYS, TWN	HKG, JPN	VNM, IND	MYS, THA	-	-
	2 PHL, IND	HKG, KOR,	HKG, MYS, THA_SGP	HKG, SGP			-	PHL, IND	KHM, TWN	TWN, MYS	VNM, IND		
	3 HKG, MAC	TWN, KHM SCP	KHM, MAC	AUS, NZL			-		PHL, MAC	KHM, SGP	TWN, KHM		
	4	IND, AUS					-		MYS. THA	AUS, NZL	HKG, SGP		
	5						-				AUS, NZL		
DB Y	1 SGP, TWN, KOR, MYS	SGP, TWN, KOR, MYS	TWN, MYS, THA, CHN, HKG, SGP, VNM	MYS, THA, CHN, TWN, VNM	SGP, TWN, MYS	TWN, MYS	DBE	E TWN, KOR MYS	, KOR, MYS	TWN, MYS, CHN, HKG, SGP	MYS, THA	-	-
	2 HKG, MAC	PHL, BRN	KHM, MAC	КНМ, МАС			-	CHN, NZL		IND, VNM	CHN, TWN,		
	3 IDN THA			HKG, SGP			-	IND, AUS		AUS, NZI	KHM MAC		
	4			AUS, NZL			-			KHM, MAC	HKG, SGP		
	5						-			,	AUS NZL		

	PRE	CRS	P	ST	А	.11		PRE	CRS	P	ST	A	.11
			7V	8V	7V	8V				7V	8V	7V	8V
DBR	1 SGP, TWN,	SGP, TWN	VNM, IND,	MYS, THA,	-	-	DYE	TWN, KOR	, KOR, MYS,	TWN, MYS,	MYS, THA	-	-
	KOK, MIS		THA	VINIVI				MIS	IHA	SGP			
	2 HKG, MAC		AUS, NZL	HKG, SGP			-	IND, AUS	NZL, VNM	KHM, MAC	CHN, TWN.		
	-, -			-,				,	, , , ,	,	IND, VNM		
	3			AUS, NZL			_				KHM, MAC		
	4						_				HKG, SGP		
	5										AUS, NZL		
DY	1 SGP. TWN.	MYS. THA.	VNM. TWN	MYS. THA.	-	-	DER	TWN, KOR	. MYS. THA	TWN. MYS	VNM. IND	-	-
R	KOR, MYS	VNM, BRN	MYS, THA	VNM, IND				MYS	,,				
	2 HKG, MAC	TWN, SGP		HKG, SGP			_		HKG, JPN	SGP, JPN	MYS, THA		
	3	KOR, PHL		AUS, NZL						AUS, NZL	HKG, SGP		
	4	HKG, MAC					_				AUS, NZL		
	5	IND, AUS											
BYE	1 TWN, KOR	HKG. KHM	TWN, MYS.	MYS. THA	-	-	BYR	KOR. TWN	SGP. TWN.	VNM.	MYS. THA.	-	-
	MYS	TWN	CHN, HKG,	,				MYS, SGP	KHM	TWN, MYS,	VNM		
			SGP					ŕ		THA			
	2	KOR, MYS	KHM, MAC	CHN, TWN, VNM			_	PHL, IND	HKG, KOR	HKG, PHL	HKG, SGP		
	3	PHL, MAC		KHM, MAC			-	HKG, MAC	PHL, MAC		AUS, NZL		
	4			HKG, SGP			-						
	5			AUS, NZL									
BER	1 TWN KOR	KHM TWN	VNM IND	MVS THA		_	VER	TWN KOR	ΜΥς ΤΗΔ	TWN MYS	VNM IND		_
DER	MYS	, 111101, 1 1011	1100, 110	M110, 1111			1 LIX	MYS	, 1110, 1111	1 111, 1115	· · · · · · · · · · · · · · · · · · ·		
	2 PHL, IND	PHL, MAC	TWN, MYS	HKG, SGP				PHL, IND	KHM, TWN	[MYS, THA		
	3		KHM, SGP	AUS, NZL			_		PHL, MAC		AUS, NZL		
-	4		AUS, NZL										
DB	1 TWN, KOR	KOR, MYS	TWN, MYS.	CHN, TWN,	-	-	DB	SGP, TWN.	SGP. TWN	VNM.TWN.	MYS. THA.	-	-
YE	MYS	,	CHN, HKG,	VNM			YR	KOR, MYS	,	MYS, THA	VNM		
			SGP				_						
	2		KHM, MAC	MYS, THA			_	HKG, MAC			HKG, SGP		
	3			KHM, MAC			_				AUS, NZL		
	4			HKG, SGP			_						
	5			AUS, NZL									
DB	1 TWN, KOR	, -	TWN, MYS	MYS, THA	-	-	DY	TWN, KOR	, MYS, THA	TWN, MYS	MYS, THA	-	-
ER	MYS						ER	MYS					
	2		IND, VNM	HKG, SGP			_				VNM, IND		
	3		AUS, NZL	AUS, NZL			-				HKG, SGP		
	4										AUS, NZL		
BY	1 TWN KOR	KHM TWN	TWN MYS	MYS THA		-	DB	TWN KOR		TWN MYS	MYS THA	-	-
ER	MYS		,				YER	MYS	,	,			
	2	PHL, MAC		HKG, SGP			-				HKG, SGP		
	3			AUS, NZL			-				AUS, NZL		

Table 6.11 OCA-HCM cross-anchor subclusters (continued)

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi).

6.2.2 Classifications using Weighted Criteria

This section examines the classifications using an explicit weighting scheme, that is, weighting the sum of the 'benefit' variables (the trade and debt criteria) and the sum of the 'cost' variables (the rest of the criteria) equally. Since there are only two benefit variables, each benefit variable is given more weight under the new weighting and correspondingly each cost variable is given less weight. As before, average linkage method generally yields the configurations which best match the data structure.

The findings are put together in Table 6.12. Columns '1' contain the original groupings when all criteria are weighted equally (since there are more cost variables, costs may be given heavier weight) and columns '2' contain the solutions by the new weighting scheme.

Some of the configurations have become more convergent, divergent, or more or less unchanged after the weighting. The configurations that become significantly convergent as indicated by much fewer clusters and/or somewhat larger dominant cluster include the pre-crisis dollar and euro solutions; the post-crisis 7V dollar and euro solutions; and the post-crisis 8V dollar and yuan solutions.

Quite the reverse, by putting more weight on benefits and hence less weight on costs, the pre-crisis basket solution, the crisis period yen solution, the post-crisis 7V basket and yen solutions, and the post-crisis 8V yen solution have become rather divergent. The rest of the solutions have been more or less the same.

Since only two benefit variables are defined in this study, trade openness and external indebtedness, and only the trade variable is measured relative to a reference, on the whole putting more weight on trade linkage has brought the region closer together vis-à-vis US but farther apart vis-à-vis Japan.

Since the configurations are somewhat different after the weighting, it is instructive to identify subgrouping linkages which are robust to the new weighting. Robust nonsingleton cross-weighting common sets are shown in Table 6.13.

Using 7 variables, the subclusters which are not only stable to the weighting but also robust over the periods are Malaysia-Singapore under the US reference and Korea-Malaysia under the G3 or the Germany/EMU reference. Using 8 variables for the postcrisis period, the basket anchor Korea-Malaysia and euro anchor Malaysia-Thailand are stable over periods. Thus, regardless of the labor criterion, by the G3 reference Korea and Malaysia share the same grouping across weightings and periods.

The effective dollar areas of Hong Kong and Macau share the same common set for the US-based pre-crisis and crisis period, the Japan-based crisis period, and the Germany/EMU-based post-crisis 7V period. Hence, they are indicated to share similar OCA features against US regardless of the weighting in the pre-crisis and crisis periods. Nonetheless, the monetary union members of Singapore and Brunei do not share any common set across weightings.

Countries which are stably linked across weightings and anchors are collected in Table 6.14. Slightly more of these countries are present in the post-crisis solutions. For post-crisis 7V, Taiwan and Malaysia which are linked over all anchors without the weighting are still linked over all anchors except for yuan anchor here. For post-crisis 8V, as without the weighting Malaysia-Thailand and Australia-NewZealand are stable across all anchors whereas Hong Kong and Singapore which have been stable over all anchors previously are now robust for all anchors except for euro anchor.

	De	ollar	Current	cy Basket	١	'en	E	uro	Y	uan
	1	2	1	2	1	2	1	2	1	2
	1 HKG SGP	CHN HKG	KOR MYS	KOR TWN	TWN SGP	HKG KOR	KOR MYS	CHN HKG	KOR TWN	KOR TWN
	TWN KOP	KOD TWN	SCR IND	MVS	KOD MVS	TWN MVS	CAN TWN	KOP TWN	IDN MVS	IDN MVS
	TWN, KOK,	KOK, TWN,	SGP, IND,	MIS	KOK, MIS,	IWN, MIS,	CAN, IWN,	KOK, IWN,	IDN, M15,	IDN, M15,
	MYS, MAC	IDN, MYS,	TWN, PHL,		PHL, IND,	PHL, SGP,	IHA	IDN, MYS,	SGP	SGP
		PHL, SGP,	CHN, NZL,		AUS	THA, AUS		THA, AUS,		
		THA, IND,	AUS					NZL		
		MAC, BRN,								
		JPN, AUS,								
		NZL								
	2 CHN, IND.	KHM, LAO,	HKG. IDN.	HKG, SGP.	HKG. MAC	IND. MAC	PHL, IND.	SGP. BRN.	PHL, THA.	AUS, NZL,
	AUS NZI	MMR VNM	MAC BRN	BRN		,	AUS	CAN	IND	CAN
D	1100,1122		KHM THA	Didi				Cili	1.12	c. iii
Pre-	2 VUM IDN	CAN	LAO MMP		IDN THA		UVC SCD		AUS CAN	DUI TUA
CI1818	J KHWI, IDN,	CAN	LAO, MINIK	LAO, MINIK	IDN, THA	LAO, MINIK	пко, зог	LAO, MINIK	AUS, CAN	FIL, IIA,
	JPN, IHA		100/	IDN THE		CIDI NO	DDM IDM	WID () () G	IIII A MAG	IND
	4 LAO, MMR		VNM	IDN, THA	KHM, NZL	CHN, NZL	BRN, JPN	КНМ, МАС	HKG, MAC	BRN
	5 BRN		CAN	IND, NZL	CHN	KHM	CHN, NZL	PHL, IND	NZL	JPN
	6 VNM			CAN	LAO	IDN	MAC	VNM	BRN	VNM
	7 CAN			VNM	MMR	VNM	KHM	JPN	JPN	MAC
	8 PHL			KHM	VNM	BRN	IDN		LAO	HKG
	9			MAC	BRN	CAN	LAO		MMR	MAC
	10			DUI	CAN	Criti	VNM		VNM	LAO
	10			CUN	CAN		MMD		VINI	MMD
	11						WIWIK		KIIM	WIWIK
	12			AUS						
-										
	I KOR, MYS,	KOR, MYS,	HKG, SGP,	HKG, KOR,	VNM, NZL,	KOR, MYS,	HKG, JPN,	HKG, KHM,	HKG, KOR,	IND, CAN,
	THA, NZL,	SGP, THA,	KHM, KOR,	MYS, SGP,	THA, KOR,	PHL, SGP,	KHM, TWN	JPN	PHL, MAC,	SGP, NZL,
	PHL, BRN,	NZL	MYS, TWN	MAC, BRN	PHL, MYS,	THA, VNM,			JPN	AUS, KHM
	TWN, SGP,				SGP, TWN,	NZL				
	VNM				CAN, HKG,					
					MAC, KHM					
					BRN					
	2 CHN, HKG,	CHN. HKG.	PHL, MAC.	THA, IND,	MMR. IND.	KHM, IND	CHN. PHL.	CHN, PHL	MYS. THA.	HKG, PHL
	MAC IPN	MAC	BRN	NZI.	AUS		MAC	MAC	VNM BRN	KOR IPN
	3 IND AUS	KHM IPN	CHN VNM	CHN PHI	CHN IDN	HKG MAC	KOR MYS	KOR MYS	IND AUS	MYS THA
Crisis	5 110, A05	KIIWI, JI W	cint, vitua	VNM	CIII, IDI	inco, whee	TUA	TUA	CAN	VNM
	4 KHM	DHI VNM	THA IND	TWN	LAO	LAO	SCD CAN	VNM AUS	TWN KHM	TWN DDN
	4 KUM	FIL, VINN	IHA, IND	I WIN	LAU	LAO	SUF, CAN	VINNI, AUS,	SCD	, I WIN, DKIN
	5 10 00	DID ALLC	MAD	100		MAD		NZL CAN	SUF	IDM
	5 MINIK	IND, AUS	MMK	MINIK		MMK	VINIA, NZL	SGP, CAN	NZL	IDN
	6 CAN	CAN	AUS	AUS		AUS	IND	IND	MMR	MAC
	7 IDN	IDN	NZL	KHM		TWN	BRN	BRN	IDN	MMR
	8 LAO	LAO	CAN	CAN		CHN	MMR	MMR	LAO	LAO
	9	MMR	IDN	IDN		IDN	AUS	TWN		
	10	TWN	LAO	LAO		BRN	IDN	IDN		
	11	BRN				CAN	LAO	LAO		
							-			
	1 TWN, MYS.	CHN, HKG.	TWN. MYS	MYS, THA.	CHN, TWN.	CHN, TWN	CHN, TWN	CHN, HKG.	VNM. IND.	KHM, MYS.
	THA. CHN	TWN, KHM	THA, CHN	CHN, TWN	MYS, HKG	MYS, THA	HKG, MYS	KOR, TWN	TWN, MYS	THA, VNM
	HKG SGP	MYS PHI	HKG SGP	HKG KOP	SGP THA	VNM	KOR IPN	KHM MYS	THA	IND IPN
	IND IPN	SGP THA	PHL MAC	BRN	VNM PHI		MAC KHM	PHI THA		
	VNM	VNM IND	VNM IND	DIVIN	, 19191, 1 11L		SGP	VNM MAC		
	V I VIVI	MAC IDM	VUM VOD				501	IDN	,	
		MAC, JPN	KHWI, KUK,					JPIN		
	A KIDA DIE	IDNI AUG	DKIN	VIDA NE	RIDA MAS	IIKO PIPE	DIII 7711	IDN AUG	KIDA SOS	IDNL ALIG
	∠ KHM, PHL,	IDN, AUS,	IDN, AUS,	KHM, PHL,	кнм, мас	HKG, KHM,	PHL, THA	IDN, AUS,	KHM, SGP,	IDN, AUS,
Post-	MAC	NZL	NZL	MAC	DID GUN	SGP, MAC		NZL	JPN	NZL, CAN
crisis	3 AUS, NZL	KOR, BRN	CAN	IDN, AUS,	IND, CAN	IND, CAN	VNM, IND	SGP, CAN	HKG, PHL	SGP, BRN
7V		10.0		NZL						
	4 KOR	MMR	LAO	SGP, IND	IDN, AUS	AUS, NZL	AUS, NZL	BRN	AUS, NZL	PHL, MAC
	5 BRN	LAO	MMR	VNM	KOR	IDN	CAN	LAO	BRN	TWN
	6 IDN	CAN		MMR	NZL	BRN	BRN	MMR	MAC	MMR,
	7 LAO			CAN	BRN	LAO	IDN	IND	IDN	LAO
	8 CAN			LAO	LAO	MMR	LAO		KOR	HKG
	9 MMR			-	MMR	PHI	MMR		CAN	KOR
	10					KOR			LAO	
	10					KOK			MMP	
	11								WININ	
	1.000 7020	MVC COP	SCD VOD	KOD MVC	TWN COD	MVC TIL	KOD MYC	KOD MYS		ALLO MOT
A 11	1 SGP, TWN,	MIS, SGP,	SGP, KOR,	KOK, MYS	I WIN, SGP,	MYS, THA	KOK, MYS	KUK, MYS	-	AUS, NZL,
	M 1 5		MIS, IWN	UKG PPT	MIS, PHL			I FIA		CAN
Periods	2	CHN, HKG,	пко, кнм	HKG, BRN				AUS, NZL		
/ V	2	MAC	MAC DDY					SCD CAN		
	3		MAC, BRN					SGP, CAN		

Table 6.12 HCM clusters by equal and by weighted criteria

	Do	ollar	Currenc	y Basket	Y	'en	E	uro	Y	uan
	1	2	1	2	1	2	1	2	1	2
	1 MYS, THA,	CHN, HKG,	MYS, THA,	CHN, KOR,	CHN, MYS,	CHN, TWN,	MAC, JPN,	CHN, HKG,	MYS, THA,	MYS, THA,
	CHN, TWN,	TWN, KHM	CHN, TWN,	TWN, MYS,	TWN, THA,	MYS, THA,	KOR, KHM,	KOR, TWN,	VNM, IND	KHM, VNM,
	IND, VNM	MYS, PHL,	VNM, KOR,	THA	PHL, VNM,	VNM	CHN, TWN,	KHM, MYS,		IND, IDN,
		SGP, THA,	PHL		IND		VNM, IND	THA, VNM,		TWN, LAO
		VNM, IND,						MAC, JPN		
		MAC, JPN								
	2 KHM, PHL,	IDN, AUS,	HKG, SGP,	KHM, PHL,	HKG, SGP,	HKG, SGP	HKG, MYS,	PHL, IND	HKG, SGP,	HKG, JPN,
	MAC	NZL	IND	MAC	KHM, MAC		THA, SGP		JPN	SGP, BRN,
										CAN, AUS,
Post-										NZL
crisis	3 HKG, SGP,	KOR, BRN	KHM, MAC	HKG, SGP	AUS, NZL	IND, CAN	AUS, NZL	IDN, AUS,	TWN, KHM	KOR, PHL,
8V	JPN							NZL		MAC
	4 AUS, NZL	MMR	AUS, NZL	AUS, NZL	KOR	KHM, MAC	IDN	SGP, CAN	AUS, NZL	MMR
	5 KOR	LAO	IDN	IDN	IDN	AUS, NZL	CAN	BRN	PHL	
	6 BRN	CAN	BRN	BRN	CAN	IDN	BRN	LAO	MAC	
	7 IDN		CAN	CAN	BRN	BRN	PHL	MMR	KOR	
	8 LAO		LAO	LAO	LAO	LAO	LAO		BRN	
	9 CAN		MMR	MMR	MMR	MMR	MMR		IDN	
	10 MMR			VNM		PHL			CAN	
	11			IND		KOR			LAO	
	12								MMR	
	1 MYS, TWN	MYS, SGP,	KOR, MYS,	KOR, MYS	TWN, MYS,	MYS, THA	MYS, THA	KOR, MYS,	-	AUS, NZL,
All		THA	TWN		PHL			THA		CAN
Periods	2	CHN, HKG,		HKG, SGP	HKG, MAC			SGP, CAN		
8v		MAC								
	3							AUS, NZL		

Table 6.12 HCM clusters by equal and by weighted criteria (continued)

Table 6.13 HCM cross-weighting subclusters

	Dollar	Currency Basket	Yen	Euro	Yuan
	1 HKG, SGP, TWN, KOR,	KOR, MYS, TWN	TWN, SGP, KOR, MYS,	KOR, MYS, TWN, THA	KOR, TWN, IDN, MYS,
	MYS, MAC		PHL, AUS		SGP
Pre-	2 CHN, IND, AUS, NZL	HKG, BRN		PHL, IND	PHL, THA, IND
crisis	3 IDN, JPN, THA	LAO, MMR		CHN, NZL	AUS, CAN
	4 LAO, MMR	IDN, THA			
	5	IND, NZL			
	1 KOR, MYS, THA, NZL,	HKG, SGP, KOR, MYS	KOR, MYS, PHL, SGP,	HKG, JPN, KHM	HKG, PHL, KOR, JPN
	SGP		THA, VNM, NZL		
Crisis	2 CHN, HKG, MAC	MAC, BRN	HKG. MAC	CHN, PHL, MAC	MYS, THA, VNM
Clisis	3 PHL, VNM	CHN, VNM		KOR, MYS, THA	IND, AUS, CAN
	4 IND, AUS	THA, IND		SGP, CAN	KHM, SGP
	5			VNM, NZL	
	1 TWN, MYS, THA, CHN,	MYS, THA, CHN, TWN,	CHN, TWN, MYS, THA,	CHN, TWN, HKG, MYS,	VNM, IND, MYS, THA
Dect	HKG, SGP, IND, JPN,	HKG, KOR, BRN	VNM	KOR, JPN, MAC, KHM	
rost-	VNM				
7V	2 KHM, PHL, MAC	KHM, PHL, MAC	HKG, SGP	PHL, THA	KHM, JPN
	3 AUS, NZL	IDN, AUS, NZL	KHM, MAC	AUS, NZL	AUS, NZL
	4	SGP, IND	IND, CAN		
All	1 MYS, SGP	KOR, MYS	-	KOR, MYS	-
Periods					
7V					
	1 MYS, THA, CHN, TWN,	MYS, THA, CHN, TWN,	CHN, MYS, TWN, THA,	MAC, JPN, KOR, KHM,	MYS, THA, VNM, IND
Post-	IND, VNM	KOR	VNM	CHN, TWN, VNM,	
crisis	2 KHM, PHL, MAC	КНМ, МАС	HKG, SGP	HKG, MYS, THA	HKG, SGP, JPN
8V	3 HKG, SGP, JPN	HKG, SGP	KHM, MAC	AUS, NZL	TWN, KHM
	4 AUS, NZL	AUS, NZL	AUS, NZL		AUS, NZL
All	1 -	KOR, MYS	-	MYS, THA	-
Periods					
8V					

	PRE	CRS	P	ST	А	11		PRE	CRS	P	ST	۵	411
			7V	8V	7V	8V				7V	8V	7V	8V
DB	1 KOR, MYS, F	KOR, MYS,	MYS, THA,	MYS, THA,	-	-	DY	SGP, TWN	KOR, MYS,	CHN, TWN,	MYS, THA,	-	-
	TWN S	GP	CHN, TWN,	CHN, TWN				KOR, MYS	THA, NZL,	MYS, THA,	CHN, TWN,		
			HKG				_		SGP	VNM	VNM		
	2 LAO, MMR		KHM, PHL,	KHM, MAC					HKG, MAC	HKG, SGP	HKG, SGP		
	2 IDN THA		MAC	UKC SCD			-			VIIM MAC	KIDA MAC		
	4 IND NZI		AUS NZI	ALIS NZI			-			KHWI, WIAC	AUS NZI		
	4 IND, INZL		AUS, NZL	AUS, NZL							AUS, NZL		
DE	1 TWN KOD (THN MAC	CHN TWN	MVS THA			DB	VOD MVS	SCD KOD	VNM IND	MVS CHN		
DL	MYS	JIIN, MAC	HKG MYS	M15, 111A	-	-	DK	TWN	MYS	MYS THA	TWN	-	-
	MIID		JPN					1010		M10, 1111	1.010		
•	2 CHN, NZL		KHM, MAC	CHN, TWN,			-			AUS, NZL	KHM, MAC		
				VNM			_						
	3		AUS, NZL	KHM, MAC			_				HKG, SGP		
	4			AUS, NZL							AUS, NZL		
BY	1 KOR MYS -		CHN TWN	MYS THA	-	-	BE	KOR MYS	KOR MYS	CHN TWN	CHN TWN	MYS.	-
21	TWN		MYS, THA,				22	TWN	THA	HKG, MYS,	VNM	KOR	
							_			KOR			
	2		KHM, MAC	KHM, MAC			_			MAC, KHM	MYS, THA		
	3			AUS, NZL			_			AUS, NZL	KHM, MAC		
	4										AUS, NZL		
BR	1 KOR MYS F	IKG KOR	MYS THA	MYS THA	-	-	YE	KOR MYS	KOR MYS	CHN TWN	CHN TWN	-	-
Dit	TWN						12	TWN	THA	MYS,	VNM		
	2		AUS, NZL	HKG, SGP			_		VNM, NZL	KHM, MAC	MYS, THA		-
	3			AUS, NZL			_				KHM, MAC		
	4										AUS, NZL		
VP	1 TWN SCP K		VNM	MVS TUA			ED	KOP MVS	UKC IDN	VUM IDN	MVS TUA		
IK	KOR. MYS	XOK, I IIL	MYS. THA	VNM	-	-	LK	TWN	,11KO, J1 N	KIIWI, JI W	W13, 111A	-	-
	2 N	AYS, THA,	,	HKG, SGP			-	PHL, IND	MYS, THA	AUS, NZL	TWN, KHM		
	١	/NM					_						
	3			AUS, NZL							AUS, NZL		
DPV	1 KOD MVS K	OR MYS	MVS THA	MVS THA			DPE	VOD MVS	KOD MVS	MVS CHN	CHN TWN		
DBI	TWN S	GP	CHN TWN	CHN TWN	-	-	DBE	TWN	, KOK, MIS	TWN HKG	CHN, I WN	-	-
	2	/01	KHM, MAC	KHM, MAC			-	1010		KHM, MAC	MYS, THA		
	3		,	HKG, SGP			-			AUS, NZL	KHM, MAC		
	4			AUS, NZL							AUS, NZL		
DBR	I KOR, MYS, -		MYS, THA	MYS, THA	-	-	DYE	KOR, MYS	, KOR, MYS,	CHN, TWN,	MYS, THA	-	-
•	2		AUS NZL	HKG SGP			_	1 WIN	IIIA	KHM MAC	CHN TWN		
	-		1100,1122								VNM		
	3			AUS, NZL			_				KHM, MAC		-
	4										AUS, NZL		
DVD	1 KOD TWAL	ANC THA	MNG THA	MNC THA			DED	77337A3		ALIC NO	MNG THA		
DYR	I KOR, IWN, N	115, IHA	MYS, IHA	MYS, IHA, VNM	-	-	DER	IWN, KOR MYS	-	AUS, NZL	MYS, IHA	-	-
	2			HKG, SGP			-	KOR, MIIS			AUS, NZL		
	3			AUS, NZL			-				,		
BYE	1 KOR, MYS, F	KOR, MYS	CHN, TWN,	CHN, TWN	-	-	BYR	KOR, MYS	,-	MYS, THA	MYS, THA	-	-
	1WN		MYS	KIIM MAC			-	TWN			ALIC NZI		
	2 3		KHM, MAC	AUS NZI			-				AUS, NZL		
	5			NOS, NEE									
BER	1 KOR, MYS, M	AYS, THA	AUS, NZL	MYS, THA	-	-	YER	KOR, MYS	, MYS, THA	-	MYS, THA	-	-
	TWN						_	TWN					
	2			AUS, NZL							AUS, NZL		
DDVE	1 KOD MVC I	OD MVC	CUN TWN	MVC THA			DDVD	KOD MVC		MVC THA	MVC THA		
DBIE	TWN	Ок, M 1 S	MYS	M15, IHA	-	-	DBIK	THA	,-	w115, 1HA	w115, 1HA	-	-
	2		KHM, MAC	KHM, MAC			-				HKG, SGP		
	3		,	AUS, NZL			-				AUS, NZL		
	-												
DBER	1 KOR, MYS, -		AUS, NZL	MYS, THA	-	-	DYER	KOR, MYS	, MYS, THA	-	MYS, THA	-	-
	TWN 2			ALIS NOT			-	TWN			ALIS N'ZI		
	4			AUS, NZL							AUS, NZL		
BYER	1 KOR, MYS		-	AUS, NZL	-	-	DB	KOR, MYS	,-	-	MYS, THA	-	-
	TWN						YER	TWN					
	2										AUS, NZL		

Table 6.14 HCM cross-weighting-anchor subclusters

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi)

6.2.3 Assessment of Preparedness

This section explores the hierarchical clustering solutions when dollarized and euroized cases are added into the set of Asian cases.⁵⁵ The results are expected to suggest the levels of preparedness for dollarization-like and for EMU-like arrangement amongst the Asian economies. Asian cases which are merged with the dollarized and the euroized cases (the benchmarks) might most probably share characteristics appropriate for fixed peg and currency union respectively. Besides that, linkages with Hong Kong, an effective dollar area may also cast some light on the readiness for fixed exchange rate when the reference country is the US.

To reiterate, Panama (or PAN) has long dollarized since the beginning of 20th century while other dollarized cases ECU3, ELS3, and GTM3 denote Ecuador, El Salvador, and Guatemala in the post-dollarization era. The cases with suffixes 1 and 2 correspond to the pre-crisis and the crisis period of the latter three benchmarks (the pre-dollarization periods) respectively. For the euroized cases, EMU1 stands for the pre-Maastricht period, EMU2 the post-Maastricht period, and EMU3 the post-euro period.

The first part of this section provides the findings using the original unweighted criteria and the second part presents those using weighted criteria.

6.2.3.1 Preparedness Assessment using Unweighted Criteria

Table 6.15 exhibits the classifications for preparedness assessment using the original unweighted variables. Columns '1' show the original clusters comprising of Asian cases only while columns '2' provide the groupings involving the Asian cases and the benchmarks. Cells in column 2 containing Asian and benchmark cases are highlighted.

Looking at columns 2, for pre-crisis period the general level of preparedness for exchange rate fixation and for monetary union for dollar, basket, and yuan pegs could have been greater since the bulk of the Asian cases are being grouped with the post-

⁵⁵ Previous HCM methodology applies.

dollarization and/or post-euro benchmarks. Likewise, for crisis period the readiness for basket and yuan pegs might have been higher; for post-crisis 7V the readiness for basket and yen pegs could be greater; and for post-crisis 8V that for basket, yen, and yuan pegs might be higher.

In light of the above, the region on the whole could have been relatively ready for a basket peg throughout the periods.

Interestingly, for post-crisis 8V by the yuan anchor the Philippines is connected with almost all dollarization benchmarks but not even one EMU benchmark, signifying high preparedness for unilateral peg rather than multilateral monetary union based on the China reference. As for Korea, Macau, and Brunei, their degree of preparedness for yuan peg could be lower than that of Philippines as they are only linked with ELS1, the pre-crisis El Salvador.

Obviously, the groupings of the Asian cases somewhat vary when benchmark cases are added in the cluster analysis. Hence, it is compelling to identify common groupings between the with- and without-benchmark results. When a subset of Asian countries in column 1 intersects with that in column 2, the common set of countries might most probably possess common OCA features and level of preparedness.

Common (non-singleton) sets of countries by anchor are provided in the bottom part of Table 6.15. Clearly, more substantial common sets are present under the dollar and the basket anchor across the periods. Thus, overall more countries could share similar OCA dimensions and levels of preparedness when US or G3 is the reference.

Remarkably, using 7 variables, the links of Singapore-Malaysia and Singapore-Korea-Malaysia-Taiwan are consistently present in the US and the weighted-G3 common sets of countries respectively. Hence, they could have been relatively and consistently symmetrical in the OCA features and the level of preparedness over the periods. Singapore and Malaysia are even robust under both dollar and basket anchors. Even when labor criterion is also considered for the post-crisis period, Korea, Malaysia, and Taiwan are still robust over periods by the basket anchor.

With regard to the dollar areas of Hong Kong and Macau, they are hardly seen together in the common sets; they are only put together in the crisis period yuan, postcrisis 7V basket, and post-crisis 8V yen solutions. They are not found together even under the US reference. For the monetary union members of Singapore and Brunei, they are only placed together in the crisis period dollar and post-crisis 7V basket solutions. On this evidence, though maintaining similar monetary standards, these pairs of economies are not indicated to be consistently parallel in both the OCA dimensions and the level of preparedness.

Except for the crisis period, Hong Kong and Singapore always share the same common set under US reference regardless of the labor criterion. Since Hong Kong maintains a dollar currency board, Singapore could have been relatively ready for the same regime except only in the crisis period. This observation somehow confirms the finding by Ogawa and Shimizu (2006) which suggested that two-thirds of Singapore currency basket weights were on the dollar.

Table 6.16 lists the cross-anchor common sets. Since no subgroups are stable over all anchors, it is worthwhile to note those which are stable over four anchors and since the post-crisis period is the most recent period, it is compelling to focus on this period. For post-crisis 7V, Vietnam-India is robust over dollar, basket, euro, and yuan anchors and for post-crisis 8V, Vietnam-India is robust over dollar, yen, euro, and yuan anchors. For post-crisis 8V also, Malaysia-Thailand-Vietnam and HongKong-Singapore are stable over all anchors except for euro anchor.

Table 6.17 displays the features of the groupings involving the benchmarks. This is important because while the preceding analysis identifies Asian cases which share the features maintained by the benchmarks, some countries are actually more conforming in some OCA aspects than the benchmarks but are not clustered with them. For instance, in the US-based solutions, Canada is distanced from the benchmark clusters except only for the pre-crisis period even though Canada maintains more favorable features in the trade, inflation, exchange rate, and diversification dimensions.

By examining the variables also, the features which bring the Asian economies close to or far away from the benchmarks can be recognized. In most cases, convergent inflation, stable real exchange rates, and diversified exports predominantly link the Asian economies with the post-dollarization and post-euro benchmarks of PAN, ELS3, GTM3, and EMU3. On the other hand, low trade intensity and inflation divergence generally dissociate the Asian cases from those benchmarks.

		Dollar	Curre	ncy Basket		Yen		Euro		Yuan
	1	2	1	2	1	2	1	2	1	2
	1 HKG, SGP, TWN, KOR, MYS, MAC	CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, AUS, NZL, CAN, PAN, ELS3, GTM3, EMU1, EMU2, FMU3	KOR, MYS, SGP, IND, TWN, PHL, CHN, NZL, AUS	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, AUS, NZL, CAN, PAN, ELS1, ELS3, GTM3_FAUL	TWN, SGP, KOR, MYS, PHL, IND, AUS	IDN, THA, AUS, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	KOR, MYS, CAN, TWN, THA	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, AUS, NZL, CAN, EMU2	KOR, TWN, IDN, MYS, SGP	HKG, KOR, TWN, IDN, MYS, SGP, AUS, NZL, CAN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3
Pre-	2 CHN, IND, AUS, NZL	GTM1, ELS2, GTM2, ECU3	HKG, IDN, THA, MAC, BRN, KHM	KHM, LAO, MMR, VNM, MAC, BRN	HKG, MAC	CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND,	PHL, IND, AUS	ELS3, GTM3, EMU1, EMU3	PHL, THA, IND	MAC, GTM1, ELS2, GTM2, ECU3
crisis	3 KHM, IDN, JPN, THA	MAC, BRN, ELS1	LAO, MMR	GTM1, GTM2, ECU3	IDN, THA	NZL, CAN BRN, GTM1, ELS2, GTM2, ECU3	HKG, SGP	GTM1, GTM2, ECU3	AUS, CAN	PHL, THA, VNM, IND
	4 LAO, MMR	IDN, THA, VNM, JPN	VNM	ELS2	KHM, NZL	VNM, ECUI	BRN, JPN	MAC, BRN, JPN	HKG, MAC	BRN, JPN, ELS1
	5 BRN	KHM, LAO	CAN	ECU1	CHN	KHM, LAO	CHN, NZL	KHM, LAO	NZL	KHM, LAO, MMR
	6 PHL	MMR		ECU2	LAO	MMR, MAC	IDN	PAN, ELS1	BRN	ECU1
	7 CAN	ECU1			MMR	ECU2	KHM	VNM	JPN	ECU2
	8 VNM	ECU2			VNM	ELS1	MAC	ELS2	LAO	
	9				BRN		LAO	MMR	MMR	
	10				CAN		MMR	ECU1 ECU2	VINM	
								2002		
	1 KOR, MYS, THA, NZL, PHL, BRN, TWN, SGP, VNM	KOR, MYS, PHL, SGP, THA, VNM, BRN, NZL, ELS1, EMU2	HKG, SGP, KHM, KOR, MYS, TWN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, NZL, CAN, PAN, ELS1, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	VNM, NZL, THA, KOR, PHL, MYS, SGP, TWN, CAN, HKG, MAC, KHM, BRN	KOR, MYS, PHL, SGP, THA, VNM, BRN, NZL. CAN	HKG, JPN, KHM, TWN	CHN, HKG, KOR, TWN, KHM, PHL, SGP, MAC, JPN	HKG, KOR, PHL, MAC, JPN	HKG, KOR, PHL, MAC, JPN, NZL, PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3
Crisis	2 CHN, HKG, MAC, JPN	TWN, PAN, ELS3, GTM3, EMU1, EMU3	PHL, MAC, BRN	GTM1, GTM2, ECU3	MMR, IND, AUS	CHN, TWN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	CHN, PHL, MAC	IND, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	MYS, THA, VNM, BRN	MYS, SGP, THA, VNM, BRN, GTM1, GTM2, ECU3
	3 KHM	KHM, GTM1, ELS2, GTM2, ECU3	CHN, VNM	IDN, AUS	CHN, IDN	GTM1, ELS2, GTM2, ECU3	KOR, MYS, THA	GTM1, ELS2, GTM2, ECU3	TWN, KHM, SGP	TWN, KHM, IND, AUS, CAN
	4 MMR	CHN, HKG, MAC, JPN	THA, IND	MMR	LAO	HKG, KHM, MAC	SGP, CAN	MYS, THA, VNM, BRN, NZL	IND, AUS, CAN	ECU1, ELS1
	5 IND, AUS	IND, AUS	MMR	ECU1		MMR, IND	VNM, NZL	ECU1, ELS1	NZL	IDN, MMR
	6 CAN	CAN	AUS	LAO		ECU1, ELS1	IND	AUS, CAN	MMR	LAO
	7 IDN	IDN	NZL	ECU2		IDN	BRN	IDN	IDN	ECU2
	8 LAO	LAO	CAN			AUS	MMR	MMR	LAO	
	9	MMR	IDN			LAO	AUS	LAO		
	10	ECUI	LAO			ECU2	IDN	ECU2		
	11	ECU2					LAU			
	1 TWN, MYS, THA, CHN, HKG, SGP, IND, JPN, VNM	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN, GTM1, GTM2, ECU3	TWN, MYS, THA, CHN, HKG, SGP, PHL, MAC, VNM, IND, KHM, KOR, BRN	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, PAN, EMU1, EMU2, EMU3	CHN, TWN, MYS, HKG, SGP, THA, VNM, PHL	CHN, HKG, TWN, MYS, SGP, THA, VNM, IND, EMU1, EMU3	CHN, TWN, HKG, MYS, KOR, JPN, MAC, KHM, SGP	CHN, HKG, KOR, TWN, KHM, MYS, SGP, MAC, BRN, JPN	VNM, IND, TWN, MYS, THA	HKG, TWN, KHM, MYS, SGP, THA, JPN
Post- crisis	2 KHM, PHL, MAC	NZL, PAN, ELS2, GTM3, EMU1, EMU2, EMU3	IDN, AUS, NZL	CAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	KHM, MAC	IDN, AUS, NZL, CAN, EMU2	PHL, THA	IDN, VNM, IND, EMU1, EMU2, EMU3	KHM, SGP, JPN	IDN, VNM, IND, EMU1, EMU3
7V	3 IDN	KOR, BRN	CAN	MMR	IND, CAN	KHM, PHL,	IDN	PHL, THA,	HKG, PHL	PHL, PAN,
	4 KOR	ELS1	LAO	ECU1, ELS1	KOR	MAC GTM1, GTM2, ECU3	VNM, IND	NZL GTM1, GTM3, ECU3	KOR	ELS2, GTM1, GTM2, ECU3
	5 BRN	IDN. AUS	MMR	LAO	IDN. AUS	ELS3. GTM3	CAN	ELS3. GTM3	BRN	ELS3. GTM3
	6 AUS, NZL	MMR		ECU2	NZL	PAN, ELS2	BRN	AUS, CAN	MAC	MMR
	7 LAO	CAN, ELS3			BRN	KOR, BRN	AUS, NZL	PAN, ELS2	IDN	AUS, NZL, CAN, EMU2
	8 CAN	LAO			LAO	ELS1	LAO	ELS1	AUS, NZL	KOR, BRN
	9 MMR	ECU1			MMR	LAO	MMR	MMR	CAN	MAC, ELS1
	10	ECU2				MMR		LAU	LAU	ECUI
	12					ECU1 ECU2		ECU1 ECU2	IVIIVIK	EAU ECU2
	12					1002		1002		1002
All Periods	1 SGP, TWN, MYS	MYS, PHL, SGP	SGP, KOR, MYS, TWN	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, IND, NZL,	TWN, SGP, MYS, PHL	-	KOR, MYS	IND	-	NZL
/ v	2	TWN	HKG, KHM	CAN						MAC
	3	KHM	MAC, BRN							
	4	INCL								

Table 6.15 OCA-HCM preparedness assessment

		D	ollar	Curren	icy Basket		Yen	I	Euro	1	ruan
		1	2	1	2	1	2	1	2	1	2
	1 MYS, CHN, IND,	, THA, , TWN, VNM	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN, GTM1, GTM2, ECU3	MYS, THA, CHN, TWN, VNM, KOR, PHL	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, PAN, EMU1, EMU2, EMU3	CHN, MYS, TWN, THA, PHL, VNM, IND	CHN, HKG, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, EMU1, EMU2, EMU3	MAC, JPN, KOR, KHM, CHN, TWN, VNM, IND	CHN, HKG, KOR, TWN, KHM, MYS, SGP, MAC, JPN	MYS, THA, VNM, IND	HKG, TWN, KHM, IDN, MYS, SGP, THA, VNM, IND, JPN, EMU1, EMU2, EMU3
Post-	2 KHM MAC	, PHL,	PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	КНМ, МАС	GTM1, GTM2, ECU3	HKG, SGP, KHM, MAC	PAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	HKG, MYS, THA, SGP	IDN, VNM, IND, EMU1, EMU2, EMU3	TWN, KHM	PHL , PAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3
crisis 8V	3 HKG, JPN	, SGP,	KOR, ELS1	HKG, SGP, IND	ELS2, ELS3, GTM3	AUS, NZL	KOR, BRN, ELS1	AUS, NZL	PAN, ELS2, ELS3, GTM3	HKG, SGP, JPN	KOR, MAC, BRN, ELS1
	4 IDN		AUS, NZL	BRN	AUS, NZL, CAN	KOR	AUS, NZL, CAN	IDN	PHL, THA, NZL	AUS, NZL	MMR, AUS, NZL, CAN
_	5 KOR		IDN	IDN	IDN	IDN	LAO	CAN	GTM1, GTM2, ECU3	PHL	ECU1
-	6 BRN		BRN	AUS, NZL	ELS1	CAN	MMR	BRN	AUS, CAN	MAC	LAO
-	7 AUS,	NZL	ECU2	CAN	BRN	BRN	ECU1	PHL	ELS1	KOR	ECU2
-	8 LAO		LAO	LAO	MMR	LAO	ECU2	LAO	BRN	BRN	
-	9 CAN		CAN	MMR	LAO	MMR		MMR	MMR	IDN	
-	10 MMR	2	MMR		ECUI				LAO	CAN	
-	11		ECU1		ECU2				ECUI	LAO	
	12								ECU2	MMR	
All	1 MYS	, TWN	MYS, PHL, SGP	KOR, MYS, TWN	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, IND	TWN, MYS, PHL	-	MYS, THA	IND	-	MYS, SGP
Periods	2		TWN			HKG, MAC					HKG
8V	3		KOR								MAC
_	4										JPN
_	5										KOR
	6										BRN
Comm	on sets	of cou	untries								
			Dollar	Curre	ency Basket		Yen		Euro	Y	ruan
Pre-	1 HK MY	KG, SGI YS,	P, TWN, KOR,	KOR, MY TWN, PHI AUS	S, SGP, IND, L, CHN, NZL,	IDN, THA		KOR, MYS THA	, CAN, TWN,	KOR, TWN SGP	, IDN, MYS,
crisis	2 CH	IN. IND	, AUS, NZL	HKG, IDN	I. THA			PHL, IND,	AUS	AUS, CAN	
	3		,,		,			HKG SGP		,	
	4							CHN NZI			
-	4							CIIN, NZL			
	1 KC PH	DR, MY IL, BRN	S, THA, NZL, J, SGP, VNM	HKG, SGI MYS, TW	P, KHM, KOR, N	-		-		HKG, KOR JPN	, PHL, MAC,
Crisis	2			PHL, MAG	J, BRN					MYS, THA	, VNM, BRN
	5			CHN, VN	NI						
	4			THA, IND)						
Post- crisis 7V	1 TW HK VN	VN, MY KG, SGI IM	'S, THA, CHN P, IND, JPN,	, TWN, MY HKG, SGI VNM, INI BRN	S, THA, CHN P, PHL, MAC, D, KHM, KOR	, CHN, TWI SGP, THA	N, MYS, HKG , VNM	, VNM, IND		VNM, IND	
	2 KH	IM, PH	L, MAC	IDN, AUS	, NZL	IDN, AUS				AUS, NZL	
All Periods 7V	1 SG	P. MYS	5	SGP, KOR	R, MYS, TWN	-		-		-	
Post-	1 MY INI	YS, TH. D, VNN	A, CHN, TWN A	, MYS, TH VNM, KO	A, CHN, TWN R, PHL	, CHN, MY PHL, VNN	S, TWN, THA, 1, IND	VNM, IND		MYS, THA	, VNM, IND
8V	2 KH 3 HK	IM, PH	L, MAC P. JPN	HKG, SGI	P, IND	HKG, SGF	, KHM, MAC			TWN, KHM HKG, SGP	1 JPN
		2,50	,		-					, 501,	
All Periods 8V	1 -			KOR, MY	S, TWN	-		-		-	

Table 6.15 OCA-HCM preparedness assessment (continued)

	PRE	CRS	Р	ST	All		PRE	CRS	I	PST		All
			7V	8V	7V 8V				7V	8V	7V	7 8V
DB	1 CHN, IND, AUS, NZL	KOR, MYS	TWN, MYS THA, CHN, HKG, SGP, IND, VNM	, MYS, THA, CHN, TWN VNM		DY	-	-	CHN, TWN, MYS, HKG, SGP, THA, VNM	CHN, MYS, TWN, THA, VNM, IND	-	-
	2 SGP, TWN,	, PHL, BRN	KHM, PHL,	, КНМ, МАС						HKG, SGP		
	3 8		MAC	HKG, SGP		_				KHM, MAC		
DE	1 HKG SGP	_	VNM IND	VNM IND		DR	SGP TWN	MYS THA	VNM IND	MYS THA	_	-
22	2 TWN KOR	,				_	KOR,	VNM, BRN	1100, 1102	VNM, IND		
	MYS	.,				_		non, mil		JPN		
	3 CHN, NZL					-						
	4 IND, AUS											
BY	1 IDN, THA	-	CHN, TWN MYS, HKG SGP, THA, VNM, PHL	, MYS, THA, , CHN, TWN PHL, VNM	 ,	BE	KOR, MYS, TWN	-	VNM, IND	-	-	-
	2			HKG, SGP		_	CHN, NZL					
	3						PHL, IND, AUS					
BR	1 KOR, MYS SGP_TWN	, HKG, KOR	VNM, IND	MYS, THA, VNM		YE	-	-	-	VNM, IND	-	-
	2	PHL, MAC	AUS, NZL	HKG, SGP		-						
VD	1			10/0 10/1		ED	NOD MUG					
ΥK	1 -	-	-	MYS, THA, VNM, IND		ER	KOR, MYS, TWN	-	VNM, IND	VNM, IND	-	-
	2			HKG, SGP		-	-					
DBY	1 -	-	TWN, MYS THA, CHN, HKG, SGP, VNM	, MYS, THA, CHN, TWN VNM		DBE	CHN, NZL	-	VNM, IND	-	-	-
	2		KHM, PHL,	, КНМ, МАС		_	IND, AUS					
	3			HKG, SGP		_	TWN, KOR, MYS					
DBR	1 SGP, TWN, KOR, MYS	, -	VNM, IND	MYS, THA, VNM		DYE	-	-	-	VNM, IND		-
	2			HKG, SGP		-						
DYR	1 -	-	-	MYS, THA, VNM, IND	-	DER	TWN, KOR, MYS	-	VNM, IND	VNM, IND	-	-
	4			1110, 501								
BYE	1 -	-	-	-		BYR	-	-	-	MYS, THA, VNM		-
DED	1 KOD MVS		VNM IND			VED				HKG, SGP		
DER	TWN	, -	vinn, ind	-		IEK	-	-	-	vinin, ind	-	-
DBYE	1 -	-	-	-		DBYR	-	-	-	MYS, THA, VNM	-	-
DDDD			VAD (DIS			DUTT				HKG, SGP		
DBER	MYS	., -	v nm, ind	-		DYER	-	-	-	vnm, ind	-	-
BYER	1 -	-	-	-		DBYE	R-	-	-	-	-	-

Table 6.16 OCA-HCM-preparedness cross-anchor subclusters

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi)

Table 6 17	OCA-HCM	I-prepare	dness	clusters
14010 0.17	00111101	i propuio	anebb	erabterb

Dollar									
Cluster	TRA (%)	BUS	INF (%)	RER ¹	INT	EXP	DEB	LAB	N ²
Pre-crisis									
All Cases	25.002	.182	7.752	6.813	.215	3.253	2.539		
1 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, AUS,									
NZL, CAN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	26.344	.283	3.361	1.968	.651	4.137	1.173	-	3
2 MAC, BRN, ELS1	21.544	312	7.277	2.532	.607	1.601	1.951	-	0
3 IDN, THA, VNM, JPN	18.160	.016	8.179	2.939	972	3.020	2.826	-	0
4 KHM, LAO	2.145	.030	9.524	3.015	994	1.854	8.685	-	0
5 MMR	3.267	100	14.438	2.938	.897	2.529	9.475	-	2
6 GTM1, ELS2, GTM2, ECU3	39.296	.712	6.520	2.548	383	2.331	1.474	-	1
7 ECU1	41.699	.150	33.452	5.689	.737	2.158	3.287	-	1
8 ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	0
Crisis									
All Cases	24.964	.121	9.006	7.790	.048	3.188	1.591		
1 KOR, MYS, PHL, SGP, THA, VNM, BRN, NZL, ELS1,									
EMU2	19.315	239	3.483	4.187	.570	2.849	1.068	-	0
2 TWN, PAN, ELS3, GTM3, EMU1, EMU3	30.579	.665	1.944	.933	.360	4.054	.974	-	1
3 KHM, GTM1, ELS2, GTM2, ECU3	36.437	.729	6.555	2.521	505	2.174	1.582	-	0
4 CHN, HKG, MAC, JPN	18.592	448	3.193	1.423	737	2.388	.698	-	0
5 IND, AUS	12.828	.704	3.269	2.984	753	5.233	1.951	-	0
6 CAN	73.515	.922	.596	1.547	.832	4.456	n.a. ³	-	4
7 IDN	11.197	482	21.576	16.519	826	6.390	2.416	-	1
8 LAO	1.013	028	67.298	11.101	159	2.674	5.252	-	1
9 MMR	4.034	560	24.586	3.340	353	3.412	3.261	-	0
10 ECU1	41.699	.150	33.452	5.689	.737	2.158	3.287	-	0
11 ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	0
Post-crisis 7V									
All Cases	24.154	.264	6.190	6.454	159	3.266	1.351		
1 CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM,									
IND, MAC, JPN, GTM1, GTM2, ECU3	21.787	.553	3.461	1.648	635	2.916	.958	-	1
2 NZL, PAN, ELS2, GTM3, EMU1, EMU2, EMU3	26.914	.416	1.767	1.515	.353	3.506	1.074	-	0
3 KOR, BRN	11.250	605	1.743	1.741	.452	1.852	.330	-	0
4 ELS1	37.443	451	12.575	5.675	.231	2.028	1.853	-	0
5 IDN, AUS	11.038	.009	3.742	4.599	292	6.386	1.722	-	1
6 MMR	2.913	729	23.681	2.307	.251	4.119	2.009	-	0
7 CAN, ELS3	60.509	.142	1.011	1.432	565	4.928	1.741	-	2
8 LAO	.729	.310	6.162	1.308	.213	2.442	4.457	-	2
9 ECU1	41.699	.150	33.452	5.689	.737	2.158	3.287	-	0
10 ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	1
Post-crisis 8V									
All Cases	24.154	.264	6.190	6.454	159	3.266	1.351	68.7	
1 CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM,									
IND, MAC, JPN, GTM1, GTM2, ECU3	21.787	.553	3.461	1.648	635	2.916	.958	67.5	1
2 PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	32.075	.514	1.859	.785	.357	3.648	1.241	56.8	1
3 ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	1
4 IDN	10.045	.100	6.663	3.931	685	6.159	1.722	48.4	1
5 KOR, ELS1	26.170	504	6.775	3.849	.608	2.268	1.256	55.6	0
6 BRN	7.604	653	2.511	1.460	081	1.197	.000	94.0	1
7 AUS, NZL	12.551	229	.657	5.453	.213	5.223	n.a.	91.8	1
8 LAO	0.729	.310	6.162	1.308	.213	2.442	4.457	69.4	1
9 CAN	71.818	021	.882	2.333	565	5.025	.000	90.9	1
10 MMR	2.913	729	23.681	2.307	.251	4.119	2.009	-	0
11 ECU1	41.699	.150	33.452	5.689	.737	2.158	3.287	-	0

Table 6.17 OCA-H	ICM-preparedness clusters	(continued)
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_	Currency Basket									
	Cluster	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N ²
	Cluster	(%)		(%)						
	Pre-crisis									
	All Cases	23.772	.104	8.208	7.704	.148	3.292	2.539		
1	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA,									
	IND, AUS, NZL, CAN, PAN, ELS1, ELS3, GTM3, EMU1,									
	EMU2, EMU3	22.952	.076	4.165	3.262	.224	3.955	1.308	-	1
2	KHM, LAO, MMR, VNM, MAC, BRN	11.543	055	11.450	3.043	.020	2.060	5.962	-	1
3	GTM1, GTM2, ECU3	37.207	.687	8.133	3.183	668	2.4/5	1.587	-	0
4	ELS2	45.562	./88	1.682	.644	.4/3	1.898	1.134	-	4
5	ECUI	41.699	.150	33.452	5.689	./3/	2.158	3.287	-	0
6	ECU2	33.514	879	51.111	147.15	./91	2.406	2.760		1
_	Crisis	00.070		0.005	0.001	050		1 501		
	All Cases	22.670	.212	9.235	9.321	.053	3.226	1.591		
1	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA,									
	VNM, IND, MAC, BRN, NZL, CAN, PAN, ELS1, ELS2,									
	ELS3, GTM3, EMU1, EMU2, EMU3	21.867	.245	3.036	4.187	.136	3.156	1.091	-	1
2	GTM1, GTM2, ECU3	37.207	.687	8.133	3.183	668	2.475	1.587	-	2
3	IDN, AUS	13.086	.104	11.816	10.899	358	6.281	2.416	-	1
4	MMR	5.428	537	24.978	5.668	.022	3.412	3.261	-	0
5	ECUI	41.699	.150	33.452	5.689	.737	2.158	3.287	-	1
6	LAO	4.070	.127	68.106	12.122	188	2.674	5.252	-	1
7	ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	1
	Post-crisis 7V									
_	All Cases	22.010	.217	6.524	6.892	.071	3.301	1.351		
1	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP,									
	THA, VNM, IND, MAC, BRN, AUS, NZL, PAN, EMU1,									
	EMU2, EMU3	15.097	.216	2.351	2.176	.128	3.466	.803	-	1
2	CAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	40.324	.590	4.698	2.025	265	3.307	1.453	-	2
3	MMR	4.023	799	24.559	2.364	238	4.119	2.009	-	1
4	ECUI, ELSI	39.571	150	23.014	5.682	.484	2.093	2.570	-	0
5	LAO	3.441	.490	7.151	1.961	284	2.442	4.457	-	2
6	ECU2	33.514	879	51.111	147.15	./91	2.406	2.760		1
_	Post-crisis 8 V	00.010		0.504		074		1 051		
	All Cases	22.010	.217	6.524	6.892	.071	3.301	1.351	67.9	
1	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA,									-
	VNM, IND, MAC, PAN, EMU1, EMU2, EMU3	15.928	.340	2.178	1.669	.143	3.220	.794	65.0	0
2	IDN	11.537	.141	7.663	4.123	.024	6.159	1.722	48.4	1
3	ELS1	37.443	451	12.575	5.675	.231	2.028	1.853	-	0
4	ELS2, ELS3, GTM3	44.856	.601	2.425	.702	.387	3.567	1.319	63.0	2
5	AUS, NZL, CAN	20.207	124	1.317	4.482	068	5.157	n.a.	91.5	1
6	GTM1, GTM2, ECU3	37.207	.687	8.133	3.183	668	2.4/5	1.587	37.1	1
7	BKN	11.005	632	1.786	1.//3	.089	1.197	.000	94.0	1
8	MMK	4.023	/99	24.559	2.364	238	4.119	2.009	-	0
9	LAO	3.441	.490	7.151	1.961	284	2.442	4.457	69.4	1
10	J ECUI	41.699	.150	33.452	5.689	./37	2.158	3.287	-	0
- 10	I ECU2	33.514	879	51.111	147.15	./91	2.406	2.760	-	1

	Yen									
	Chuster	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N ²
	Cluster	(%)		(%)						
	Pre-crisis									
	All Cases	25.216	.054	8.757	9.257	066	3.292	2.539		
1	CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, NZL, CAN	15.856	141	5.566	8.760	724	3.956	1.106	-	0
2	BRN, GTM1, ELS2, GTM2, ECU3	41.000	.608	6.230	2.603	383	2.084	1.179	-	2
3	ELS1	37.443	451	12.575	5.675	.231	2.028	1.853	-	0
4	KHM, LAO	11.691	369	10.757	4.115	.986	1.854	8.685	-	2
5	IDN, THA, AUS, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	29.156	.256	2.979	1.962	.496	4.167	1.523	-	3
6	MMR. MAC	12.136	357	10.956	3.192	950	2.104	6.738	-	Ō
7	VNM. ECU1	31.163	.278	29.749	5.251	.867	2.752	4.106	-	0
8	ECU2	33 514	- 879	51 111	147 15	791	2 406	2 760	-	0
-	Crisis			• • • • • •						
	All Cases	21,558	.423	9.357	9,290	.017	3.226	1.591		
1	KOR MYS PHI SGP THA VNM BRN NZI CAN	15,006	690	2 666	5.064	- 705	2 956	956		0
2	GTM1 FLS2 GTM2 FCU3	39 296	712	6 520	2 548	- 383	2 331	1 474	-	1
3	CHN TWN PAN ELS3 GTM3 EMUL EMU2 EMU3	27 183	473	1 709	3 614	376	3 986	910	-	1
4	HKG KHM MAC	5 632	6/0	3 8/0	/ 312	.070	1 960	1 1 5 2		1
5	MMR IND	6 228	- 402	16 233	4 199	697	3 853	2 606		0
6	FCUL FLS1	39 571	- 150	23 014	5 682	484	2 093	2 570		1
7	IDN	10 5/3	800	22.014	16 357	-0 - .	6 300	2.370	_	2
8		15 300	- 803	2 530	10.557	- 685	6 173	2.410	_	2
0		3 221	003	60 312	11 836	003	2.674	5 252	_	1
10	ECU2	0.221	.039	09.01Z	147 15	003	2.074	0.760	-	0
10	Deut minin 7W	33.314	079	51.111	147.15	.791	2.400	2.700	-	0
		20 644	065	7 1 0 0	7 170	200	2 201	1.051		
1	CHN HEC TWN MYS SCD THA WNM IND EMUL	20.044	.205	7.133	7.179	.300	3.301	1.351		
1	CHN, HKG, IWN, MYS, SGP, IHA, VNM, IND, EMUI,	10 150	004	0.050	0.000	055	0 000	001		~
2	EMUS	13.130	.604	2.002	2.202	.000	3.039	.031	-	0
2	IDN, AUS, NZL, CAN, EMU2	13.231	024	3.823	3.650	.310	5.189	1.722	-	1
3	KHM, PHL, MAC	7.600	.277	4.119	2.779	.963	1.565	1.200	-	1
4	GIMI, GIM2, ECU3	39.401	.700	0.957	3.182	375	2.913	1.2/5	-	1
2	ELS3, GIM3	44.503	.508	2.796	./31	.302	4.401	1.412	-	1
6	PAN, ELS2	38.414	.581	1.65/	.621	.344	1.753	1.070	-	2
/	KOR, BRN	21.962	544	2.195	2.319	193	1.852	.330	-	0
8	ELSI	37.443	451	12.5/5	5.675	.231	2.028	1.853	-	0
9	LAO	1.644	.489	9.059	2.432	838	2.442	4.457	-	1
10	MMR	4.401	/20	26.361	2.674	/39	4.119	2.009	-	0
11	ECUI	41.699	.150	33.452	5.689	./3/	2.158	3.287	-	0
12	ECU2	33.514	879	51.111	147.153	./91	2.406	2.760	-	0
	Post-crisis 8V		0.05	7 / 00	7 4 7 0		0.004	1 051		
	All Cases	20.644	.265	7.133	7.179	.380	3.301	1.351	67.9	
1	CHN, HKG, TWN, KHM, IDN, MYS, PHL, SGP, THA,									
	VNM, IND, MAC, EMU1, EMU2, EMU3	12.785	.473	3.295	2.427	.842	3.570	.864	66.4	1
2	AUS, NZL, CAN	9.579	114	2.856	4.271	.119	5.157	n.a.	91.5	3
3	KOR, BRN, ELS1	27.122	513	5.655	3.438	052	1.911	.838	74.8	0
4	PAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	39.636	.606	4.758	1.750	169	2.819	1.389	50.8	2
5	LAO	1.644	.489	9.059	2.432	838	2.442	4.457	69.4	1
6	MMR	4.401	720	26.361	2.674	739	4.119	2.009	-	0
7	ECU1	41.699	.150	33.452	5.689	.737	2.158	3.287	-	1
8	ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	0

Euro				1					
	TRA	BUS	INF	RER	INT	EXP	DEB	LAB	N²
Cluster	(%)		(%)						
Dra arisis									
	20 536	021	8 033	7 50/	158	3 253	2 5 3 0		
1 CHN HKG KOR TWN IDN MYS PHI, SGP THA	20.000	.021	0.002	7.004	.150	0.200	2.000		
IND. AUS. NZL. CAN EMU2	12 072	- 244	4 4 2 7	3 851	118	3 981	1 240		0
2 PAN, ELS1	37.139	364	7.564	3.005	.340	2.817	1.544	-	0
3 GTM1, GTM2, ECU3	37.207	.687	8.133	3.183	668	2.475	1.587	-	Ō
4 ELS2	45.562	.788	1.682	.644	.473	1.898	1.134	-	4
5 KHM, LAO	11.401	.036	9.824	4.071	.772	1.854	8.685	-	0
6 VNM	12.670	077	23.962	4.424	.794	3.346	4.925	-	1
7 MAC, BRN, JPN	9.993	.117	3.299	3.003	231	1.593	2.000	-	0
8 ELS3, GTM3, EMU1, EMU3	31.946	.603	2.196	.812	.419	4.429	1.412	-	1
9 MMR	8.772	044	15.020	2.807	567	2.529	9.475	-	1
10 ECU1	41.699	.150	33.452	5.689	.737	2.158	3.287	-	0
	33.514	879	51.111	147.15	.791	2.406	2.760	-	0
Crisis	10 500	170	0.010	44 504		0.400	1 501		
	19.532	.1/6	8.919	11.521	.062	3.188	1.591		
1 CHN, HKG, KOR, TWN, KHM, PHL, SGP, MAC, JPN	10.132	.1/2	2.771	10.260	.461	2.297	.963	-	0
2 GIMI, ELS2, GIM2, ECU3 2 IND DAN ELS2 CTM2 EMU1 EMU2 EMU2	39.290	./12	0.520	2.548	383	2.331	1.4/4	-	1
A MMD	5 980	- 823	2.433	2.090	201	4.329	3 261	-	0
5 MVS THA VNM BRN NZI	8 735	- 2020	2 1 9 5	0 / 12	- 827	3.412	833		0
6 AUS CAN	8 394	678	1 225	7 005	- 582	5.314	.000 n a ³	_	1
7 IDN	10 402	- 224	22 092	19 395	382	6 390	2 4 1 6	-	1
8 ECUL ELSI	39.571	150	23.014	5.682	.484	2.093	2.570	-	1
9 LAO	9.512	023	68,446	13.940	330	2.674	5.252	-	1
10 ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	1
Post-crisis 7V									
All Cases	19.220	.145	6.286	7.030	.175	3.266	1.351	-	
1 CHN, HKG, KOR, TWN, KHM, MYS, SGP, MAC, BRN, JPN	8.707	.118	1.732	2.454	.352	2.335	.612	-	0
2 IDN, VNM, IND, EMU1, EMU2, EMU3	15.488	.440	3.303	2.094	.377	4.900	1.164	-	0
3 PHL, THA, NZL	10.796	827	1.959	3.669	.350	3.495	1.017	-	0
4 GTM1, GTM3, ECU3	36.911	.636	8.146	2.992	294	2.914	1.589	-	0
5 ELS3, GTM3	44.503	.508	2.796	.731	.302	4.401	1.412	-	1
6 AUS, CAN	8.618	.301	1.097	4.137	363	5.818	n.a.	-	2
7 PAN, ELS2	38.414	.581	1.657	.621	.344	1.753	1.070	-	1
8 ELSI	37.443	451	12.575	5.675	.231	2.028	1.853	-	1
9 MMR	5.473	970	24.554	2.215	620	4.119	2.009	-	0
10 LAO	9.068	.//2	7.239	2.020	639	2.442	4.457	-	2
12 ECU2	41.099 33.51/	- 870	51 111	0.009 1/7 153	./3/ 701	2.100	3.207 2.760	-	0
12 ECU2 Doct price 9V	33.314	079	51.111	147.155	.791	2.400	2.700		0
All Cases	10.220	145	6 296	7 020	175	2 266	1 251	69.7	
1 CHN HKC KOD TWN KHM MYS SCD MAC IDN	0 500	106	1 702	2.507	261	2.462	600	71.2	
2 IDN VNM IND EMILI EMIL2 EMIL3	15 488	.190	3 303	2.007	377	4 900	1 164	58.2	0
3 PHL THA NZL	10.796	- 827	1 959	3 669	350	3 4 9 5	1 017	76.4	ő
4 BRN	1 494	- 586	1 196	1 985	270	1 197	000	94.0	1
5 PAN, ELS2, ELS3, GTM3	41.458	.545	2.227	.676	.330	3.077	1.241	55.4	1
6 ELS1	37.443	451	12.575	5.675	.231	2.028	1.853	-	0
7 GTM1, GTM2, ECU3	37.207	.687	8.133	3.183	668	2.475	1.587	37.1	0
8 AUS, CAN	8.618	.301	1.097	4.137	363	5.818	n.a.	89.8	2
9 MMR	5.473	970	24.554	2.215	620	4.119	2.009	-	0
10 LAO	9.068	.772	7.239	2.625	639	2.442	4.457	69.4	2
11 ECU1	41.699	.150	33.452	5.689	.737	2.158	3.287	-	1
12 ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	1

Table 6.17 OCA-HCM-	preparedness clu	usters (continued)
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Table 6 17 OCA-HCM-preparedness	clusters (continued)
ruble 0.17 OCH ment preparednese	(continued)

	Yuan									
_		TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N ²
	Cluster	(%)		(%)						
	Pre-crisis									
	All Cases	17.692	.237	10.527	8.285	.086	3.218	2.610	-	
1	HKG, KOR, TWN, IDN, MYS, SGP, AUS, NZL, CAN,									
	PAN, ELS3, GTM3, EMU1, EMU2, EMU3	14.853	.374	6.213	3.143	.480	3.966	.933	-	1
2	MAC, GTM1, ELS2, GTM2, ECU3	35,404	.670	6.962	2,966	274	2,200	1.979		2
3	PHL, THA, VNM, IND	2.576	.025	11.941	5.080	839	4.143	3.055		1
4	BRN. JPN. ELS1	14.209	457	11.880	5.327	.395	1.709	.926		Ó
5	KHM, LAO, MMR	12,728	.205	13.634	4.668	578	2.079	8.948		1
6	ECU1	41 699	150	33 452	5 689	737	2 158	3 287	-	1
7	ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	1
-	Crisis			• • • • • •						
	All Cases	19 925	231	9 5 1 8	8 094	153	3 186	1 629	-	
1	HKC KOR PHI MAC IPN NZI PAN ELS2 ELS3	10.020	.201	0.010	0.001	.100	0.100	1.020		
1	GTM3 FMU1 FMU2 FMU3	24 862	522	2 304	2 163	544	3 283	1 055		2
2	MVS SCP THA VNM BRN GTM1 GTM2 ECU3	18 072	530	4 762	3 526	- 657	2 6 3 7	1 1 57	_	0
3	TWN KHM IND AUS CAN	5 394	- 785	4 1 94	2 599	467	3 820	1 400		0
1	FCU1 FLS1	39 571	- 150	23 014	5 682	484	2 093	2 570		1
5	IDN MMR	12 264	585	24 472	9 970	053	4 901	2 838		2
6		5 679	217	69 459	11 224	- 724	2 674	5 252		1
7	EQU2	33 514	- 879	51 111	147 15	791	2.074	2 760		1
	Post crisis 7V	00.014	.075	51.111	147.15	.751	2.400	2.700		
-	All Cases	20.005	206	6 6 1 6	6 721	260	2 260	1 200		
	HIC TWN KUM MYS SCD THA IDN	20.995	.200	0.010	1 4 9 0	.300	0.700	1.300		- 1
2	IDN VNM IND EMULTEMUS	10.002	.549	2.070	1.409	.947	2.792	1 1 6 4	-	
2	DIN, VINN, IND, EMUT, EMUS	13.270	.0//	0.040	1.730	.//0	1.062	1.104	-	1
3	CTM1 CTM2 ECU2	35.405	.532	2.3/9	.992	.555	1.903	1.204	-	0
4	GIMI, GIM2, ECU3	37.207	.687	8.133	3.183	668	2.4/5	1.587	-	1
2	ELSS, GIMS	44.503	.508	2.796	.731	.302	4.401	1.412	-	2
0	MMK	16.824	325	23.901	2.501	606	4.119	2.009	-	0
/	AUS, NZL, CAN, EMUZ	9.440	207	1.892	3.774	023	4.946	n.a.	-	1
8	KUK, BKN	11.196	258	2.080	1.939	268	1.852	.330	-	0
9	MAC, ELSI	32.639	507	/.48/	3.266	.614	1.599	1.463	-	0
10) ECUI	41.699	.150	33.452	5.689	./3/	2.158	3.287	-	0
10	LAO DECLO	6.981	.662	7.225	1.4/1	841	2.442	4.457	-	1
14	2 ECU2	33.514	879	51.111	147.153	.791	2.406	2.760	-	0
	Post-crisis 8 V	00.005		0.010	0 70 /			1 0 0 0		
	All Cases	20.995	.286	6.616	6.731	.360	3.268	1.388	69.0	
1	HKG, TWN, KHM, IDN, MYS, SGP, THA, VNM, IND,									-
	JPN, EMU1, EMU2, EMU3	12.345	.558	2.547	1.546	.824	3.765	.822	69.3	2
2	PHL, PAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	38.355	.584	4.641	1.748	005	2.765	1.399	52.2	0
3	KOR, MAC, BRN, ELS1	21.918	382	4.784	2.603	.173	1.726	.897	74.8	0
4	MMR, AUS, NZL, CAN	8.666	293	7.639	4.148	224	4.897	2.009	91.5	2
5	ECUI	41.699	.150	33.452	5.689	.737	2.158	3.287		1
6	LAO	6.981	.662	7.225	1.471	841	2.442	4.457	69.4	3
7	ECU2	33 514	- 879	51 111	147 15	791	2 4 0 6	2 760	-	0

 $\frac{7 \text{ ECU2}}{33.514} - \frac{.879}{51.111} \frac{147.15}{147.15} \frac{.791}{2.406} \frac{2.760}{2.760} - \frac{.791}{2.406} \frac{2.760}{2.760} - \frac{.791}{2.406} \frac{12.760}{2.760} \frac{.791}{2.406} \frac{12.760}{2.760} - \frac{.791}{2.406} \frac{12.760}{2.760} \frac{.791}{2.406} \frac{12.760}{2.760} - \frac{.791}{2.406} \frac{.$

6.2.3.2 Preparedness Assessment using Weighted Criteria

It may also be instructive to investigate the levels of preparedness when the sum of the 'benefit' criteria and the sum of the 'cost' criteria are given equal weights, in a sense measuring the robustness of the preparedness when the trade and debt criteria are given larger weights whilst at the same time the cost criteria are given lesser weights. The results are shown in Table 6.18; columns '1' display the preparedness solutions using the original unweighted variables and columns '2' the solutions based on weighted variables.

Cross-weighting prepared common sets are shown in columns 2 in Table 6.19. Countries in these subsets are still equally prepared even after the weighting because they are generally linked with all the EMU benchmarks after the weighting, as good as those before the weighting. Columns 1 contain the cross-weighting subsets in the original solutions without any benchmarks. Countries that are placed together in both the subsets in columns 1 and 2 (non-singleton sets highlighted in column 1) might share common OCA features and degrees of preparedness regardless of the weighting.

For pre-crisis period, relatively substantial common sets defined above are present under dollar anchor and for crisis period under basket and yuan anchors. For post-crisis 7V, only Indonesia-Australia and Australia-NewZealand by basket and yuan anchors respectively are present. For post-crisis 8V, the US-based Cambodia-Philippines-Macau and Singapore-Japan and the G3-based Malaysia-Thailand-China-Taiwan-Korea, Cambodia-Macau, and HongKong-Singapore subsets are found.

Hong Kong and Macau as well as Singapore and Brunei are not seen sharing any common set. Rather, Hong Kong and Singapore are seen together for the crisis and postcrisis 8V periods under the basket anchor.

In brief, few countries simultaneously share common OCA features and levels of preparedness across unweighted and weighted criteria. Despite this, in relation to other anchors, on the whole basket anchor is compatible with more substantial groups of

countries exhibiting this attribute.

	Dollar		ollar	Currenc	y Basket	Y	'en	E	uro	Yuan	
	_	1	2	1	2	1	2	1	2	1	2
	1	CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, AUS, NZL, CAN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, MYS, SGP, IND, AUS, NZL, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, AUS, NZL, CAN, PAN, ELS1, ELS3, GTM3, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, IDN, MYS, SGP, THA, BRN, NZL	IDN, THA, AUS, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, IND, MAC, AUS, NZL, CAN, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, AUS, NZL, CAN, EMU2	CHN, HKG, KOR, TWN, IDN, MYS, SGP, THA, AUS, NZL, CAN	HKG, KOR, TWN, IDN, MYS, SGP, AUS, NZL, CAN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, AUS, NZL, CAN
Pre-crisis.	2	MAC, BRN, ELS1	GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	KHM, LAO, MMR, VNM, MAC, BRN	PHL, IND, AUS, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, NZL, CAN	IDN, BRN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	ELS3, GTM3, EMU1, EMU3	PHL, IND, EMU1, EMU2, EMU3	MAC, GTM1, ELS2, GTM2, ECU3	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3
	3	GTM1, ELS2, GTM2, ECU3	PHL, PAN, ELS1	GTM1, GTM2, ECU3	GTM1, GTM2, ECU3	BRN, GTM1, ELS2, GTM2, ECU3	KHM, LAO, MMR	GTM1, GTM2, ECU3	GTM1, GTM2, ECU3	PHL, THA, VNM, IND	HKG, MAC, EMU1, EMU2, EMU3
	4	IDN, THA, VNM, JPN	IDN, THA, JPN	ELS2	CAN, GTM3	VNM, ECU1	VNM	PAN, ELS1	ELS2, ELS3, GTM3	BRN, JPN , ELS1	BRN, JPN
	5	KHM, LAO	LAO, MMR	ECU1	VNM, MAC	KHM, LAO	ECU2	KHM, LAO	PAN, ELS1	KHM, LAO, MMR	KHM, VNM
-	6	MMR	KHM	ECU2	LAO, MMR	MMR, MAC		MAC, BRN, JPN	MAC, JPN	ECU1	LAO, MMR
	7	ECUI	VNM		PAN, ELS1	ECU2		VNM	KHM, VNM	ECU2	ECU2
	8	ECU2	MAC		ELS3	ELS1		ELS2	LAO, MMR		ECU1
	9		BRN		ELS2			MMR	BRN		
	10		CAN		KHM			ECU1	ECU1		
	11		ECU1		ECUI			ECU2	ECU2		
	12		ECU2		ECU2						
	1	KOR, MYS, PHL, SGP, THA, VNM, BRN, NZL, ELS1, EMU2	PHL, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU2	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, THA, VNM, IND, MAC, BRN, NZL, CAN, PAN, ELS1, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, IDN, MYS, MMR, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, EMU1, EMU2, EMU3	KOR, MYS, PHL, SGP, THA, VNM, BRN, NZL. CAN	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, VNM, MAC, AUS, NZL, CAN, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, PHL, SGP, MAC, JPN	CHN, HKG, KOR, TWN, MYS, SGP, MAC, BRN	HKG, KOR, PHL, MAC, JPN, NZL, PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	HKG, KOR, TWN, KHM, IDN, MYS, MMR, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, EMU1, EMU2, EMU3
Crisis	2	ELS3, GTM3, EMU1, EMU3	KOR, TWN, MYS, SGP, MAC, BRN	ECU3	ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	PAN, ELS3, GTM3, EMU1, EMU2, EMU3	ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	ELS3, GTM3, EMU1, EMU2, EMU3	JPN , EMU1, EMU2, EMU3	THA, VNM, BRN, GTM1, GTM2, ECU3	ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3
	3	KHM, GTM1, ELS2, GTM2, ECU3	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3,	IDN, AUS	ECU2	GTM1, ELS2, GTM2, ECU3	KHM, MMR, IND	GTM1, ELS2, GTM2, ECU3	PAN, GTM1, ELS2, GTM2, ECU3, GTM3	TWN, KHM, IND, AUS, CAN	ECU2
	4	CHN, HKG, MAC, JPN	KHM, JPN	MMR	LAO	HKG, KHM, MAC	ECU1	MYS, THA, VNM, BRN, NZL	PHL, THA, VNM,, AUS, NZL, CAN	ECU1, ELS1	LAO
						MMR, IND	ECU2	ECU1, ELS1	ELS3	IDN, MMR	
	5	IND, AUS	IDN, MMR	ECU1							
	5	IND, AUS	IDN, MMR ECU1	ECU1 LAO		ECU1, ELS1	LAO	AUS, CAN	IDN	LAO	
	5 6 7	IND, AUS CAN IDN	IDN, MMR ECU1 ECU2	ECU1 LAO ECU2		ECU1, ELS1 IDN	LAO	AUS, CAN IDN	IDN MMR	LAO ECU2	
	5 6 7 8	IND, AUS CAN IDN LAO	IDN, MMR ECU1 ECU2 CAN	ECU1 LAO ECU2		ECU1, ELS1 IDN AUS	LAO	AUS, CAN IDN MMR	IDN MMR LAO	LAO ECU2	
-	5 6 7 8 9	IND, AUS CAN IDN LAO MMR	IDN, MMR ECU1 ECU2 CAN LAO	ECU1 LAO ECU2		ECU1, ELS1 IDN AUS LAO	LAO	AUS, CAN IDN MMR LAO	IDN MMR LAO ECU1	LAO ECU2	
- - - - -	5 6 7 8 9 10	IND, AUS CAN IDN LAO MMR ECU1	IDN, MMR ECU1 ECU2 CAN LAO	ECU1 LAO ECU2		ECU1, ELS1 IDN AUS LAO ECU2	LAO	AUS, CAN IDN MMR LAO ECU2	IDN MMR LAO ECU1 ECU2	LAO ECU2	
-	5 6 7 8 9 10 11	IND, AUS CAN IDN LAO MMR ECU1 ECU2	IDN, MMR ECU1 ECU2 CAN LAO	ECU1 LAO ECU2		ECU1, ELS1 IDN AUS LAO ECU2	LAO	AUS, CAN IDN MMR LAO ECU2	IDN MMR LAO ECU1 ECU2 ELS1	LAO ECU2	

Table 6.18 OCA-HCM-preparedness-weighting assessment

	Dollar		Current	y Basket	Y	en	E	uro	Yuan		
		1	2	1	2	1	2	1	2	1	2
	1	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN, GTM1, GTM2, ECU3	CHN, HKG, TWN, MYS, PHL, SGP, THA, VNM, MAC, JPN	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, PAN, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, NZL	CHN, HKG, TWN, MYS, SGP, THA, VNM, IND, EMU1, EMU3	CHN, HKG, TWN, KHM, MYS, SGP, THA, VNM, IND, MAC, CAN	CHN, HKG, KOR, TWN, KHM, MYS, SGP, MAC, BRN, JPN	CHN, HKG, KOR, TWN, KHM, IDN, MYS, MMR, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, EMU1, EMU2, EMU3,	HKG, TWN, KHM, MYS, SGP, THA, JPN	HKG, TWN, KHM, MYS, SGP, THA, VNM, IND, JPN
_	2	NZL, PAN, ELS2, GTM3, EMU1, EMU2, EMU3	IDN, IND, AUS, NZL, EMU1, EMU2, EMU3	CAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	IDN, AUS, EMU1, EMU2, EMU3	IDN, AUS, NZL, CAN, EMU2	IDN, PHL, AUS, NZL, EMU1, EMU2, EMU3	IDN, VNM, IND, EMU1, EMU2, EMU3	PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	IDN, VNM, IND , EMU1, EMU3	IDN, AUS, NZL, CAN, EMU1, EMU2, EMU3
Post- crisis 7V	3	KOR, BRN	KHM, PAN, GTM1, GTM2, ECU3	MMR	PAN, ELS2, GTM3	KHM, PHL, MAC	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, GTM3	PHL, THA, NZL	LAO	PHL, PAN, ELS2,	PHL, MAC, PAN
	4	ELS1	ELS2, ELS3, GTM3	ECU1, ELS1	CAN, GTM1, GTM2, ECU3	GTM1, GTM2, ECU3	ELS3	GTM1, GTM3, ECU3	ECU2	GTM1, GTM2, ECU3	ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3
	5	IDN, AUS	KOR, BRN	LAO	ELS1	ELS3, GTM3	KOR	ELS3, GTM3		ELS3, GTM3	KOR, BRN
	6	MMR	ELS1	ECU2	ELS3	PAN, ELS2	BRN	AUS, CAN		MMR	MMR
	7	CAN, ELS3	MMR		BRN	KOR, BRN	MMR	PAN, ELS2		AUS, NZL, CAN EMU2	ECU1
	8	LAO	ECU1		MMR	ELS1	ECU1	ELS1		KOR BRN	ECU2
	9	ECU1	ECU2		ECU1	LAO	ECU2	MMR		MAC. ELSI	LAO
	10	ECU2	CAN		ECU2	MMR	LAO	LAO		ECU1	
	11		LAO		LAO	ECU1		ECU1		LAO	
	12					ECU2		ECU2		ECU2	
-											
All Periods	1	MYS, PHL, SGP	IND, AUS, NZL	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, IND NZL	AUS	-	IDN, PHL, AUS, NZL	IND	IND	NZL	MAC
7V	2	TWN		CAN	CAN					MAC	
	3	KHM									
	4	NZL									
	1	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN, GTM1, GTM2, ECU3	IDN, PHL, SGP, IND, MAC, JPN, AUS, NZL, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, PAN, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, IDN, MYS, MMR, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, EMU1, EMU2, EMU3	CHN, HKG, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, EMU1, EMU2, EMU3	IDN, PHL, AUS, NZL, CAN, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, MYS, SGP, MAC, JPN	CHN, HKG, KOR, TWN, KHM, IDN, MYS, MMR, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, EMU1, EMU2, EMU3	HKG, TWN, KHM, IDN, MYS, SGP, THA, VNM, IND, JPN, EMU1, EMU2, EMU3	HKG, MYS, SGP, THA, BRN, JPN, AUS, NZL, CAN
Post- crisis 8V	2	PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	KHM, PAN, GTM1, ELS2, GTM2, GTM3	GIMI, GIM2, ECU3	CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	PAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	CHN, HKG, TWN, KHM, MYS, SGP, THA, VNM, IND, MAC	IDN, VNM, IND, EMU1, EMU2, EMU3	ECU1, ECU2, ELS2, GTM2, ECU3, ELS3, GTM3	PHL, PAN, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	GTM1, ELS2, GTM2, ELS3, GTM3
	3	KOR, ELSI	CHN, HKG, TWN, MYS, THA, VNM	ELS2, ELS3, GTM3	ECU1, ECU2	KOR, BRN, ELS1	PAN, GTM1, ELS2, GTM2, GTM3	PAN, ELS2, ELS3, GTM3	PAN, ELS1, GTM1	KOR, MAC, BRN, ELS1	IDN, VNM, IND, EMU1, EMU2, EMU3
	4	AUS, NZL	ELS1, ECU4	AUS, NZL,	LAO	AUS, NZL,	ELS2, ECU3	GTM1, GTM2, ECU3	LAO	MMR, AUS,	PHL, MAC,
	5	IDN	BRN	IDN		LAO	BRN	PHL, THA, NZL		ECU1	TWN, KHM
	6	BRN	LAO	ELS1		MMR	MMR	AUS, CAN		LAO	KOR, MMR
	7	ECU2	CAN	BRN		ECU1	LAO	ELS1		ECU2	LAO
	8	LAO	MMR	MMR		ECU2	KOR	BRN			PAN, ECU3
	9	CAN	KOR	LAO			ECU1	MMR			ECUI
	11	FCUI	ELUI	ECUI			ECU2	ECUI			ECU2
	12	LCUI	ECU2	1002			CC	ECU2			
All	1	MYS, PHL, SGP	AUS, NZL	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, IND	PHL, IND, AUS	-	PHL, AUS, NZL, CAN	IND	IND	MYS, SGP	MAC
8V	2	TWN	PHL		CAN		IDN			HKG	
	3	KOR								MAC	
	4									JPN	
	5									RPN	
	0									DIVIN	

Table 6.18 OCA-HCM-preparedness-weighting assessment (continued)

	Dollar		Currency Basket		Y	/en	Euro		Yuan	
	1	2	1	2	1	2	1	2	1	2
	1 HKG, SGP,	CHN, HKG,	KOR, MYS,	PHL, IND,	TWN, SGP,	IDN	KOR, MYS,	PHL, IND	KOR, TWN,	HKG
	TWN, KOR,	KOR, TWN,	TWN	AUS	KOR, MYS,		TWN, THA		IDN, MYS,	
	MYS, MAC	MYS, SGP,			PHL, AUS				SGP	
		IND, AUS,								
Pre-	2 CIDI DID	NZL	LUC DDN	CAN		THA ALIC	CUN NZI			MAG
crisis	2 CHN, IND,	PHL	HKG, BKN	CAN		THA, AUS	CHN, NZL		PHL, THA,	MAC
	3 IDN IPN		LAO MMR			BRN	PHI IND		AUS CAN	
	THA		2/10, 1000			DIG	THE, IN		nes, ent	
	4 LAO, MMR		IDN, THA							
	5		IND, NZL							
	1 KOR, MYS,	PHL, THA,	HKG, SGP,	CHN, HKG,	KOR, MYS,	CHN, TWN	HKG, JPN,	IND	HKG, PHL,	HKG, KOR,
	THA, NZL,	VNM	KOR, MYS	KOR, TWN,	PHL, SGP,		КНМ		KOR, JPN	PHL, MAC,
	SGP			KHM, MYS, PHI SGP	NZI					JPN, NZL
				THA, VNM.	ILL					
				IND, MAC,						
Crisis				BRN, NZL,						
Crisis	2 CHN, HKG,	NZL	THA, IND	CAN	HKG. MAC		CHN, PHL,		MYS, THA,	MYS, SGP,
	MAC						MAC		VNM	THA, VNM,
	2 IND ALLS		CUN VNM				KOD MYS		INID ALLS	BRN
	5 IND, AUS		CHN, VINM				THA		IND, AUS, CAN	
	4 PHL VNM		MAC BRN				SGP CAN		KHM SGP	
	5		Mille, Biuv				VNM, NZL		111111, 001	
							,			
	1 TWN, MYS,	IND	MYS, THA,	IDN, AUS	CHN, TWN,	IDN, AUS,	CHN, TWN,	IDN, VNM,	VNM, IND,	AUS, NZL,
	THA, CHN,		CHN, TWN,		MYS, THA,	NZL	HKG, MYS,	IND	MYS, THA	CAN
	HKG, SGP,		HKG, KOR,		VNM		KOR, JPN,			
Post-	IND, JPN, VNM		BRN				МАС, КНМ			
crisis	2 KHM, PHL	NZL	KHM, PHL	CAN	HKG, SGP		PHL, THA		KHM. JPN	IDN
7V	MAC		MAC	0.11	11110, 501					1DIT
	3 AUS, NZL	KHM	IDN, AUS,		KHM, MAC		AUS, NZL		AUS, NZL	PHL
			NZL							
	4		SGP, IND		IND, CAN					MAC
	1 MVG GCD	NZI	KOD MYG	CAN			KOD MYC	DID		MAG
All Periods	1 M 1 S, SGP	NZL	KOR, MYS	CAN	-	-	KOR, MYS	IND	-	MAC
7V										
	1 MYS, THA,	KHM, PHL,	MYS, THA,	CHN, HKG,	CHN, MYS,	IDN, PHL	MAC, JPN,	IDN, VNM,	MYS, THA,	IDN, VNM,
	CHN, TWN,	SGP, IND,	CHN, TWN,	KOR, TWN,	TWN, THA,		KOR, KHM,	IND	VNM, IND	IND
	IND, VNM	MAC, JPN	KOR	KHM, MYS,	VNM		CHN, TWN,			
Deat				THA VNM			VNM,			
crisis				IND MAC						
8V	2 KHM, PHL,		KHM, MAC	11,2, 11110	HKG, SGP		HKG, MYS.		HKG, SGP,	PHL
	MAC		, -		-,		THA,		JPN	
	3 HKG, SGP,		HKG, SGP		KHM, MAC		AUS, NZL		TWN, KHM	MAC
	JPN									
	4 AUS, NZL		AUS, NZL		AUS, NZL				AUS, NZL	
A 11	1		KOD MYS	DUI IND			MVS TUA	IND		MAC
Periods	1 -	-	KOK, MIS	ffil, ind	-	-	M15, 1HA	IND	-	MAC
8V										

Table 6.19 HCM cross-weighting and cross-preparedness-weighting subclusters

6.2.4 Recapitulation

The section has discussed the results using hierarchical cluster analysis and OCA criteria. The following are the key findings using 7 variables unless specific mention to 8 variables is given.

Classifications

Using the original unweighted criteria, based on the average silhouettes over all objects, the reference country consistent with best partitioning differs depending on period but based on the structure of the partitions, on the whole the G3 reference is in line with more convergent arrangements.

Notably, Singapore, Taiwan, and Malaysia consistently share the same grouping for dollar, basket, and yen anchors whilst Korea and Malaysia are always linked for basket and euro anchors over periods. The same is still true for Taiwan and Malaysia even when the post-crisis labor criterion is included.

Despite maintaining fixed dollar rates, with reference to US, Hong Kong and Macau share the same cluster for pre-crisis and crisis periods only. Singapore and Brunei, the monetary union constituents are rarely put together in the same cluster.

For the most recent period, the post-crisis period, Taiwan and Malaysia are linked over all anchors. With 8 variables, Thailand and Malaysia, Hong Kong and Singapore, and Australia and New Zealand are linked over all anchors.

Classifications using Weighted Criteria

How have the configurations changed when benefits and costs are treated equally? In general, putting more weight on trade openness, the benefit variable which is measured relative to a reference, has brought the region closer together against US but farther apart against Japan.

Specifically, Singapore and Malaysia still share the same grouping over periods by

the US reference and the same is true for Korea and Malaysia by basket or euro reference. With labor criterion for post-crisis period, only the Korea-Malaysia link under the G3 reference is still robust.

Hong Kong and Macau still share the same grouping for the pre-crisis and crisis periods by the US reference. Singapore and Brunei do not share any same grouping across weightings.

For post-crisis period, with 7 variables no countries are still linked over all anchors. With 8 variables, Malaysia and Thailand, and Australia and New Zealand are still present across all anchors.

Assessment of Preparedness using Unweighted Criteria

Based on the number of countries connected with the post-dollarization and/or post-euro benchmarks, in general the region could have been more prepared for a fixed basket peg throughout the periods.

Singapore and Malaysia, and Singapore, Korea, Malaysia, and Taiwan might have constantly shared common OCA features and degrees of preparedness over the periods under the US and the G3 reference respectively. When 8 variables are used for postcrisis period, Korea, Malaysia, and Taiwan still maintain these features by G3 reference.

For Hong Kong and Macau, they are not indicated to be symmetrical in the dimensions and the level of preparedness by the US reference for any period. It is also rarely the case for other references. Similar finding is found for Singapore and Brunei. On this evidence, despite maintaining similar monetary standards, these pairs of economies are not indicated to be always parallel in both the OCA dimensions and the level of preparedness under any reference.

No subgroupings which are present in the same Asian-only and Asian-plusbenchmark clusters are also at the same time present across all anchors.

Assessment of Preparedness using Weighted Criteria

Extremely few countries are indicated to commonly share OCA features and levels of preparedness regardless of criteria weighting. No subgroupings which are present in the same Asian-only and Asian-plus-benchmark clusters regardless of weighting are also at the same time present over all periods or across all anchors.

Those in the post-crisis crisis findings, however, may be worth mentioning. For post-crisis 7V, Indonesia-Australia and Australia-NewZealand are present under basket and yuan anchors respectively. For post-crisis 8V, the US-based Cambodia-Philippines-Macau and Singapore-Japan and the G3-based Malaysia-Thailand-China-Taiwan-Korea, Cambodia-Macau, and HongKong-Singapore are found.

Hong Kong and Macau as well as Singapore and Brunei are not shown to be simultaneously parallel in the OCA features and the degree of preparedness across the weightings.

6.3 Fuzzy Clustering Results

The results by fuzzy cluster analysis are categorized into 4 main sections: classifications, classifications using weighted criteria, assessment of preparedness, and a recapitulation.

6.3.1 Classifications

The section is divided into 3 parts: cluster validation; findings by monetary anchor; and comparisons of findings across the anchors.

Cluster Validation

Xie-Beni's Index (XBI) is used to determine the number of clusters corresponding to the most appropriate partitioning for fuzzy cluster analysis. The lower the XBI value, the better the fuzzy partition fits the structure of the data. Meantime, Normalized Dunn's Partition Coefficient (DPC) is employed to measure the degree of fuzziness in the data where a value close to 1 indicates no fuzziness whilst a value close to 0 indicates complete fuzziness.

Table 6.20 exhibits the XBI and DPC values for a range of cluster solutions. The selected numbers of clusters are highlighted. Sometimes a compromise between the two measures has to be made to ensure more interpretable results. For instance, though the XBI for the currency basket post-crisis 8V solution is lowest at 6 clusters, the corresponding DPC is virtually zero where each object would have close to equal degree of belongingness to every cluster. Hence the solution of 7 clusters with a substantially high DPC is used.

Among the solutions, the euro solutions on the whole obtain the lowest XBIs, suggesting relatively good fit between the data and the generated partitions.

_				Dolla	ar			Currency Basket									
	Pre-c	risis	Cri	sis		Post	t-crisis		Pre-crisis Crisis					Post-crisis			
				7V 8V			V					7V		81	V		
k	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	
2	1.16	.18	1.25	.09	1.44	.34	1.17	.21	1.27	.17	1.32	.18	1.28	.23	.99	.06	
3	1.09	.24	.96	.24	1.32	.23	.80	.11	.91	.24	1.05	.28	1.07	.25	.74	.09	
4	1.06	.31	1.04	.22	1.33	.34	.69	.10	.92	.34	.85	.27	1.18	.26	.65	.10	
5	.93	.30	.90	.25	1.10	.31	.81	.26	.82	.30	1.08	.29	1.16	.34	.56	.09	
6	1.03	.32	.89	.24	1.04	.36	.85	.27	1.05	.32	1.04	.28	1.09	.35	.50	.09	
7	1.10	.39	1.18	.31	1.29	.38	1.02	.31	1.18	.34	1.25	.36	1.21	.40	1.08	.34	
8	1.18	.44	1.28	.36	1.28	.41	1.12	.38	1.44	.41	1.46	.39	1.60	.44	1.32	.40	
9	1.23	.49	1.27	.42	1.35	.45	1.40	.44	1.59	.45	1.69	.46	1.84	.50	1.50	.46	
10	1.42	.51	1.69	.48	1.37	.51	1.57	.49	1.70	.52	1.66	.52	1.61	.55	1.72	.51	
11	1.57	.57	1.70	.54	1.54	.56	1.64	.55	1.71	.58	1.75	.57	1.65	.60	1.84	.57	

Table 6.20 XBI and DPC using OCA criteria

				Y	en							Εu	ro				Yuan							
	Pre-c	risis	Cri	sis		Post	-crisis		Pre-c	crisis	Cri	sis	Post-crisis			Pre-crisis Crisis			Post-crisis					
					71	V	8	V					71	V	8	V					71	V	8	V
k	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC	XBI	DPC
2	1.13	.14	1.47	.25	1.43	.25	1.22	.14	1.21	.11	1.22	.08	1.22	.24	.96	.09	1.14	.25	1.11	.11	1.30	.26	1.20	.16
3	.80	.15	1.43	.20	1.17	.28	.81	.08	.77	.13	.85	.08	.85	.17	.93	.14	1.03	.25	1.16	.26	.85	.21	.80	.13
4	.84	.22	1.27	.25	1.13	.31	.90	.25	1.05	.20	.89	.24	1.07	.29	.77	.16	1.11	.32	1.05	.38	.77	.21	.74	.18
5	1.01	.27	1.16	.34	1.15	.40	.78	.24	.94	.20	.76	.25	1.09	.31	.83	.25	.95	.31	.93	.33	.78	.30	.82	.21
6	1.05	.32	1.21	.32	1.31	.44	.92	.34	.86	.31	.90	.29	1.14	.36	.90	.28	1.06	.39	1.05	.33	.87	.35	.92	.32
7	1.28	.40	1.50	.37	1.19	.45	1.04	.38	.95	.35	1.22	.32	1.38	.38	1.11	.34	1.17	.42	1.27	.37	.97	.39	1.04	.38
8	1.38	.44	1.31	.44	1.49	.53	1.16	.43	1.04	.41	1.24	.37	1.34	.43	1.15	.38	1.25	.40	1.26	.41	1.15	.44	1.19	.41
9	1.45	.49	1.62	.49	1.58	.57	1.39	.48	1.13	.45	1.40	.44	1.35	.48	1.33	.44	1.26	.50	1.48	.48	1.31	.48	1.36	.47
10	1.45	.54	1.57	.53	1.57	.62	1.57	.53	1.29	.49	1.71	.49	1.52	.50	1.39	.48	1.33	.56	1.74	.52	1.43	.52	1.55	.53
11	1.56	.60	2.21	.59	1.67	.66	1.67	.58	1.49	.55	1.62	.54	1.58	.56	1.54	.55	1.49	.58	1.62	.58	1.65	.58	.83	.27
No	ote: In	gen	eral,	an ef	fecti	ve re	prese	entati	ion of	f data	a requ	iires	that t	he n	umbe	er of	clust	ers b	e nei	ther t	too sr	nall	nor to	00

large. The number of clusters considered here should suffice for meaningful interpretations.

Source: Fuzzy cluster analysis. See Appendix A for data description.

Dollar Anchor Results

This section presents the US-based fuzzy clustering solutions. From the preceding Table 6.20, the indexes suggest 5 clusters for pre-crisis, 6 clusters for crisis, 6 clusters for post-crisis 7V, and 5 clusters for post-crisis 8V periods.

The cluster memberships which suggest the degree of belongingness of each object for a cluster are displayed in the first part of Table 6.21. For each object, the coefficients for all clusters add up to 100 percent. The higher the coefficient for a particular cluster, the higher the degree of belongingness to that cluster. The highest coefficient for every country is shaded.

Countries having the highest coefficients for a particular cluster are grouped together. The results in general provide clear-cut partitions with significantly large membership coefficients for only one group. Nonetheless, some cases have high degree of belongingness to more than one cluster. For instance, the pre-crisis Canada maintains comparably high degree of belongingness to groups one and five. This may suggest that

in practical terms, Canada has 2 equally good candidate clusters to merge into.

The OCA features of the groups are shown in the second part of the table. The highest group silhouettes and the most sympathetic (conforming) features to the OCA conditions are highlighted. Group silhouettes are given so that comparisons can be made as to which cluster is more tightly formed. The pre-crisis cases with the highest average silhouette over all objects at 0.34 should be the best partitioned.

Among the pre-crisis clusters, the first cluster comprising of Hong Kong, Taiwan, Singapore, and Macau obtains the highest group silhouette at 0.65, indicating that its constituents are most tightly clustered. Indeed, the membership coefficients of other countries for belonging to this group are significantly smaller. This group is also the most sympathetic in respect of inflation convergence, real dollar rate stability, and real interest rate cycle symmetry with US. Meantime, though the fifth group displays 2 most conforming attributes, it nevertheless has a slightly negative silhouette which implies that its components are somewhat misclassified.⁵⁶

In the crisis period solution, the pre-crisis subgroups of Taiwan-Singapore and Korea-Malaysia-Canada plus Brunei make up the sixth group which exhibits 3 most suitable conditions. However, their group silhouette is the lowest. Hong Kong and Macau also carry forward their previous tie but only share one most supportive attribute this time compared to 3 for the last period. The membership coefficient of Hong Kong is significantly lower than before.

In the post-crisis setting, a considerable number of countries have resumed their linkages from either the pre-crisis or the crisis period solution. In the post-crisis 7V solution, the third group of six countries obtains the highest silhouette at 0.75 but with only one most supportive dimension. On the other hand, 2 most conforming features are maintained by the first and the sixth group each. In the post-crisis 8V solution, Australia

⁵⁶ It is not unusual to see negative silhouettes for groupings from fuzzy clustering; see for instance Tsangarides and Qureshi (2008).

and New Zealand form an independent cluster and share the greatest silhouette at 0.79 and 3 most compliant attributes. Accordingly, their memberships for grouping with each other are extremely high. Hence, Australia and New Zealand could have been more prospective for a dollar peg in the post-crisis period when the labor criterion is included.

Table 6.21 OCA-FCM-dollar cluster	S
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Membership	Coefficients	(%)
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	· ·														
			Pre-crisis			Crisis									
	Ι	Π	Ш	IV	V	Ι	Π	III	IV	V	VI				
1 CHN	10.69	5.40	65.49	8.67	9.75	30.38	3.54	23.67	20.06	9.91	12.43				
2 HKG	86.21	.89	1.88	2.31	8.71	51.07	1.76	10.18	13.44	15.36	8.18				
3 KOR	18.75	1.49	2.50	4.26	73.00	8.32	2.00	16.68	29.68	5.06	38.26				
4 TWN	56.23	3.37	10.71	8.03	21.67	17.53	2.98	14.55	18.12	18.06	28.76				
5 KHM	13.69	21.78	9.68	42.42	12.42	31.88	3.83	12.94	14.45	23.97	12.93				
6 IDN	3.27	2.54	3.04	87.78	3.37	.39	97.84	.40	.54	.47	.37				
7 LAO	2.67	86.29	3.35	5.13	2.56	14.94	22.88	15.65	16.78	15.47	14.29				
8 MYS	18.64	2.04	4.15	5.54	69.63	4.19	.98	13.93	10.53	2.36	68.02				
9 MMR	12.72	48.79	11.57	14.17	12.75	19.45	8.45	19.53	23.54	16.04	12.99				
10 PHL	20.50	8.78	18.48	15.61	36.62	6.27	.87	71.53	9.31	1.92	10.09				
11 SGP	78.56	.92	2.01	2.76	15.75	7.98	1.53	14.47	14.16	5.83	56.02				
12 THA	16.66	6.64	8.85	45.89	21.97	7.15	3.33	18.86	33.87	6.31	30.48				
13 VNM	12.14	42.73	16.59	17.16	11.37	12.05	3.59	35.22	22.84	7.29	19.01				
14 IND	28.54	5.81	20.82	11.87	32.96	3.53	.81	1.73	2.99	89.14	1.80				
15 MAC	43.76	8.06	8.15	15.03	25.00	43.77	2.42	21.44	12.88	7.42	12.07				
16 BRN	23.47	12.70	9.83	29.54	24.47	13.30	2.58	27.48	16.05	6.05	34.54				
17 JPN	8.12	6.09	6.32	71.59	7.88	69.18	1.51	8.99	8.78	6.00	5.53				
18 AUS	8.88	5.36	70.15	7.69	7.91	10.55	7.02	8.49	16.01	47.91	10.02				
19 NZL	8.02	6.35	69.59	9.35	6.70	4.54	.85	7.11	78.56	3.10	5.84				
20 CAN	25 74	10.21	20 71	16 65	26.68	16.57	8 4 1	18 44	18 62	17 96	20.00				

			Post-cris	sis 7V	Post-crisis 8V						
	Ι	Π	III	IV	V	VI	Ι	II	III	IV	V
1 CHN	.79	.76	84.68	7.99	.39	5.4	25.24	1.80	2.95	29.30	40.72
2 HKG	2.21	2.08	70.05	14.2	1.21	10.25	63.25	2.17	3.65	12.84	18.09
3 KOR	95.55	1.04	.78	1.06	.56	1.01	15.84	13.00	22.64	24.74	23.78
4 TWN	2.29	1.97	50.74	29.53	.87	14.61	14.62	2.92	4.69	39.38	38.38
5 KHM	4.28	3.42	27.94	14.85	2.2	47.32	23.79	3.21	4.51	45.42	23.08
6 IDN	7.83	33.11	14.57	22.68	7.94	13.88	16.68	11.96	20.65	23.07	27.64
7 LAO	16.51	13.17	17.15	17.66	14.18	21.33	21.09	17.54	15.28	24.74	21.36
8 MYS	3.47	2.41	38.61	34.75	1.17	19.58	31.64	1.53	3.07	22.57	41.19
9 MMR	.12	.11	.09	.11	99.46	.11	.42	98.10	.49	.49	.49
10 PHL	1.29	1.06	6.79	7.12	.54	83.20	5.63	.92	1.49	79.52	12.45
11 SGP	1.87	1.94	68.42	11.55	.99	15.23	71.20	1.97	3.89	10.82	12.11
12 THA	3.16	3.31	13.41	69.41	1.1	9.62	17.24	1.85	5.05	17.55	58.32
13 VNM	4.57	5.14	17.67	57.05	2.37	13.19	14.56	3.61	5.82	24.78	51.23
14 IND	3.46	5.35	35.96	38.25	2.21	14.76	24.47	2.96	5.52	23.17	43.89
15 MAC	4.82	2.82	14.75	12.52	2.11	62.98	21.68	3.40	4.53	48.29	22.10
16 BRN	30.93	8.75	14.37	17.15	6.22	22.59	23.29	10.20	17.20	25.58	23.72
17 JPN	4.18	4.88	42.95	18.24	2.26	27.49	62.30	2.18	4.70	15.83	14.99
18 AUS	2.19	90.33	1.8	2.77	1.14	1.77	5.70	3.55	78.35	5.42	6.98
19 NZL	14.63	57.36	6.56	9.11	4.51	7.83	4.70	3.04	82.44	4.70	5.11
20 CAN	12.97	15.92	17.89	24.35	7.40	21.46	22.49	9.32	19.65	23.27	25.28

Table 6.21	OCA-FCM-dollar	clusters	(continued)
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					Averages					
Cluster	SW	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N^2
Clusici		(%)		(%)						
Pre-crisis										
All	.34	18.535	.109	6.017	2.576	.238	3.290	3.011	-	
1 HKG, TWN, SGP, MAC	.65	20.022	.241	3.131	1.177	.952	2.806	1.126	-	3
2 LAO, MMR, VNM	.42	6.752	.109	18.223	3.409	363	2.601	8.340	-	1
3 CHN, AUS, NZL	.62	14.418	.536	5.495	5.130	.432	4.273	.771	-	1
4 KHM, IDN, THA, BRN. JPN	.37	13.561	185	3.368	2.388	972	2.323	2.576	-	0
5 KOR, MYS, PHL, IND, CAN	12	31.857	.043	3.966	1.850	.878	4.466	1.893	-	2
Crisis										
All	.09	18.625	039	8.154	4.193	026	3.164	1.495	-	
1 CHN, HKG, KHM, MAC, JPN	.21	19.875	199	3.893	1.622	788	2.219	1.027	-	1
2 IDN, LAO	13	6.105	255	44.437	13.810	493	4.532	3.834	-	1
3 PHL, VNM	.40	25.104	769	4.417	2.970	.629	2.893	1.469	-	0
4 MMR, THA, NZL	04	10.762	312	9.767	5.077	.211	3.684	2.310	-	0
5 IND, AUS	.63	12.828	.704	3.269	2.984	753	5.233	1.951	-	2
6 KOR, TWN, MYS, SGP, BRN, CAN	22	25.462	.299	1.678	3.498	.669	2.635	.526	-	3
Post-crisis 7V										
All	.22	17.415	.211	3.485	1.972	349	3.411	1.094	-	
1 KOR, BRN	.52	11.250	605	1.743	1.741	.452	1.852	.330	-	2
2 IDN, AUS, NZL	.45	11.715	119	2.659	4.946	086	5.535	1.722	-	1
3 CHN, HKG, TWN, MYS, SGP, JPN	.76	15.185	.724	2.116	1.303	612	2.890	.543	-	1
4 THA, VNM, IND, CAN	29	31.208	.282	2.012	1.588	561	4.827	.778	-	1
5 MMR	.00	2.913	729	23.681	2.307	.251	4.119	2.009	-	0
6 KHM, LAO, PHL, MAC	34	17.947	.262	3.454	1.159	491	1.784	2.014	-	2
Post-crisis 8V										
All	.11	17.415	.211	3.485	1.972	349	3.411	1.094	73.0	
1 HKG, MYS, SGP, JPN	.71	15.199	.787	2.210	1.373	620	2.762	.650	87.4	1
2 MMR	.00	2.913	729	23.681	2.307	.251	4.119	2.009	-	2
3 AUS, NZL	.79	12.551	229	.657	5.453	.213	5.223	n.a. ³	91.8	3
4 KOR, TWN, KHM, LAO, PHL, MAC,										
BRN	16	15.654	.046	2.739	1.364	218	1.990	1.294	63.3	1
5 CHN, IDN, THA, VNM, IND, CAN	19	24,983	.323	2,783	1.863	609	4.778	.897	66.9	1

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Fuzzy cluster analysis. See Appendix A for data description.

On the whole, the configuration appears to have been more convergent with the dominant cluster getting larger since the crisis period. Singapore and Taiwan might have been consistently shared the same grouping over the periods but only if the postcrisis labor criterion is not included. From another perspective, economies which are clustered with Hong Kong, an effective dollar area could be relatively feasible for a hard dollar peg. For instance, Japan which has been linked with Hong Kong since the crisis period solution may be relatively potential. In another respect, the location of China and India, two of the largest economies today in the same group in the post-crisis configuration might be desirable.

Currency Basket Anchor Results

Table 6.22 demonstrates the G3-based results. 5 groups for pre-crisis, 4 groups for crisis, 6 groups for post-crisis 7V, and 7 groups for post-crisis 8V periods are found. The slight increase in the number of groups may signify somewhat greater divergence against the weighted G3 countries (the weights: US 0.47; Japan 0.23; Germany/EMU 0.30). The memberships for the clusters are generally clear-cut in the sense that the highest membership coefficients are substantially higher than the second highest ones. The all-object average silhouettes indicate that the pre-crisis arrangement with silhouette at 0.29 is best classified.

Amongst the five groups from the pre-crisis setting, the fifth group comprising of China, Australia, and New Zealand obtains the highest silhouette at 0.40. However, the most potential cluster is obviously Canada which is most conforming in five of the facets.

Korea-Taiwan-Malaysia-Singapore and HongKong-Cambodia retain their pre-crisis links in the crisis period setting and along with Canada make up the second cluster that enjoys five most suitable features. Hence, Canada is still the best candidate for basket peg.

Without the labor dimension, Korea, Taiwan, and Malaysia maintain their link from the pre-crisis until the post-crisis solution. Taiwan and Malaysia have also increased their membership coefficients for grouping with each other significantly over the periods. Together with Thailand and Vietnam, Korea; Taiwan, and Malaysia share 2 most suitable attributes. The third group which is best classified with silhouette 0.65 also attains 2 most supportive features.

With the labor criterion, Australia-NewZealand and Thailand-Brunei maintain their links since the pre-crisis solution. Thus, regardless of the labor variable, Australia and New Zealand constantly share the same grouping. In terms of conformity to OCA criteria, the group of Thailand-Brunei-Malaysia, the singleton Myanmar, and group four respectively exhibit 2 best features. Hong Kong and Singapore are most tightly classified at silhouette 0.78. Hence, Hong Kong and Singapore ought to be highly similar in the labor dimension.

Unlike previous periods, the results show that no single cluster is exceptionally conforming in the dimensions for the post-crisis period. Indeed, the arrangement has become more divergent in the post-crisis findings with the best features dotted over the clusters.

Members	ship Coe	efficien	ts (%)										
				Pre-crisis		Crisis							
	I II III 21.63 15.37 8.29					V	V	Ι		Π	III		IV
1 CHN	21.	63	15.37	8.29)	9.10	45.61	62	2.85	18.27	3	.39	15.49
2 HKG	11.	11	74.38	1.23	}	3.34	9.94	20).29	69.88	1	.48	8.35
3 KOR	73.	80	9.02	1.76	5	2.12	13.3	34	1.94	53.21	2	.29	9.56
4 TWN	47.	23	19.78	4.59)	5.03	23.37	22	2.07	63.47	3	.08	11.38
5 KHM	15.	38	43.00	3.52	2 2	20.62	17.48	21	1.49	62.66	3	.49	12.36
6 IDN	16.	12	51.95	2.61		6.15	23.17	23	3.75	20.97	24	.56	30.71
7 LAO	3.	29	4.85	1.57	' 8	35.74	4.55		.66	.65	97	.96	.73
8 MYS	69.	19	9.07	2.29)	2.71	16.74	34	1.74	50.24	1	.64	13.38
9 MMR	7.61		12.93	2.38	8 6	6.87	10.21	31	1.50	21.98	17	.92	28.59
10 PHL	34.67		14.33	10.30)	7.38	33.32	73	3.43	17.79	1	.82	6.96
11 SGP	44.96		31.06	1.94	Ļ	3.69	18.35	12	2.77	79.38	1	.50	6.36
12 THA	20.	74	40.88	5.68	81	12.11	20.59	34	4.17	31.06	2	.49	32.28
13 VNM	15.64		16.82	8.62	2 3	38.52	20.4	42	2.68	17.63	3	.60	36.08
14 IND	45.68		9.88	2.29)	4.17	37.98	24	4.05	32.93	3	.12	39.90
15 MAC	11.47		69.39	1.75	5	6.83	10.56	57	7.79	29.61	2	.47	10.12
16 BRN	17.46		56.80	3.06	5	7.67	15.01	44.54		36.28	3	.28	15.90
17 AUS	29.26		13.23	15.51		9.70	32.3	16	6.53	17.85	8	.25	57.37
18 NZL	12.01		7.89	1.78	3	3.12	75.2	10	0.08	8.35	2	.08	79.49
19 CAN	.23 .16		.16	99.21		.12	0.28	29	9.56	34.71	8	.85	26.88
	-												
			Post-cr	isis 7V					Pos	st-crisis 8	V		
	I	II	Ш	IV	V	VI	I	II	III	IV	V	VI	VII
1 CHN	6.38	.96	81.54	7.54	.60	2.97	85.95	.60	.30	4.12	2.51	3.67	2.86
2 HKG	10.47	2.68	63.24	15.45	2.03	6.13	13.70	2.93	1.41	10.15	53.58	12.40	5.84
3 KOR	9.24	7.19	12.29	36.57	3.42	31.29	15.28	5.88	3.06	7.78	7.86	29.97	30.19
4 TWN	3.66	1.20	10.33	79.00	.59	5.21	36.93	3.48	1.84	10.71	6.73	19.06	21.25
5 KHM	78.84	1.55	8.76	4.34	1.94	4.58	33.45	4.04	2.86	15.97	15.17	11.17	17.32
6 IDN	6.00	62.99	9.06	8.54	4.58	8.83	14.26	18.76	6.85	23.14	8.75	12.98	15.27
7 LAO	.40	.24	.36	.26	98.40	.33	14.46	9.13	11.52	20.32	17.81	11.63	15.11
8 MYS	2.48	.90	6.05	85.77	.47	4.33	12.20	1.81	.77	4.14	7.34	66.00	7.74
9 MMR	14.92	16.90	15.20	14.40	19.70	18.88	.06	.06	99.63	.07	.06	.06	.07
10 PHL	2.45	.93	2.15	3.75	.56	90.16	3.11	.70	.42	1.42	1.16	3.23	89.97
11 SGP	23.33	2.99	51.06	11.07	3.49	8.06	2.92	1.01	.51	2.84	88.27	2.66	1.80
12 THA	5.85	5.01	12.51	55.78	1.81	19.03	7.36	2.69	.97	4.34	4.74	71.60	8.31
13 VNM	11.73	9.40	23.68	36.16	3.53	15.49	25.15	6.12	2.75	16.64	8.97	24.20	16.17
14 IND	16.00	9.55	43.78	14.22	6.24	10.21	3.20	.80	.37	90.70	2.07	1.54	1.33
15 MAC	42.78	2.67	15.59	14.41	2.78	21.77	26.00	3.04	2.07	8.44	15.80	16.82	27.85
16 BRN	14.80	6.76	14.19	22.61	4.46	37.17	14.73	8.14	5.33	9.12	17.05	25.28	20.34
17 AUS	2.21	86.90	3.05	3.17	1.46	3.21	1.32	91.87	.67	1.81	1.33	1.63	1.36
18 NZL	9.35	41.93	10.71	13.91	5.63	18.46	8.22	47.45	4.66	8.01	8.67	11.86	11.13
19 CAN	22.63	15.79	19.02	16.42	8.96	17.18	16.94	14.18	6.40	17.74	15.51	14.63	14.60

Table 6.22 OCA-FCM-basket clusters
Table 6.22	OCA-FCM-basket clusters	(continued)
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				1	Averages					
Cluster	SW	TRA	BUS	INF	RER^1	INT	EXP	DEB	LAB	N^2
Cluster		(%)		(%)						
Pre-crisis										
All Cases	.29	16.122	027	6.694	3.854	.136	3.357	3.011	-	
1 KOR, TWN, MYS, PHL, SGP, IND	.29	18.116	032	4.063	2.735	.260	3.990	1.318	-	0
2 HKG, KHM, IDN, THA, MAC, BRN	.38	14.590	133	4.318	2.630	029	2.365	2.412	-	1
3 CAN	.00	36.071	.230	2.209	10.503	.290	5.038	-	-	5
4 LAO, MMR, VNM	.39	10.008	.061	18.659	3.842	008	2.601	8.340	-	1
5 CHN, AUS, NZL	.40	14.660	.024	6.238	6.338	.257	4.273	.771	-	0
Crisis										
All Cases	.18	29.533	.237	9.298	11.079	.163	3.323	2.364	-	
1 CHN, MMR, PHL, THA, VNM, MAC,										
BRN	.29	14.188	270	6.197	5.983	.044	2.712	1.237	-	0
2 HKG, KOR, TWN, KHM, MYS, SGP,										
CAN	.26	17.224	.497	2.739	5.619	.080	2.726	.940	-	5
3 LAO	.00	4.070	.127	68.106	12.122	188	2.674	5.252	-	1
4 IDN, IND, AUS, NZL	05	12.550	.074	7.683	7.924	277	5.143	2.184	-	1
Post-crisis 7V										
All Cases	.25	13.449	.130	3.906	2.473	.016	3.477	1.094	-	
1 KHM, MAC, CAN	37	22.857	.346	2.322	2.022	182	2.446	1.065	-	1
2 IDN, AUS, NZL	.54	12.026	166	3.466	5.016	.062	5.535	1.722	-	1
3 CHN, HKG, SGP, IND	.65	10.845	.606	2.234	1.875	054	3.484	.793	-	2
4 KOR, TWN, MYS, THA, VNM	.32	14.627	.134	2.190	1.988	.246	3.609	.507	-	2
5 LAO, MMR	14	3.732	154	15.855	2.163	261	3.281	3.233	-	1
6 PHL, BRN	.19	13.450	426	2.627	2.051	.091	1.789	.736	-	0
Post-crisis 8V										
All Cases	.15	12.191	.123	4.055	2.470	.038	3.391	1.094	71.1	
1 CHN, TWN, KHM, VNM	.18	13.300	005	1.596	2.081	.269	3.288	.520	59.2	1
2 AUS, NZL	.67	11.005	632	1.786	1.773	.089	1.197	-	94.0	1
3 MMR	.00	13.614	.249	1.247	1.757	.206	3.073	.377	77.8	2
4 IDN, LAO, IND, CAN	38	15.261	.272	4.199	3.296	.010	4.754	1.125	63.5	2
5 HKG, SGP	.78	14.912	.132	2.719	2.082	.039	2.792	.950	59.8	0
6 MYS, THA, BRN	.09	9.385	.419	3.922	1.799	118	2.076	2.240	83.7	2
7 KOR, PHL, MAC	.14	7.990	.182	10.001	2.082	120	4.080	1.189	76.6	0

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Fuzzy cluster analysis. See Appendix A for data description.

Yen Anchor Results

Table 6.23 lays out the Japan-centered findings. 4 clusters each for pre-crisis and postcrisis 7V periods; and 5 clusters each for crisis and post-crisis 8V periods are indicated. The crisis period solution reports the highest average silhouette over all cases at 0.36. By and large, the groupings are unambiguous except perhaps for a few cases such as the post-crisis 8V Indonesia and India which show high membership coefficients for belongingness to more than one group.

In the pre-crisis arrangement, the most symmetric intra-group structure is maintained by the third group, indicated by the highest silhouette 0.56 and high membership coefficients of its members. The group boasts the highest degrees of inflation convergence and exchange rate stability with Japan. Nonetheless, the first cluster of Indonesia-Thailand-Brunei with a much lower silhouette is most connected with Japan in 3 of the facets.

Remarkably, a subgroup of five countries, Korea, Taiwan, Malaysia, the Philippines, and Singapore carries forward their pre-crisis link till the crisis period grouping. Nonetheless, these countries only share one best attribute this time and their membership coefficients are not as high as before.

Table 6.23	OCA-FCM-yen	clusters
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Membersh	nip Coefficie	nts (%)							
		Pre-cri	sis				Crisis		
	Ι	II	Ш	IV	Ι	П	III	IV	V
1 CHN	18.59	44.46	23.93	13.02	19.71	13.27	17.67	16.27	33.08
2 HKG	10.25	53.22	29.49	7.04	8.76	5.02	77.05	6.31	2.87
3 KOR	6.55	7.41	84.00	2.04	68.82	3.45	11.13	13.72	2.87
4 TWN	8.88	17.64	70.59	2.88	38.12	9.75	19.90	27.20	5.04
5 KHM	19.71	31.82	16.21	32.26	12.04	28.53	42.17	11.92	5.33
6 IDN	78.73	7.15	8.10	6.02	1.21	1.28	1.09	1.31	95.11
7 LAO	6.64	6.75	4.59	82.02	15.87	29.83	16.98	16.81	20.51
8 MYS	12.21	11.48	72.63	3.68	71.98	3.07	6.38	16.04	2.53
9 MMR	13.41	25.27	15.14	46.19	1.38	93.66	1.93	1.99	1.05
10 PHL	20.68	21.92	46.08	11.32	65.68	4.42	14.36	13.11	2.44
11 SGP	10.19	22.69	62.96	4.16	60.68	4.21	9.74	23.14	2.23
12 THA	65.12	12.43	16.17	6.28	41.04	5.82	7.87	38.72	6.55
13 VNM	26.08	17.87	16.83	39.21	12.15	2.46	2.85	81.07	1.48
14 IND	11.80	39.65	39.40	9.15	10.14	50.32	16.49	15.09	7.95
15 MAC	13.94	43.07	24.54	18.45	10.37	6.14	73.54	7.02	2.92
16 BRN	39.64	19.48	24.91	15.97	43.69	9.39	15.64	22.70	8.57
17 AUS	33.52	22.57	35.17	8.73	16.89	23.85	12.76	33.28	13.21
18 NZL	15.14	60.40	14.49	9.96	3.66	1.22	1.31	93.28	.54
19 CAN	21.91	30.91	28.79	18.40	16.71	18.71	15.58	43.21	5.79
		Post-cris	is 7V			Р	ost-crisis 8V		
	Ι	Π	III	IV	Ι	II	III	IV	V
1 CHN	1.55	89.93	6.68	1.84	11.02	13.04	1.80	.77	73.37
2 HKG	5.51	52.37	36.10	6.02	67.32	10.33	4.03	1.65	16.67
3 KOR	3.57	4.84	4.65	86.95	16.69	36.75	13.42	10.32	22.81
4 TWN	2.51	85.09	9.17	3.23	14.43	26.46	4.72	2.37	52.02
5 KHM	4.09	15.10	74.49	6.32	32.80	28.18	6.37	4.38	28.26
6 IDN	63.27	15.83	11.01	9.89	15.53	24.14	25.19	9.23	25.91
7 LAO	19.80	20.48	29.69	30.03	20.90	22.54	15.10	23.15	18.31
8 MYS	1.11	91.71	5.74	1.44	41.32	17.34	2.95	1.09	37.30
9 MMR	24.44	18.85	21.16	35.55	.46	.58	0.52	97.96	.48
10 PHL	12.05	37.11	31.27	19.57	10.50	58.98	4.71	2.50	23.30
11 SGP	3.80	31.10	59.50	5.60	65.09	12.80	4.99	2.45	14.67
12 THA	9.47	62.02	15.77	12.74	21.17	30.25	6.87	2.67	39.04
13 VNM	12.92	58.92	19.07	9.09	16.14	21.87	6.14	2.82	53.03
14 IND	13.96	36.14	39.57	10.33	33.09	20.75	8.44	4.24	33.48
15 MAC	3.78	15.73	73.59	6.90	37.50	30.61	5.39	3.22	23.28
16 BRN	15.90	25.88	19.16	39.06	21.34	28.23	17.52	10.02	22.89
17 AUS	82.86	6.49	4.80	5.84	5.33	5.87	80.24	2.74	5.82
18 NZL	56.48	13.16	12.34	18.02	7.72	9.20	71.00	4.57	7.51
19 CAN	15.87	28.89	31.52	23.72	35.42	21.96	14.47	6.90	21.25

Table 6.23	OCA-FCM	-yen c	lusters (conti	nued)
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OCA	Features

	Averages									
Cluster	SW	TRA	BUS	INF	RER^1	INT	EXP	DEB	LAB	N^2
Cluster	3 11	(%)		(%)						
Pre-crisis										
All Cases	.22	19.279	117	7.878	4.690	196	3.264	3.011	-	
1 IDN, THA, BRN	.15	34.451	.118	5.062	3.604	.953	2.611	1.185	-	3
2 CHN, HKG, IND, MAC, NZL, CAN	16	11.609	317	6.759	12.185	600	3.639	2.024		1
3 KOR, TWN, MYS, PHL, SGP, AUS,	.56	16.841	.029	3.651	3.259	634	3.505	.792	-	2
4 KHM, LAO, MMR, VNM	.13	15.407	190	15.865	4.045	.506	2.396	7.942	-	1
Crisis										
All Cases	.36	12.556	.462	8.700	6.529	082	3.227	1.495	-	
1 KOR, TWN, MYS, PHL, SGP, THA, BRN	.50	17.598	.766	2.658	5.473	554	2.458	.773	-	1
2 LAO, MMR, IND	09	5.226	055	33.926	6.745	.444	3.460	3.488	-	1
3 HKG, KHM, MAC	.62	5.632	.649	3.849	4.312	.889	1.960	1.152		1
4 VNM, AUS, NZL, CAN	.25	11.285	.062	2.331	3.920	771	4.551	1.516	-	2
5 CHN, IDN	.44	18.834	.690	12.021	18.443	.704	4.821	1.535	-	2
Post-crisis 7V										
All Cases	.22	11.147	.212	4.931	2.956	.520	3.477	1.094	-	
1 IDN, AUS, NZL	.51	14.409	102	5.251	4.985	.404	5.535	1.722	-	2
2 CHN, HKG, TWN, MYS, PHL, THA,										
VNM	.51	13.810	.431	3.205	2.677	.964	3.476	.595	-	1
3 KHM, SGP, IND, MAC, CAN	.07	4.385	.526	3.139	2.545	.775	2.973	1.122	-	2
4 KOR, LAO, MMR, BRN	30	12.492	330	9.953	2.436	491	2.567	1.781	-	2
Post-crisis 8V										
All Cases	.27	11.147	.212	4.931	2.956	.520	3.477	1.094	72.3	
1 HKG, KHM, MYS, SGP, MAC, CAN	.39	6.678	.538	2.466	2.540	.811	2.706	.816	82.7	2
2 KOR, PHL, BRN	.02	19.695	388	3.263	2.535	.198	2.029	.711	69.1	2
3 AUS, NZL	.71	12.863	254	3.061	5.260	.108	5.223	n.a. ²	91.8	2
4 LAO, MMR	.16	3.022	115	17.710	2.553	788	3.281	3.233	69.4	1
5 CHN TWN IDN THA VNM IND	20	13 477	448	4 595	2 948	964	4 4 5 5	803	59.3	1

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable. Source: Fuzzy cluster analysis. See Appendix A for data description.

Taiwan-Malaysia-Philippines and Laos-Myanmar retain their pre-crisis links in the post-crisis 7V solution. Taiwan and Malaysia have on the whole increased their membership coefficients for grouping with each other over the periods. The highest silhouettes of 0.51 are obtained by the first two groups. The first group of Indonesia-Australia-NewZealand also maintains 2 most suitable features.

For post-crisis 8V, Singapore-Malaysia, Korea-Philippines, Laos-Myanmar, and HongKong-Macau retain their ties since the pre-crisis setting. Hence, Laos and Myanmar are always together irrespective of the labor criterion. Among them, only Singapore, the Philippines, and Myanmar have not reduced their membership coefficients. With respect to potentiality for a yen peg, the first three clusters in the configuration obtain 2 most suitable attributes each.

Over the periods, the most conforming attributes are scattered across the clusters.

Euro Anchor Results

The arrangements centered on Germany/EMU are displayed in Table 6.24. For precrisis, crisis, post-crisis 7V, and post-crisis 8V periods, 3, 5, 3, and 4 clusters are respectively detected. The all-case silhouettes signify that the post-crisis 7V solution with average silhouette 0.31 is most appropriately partitioned. The somewhat more clusters for the crisis period could indicate higher degree of regional divergence against Germany/EMU in that period. The membership coefficients are generally clear-cut.

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Wiembers	vielibership coefficients (70)										
		Pre-crisis			Crisis						
	Ι	П	III	Ι	Π	III	IV	V			
1 CHN	59.82	22.32	17.86	16.43	13.49	2.46	7.19	60.43			
2 HKG	25.15	50.55	24.30	70.84	5.79	1.36	9.82	12.18			
3 KOR	12.44	71.42	16.14	40.41	12.92	1.79	27.04	17.84			
4 TWN	13.85	75.11	11.03	41.43	13.30	3.35	22.84	19.07			
5 KHM	27.31	28.88	43.82	57.25	8.14	3.37	16.12	15.12			
6 IDN	44.36	24.37	31.27	20.79	21.46	18.68	17.60	21.47			
7 LAO	27.80	22.30	49.90	.33	.33	98.71	0.31	.32			
8 MYS	20.17	63.51	16.31	14.35	28.72	2.49	40.67	13.78			
9 MMR	22.16	27.62	50.22	20.28	23.90	15.18	17.58	23.06			
10 PHL	63.36	18.58	18.06	13.17	12.67	1.96	6.25	65.94			
11 SGP	15.25	65.29	19.46	7.99	5.72	1.25	80.92	4.11			
12 THA	18.46	67.25	14.29	9.58	58.24	2.20	19.62	10.35			
13 VNM	37.66	22.13	40.21	6.52	71.69	2.14	7.83	11.81			
14 IND	51.07	26.50	22.42	27.60	19.31	5.61	11.91	35.56			
15 MAC	26.24	39.51	34.26	26.12	9.40	2.38	8.27	53.83			
16 BRN	18.74	39.00	42.26	18.42	20.18	5.74	39.77	15.88			
17 JPN	18.72	36.62	44.66	63.40	5.42	1.41	6.41	23.37			
18 AUS	69.16	18.43	12.42	17.97	36.47	6.25	21.48	17.83			
19 NZL	51.12	26.40	22.48	11.85	53.92	3.12	13.79	17.32			
20 CAN	28.08	48.02	23.90	16.74	16.46	4.06	53.14	9.61			

	Po	st-crisis 7V		Post-crisis 8V					
	Ι	II	III	Ι	II	III	IV		
1 CHN	77.93	15.16	6.90	2.82	23.34	68.10	5.75		
2 HKG	53.58	40.23	6.20	4.38	20.52	15.32	59.78		
3 KOR	55.83	38.28	5.89	3.49	46.38	38.92	11.21		
4 TWN	76.35	16.40	7.24	6.11	28.42	54.48	10.99		
5 KHM	33.49	55.60	10.91	5.92	48.71	26.61	18.76		
6 IDN	18.42	16.95	64.63	24.25	26.31	33.21	16.23		
7 LAO	28.20	37.78	34.02	20.16	30.30	24.43	25.11		
8 MYS	71.49	22.00	6.51	5.53	30.88	34.69	28.91		
9 MMR	28.65	35.12	36.22	22.98	25.54	24.08	27.40		
10 PHL	46.66	30.77	22.57	12.21	30.87	39.49	17.43		
11 SGP	24.11	68.31	7.59	4.01	11.48	8.00	76.52		
12 THA	51.80	30.88	17.32	10.13	25.71	34.50	29.66		
13 VNM	47.96	28.41	23.63	8.58	29.63	47.87	13.92		
14 IND	39.21	25.68	35.11	14.30	30.73	41.78	13.19		
15 MAC	52.74	36.40	10.86	5.13	49.69	28.84	16.33		
16 BRN	34.39	47.27	18.34	11.13	21.55	18.02	49.30		
17 JPN	64.20	30.01	5.79	5.13	44.45	23.58	26.85		
18 AUS	16.28	15.06	68.66	82.52	5.85	6.29	5.34		
19 NZL	23.68	21.55	54.77	66.11	11.29	11.44	11.15		
20 CAN	26.10	39.46	34.44	21.40	24.31	19.94	34.36		

Table 6.24	OCA-FCM-euro	clusters	(continued)
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OCA Features

					Averages					
Cluster	SW	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N^2
Cluster		(%)		(%)						
Pre-crisis										
All Cases	.26	11.166	157	6.479	3.865	.145	3.290	3.011	-	
1 CHN, IDN, PHL, IND, AUS, NZL	.35	14.143	328	7.062	5.017	.293	4.187	2.238	-	2
2 HKG, KOR, TWN, MYS, SGP, THA,										
MAC, CAN	.49	9.955	232	2.802	3.257	104	3.498	1.065	-	2
3 KHM, LAO, MMR, VNM, BRN, JPN	12	9.803	.115	10.800	3.522	.367	2.114	6.354	-	3
Crisis										
All Cases	.20	9.662	.052	8.011	10.348	004	3.164	1.495	-	
1 HKG, KOR, TWN, KHM, JPN	.60	9.672	.456	3.037	10.510	.590	2.385	1.006	-	2
2 MMR, THA, VNM, AUS, NZL	.17	9.813	271	6.900	8.158	564	4.217	2.045	-	2
3 LAO	.00	9.512	023	68.446	13.940	330	2.674	5.252		1
4 MYS, SGP, BRN, CAN	.27	5.832	.384	1.160	10.102	677	2.587	0.539	-	1
5 CHN, IDN, PHL, IND, MAC	21	12.596	278	7.488	11.855	.566	3.449	1.378	-	1
Post-crisis 7V										
All Cases	.31	9.273	.016	3.645	2.922	.185	3.411	1.094	-	
1 CHN, HKG, KOR, TWN, MYS, PHL,										
THA, VNM, IND, MAC, JPN	.68	10.710	.051	2.308	2.595	.431	3.188	.707	-	3
2 KHM, LAO, SGP, BRN, CAN	16	6.027	.319	2.576	2.446	104	2.484	1.675	-	2
3 IDN, MMR, AUS, NZL	14	9.381	457	8.659	4.416	132	5.181	1.865	-	2
Post-crisis 8V										
All Cases	.23	9.273	.016	3.645	2.922	.185	3.411	1.094	73.0	
1 AUS, NZL	.70	11.376	509	1.181	5.630	148	5.223	n.a. ²	91.8	3
2 KOR, KHM, LAO, MAC, JPN	.11	9.716	.504	3.269	2.600	.106	1.882	1.812	67.2	2
3 CHN, TWN, IDN, MYS, PHL, THA,										
VNM, IND	.40	11.056	077	3.049	2.811	.453	4.023	.834	61.4	1
4 HKG MMR SGP BRN CAN	- 10	5 137	- 112	5,960	2,338	- 033	3.234	896	92.8	2

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Fuzzy cluster analysis. See Appendix A for data description.

Amongst the pre-crisis clusters, the third cluster enjoys 3 most conforming attributes. Nevertheless, based on its slightly negative group silhouette and its relatively low membership coefficients of its constituents, its members should be loosely classified. On the contrary, the second group of 8 countries boasts the largest silhouette at 0.49. This group and the first group display 2 best features each.

The pre-crisis subgroups of HongKong-Korea-Taiwan and Cambodia-Japan form the most tightly classified crisis period cluster with 2 best features. Regarding the degree of belongingness, the membership coefficients of Korea and Taiwan have fallen whereas those of the rest have risen.

A number of subclusters have stayed put from the pre-crisis till the post-crisis solution. Among them, HongKong-Korea-Taiwan and China-Philippines-India belong to the first cluster which obtains the largest silhouette 0.68 and 3 most supportive attributes in the post-crisis 7V configuration.

Hence, though more clusters are present for the crisis period, judging by significantly larger dominant cluster for the post-crisis period, the region might have been on the whole more convergent against Germany/EMU.

In the post-crisis 8V arrangement, it is the cluster of Australia-NewZealand which obtains the highest silhouette at 0.70 and 3 most conforming features. Clearly, the arrangement is not as symmetrical as the post-crisis 7V one, when labor criterion is not included.

Yuan Anchor Results

The China-based configurations are presented in Table 6.25. 5 clusters for pre-crisis, crisis, and post-crisis 7V periods and 4 clusters for post-crisis 8V period are indicated. The membership coefficients suggest that the partitions are crisp. The post-crisis 8V solution obtains the highest average silhouette over all objects at 0.25.

Possessing the highest degree of trade, output variation symmetry, and real exchange rate stability against China in the pre-crisis solution, the group of HongKong-Cambodia-Macau could have been more feasible for a yuan peg in that period. Nonetheless, the group's silhouette is somewhat negative, most probably due to Cambodia which displays high memberships to other clusters. Quite the opposite, the Philippines-Thailand-India cluster obtains the highest positive silhouette at 0.58 but does not display any particularly conforming attributes.

In the crisis period setting, the first group which maintains the highest silhouette, trade linkage, and real interest rate cycle symmetry could have been the most potential group in that period. Amongst its constituents, Myanmar-Japan and HongKong-Macau have also been linked since the previous solution.

In the post-crisis setting, using 7 variables the first largest cluster obtains the greatest silhouette at 0.56 with 2 closest features with China. Regardless of the labor criterion, Australia and Canada retain their link since the pre-crisis setting and they

share the most symmetrical cluster with New Zealand at silhouette 0.61 in the post-

crisis 8V configuration.

Table 6.25	OCA-FCM-yuan	clusters
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Membership Coefficients (%)

			Pre-crisis			Crisis						
	Ι	II	Ш	IV	V	Ι	П	III	IV	V		
1 HKG	20.90	4.96	48.86	10.44	14.84	70.33	1.62	7.73	6.75	13.57		
2 KOR	84.12	.77	1.87	3.17	10.07	33.04	2.76	11.57	20.37	32.27		
3 TWN	71.90	1.61	4.94	4.99	16.56	10.36	2.85	37.92	11.64	37.24		
4 KHM	20.47	13.41	24.60	21.97	19.55	15.34	3.54	24.90	11.32	44.90		
5 IDN	67.14	2.50	7.03	7.17	16.16	15.98	19.95	19.55	24.61	19.91		
6 LAO	2.04	91.13	2.37	2.26	2.21	0.17	99.21	0.19	0.23	0.21		
7 MYS	26.03	2.44	4.41	24.73	42.38	5.05	1.53	4.71	76.72	12.00		
8 MMR	11.82	32.60	28.04	14.73	12.81	27.78	9.94	16.48	21.53	24.27		
9 PHL	11.49	5.72	6.29	59.31	17.20	83.82	1.31	3.07	5.23	6.57		
10 SGP	76.15	2.07	4.09	5.23	12.46	6.26	1.44	11.12	16.68	64.51		
11 THA	9.49	2.92	5.35	69.20	13.04	3.78	1.62	5.40	79.61	9.58		
12 VNM	13.10	41.72	11.41	18.16	15.61	11.36	3.77	9.64	58.88	16.35		
13 IND	6.91	3.08	3.68	73.10	13.23	1.50	0.56	90.77	1.94	5.23		
14 MAC	2.01	1.10	93.99	1.36	1.53	68.92	2.84	7.07	8.99	12.18		
15 BRN	28.70	16.26	16.60	20.86	17.58	13.58	4.10	11.56	42.56	28.19		
16 JPN	23.76	25.16	15.01	18.27	17.80	57.26	1.74	7.07	9.50	24.43		
17 AUS	16.53	4.01	5.63	14.06	59.77	8.56	3.55	61.22	9.99	16.67		
18 NZL	26.63	6.16	11.21	14.48	41.52	12.34	2.72	23.60	16.17	45.17		
19 CAN	15.46	2.35	3.80	9.63	68.76	5.25	2.53	60.76	12.19	19.27		

		Pos	st-crisis 7V			Post-crisis 8V					
	Ι	II	III	IV	V	Ι	П	III	IV		
1 HKG	25.23	10.44	4.19	3.61	56.53	20.22	23.17	49.86	6.74		
2 KOR	5.11	79.97	5.55	3.03	6.34	49.84	15.99	19.18	14.98		
3 TWN	61.49	9.04	5.44	3.63	20.39	18.06	47.94	25.68	8.32		
4 KHM	25.45	10.77	4.08	4.81	54.88	23.75	29.64	41.02	5.59		
5 IDN	28.61	13.70	28.99	9.13	19.57	20.74	39.10	19.89	20.28		
6 LAO	.64	.70	.52	97.48	.66	30.61	25.03	24.66	19.69		
7 MYS	54.34	7.91	2.81	2.01	32.93	11.06	19.79	66.12	3.03		
8 MMR	16.50	23.85	20.10	22.70	16.84	31.37	21.69	21.59	25.35		
9 PHL	18.42	19.57	7.48	7.26	47.27	39.85	22.48	29.31	8.35		
10 SGP	47.49	7.40	4.11	4.33	36.67	15.74	25.86	49.43	8.96		
11 THA	69.52	7.92	4.49	2.08	15.99	14.89	39.28	38.80	7.03		
12 VNM	61.92	7.20	5.17	3.78	21.93	9.70	69.06	16.85	4.38		
13 IND	69.93	5.68	4.67	3.51	16.21	5.99	78.66	12.19	3.16		
14 MAC	17.49	34.89	10.14	8.34	29.14	42.62	17.27	28.59	11.52		
15 BRN	20.41	41.59	11.10	6.95	19.95	28.94	18.80	33.57	18.68		
16 JPN	14.48	6.53	2.99	2.27	73.74	18.03	17.12	58.66	6.18		
17 AUS	4.66	5.86	82.87	2.80	3.82	7.37	6.85	6.51	79.26		
18 NZL	6.38	9.18	74.80	3.89	5.76	7.69	6.33	7.17	78.81		
19 CAN	24.93	20.83	32.83	7.68	13.73	16.71	18.69	18.92	45.68		

OCA F	Features
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	Averages											
Cluster	SW	TRA	BUS	INF	RER^1	INT	EXP	DEB	LAB	N^2		
Ciusici		(%)		(%)								
Pre-crisis												
All Cases	.21	5.882	.197	10.600	4.833	.025	3.233	3.160	-			
1 KOR, TWN, IDN, SGP, BRN	.20	2.576	.160	9.407	4.607	.745	2.838	.682	-	1		
2 LAO, MMR, VNM, JPN	.04	10.617	204	15.951	5.732	295	2.451	8.340	-	1		
3 HKG, KHM, MAC	10	13.553	.635	9.109	3.818	106	2.118	3.639		3		
4 PHL, THA, IND	.58	2.850	.066	8.167	4.853	786	4.409	2.432		1		
5 MYS, AUS, NZL, CAN	.35	1.801	.415	9.684	4.964	.332	4.465	.758	-	1		
Crisis												
All Cases	.17	9.806	.138	8.971	4.514	.141	3.159	1.551	-			
1 HKG, KOR, MMR, PHL, MAC, JPN	.29	17.940	.514	6.907	3.466	.598	2.412	1.381	-	2		
2 LAO	.00	5.679	.217	69.459	11.224	724	2.674	5.252	-	1		
3 TWN, IND, AUS, CAN	.24	4.486	808	3.481	2.587	.431	4.388	1.093		2		
4 IDN, MYS, THA, VNM, BRN	03	7.149	.618	7.098	6.538	619	3.575	1.150	-	1		
5 KHM, SGP, NZL	.23	6.436	179	3.377	3.570	.396	2.484	1.588	-	1		
Post-crisis 7V												
All Cases	.23	11.739	.246	4.061	2.202	.487	3.422	1.138	-			
1 TWN, MYS, SGP, THA, VNM, IND	.56	7.542	.578	2.369	1.413	.947	3.843	.706	-	2		
2 KOR, MMR, MAC, BRN	29	16.763	351	7.615	1.809	036	2.249	.936	-	0		
3 IDN, AUS, NZL, CAN	.34	6.960	121	3.497	4.518	.171	5.408	1.722	-	1		
4 LAO	.00	6.981	.662	7.225	1.471	841	2.442	4.457	-	2		
5 HKG, KHM, PHL, JPN	.23	18.982	.608	2.818	1.648	.971	2.221	.971	-	2		
Post-crisis 8V												
All Cases	.25	11.739	.246	4.061	2.202	.487	3.422	1.138	73.7			
1 KOR, LAO, MMR, PHL, MAC	18	19.848	011	7.902	1.768	020	2.525	1.934	60.9	2		
2 TWN, IDN, THA, VNM, IND	.36	7.538	.522	3.642	2.002	.959	4.706	.878	58.7	2		
3 HKG, KHM, MYS, SGP, BRN, JPN	.32	11.379	.494	2.132	1.485	.810	2.231	.601	83.7	2		
4 AUS, NZL, CAN	.61	5.947	283	2.218	4.697	097	5.157	n.a. ³	91.5	2		

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable. Source: Fuzzy cluster analysis. See Appendix A for data description.

6.3.1.1 Comparisons across Anchors

Here, results by each of the monetary anchors are compared. The groupings are collected in Table 6.26.

Based on the average silhouettes over all objects, the following anchor countries produce the most appropriate solutions: for pre-crisis period the US anchor; for crisis period the Japan anchor; for post-crisis 7V period the Germany/EMU anchor; and for post-crisis 8V period the Japan anchor once again. Hence, the reference country in line with best partitioning is different for different period.

Signified by the number of clusters and the size of the dominant clusters, different reference country corresponds to the most convergent configuration for different period. For pre-crisis period, the euro anchor solution is most convergent; for crisis period the basket anchor; and for post-crisis 7V the euro anchor again. For post-crisis 8V the euro

and the yuan anchor solution are most convergent.

To evaluate how the levels of convergence might have changed, it is apt to look at the 7-variable configurations over the periods. Judging by the similar number of clusters for pre-crisis and post-crisis periods by the yen and the euro anchor, the structure of the region in the post-crisis period might have returned to the pre-crisis one for those anchors. On the contrary, solutions by other anchors have become more fragmented.

Based on the above, in general the Germany/EMU reference is associated with more convergent cluster configurations.

The rows labeled 'All Periods' list the stable subgroupings that have weathered the periods. Notably, more stable subclusters are present under the euro anchor. In particular, China-Philippines-India, Australia-NewZealand and Singapore-Canada are robust regardless of the labor criterion. Australia-NewZealand is even stable across basket and euro anchors.

How stable are the groupings of economies which implement fixed exchange rates in practice? Hong Kong and Macau, the effective dollar areas are amongst others placed together in the pre-crisis and crisis period clusters for dollar, yen, and yuan anchors. They are also placed together for post-crisis 7V euro anchor and for post-crisis 8V yen anchor. Despite maintaining fixed dollar rates, they are not indicated to be consistently parallel vis-à-vis US over the periods.

Similar finding is detected for the prevailing monetary union members of Singapore and Brunei. They are placed together consecutively at most over crisis and post-crisis 7V periods and only by the euro anchor.

Next, it may be instructive to examine the results from the post-crisis period, the most recent period in detail. Three observations are collected in the bottom part of Table 6.26. The first row contains the clusters with the highest silhouettes; the second row lists subclusters whose countries maintain >50 percent membership coefficients; and the

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third row shows countries with equally high belongingness to more than a group.

Without the labor criterion, amongst others, China, Hong Kong, Taiwan, and Malaysia belong to some of the groups with the largest silhouettes for most of the anchors. Coherently, they also always show high membership coefficients. When labor criterion is included, Australia and New Zealand demonstrate the highest group silhouettes and high membership coefficients for all anchors except for the basket anchor whilst Hong Kong and Singapore display high memberships for all except for the yuan anchor. Hence, these economies might have been relatively closely linked in the post-crisis period.

Some cases maintain high belongingness to more than one group (less than 2 percent difference between the highest and the second highest membership coefficient). Hence, these countries can be described as 'straddling the fence'. As shown by the third row, Korea and Canada for instance, represent two such countries for dollar and basket anchors in the post-crisis 8V solutions.

This characteristic may have implications for practice. Korea and Canada may have more flexibility in their choice of potential group to merge into. From another perspective, it can also be interpreted that Korea and Canada are not strongly linked to any of the groupings closer to them.

Countries that share the same grouping over anchors are listed in Table 6.27. Overall, fewer countries share the same grouping across anchors for the crisis period. Notably, based on 7 variables Taiwan-Malaysia is robust over the periods for basket and yen anchors whilst Korea-Taiwan and Australia-NewZealand are robust over the periods over basket and euro anchors.

If one looks at the subclusters for the post-crisis period, the most recent period, using 7 variables Indonesia-Australia-NewZealand, Taiwan-Malaysia, and Thailand-Vietnam are robust across all anchors; and using 8 variables HongKong-Singapore, Australia-NewZealand, and Indonesia-India are robust over all anchors. Hence, regardless of labor Australia and New Zealand are stable across all anchors for the post-crisis period.

	Dollar	SW Currency Basket	SW	Yen	SW	Euro	SW	Yuan	SW
	1 KOR, MYS, PHL,	12 KOR, TWN, MYS,	.29	CHN, HKG, IND,	16	HKG, KOR, TWN,	.49	KOR, TWN, IDN,	.20
	IND, CAN	PHL, SGP, IND		MAC, NZL, CAN		MYS, SGP, THA,		SGP, BRN	
						MAC, CAN			
	2 KHM, IDN, THA,	.37 HKG, KHM, IDN,	.38	KOR, TWN, MYS,	.56	KHM, LAO, MMR,	12	LAO, MMR, VNM,	.04
Pre-crisis	BRN. JPN	THA, MAC, BRN		PHL, SGP, AUS,		VNM, BRN, JPN		JPN	
	3 HKG, TWN, SGP,	.65 LAO, MMR, VNM	.39	KHM, LAO, MMR,	.13	CHN, IDN, PHL,	.35	MYS, AUS, NZL,	.35
	MAC			VNM		IND, AUS, NZL		CAN	
	4 CHN, AUS, NZL	.62 CHN, AUS, NZL	.40	IDN, THA, BRN	.15			HKG, KHM, MAC	10
	5 LAO, MMR, VNM	.42 CAN	.00					PHL, THA, IND	.58
Average		.34	.29		.22		.26	, ,	.21
		-							
	1 KOR, TWN, MYS.	- 22 CHN, MMR, PHL	29	KOR, TWN, MYS,	50	HKG. KOR. TWN.	60	HKG. KOR. MMR.	29
	SGP. BRN. CAN	THA, VNM, MAC,		PHL, SGP, THA,		KHM, JPN		PHL, MAC, JPN	
		BRN		BRN				, -,	
	2 CHN HKG KHM	21 HKG KOR TWN	26	VNM AUS NZL	25	MMR THA VNM	17	IDN MYS THA	- 03
	MAC. JPN	KHM, MYS, SGP.		CAN		AUS, NZL		VNM. BRN	
		CAN							
Crisis	3 MMR THA NZI	- 04	- 05	HKG KHM MAC	62	CHN IDN PHI	- 21	TWN IND AUS	24
		IDN, IND, AUS, NZL		1110, 11111, 1110	.02	IND. MAC		CAN	
	4 IND AUS	63 I AO	00	LAO MMR IND	- 09	MYS SGP BRN	27	KHM SGP NZI	23
	4 100, 100	.00 Eno	.00		05	CAN	.21	KIIM, SOL, NEE	.20
	5 IDN LAO	. 12		CHN IDN	11	LAO	00	LAO	00
	6 PHI VNM	13		CIIN, IDN	.44	LAO	.00	LAO	.00
Avanaaa	0 FIIL, VINN	.40	10		26		20		17
Average		.09	.10		.30		.20		.17
				CIDI UKO TUDI		CIDI UNC KOD		THAN MUC COD	
	I CHN, HKG, IWN,	KOR, IWN, MYS,		CHN, HKG, TWN,	CHN, HKG, TWN, CHN, HKG, KOR			TWN, MYS, SGP,	
	MYS, SGP, JPN	IHA, VNM		MYS, PHL, THA,		TWN, MYS, PHL,		THA, VNM, IND	
-		70	~~~	VNM	- 4	THA, VNM, IND,	~~~		50
		./b	.32		.51	MAC, JPN	.68		.56
	2 THA, VNM, IND,	CHN, HKG, SGP,		KHM, SGP, IND,		KHM, LAO, SGP,		KOR, MMR, MAC,	~~~
Post-crisis	CAN	29 IND	.65	MAC, CAN	.07	BRN, CAN	16	BRN	29
7V	3 KHM, LAO, PHL,	KHM, MAC, CAN		KOR, LAO, MMR,	~~~	IDN, MMR, AUS,		IDN, AUS, NZL,	~ ~ ~
	MAC	34	37	BRN	30	NZL	14	CAN	.34
	4 IDN, AUS, NZL	IDN, AUS, NZL		IDN, AUS, NZL				HKG, KHM, PHL,	
		.45	.54		.51			JPN	.23
	5 KOR, BRN	.52 LAO, MMR	14					LAO	.00
	6 MMR	.00 PHL, BRN	.19						
Average		.22	.25		.22		.31		.23
A 11	1 TWN, SGP	KOR, MYS, TWN		TWN, MYS, PHL		HKG, KOR, TWN		AUS, CAN	
All	2	AUS, NZL		LAO, MMR		CHN, PHL, IND			
Periods	3	HKG, SGP				AUS, NZL			
/ v	4					SGP, CAN			
						,			
	1 KOR, TWN, KHM,	- 16 CHN, TWN, KHM,	18	HKG. KHM. MYS.	39	CHN, TWN, IDN,	40	KOR, LAO, MMR,	- 18
	LAO, PHL, MAC.	VNM		SGP. MAC. CAN	.00	MYS. PHL. THA.		PHL, MAC	
	BRN			,,		VNM. IND		,	
	2 CHN IDN THA	- 19 IDN LAO IND	- 38	CHN TWN IDN	20	KOR KHM LAO	11	TWN IDN THA	36
	VNM, IND, CAN	CAN	.00	THA, VNM, IND	.20	MAC. JPN		VNM, IND	.00
Post-crisis	3 HKG MYS SGP IPN	71 KOR PHL MAC	14	KOR PHI BRN	02	HKG MMR SGP	- 10	HKG KHM MYS	32
8V	5 1110, 1110, 501, 511	art Rok, The, and		Ron, The, Bhuv	.02	BRN CAN		SGP BRN IPN	.02
	4 AUS NZI	79 MYS THA BRN	09	LAO MMR	16	AUS NZI	70	AUS NZL CAN	61
	5 MMP	00 HKC SCP	.03	AUS NZI	.10	AUS, NZL	.70	AUS, NZL, CAN	.01
	6		.10	100, ILL	.71				
	7	MMD	.07						
	1	IVIIVIK	.00		07				
Average		.11	.15		.27		.23		.25
	1 -	AUS, NZL		SGP, MYS		CHN, IDN, PHL,		AUS, CAN	
All	_					IND			
Periods	2	THA, BRN		KOR, PHL		KHM, JPN			
8V	3			LAO, MMR		SGP, CAN			
	4			HKG, MAC		AUS, NZL			

Table 6.26 OCA-FCM summary

Post-crisis findings	Dollar		Currenc	y Basket	Y	en	E	uro	Yuan	
	7V	8V	7V	8V	7V	8V	7V	8V	7V	8V
1 Highest silhouette	CHN- HKG TWN- MYS-SGP- JPN	-AUS-NZL	CHN- HKG SGP-IND	-HKG-SGP	IDN-AUS- NZL; CHN- HKG- TWN- MYS- PHL- THA- VNM	AUS-NZL	CHN-HKG- KOR-TWN MYS-PHL- THA-VNM IND-MAC- JPN	- AUS-NZL -	TWN-MYS- SGP-THA- VNM-IND	AUS-NZL- CAN
2 Closely linked subclusters shown by membership coefficients > 50%	AUS-NZL; CHN-HKG- TWN-SGP; THA-VNM	HKG-SGP- JPN; AUS- NZL; THA- VNM	IDN-AUS; CHN-HKG- SGP; TWN- MYS-THA	HKG-SGP, MYS-THA	IDN-AUS- NZL; CHN- HKG-TWN MYS-THA- VNM	HKG-SGP, AUS-NZL, -CHN-TWN- VNM	CHN-PHL- IND-AUS- NZL; HKG- KOR-TWN MYS-SGP- THA	HKG-SGP, AUS-NZL, - CHN-TWN, -	TWN-MYS- THA-VNM- IND; AUS- NZL; HKG- KHM-JPN	VNM-IND, MYS-JPN, AUS-NZL
3 High belongingness to more than one group (< 2 % difference in membership)	-	KOR, TWN, BRN, CAN	MMR	KOR, VNM, MAC, CAN	LAO	IDN, LAO, IND	-	MMR	MMR, IDN	THA

Table 6.26 OCA-FCM summary (continued)

Table 6.27 OCA-FCM cross-anchor subclusters

	PRE	CRS	Р	ST	All		PRE	CRS	Р	ST	All	
-			7V	8V	7V 8V	r			7V	8V	7V 8	3V
DB	1 KOR, MYS,	KOR, TWN,	CHN, HKG,	KOR, PHL,		DY	IDN, THA,	KOR, TWN,	CHN, HKG,	CHN, IDN,		
	PHL, IND	MYS, SGP,	SGP	MAC			BRN	MYS, SGP,	TWN, MYS	THA, VNM,		
		CAN				_		BRN		IND		
	2 KHM, IDN,	PHL, VNM	IDN, AUS,	IDN, IND,			KOR, MYS,	HKG, KHM,	IDN, AUS,	HKG, MYS,		
	THA, BRN		NZL	CAN		_	PHL	MAC	NZL	SGP		
	3 CHN, AUS,	MMR, THA	KHM, MAC	TWN, KHM			LAO, MMR,		IND, CAN	KOR, PHL,		
	NZL	DID AUG	7000 L 1 (1/0			-	VNM		WIDA MAG	BRN		
	4 LAO, MMR, VNM	IND, AUS	TWN, MYS	AUS, NZL			CHN, NZL		КНМ, МАС	КНМ, МАС		
	5 HKG, MAC	CHN, MAC	THA, VNM	CHN, VNM		-	TWN, SGP		KOR, BRN	AUS, NZL		
	6			HKG, SGP		-	HKG, MAC		THA, VNM			
	7					-	IND, CAN					
DE	1 HKG. TWN.	MYS. SGP.	CHN, HKG,	CHN. IDN.		DR	LAO, MMR.	HKG. MAC.	TWN, MYS.	KOR, LAO,		
	SGP, MAC	BRN, CAN	TWN, MYS,	THA, VNM,			VNM	JPN	SGP	PHL, MAC		
	<i>,</i>	<i>,</i>	JPN	IND						,		
	2 LAO, MMR,	HKG, KHM,	THA, VNM,	KOR, KHM,		-	MYS, CAN	MMR, THA	THA, VNM,	IDN, THA,		
	VNM	JPN	IND	LAO, MAC		_			IND	VNM, IND		
	3 CHN, AUS,	MMR, THA,	KHM, LAO	TWN, PHL			IDN, BRN	IND, AUS	IDN, AUS,	HKG, MYS,		
	NZL	NZL				_			NZL	SGP, JPN		
	4 KHM, BRN, JPN	KOR, TWN	PHL, MAC	HKG, SGP			HKG, MAC	TWN, CAN	HKG, JPN	AUS, NZL		
	5 KOR, MYS,	CHN, MAC	IDN, AUS,	AUS, NZL		-	AUS, NZL	MYS, BRN	KOR, BRN	KHM, BRN		
	CAN		NZL			_						
	6 PHL, IND					_	SGP, TWN		KHM, PHL			
	7						PHL, IND					
DV				CUDI TUDI	(T) () ()	DE	NOD THAT		KOD TUNI	CIDI TUDI	KOD A	110
Вү	I KOR, TWN,	PHL, THA,	TWN, MYS,	CHN, TWN,	TWN,-	BE	KOR, TWN,	CHN, PHL,	KOR, TWN,	CHN, TWN,	KOR, A	US,
	MIS, PHL,	BKIN	THA, VINM	VINIVI	MIS		M15, 5GP	MAC	MIS, IHA,	VINIVI	I WIN IN.	ZL
	21 AO MMR	KOR TWN	KHM MAC	AUS NZI		-	HKG THA	MMR THA	CHN HKG	AUS NZI	AUS	
	VNM	MYS. SGP	CAN	, A05, NZE			MAC	VNM	IND	AUS, NEL	NZL	
	3 IDN. THA.	AUS, NZL	IDN. AUS.	HKG, SGP		-	LAO, MMR.	HKG. KOR.	IDN. AUS.	IDN. IND		
	BRN		NZL				VNM	TWN	NZL			
	4 HKG, MAC	HKG, KHM	SGP, IND	KOR, PHL		-	CHN, AUS,	MYS, SGP,	KHM, CAN	HKG, SGP		
						_	NZL	CAN				
	5 CHN, NZL		LAO, MMR			_	PHL, IND	IDN, IND		MYS, THA		
	6		CHN, HKG					AUS, NZL		KOR, MAC		
BR	1 KOR, TWN,	MMR, PHL,	TWN, MYS,	KOR, PHL,		YE	KHM, LAO,	VNM, AUS,	CHN, HKG,	CHN, TWN,		
	SGP	MAC	THA, VNM	MAC			MMR, VNM	NZL	TWN, MIS,	IDN, THA,		
									VNM	VINNI, IIND		
	2 HKG KHM	THA VNM	SGP IND	IDN IND		-	CHN IND	MVS SGP	KHM SCP	HKG SGP		
	MAC	BRN	551, 110	1213, 1112			NZL	BRN	CAN	CAN		
	3 LAO, MMR.	HKG, KOR	IDN. AUS.	TWN, VNM		-	HKG. MAC.	HKG. KHM	IDN. AUS.	KHM, MAC		
	VNM		NZL	,			CAN CAN		NZL	,		
	4 IDN, BRN	TWN, CAN		MYS, BRN		-	KOR, TWN,	KOR, TWN	LAO, BRN	AUS, NZL		
						_	MYS					
	5 PHL, IND	KHM, SGP		HKG, SGP		_	PHL, AUS	CHN, IDN	IND, MAC	LAO, MMR		
	6 AUS, NZL	IND, AUS		AUS, NZL								

	PRE (TRS	P	ST	All		PRE	CRS	Р	ST	All
			7V	8V	7V 8V				7V	8V	7V 8V
YR	1 KOR, TWN, MYS SGP BRN	, THA,	TWN, MYS, THA, VNM	TWN, IDN, - THA, VNM,	-	ER	LAO, MMR, VNM. JPN	HKG, KOR, JPN	TWN, MYS, THA. VNM.	TWN, IDN, THA, VNM,	
			,	IND		_			IND	IND	
	2 LAO, MMR, AUS	, CAN	KOR, MMR,	HKG, KHM,			KOR, TWN,	THA, VNM	IDN, AUS,	KOR, LAO,	
	3 NZL, CAN HKG	, MAC	IDN, AUS,	KOR, PHL		-	HKG, MAC	MYS, BRN	HKG, PHL,	HKG, SGP,	
			NZL			_			JPN	BRN	
	4 MYS, AUS KOR	, PHL	HKG, PHL	LAO, MMR		-	PHL, IND	PHL, MAC	KOR, MAC	KHM, JPN	
	5 HKG, MAC 6 IDN BRN		SGP, IND	AUS, NZL		-	MYS, CAN			AUS, NZL	
	0 IDIV, DICIV						AUS, IZL				-
DBY	1 KOR, MYS, KOR	, TWN,	CHN, HKG	HKG, SGP -		DBE	LAO, MMR,	MYS, SGP,	CHN, HKG	KOR, MAC	
	2 LAO, MMR.	, 50P	IDN, AUS,	AUS, NZL		_	CHN. AUS.	KOR. TWN	IDN. AUS.	IDN. IND	
	VNM		NZL			_	NZL		NZL		
	3 HKG, MAC		TWN, MYS	KOR, PHL		_	KOR, MYS	MMR, THA	TWN, MYS	AUS, NZL	
	4 CHN, NZL		THA, VNM	CHN, VNM		-	PHL, IND	CHN, MAC	THA, VNM	CHN, VNM	
	<u> </u>			IDN, IND		-	HKG MAC			HKG, SGP	
	0						linco, mile				
DBR	1 LAO, MMR, TWN	I, CAN	IDN, AUS,	KOR, PHL, -	-	DYE	LAO, MMR,	KOR, TWN	CHN, HKG,	CHN, IDN,	
	VNM		NZL	MAC			VNM		TWN, MYS	THA, VNM,	
	2 IDN DDN IND	ALIC	TWN MYC	IDN ND		-	KOD MYS	SCD DDN	IDN ALIC	IND	
	2 IDN, BRIN IND,	AUS	1 W N, M 1 5	IDN, IND			KOK, MIS	SGP, BKN	NZL	пко, зор	
	3 AUS, NZL		THA, VNM	AUS, NZL		_	CHN, NZL	HKG, KHM	THA, VNM	KHM, MAC	
	4 PHL, IND			HKG, SGP		-	TWN, SGP			AUS, NZL	
	5 HKG, MAC						HKG, MAC				
DYR	1 LAO, MMR, MYS	, BRN	TWN, MYS	IDN, THA, -	-	DER	LAO, MMR,	MYS, BRN	TWN, MYS	IDN, THA,	
	VNM			VNM, IND		_	VNM			VNM, IND	
	2 KOR, SGP HKG	, MAC	IDN, AUS, NZL	HKG, MYS, SGP			HKG, MAC	HKG, JPN	HKG, JPN	KOR, LAO, MAC	
	3 IDN, BRN		KOR, BRN	KOR, PHL		-	TWN, SGP		THA, VNM,	HKG, SGP	
	4 TWN, SGP		THA, VNM	AUS, NZL		-	AUS, NZL		IDN, AUS,	AUS, NZL	
	5 HKG MAC					-	MVS CAN		NZL		
	6					-	PHL, IND				
BYE	1 KOR, TWN, HKG	, KHM	TWN, MYS, THA VNM	CHN, TWN, - VNM	-	BYR	KOR, TWN,	THA, BRN	TWN, MYS, THA VNM	TWN, VNM	
	2 LAO, MMR, KOR	, TWN	IDN, AUS,	AUS, NZL			LAO, MMR,		IDN, AUS,	AUS, NZL	
	VNM	·	NZL	,			VNM		NZL		
	3 HKG, MAC MYS	, SGP	KHM, CAN	HKG, SGP			IDN, BRN		SGP, IND	HKG, SGP	
	4 CHN, NZL AUS	, NZL	CHN, HKG				HKG, MAC			KOR, PHL	
BER	1 KOR TWN PHL	MAC	TWN MYS	TWN VNM -	_	YER	LAO MMR	MYS BRN	TWN MYS	TWN IDN	
BER	SGP	mile	THA, VNM	1 111, 1111		1 LIX	VNM	MIIS, BRIV	THA, VNM	THA, VNM,	
						_				IND	
	2 LAO, MMR, THA VNM	, VNM	IDN, AUS, NZL	AUS, NZL			HKG, MAC		IDN, AUS, NZL	HKG, SGP	
	3 HKG, MAC HKG	, KOR		IDN, IND		-	KOR, TWN		HKG, PHL	AUS, NZL	
	4 AUS, NZL			HKG, SGP						LAO, MMR	
	5 PHL, IND			KOR, MAC							
DDVE	1 LAO MMD KOD	TWA	IDN ALIC	UKC SCD		DD			IDN ALIC	UKC SCD	
DBIE	VNM	, I WIN	NZL	HKG, 30P -	-	DБ YR	VNM	-	NZL	пко, зор	
	2 HKG, MAC		CHN, HKG	AUS, NZL		-	HKG, MAC		TWN, MYS	AUS, NZL	
	3 CHN, NZL		TWN, MYS	CHN, VNM		_			THA, VNM	KOR, PHL	
	4 KOR, MYS		THA, VNM	IDN, IND						IDN, IND	
DBER	1 LAO, MMR, -		IDN, AUS.	KOR, MAC -	-	DY	LAO, MMR.	-	IDN, AUS.	IDN, THA.	
	VNM		NZL	- , -		ER	VNM		NZL	VNM, IND	
	2 AUS, NZL		TWN, MYS	IDN, IND		-	TWN, SGP		TWN, MYS	HKG, SGP	
	3 PHL, IND		iha, vnm	AUS, NZL		-	HKG, MAC		THA, VNM	AUS, NZL	
	+ IINU, MAU			11KU, 3UP							
BYER	1 KOR, TWN, -		TWN, MYS,	TWN, VNM -	-	DB	HKG, MAC	-	IDN, AUS,	HKG, SGP	
	SGP		THA, VNM			YER	1.10.205		NZL		
	2 LAO, MMR, VNM		IDN, AUS, NZL	AUS, NZL			LAO, MMR, VNM		TWN, MYS	AUS, NZL	
	3 HKG, MAC			HKG, SGP		-			THA, VNM	IDN, IND	

Table 6.27 OCA-FCM cross-anchor subclusters (continued)

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi)

6.3.2 Classifications using Weighted Criteria

Table 6.28 collects the solutions by original unweighted (or equally weighted) criteria in columns 1 and the solutions by weighted (or unequally weighted) criteria in columns 2. To reiterate, under weighted criteria, the sum of 'benefit' variables and the sum of 'cost' variables are given equal weights. Since there are only two benefit variables, each benefit variable is given more weight under the new weighting. As before, XBI and DPC are utilized to indicate the cluster solutions.

Some of the configurations have become more convergent, divergent, or more or less unchanged after the weighting. The configurations that become visibly more convergent include the pre-crisis basket solution; the crisis period yen and euro solutions; the post-crisis 7V yen solution; and the post-crisis 8V basket and yen solutions.

Quite the opposite, by putting more weight on benefits and hence less weight on costs, the pre-crisis euro solution, the crisis period basket solution, the post-crisis 7V euro solution, and the post-crisis 8V yuan solution become noticeably divergent. The rest of the solutions have been more or less the unchanged.

Since only two benefit variables are defined here, trade openness and external indebtedness and only the trade variable is measured relative to a reference, generally putting more weight on trade has made the region more symmetrical against Japan but more asymmetrical against Germany/EMU.

Since the configurations are somewhat different after the weighting, it is instructive to identify subgrouping linkages which are robust to the new weighting as shown in Table 6.29. Notably, the subcluster of Australia-NewZealand is not only unmoved by the weighting but is also robust through the periods by the basket and the euro anchor regardless of the post-crisis labor criterion. Also notable, Taiwan and Malaysia are robust over the periods for basket and yen anchors using 7 variables. The pairs of countries associated with fixed exchange rates in practice, Singapore-Brunei and HongKong-Macau are rarely linked across weightings. Hong Kong and Macau are only placed together in crisis period dollar and yuan solutions and post-crisis 8V yen solution. Hence, they do not consistently share the same grouping against US. Meanwhile, Singapore and Brunei are at most placed together consecutively over crisis and post-crisis 7V periods by the euro anchor.

Table 6.30 shows the cross-weighting linkages across anchors. Notice that Indonesia, Australia, and New Zealand are always placed together over all anchors in the post-crisis 7V solutions. For post-crisis 8V, Australia and New Zealand still share the same clusters over all anchors except for the yen anchor. At the same time, Taiwan-Vietnam is robust over all anchors except for the dollar anchor in the post-crisis setting irrespective of the labor dimension.

	D	ollar	Curren	cy Basket		/en	F	iuro	Y	ันลท
	1	2	1	2	1	2	1	2	1	2
	1 KOR, MYS,	HKG, TWN,	KOR, TWN,	CHN, IDN,	CHN, HKG,	CHN, HKG,	HKG, KOR,	CHN, KHM,	KOR, TWN,	HKG, KOR,
	PHL, IND,	SGP, KOR,	MYS, PHL,	PHL, VNM,	IND, MAC,	KOR, TWN,	TWN, MYS,	IDN, VNM,	IDN, SGP,	TWN, IDN,
	CAN	MYS, PHL	SGP, IND	IND, MAC,	NZL, CAN	MYS, SGP	SGP, THA, Mac can	MAC, AUS, NZI	BRN	MYS, SGP, BRN
	2 KHM, IDN,	CHN, AUS,	HKG, KHM,	HKG, KOR,	KOR, TWN,	IDN, PHL,	KHM, LAO,	HKG, KOR,	LAO, MMR,	KHM, PHL,
	THA, BRN.	NZL, VNM,	IDN, THA,	TWN, MYS,	MYS, PHL,	THA, VNM,	MMR, VNM,	TWN, MYS,	VNM, JPN	THA, IND
	JPN	IND	MAC, BRN	SGP, THA,	SGP, AUS,	AUS, NZL	BRN, JPN	THA, JPN		
Pre-crisis	3 HKG TWN	IDN THA	LAO MMR	KHM LAO	KHM LAO	IND MAC	CHN IDN	SGP BRN	HKG KHM	AUS NZL
	SGP, MAC	MAC, BRN,	VNM	MMR	MMR, VNM	CAN	PHL, IND,	CAN	MAC	CAN
		JPN	ann 1114				AUS, NZL			100 100
	4 CHN, AUS, NZI	LAO, MMR, KHM	CHN, AUS, NZI	CAN	IDN, THA, BRN	KHM, LAO, MMR		LAO, MMR	PHL, THA, IND	MMR, MAC
	5 LAO, MMR,	CAN	CAN		Didi	BRN		PHL, IND	MYS, AUS,	VNM, JPN
	VNM								NZL, CAN	
	6									LAO
	1 KOR, TWN,	KOR, TWN,	CHN, MMR,	CHN, KOR,	KOR, TWN,	HKG, KOR,	HKG, KOR,	CHN, TWN,	HKG, KOR,	KOR, KHM,
	MYS, SGP, BRN CAN	MYS, SGP, BRN THA	PHL, THA, VNM MAC	TWN, MYS, MAC BRN	MYS, PHL, SGP THA	PHL, SGP, VNM AUS	TWN, KHM, IPN	PHL, VNM,	MMR, PHL,	IDN, MMR, IPN
	DRIV, CAIV	DRN, IIIA	BRN	MAC, DRIV	BRN	NZL	JIN	JPN, AUS.	MAC, JI N	5110
								NZL		
	2 CHN, HKG,	CHN, HKG,	HKG, KOR,	IDN, MMR,	VNM, AUS,	CHN, TWN,	MMR, THA,	HKG, KOR,	IDN, MYS,	TWN, IND,
	JPN	MAC, NZL	MYS. SGP.	AUS, NZL	NZL, CAN	THA, BRN	NZL	SGP. THA.	BRN	CAN
Crisis			CAN			,		BRN, CAN		
	3 MMR, THA,	PHL, VNM,	IDN, IND,	HKG, KHM,	LAO, MMR,	KHM, MMR,	CHN, IDN,	IDN, LAO,	TWN, IND,	MYS, SGP,
	NZL	KHM, JPN	AUS, NZL	SGP	IND	IND, MAC, CAN	PHL, IND, MAC	MMK	AUS, CAN	IHA, VNM, BRN
	4 IND, AUS	IDN, MMR,	LAO	PHL, VNM,	HKG, KHM,	LAO	MYS, SGP,		KHM, SGP,	HKG, PHL,
		IND, AUS		CAN	MAC		BRN, CAN		NZL	MAC
	5 IDN, LAO	CAN		LAO	CHN, IDN		LAO		LAO	LAO
	0 PHL, VINM	LAU								
	1 CHN, HKG, TWN MXS	CHN, HKG,	KOR, TWN,	CHN, HKG,	CHN, HKG,	CHN, KOR,	CHN, HKG,	CHN, TWN,	TWN, MYS,	KOR, TWN,
	SGP. JPN	THA	VNM	VNM	PHL, THA.	THA. VNM.	MYS. PHL.	IND. MAC.	VNM. IND	VNM, BRN
					VNM	BRN	THA, VNM,	JPN		
							IND, MAC,			
	2 THA. VNM.	IDN. MMR.	CHN. HKG.	KOR. THA.	KHM, SGP.	HKG. KHM.	KHM, LAO.	HKG. KOR.	KOR. MMR.	IDN. MMR.
	IND, CAN	AUS, NZL	SGP, IND	BRN	IND, MAC,	MMR, SGP,	SGP, BRN,	KHM, MYS,	MAC, BRN	AUS, NZL,
Post-					CAN	IND, MAC,	CAN	THA		CAN
crisis / v	3 KHM, LAO,	KHM, PHL.	KHM, MAC.	KHM, PHL,	KOR, LAO,	IDN. PHL.	IDN. MMR.	MMR, SGP.	IDN. AUS.	KHM, SGP,
	PHL, MAC	VNM, MAC	CAN	MAC	MMR, BRN	AUS, NZL	AUS, NZL	BRN, CAN	NZL, CAN	IND, JPN
	4 IDN, AUS,	SGP, IND,	IDN, AUS,	MMR, SGP,	IDN, AUS,	LAO		IDN, AUS,	HKG, KHM,	HKG, PHL,
	5 KOR BRN	JPN KOR BRN	I AO MMR	IDN AUS	NZL			I AO	I AO	IAO
	5 KOR, DRIV	ROR, BRIV	Lito, mini	NZL				LIIO	LIIO	LINO
	6 MMR	LAO	PHL, BRN	LAO						
	7	CAN		CAN						
	1 TWN, SGP	TWN, MYS	KOR, MYS,	TWN, MYS	TWN, MYS,	CHN, TWN,	HKG, KOR,	CHN, VNM,	AUS, CAN	AUS, NZL,
	2		I WN	KOR BRN	I AO MMR	IND MAC	TWN CHN PHI	MAC AUS NZI		MVS BRN
. 11	2		AUS, NEL	KOK, DKIV	LAO, MIMIK	CAN	IND	AUS, NZL		MIS, BRIV
All Periods	3		HKG, SGP	IDN, AUS,		PHL, AUS,	AUS, NZL	HKG, KOR,		
7V	4			NZL		NZL	COD CAN	MYS, THA,		
	5					KHM MMR	SGP, CAN	SGP BRN		
	-							CAN		
	6							PHL, IND		
	1 KOR, TWN,	CHN, HKG,	CHN, TWN,	CHN, HKG,	HKG, KHM,	CHN, KOR,	CHN, TWN,	CHN, TWN,	KOR, LAO,	KOR, TWN,
	KHM, LAO,	KOR, TWN,	KHM, VNM	KOR, TWN,	MYS, SGP,	TWN, IDN,	IDN, MYS,	VNM, IND,	MMR, PHL,	KHM, LAO,
	BRN	BRN		THA. VNM.	MAC, CAN	THA. VNM.	VNM. IND	MAC, JEN	MAC	VINNI, IND
				MAC, BRN		BRN, AUS,				
	2 CUN IDN			IDM MMD	CUN TWN	CAN	KOD KIDA	UKC KOD	TWALIDA	MVC MMD
	2 CHN, IDN, THA, VNM.	VNM, MAC.	IDN, LAO, IND, CAN	PHL, SGP.	IDN. THA.	MMR, SGP.	LAO, MAC.	KHM, MYS.	TWN, IDN, THA, VNM,	MYS, MMR, THA
Post-	IND, CAN	JPN	,	IND, AUS,	VNM, IND	IND, MAC,	JPN	THA,	IND	
crisis 8V				NZL		NZL				
	3 HKG, MYS, SGP IPN	IDN, SGP, IND	MYS, THA, BRN	LAO	KOR, PHL, BRN	LAO	HKG, MMR, SGP BRN	IDN, PHL, AUS NZI	HKG, KHM, MYS SGP	SGP, BRN, CAN
							CAN		BRN, JPN	
	4 AUS, NZL	LAO, MMR	KOR, PHL,	CAN	LAO, MMR		AUS, NZL	MMR, SGP,	AUS, NZL,	PHL, MAC
	5 MMP	AUS NZI	MAC HKG SCP		AUS NZI			BRN, CAN	CAN	HKG IDM
	6	CAN	AUS, NZL		100, NLL			LAU		AUS, NZL
	7		MMR							IDN
	1 -	TWN, KOR	AUS, NZL	KOR, TWN	SGP, MYS	PHL, VNM	CHN, IDN.	HKG, KOR	AUS, CAN	SGP, BRN
		MYS	.,	MYS, BRN	,	AUS	PHL, IND	MYS, THA	.,	,
All	2	THA, BRN	THA, BRN	IDN, IND,	KOR, PHL	CHN, TWN,	KHM, JPN	CHN, VNM,		AUS, NZL
Periods	3			CHN MAC	LAO MMP	HKG SGP	AUS NZI	AUS N7I		
8V	4			, mae	HKG, MAC	KHM, MMR	SGP, CAN	TWN, JPN		
	5					IDN, THA		SGP, BRN		
	6					IND, MAC				

Table 6.28 FCM clusters by equal and by weighted criteria

		Dollar	Currency Basket	Yen	Euro	Yuan
	1	IDN, THA, BRN, JPN	KOR, TWN, MYS, SGP	KOR, TWN, MYS, SGP	HKG, KOR, TWN, MYS,	KOR, TWN, IDN, SGP,
					THA	BRN
	2	HKG, TWN, SGP	HKG, THA, BRN	KHM, LAO, MMR	CHN, IDN, AUS, NZL	PHL, THA, IND
Pre-crisis	3	CHN, AUS, NZL	CHN, AUS, NZL	IND, MAC, CAN	KHM, VNM	AUS, NZL, CAN
	4	KOR, MYS, PHL	IDN, MAC	CHN, HKG	LAO, MMR	VNM, JPN
	5	LAO, MMR	LAO, MMR	PHL, AUS	PHL, IND	
	6		PHL, IND	IDN, THA	SGP, CAN	
	1	KOR, TWN, MYS, SGP, BRN	IDN, IND, AUS, NZL	TWN, MYS, THA, BRN	CHN, PHL, IND, MAC	MYS, THA, VNM, BRN
	2	CHN, HKG, MAC	KOR, TWN, MYS	KOR, PHL, SGP	MYS, SGP, BRN, CAN	TWN, IND, AUS, CAN
Crisis	3	KHM, JPN	HKG, KHM, SGP	VNM, AUS, NZL	HKG, KOR, KHM	HKG, PHL, MAC
	4	PHL, VNM	CHN, MAC, BRN	KHM, MAC	VNM, AUS, NZL	KOR, MMR, JPN
	5	IND, AUS	MMR, THA	MMR, IND	TWN, JPN	
	6		PHL, VNM	CHN, IDN		
	1	CHN, HKG, TWN, MYS	TWN, MYS, VNM	CHN, TWN, MYS, THA,	CHN, TWN, PHL, VNM,	IDN, AUS, NZL, CAN
				VNM	IND, MAC, JPN	
Post-	2	KHM, PHL, MAC	IDN, AUS, NZL	KHM, SGP, IND, MAC,	HKG, KOR, MYS, THA	TWN, MYS, THA, VNM
crisis				CAN		
7V -	3	IDN, AUS, NZL	KOR, THA	IDN, AUS, NZL	SGP, BRN, CAN	SGP, IND
	4	KOR, BRN	CHN, HKG	KOR, BRN	IDN, AUS, NZL	KHM, JPN
	5	SGP, JPN	KHM, MAC			KOR, BRN
	6		SGP, IND			HKG, PHL
All	1	-	AUS, NZL	TWN, MYS	PHL, IND	AUS, CAN
Periods	2		TWN, MYS		HKG, KOR	
7V	3				AUS, NZL	
	4				SGP, CAN	
	1	KHM, PHL, MAC	CHN, TWN, KHM, VNM	CHN, TWN, IDN, THA, VNM	CHN, TWN, VNM, IND	TWN, VNM, IND
Post-	2	KOR, TWN, BRN	MYS, THA, BRN	HKG, KHM, SGP, MAC	MMR, SGP, BRN, CAN	KOR, LAO
crisis	3	HKG, MYS	KOR, MAC	KOR, PHL, BRN	KOR, KHM	PHL, MAC
8V	4	CHN, THA	IDN, IND	MYS, CAN	MAC, JPN	HKG, JPN
0,	5	AUS, NZL	AUS, NZL		IDN, PHL	SGP, BRN
	6	IDN, IND			MYS, THA	AUS, NZL
	7				AUS, NZL	
All	1	-	AUS, NZL	-	AUS, NZL	-
Periods						
8V						

Table 6.29 FCM cross-weighting subclusters

	PRE	CRS	Р	ST	All		PRE	CRS	Р	ST	A	411
			7V	8V	7V 8V	/			7V	8V	7V	8V
DB	1 CHN, AUS, NZL	KOR, TWN, MYS	IDN, AUS, NZL	AUS, NZL		DY	TWN, SGP	TWN, MYS	CHN, TWN, MYS	CHN, THA	-	-
	2 THA, BRN	CHN, MAC	TWN, MYS	IDN, IND			LAO, MMR	KOR, SGP	IDN, AUS, NZI			
	3 TWN, SGP	PHL, VNM	KHM, MAC			_	IDN, THA		KOR, BRN			
	4 LAO, MMR	IND, AUS	CHN, HKG			_			KHM, MAC			
DE	1 CHN, AUS, NZL	MYS, SGP, BRN	IDN, AUS, NZL	AUS, NZL		DR	TWN, SGP	MYS, BRN	IDN, AUS, NZL	PHL, MAC	-	-
	2 HKG, TWN	CHN, MAC	HKG, MYS			_	AUS, NZL	HKG, MAC	KOR, BRN	AUS, NZL		
·	3 LAO, MMR		CHN, TWN					IND, AUS	TWN, MYS			
BY	1 KOR, TWN, MYS_SGP	TWN, MYS	TWN, MYS, VNM	CHN, TWN VNM	I, TWN - MYS	BE	KOR, TWN	, AUS, NZL	TWN, VNM	CHN, TWN VNM	, AUS, NZI	AUS, NZI
	2 LAO, MMR	AUS, NZL	IDN, AUS,			_	CHN, AUS,	HKG, KHM	IDN, AUS,	MYS, THA	T.LL	1,22
	3		KHM. MAC			_	HKG. THA	CHN. MAC	KOR, THA	AUS, NZL		
	4		SGP, IND			_	LAO, MMR					
	5						PHL, IND					
BR	1 KOR, TWN,	IND, AUS	TWN, MYS,	TWN, VNN	1	YE	KOR, TWN	, VNM, AUS	CHN, TWN,	CHN, TWN	, -	-
	2 AUS, NZL		IDN, AUS,	AUS, NZL		-	LAO, MMR	MYS, BRN	IDN, AUS,	VNM		
	3		SGP, IND			-		CHN, IND	IND, MAC			
	6					_			SGP, CAN			
	5								MYS, THA			
YR	1 KOR, TWN,	MYS, THA,	-	TWN, VNN	1	ER	KOR, TWN	, PHL, MAC	-	TWN, VNM IND	-	-
	2	DKN				-	AUS, NZL	MYS. BRN		SGP. BRN		
	3					_	PHL, IND			AUS, NZL		
DBY	1 TWN, SGP	TWN, MYS	IDN, AUS, NZL	-		DBE	CHN, AUS, NZL	CHN, MAC	IDN, AUS, NZL	AUS, NZL		-
	2 LAO, MMR		KHM, MAC			_	LAO, MMR	PHL, VNM				
	3		SGP, IND									
DBR	1 AUS, NZL	IND, AUS	IDN, AUS,	AUS, NZL		DYE	LAO, MMR		IDN, AUS,	-	-	-
	2 TWN SGP		NZL TWN MYS			_			NZL CHN TWN			
	2100, 301		1 1 11 1, 11 1 3									
DYR	1 TWN, SGP	-	TWN, MYS	-		DER	AUS, NZL	MYS, BRN	IDN, AUS, NZL	AUS, NZL	-	-
	2		IDN, AUS,			_						
	3		NZL KOR BRN			-						
BVE	1 KOR TWN	AUS NZI	TWN VNM	CHN TWN	I	BVR	KOR TWN		TWN MYS	TWN VNM	[_	
DIL	MYS	nes, nze	1 111, 1111	VNM	,		SGP	,	VNM	, 1 0010, 0100		
	2 LAO, MMR		IDN, AUS,						IDN, AUS,			
			NZL			-			NZL SGP_IND			
									561, 110			
BER	1 KOR, TWN	-	TWN, VNM	TWN, VNN	1	YER	KOR, TWN	MYS, BRN	IDN, AUS, NZL	TWN, VNM	[-	-
	2 AUS, NZL		IDN, AUS, NZL	AUS, NZL					TWN, VNM			
	3 PHL, IND								MYS, THA		-	-
DRVE			IDN AUS			DBVD	TWN SCP		IDN AUS			
DDIL	I LAO, MINIK	-	NZL	-		DDIK	1 wiv, 501	-	NZL	-	-	-
						_			SGP, IND			
DBEB	1 ALIC M'71		IDN AUG	ALLS NOT		DVED			IDM ALC			
DDEK	I AUS, NZL	-	NZL	AUS, NZL		DIEK	-	-	NZL	-	-	-
BYER	1 KOR, TWN	-	TWN, VNM	TWN, VNN	1	DBYER	-	-	IDN, AUS, NZL	-	-	-
			IDN, AUS,									
			NZL									

Table 6.30 FCM cross-weighting-anchor subclusters

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi)

6.3.3 Assessment of Preparedness

This section compares the results involving the dollarized and euroized cases, the benchmarks with the original solutions. Asian cases which are put together with the benchmarks may be more ready for fixed exchange rates and/or monetary union.

The first part presents the results using the original unweighted criteria and the second part provides the analysis using weighted criteria.

6.3.3.1 Preparedness Assessment using Unweighted Criteria

Table 6.31 reports the classifications for preparedness assessment using the original unweighted variables. Columns '1' show the original groupings without the benchmarks while columns '2' provide the groupings with the benchmarks. The cells containing the Asian and the benchmark cases in columns 2 are highlighted. Associations with benchmarks from the post-dollarization or post-euro period may suggest greater preparedness.

For the pre-crisis period, shown by columns 2 the general level of preparedness for exchange rate fixation and monetary union could have been greater for dollar and yen pegs since quite a number of the Asian cases are being grouped with post-dollarization and/or post-euro benchmarks. Notice that for this period Hong Kong and a bunch of other countries are linked with PAN and ELS1 but not with any EMU benchmarks, in line with their unilateral dollar pegs before the Asian crisis.

Likewise, for crisis period the readiness for dollar and basket pegs might have been higher; for post-crisis 7V the readiness for yuan peg could be greater; and for post-crisis 8V that for dollar, basket, and euro pegs might be better.

For post-crisis 8V, most countries which are associated with dollarized benchmarks are not linked with euroized benchmarks and vice versa. For instance, under US reference, Korea, Indonesia, Laos, Myanmar, Australia, and New Zealand are connected with all the EMU benchmarks, hence they might be relatively prepared for a multilateral

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monetary bloc centered on the US dollar. On the contrary, the Philippines with connection to PAN, GTM1, and ECU3 might be more suitable for a unilateral dollar peg.

In light of the above, by and large the region could have been relatively prepared for a dollar peg throughout the periods.

Obviously, the groupings of the Asian cases are somewhat different when benchmark cases are added in the analysis. Hence, it is straightforward to identify common groupings between the two results. When the groupings in columns 1 intersect with those in columns 2, the common sets of countries should share common OCA features and levels of preparedness. The common sets of countries are presented in the bottom part of Table 6.31.

No common sets are robust over the periods. For pre-crisis period, more substantial common sets are present under dollar and euro anchors; for crisis period, under dollar and basket anchors; for post-crisis 7V, under yuan anchor; and for post-crisis 8V, under dollar anchor. Hence, overall more countries could share similar OCA dimensions and levels of preparedness when US is the reference.

With regard to the dollar areas of Hong Kong and Macau, they are hardly seen together in the common sets; they are only put together in the pre-crisis dollar solution. For the monetary union members of Singapore and Brunei, they are only placed together in the crisis period dollar solution. On this evidence, though maintaining similar monetary standards, these pairs of economies are not indicated to be constantly parallel in both the OCA dimensions and in the level of preparedness.

Table 6.32 puts together the cross-anchor common sets. Since no subgroups are stable over all anchors, it may be worthwhile to note those which are stable over four anchors and since the post-crisis period is the most recent period, it is compelling to focus on this period. The subclusters of Vietnam-India and Indonesia-India are stable across four of the five anchors in the post-crisis 8V solutions.

Table 6.33 displays the features of the clusters involving the benchmarks. From the table, the characteristics shared by the Asian countries and the benchmarks can be recognized. For instance, in the pre-crisis dollar findings, high degrees of business cycle symmetry, inflation convergence, and diversification are probably the predominant features which put the Asian cases together with the benchmarks in the first group. In general, Asian countries associated with dollarized and euroized benchmarks exhibit higher levels of business cycle symmetry, inflation convergence, and real exchange rate stability. Meantime, less developed countries such as Laos and Myanmar can be seen being linked with pre-dollarization benchmarks such as ECU1 and ECU2 which maintain high degrees of inflation differential and real exchange rate variability.

	D	ollar	Curren	cy Basket		Yen	E	Euro	Y	uan
	1	2	1	2	1	2	1	2	1	2
	1 KOR, MYS, PHL, IND, CAN	CHN, TWN, IND, AUS, NZL, CAN, ELS3, GTM3, EMU1, EMU2 EMU3	HKG, KHM, IDN, THA, MAC, BRN ,	CHN, TWN, MYS, PHL, IND, AUS, EMU1, EMU2	CHN, HKG, IND, MAC, NZL, CAN	THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3	HKG, KOR, TWN, MYS, SGP, THA, MAC, CAN	CHN, MYS, PHL, IND, AUS, CAN, EMU2, PAN	KOR, TWN, IDN, SGP, BRN	AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3
	2 KHM, IDN, THA, BRN. JPN	HKG, KOR, MYS, PHL, SGP, THA, MAC, BRN, PAN, ELS1	KOR, TWN, MYS, PHL, SGP, IND	CAN, ELS2, ELS3, GTM3, EMU3	KOR, TWN, MYS, PHL, SGP, AUS	BRN, GTM1, ELS2, GTM2, ECU3, GTM3	KHM, LAO, MMR, VNM BRN, JPN	LAO, VNM, ECU1, ECU2	LAO, MMR, VNM, JPN	GTM1, ELS2, GTM2, ECU3
Pre- crisis	3 HKG, TWN, SGP, MAC	JPN, ECU1, GTM1, ELS2, GTM2, ECU3	LAO, MMR, VNM	HKG, KOR, IDN, SGP, THA, MAC, BRN, NZL	KHM, LAO, MMR, VNM	IDN, VNM, ECU1, ELS1, ECU2	CHN, IDN, PHL, IND, AUS, NZL	KHM, MMR, MAC, ELS1	HKG, KHM, MAC	KOR, TWN, IDN, MYS, SGP, NZL
	4 CHN, AUS, NZL	ECU2	CHN, AUS, NZL	KHM, LAO, MMR, VNM	IDN, THA, BRN	HKG, KOR, TWN, MYS, SGP, MAC		HKG, TWN, SGP, THA, NZL	PHL, THA, IND	BRN, JPN, PAN, ECU1, ELS1, ECU2
	5 LAO, MMR, VNM	KHM, IDN, LAO, MMR, VNM	CAN	PAN, ECU1, ELS1, ECU2		KHM, LAO, MMR		ELS2, ELS3, GTM3, EMU1 EMU3	MYS, AUS, ,NZL, CAN	PHL, THA, VNM, IND
	6			GTM1, GTM2 ECU3	,	CHN, PHL,		KOR, IDN, BRN IPN		KHM, LAO, MMP
	7			Leos		IND, CAN		GTM1, GTM2	,	HKG, MAC
								ECU3		
	1 CHN, HKG, KHM, MAC, JPN	TWN, IDN, AUS, CAN, PAN, ELS3, GTM3, EMU1 EMU2, EMU3	HKG, KOR, TWN, KHM, MYS, SGP, ,CAN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, MAC, BRN, ELS1	KOR, TWN, MYS, PHL, SGP, THA, BRN	CHN, HKG, IDN, PAN, GTM3, EMU1 EMU3	HKG, KOR, TWN, KHM, , JPN	IND, CAN, PAN, ELS3, GTM3, EMU1 EMU2, EMU3	HKG, KOR, MMR, PHL, ,MAC, JPN	IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3
	2 KOR, TWN, MYS, SGP, BRN, CAN	CHN, KOR, MYS, MMR, PHL, SGP, THA, VNM, MAC, BRN, NZL, ELS1, ECU2	CHN, MMR, PHL, THA, VNM, MAC, BRN	CAN, PAN, ECU1, ELS2, ELS3, GTM3, EMU1, EMU3	LAO, MMR, IND	KHM, LAO, MMR, ECU1, ECU2	MMR, THA, VNM, AUS, NZL	IDN, LAO, MMR, ECU1, ECU2	IDN, MYS, THA, VNM, BRN	ELS1, GTM1, ELS2, GTM2, ECU3
Crisis	3 PHL, VNM	HKG, KHM, LAO, IND, JPN, ECU1, GTM1, ELS2, GTM2, ECU3	IDN, IND, AUS, NZL	IDN, LAO, MMR, THA, VNM, IND, AUS, NZL, EMU2	HKG, KHM, MAC	IND, AUS, CAN, EMU2	CHN, IDN, PHL, IND, MAC	MYS, SGP, THA, VNM, BRN, AUS, NZL	TWN, IND, AUS, CAN	LAO, MMR, ECU1, ECU2
	4 MMR, THA, NZL		LAO	GTM1, GTM2 ECU3	, VNM, AUS, NZL, CAN	KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL	MYS, SGP, BRN, CAN	ELS1, GTM1, ELS2, GTM2, ECU3	KHM, SGP, NZL	HKG, KOR, PHL, MAC, JPN, NZL
	5 IND, AUS			ECU2	CHN, IDN	ELS1, GTM1, ELS2, GTM2, ECU3, ELS3	LAO	CHN, HKG, KOR, TWN, KHM, PHL, MAC, JPN	LAO	MYS, SGP, THA, VNM, BRN
	6 IDN, LAO									TWN, KHM, IND, AUS, CAN
	1 CHN, HKG, TWN, MYS, SGP, JPN	KHM, PHL, MAC, GTM1, GTM2, ECU3	KOR, TWN, MYS, THA, VNM	CAN, PAN, ELS2, ELS3, GTM3, EMU1 EMU3	CHN, HKG, TWN, MYS, , PHL, THA, VNM	CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC	CHN, HKG, KOR, TWN, MYS, PHL, THA, VNM, IND, MAC, IPN	CHN, HKG, TWN, MYS, THA, BRN	TWN, MYS, SGP, THA, VNM, IND	HKG, TWN, IDN, MYS, SGP, THA, VNM, IND, EMU1, EMU3
	2 THA, VNM, IND, CAN	CAN, PAN, ELS2, ELS3, GTM3, EMU3	CHN, HKG, SGP, IND	KOR, MMR, PHL, MAC, BRN, NZL, ELS1	KHM, SGP, IND, MAC, CAN	VNM, IND, ELS3, GTM3, EMU1, EMU3	KHM, LAO, SGP, BRN, CAN	IDN, VNM, IND, CAN, EMU1, EMU3	KOR, MMR MAC, BRN	LAO, ECUJ1, GTM1, GTM2, ECU3, ELS3
Post- crisis	3 KHM, PHL, MAC, LAO	CHN, HKG, TWN, MYS, SGP, JPN	KHM, MAC, CAN	LESI LAO, GTM1, GTM2, ECU3	KOR, LAO, MMR, BRN	IDN, THA, AUS, CAN, EMU2	IDN, MMR, AUS, NZL	KOR, KHM, SGP, MAC, JPN, PAN	IDN, AUS, NZL, CAN	KHM, PHL, MAC, JPN, PAN, ELS1, FLS2_GTM3
7V	4 IDN, AUS, NZL	KOR, LAO, MMR, BRN, NZL	IDN, AUS, NZL	IDN, THA, VNM, IND, AUS, EMU2	IDN, AUS, NZL	LAO, GTM1, GTM2, ECU3		LAO, GTM1, GTM2, ECU3	HKG, KHM, PHL, JPN	KOR, MMR, BRN, AUS, NZL, CAN, EMU2
	5 KOR, BRN	THA, VNM, IND	LAO, MMR	CHN, HKG, TWN, KHM, MYS, SGP		BRN , PAN, ELS2		ELS2, ELS3, GTM3	LAO	ECU2
	6 MMR	ECU1, ELS1, ECU2	PHL, BRN	ECU1, ECU2		KOR, MMR,		MMR, PHL, NZI		
	7	AUS, EMU1,				ECU1, ELS1,		ECU1, ELS1,		
	8	EMU2				ECU2		ECU2	_	
	5							.100, ENIU2		
	1 TWN, SGP	PHL, MAC,	KOR, MYS, TWN	IND, AUS	TWN, MYS, PHL	AUS	HKG, KOR, TWN	IND, CAN	AUS, CAN	
All Periods	2	CAN	AUS, NZL	CAN	LAO, MMR	IDN	CHN, PHL,	LAO		
7V	3	AUS	HKG, SGP	PHL			AUS, NZL			
	4	KHM					SGP, CAN			

Table 6.31 OCA-FCM preparedness assessment

		Γ	Dollar	(Curren	cy Basket	,	Yen	I	Euro	Y	Tuan
		1	2	1		2	1	2	1	2	1	2
	1 KO KH PHI BRI	R, TWN, M, LAO, L, MAC, N	CHN, HKG, TWN, KHM, MYS, SGP, THA, VNM, IND, MAC, BRN, JPN,	CHN, T KHM, T	ΓWN, VNM	IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3	HKG, KHM, MYS, SGP, MAC, CAN	IDN, VNM, IND, ELS3, GTM3, EMU1 EMU2, EMU3	CHN, TWN, IDN, MYS, PHL, THA, VNM, IND	IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1 EMU2, EMU3	KOR, LAO, MMR, PHL, MAC	TWN, IDN, VNM, IND, EMU1, EMU2, EMU3
	2 CH TH INI	N, IDN, A, VNM, D, CAN	GTM2 KOR, IDN, LAO, MMR, AUS, NZL, EMU1, EMU2 EMU3	AUS, N	NZL	KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	CHN, TWN, IDN, THA, VNM, IND	LAO, GTM1, ELS2, GTM2, ECU3	KOR, KHM, LAO, MAC, JPN	CHN, KOR, TWN, KHM, PHL, MAC, PAN	TWN, IDN, THA, VNM, IND	HKG, KHM, MYS, SGP, THA, BRN, JPN
Post- crisis 8V	3 HK SGI	G, MYS, P, JPN	PHL, PAN, GTM1, ECU3	MMR		CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN	KOR, PHL, BRN	MMR, ECU1, ELS1, ECU2	HKG, MMR, SGP, BRN, CAN	LAO, ELS1, GTM1, ELS2, GTM2, ECU3	HKG, KHM MYS, SGP, BRN, JPN	, KOR, LAO , GTM1, GTM2, ECU3
	4 AU	S, NZL	CAN, ECU1, ELS1, ELS2, ELS3, GTM3	IDN, L IND, C	AO, CAN	ECU2	AUS, NZL	PHL, PAN	AUS, NZL	HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL	AUS, NZL, CAN	MMR, MAC, ECU1, ELS1, ECU2
	5 MN	IR	ECU2	HKG, S	SGP		LAO, MMR	CHN, HKG, TWN, KHM, MYS, SGP, THA, MAC		ECU1, ECU2		PHL, PAN, ELS2, ELS3, GTM3
	6			MYS,	THA,			AUS, NZL,				AUS, NZL,
_	7			BRN KOR, F MAC	PHL,			CAN KOR, BRN				CAN
	1 -		MYS, SGP, THA, MAC, PPN	AUS, N	NZL	IND, AUS	SGP, MYS	IDN	AUS, NZL	IND, CAN	-	-
	2		HKG	THA, E	BRN	CAN	KOR, PHL		KHM, JPN	LAO		
	3		JPN				LAO, MMR		CHN, IDN,			
All	4		TWN				HKG MAC		SGP CAN			
Periods	5		IND				1110, 1110		501, 6.11			
0.4	6		CAN									
	7		AUS									
	9		CHN									
	10		KOR									
	11		PHL									
Comm	on set	s of cou	ntries									
comm	on sea	, or cou	Dollar		С	urrency Baske	t	Yen		Euro		Yuan
		1 KOR	R, MYS, PHL		TWN	, MYS, PHL, I	ND -		CHN, PH	L, IND, AUS	AUS, CAN	1
_		2 HKC	G, SGP, MAC	(CHN,	AUS			KHM, MI	MR		
Pre-c	risis	3 CHN	I, AUS, NZL						LAO, VN	M		
	-	5 THA	, CAN , BRN						M 15, CA	IN		
		1 KOR	, MYS, SGP, B	RN I	HKG,	KOR, TWN,	LAO, M	IMR	-		-	
	-	2 HKC	, KHM, JPN	(CHN,	PHL, MAC, E	BRN AUS, C.	AN				
Cris	sis	3 MM	R, THA, NZL		IDN,	IND, AUS, NZ	L CHN, II	DN				
	-	4 PHL	, VNM]	MMR	, THA, VNM						
		6 TWN	I, MAC I, CAN									
		1 KHM	I, PHL, MAC		THA,	VNM	IDN, AU	JS	KOR, MA	AC, JPN	TWN, MY VNM, IND	S, SGP, THA,
Post-cri	sis 7V	2]	IDN, . PHI	AUS BRN			KHM, SG	р Р	KOR, MM	R, BRN CAN
	-	4			TIL,	DRIV			v i vivi, ii v	U	KHM, PHI	L, JPN
All Pe 7V	riods /	1 -		-	-		-		-		-	
		1		DET								
		1 TWN	N, KHM, MAC,	BRN	AUS,	NZL	IDN, VI	NM, IND	CHN, TW	'N, PHL	TWN, IDN	I, VNM, IND
Post-cri	sis 8V	2 CHN 3 HKG	6, 11123, VINIVI, I 6, MYS, SGP 11	PN 1	LAO	CAN			KOR. KH	M, MAC	MMR. MA	, .C
		4 KOR	, LAO						non, m	,		
		5 AUS	, NZL									
A11 D-	riode	1 -			-		_				_	
81	V	1 -		-			-		-			

Table 6.31 OCA-FCM preparedness assessment (continued)

	PRE	CRS	I	PST		All		PRE	CRS		PST	1	All
			7V	8V	7V	8V				7V	8V	7V	8V
DB	1 MYS, PHL	LKOR, MYS, SGP, BRN	-	AUS, NZL	-	-	DY	-	-	-	VNM, IND	-	-
	2 CHN, AUS	CHN, MAC					-						
	3	HKG, KHM					_						
	4	MMR, THA											
DE	1 CHN, AUS	-	KHM, MAG	C VNM, IND	-	-	DR	-	-	KHM, PHL	KOR, LAO	-	-
	2			KHM, MAC	2		-				VNM, IND		
BY	1 -	-	IDN, AUS	IDN, IND		-	BE	PHL, IND	-	-	IDN, IND	-	-
	2							CHN, AUS					
BR	1 -	-	THA, VNM	IDN, IND	-	-	YE	-	-	-	IDN, VNM, IND	-	-
YR	1 -	-	-	IDN, VNM, IND	-	-	ER	-	-	VNM, IND	IDN, VNM, IND	-	-
DBY	1 -	-	-	-	-	-	DBE	CHN, AUS	-	-	-	-	-
	2						_						
DBR	1 -	-	-	-	-	-	DYE	-	-	-	VNM, IND	-	-
	2												
DYR	1 - 2	-	-	VNM, IND	-	-	DER	-	-	-	VNM, IND	-	-
BYE	1-	-	-	IDN, IND	-	-	BYR	-	-	-	IDN, IND	-	-
BER	1 -	-	-	IDN, IND	-	-	YER	-	-	-	IDN, VNM, IND	-	-
DBYE	1 -	-	-	-	-	-	DBYR	-	-	-	-	-	-
DBER	1 -	-	-	-	-	-	DYER	-	-	-	VNM, IND	-	-
BYER	1 -	-	-	IDN, IND	-	-	DBYER	-	-	-	-	-	-

Table 6.32 OCA-FCM-preparedness cross-anchor subclusters

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi).

	Dollar									
		TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N ²
	Cluster	(%)		(%)						
	Pre-crisis									
_	All Cases	25.002	.182	7.752	6.813	.215	3.253	2.539		
1	CHN, IWN, IND, AUS, NZL, CAN, ELSS, GIMS, EMUI, EMU2, EMU3	27 307	181	3 176	2 255	511	4 357	1 400	_	3
2	HKG, KOR, MYS, PHL, SGP, THA, MAC, BRN, PAN, ELS1	22.715	161	4.563	1.790	.616	3.103	1.310	-	1
3	KHM, IDN, LAO, MMR, VNM	7.592	.051	12.441	3.138	602	2.498	6.798	-	1
4	JPN, ECU1, GTM1, ELS2, GTM2, ECU3	37.633	.325	10.418	2.973	158	2.233	1.874	-	1
5	ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	1
		24.064	101	0.006	7 700	049	0 1 0 0	1 501		
1	TWN IDN AUS CAN DAN ELS3 GTM3 EMULTEMU2 EMU3	24.904	372	3 752	2 9/6	.040	4 658	1 710		4
2	CHN, KOR, MYS, MMR, PHL, SGP, THA, VNM, MAC, BRN,	00.102	.072	0.702	2.040	.100	4.000	1.710		4
	NZL, ELS1, ECU2	19.243	417	8.881	14.803	.366	2.664	1.305	-	0
3	HKG, KHM, LAO, IND, JPN, ECU1, GTM1, ELS2, GTM2, ECU3	27.216	.421	14.577	3.558	469	2.491	2.155	-	2
	Post-crisis 7V									
1	All Cases	24.154	.264	6.190	6.454	159	3.266	1.351	-	0
2	CAN PAN FLS2 FLS3 GTM3 FMU3	42 683	.400	1 803	2.140	097	3 591	1.393	-	2
3	CHN, HKG, TWN, MYS, SGP, JPN	15.185	.724	2.116	1.303	612	2.890	.543	-	2
4	KOR, LAO, MMR, BRN, NZL	7.842	401	6.764	2.547	.339	2.820	1.781	-	0
5	THA, VNM, IND	17.671	.383	2.389	1.340	560	4.761	.778	-	0
6	ECU1, ELS1, ECU2	37.552	393	32.380	52.839	.586	2.197	2.633	-	1
	AUS, EMUI, EMU2 Post crisis 8V	17.420	.156	1.299	2.533	.251	5.208	n.a.		2
	All Cases	24 154	264	6 190	6 454	- 159	3 266	1 351	68 7	
1	CHN, HKG, TWN, KHM, MYS, SGP, THA, VNM, IND, MAC,	211101	.201	0.100	0.101		0.200	1.001	0011	
	BRN, JPN, GTM2	18.840	.482	2.456	1.264	604	2.907	.688	73.6	4
2	KOR, IDN, LAO, MMR, AUS, NZL, EMU1, EMU2, EMU3	12.487	.009	4.767	2.585	.260	4.323	2.212	69.7	1
3	ECU2	33.514	879	51.111	147.15	./91	2.406	2.760	-	2
4	CAN ECUL ELSI ELS2 ELS3 GTM3	47 588	.437	0.032	2.585	386	2.191	1.540	45.0	1
	Cirit, ECC1, EEC1, EEC2, EEC5, CIVID	47.000	+/	0.001	2.004	.200	0.010	1.010	72.0	<u> </u>
	Currency Basket									
	Cluster	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N ²
	Clusici	(%)		(%)						
	Pre-crisis	00 770	101	0.000	7 70 4	1.10	0.000	0.500		
1	All Cases	19 202	.104	8.208	7.704	.148	3.292	2.539		1
2	HKG KOR IDN SGP THA MAC BRN NZI	15 737	- 093	4.492	2 936	.201	2 802	1.040	-	0
3	CAN, ELS2, ELS3, GTM3, EMU3	37.817	.580	2.103	2.614	.313	3.990	1.319	-	3
4	KHM, LAO, MMR, VNM	9.543	010	14.813	3.526	.004	2.396	7.942	-	1
5	PAN, ECU1, ELS1, ECU2	37.373	364	24.923	39.713	.552	2.549	2.284	-	1
6	GTM1, GTM2, ECU3	37.207	.687	8.133	3.183	668	2.475	1.587	-	1
		00.670	010	0.005	0.201	050	0.006	1 501		
1	CHN HKG KOR TWN KHM MVS PHL SGP MAC BRN	22.070	.212	9.233	9.321	.055	3.220	1.591		
1	ELS1	16.477	.117	3.820	5.866	.101	2.222	.910	-	1
2	CAN, PAN, ECU1, ELS2, ELS3, GTM3, EMU1, EMU3	35.708	.596	5.758	1.726	.420	3.775	1.617	-	1
3	IDN, LAO, MMR, THA, VNM, IND, AUS, NZL, EMU2	12.600	050	14.658	7.026	132	4.306	2.626	-	1
4	GTM1, GTM2, ECU3	37.207	.687	8.133	3.183	668	2.475	1.587	-	2
5	ECU2 Post crisis 7V	33.514	879	51.111	147.15	./91	2.406	2.760		2
	All Cases	22.010	.217	6.524	6.892	.071	3.301	1.351		
1	CAN, PAN, ELS2, ELS3, GTM3, EMU1, EMU3	34.384	.548	1.902	1.002	.264	3.750	1.241	-	2
	KOP MMP PHI MAC BPN NZI FLS1	15 475				.112	2.463	1.178	-	0
2	KOK, MINIK, I HE, MAC, DRIV, IVEE, EEST	10.470	387	6.900	3.115	572	2.467	2.304	-	1
2 3	LAO, GTM1, GTM2, ECU3	28.766	387 .638	6.900 7.887	3.115	.079	5.2.28	1.014		1
2 3 4	LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CUN, UKG, TWN, VHM, MXS, SGD	28.766 14.485	387 .638 .173	6.900 7.887 3.264	3.115 2.877 2.734	001	0.720	1	-	0
2 3 4 5	LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1 ECU2	28.766 14.485 13.022 37.607	387 .638 .173 .494 - 364	6.900 7.887 3.264 1.908 42.282	3.115 2.877 2.734 1.828 76 421	.021	2.722	3 023	-	0
2 3 4 5 6	LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V	28.766 14.485 13.022 37.607	387 .638 .173 .494 364	6.900 7.887 3.264 1.908 42.282	3.115 2.877 2.734 1.828 76.421	.021 .764	2.722 2.282	.629 3.023	-	0 3
2 3 4 5 6	LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases	28.766 14.485 13.022 37.607 22.010	387 .638 .173 .494 364	6.900 7.887 3.264 1.908 42.282 6.524	3.115 2.877 2.734 1.828 76.421 6.892	.021 .764 .071	3.301	3.023 1.351	67.9	0 3
2 3 4 5 6	LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3	28.766 14.485 13.022 37.607 22.010 14.164	387 .638 .173 .494 364 .217 .109	6.900 7.887 3.264 1.908 42.282 6.524 4.851	3.115 2.877 2.734 1.828 76.421 6.892 2.625	.021 .764 .071 .136	3.220 2.722 2.282 3.301 4.824	1.351 1.213	- - - 67.9 70.5	0 3
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2$	LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHN, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3,	28.766 14.485 13.022 37.607 22.010 14.164	387 .638 .173 .494 364 .217 .109	6.900 7.887 3.264 1.908 42.282 6.524 4.851	3.115 2.877 2.734 1.828 76.421 6.892 2.625	.021 .764 .071 .136	3.220 2.722 2.282 3.301 4.824		- - - 67.9 70.5	03
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	LAO, GTMI, FILL, SIAC, DAX, NEL, ELSI LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHM, LAO, CAN, PAN, ECU1, ELSI, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HYC, KOP, TWN, MYS, BHL, SGP, MAC, PRN	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865	387 .638 .173 .494 364 .217 .109 .441	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499	.021 .764 .071 .136 080	3.220 2.722 2.282 3.301 4.824 2.711 2.404		- - - - - - - - - - - - - - - - - - -	03
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 4 \end{array} $	LAO, GTMI, FILL, SHAY, JACK, JACK, HEL, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNN, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514	387 .638 .173 .494 364 .217 .109 .441 .161 -879	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51 111	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147 15	.021 .764 .071 .136 080 .105 .791	3.301 2.722 2.282 3.301 4.824 2.711 2.494 2.406	.629 3.023 1.351 1.213 1.852 .658 2.760	67.9 70.5 60.3 72.3	0 3 1 2 3 2
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 1 \\ 1$	LAO, GTMI, FILL, SHAC, DAK, KEL, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNN, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514	387 .638 .173 .494 364 .217 .109 .441 .161 879	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15	.021 .764 .071 .136 080 .105 .791	3.301 2.722 2.282 3.301 4.824 2.711 2.494 2.406		67.9 70.5 60.3 72.3	0 3 1 2 3 2
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 1 \\ 1$	LAO, GTMI, THL, SHAC, DAX, NEL, ELSI LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514	387 .638 .173 .494 364 .217 .109 .441 .161 879	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15	.021 .764 .071 .136 080 .105 .791	3.301 4.824 2.711 2.494 2.406		67.9 70.5 60.3 72.3	0 3 1 2 3 2
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 3 \\ 4 \\ \hline 1 2 3 4 \hline 3 4 3 4 $	LAO, GTMI, FILL, SIAC, DAK, NEL, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, ENU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA	387 .638 .173 .494 364 	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 RER ¹	.021 .764 .071 .136 .080 .105 .791 INT	3.222 2.282 3.301 4.824 2.711 2.494 2.406 EXP	629 3.023 1.351 1.213 1.852 658 2.760 DEB	- - - - - - - - - - - - - - - - - - -	0 3 1 2 3 2 N ²
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ -$	LAO, GTMI, FILI, SIAC, DAK, KEL, ELSI LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, ENU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA (%)	387 .638 .173 .494 364 .217 .109 .441 .161 .879 BUS	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%)	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 RER ¹	.021 .764 .071 .136 .080 .105 .791 INT	2.722 2.282 3.301 4.824 2.711 2.494 2.406 EXP	629 3.023 1.351 1.213 1.852 658 2.760 DEB	- - - - - - - - - - - - - - - - - - -	0 3 1 2 3 2
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	LAO, GTMI, FILI, STAC, DAC, NEL, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis AUCence	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA (%)	387 .638 .173 .494 364 .217 .109 .441 .161 .879 BUS	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%)	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 RER ¹	.021 .764 .071 .136 .080 .105 .791 INT	3.202 2.722 2.282 3.301 4.824 2.711 2.494 2.406 EXP	629 3.023 1.351 1.213 1.852 658 2.760 DEB	67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 2 N ²
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ - \\ - \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	IDN, MIR, HIL, SIAC, DK, KEL, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MIR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA AUS NZL, PAN ELS3, EMU1, EMU2, EMU3	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA (%) 25.216 25.211	387 .638 .173 .494 364 .217 .109 .441 .161 .879 BUS BUS	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 RER ¹	.021 .764 .071 .136 080 .105 .791 INT INT	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.406 EXP 3.292 4.245		67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 N ²
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 2 \\ 1 \\ 2 \\ 2$	Rox, anin, rin, sinc, bic, bick, rel, elsi LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, ENU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MIR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.665 33.514 TRA (%) 25.216 25.216 25.211 40.801	387 .638 .173 .494 364 .494 .364 .109 .441 .161 .879 BUS BUS .054 .125 .625	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.687 5.934	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 RER ¹ 9.257 2.230 2.324	.021 .764 .071 .136 .080 .105 .791 INT INT 066 .434 .246	3.202 2.722 2.282 3.301 4.824 2.711 2.494 2.406 EXP EXP 3.292 4.245 2.399		67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 2 N ² 2 2
$2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	Nors, Milli, Hill, Stare, Back, Bock, Neb, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, ENU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC	28.766 14.485 13.022 22.010 14.164 14.164 14.165 33.514 TRA (%) 25.216 25.216 25.711 40.801 15.890	387 .638 .173 .494 364 .217 .109 .441 .161 879 BUS BUS .054 .125 .625 .625	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.625 2.499 1.905 147.15 RER ¹ 9.257 2.230 2.324 3.227	.021 .764 .071 .136 .080 .105 .791 INT INT 066 .434 246 928	3.202 2.722 2.282 3.301 4.824 2.711 2.494 2.406 EXP EXP 3.292 4.245 2.399 3.187		67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 2 N ² 2 2 2 0
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 3$	Kora, anin, Fini, Sirke, Jack, Jack, Hell, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, ENU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA (%) 25.216 25.711 40.801 15.890 33.284	387 .638 .173 .494 364 .217 .109 .441 .161 879 BUS BUS .054 .125 .625 .117 136	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 2.6029	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 147.15 147.15 9.257 2.230 2.324 3.227 3.3631	.021 .764 .071 .136 -080 .105 .791 INT -066 .434 246 928 .745	3.222 2.282 3.301 4.824 2.711 2.494 2.406 EXP 5.292 4.245 2.399 3.187 2.568	.629 3.023 1.351 1.213 1.852 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009	67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 N ² 2 2 2 0 1
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7 \\ 7$	Rox, anin, rin, sinc, bic, bic, rest LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MIR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases HA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VMR, ECU1, ELS1, ECU2 KHM, LAO, MMR Club BD, COM	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA (%) 25.216 25.711 40.801 15.880 33.284 13.667 12.11	387 .638 .173 .494 364 .217 .109 .441 .161 .879 BUS BUS BUS .054 .125 .625 .117 .136 .389	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 e.029	3.115 2.877 2.734 1.828 76.421 2.625 2.625 2.499 1.905 147.15 	.021 .764 .071 .136 .080 .105 .791 INT INT 066 .434 .246 .434 .246 .948 .745 .342	3.202 2.722 2.282 3.301 4.824 2.711 2.494 2.406 EXP 3.292 4.245 2.399 3.187 2.568 2.079		67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 N ² 2 2 0 1 1
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ \end{array} $	Kox, anin, Fin, Sirk, Bik, Kik, Kik, Kik, Kik, Kik, Kik, Kik, K	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 7RA (%) 25.216 25.711 40.801 15.890 33.284 13.667 13.411	387 .638 .173 .494 .364 .217 .109 .441 .161 .161 .879 .825 .625 .625 .625 .117 .1389 .389 .124	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 RER ¹ RER ¹ 9.257 2.230 2.324 3.627 3.3631 3.789 16.387	.021 .764 .071 .136 080 .105 .791 .05 .791 .05 .791 .066 .434 246 .928 .745 .342 .744	3.222 2.282 3.301 4.824 2.711 2.494 2.406 EXP 5.299 4.245 2.399 3.187 2.568 2.079 4.697	.629 3.023 1.351 1.213 1.852 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244	67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 2 N ² 2 2 0 0 1 1 1
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \end{array} $	Rox, ann, rm, rm, snc, bas, rel, test LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, ENU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases	28.766 14.485 13.022 22.010 14.164 34.450 12.865 33.514 TRA (%) 25.216 25.216 25.711 40.801 15.890 33.284 13.667 13.411 21.558	387 .638 .173 .494 .364 .217 .109 .441 .161 .879 .879 .879 .054 .125 .625 .625 .117 .1369 .389 .124	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 3.801 26.029 12.471 8.205	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 7.2230 2.324 7.230 2.324 3.227 3.631 3.789 16.387 9.290	.021 .764 .071 .136 .080 .105 .791 INT 066 .434 .246 .928 .744 .244 .244 .244 .244 .244 .244 .244	3.222 2.282 3.301 4.824 2.711 2.494 2.406 EXP 5.292 4.245 2.399 3.187 2.568 2.079 4.697 3.226	.629 3.023 1.351 1.213 1.813 1.825 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244	67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 N ² 2 2 0 0 1 1 1 1 1 1
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \end{array} $	Kora, anine, Fine, Stare, Jack, Jack, Hell, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, SGP, THA, VNM, MAC, BRN. NZL	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA (%) 25.216 25.711 40.801 15.890 33.284 13.667 13.411 21.558	387 .638 .173 .494 364 .217 .109 .441 .161 879 .879 .879 .054 .125 .625 .117 136 389 .124 .125 .117 .126 .389 .124 .125	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522	3.115 2.877 2.734 1.828 76.421 2.625 2.499 1.905 147.15 7.421 RER ¹ 8.827 2.230 2.324 3.227 3.631 3.789 16.387 9.290 5.192	.021 .764 .071 .136 .080 .105 .791 .0066 .434 .246 .928 .745 .342 .745 .342 .745	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 3.292 4.245 2.399 3.187 2.568 2.079 4.697 4.697 4.697 2.5616		67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 N ² 2 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$	Rox, anin, rin, sinc, bik, rich, rich, ensite LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA (%) 25.216 25.711 40.801 15.880 33.284 13.667 13.411 21.558 15.361 22.739	387 .6387 .173 .494 364 .217 .109 .441 .161 .161 .879 .054 .125 .625 .625 .117 .136 .625 .389 .124 .389 .124	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522 5.181	3.115 2.877 2.734 1.828 76.421 2.625 2.499 1.905 147.15 147.15 RER ¹ 	.021 .764 .071 .136 -080 .105 .791 INT INT -0666 .434 -246 -928 .745 .342 744 .017 478 .565	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.406 EXP EXP 3.292 4.245 2.399 3.187 2.568 2.079 4.697 3.226 2.616 4.208		67.9 70.5 60.3 72.3 LAB	0 3 1 2 3 2 N ² 2 2 0 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	Rox, anin, rin, sinc, bic, bic, rel, clear LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases IDN, MMR, THA, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VMR, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELSA, GTM1, ELS2, GTM2, ECU3, ELS3	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 7RA (%) 25.711 25.711 13.880 33.284 40.801 15.880 33.284 40.801 15.581 13.667 13.411 21.558 15.361 22.739 40.638	387 .6387 .173 .494 .364 .217 .109 .441 .161 .161 .879 .054 .125 .625 .625 .117 .1389 .389 .124 .389 .124 .423 .713 .731 .731 .735	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522 5.181 5.181	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 47.15 78.227 33.631 2.234 3.227 33.631 3.789 16.387 9.290 5.192 6.300 2.573	.021 .764 .071 .136 .080 .105 .791 INT <u>066</u> .434 .246 .928 .745 .342 .744 .246 .928 .742 .342 .744	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.406 EXP 5.299 3.187 2.568 2.079 4.245 2.399 3.187 2.568 2.079 4.697 3.226 2.616 4.206	.629 3.023 1.351 1.213 1.852 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244 1.591 .197 1.191 8.199	- 67.9 70.5 60.3 72.3 	0 3 1 1 2 3 3 2 2 2 2 2 2 2 0 0 1 1 1 1 1 1 1 2 3 2 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	Rora, Jamir, Tim, Stare, Jack, Jack, Rub, Rub, Elsi LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, ENU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, ELS3 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HK, G, IDN, PAN, GTM3, ELU1, ELS3 KHM, LAO, MMR, ECU1, ELS3 CHN, HK, COM, CAN, ECU3 CHN, MLAO, MMR, CU1, EU2	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 7 TRA (%) 25.216 25.711 40.801 15.890 33.284 13.661 15.480 33.284 13.661 12.739 40.638 17.966 17.966	387 .6387 .173 .494 .364 .217 .109 .441 .161 .879 .879 .879 .054 .125 .625 .117 .136 .255 .117 .1369 .124 .389 .124 .238 .713 .731 .450 .052 .255	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522 5.181 6.632 9.357 2.522 5.181 6.632 2.571 8.632 2.571 8.663 2.571 8.652 2.572 5.7183 6.632 2.572 5.7183 6.632 2.572 5.7183 6.632 2.572 5.7183 5.7183 5.7183 5.7183 5.7183 5.7183 5.7183 5.7183 5.7183 5.7183 5.7252 5.7181 5.7252 5.7181 5.7252 5.7181 5.7252 5.7181 5.7252 5.7181 5.7252 5.7181 5.7252 5.7252 5.7181 5.7252 5.7181 5.7572 5.757575 5.75757575 5.75757575757575757	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 76.221 9.257 2.230 2.324 3.227 33.631 3.789 16.387 9.290 5.192 6.300 2.733 34.802 2.732	.021 .764 .071 .136 .080 .105 .791 INT -066 .434 .246 .342 .744 .248 .342 .744 .246 .342 .744	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.495 2.399 3.187 2.668 2.079 4.697 3.226 2.616 4.208 2.616 4.208 2.616 4.209 2.439	.629 3.023 1.351 1.213 1.852 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244 1.591 1.591 8.197 1.581 3.315 3.675		0 0 3 1 1 2 2 2 2 2 2 2 0 0 1 1 1 1 1 2 2 2 0 0 1 1 1 2 2 2 0 0 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2
$\begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \end{array}$	Rora, Jamir, Tim, Stare, Jack, Jack, Hell, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR, ECU1, ELS1, ECU2 KND, MXS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR, ECU1, ECU2 IND, AUS, CAN, EMU1, SCP, THA, VNM, MAC, DBN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, E	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 TRA (%) 25.216 25.711 40.801 15.890 33.284 13.667 13.411 21.558 15.3667 13.411 21.558 15.3667	387 .6387 .6384 .173 .494 .364 .217 .109 .441 .1619 .879 .879 .879 .054 .125 .625 .117 .136 .389 .124 .124 .125 .325 .321 .713 .731 .423 .713 .731	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 51.111 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522 5.181 6.632 3.3056 2.522	3.115 2.877 2.734 1.828 76.421 2.625 2.625 2.499 1.905 147.15 76.421 8.892 2.625 147.15 76.421 8.230 2.324 3.227 3.631 3.789 16.387 9.290 5.192 6.300 2.733 3.4.802 2.714 5.102	.021 .764 .071 .136 .080 .105 .791 .0066 .434 .246 .928 .745 .342 .745 .342 .744 .017 .744 .565 .260 .578 .061 .578	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.499 3.292 4.245 2.399 3.187 2.568 2.079 4.697 3.226 2.616 4.208 2.616 4.208 2.616 4.208 2.616 2.439 4.899 2.616	.629 3.023 1.351 1.213 1.851 1.213 1.852 658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244 2.244 1.591 8.19 1.197 1.581 3.315 1.951 1.819	- 67.9 70.5 60.3 72.3 	0 0 0 0 0 0 0 0 0 0 0 0 0 0
$\begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	Rora, Jamir, Finl, Stare, Jack, Joki, ReD, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR, ECU1, ECU2 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR, ECU1, ECU2 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC,	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 7RA (%) 25.216 25.711 40.801 15.800 33.284 13.667 13.411 21.558 15.3667 13.411	387 .6387 .173 .494 364 .217 .109 .441 .161 .625 .625 .625 .625 .117 .136 .625 .389 .124 .423 .713 .731 .450 .022 .322 .713	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.687 3.801 26.029 12.471 8.205 9.357 2.522 5.181 6.632 37.183 3.056	3.115 2.877 2.734 1.828 76.421 2.625 2.625 2.499 1.905 147.15 147.15 7.230 2.324 3.227 3.631 3.789 16.387 9.290 5.192 6.300 2.733 34.802 2.714 5.192	.021 .764 .071 .136 -080 .105 .791 INT INT -0666 .434 -246 -928 .745 .342 -744 .017 -478 .565 -260 .578 -061 -478	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.494 2.406 EXP EXP 3.292 4.245 2.399 3.187 2.568 2.079 4.697 3.266 2.616 2.439 2.439 2.439 2.439 2.439		67.9 70.5 60.3 72.3 LAB	0 0 3 3 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	Rora, anin, Fini, Sine, Jac, Jac, Hell, Edst LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases IBA, MU, NYS, PAL, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VMM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VMM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR, ECU1, ECU2 IND, AUS, CAN, EMU2 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL PR	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 70.000 25.711 25.711 25.711 13.667 13.411 21.558 15.361 22.739 40.638 17.966 10.858 15.361 22.739	387 .6387 .6384 .173 .494 .364 .217 .109 .441 .161 .161 .879 .054 .125 .625 .625 .117 .136 .625 .389 .124 .389 .124 .423 .713 .713 .731 .450 .025 .325 .325 .325	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522 5.181 6.632 37.183 3.056 2.522 7.133	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.499 1.905 147.15 7.230 8.892 2.625 147.15 7.230 2.324 3.621 2.324 3.621 2.324 3.621 3.789 16.387 9.290 2.733 34.802 2.733 34.802 2.714 5.192 7.179	.021 .764 .764 .764 .764 .764 .764 .705 .791 .791 .791 .791 .791 .791 .791 .791	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.406 2.406 2.406 2.406 2.406 2.406 2.399 3.187 2.568 2.079 3.187 2.568 2.697 3.226 2.616 4.208 2.697 2.439 4.697 3.226 2.616 4.809 2.616	.629 3.023 1.351 1.213 1.852 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244 1.591 .1951 1.581 3.315 1.951 1.351		0 0 0 3 1 1 2 3 3 2 2 2 2 2 2 2 2 2 2 2 2 2
$ \begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	Rora, Julia, Jink, Jink, Jike, Jike	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 7 TRA (%) 25.216 25.711 40.801 15.880 33.284 13.667 13.411 22.739 40.638 17.966 10.858 15.361 22.739 40.638	387 .6387 .173 .494 .364 .217 .109 .441 .161 .879 .879 .879 .054 .125 .514 .389 .124 .389 .124 .389 .124 .389 .124 .399 .124 .255 .322 .713 .325 .514	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522 5.181 6.632 3.7.183 3.056 2.522 7.133 2.691	3.115 2.877 2.734 1.828 76.421 6.892 2.625 2.625 2.499 1.905 147.15 7.05 147.15 7.2200 2.324 3.227 33.631 3.789 16.387 9.290 5.192 6.300 2.733 34.802 2.714 5.192 7.179 2.654	.021 .764 .071 .136 .085 .791 .005 .791 .005 .791 .005 .791 .005 .791 .005 .791 .017 .2478 .342 .744 .246 .342 .744 .246 .342 .744 .265 .578 .061 .578 .066 .077 .066 .065 .076 .066 .076 .066 .076 .066 .076 .066 .076 .066 .076 .066 .076 .07	3.292 2.722 2.282 3.301 4.824 2.711 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.494 2.495 2.399 3.187 2.668 2.079 2.616 4.209 2.616 4.209 2.439 4.609 2.616 2.616 2.616 2.616 2.632 2.439 3.301	.629 3.023 1.351 1.213 1.852 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244 1.591 1.581 3.315 1.951 1.581 3.315 1.951 1.351		0 0 3 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2
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$\begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \\ 1 \\ 2 \\ 3 \\ 3 \\ 5 \\ 6 \\ \hline \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 5 \\ 6 \\ \hline \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	 KON, MINI, TIM, SIAV, JAK, KUL, ELSI LAO, GTMI, GTM2, ECU3 IDN, THA, VNN, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELSI, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR, ECU1, ECU2 KMM, LAO, MMR, CEU1, EGU2 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR, CEU1, EGU2 KM, CAN, CAN, EMU2 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC YNM, IND, ELS3, GTM3, EMU1, EMU3 IDN, THA, AUS, CAN, EMU2 CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC YNM, IND, ELS3, GTM3, EMU1, EMU3 IDN, THA, AUS, CAN, EMU2 YNM, IND, ELS3, CTM2, ECU3 	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 7RA (%) 25.216 25.711 40.801 15.890 33.284 13.667 13.411 21.558 15.361 22.739 40.638 15.361 22.739 40.638 15.361 22.739 40.638 15.361 22.644 10.261 23.894 4.644 26.644	387 .6387 .173 .494 364 364 217 .109 .441 .161 629 879 124 136 389 124 136 389 124 389 124 389 124 389 124 389 322 713 322 314 322 322 314 322 3244 324 324 3244 3244 3244 3244	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.687 5.934 3.801 26.029 9.357 2.522 5.181 6.632 37.183 3.056 2.522 7.133 2.661 3.303 3.843	3.115 2.877 2.734 1.828 76.421 2.625 2.625 2.499 1.905 147.15 147.15 2.205 147.15 2.230 2.324 3.227 3.631 3.789 16.387 9.290 5.192 6.300 2.714 5.192 7.179 2.654 1.483 3.021 2.554	.021 .764 .764 .764 .791 .136 080 .105 .791 .791 .791 .791 .791 .791 .791 .791	3.292 3.301 4.824 2.711 2.494 2.494 2.406 EXP EXP 3.292 4.245 2.399 3.187 2.568 2.079 4.245 2.399 3.187 3.292 4.245 2.568 2.616 2.439 2.616 3.301 2.438 4.809 2.616 2.439 2.616 2.439 2.630 2.439 2.616 2.439 2.630 2.439 2.630 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.568 2.697 2.438 2.497 2.438 2.497 2.568 2.697 2.438 2.497 2.438 2.497 2.568 2.697 2.438 2.497 2.438 2.497 2.568 2.697 2.438 2.497 2.438 2.497 2.568 2.697 2.438 2.697 2.438 2.439 2.616 2.439 2.616 2.439 2.636 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.439 2.646 2.679 2.439 2.646 2.697 2.438 2.439 2.568 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.639 2.646 2.645 2.439 2.646 2.646 2.639 2.646 2.645 2.439 2.646 2.646 2.646 2.646 2.645 2.6466 2.646 2.646 2.646 2.646 2.6466 2.6466 2.6466 2.6466 2.6466 2.6466 2.64666 2.646666 2.646666666666		67.9 70.5 60.3 72.3 LAB	0 0 0 3 1 1 2 3 3 2 2 2 2 2 2 2 2 2 2 2 2 2 2
$\begin{array}{c} 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\$	 RON, MIRI, FIL, SIRC, DK, NEL, ELST LAO, GTMI, GTM2, ECU3 IDN, THA, VNM, IND, AUS, ENU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELSI, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases IDN, MMR, TELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases All Cases IDN, VMN, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases Consis All Cases CHN, HKG, GUN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HK, G, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR CHN, HKG, GUN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 KHM, LAO, MMR, ECU1, ECU2 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC VNM, MN, ELS3, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 END, AUS, CAN, EMU2 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL Post-crisis 7V All Cases CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC VNM, IND, ELS3, GTM3, EMU1, EMU3 IDN, THA, AUS, CAN, EMU2 LAO, GTM1, GTM2, ECU3 ENDA AUS LE 20 	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 70.000 25.711 25.711 25.711 25.711 25.711 25.711 25.711 25.711 25.711 25.711 25.711 25.711 25.7158 15.361 22.739 40.638 17.966 10.858 15.361 22.739 40.638 17.966 10.858 15.361 22.739 40.638 17.966 10.858 15.361 22.644 10.261 23.644 10.261 23.644 10.261 23.644 10.261 23.644 10.261 23.644	387 .6387 .6384 .173 .494 .364 .217 .109 .441 .161 .161 .7879 .054 .125 .625 .117 .136 .625 .389 .124 .389 .124 .423 .713 .713 .713 .713 .450 .025 .325 .325 .325 .325 .325 .325 .325 .3	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522 5.181 6.632 37.183 3.056 2.522 7.133 2.691 3.333 3.843 8.864 4.465	3.115 2.877 2.734 1.828 76.421 2.625 2.625 2.499 1.905 147.15 7.15 8.827 2.230 2.324 3.627 2.230 2.324 3.627 3.631 3.789 16.387 9.290 2.734 4.802 2.714 5.192 6.300 2.714 5.192 7.179 2.654 1.483 3.021 2.955	.021 .764 .764 .764 .764 .764 .764 .705 .791 .791 .791 .791 .791 .791 .791 .791	3.292 3.301 4.824 2.711 2.406 2.406 3.292 4.245 2.399 4.245 2.399 4.245 2.399 4.697 3.226 2.616 4.208 2.616 3.201 2.485 4.622 5.276 2.467 1.622 5.276	.629 3.023 1.351 1.213 1.852 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244 1.591 8.948 2.244 1.591 8.199 1.1951 3.315 1.951 3.819 1.351 7.790 1.142 2.304		0 0 0 3 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	 KOK, MIRI, HIL, SIAC, JAK, KEJ, KEJ, LEST LAO, GTMI, GTMZ, ECU3 IDN, THA, VNM, IND, AUS, EMU2 CHN, HKG, TWN, KHM, MYS, SGP ECU1, ECU2 Post-crisis 8V All Cases IDN, MMR, THA, VNM, IND, AUS, NZL, EMU1, EMU2, EMU3 KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN ECU2 Yen Cluster Pre-crisis All Cases THA, AUS, NZL, PAN, ELS3, EMU1, EMU2, EMU3 BRN, GTM1, ELS2, GTM2, ECU3, GTM3 HKG, KOR, TWN, MYS, SGP, MAC IDN, VNM, ECU1, ELS1, ECU2 KHM, LAO, MMR CHN, PHL, IND, CAN Crisis All Cases KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL CHN, HKG, IDN, PAN, GTM3, EMU1, EMU3 ELS1, GTM1, ELS2, GFM2, ECU3, BLS3 KHM, LAO, MMR, ECU1, ECU3 IND, AUS, CAN, EMU2 KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, NZL Post-crisis 7V All Cases CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC Yost-crisis 7V All Cases CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC Yost-crisis 7V All Cases CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC Yost-crisis 7V All Cases CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC Yost-crisis 7V All Cases CHN, HKG, TWN, KHM, MYS, PHL, SGP, MAC YNM, IND, ELS3, GTM3, EMU1, EMU3 IDN, THA, AUS, CAN, EMU2 LAO, GTM1, GTM2, ECU3 BRN, PAN, ELS2 KOR, WM, NZL 	28.766 14.485 13.022 37.607 22.010 14.164 34.450 12.865 33.514 7 TRA (%) 25.216 25.711 40.801 15.380 33.284 13.667 13.411 22.739 40.638 15.361 15.361 15.361 15.361 15.361 15.361 15.361 15.361 12.739 40.638 15.361 12.3894 14.644 28.317 35.730 9.605	387 .6387 .6384 .173 .494 .364 .217 .109 .441 .161 .879 .879 .054 .125 .514 .423 .713 .713 .736 .389 .124 .225 .312 .713 .731 .450 .025 .325 .514 .612 .637 .172 .564	6.900 7.887 3.264 1.908 42.282 6.524 4.851 7.530 2.087 51.111 INF (%) 8.757 2.680 5.934 3.801 26.029 12.471 8.205 9.357 2.522 37.183 3.056 3.056 2.522 37.183 3.033 3.843 3.844 1.462 10.841	3.115 2.877 2.734 1.828 76.421 2.625 2.625 2.499 1.905 147.15 47.15 RER ¹ 9.257 2.320 2.324 3.227 33.631 3.789 16.387 9.290 5.192 6.300 2.733 34.802 2.733 34.802 2.714 5.192 7.179 2.654 1.483 3.021 2.995 1.2654	.021 .764 .764 .764 .764 .764 .764 .764 .765 .791 .791 .791 .791 .791 .791 .791 .791	3.292 3.301 4.824 2.711 2.494 2.406 EXP EXP 3.292 4.245 2.399 3.187 2.668 2.079 4.697 3.226 2.616 4.208 2.67 3.226 2.616 4.208 2.439 3.301 2.485 4.622 5.276 3.301	.629 3.023 1.351 1.213 1.852 .658 2.760 DEB 2.539 1.437 1.163 1.020 3.009 8.948 2.244 1.591 8.948 2.244 1.591 8.948 1.1591 1.581 3.315 1.351 1.351 1.351 1.351 1.351 1.351		0 0 0 3 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2

Table 6.33 OC	CA-FCM prepar	edness clusters	(continued)
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		TDA	DIIC	INE	DED!	INT	EVD	DED	LAD	N ²
	Cluster	(%)	воз	(%)	KEK	118.1	EAP	DEB	LAD	IN
	Yen	X: /		<u> </u>						
_	Post-crisis 8V									
	All Cases	20.644	.265	7.133	7.179	.380	3.301	1.351	67.9	
2	CHN HKG TWN KHM MYS SGP THA MAC	10 605	.407	2 384	2 570	948	4.770	0.676	59.6 72.4	1
3	LAO, GTM1, ELS2, GTM2, ECU3	31.766	.667	7.028	2.525	474	2.353	2.070	53.3	2
4	MMR, ECU1, ELS1, ECU2	29.264	475	30.875	40.298	.255	2.678	2.477	-	1
5	AUS, NZL, CAN	9.579	114	2.856	4.271	.119	5.157	n.a. ⁻	91.5	2
7	KOR. BRN	23.214	544	2.195	2.319	.597	1.852	0.330	48.9 74.8	1
_										
_	Euro	TDA	DUC	INE	DED	INT	EVD	DEB	LAD	N ²
	Cluster	(%)	603	(%)	KEK	1181	EAF	DEB	LAD	IN
_	Pre-crisis									
	All Cases	20.592	.027	33.102	8.055	.132	3.265	2.641		
2	HKG TWN SGP THA NZL	9 780	227	4.765	3.409	- 286	4.525	460	-	0
3	ELS2, ELS3, GTM3, EMU1, EMU3	34.669	.640	2.094	.779	.433	3.923	1.319	-	2
4	LAO, VNM, ECU1, ECU2	23.870	131	31.287	40.623	.735	2.459	5.398	-	1
5	KHM, MMR, MAC, ELS1,	19.207	274	8.586	3.662	.016	2.004	5.519	-	1
7	GTM1 GTM2 ECU3	37 207	.145	3.889	3.458	- 668	2.386	1.025	-	2
<u> </u>	Crisis	07.207	.007	0.100	0.100	.000	2.170	1.007		
_	All Cases	19.532	.176	8.919	11.521	.062	3.188	1.591		
1	IND, CAN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	25.299	.531	2.237	3.027	.299	4.344	1.403	-	3
2	UHN, HKU, KUK, TWN, KHM, PHL, MAC, JPN MYS SGP THA VNM RRN AUS NZI	10.654	.111	3.046	10.285	.583	2.311	.935 202	-	1
4	ELS1, GTM1, ELS2, GTM2, ECU3	38.925	.479	7.731	3.173	260	2.270	1.549	-	1
5	IDN, LAO, MMR, ECU1, ECU2	20.222	360	40.060	39.250	.374	3.408	3.395	-	1
	Post-crisis 7V									
	All Cases	19.220	.145	6.286	7.030	.175	3.266	1.351		
2	IDN. VNM. IND. CAN EMUL EMUL	8.529	215	3 284	2.397	.454	3.007	.349	-	0
3	KOR, KHM, SGP, MAC, JPN, PAN	12.716	.358	1.966	2.159	.267	1.866	.997	-	ő
4	LAO, GTM1, GTM2, ECU3	30.173	.708	7.909	3.043	661	2.467	2.304	-	1
5	ELS2, ELS3, GTM3	44.856	.601	2.425	.702	.387	3.567	1.319	-	2
7	MMR, PHL, NZL ECUL ELSI ECU2	9.574 37.552	919	32 380	52 839	054	3.445	2 633	-	2
8	AUS, EMU2	15.852	082	1.156	3.142	046	5.462	n.a.	-	2
	Post-crisis 8V									
-	11.0	10.000	4.45	0.000	7 000	470	0 0 0 0	1 0 1 1	00.7	
1	All Cases	19.220	.145	6.286	7.030	.175	3.266	1.351	68.7	2
1	All Cases IDN, VNM, IND, AUS, CAN , ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL	19.220 19.917 7.477	.145 .426 341	6.286 2.761 4.270	7.030 2.230 2.751	.175 .204 .227	3.266 4.984 3.059	1.351 1.263 .754	68.7 67.3 87.9	2
1 2 3	All Cases IDN, VNM, IND, AUS, CAN , ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2	19.220 19.917 7.477 37.607	.145 .426 341 364	6.286 2.761 4.270 42.282	7.030 2.230 2.751 76.421	.175 .204 .227 .764	3.266 4.984 3.059 2.282	1.351 1.263 .754 3.023	68.7 67.3 87.9	2 1 3
1 2 3 4	All Cases IDN, VNM, IND, AUS, CAN , ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO , ELS1, GTM1, ELS2, GTM2, ECU3 CIN , <i>KOD</i> , TWN, <i>KUN</i> , MK, G, DAN	19.220 19.917 7.477 37.607 33.949	.145 .426 341 364 .528	6.286 2.761 4.270 42.282 7.649	7.030 2.230 2.751 76.421 3.082	.175 .204 .227 .764 323	3.266 4.984 3.059 2.282 2.299 2.157	1.351 1.263 .754 3.023 2.034	68.7 67.3 87.9 53.3	2 1 3 1
1 2 3 4 5	All Cases IDN, VNM, IND, AUS, CAN , ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO , ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC , PAN	19.220 19.917 7.477 37.607 33.949 13.768	.145 .426 341 364 .528 .119	6.286 2.761 4.270 42.282 7.649 2.175	7.030 2.230 2.751 76.421 3.082 2.336	.175 .204 .227 .764 323 .336	3.266 4.984 3.059 2.282 2.299 2.157	1.351 1.263 .754 3.023 2.034 .862	68.7 67.3 87.9 - 53.3 53.2	2 1 3 1 1
1 2 3 4 5	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan	19.220 19.917 7.477 37.607 33.949 13.768	.145 .426 341 364 .528 .119	6.286 2.761 4.270 42.282 7.649 2.175	7.030 2.230 2.751 76.421 3.082 2.336	.175 .204 .227 .764 323 .336	3.266 4.984 3.059 2.282 2.299 2.157	1.351 1.263 .754 3.023 2.034 .862	68.7 67.3 87.9 53.3 53.2	2 1 3 1 1
1 2 3 4 5	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster	19.220 19.917 7.477 37.607 33.949 13.768	.145 .426 .341 .364 .528 .119 BUS	6.286 2.761 4.270 42.282 7.649 2.175	7.030 2.230 2.751 76.421 3.082 2.336 RER ¹	.175 .204 .227 .764 323 .336	3.266 4.984 3.059 2.282 2.299 2.157 EXP	1.351 1.263 .754 3.023 2.034 .862 DEB	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1 N ²
1 2 3 4 5	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%)	.145 .426 341 364 .528 .119 BUS	6.286 2.761 4.270 42.282 7.649 2.175 INF (%)	7.030 2.230 2.751 76.421 3.082 2.336 RER ¹	.175 .204 .227 .764 323 .336	3.266 4.984 3.059 2.282 2.299 2.157 EXP	1.351 1.263 .754 3.023 2.034 .862 DEB	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1
1 2 3 4 5	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692	.145 .426 341 364 .528 .119 BUS	6.286 2.761 4.270 42.282 7.649 2.175 INF (%) 10.527	7.030 2.230 2.751 76.421 3.082 2.336 RER ¹ 8.285	.175 .204 .227 .764 323 .336 INT	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218	1.351 1.263 .754 3.023 2.034 .862 DEB DEB	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1
1 2 3 4 5	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 CCMU, FU3 CCMD, EGU3	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 20.206	.145 .426 341 364 .528 .119 BUS BUS	6.286 2.761 4.270 42.282 7.649 2.175 INF (%) 10.527 4.047 6.520	7.030 2.230 2.751 76.421 3.082 2.336 RER ¹ 8.285 2.043 2.549	.175 .204 .227 .764 .323 .336 	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601	1.351 1.263 .754 3.023 2.034 .862 DEB DEB 2.610 1.412	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1 N ²
1 2 3 4 5 	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708	.145 .426 .341 .364 .528 .119 BUS BUS .237 .463 .712 .328	6.286 2.761 4.270 42.282 7.649 2.175 INF (%) 10.527 4.047 6.520 9.191	7.030 2.230 2.751 76.421 3.082 2.336 RER ¹ 8.285 2.043 2.548 4.683	.175 .204 .227 .764 323 .336 	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.474 834	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1 N ² 0
1 2 3 4 5 	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779	.145 .426 341 364 .528 .119 BUS BUS .237 .463 .712 .328 396	6.286 2.761 4.270 42.282 7.649 2.175 INF (%) 10.527 4.047 6.520 9.191 20.459	7.030 2.230 2.751 76.421 3.082 2.336 RER ¹ 8.285 2.043 2.548 4.683 28.193	.175 .204 .227 .764 -323 .336 .336 .086 .408 .383 .552 .554	3.266 4.984 3.059 2.282 2.299 2.157 EXP 5.218 4.601 2.318 4.601 2.313 3.463 2.216	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.474 .834 1.827	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1 N ² 3 2 0 1
1 2 3 4 5 	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases All Cases AllS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779 2.576	.145 .426 341 .528 .119 BUS .237 .463 .712 .328 .396 .025	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941	7.030 2.230 2.751 76.421 3.082 2.336 RER ¹ 8.285 2.043 2.548 4.683 28.193 5.080	.175 .204 .227 .764 -323 .336 .336 .086 .408 .383 .552 .554 .839	3.266 4.984 3.059 2.282 2.299 2.157 EXP 5.218 4.601 2.318 4.601 2.318 4.601 2.318 4.601 2.318 4.601 2.318 4.601 2.318	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.474 1.827 3.055	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1 N ² 3 2 0 1 0
1 2 3 4 5 1 2 3 4 5 6 7	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG MAC	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779 2.576 12.728 19.120	.145 .426 .341 .528 .119 BUS .237 .463 .712 .328 .396 .025 .205	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948	7.030 2.230 2.751 76.421 3.082 2.336 	.175 .204 .227 .764 .323 .336 INT	3.266 4.984 3.059 2.282 2.299 2.157 EXP EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.279 2.287	1.351 1.263 .754 3.023 2.034 .862 DEB DEB 2.610 1.412 1.474 1.827 3.055 8.948 2.985	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1 N ² 3 2 0 1 0 1 0
1 3 4 5 1 2 3 4 5 6 7	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 2.576 12.728 19.120	.145 .426 341 .528 .119 BUS BUS .237 .463 .712 .328 .326 .025 .205 .586	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948	7.030 2.230 2.751 76.421 3.082 2.336 	.175 .204 .227 .764 .323 .336 INT INT .086 .408 .383 .552 .554 .839 .578 .337	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.217 2.287	1.351 1.263 .754 3.023 2.034 .862 DEB DEB 2.610 1.412 1.474 .834 1.474 3.055 8.948 2.085	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1 1 N ² 0 1 0 1 0 1 0 1 0
1 2 3 4 5 1 2 3 4 5 6 7	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis AUI Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis AII Cases	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779 2.576 12.728 19.120	.145 .426 341 364 .528 .119 BUS BUS .237 .463 .712 .328 .326 .025 .205 .586 .231	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518	7.030 2.230 2.751 76.421 3.082 2.336 2.336 	.175 .204 .227 .764 .323 .336 	3.266 4.984 3.059 2.282 2.299 2.157 EXP 8.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186	1.351 1.263 .754 3.023 2.034 .862 DEB DEB 2.610 1.412 1.474 834 1.827 3.055 8.948 2.085	68.7 67.3 87.9 53.3 53.3 53.3 LAB	2 1 3 1 1
$1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 2.577 2.576 12.728 19.120 19.925 2.7142	.145 .426 .341 .364 .528 .119 BUS BUS .237 .463 .712 .328 .396 .025 .586 .205 .586 .231	6.286 2.761 4.270 4.2282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.847	7.030 2.230 2.751 76.421 3.082 2.336 	.175 .204 .227 .764 .336 .336 .336 .336 .385 .554 .337 .578 .337 .553 .310	3.266 4.984 3.059 2.282 2.299 2.157 EXP 5.218 4.601 2.331 3.463 2.216 4.143 2.216 4.143 2.276 4.143 2.276 4.143 2.287	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.474 .834 1.827 3.055 8.948 2.085 1.629 1.520	68.7 67.3 87.9 53.3 53.3 53.2 LAB	2 1 3 1 1
1 2 3 4 5 	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR ECU1, ECU2	19.220 19.917 7.477 37.607 33.949 13.768 7 7 8 7 8 2.769 2.769 2.769 2.779 2.576 12.728 9.925 2.779 2.576 12.728 9.9120 19.925 2.7142 38.925 24.221	.145 .426 .341 -364 .528 .119 BUS BUS .237 .463 .712 .326 .205 .205 .586 .225 .586 .225 .586 .231 .542 .479 .010	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 120.459 11.941 13.634 7.948 9.518 4.847 7.731 4.4986	7.030 2.230 2.751 76.421 2.336 2.336 RER ¹ 8.285 2.043 2.548 4.663 2.548 4.663 2.648 4.568 4.526 4.526 8.094 3.020 3.173 4.173	.175 .204 .227 .764 .336 .336 .1NT 	3.266 4.984 3.059 2.282 2.299 2.157 EXP 5.218 4.601 2.331 3.463 2.216 4.143 2.216 4.143 2.216 4.143 2.276 3.186 4.628 2.270 2.287	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.474 .834 1.827 3.055 8.948 2.085 1.629 1.520 1.549 2.649	68.7 67.3 87.9 53.3 53.2 LAB	2 1 3 1 1 N ² 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 1 1
$1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis AII Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU3 HKG, KOR, PHL, MAC, JPN, NZL	19.220 19.917 7.477 37.607 33.949 13.768 7.7692 21.614 39.296 2.708 2.576 12.728 19.120 19.925 2.576 12.728 19.120	.145 .426 .341 -364 .528 .119 BUS BUS .237 .463 .712 .328 .326 .025 .205 .586 .205 .586 .225 .205 .586 .242 .479 .010 .484	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 4.847 7.731 44.986 2.895	7.030 2.250 2.751 76.421 3.082 2.336 8.285 2.043 2.548 4.663 2.548 4.668 4.526 8.094 3.020 3.173 41.848 3.825	.175 204 .227 .764 .323 .336 .336 .1NT .086 .408 .408 .383 .552 .554 .839 .552 .839 .538 .337 .310 .260 .225 .260	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.143 2.079 2.287 3.186 4.628 2.270 2.663 2.2463	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.474 8.34 1.825 3.055 8.948 2.085 1.629 1.549 3.640 9.11	68.7 67.3 87.9 53.3 53.2 LAB	2 1 1 1 1 N ² 0 1 0 1 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU3 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN	19.220 19.917 7.477 37.607 33.949 13.768 7.607 33.949 13.768 7.7692 21.614 39.296 2.576 2.576 2.576 2.577 9.120 19.925 2.7142 38.925 24.221 16.032 6.590	.145 .426 .341 -364 .528 .119 .000 .000 .237 .463 .712 .328 .328 .328 .326 .205 .586 .205 .586 .205 .586 .201 .479 .010 .4451	6.286 2.761 4.270 4.270 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.895 2.739	7.030 2.230 2.751 76.421 3.082 2.336 8.285 2.043 2.548 4.683 2.548 4.683 2.8193 5.080 4.668 4.526 8.094 3.173 41.848 3.825	.175 .204 .227 .764 .336 .336 .336 .1NT .086 .408 .383 .552 .554 .383 .552 .578 .337 .153 .310 .260 .225 .705 .650	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.628 2.279 3.186 4.628 2.270 2.663 2.463 2.473	1.351 1.263 7.754 3.023 2.034 .862 DEB 2.610 1.412 1.474 1.827 3.055 8.948 2.085 1.629 1.520 1.549 3.640 .911 8.899	68.7 67.3 87.9 53.3 53.2 LAB	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 7 \\ \hline $	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CIN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis AUI Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KMM, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis AII Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU2 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN TWN, KHM, IND, AUS, CAN	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779 2.576 2.708 2.5.779 2.577 19.120 19.925 27.142 38.925 24.221 16.032 6.590 5.394	.145 .426 .341 .364 .528 .119 BUS BUS .237 .463 .712 .328 .3366 .025 .586 .205 .586 .205 .586 .205 .586 .2010 .449 .010 .481 .479 .010	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.835 2.239 4.194	7.030 2.230 2.751 76.421 3.082 2.336 2.336 8.285 2.043 2.543 4.683 2.543 4.683 4.683 4.683 4.668 4.526 8.094 3.020 3.173 41.848 3.822 3.732 2.599	.175 .204 .227 .764 .3336 .336 .086 .408 .383 .552 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337	3.266 4.984 3.059 2.282 2.292 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.628 2.270 3.186 4.628 2.270 3.663 2.463 2.473 2.473 2.473 3.820	1.351 1.263 7.754 3.023 2.034 .862 DEB DEB 2.610 1.412 1.474 8.834 1.827 3.055 8.948 2.085 1.629 1.520 1.549 3.640 .911 8.894 8.919 3.640	68.7 67.3 87.9 53.3 53.3 LAB	2 2 1 1 1 1 1 1 N ² 0 0 1 1 0 0 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ \hline \end{array} $	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis AUI Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, GGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis AII Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM3, EMU1, EMU2, EMU3 POSt-crisis 7V AUC 2000	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779 2.576 2.708 2.5.779 2.576 12.728 19.120 19.925 27.142 38.925 24.221 16.032 6.5394 19.925	.145 .426 .341 .364 .528 .119 BUS BUS .237 .463 .712 .328 .336 .025 .586 .205 .586 .205 .586 .205 .586 .205 .586 .201 .4451 .441 .542 .479 .010 .484 .484 .785 .785	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 10.527 4.047 6.520 9.191 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.895 2.739 4.194	7.030 2.230 2.751 76.421 3.082 2.336 	.175 204 .227 .764 .3336 .336 .086 .408 .383 .552 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .260 .225 .762 .265 .467	3.266 4.984 3.059 2.282 2.292 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.231 3.463 2.216 4.143 2.270 3.186 4.628 2.270 2.663 2.463 2.463 2.473 2.463 2.473 2.463 2.473 2.463 2.475 2.475 2.	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.412 1.474 .834 1.827 3.055 8.948 2.085 1.629 1.549 3.640 .911 .899 1.400 	68.7 67.3 87.9 53.3 53.3 53.3 LAB	2 2 1 1 1 1 1 1 N ² 0 0 1 1 0 0 1 0 0 0 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, IND, EMU1, EMU2 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN TWN, KHM, IND, AUS, CAN Post-crisis 7V All Cases HKG, TWN, IDN, MYS, SGP, THA, VNM, IND, EMU1, EMU3	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779 2.576 12.728 19.120 19.925 27.142 38.925 24.221 16.032 6.599 5.394	.145 .426 .341 .364 .528 .119 BUS BUS .237 .463 .712 .328 .328 .336 .025 .586 .225 .586 .225 .586 .225 .586 .231 .542 .475 .785	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 10.527 4.047 6.520 9.191 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.895 2.739 4.194 9.518 5.104	7.030 2.230 2.751 76.421 3.082 2.336 2.336 3.336 2.548 4.683 2.643 2.548 4.683 2.643 2.548 4.623 2.694 3.020 3.173 4.1.848 3.825 3.732 2.599 	.175 .204 .227 .764 .3336 .336 .086 .408 .383 .552 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .225 .578 .337 .225 .467 .225 .467 .153 .050	3.266 4.984 3.059 2.282 2.292 2.157 	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.472 1.472 1.472 1.472 1.472 1.472 1.472 3.055 8.948 8.948 1.629 1.549 3.640 9.11 899 1.629 1.400	68.7 67.3 87.9 53.3 53.3 53.3 - - - - - - - - - - - - - - - - - -	2 1 1 3 1 1 1 1 1 2 2 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 7 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 2 \\ 5 \\ 6 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 HL, GMA, ECU1 ELQ HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, IND, EMU1, EMU2 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN TWN, KHM, IND, AUS, CAN Post-crisis 7V All Cases HKG, TWN, IDN, MYS, SGP, THA, VNM, IND, EMU1, EMU3 LAO, ECU11, GTM1, GTM2, ECU3, ELS3	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 2.577 2.576 12.728 19.120 19.925 27.142 38.925 24.221 16.032 6.590 5.394 19.925 10.344 34.700	.145 .426 .341 -364 .528 .119 BUS .119 .237 .463 .712 .328 .326 .025 .205 .205 .205 .205 .205 .205 .205	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.895 2.739 4.194 9.5104 2.1408	7.030 2.230 2.751 76.421 2.336 8.2336 8.243 2.548 4.663 2.548 4.663 2.548 4.663 2.548 4.663 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.568 4.573 2.599 8.094 3.946 3.946	.175 .204 .227 .764 .323 .336 .336 .336 .383 .554 .383 .552 .554 .839 .554 .839 .554 .839 .557 .310 .260 .225 .702 .660 .467 .465 .702 .655 .505 .505 .538	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.628 2.270 2.663 2.475 2.463 2.463 2.475 2.463 2.475 2.463 2.475 2.463 2.475 2.463 2.475 2.463 2.463 2.475 2.463 2.475 2.463 2.475 2.463 2.475 2.463 2.475 2.463 2.475 2.463 2.475 2.485	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.474 .834 1.825 8.948 2.084 1.629 1.540 1.549 3.640 .911 .899 1.400 1.629 1.540 .911 .920 .921 .2610	68.7 67.3 87.9 53.3 53.3 53.2 LAB	2 1 1 3 3 1 1 1 1 1 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU3 LAO, MMR, ECU4, JPN, ZAU, JPN	19.220 19.917 7.477 37.607 33.949 13.768 21.614 39.296 2.708 2.576 2.708 2.576 12.728 19.120 19.925 2.7142 38.925 24.221 16.032 2.574 38.925 24.221 16.932 2.534 19.925 10.344 34.700 28.011 9.725	.145 .426 .341 -364 .528 .119 .025 .237 .463 .712 .328 .326 .025 .205 .586 .025 .205 .586 .025 .205 .586 .025 .205 .586 .025 .231 .479 .010 .484 .451 .785 .231 .2231 .2231 .2231 .2231 .2231 .2231 .2231 .2231 .2231 .2231 .2231 .2231 .2342 .235 .235 .235 .235 .235 .235 .235 .23	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.845 2.739 4.194 9.518 5.104 2.895 2.739 4.194	7.030 2.230 2.751 76.421 3.082 2.336 8.285 2.043 2.548 4.683 28.193 5.080 4.668 4.526 8.094 3.020 3.173 41.848 3.825 3.732 2.599 8.094 4.499 2.417 3.976	.175 204 .227 .764 .323 .336 .336 .383 .552 .554 .839 .552 .554 .839 .578 .337 .260 .225 .546 .260 .225 .560 .467 .260 .225 .550 .467 .253 .398 .5398 .5398 .5398	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.143 2.270 2.287 3.186 3.735 3.820 3.186 3.763 2.2463 2.463 2.735 3.820	1.351 1.263 7.754 3.023 2.034 .862 DEB 2.610 1.412 1.474 8.34 1.825 3.055 8.948 2.085 1.629 1.549 3.640 9.911 8.999 1.549 3.640 9.911 8.999 1.549 3.640 9.911 8.999 1.261 2.507 1.256 1.247	68.7 67.3 87.9 53.3 53.2 LAB	2 1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CIN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU3 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN TWN, KHM, IND, AUS, CAN Post-crisis 7V All Cases HKG, TWN, IDN, MYS, SGP, THA, VNM, IND, EMU1, EMU3 LAO, ECU1, GTM1, GTM2, ECU3, ELS3 KHM, PHL, MAC, JPN, PAN, ELS1, ELS2, GTM3 KOR, MMR, BRN, AUS, NZL, CAN, EMU2 ECU2	19.220 19.917 7.477 37.607 33.949 13.768 7.607 33.949 13.768 21.614 39.296 2.576 2.576 2.576 2.576 2.576 2.577 9.120 19.925 24.221 16.039 5.394 19.925 24.221 16.032 5.394 19.925 10.344 34.700 28.011 9.766 33.514	.145 .426 .341 -364 .528 .119 .119 .027 .463 .712 .328 .328 .328 .326 .205 .586 .205 .586 .205 .586 .201 .479 .010 .481 .479 .231 .247 .455 .201 .323 .323 .328 .396 .000 .009 .879 .879	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.879 4.194 9.518 5.104 21.408 5.495 5.1.111	7.030 2.230 2.751 76.421 3.082 2.336 8.285 2.043 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 4.668 4.526 8.094 3.173 41.848 3.252 8.094 3.173 2.599 8.094 3.946 4.499 2.417 3.273	.175 .204 .227 .764 .323 .336 .336 .1NT .086 .408 .383 .552 .558 .337 .578 .337 .153 .310 .260 .225 .702 .650 .467 .153 .050 .398 .529 .175 .791	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.628 2.270 2.663 2.463 2.463 2.463 2.435 3.186 3.763 2.436 3.735 3.218	1.351 1.263 7.754 3.023 2.034 .862 DEB 2.610 1.412 1.474 1.827 3.055 8.948 2.085 1.629 1.520 1.549 3.640 9.11 899 1.549 1.520 1.549 1.520 1.549 1.540 1.549 1.540 1.549 1.250 1.256 1.256 1.347	68.7 67.3 87.9 53.3 53.2 LAB	2 1 1 3 3 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CIN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM3, EMU1, EMU2, EMU3 EX, IPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU2 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN TWN, KHM, IND, AUS, CAN Post-crisis 7V All Cases IKMP, PHL, MAC, JPN, PAN, ELS1, ELS3, GTM3 KOR, TWN, IDN, MYS, SGP, THA, VNM, IND, EMU1, EMU3 LAO, ECU1, GTM1, GTM2, ECU3, ELS3, KIM, PHL, MAC, JPN, PAN, ELS1, ELS3, GTM3 KOR, MMR, BRN, AUS, NZL, CAN, EMU2 ECU2	19.220 19.917 7.477 37.607 33.949 13.768 7 7 7 7 7 7 7 7 6 2 1.614 39.296 2.708 2.5776 2.5776 2.5779 2.5776 2.5779 2.5778 12.728 19.120 19.925 2.7.142 38.925 2.4.221 16.032 6.5394 19.925 10.344 34.700 28.011 9.766 33.514	.145 .426 341 364 .528 .119 BUS BUS .237 .463 .712 .328 .336 .025 .586 .205 .586 .205 .586 .205 .586 .205 .586 .231 .542 .479 .010 .481 .785 .201 .231 .247 .456 .330 .231 .247 .542 .336 .336 .336 .336 .336 .336 .336 .33	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.835 2.739 4.194 9.518 5.104 21.408 4.438 5.104 21.408 5.495 5.104	7.030 2.230 2.751 76.421 3.082 2.336 2.336 8.285 2.043 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.549 3.020 3.173 41.848 3.020 3.173 41.848 3.372 2.599 8.094 3.946 4.499 2.417 3.723 147.15	.175 .204 .227 .764 .323 .336 INT .086 .408 .383 .552 .578 .337 .554 .578 .337 .578 .337 .578 .337 .578 .337 .578 .578 .578 .260 .467 .650 .467 .529 .175 .529 .175 .791	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.628 2.270 2.663 2.463 2.735 3.820 3.186 3.763 2.848 2.336 3.733 2.406	1.351 1.263 1.264 .754 3.023 2.034 .862 DEB 2.610 1.412 1.472 1.472 1.472 1.472 1.472 1.472 1.472 1.472 1.472 1.472 1.402 1.549 1.549 3.640 .911 .8948 .8640 .911 .899 1.400 1.629 1.261 2.507 1.256 1.347 2.760	68.7 67.3 87.9 53.3 53.3 LAB	2 1 1 3 1 1 1 1 1 2 2 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, GTM2, ECU3 LAO, MMR, ECU1, ECU2 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN TWN, KHM, IND, AUS, CAN Post-crisis 7V All Cases HKG, TWN, IDN, MYS, SGP, THA, VNM, IND, EMU1, EMU3 LAO, ECU11, GTM1, GTM2, ECU3, ELS3 KHM, PHL, MAC, JPN, PAN, ELS1, ELS2, GTM3 KOR, MMR, BRN, AUS, NZL, CAN, EMU2 ECU2 Post-crisis 8V All Cases	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779 2.576 2.708 2.5.779 2.576 12.728 19.120 19.925 27.142 38.925 24.221 16.032 6.599 5.394 19.925 10.344 34.700 28.011 9.766 33.514	.145 .426 .341 .364 .528 .119 BUS BUS .237 .463 .712 .328 .336 .025 .586 .205 .586 .205 .586 .205 .586 .205 .586 .205 .586 .201 .4451 .247 .456 .390 .010 .484 .456 .231 .247 .456 .396 .231 .247 .456 .396 .209 .879 .231 .247 .237 .237 .237 .237 .237 .237 .237 .23	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 10.527 4.047 6.520 9.191 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.895 2.739 4.194 9.518 5.104 21.408 4.438 5.495 5.1111 6.616	7.030 2.230 2.751 76.421 3.082 2.336 8.285 2.043 2.548 4.683 4.683 4.683 4.684 4.526 8.094 3.020 3.173 41.848 3.825 3.732 2.599 8.094 3.946 4.499 2.417 3.723 147.15	.175 .204 .227 .764 .3336 .336 .336 .336 .336 .333 .552 .554 .578 .337 .579 .265 .578 .337 .579 .578 .337 .579 .357 .578 .337 .579 .377 .579 .578 .337 .579 .578 .337 .579 .578 .337 .579 .578 .337 .579 .578 .337 .579 .578 .337 .579 .578 .337 .579 .578 .337 .579 .578 .337 .579 .578 .337 .579 .578 .377 .579 .578 .377 .579 .578 .377 .579 .579 .579 .579 .579 .579 .579 .5	3.266 4.984 3.059 2.282 2.292 2.157 EXP 3.218 4.601 2.318 4.601 2.318 4.601 2.318 4.601 2.318 2.216 4.143 2.216 4.143 2.216 4.143 2.270 3.186 3.663 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.473 2.463 2.473 2.463 2.473 2.463 2.473 2.473 2.473 2.484 2.473 2.435 2.356 3.423 2.435 2.356 3.423 2.435 2.356 3.423 2.435 2.356 3.423 2.435 2.356 3.435 2.455 2.4555 2.4555 2.4555 2.45555555555	1.351 1.263 .754 3.023 2.034 .862 DEB 2.610 1.412 1.472 1.474 .834 2.085 1.629 1.549 3.640 .911 .899 1.400 1.629 1.261 2.507 1.256 1.347 2.760	68.7 67.3 87.9 53.3 53.3 53.3 - - - - - - - - - - - - - - - - - -	2 2 1 1 3 3 1 1 N ² N ² 2 2 0 0 0 1 1 1 1 1 1 2 2 2 ² 2 2 2 0 0 1 1 1 1 1 1 1 1 2 2 2 2 2 2 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CHN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, GTM2, ECU3 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN TWN, KHM, IND, AUS, CAN Post-crisis 7V All Cases HKG, TWN, IDN, MYS, SGP, THA, VNM, IND, EMU1, EMU3 LAO, ECU1, GTM1, GTM2, ECU3, ELS3, KHM, PHL, MAC, JPN, PAN, ELS1, ELS2, GTM3 KOR, MRR, BRN, AUS, NZL, CAN, EMU2 ECU2 Post-crisis 8V All Cases TWN, IDN, VMN, IND, EMU1, EMU2, EMU3 ELS1, GTM3, IDN, EMU1, EMU2, EMU3 ECU4 Post-crisis 8V All Cases TWN, IDN, VMN, IND, EMU1, EMU2, EMU3 ECU4 FU4, EMU4, MYS, SGP, THA, EMU3 ECU4 FU4, EMU4, MYS, SGP, THA, EMU3 ECU5 FU4, MY, DN, MY, SGP, THA, EMU3 ECU4 FU4, EMU4, EMU4, EMU4, EMU4 ECU4 FU4, EMU4, MYS, SGP, THA, EMU3 ECU4 FU4, EMU4, EMU4, EMU4, EMU4 ECU4 FU4, EMU4, MYS, SGP, THA, EMU3 ECU4 FU4, EMU4, MYS, SGP, THA, EMU3 ECU5 FU4, MY, IDN, MY, IDN, EMU1, EMU3, EMU3 ECU4 FU4, EMU4, MYS, SGP, THA, EMU3 ECU5 FU4, MY, IDN, MY, SH, EMU4, EMU3, EMU3 ECU4 FU4, EMU4, EMU4, EMU4, EMU3 ECU5 FU4, MY, SMA ECU4 FU4, MYS, SGP, THA, EMU3 EU45 EU44, MYS, SGP, THA, EMU4 EU45 FU4, MYS, SGP, FU4, EMU3 EU45, EMU4, MYS, SGP, FU4, EMU3 EU45, EMU4 EU45 FU4, MYS, SGP, FU44, EMU4 EU45 FU4, MYS, SGP, FU44, EMU4 EU45 FU4, MYS, SGP, FU44, EMU4 EU45 FU45 FU45 FU45 FU45 FU45 FU45 FU45 F	19.220 19.917 7.477 37.607 33.949 13.768 TRA (%) 17.692 21.614 39.296 2.708 25.779 2.576 12.728 19.120 19.925 27.142 38.925 24.221 16.032 6.590 19.925 10.344 34.700 28.011 9.765 33.514	.145 .341 -341 -384 .528 .119 BUS .119 .237 .463 .712 .328 .328 .328 .025 .205 .205 .205 .205 .205 .205 .205	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 7.948 7.948 4.847 7.731 44.985 2.739 4.194 21.408 4.885 2.739 4.194 21.408 4.438 5.104 21.408 5.495 5.1.111	7.030 2.230 2.751 76.421 2.336 8.285 2.043 2.548 4.663 2.548 4.663 2.548 4.663 4.568 4.599 8.094 3.723 3.732 2.599 8.094 3.946 3.946 3.946 3.924 7.7517 7.7517 7.7517 7.7517 7.751777 7.7517777777777	.175 .204 .227 .764 .323 .336 INT .086 .408 .383 .552 .554 .839 .558 .839 .578 .310 .260 .225 .702 .650 .460 .405 .398 .529 .310 .260 .275 .791 .791	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.143 2.079 2.287 3.186 4.143 2.270 2.663 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.463 2.464 3.735 3.820	1.351 1.263 1.263 .754 3.023 2.034 .862 DEB 2.034 .862 .862 .862 .862 .862 .862 .862 .844 .834 .834 .834 .848 2.055 .8948 2.050 1.529 1.474 .899 1.400 1.629 1.261 .2507 .2507 .2507 .2507 .261 .3347 .3388 .957	68.7 67.3 87.9 53.3 53.2 LAB	2 1 1 3 1 1 1 1 1 1 1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CU3, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU3 LAO, MMR, ECU4, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU4, IEM2, EMU3 ELS1, GTM1, ELS2, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM3, EMU1, EMU3 LAO, ECU1, GTM1, GTM2, ECU3 LAO, MMR, BRN TWN, KIM, IND, AUS, CAN Post-crisis 7V All Cases TKG, KWN, BRN, AUS, NZL, CAN, EMU2 ECU2 Post-crisis 8V All Cases TWN, IDN, VNM, IND, EMU1, EMU2, EMU3 HKG, KIM, MNS, SGP, THA, BRN, JPN KKG, KIM, MN, SOP, THA, BRN, JPN KKG, KIM, MNS, SGP, THA, BRN, JPN KKG, KIM, MYS, SGP, THA, BRN, JPN	19.220 19.917 7.477 37.607 33.949 13.768 21.614 39.296 2.708 2.576 2.708 2.576 12.728 19.120 19.925 2.7142 38.925 24.221 16.925 24.221 6.590 5.394 19.925 10.344 34.700 28.011 9.766 2.3514 20.995 12.528 10.994 27.363	.145 .426 .341 -364 .528 .119 BUS .237 .463 .712 .328 .326 .205 .586 .205 .586 .205 .586 .205 .205 .586 .205 .205 .205 .205 .205 .205 .205 .205	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 4.847 7.731 44.986 2.895 2.739 4.194 9.518 5.104 21.408 4.848 5.495 5.1.111 6.616 2.900 2.115 6.6757	7.030 2.230 2.751 76.421 3.042 2.336 8.285 2.043 2.548 4.663 28.193 5.080 4.668 4.526 8.094 3.020 4.668 4.526 8.094 3.173 41.848 3.825 3.732 2.599 8.094 4.499 2.417 3.723 2.599 2.417 3.723 1.503 1.47.15	.175 .204 .227 .764 .323 .336 .336 .1NT .086 .408 .383 .552 .558 .839 .578 .337 .310 .260 .225 .578 .311 .260 .225 .467 .467 .153 .050 .467 .398 .539 .175 .791 .791 .360 .719 .825 .695	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.143 2.079 2.287 3.186 4.143 2.270 2.663 2.463 2.463 2.463 2.463 2.463 2.463 2.464 2.2406	1.351 1.263 1.263 1.263 .754 3.023 2.034 .862 DEB 2.034 .862 .862 .862 .862 .862 .862 .862 .862 .844 .827 3.055 .848 2.085 1.629 1.549 3.640 .911 .899 1.629 1.629 1.629 1.629 1.621 2.561 2.561 1.347 2.760 1.388 .957 .595 1.975	68.7 67.3 87.9 53.3 53.2 LAB	2 1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CIN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 KOR, TWN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU2 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, BRN TWN, KHM, IND, AUS, CAN Post-crisis 7V All Cases HKG, TWN, IDN, MYS, SGP, THA, VNM, IND, EMU1, EMU3 LAO, ECU1, GTM1, GTM2, ECU3, ELS3 KHM, PHL, MAC, JPN, PAN, ELS1, ELS2, GTM3 KOR, MMR, BRN, AUS, NZL, CAN, EMU2 ECU2 Post-crisis 8V All Cases TWN, IDN, VNM, IND, EMU1, EMU2, EMU3 HKG, KHM, MN, SGP, THA, BRN, JPN KOR, LAO, GTM1, GTM2, ECU3 HKG, KHM, MYS, SGP, THA, BRN, JPN KOR, LAO, GTM1, GTM2, ECU3 HKG, KHM, MYS, SGP, THA, BRN, JPN KOR, LAO, GTM1, GTM2, ECU3 MMR, MAC, ECU1, ELS1, ECU2	19.220 19.917 7.477 37.607 33.949 13.768 21.614 39.296 2.708 2.576 2.708 2.576 2.708 2.576 2.708 2.576 2.708 2.576 2.708 2.577 9.2576 2.7142 38.925 2.4.221 16.0320 5.394 19.925 10.344 34.700 28.011 9.766 33.514 3.528 10.994 2.528 10.994 27.363 31.463	.145 .426 .341 -364 .528 .119 .237 .463 .712 .328 .328 .396 .396 .395 .205 .586 .205 .586 .205 .205 .586 .205 .205 .205 .205 .205 .205 .205 .205	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.895 2.739 4.194 9.518 5.104 21.408 5.435 5.104 21.408 5.115 6.616 6.2900 2.115 6.757 24.688	7.030 2.230 2.751 76.421 3.082 2.336 8.283 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.668 4.526 4.668 4.526 4.668 4.526 3.070 3.173 41.848 3.020 3.173 3.173 3.173 3.159 5.000 4.669 4.668 4.526	.175 .204 .227 .764 .323 .336 .336 .086 .408 .383 .552 .558 .337 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .578 .337 .260 .225 .650 .467 .529 .175 .529 .175 .529 .175 .529 .175 .529 .175 .5791 .360 .7119 .825 .630	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.143 2.079 2.287 3.186 4.143 2.079 2.287 3.186 4.643 2.270 2.663 2.463 2.463 3.735 3.820 3.186 3.763 2.2463 3.735 3.2848 3.735 3.2868 4.641 2.522 2.475	1.351 1.263 1.263 1.264 3.023 2.034 .862 DEB 2.034 .862 2.034 .862 2.610 1.474 .834 1.827 3.055 8.948 2.085 1.629 1.549 1.549 1.549 1.549 1.549 1.629 1.261 2.507 1.256 1.388 .957 .595 1.388	68.7 67.3 87.9 53.3 LAB - - - - - - - - - - - - - - - - - - -	2 1 3 3 1 1 1 1 1 2 0 0 0 0 1 1 1 1 1 1 1 2 2 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	All Cases IDN, VNM, IND, AUS, CAN, ELS3, GTM3, EMUI, EMU2, EMU3 HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL ECU1, ECU2 LAO, ELS1, GTM1, ELS2, GTM2, ECU3 CIN, KOR, TWN, KHM, PHL, MAC, PAN Yuan Cluster Pre-crisis All Cases AUS, CAN, ELS3, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM3, EMU1, EMU2, EMU3 GTM1, ELS2, GTM2, ECU3 CTMN, IDN, MYS, SGP, NZL BRN, JPN, PAN, ECU1, ELS1, ECU2 PHL, THA, VNM, IND KHM, LAO, MMR HKG, MAC Crisis All Cases IDN, PAN, ELS3, GTM3, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU2 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, IND, EMU1, EMU2, EMU3 ELS1, GTM1, ELS2, GTM2, ECU3 LAO, MMR, ECU1, ECU2 HKG, KOR, PHL, MAC, JPN, NZL MYS, SGP, THA, VNM, IND, EMU1, EMU2, EMU3 ELS1, GTM1, GTM2, ECU3, ELS3 KHM, PHL, MAC, JPN, PAN, ELS1, ELS2, GTM3 KOR, MMR, BRN, AUS, NZL, CAN, EMU2 ECU2 POst-crisis 8V All Cases TWN, IDN, VNM, IND, EMU1, EMU2, EMU3 HKG, KIM, MYS, SGP, THA, BRN, JPN KOR, LAO, GTM1, GTM2, ECU3 HKG, KIM, MYS, SGP, THA, UNM, IND, EMU1, EMU3 HKG, KIM, MND, EMU1, EMU2, EMU3 HKG, KIM, MYS, SGP, THA, UNM, IND, EMU1, EMU3 HKG, KIM, MNS, SGP, THA, BRN, JPN KOR, LAO, GTM1, GTM2, ECU3 PHL, PAN, ELS1, ELS2, GTM3 HKM, KIM, MYS, SGP, THA, BRN, JPN KOR, LAO, GTM1, GTM2, ECU3 PHL, PAN, ELS1, ELS2, ELS3 HKM, PHL, MAC, JPN, PAN, ELS1, ELS2 PHL, PAN, ELS1, ELS1, ECU2 PHL, PAN, ELS1, ELS1, ECU3 PHL, PAN,	19.220 19.917 7.477 37.607 33.949 13.768 13.768 21.614 39.296 22.768 2.576 2.576 2.576 12.728 19.120 19.925 27.142 38.925 24.221 16.032 6.590 5.394 19.925 10.344 34.701 9.766 33.514 20.955 12.528 10.994 27.363 31.463 39.044 2.516 2.525 2.526 2.526 2.526 2.536 2.5394 2.5394 2.576 2.579 2.576 2.	.145 .426 .341 .364 .528 .119 .237 .463 .712 .328 .336 .025 .586 .205 .586 .205 .586 .205 .586 .205 .586 .231 .442 .479 .010 .481 .247 .455 .390 .009 .879 .879 .879 .286 .553 .446 .553 .446 .553	6.286 2.761 4.270 42.282 7.649 2.175 10.527 4.047 6.520 9.191 20.459 11.941 13.634 7.948 9.518 4.847 7.731 44.986 2.895 1.941 13.634 7.948 9.518 5.104 21.408 5.104 21.408 5.495 5.1111 6.616 6.2900 2.115 6.757 24.688 6.2946	7.030 2.230 2.751 76.421 3.082 2.336 8.285 2.043 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.548 4.683 2.549 3.094 3.173 3.123 3.732 2.599 8.094 3.946 4.499 2.417 3.723 147.15 6.731 1.509 2.417 3.723 147.15	.175 204 227 .764 .227 .764 .3336 .336 .086 .408 .383 .552 .554 .337 .552 .554 .839 .578 .337 .153 .310 .260 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .700 .225 .701 .250 .257 .701 .250 .257 .701 .257 .701 .257 .701 .257 .701 .257 .701 .257 .701 .257 .701 .257 .701 .257 .701 .257 .701 .255 .701 .259 .775 .791 .775 .791 .775 .791 .7791 .255 .701 .791 .7791	3.266 4.984 3.059 2.282 2.299 2.157 EXP 3.218 4.601 2.331 3.463 2.216 4.628 2.273 2.287 3.186 4.628 2.270 2.663 2.463 2.463 2.273 3.820 3.186 3.763 2.2406 3.733 2.406 3.733 2.406	1.351 1.263 1.263 .754 3.023 2.034 .862 DEB 2.031 .862 .862 .862 .862 .862 .862 .862 .862 .862 .848 2.085 .8948 2.085 .1.629 1.549 3.640 .911 .899 1.400 1.629 1.261 2.566 1.347 2.760 1.388 .957 .955 1.287	68.7 67.3 87.9 53.3 53.2 LAB - - - - - - - - - - - - - - - - - - -	2 2 1 3 3 1 1 1 1 1 1 1 1 2 2 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Fuzzy cluster analysis. See Appendix A for data description.

6.3.3.2 Preparedness Assessment using Weighted Criteria

Table 6.34 compares the benchmark-added solutions using the original criteria (columns '1') with those using weighted criteria (columns '2'). Under weighted criteria, the sum of the 'benefit' criteria and the sum of the 'cost' criteria are weighted equally.

Countries which stay grouped with the benchmarks regardless of the new weighting are shown in columns 2 in Table 6.35. Columns 1 contain the cross-weighting subclusters without the benchmarks. Countries that are placed together in both the subsets in columns 1 and 2 (non-singleton sets highlighted in column 1) might share common OCA features and degrees of preparedness regardless of the weighting.

For pre-crisis period, the common sets of Australia-NewZealand by US reference, Australia-Canada by China reference and Philippines-India by G3 and Germany/EMU references can be seen. A number of these common sets of countries can be found in the crisis period dollar solution. Remarkably, for post-crisis 7V, Indonesia and Australia are robustly parallel and prepared to be placed together for basket and yen anchors. For post-crisis 8V, Korea-Laos is a common set against China.

Hong Kong and Macau are not seen sharing any common set. As for Singapore and Brunei, they might have been parallel in the OCA facets and level of preparedness regardless of weighting but only for the crisis period against US.

In brief, few countries simultaneously share common OCA features and levels of preparedness across unweighted and weighted criteria.

	Do	ollar	Currenc	y Basket	Y	'en	E	uro	Y	uan
	1	2	1	2	1	2	1	2	1	2
	1 CHN, TWN, IND. AUS.	IDN, THA, VNM, IND,	CHN, TWN, MYS, PHL	CAN, PAN, ECU1 ELS1	THA, AUS, NZL, PAN	LAO, PHL, THA, VNM,	CHN, MYS, PHL, IND,	PHL, IND, AUS EMUI	AUS, CAN, ELS3 GTM3	PHL, THA, VNM, IND,
	NZL, CAN,	MAC, AUS,	IND, AUS,	ECU2, ELS2,	ELS3, EMU1,	AUS, NZL,	AUS, CAN,	EMU2, EMU3	BEMU1,	MAC, AUS,
	ELS3, GTM3,	NZL, EMU1,	EMU1,	ELS3, GTM3	EMU2, EMU3	BEMU1,	EMU2, PAN		EMU2, EMU3	NZL, CAN,
	EMU1, EMU2, EMU3	EMU2, EMU3	SEMU2,			EMU2, EMU.	5			EMU1, EMU2, EMU3
-	2 HKG, KOR,	CAN, GTM1,	CAN, ELS2,	PHL, IND,	BRN, GTM1,	BRN, GTM1,	LAO, VNM,	PAN, ECU1,	GTM1, ELS2,	PAN, ECU1,
	MYS, PHL,	ELS2, GTM2,	ELS3, GTM3,	AUS, EMU1,	ELS2, GTM2,	ELS2, GTM2	ECU1, ECU2	ELS1, ECU2,	GTM2, ECU3	ELS1, GTM1,
	SGP, THA, MAC. BRN	ECU3, ELS3, GTM3	EMU3	EMU2, EMU3	SECU3, GTM3	ECU3, ELS3, GTM3		ELS2, ELS3, GTM3		ECU2, ELS2, GTM2
	PAN, ELS1	011115				011112		01110		ECU3, ELS3,
-										GTM3
Pre-	3 JPN, ECU1, GTM1 FLS2	PHL, JPN, PAN_ECU1	HKG, KOR, IDN SGP	CHN, HKG, KOR TWN	IDN, VNM, ECU1_ELS1	IDN, PAN, ECUL ELSI	KHM, MMR, MAC FLS1	CHN, HKG,	KOR, TWN, IDN MYS	HKG, KOR, TWN IDN
crisis	GTM2, ECU3	ELS1, ECU2	THA, MAC,	MYS, SGP,	ECU2	ECU2	Mile, LL01	MYS, SGP,	SGP, NZL	MYS, SGP,
	4 5612	CUDI UKC	BRN, NZL	THA, BRN	IWG KOD			THA, BRN	DDM IDM	BRN, JPN
	4 ECU2	KOR, TWN,	MMR, VNM	MAC, NZL	TWN, MYS,	KOR, TWN,	SGP, THA,	MAC, JPN,	PAN, ECU1,	MMR
		MYS, SGP,			SGP, MAC	MYS, SGP	NZL	NZL, CAN	ELS1, ECU2	
-	5 KHM IDN	KHM LAO	PAN ECU1	KHM LAO	KHM LAO	IND MAC	ELS2 ELS3	KHM LAO	PHL THA	
	LAO, MMR,	MMR	ELS1, ECU2	MMR	MMR	CAN	GTM3,	MMR	VNM, IND	
-	VNM		CTM	CTM	CUN DU		EMU1, EMU3	S CTM1	VIIM LAO	
	0		GTM1, GTM2, ECU3	GTM1, GTM2, ECU3	IND, CAN	KEIWI, WIWIK	BRN, JPN	GTM1, GTM2, ECU3	MMR	
-	7						GTM1,		HKG, MAC	
							GTM2, ECU3			
	1 CHN, KOR,	CHN, HKG,	CHN, HKG,	CAN, PAN,	CHN, HKG,	CHN, HKG,	IND, CAN,	KHM, IDN,	IDN, PAN,	HKG, PHL,
	MYS, MMR,	KOR, TWN,	KOR, TWN,	ELS1, GTM1,	IDN, PAN,	KOR, TWN,	PAN, ELS3,	IND, EMU1,	ELS3, GTM3,	MAC, JPN,
	THA, VNM.	MYS, PHL, SGP, THA.	KHM,, MYS, PHL, SGP.	ECU3, ELS3,	EMU1, EMU3	MYS, PHL, SGP. THA.	EMU1.	EMU2, EMU3	EMU1, EMU2, EMU3	EMU1, EMU2, EMU3
	MAC, BRN,	VNM, IND,	MAC, BRN,	GTM3		VNM, MAC,	EMU2, EMU3	3		
	NZL, ELS1,	MAC, BRN,	ELS1			BRN, AUS,				
	1002	NZL, EMU1,				EMU1,				
-		EMU2, EMU3	CAN DAN	DITE VINA		EMU2, EMU		DAN FLOI	ELCI CTMI	DAN FLO1
	AUS, CAN,	PAN, ECU1,	ECU1, ELS2,	EMU1,	MMR, ECU1.	LAO, MMR,	MMR, ECU1.	GTM1, ELS1,	ELS1, GTM1, ELS2, GTM2,	GTM1, ELS1,
	PAN, ELS3,	ELS1, GTM1,	ELS3, GTM3,	EMU2, EMU3	ECU2	IND, ECU2	ECU2	GTM2,	ECU3	GTM2,
	GTM3, EMU1.	ELS2, GTM2, ECU3, ELS3,	EMUI, EMU3	5				ECU3, ELS3, GTM3		ECU3, ELS3, GTM3
	EMU2, EMU3	GTM3								
Crisis	3 HKG, KHM,	IDN, LAO,	IDN, LAO,	CHN, HKG,	IND, AUS,	PAN, ECU1,	MYS, SGP,	PHL, THA,	LAO, MMR,	KOR, TWN,
	JPN, ECU1,	WINK, EC02	VNM, IND,	MYS, SGP,	CAN, EMO2	ELS1, GTM1, ELS2, GTM2.	BRN, AUS,	NZL, CAN	ECUI, ECU2	THA, VNM,
	GTM1, ELS2,		AUS, NZL,	MAC, BRN		ECU3, ELS3,	NZL			BRN
-	4 GTM2, ECU3		GTM1.	KHM. IDN.	KOR. TWN.	GIM3	ELS1. GTM1.	CHN. HKG.	HKG. KOR.	KHM. IDN.
	-		GTM2, ECU3	MMR, THA,	MYS, PHL,		ELS2, GTM2,	KOR, TWN,	PHL, MAC,	IND, AUS,
				IND, AUS,	SGP, THA,		ECU3	MYS, SGP,	JPN, NZL	NZL, CAN
_				ILLE	BRN, NZL			JPN		
	5		ECU2	ECU1, ECU2	ELS1, GTM1,		CHN, HKG,	LAO, MMR	MYS, SGP,	LAO, MMR,
					GTM2,		KUR, TWN, KHM, PHL,		BRN	ECUI, ECU2,
	_				ECU3, ELS3		MAC, JPN			
	6			LAO				ECU1, ECU2	TWN, KHM, IND. AUS.	
									CAN	
	1 KHM PHI	KOR, IDN	CAN PAN	CHN HKG	CHN HKG	CHN HKG	CHN HKG	CHN HKG	HKG. TWN	HKG TWN
	MAC, GTM1,	MMR, AUS,	ELS2, ELS3,	KOR, TWN,	TWN, KHM,	TWN, KHM,	TWN, MYS,	KOR, TWN,	IDN, MYS,	KHM, MYS,
	GTM2, ECU3	NZL, EMU1,	GTM3,	KHM, MYS,	MYS, PHL,	MYS, SGP,	THA, BRN	MYS, THA,	SGP, THA,	SGP, THA,
		EMU2, EMU3	EMUI, EMUS	VNM, MAC,	SGP, MAC	IND, MAC		VINM, BKN	EMU1, EMU3	BRN
				BRN		,		-		
	2 CAN, PAN, ELS2 ELS3	CHN, HKG, TWN MVS	KOR, MMR,	CAN, PAN, FLS1 GTM1	VNM, IND, ELS3 GTM3	KOR, IDN, MMR PHI	IDN, VNM, IND. CAN	PAN, ELS1, GTM1 ELS2	LAO, ECUJ1, GTM1	IDN, JPN, EMUI
	GTM3, EMU3	THA, BRN	BRN, NZL,	ELS2, GTM2,	EMU1, EMU3	AUS, NZL,	EMU1, EMU3	GTM2,	GTM2,	EMU2, EMU3
			ELS1	ECU3, ELS3, GTM2		CAN, EMU1,	2	ECU3, ELS3, GTM2	ECU3, ELS3	
-	3 CHN, HKG,	KHM, VNM,	LAO, GTM1,	IDN, MMR,	IDN, THA,	BRN, PAN,	KOR, KHM,	KHM, PHL,	KHM, PHL,	ELS2, GTM2,
	TWN, MYS,	PAN, ELS2,	GTM2, ECU3	PHL, IND,	AUS, CAN,	ELS1, GTM1	SGP, MAC,	SGP, MAC,	MAC, JPN,	ELS3, GTM3
Post-	SGP, JPN	GIM3		AUS, NZL, EMU1.	EMU2	ELS2, GTM2, ECU3, ELS3,	JPN, PAN	JPN	PAN, ELS1, ELS2, GTM3	
7V				EMU2, EMU3	3	GTM3			.,	
	4 KOR, LAO,	ELS1, GTM1,	IDN, THA,	LAO, ECU1,	LAO, GTM1,	LAO, ECU1,	LAO, GTM1,	IND, EMU1,	KOR, MMR,	ELS1, GTM1,
	NZL	01W12, ECU3	AUS, EMU2	EC02	UTWI2, ECUS	LCU2	01112, ECU3	EWIO2, EWIO.	NZL, CAN,	LCUS
-	5 ALLO FRALLS	DIII SCD	CUN UKC		DDN DAN		ELCO ELCO	IDN MAD	EMU2	VOD BUI
	EMU2	IND, MAC,	CHIN, HKG, TWN, KHM.		ELS2		GTM3	AUS, NZL,	ECU2	MAC, PAN
-		JPN	MYS, SGP		KOD NO -		10/2 5	CAN		
	6 ECU1, ELS1, ECU2	LAO, ECU1, ECU2	ECU1, ECU2		KOR, MMR, NZL		MMR, PHL, NZL	LAO, ECU1, ECU2		MMR, Aus, NZL, CAN
-	7 THA, VNM,	CAN, ELS3			ECU1, ELS1,		ECU1, ELS1,			LAO, ECU1,
	IND 8				ECU2		ECU2			ECU2
-	0						AUS, EMUZ			

Table 6.34 OCA-FCM-preparedness-weighting assessment

	Dollar		Currency Basket		Yen		Euro		Yuan	
	1	2	1	2	1	2	1	2	1	2
All	1 PHL, MAC,	AUS, NZL	IND, AUS	CAN	AUS	PHL, AUS, NZL	IND, CAN	IND	-	PHL, MAC
Periods	2 CAN	VNM	CAN	PHL	IDN	BRN	LAO			
7V	3 AUS	IDN	PHL			LAO				
	4 KHM	CAN				IDN,				
						,				
Post- crisis 8V	¹ CHN, HKG, TWN, KHM, MYS, SGP, THA, VNM, IND, MAC, BRN, JPN,	CAN, ELS2, GTM2, ELS3, GTM3	IDN, MMR, , THA, VNM, IND, AUS, NZL, EMU1, EMU2,, EMU3	KHM, PHL, EMU1, EMU2, EMU2	IDN, VNM, IND, ELS3, ³ GTM3, EMU1, EMU2, EMU2	IDN, MMR, PHL, AUS, NZL, CAN, EMU1, 3EMU2, EMU2	IDN, VNM, IND, AUS, CAN, ELS3, GTM3, 3EMU1, EMU2, EMU2	IDN, IND, EMU1, EMU2, EMU3	TWN, IDN, VNM, IND , 3EMU1, EMU2, EMU3	HKG, KOR, LAO, MYS, MMR, THA, BEMU1, EMU2, EMU3
	GTM2									
	2 KOR, IDN, LAO, MMR, AUS, NZL, EMU1, EMU2, EMU3	KHM, VNM , PAN 3	KHM, LAO, CAN, PAN, ECU1, ELS1, GTM1, ELS2 GTM2, ECU3, ELS3, GTM3	CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	LAO, GTM1, ELS2, GTM2, ECU3	LAO, ECU1, ECU2	CHN, KOR, TWN, KHM, PHL, MAC, PAN	LAO, ECU1, ECU2	HKG, KHM, MYS, SGP, THA, BRN, JPN	GTM1, ELS2, GTM2, ELS3, GTM3
	3 PHL, PAN, GTM1, ECU3	CHN, HKG, TWN, MYS, THA, BRN	CHN, HKG, KOR, TWN, MYS, PHL, SGP, MAC, BRN	CHN, HKG, KOR, TWN, MYS, THA, VNM, MAC, BRN	MMR, ECU1 ELS1, ECU2	, CHN, HKG, KOR, TWN, KHM, MYS, SGP, THA, VNM, IND, MAC, BRN	LAO, ELS1, GTM1, ELS2, GTM2, ECU3	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	KOR, LAO, GTM1, GTM2, ECU3	SGP, BRN, JPN, AUS, NZL, CAN
	4 CAN , ECU1, ELS1, ELS2, ELS3, GTM3	PHL, SGP, IND, MAC, JPN	ECU2	IDN, LAO, MMR, SGP, IND, AUS, NZL	PHL, PAN	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	HKG, MYS, MMR, SGP, THA, BRN, JPN, NZL	CHN, HKG, KOR, TWN, MYS, THA, VNM, BRN	MMR, MAC, ECU1, ELS1, ECU2	TWN, KHM, IDN, VNM, IND
	5 ECU2	KOR, IDN, MMR, AUS, NZL		ECU1, ECU2	CHN, HKG, TWN, KHM, MYS, SGP, THA, MAC		ECU1, ECU2	KHM, MMR, PHL, SGP, MAC, JPN, AUS, NZL, CAN	PHL, PAN, ELS2, ELS3, GTM3	PHL, MAC, ECU1, ELS1, ECU2
	6	EMU1,			AUS, NZL,				AUS, NZL,	PAN, ECU3
		EMU2, EMU2	3		CAN				CAN	
	7	ELS1, GTM1 ECU3	,		KOR, BRN					
	8	ECU1, ECU2								
	9	LAO								
All Periods 8V	1 MYS, SGP, THA, MAC, BRN	CAN	IND, AUS	PHL	IDN	PHL, AUS, NZL	IND, CAN	IND	-	PHL, MAC
	2 HKG	VNM	CAN	CAN		LAO	LAO			
	3 IPN	1 1 1 1 1 1	Criti	CINI		IDN	LIO			
	4 TWN					11213				
	5 IND									
	6 CAN									
	7 AUS									
	8 NZI									
	0 CHN									
	2 CRIN									
	11 PHI									
	111111									

Table 6.34 OCA-FCM-preparedness-weighting assessment (continued)

	Dollar		Currency Basket		Yen		Euro		Yuan	
	1	2	1	2	1	2	1	2	1	2
Pre- crisis	1 IDN, THA,	THA. MAC	KOR. TWN.	PHL, IND,	KOR, TWN.	THA. AUS.	HKG. KOR.	PHL. IND.	KOR, TWN,	AUS, CAN
	BRN, JPN	, -	MYS, SGP	AUS	MYS, SGP	NZL	TWN, MYS,	AUS	IDN, SGP,	
							THA		BRN	
	2 HKG, TWN,	IND, AUS,	HKG, THA,	CAN	KHM, LAO,	BRN	CHN, IDN,		PHL, THA,	
	SGP	NZL	BRN		MMR		AUS, NZL		IND	
	3 CHN, AUS,	CAN	CHN, AUS,		IND, MAC,	IDN	KHM, VNM		AUS, NZL,	
	NZL		NZL		CAN				CAN	
	4 KOR, MYS,	PHL	IDN, MAC		CHN, HKG	VNM	LAO, MMR		VNM, JPN	
	PHL									
	5 LAO, MMR		LAO, MMR		PHL, AUS		PHL, IND			
	6		PHL, IND		IDN, THA		SGP, CAN			
	1 KOD TWN	CUN KOD	IDN IND	CAN	TWN MYC	VIIM LAO	CUN DU	IDN	MVC THA	
	I KUK, I WN,	CHN, KUK,	IDN, IND,	CAN	TUA DDN	KHM, LAO,	UND MAC	IDN	WIS, IHA,	LAO, MMR
	BRN	SGP THA	AUS, NZL		ITA, DKN	WINK	IND, MAC		VINNI, DRIN	
	DKN	VNM MAC								
		BRN. NZL								
	2 CHN, HKG,	HKG, IND,	KOR. TWN.	PHL	KOR, PHL.	CHN, HKG	MYS. SGP.		TWN, IND,	
Crisis	MAC	JPN, KHM	MYS		SGP		BRN, CAN		AUS, CAN	
	3 KHM, JPN	TWN, AUS,	HKG, KHM,	VNM	VNM, AUS,	AUS, CAN	HKG, KOR,		HKG, PHL,	
		CAN	SGP		NZL		KHM		MAC	
	4 PHL, VNM	IDN	CHN, MAC,		KHM, MAC	IND	VNM, AUS,		KOR, MMR,	
			BRN				NZL		JPN	
	5 IND, AUS	LAO	MMR, THA		MMR, IND	IDN	TWN, JPN			
	6	MMR	PHL, VNM		CHN, IDN					
Post- crisis 7V	1 OIDL UVO				CIDI TUDI		CIDI TUDI	DUD		NH MAG
	I CHN, HKG,	KHM	TWN, MYS,	IDN, IND,	CHN, TWN,	IDN, AUS,	CHN, TWN,	IND	IDN, AUS,	PHL, MAC
	1 W N, M I S		VINIVI	AUS	WIS, IHA,	CAN	IND MAC		NZL, CAN	
					VINNI		IND, MAC, IPN			
	2 KHM PHI	CAN	IDN AUS	MMR PHI	KHM SGP	LAO	HKG KOR	LAO	TWN MYS	IPN
	MAC	0.11	NZL	NZL	IND. MAC.	2.10	MYS. THA	2.10	THA, VNM	
					CAN		,			
	3 IDN, AUS,	AUS	KOR, THA	LAO	KOR, BRN	BRN	SGP, BRN,		SGP, IND	KOR
	NZL						CAN			
	4 KOR, BRN		CHN, HKG	CAN	IDN, AUS,		IDN, AUS,		KHM, JPN	IDN
					NZL		NZL			
	5 SGP, JPN		KHM, MAC						KOR, BRN	LAO
	6		SGP, IND						HKG, PHL	
All Periods	1	ALC NZI	ALC NZI	CAN	TWN MYC	DIT ALLS	DITI IND	NID	ALIS CAN	DIII MAC
	1 -	AUS, NZL	AUS, NZL	CAN	1 W N, M I S	NZI	PHL, IND	IND	AUS, CAN	PHL, MAC
	2	VNM		PHI		BRN	HKG KOR			
	3	IDN		THE		LAO	AUS NZL			
	4	CAN				IDN.	NOS, NEL			
	1 KHM, PHL,	CAN	CHN, TWN,	KHM	CHN, TWN,	IDN	CHN, TWN,	IDN, IND	TWN, VNM,	KOR, LAO
	MAC		KHM, VNM		IDN, THA,		VNM, IND		IND	
Post- crisis 8V					VNM					
	2 KOR, TWN,	KHM, VNM	MYS, THA,	CAN	HKG, KHM,	LAO	MMR, SGP,	LAO	KOR, LAO	MMR
	BRN		BRN		SGP, MAC		BRN, CAN			
	3 HKG, MYS		KOR, MAC		KOR, PHL,	MMR	KOR, KHM		PHL, MAC	MAC
					BRN					
	4 CHN, THA		IDN, IND		MYS, CAN	PHL	MAC, JPN		HKG, JPN	PHL
	5 AUS, NZL		AUS, NZL				IDN, PHL		SGP, BRN	
	7						AUS NZI		AUS, NZL	
	1						AUS, NZL			
All	1-	CAN	AUS, NZL	CAN	-	IDN	AUS, NZL	-	-	-
Periods	-									
8V										

Table 6.35 FCM cross-weighting and cross-preparedness-weighting subclusters

6.3.4 Recapitulation

This section has discussed the findings using fuzzy cluster analysis and OCA criteria. The following are the key findings using 7 variables unless specific mention is made for 8 variables.

Classifications

Using the original unweighted criteria, based on the average silhouettes over all objects, the reference country consistent with best partitioning differs depending on period but based on the structure of the partitions, on the whole the Germany/EMU reference is in line with more convergent arrangements.

Notably, more subclusters are robust over periods by the euro anchor. In particular, China-Philippines-India, Australia-NewZealand and Singapore-Canada are robust regardless of the labor criterion.

Despite maintaining fixed dollar rates, against US, Hong Kong and Macau share the same cluster for pre-crisis and crisis periods only. Singapore and Brunei, the existing monetary union constituents are placed together consecutively at most over crisis and post-crisis periods and only under euro anchor.

For post-crisis period, Indonesia, Australia, and New Zealand; Taiwan and Malaysia; as well as Thailand and Vietnam are linked over all anchors. With 8 variables, Hong Kong and Singapore, Australia and New Zealand, and Indonesia and India are linked over all anchors.

Classifications using Weighted Criteria

How have the configurations changed when benefits and costs are treated equally? In general, under the weighting scheme the arrangements have become more convergent against Japan but more divergent against Germany/EMU.

Remarkably, the link between Taiwan and Malaysia is not only unmoved by the

weighting but is also robust through the periods for basket and yen anchors. The linkage of Australia-NewZealand is robust over the periods under the basket and the euro anchor regardless of the post-crisis labor criterion.

After the weighting, against the US reference Hong Kong and Macau only share the same grouping for the crisis period whilst Singapore and Brunei are still placed together consecutively over crisis and post-crisis periods against Germany/EMU.

For post-crisis period, Indonesia, Australia, and New Zealand are still placed together over all anchors. For post-crisis 8V, Australia and New Zealand still share the same clusters over all anchors except for the yen anchor.

Assessment of Preparedness using Unweighted Criteria

Based on the number of countries connected with the post-dollarization and/or post-euro benchmarks, in general the region might have been relatively prepared for a dollar peg through the periods.

No countries which are indicated to commonly share OCA features and level of preparedness are also shown to be robust over all periods. Nonetheless, more such homogenous countries are present under the US reference in relation to other references.

For Hong Kong and Macau, they are indicated to be symmetrical in the OCA dimensions and the level of preparedness only for the pre-crisis period and only under US anchor. For Singapore and Brunei, they are only placed together in the crisis period dollar solution. On this evidence, despite maintaining similar monetary standards, these pairs of economies are not indicated to be constantly parallel in both the OCA dimensions and the level of preparedness under any reference.

No subgroupings which are present in the same Asian-only and Asian-plusbenchmark clusters are also at the same time exist across all anchors.

Assessment of Preparedness using Weighted Criteria

Extremely few countries are indicated to commonly share OCA features and levels of preparedness regardless of criteria weighting. No subgroupings which are present in the same Asian-only and Asian-plus-benchmark clusters across the weightings are also at the same time present over all periods or across all anchors.

Those in the post-crisis crisis findings, however, may be worth mentioning. For post-crisis 7V, Indonesia and Australia are indicated to share OCA features and level of preparedness regardless of criteria weighting for basket and yen anchors. For post-crisis 8V, Korea and Laos display those features by the China reference.

Hong Kong and Macau are not shown to be simultaneously parallel in the OCA features and the degree of preparedness across the weightings. As for Singapore and Brunei, they might possess those attributes but only for the crisis period and only against US.

6.4 Model-based Clustering Results

The results by model-based cluster analysis are categorized into 4 main sections: classifications, classifications using weighted criteria, assessment of preparedness, and a recapitulation.

6.4.1 Classifications

The previous sections have presented the results from hierarchical and fuzzy cluster analysis methods. Before the discussion on model-based clustering results begins, it is worthwhile to review the steps involved in model-based cluster analysis to better understand the results.

First, the constraints on the component covariance matrices (i.e. model 9) are chosen before the agglomerative model-based clustering is applied. This provides an initial partition of the data for any given number of groups and any desired model. This partition is used to get the initial estimates of the component density parameters for use in the Expectation-Maximization (EM) algorithm. Once the estimates converge, Bayesian Information Criterion (BIC) is calculated. The process is repeated for various models (the number of groups and forms of the covariance matrices). The final model, together with the number of clusters that is chosen is the one that produces the highest BIC. The parameterizations of covariance matrices for the models have been shown earlier in Chapter 5.

In a nutshell, a cluster solution is selected based on the maximum BIC which indicates the best fit between the partition, depending on the parameterization of covariance matrix model, and the data.

In the analysis, some BIC estimates could not be generated, as the covariance matrix associated with one or more of the mixture components is ill-conditioned, so that the log likelihood and hence the BIC cannot be computed. Nonetheless, this does not affect the analysis as ample BICs are generated which can then be selected.

In the findings, the largest difference between the highest BIC and the second highest BIC is detected in the post-crisis 8V yen and post-crisis 7V euro results. The differences are highly above 10, the conventional threshold for strong statistical evidence for a chosen solution.

The remainder of the section is divided into findings by each monetary anchor and comparisons of solutions across the anchors.

Dollar Anchor Results

Figure 6.16 displays the BIC plots for the US-based analysis. 9 groups and model 3 are selected for pre-crisis period; 7 groups (model 3) for crisis period; 6 groups (model 3) for post-crisis 7V; and 10 groups (model 1) for post-crisis 8V. Based on the average silhouette over all objects at 0.55, the post-crisis 7V solution should be most appropriately classified.

Table 6.36 exhibits the features of the groupings. For pre-crisis period, the group comprising of the four Asian Tigers (Hong Kong, Korea, Taiwan, and Singapore), Malaysia, and Macau enjoys the highest silhouette 0.57 and the most stable real dollar rate. This finding is compatible with the strong dollar pegs among them at that time. Amongst the clusters, Canada is the most viable for a hard dollar peg since it maintains the greatest degree of trade, business cycle symmetry, and inflation convergence with the US as well as the most varied exports.

In the crisis period setting, Korea-Malaysia-Singapore, HongKong-Macau, and India-Australia retain their pre-crisis links. HongKong-Macau plus China and Japan constitute the most tightly classified cluster. The most prospective country is still Canada.



Figure 6.16 OCA-dollar BICs


Figure 6.16 OCA-dollar BICs (continued)

Malaysia-Singapore and HongKong-Macau retain their links since the pre-crisis period in the post-crisis 7V arrangement. They also belong to the largest cluster which obtains the largest silhouette 0.72. Nonetheless, when labor criterion is included, the configuration becomes significantly fragmented and no countries carry forward their pre-crisis ties till the post-crisis setting. Hence, the countries could have been predominantly divergent with respect to labor market flexibility.

Reduction in the number of clusters and increase in the size of the dominant group across the 7-variable solutions indicate greater convergence vis-à-vis US over the periods. Also, unlike those of the previous periods, the findings of the post-crisis period show that the most conforming attributes are more distributed over the clusters.

				A	Averages					
Cluster	SW	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N^2
Pre-crisis		(%)		(%)						
All Cases	.34	18,535	109	6.017	2.576	238	3,290	3.011	-	
1 HKG KOR TWN MYS SGP MAC	57	20 418	106	2 777	1 154	959	3 187	1 020	-	1
2 CHN IND AUS NZL	36	14 086	454	5 450	4 442	494	4 340	1 964	-	ò
3 KHM IDN THA IPN	.00	14 985	- 076	2 884	2 624	- 972	2 629	3 434	-	õ
4 PHL	00	33 506	- 237	8 930	3 353	982	4 854	2 804	-	1
5 VNM	00	15 261	360	24 109	3 310	- 998	3 346	4 925	-	0
6 BRN	00	7 867	- 624	5 303	1 444	000	1 099	000	-	õ
7 LAO	00	1 728	068	16 120	3 979	- 989	1 927	10 621	-	1
8 MMR	00	3 267	- 100	14 438	2 938	897	2 529	9 475	-	0 0
9 CAN	00	70 274	571	1 445	1 303	784	5.038	n a ³	-	4
Crisis	.00	/0.2/1	.071	1.110	1.000	./01	0.000	ma		<u> </u>
All Cases	.33	18.625	039	8.154	4.193	026	3.164	1.495	-	
1 KOR, MYS, PHL, SGP, THA, VNM,										
BRN. NZL	.45	16.973	245	2,668	4.399	.660	2.769	.956	-	0
2 TWN, KHM, IND, AUS	.18	18,148	.781	3.727	2.616	587	3.661	1.400	-	Ō
3 CHN, HKG, MAC, JPN	.57	18.592	448	3,193	1.423	737	2.388	.698	-	1
4 IDN	.00	11.197	482	21.576	16.519	826	6.390	2.416	-	1
5 LAO	.00	1.013	028	67.298	11.101	159	2.674	5.252	-	1
6 MMR	.00	4.034	560	24.586	3.340	353	3.412	3.261	-	0
7 CAN	.00	73.515	.922	.596	1.547	.832	4.456	n.a.	-	4
Post-crisis 7V			-							
All Cases	.55	17.415	.211	3.485	1.972	349	3.411	1.094		
1 CHN, HKG, TWN, KHM, MYS, PHL,										
SGP, THA, VNM, IND, MAC, JPN	.72	17.932	.519	2.293	1.264	627	3.026	.786	-	2
2 IDN, AUS, NZL	.48	11.715	119	2.659	4.946	086	5.535	1.722	-	1
3 KOR, BRN	.50	11.250	605	1.743	1.741	.452	1.852	.330	-	1
4 LAO	.00	.729	.310	6.162	1.308	.213	2.442	4.457	-	1
5 MMR	.00	2.913	729	23.681	2.307	.251	4.119	2.009	-	0
6 CAN	.00	71.818	021	.882	2.333	565	5.025	n.a.	-	2
Post-crisis 8V										
All Cases	.29	17.415	.211	3.485	1.972	349	3.411	1.094	73.0	
1 CHN, TWN, MYS, THA, VNM, IND	.31	16.691	.457	2.002	1.189	543	3.941	.579	64.2	0
2 HKG, SGP, JPN	.63	14.659	.916	2.618	1.567	697	2.658	.787	90.6	1
3 KHM, PHL, MAC	.48	23.687	.246	2.552	1.110	726	1.565	1.200	58.0	1
4 AUS, NZL	.68	12.551	229	.657	5.453	.213	5.223	n.a.	91.8	1
5 KOR	.00	14.897	556	.975	2.023	.985	2.508	.660	55.6	1
6 IDN	.00	10.045	.100	6.663	3.931	685	6.159	1.722	48.4	1
7 BRN	.00	7.604	653	2.511	1.460	081	1.197	.000	94.0	1
8 LAO	.00	.729	.310	6.162	1.308	.213	2.442	4.457	69.4	1
9 MMR	.00	2.913	729	23.681	2.307	.251	4.119	2.009	-	0
10 CAN	.00	71.818	021	.882	2.333	565	5.025	n.a.	90.9	1

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable. Source: Model-based cluster analysis. See Appendix A for data description.

Source. Model-based cluster analysis. See Appendix A for data descripti

Currency Basket Anchor Results

Figure 6.17 collects the G3-based BIC plots. 4 groups (model 1) are appropriate for precrisis period; 4 groups (model 3) for crisis period; 5 groups (model 3) for post-crisis 7V; and 5 groups (model 3) for post-crisis 8V period. Table 6.37 puts together the groupings and their features. Based on the average silhouette over all objects at 0.52, the postcrisis 7V solution should be most appropriately classified.



Figure 6.17 OCA-basket BICs



Figure 6.17 OCA-basket BICs (continued)

The best classified group for the pre-crisis period is the 7-country second cluster with silhouette 0.46 which exhibits the most stable G3-weighted real exchange rate. Canada is most desirable in 5 of the 7 dimensions. The Indo-China countries Laos, Myanmar, and Vietnam make up the most indebted group. The first and second precrisis clusters basically form the best classified cluster in the crisis period configuration. However, the most potential cluster is still the singleton Canada.

For post-crisis7V, the cluster configurations are the same regardless of the labor criterion. Countries from the largest crisis period cluster, except Australia and New Zealand, once again constitute the cluster with high silhouette 0.61 which almost encompasses the whole region. The group enjoys the least variable real exchange rate and the most symmetrical monetary policy with the weighted G3 countries.

The significantly larger dominant cluster since the pre-crisis period signifies increased convergence vis-à-vis the G3 reference over the periods. Also, the post-crisis configuration is robust to inclusion of the labor criterion.

	Averages									
Cluster	SW	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N^2
Cluster		(%)		(%)						
Pre-crisis										
All Cases	.39	16.122	027	6.694	3.854	.136	3.357	3.011	-	
1 CHN, KOR, TWN, MYS, PHL, IND,										
AUS, NZL	.35	17.437	009	5.186	4.164	.269	4.202	1.432	-	0
2 HKG, KHM, IDN, SGP, THA, MAC,										
BRN	.46	14.389	122	3.929	2.555	.005	2.476	2.080	-	1
3 LAO, MMR, VNM	.43	10.008	.061	18.659	3.842	008	2.601	8.340	-	1
4 CAN	.00	36.071	.230	2.209	10.503	.290	5.038	n.a. ³	-	5
Crisis										
All Cases	.43	14.429	.106	8.494	6.581	023	3.227	1.495	-	
1 CHN, HKG, KOR, TWN, KHM, MYS,										
PHL, SGP, THA, VNM, IND, MAC,										
BRN, AUS, NZL	.56	14.327	.117	3.025	5.730	015	2.959	.999	-	0
2 IDN, MMR	15	9.153	312	23.482	11.506	046	4.901	2.838	-	1
3 LAO	.00	4.070	.127	68.106	12.122	188	2.674	5.252	-	1
4 CAN	.00	36.864	.753	.943	3.954	.081	4.456	n.a.	-	5
Post-crisis 7V										
All Cases	.52	13.449	.130	3.906	2.473	.016	3.477	1.094	-	
1 CHN, HKG, KOR, TWN, KHM, MYS,										
PHL, SGP, THA, VNM, IND, MAC, BRN	.61	13.531	.232	2.376	1.930	.078	2.913	.716	-	2
2 IDN, AUS, NZL	.62	12.026	166	3.466	5.016	.062	5.535	1.722	-	1
3 MMR	.00	4.023	799	24.559	2.364	238	4.119	2.009	-	0
4 CAN	.00	36.082	.264	1.216	2.522	364	5.025	n.a.	-	2
5 LAO	.00	3.441	.490	7.151	1.961	284	2.442	4.457	-	2
Post-crisis 8V										
All Cases	.45	13.449	.130	3.906	2.473	.016	3.477	1.094	72.3	
1 CHN, HKG, KOR, TWN, KHM, MYS,										
PHL, SGP, THA, VNM, IND, MAC, BRN	.56	13.531	.232	2.376	1.930	.078	2.913	.716	69.7	2
2 IDN, AUS, NZL	.39	12.026	166	3.466	5.016	.062	5.535	1.722	77.3	1
3 LAO	.00	3.441	.490	7.151	1.961	284	2.442	4.457	69.4	2
4 MMR	.00	4.023	799	24.559	2.364	238	4.119	2.009	-	0
5 CAN	.00	36.082	.264	1.216	2.522	364	5.025	n.a.	90.9	3

Table 6.37 OCA-MBC-basket clusters

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Model-based cluster analysis. See Appendix A for data description.

Yen Anchor Results

Figure 6.18 displays the Japan-based BIC plots. 10 clusters and model 3 are selected for the pre-crisis period; 7 clusters and model 4 for the crisis period; 2 clusters and model 5 for the post-crisis 7V period; and 3 clusters and model 2 for the post-crisis 8V period. Table 6.38 puts together the groupings and their attributes. Based on the average silhouette over all objects at 0.36, the post-crisis 7V solution should be most appropriately classified.

Among the pre-crisis groupings, the highest silhouette 0.64 is obtained by the Indonesia-Thailand pair. Despite this, other than somewhat high degrees of trade intensity and real interest rate cycle symmetry with Japan, other attributes are not very conforming. On the other hand, the singletons of Brunei, Vietnam, and Canada each possess 2 most suitable features.

Several pre-crisis subgroups maintain their ties in the crisis period. Among them, the notable one is HongKong-Macau which attains the highest silhouette as well as high degree of business cycle synchronicity and real interest rate cycle symmetry.

The region becomes significantly convergent in the post-crisis solution in which without the labor criterion only 2 clusters are present and with the labor criterion only 3 clusters are present. In both results, Malaysia-Philippines, HongKong-Macau, and Taiwan-Singapore remain linked since the pre-crisis period and form the largest group which is also the most tightly classified cluster with silhouettes at least 0.70. The largest cluster also maintains significantly more best-features when 7 variables are used.

The reduction of clusters from 10 in the pre-crisis setting to only 2 or 3 in the postcrisis configuration might indicate significantly higher degree of regional symmetry against Japan. Furthermore, the dominant cluster for the post-crisis period also obtains substantially high group silhouette, suggesting highly symmetrical intra-group structure despite its large size.



Figure 6.18 OCA-yen BICs



Figure 6.18 OCA-yen BICs (continued)

				A	Averages					
Cluster	SW	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N^2
Cluster		(%)		(%)						
Pre-crisis										
All Cases	.24	18.554	111	7.619	6.469	228	3.357	3.011	-	
1 KOR, MYS, PHL, IND, AUS	.25	18.350	.070	5.996	4.043	700	4.486	1.893	-	0
2 HKG, TWN, SGP, MAC	.37	13.347	237	4.018	3.226	916	2.806	1.126	-	0
3 IDN, THA	.64	27.769	.079	5.059	3.995	.953	3.367	1.777	-	0
4 KHM, NZL	.32	13.293	582	5.179	4.573	.672	2.554	6.749	-	0
5 CHN	.00	20.683	601	11.070	18.367	442	4.356	.771	-	0
6 BRN	.00	47.816	.194	5.068	2.823	-	1.099	.000	-	2
7 LAO	.00	13.024	067	17.197	5.017	.972	1.927	10.621	-	1
8 MMR	.00	17.619	428	15.899	3.137	946	2.529	9.475	-	0
9 VNM	.00	20.626	.407	26.045	4.813	.998	3.346	4.925	-	2
10 CAN	.00	5.495	010	2.944	38.503	782	5.038	n.a. ³	-	2
Crisis										
All Cases	.23	12.556	.462	8.700	6.529	082	3.227	1.495	-	
1 KOR, MYS, PHL, THA,	.50	15.994	.875	3.782	6.712	575	2.790	1.004	-	0
2 VNM, AUS, NZL, CAN	.08	11.285	.062	2.331	3.920	771	4.551	1.516	-	0
3 TWN, SGP, BRN	33	19.736	.622	1.160	3.821	526	2.015	.465	-	3
4 KHM, MMR, IND	.31	5.431	242	13.004	4.350	.794	3.084	2.408	-	0
5 HKG, MAC	.71	6.530	.934	2.500	4.142	.839	2.167	.721	-	2
6 CHN, IDN	.34	18.834	.690	12.021	18.443	.704	4.821	1.535	-	1
7 LAO	.00	3.221	.639	69.312	11.836	063	2.674	5.252	-	1
Post-crisis 7V										
All Cases	.36	11.147	.212	4.931	2.956	.520	3.477	1.094		
1 CHN, HKG, TWN, KHM, MYS, PHL,										
SGP, THA, VNM, IND, MAC	.78	10.507	.498	3.244	2.652	.953	3.106	.786	-	4
2 KOR, IDN, LAO, MMR, BRN, AUS,										
NZL, CAN	22	12.026	182	7.251	3.374	076	3.987	1.769	-	3
Post-crisis 8V										
All Cases	.35	11.147	.212	4.931	2.956	.520	3.477	1.094	72.3	
1 CHN, HKG, TWN, KHM, MYS, PHL,										
SGP, THA, VNM, IND, MAC	.70	10.507	.498	3.244	2.652	.953	3.106	.786	68.7	2
2 KOR, IDN, LAO, MMR, AUS, NZL, CAN	14	9.407	116	8.134	3.551	115	4.386	2.212	74.7	2
3 BRN	.00	30.361	647	1.073	2.135	.199	1.197	.000	94.0	4

Га	ble	6.38	OCA-I	ивс-у	yen	cluster	S
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Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Model-based cluster analysis. See Appendix A for data description.

Euro Anchor Results

Figure 6.19 collects the BIC plots using Germany/EMU as the reference. 3 clusters and model 3 are indicated for the pre-crisis period; 6 clusters and model 3 for the crisis period; 5 clusters and model 2 for the post-crisis 7V period; and 10 clusters and model 1 for the post-crisis 8V period. The characteristics of the groups are reported in Table 6.39. Based on the average silhouette over all objects at 0.38, the post-crisis 7V solution should be most appropriately classified.

Among the three groups identified for the pre-crisis period, the highest silhouette 0.44 is attained by the second group which demonstrates the greatest trade linkage with the EMU founding members, the most symmetrical monetary policy with Germany, and the broadest range of exports. The other 2 groups display 2 most favorable conditions

for German mark peg each. A number of countries retain their previous subgroupings in the crisis period arrangement but Australia-NewZealand could possibly be of high potential for fixed exchange rate.



Figure 6.19 OCA-euro BICs



Figure 6.19 OCA-euro BICs (continued)

The post-crisis 7V arrangement appears to be more convergent than the crisis period solution but more divergent than the pre-crisis one. A number of countries maintain their groupings since the pre-crisis solution and share the highest silhouette 0.60 in the largest group. This group, however, exhibits only one most conforming feature.

When the labor criterion is also considered in the post-crisis analysis, the region becomes significantly more fragmented. The degree of asymmetry in the labor market flexibility dimension could have overwhelmed the degree of symmetry in the rest of the dimensions.

				Α	Verages					
Cluster	SW	TRA	BUS	INF	RER^1	INT	EXP	DEB	LAB	N^2
Cluster		(%)		(%)						
Pre-crisis										
All Cases	.32	11.166	157	6.479	3.865	.145	3.290	3.011	-	
1 HKG, KOR, TWN, KHM, MYS, SGP,										
THA, MAC, BRN, JPN, CAN	.29	9.947	121	2.874	3.157	.016	2.988	1.578	-	2
2 CHN, IDN, PHL, IND, AUS, NZL	.44	14.143	328	7.062	5.017	.293	4.187	2.238	-	3
3 LAO, MMR, VNM	.20	9.680	.054	18.535	4.152	.281	2.601	8.340	-	2
Crisis										
All Cases	.32	9.662	.052	8.011	10.348	004	3.164	1.495	-	
1 CHN, HKG, KOR, TWN, KHM, PHL,										
IND, MAC, JPN	.45	11.215	.124	3.393	10.270	.600	2.531	1.062	-	2
2 MYS, SGP, THA, VNM, BRN, CAN	.25	7.347	.157	1.927	10.228	743	3.021	.899	-	1
3 AUS, NZL	.48	11.167	.032	1.191	4.878	678	4.945	n.a. ³	-	2
4 IDN	.00	10.402	224	22.092	19.395	.382	6.390	2.416	-	1
5 LAO	.00	9.512	023	68.446	13.940	330	2.674	5.252	-	1
6 MMR	.00	5.980	823	25.197	10.075	.291	3.412	3.261	-	0
Post-crisis 7V										
All Cases	.38	9.273	.016	3.645	2.922	.185	3.411	1.094	-	
1 CHN, HKG, KOR, TWN, KHM, MYS,										
PHL, SGP, THA, VNM, MAC, JPN	.60	9.787	.056	2.171	2.529	.409	2.826	.740	-	1
2 IDN, IND, AUS, NZL, CAN	.08	10.397	.088	2.772	4.253	045	5.308	1.446	-	2
3 LAO	.00	9.068	.772	7.239	2.625	639	2.442	4.457	-	2
4 BRN	.00	1.494	586	1.196	1.985	.270	1.197	.000	-	2
5 MMR	.00	5.473	970	24.554	2.215	620	4.119	2.009	-	0
Post-crisis 8V										
All Cases	.23	9.273	.016	3.645	2.922	.185	3.411	1.094	73.0	
1 CHN, TWN, VNM, IND	.16	12.146	.258	2.726	2.686	.400	4.076	.634	57.6	0
2 HKG, MYS, SGP, THA	.28	7.886	161	1.383	2.304	.448	3.293	.628	85.2	0
3 KOR, KHM, MAC, JPN	.41	9.878	.437	2.277	2.594	.293	1.742	.930	66.5	0
4 AUS, NZL	.61	11.376	509	1.181	5.630	148	5.223	n.a.	91.8	0
5 IDN	.00	9.299	.159	7.720	4.187	.389	6.159	1.722	48.4	1
6 BRN	.00	1.494	586	1.196	1.985	.270	1.197	.000	94.0	2
7 PHL	.00	12.285	955	3.488	2.836	.466	2.382	1.471	57.5	2
8 LAO	.00	9.068	.772	7.239	2.625	639	2.442	4.457	69.4	1
9 MMR	.00	5.473	970	24.554	2.215	620	4.119	2.009	-	0
10 CAN	.00	5.448	.786	.796	2,992	436	5.025	n.a.	90.9	2

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable. Source: Model-based cluster analysis. See Appendix A for data description.

Yuan Anchor Results

Figure 6.20 displays the China-based BIC plots. 10 clusters and model 3 are suggested by the BICs for the pre-crisis solution; 6 clusters and model 3 for the crisis period solution; 2 clusters and model 5 for the post-crisis 7V solution; and 13 clusters and model 1 for the post-crisis 8V solution. Obviously, without the post-crisis labor dimension, the region could have been significantly more convergent vis-à-vis China over the periods. Based on the average silhouette over all objects at 0.41, the crisis period solution should be most appropriately classified.

Table 6.40 collects the features of the clusters. In the pre-crisis setting, the most appropriately classified group is the Korea-Taiwan-Indonesia-Singapore cluster with silhouette 0.73. The third and fourth clusters are also somewhat well-classified. Despite

this, the relatively feasible candidate for a yuan peg might be Cambodia whose real business cycle is most synchronous with the Chinese cycle and whose real yuan rate is the most stable.

Amongst the countries that retain their pre-crisis links, Hong Kong and Macau could be relatively feasible for a yuan peg for the crisis period. In combination with Korea, the Philippines, and Japan, they share the greatest degree of trade linkage, inflation convergence, and real interest rate cycle symmetry with China.

The configuration becomes significantly more convergent in the post-crisis 7V solution with the presence of only 2 groups. A number of countries carry on their links since the pre-crisis solution. The first cluster containing Hong Kong, Taiwan, and Macau, the close neighbors to China, obtains the greatest silhouette 0.49 and 5 closest features with China.

The configuration becomes highly fragmented in the post-crisis 8V solution, that is, when the labor criterion is included. Hence, the countries ought to be predominantly divergent in the labor dimension.



Figure 6.20 OCA-yuan BICs



Figure 6.20 OCA-yuan BICs (continued)

				А	verages					
Cluster	SW	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N^2
Cluster		(%)		(%)						
Pre-crisis										
All Cases	.33	5.882	.197	10.600	4.833	.025	3.233	3.160	-	
1 KOR, TWN, IDN, SGP	.73	3.161	.280	8.760	4.573	.745	3.273	.853	-	0
2 MYS, AUS, NZL, CAN	.12	1.801	.415	9.684	4.964	.332	4.465	.758	-	1
3 PHL, THA, IND	.58	2.850	.066	8.167	4.853	786	4.409	2.432	-	1
4 HKG, MAC	.58	19.120	.586	7.948	4.526	.337	2.287	2.085	-	1
5 BRN	.00	0.237	320	11.996	4.740	-	1.099	.000	-	0
6 JPN	.00	4.947	601	11.070	5.565	.560	2.001	n.a. ³	-	0
7 LAO	.00	8.611	177	16.614	6.139	086	1.927	10.621	-	1
8 MMR	.00	27.154	.060	12.857	5.465	654	2.529	9.475	-	1
9 VNM	.00	1.755	100	23.264	5.760	-1.000	3.346	4.925	-	0
10 KHM	.00	2.419	.733	11.432	2.401	992	1.782	6.749	-	2
Crisis										
All Cases	.41	9.806	.138	8.971	4.514	.141	3.159	1.551	-	
1 TWN, KHM, SGP, IND, AUS, NZL, CAN	.38	5.322	539	3.436	3.008	.416	3.572	1.340	-	1
2 HKG, KOR, PHL, MAC, JPN	.54	18.330	.522	3.104	3.495	.698	2.212	.911	-	3
3 MYS, THA, VNM, BRN	.60	6.803	.598	3.117	4.019	776	2.871	.833	-	0
4 MMR	.00	15.993	.470	25.923	3.325	.096	3.412	3.261	-	0
5 IDN	.00	8.535	.700	23.022	16.615	.011	6.390	2.416	-	2
6 LAO	.00	5.679	.217	69.459	11.224	724	2.674	5.252	-	1
Post-crisis 7V										
All Cases	.36	9.806	.138	8.971	4.514	.141	3.159	1.551	-	
1 HKG, TWN, KHM, MYS, PHL, SGP,					-					
THA, VNM, IND, MAC, JPN	.49	11.242	.163	3.674	2.989	.215	2.649	1.156	-	5
2 KOR, IDN, LAO, MMR, BRN, AUS,										
NZL, CAN	.19	7.833	.104	16.254	6.612	.039	3.861	2.342	-	2
Post-crisis 8V										
All Cases	.23	11.739	.246	4.061	2.202	.487	3.422	1.138	73.7	
1 HKG, SGP, JPN	.13	14.537	.738	2.022	1.705	.977	2.658	.787	90.6	0
2 TWN, KHM	.17	5.619	.555	2.169	1.349	.938	2.114	.696	51.7	0
3 MYS, THA	.67	9.682	.258	2.045	1.305	.912	3.672	.470	77.3	0
4 VNM, IND	.76	8.788	.815	3.586	1.456	.979	5.007	.885	61.6	1
5 AUS, NZL	.43	7.724	355	2.253	5.742	172	5.223	n.a.	91.8	0
6 CAN	.00	2.394	139	2.147	2.607	.053	5.025	n.a.	90.9	0
7 PHL	.00	29.388	.433	3.823	1.735	.977	2.382	1.471	57.5	1
8 MAC	.00	27.834	562	2.399	.858	.997	1.171	1.074	-	2
9 KOR	.00	18.214	262	2.160	2.275	628	2.508	.660	55.6	0
10 IDN	.00	9.997	.363	7.336	3.980	.974	6.159	1.722	48.4	1
11 BRN	.00	4.179	254	2.001	1.604	.092	1.197	.000	94.0	2
12 LAO	.00	6.981	.662	7.225	1.471	841	2.442	4.457	69.4	1
12 MMD	00	16 824	- 325	22 001	2 501	- 606	1 110	2 000	_	0

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable.

Source: Model-based cluster analysis. See Appendix A for data description.

6.4.1.1 Comparisons across Anchors

The MBC classifications by the five alternative anchors are arranged in Table 6.41. The average silhouettes for all objects suggest that the currency basket partitions are more fitting for all period solutions except for post-crisis 7V in which the dollar solution is best partitioned. Thus, the reference country consistent with best partitioning is virtually the G3 reference.

The reference country compatible with the most convergent arrangement, signified

by the smallest number of clusters and/or the largest dominant cluster is different for each period. For pre-crisis period, the basket and euro solutions; for crisis period the basket solution; and for post-crisis 7V the yen and yuan solutions are most convergent. For post-crisis 8V the basket and the yen configurations are most convergent.

To evaluate how the levels of convergence might have changed, it is appropriate to examine the 7-variable configurations over the periods. Virtually all reference countries have produced increasingly convergent configurations. Nevertheless, amongst the references only the G3 reference consistently generates highly symmetrical solutions for every period even when 8 variables are used for post-crisis period.

The 'All Periods' rows list the stable subgroups that have stayed through the periods. Regardless of the labor criterion, more substantial cross-period subsets are found under the basket and euro anchors.

Notice that the current monetary union members of Singapore and Brunei consistently share the same grouping over the periods under the basket anchor regardless of labor. This is consistent with the union which pegs its currency to an undisclosed basket of currencies with about two-thirds of the weight on the US dollar (see Ogawa & Shimizu, 2006).

For the dollar areas of Hong Kong and Macau, they constantly share the same grouping over the periods by any anchor when 7 variables are used and by basket and yen anchors when 8 variables are used, compatible with their parallel exchange regimes.

The bottom part of Table 6.41 shows the clusters possessing the highest silhouettes for the post-crisis period. Remarkably, by the Japan reference at least half the countries are found to share the highest group silhouette regardless of the labor criterion.

Cross-anchor subclusters are listed in Table 6.42. Remarkably, based on 7 variables, Hong Kong and Macau the effective dollar areas in practice are linked over the periods across all anchors. For post-crisis period, the most recent period, HongKong-Singapore and Australia-NewZealand maintain their links over all anchors regardless of the labor

criterion.

		Dollar	SW Currency Basket	SW Yen	SW Euro	SW Yuan	SW
	1	HKG, KOR, TWN,	.57 CHN, KOR, TWN,	.35 KOR, MYS, PHL,	.25 HKG, KOR, TWN,	.29 KOR, TWN, IDN,	.73
		MYS, SGP, MAC	MYS, PHL, IND, AUS, NZL	IND, AUS	KHM, MYS, SGP, THA, MAC, BRN,	SGP	
					JPN, CAN		
	2	CHN, IND, AUS, NZL	.36 HKG, KHM, IDN, SGP, THA, MAC, PPN	.46 HKG, TWN, SGP, MAC	.37 CHN, IDN, PHL, IND, AUS, NZL	.44 MYS, AUS, NZL, CAN	.12
Pre-crisis	3	KHM, IDN, THA, JPN	.51 LAO, MMR, VNM	.43 IDN, THA	.64 LAO, MMR, VNM	.20 PHL, THA, IND	.58
	4	PHL	.00 CAN	.00 KHM, NZL	.32	HKG, MAC	.58
	5	VNM	.00	CHN	.00	BRN	.00
	6	BRN	.00	BRN	.00	JPN	.00
	7	LAO	.00	LAO	.00	LAO	.00
	8	MMR	.00	MMR	.00	MMR	.00
	9	CAN	.00	VNM	.00	VNM	.00
	10			CAN	.00	KHM	.00
Average			.34	.39	.24	.32	.33
	1	KOR, MYS, PHL,	.45 CHN, HKG, KOR,	.56 KOR, MYS, PHL,	.50 CHN, HKG, KOR,	.45 TWN, KHM, SGP,	.38
		SGP, THA, VNM, BRN, NZL	TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL	THA	TWN, KHM, PHL, IND, MAC, JPN	IND, AUS, NZL, CAN	
Crisis	2	TWN, KHM, IND, AUS	.18 IDN, MMR	15 VNM, AUS, NZL, CAN	.08 MYS, SGP, THA, VNM, BRN, CAN	.25 HKG, KOR, PHL, MAC, JPN	.54
	3	CHN, HKG, MAC, JPN	.57 LAO	.00 TWN, SGP, BRN	33 AUS, NZL	.48 MYS, THA, VNM, BRN	.60
	4	IDN	.00 CAN	.00 KHM, MMR, IND	.31 IDN	.00 MMR	.00
	5	LAO	.00	HKG, MAC	.71 LAO	.00 IDN	.00
	6	MMR	.00	CHN, IDN	.34 MMR	.00 LAO	.00
<u> </u>	7	CAN	.00	LAO	.00		
Average			.33	.43	.23	.32	.41
	1	CHN, HKG, TWN,	CHN, HKG, KOR,	CHN, HKG, TWN,	CHN, HKG, KOR,	HKG, TWN, KHM,	
		KHM, MYS, PHL,	TWN, KHM, MYS,	KHM, MYS, PHL,	TWN, KHM, MYS,	MYS, PHL, SGP,	
		SGP, THA, VNM,	PHL, SGP, THA,	SGP, THA, VNM,	PHL, SGP, THA,	THA, VNM, IND,	
		IND, MAC, JPN	VNM, IND, MAC,	IND, MAC	VNM, MAC, JPN	MAC, JPN	40
		IDM ALIG MOL	./2 BRN	.61	./8	.60	.49
Post-crisis 7V	2	IDN, AUS, NZL	1DN, AUS, NZL	MMR, BRN, AUS, 62 NZL CAN	NZL, CAN	MMR, BRN, AUS, 08 NZL CAN	19
	3	KOR. BRN	.50 MMR	.00	LAO	.00	
	4	LAO	.00 CAN	.00	BRN	.00	
	5	MMR	.00 LAO	.00	MMR	.00	
	6	CAN	.00				
Average			.55	.52	.36	.38	.36
	1	HKG, MAC	CHN, KOR, TWN, MYS, PHL, IND	MYS, PHL	HKG, KOR, TWN, KHM, MAC, JPN	AUS, NZL, CAN	
All Periods 7V	2	MYS, SGP	HKG, KHM, SGP, THA, MAC, BRN	HKG, MAC	MYS, SGP, THA	HKG, MAC	
	3		AUS, NZL	TWN, SGP	CHN, PHL	TWN, SGP	
	4				AUS, NZL		
	1	CHN, TWN, MYS, THA, VNM, IND	.31 CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BDN	.56 CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC	.70 CHN, TWN, VNM, IND	.16 HKG, SGP, JPN	.13
	2	HKG, SGP, JPN	.63 IDN, AUS, NZL	.39 KOR, IDN, LAO, MMR, AUS, NZL, CAN	14 HKG, MYS, SGP, THA	.28 TWN, KHM	.17
D	3	KHM, PHL, MAC	.48 LAO	.00 BRN	.00 KOR, KHM, MAC, JPN	.41 MYS, THA	.67
Post-crisis 8V	4	AUS, NZL	.68 MMR	.00	AUS, NZL	.61 VNM, IND	.76
	5	KOR	.00 CAN	.00	IDN	.00 AUS, NZL	.43
	6	IDN	.00		BKN	.00 CAN	.00
	/		.00		LAO	.00 PHL	.00
	0	MMR	.00		MMR	00 KOR	.00
	- 10	CAN			CAN	00 IDN	.00
	11					BRN	.00
	12					LAO	.00
	13					MMR	.00
			00	45	05		
Average			.29	.45	.35	.23	.23
	1	-	CHN, KOR, TWN, MYS, PHL, IND	MYS, PHL	KOR, KHM, MAC, JPN	AUS, NZL	
All Periods 8V	2		HKG, KHM, SGP, THA, MAC, BRN	HKG, MAC	MYS, SGP, THA		
	3		AUS, NZL	TWN, SGP	CHN, IND		
	4	·	·		AUS, NZL	·	

Table 6.41 OCA-MBC summary

	Post-crisis findings	Doll	ar	Currency	ncy Basket Yen Euro		Y	Yuan					
	6	7V	8V	7V	8V		7V	8V	7V	8V	7V	8	V
1	Highest silhouette	CHN, HKG, A TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN	US-NZL I	DN, AUS, C NZL F F 1 1 E E	CHN-HKG COR-TWN KHM-MYS PHL-SGP- THA-VNM ND-MAC- BRN	- C - T S- M S' - V	HN, HKO WN, KH IYS, PHI GP, THA NM, INI IAC	G, CHN-HKC M, TWN-KHI L, MYS-PHL A, SGP-THA D, VNM-IND MAC	 G- CHN, HKC M- KOR, TWN - KHM, MY - PHL, SGP, O- THA, VNN MAC, JPN 	3, AUS-NZL N, S, 1,	HKG, TWN, KHM, MYS PHL, SGP, THA, VNM, IND, MAC, JPN	, VNM	IND
			Table 6	5.42 OCA	-MBC	cre	oss-an	chor subc	lusters				
	PRE	CRS	7V	PST 8V	Al 7V	1 8V		PRE	CRS	P 7V	ST 8V	7V	All 8V
DB	1 CHN, IND, AUS, NZL	KOR, MYS, PHL, SGP, THA, VNM, BRN, NZL	CHN, HKG, TWN, KHM MYS, PHL, SGP, THA, VNM, IND, MAC	CHN, TWN , MYS, THA VNM, IND	, HKG, - , MAC	-	DY	HKG, TWN, SGP, MAC	KOR, MYS, PHL, THA	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC,	CHN, TWN, MYS, THA, VNM, IND	HKG, MAC	-
	2 HKG, SGP, MAC	TWN, KHM, IND, AUS	IDN, AUS, NZL	KHM, PHL MAC			_	KOR, MYS	VNM, NZL	IDN, AUS, NZL	KHM, PHL, MAC		
	3 KHM, IDN, THA	CHN, HKG, MAC	KOR, BRN	HKG, SGP			_	IND, AUS	SGP, BRN	KOR, BRN	HKG, SGP		
	4 KOR, TWN, MYS			AUS, NZL			_	IDN, THA	KHM, IND		AUS, NZL		
	5								НКС, МАС				
DE	1 HKG, KOR, TWN, MYS, SGP, MAC	MYS, SGP, , THA, VNM, BRN	CHN, HKG, TWN, KHM MYS, PHL, SGP, THA, VNM, MAC JPN	CHN, TWN I, VNM, IND	, MYS, - SGP	-	DR	KOR, TWN, SGP	MYS, THA, VNM, BRN	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN	HKG, SGP, JPN	HKG, MAC	-
	2 CHN, IND, AUS NZI	CHN, HKG, MAC IPN	IDN, AUS, NZI	HKG, SGP	HKG, MAC		_	HKG, MAC	TWN, KHM,	IDN, AUS, NZI	MYS, THA		
	3 KHM, THA, JPN	TWN, KHM, IND	IVEL	MYS, THA	MAC			AUS, NZL	HKG, MAC, JPN	KOR, BRN	VNM, IND		
	4	KOR, PHL		KHM, MAC			_		SGP, NZL KOR PHL		AUS, NZL		
DV	1 KOD MYS	KOD MVS	CUN UKC		MVC	MV	E DE	UKC KIM		CUN UKC	CUN TWN	UVC	CUN
Ы	PHL, IND, AUS	NOR, M13, PHL, THA	TWN, KHM MYS, PHL, SGP, THA, VNM, IND, MAC	I, TWN, KHM MYS, PHL, SGP, THA, VNM, IND, MAC	, M13, 1 I, PHL I	PHL	5, DE	MAC, BRN	KOR, TWN, KHM, PHL, IND, MAC	KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	VNM, IND	MAC	IND
	2 HKG, SGP, MAC	VNM, AUS, NZL	IDN, AUS, NZL	IDN, AUS, NZL	HKG, I MAC I	HKC MAC) ,	CHN, PHL, IND, AUS,	MYS, SGP, THA, VNM,	IDN, AUS, NZL	HKG, MYS, SGP, THA	CHN, PHL	SGP, THA
	3 IDN, THA	TWN, SGP, BRN	KOR, BRN				_	LAO, MMR, VNM	AUS, NZL		KOR, KHM, MAC	KOR, TWN	AUS, NZI
	4	KHM, IND					_	KOR, TWN,			AUS, NZL	SGP,	KHM
	5	HKG, MAC						<u>M13</u>				AUS, NZL	MAC
BR	1 MYS, AUS, NZL	TWN, KHM, SGP, IND, AUS, NZL	HKG, TWN KHM, MYS PHL, SGP, THA, VNM IND, MAC, IPN	, HKG, SGP ,	AUS, A NZL I	AUS NZL	, YE	HKG, TWN, SGP, MAC	KOR, PHL	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	CHN, TWN, VNM, IND	HKG, MAC	-
	2 IDN, SGP	HKG, KOR, PHL_MAC	IDN, AUS,	TWN, KHM	I HKG, MAC		_	PHL, IND,	MYS, THA	IDN, AUS, NZL CAN	HKG, MYS, SGP_THA		
	3 PHL, IND	MYS, THA, VNM, BRN	IVEL	MYS, THA	MAC			KOR, MYS	VNM, CAN	NZE, CAN	KHM, MAC		
	4 HKG, MAC 5 KOR, TWN			VNM, IND AUS, NZL			_		AUS, NZL SGP, BRN KHM_IND		AUS, NZL		
	7						_		HKG, MAC				
YR	1 PHL, IND	AUS, NZL, CAN	HKG, TWN KHM, MYS PHL, SGP, THA, VNM IND, MAC	, HKG, SGP ,	HKG, - MAC	-	ER	KOR, TWN, SGP	HKG, KOR, PHL, MAC, JPN	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC, JPN	VNM, IND	HKG, MAC	AUS, NZL
	2 MYS, AUS	KOR, PHL	KOR, IDN, LAO, MMR BRN, AUS, NZL, CAN	TWN, KHM	I TWN, SGP			MYS, CAN	MYS, THA, VNM, BRN	IDN, AUS, NZL, CAN	HKG, SGP		
	3 HKG, MAC	MYS, THA	,	MYS, THA				AUS, NZL	TWN, KHM, IND		MYS, THA		
	4 TWN, SGP	TWN, SGP		VNM, IND			_	PHL, IND	AUS, NZL		AUS, NZL		
	<u>5</u> 6	KHM, IND HKG, MAC		AUS, NZL			_	HKG, MAC	SGP, CAN				

Table 6.41 OCA-MBC summary (continued)

	PRE	CRS	F	PST	All		PRE	CRS	F	ST	А	11
	TRE	ens	7V	8V	7V 8V		TRE	ens	7V	8V	7V	8V
DBY	1 HKG, SGP, MAC	KOR, MYS, PHL, THA	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA,	CHN, TWN, MYS, THA, VNM, IND	HKG, - MAC	DBE	CHN, IND, AUS, NZL	MYS, SGP, THA, VNM, BRN	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA,	CHN, TWN VNM, IND	HKG, MAC	-
	2 IND, AUS	VNM, NZL	VNM, MAC IDN, AUS,	KHM, PHL,		-	HKG, SGP,	TWN, KHM,	VNM, MAC IDN, AUS,	HKG, SGP		
	3 IDN, THA	SGP, BRN	NZL	MAC AUS, NZL		-	MAC KOR, TWN,	IND CHN, HKG,	NZL	MYS, THA		
	4 KOR, MYS	HKG, MAC		HKG, SGP		-	MYS KHM, THA	KOR, PHL		KHM. MAC		
	5	KHM, IND		<i>.</i>		_		· · · · ·		AUS, NZL		
DBR	1 AUS, NZL	MYS, THA, VNM, BRN	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC	HKG, SGP	HKG, - MAC	DYE	HKG, TWN, SGP, MAC	KOR, PHL	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	CHN, TWN, VNM, IND	HKG, MAC	-
	2 HKG, MAC	TWN, KHM, IND, AUS	IDN, AUS, NZL	MYS, THA		_	KOR, MYS	MYS, THA	IDN, AUS, NZL	MYS, THA		
	3 KOR, TWN	SGP, NZL	KOR, BRN	VNM, IND		_	IND, AUS	SGP, BRN		HKG, SGP		
	5	HKG, MAC		AUS, NZL		-		HKG, MAC		KHM, MAC		
DYR	a 1 TWN, SGP	KOR, PHL	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC	HKG, SGP	HKG, - MAC	DER	KOR, TWN, SGP	MYS, THA, VNM, BRN	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC, IPN	VNM, IND	HKG, MAC	-
	2 HKG, MAC	MYS, THA	IDN, AUS,	MYS, THA		_	HKG, MAC	HKG, MAC,	IDN, AUS,	HKG, SGP		
	3	KHM, IND	NZL KOR, BRN	VNM, IND		-	AUS, NZL	JPN TWN, KHM, IND	NZL	AUS, NZL		
	4	HKG, MAC		AUS, NZL		_		KOR, PHL				
BYE	1 HKG, SGP, MAC	KOR, PHL	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM MAC	CHN, TWN, VNM, IND	HKG, - MAC	BYR	MYS, AUS	KOR, PHL	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC	HKG, SGP	HKG, MAC	-
	2 PHL, IND,	MYS, THA	IDN, AUS,	HKG, MYS,		_	PHL, IND	MYS, THA	IDN, AUS,	TWN, KHM		
	AUS 3 KOR, MYS	AUS, NZL	NZL	SGP, THA KHM, MAC		_	HKG, MAC	AUS, NZL	NZL KOR, BRN	MYS, THA		
	4	SGP, BRN		AUS, NZL		_		TWN, SGP		VNM, IND		
	<u>5</u> 6	KHM, IND HKG, MAC				_		KHM, IND HKG, MAC		AUS, NZL		
BER	1 PHL, IND	HKG, KOR, PHL, MAC	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	VNM, IND	HKG, AUS MAC NZL	, YER	TWN, SGP	KOR, PHL	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	VNM, IND	HKG, MAC	-
	2 AUS, NZL	TWN, KHM, IND	IDN, AUS, NZL	HKG, SGP	AUS, NZL	_	HKG, MAC	MYS, THA	IDN, AUS, NZL, CAN	MYS, THA		
	3 KOR, TWN	MYS, THA, VNM, BRN		MYS, THA		_	PHL, IND	AUS, NZL		HKG, SGP		
	4 HKG, MAC 5	AUS, NZL		AUS, NZL		_		KHM, IND HKG, MAC		AUS, NZL		
DB YE	1 HKG, SGP, MAC	KOR, MYS	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA,	CHN, TWN, VNM, IND	HKG, - MAC	DB YR	HKG, MAC	KOR, PHL	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM,	MYS, THA	HKG, MAC	-
	2 IND, AUS	HKG, MAC	VNM, MAC IDN, AUS,	HKG, SGP		-		HKG, MAC	MAC IDN, AUS,	VNM, IND		
	3	IND, AUS	NZL	AUS, NZL		_		IND, AUS	NZL	AUS, NZL		
	4									HKG, SGP		
DB ER	1 AUS, NZL	THA, VNM, BRN	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	VNM, IND	HKG, - MAC	DY ER	TWN, SGP	KOR, PHL	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	VNM, IND	HKG, MAC	-
	2 HKG, MAC	TWN, KHM, IND	IDN, AUS, NZL	HKG, SGP		-	HKG, MAC	MYS, THA	IDN, AUS, NZL	MYS, THA		
	3	HKG, MAC	ILL .	MYS, THA		_		KHM, IND HKG MAC	NEL .	HKG, SGP		
	T	KOR, THE		1004 000	WIG .			IIKO, MAC		AUS, NZL	ma	
BY ER	1 HKG, MAC	KOR, PHL	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	VNM, IND	HKG, - MAC	DB YER	HKG, MAC	HKG, MAC	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	VNM, IND	HKG, MAC	-
	2 PHL, IND	MYS, THA	IDN, AUS, NZL	HKG, SGP				IND, AUS	IDN, AUS, NZL	HKG, SGP		
	3	AUS, NZL		MYS, THA		_				AUS, NZL		
	4 5	KHM, IND		AUS, NZL		-						

Table 6.42 OCA-MBC cross-anchor subclusters (continued)

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi)

6.4.2 Classifications using Weighted Criteria

This section compares the classifications by the original unweighted criteria with those by the weighted criteria. Under the weighted criteria scheme, the sum of the 'benefit' variables is weighted equally with the sum of the 'cost' variables. The findings are put together in Table 6.43 in which columns '1' contain the original groupings and columns '2' display the groupings with the new weighting introduced. Previous MBC methodology applies.

Some of the configurations have become more convergent, divergent, or more or less the same after the weighting. The configurations that become significantly convergent include the pre-crisis dollar, basket, yen, and euro solutions; the crisis period dollar, yen, and euro solutions; the post-crisis 7V euro solution; and the post-crisis 8V dollar, euro, and yuan solutions.

Quite the opposite, by putting more weight on benefits and hence less weight on costs, the pre-crisis yuan solution, the crisis period basket solution, and the post-crisis 7V yuan solution have become somewhat more divergent. The rest of the solutions have been similar after the weighting.

Since only two benefit variables are defined here, trade openness and external indebtedness, and only the trade variable is measured relative to a reference, on the whole putting more weight on trade has brought the region closer together against Germany/EMU and against US but farther apart against China.

As the configurations are somewhat different after the weighting, it is instructive to identify subgrouping linkages which are robust to the new weighting. Non-singleton cross-weighting subclusters are shown in Table 6.44.

Notably, the subcluster of Australia-NewZealand is not only unmoved by the weighting but is also robust through the periods under the basket and the euro anchor regardless of the post-crisis labor criterion.

Meantime, using 7 variables, the effective dollar areas of Hong Kong and Macau are stable in such a manner for dollar, yen, and euro anchors. Previously without the weighting they share the same grouping over the periods by any anchor. As before, the monetary union members of Singapore and Brunei share the same grouping over the periods under the basket anchor irrespective of the post-crisis labor criterion.

Cross-weighting cases which are also linked across anchors are collected in Table 6.45. No countries are consistently linked simultaneously across all periods and anchors regardless of the weighting.

Nonetheless, for the most recent period the post-crisis period, irrespective of the labor criterion the subgroupings of Malaysia-Thailand and Australia-NewZealand are stable across all anchors.

Table 6.43 MBC clusters by equal and by weighted criteria	

I 2 1 2 1 2 1 2 1 2 1 HKG, KOR, CHN, HKG, CHN, KKG, KOR, WS, HKG, KOR, HKG, KOR, CHN, HKG, KOR, TWN, KOR, KOR, TWN, SOP, MS, SOP, MA, CDN, WS, SOP, MYS, SOP, MAC, SGP, THA, THA, VNM, VNN, NUN, NUN, SOP, MAC, BRN, PHL, SGP, AUS, NZL MAC, BRN, WYS, SOP, MAC, SGP, THA, THA, MAC, SGP, THA, MAC, SGP, THA, MAC, SGP, THA, MAC, SGN, MAC, BRN, NUN, MAC, MAC, BRN, MAC, MAC, BNN, MAC, CAN 2 CHN, ND, KHM, LAO, HKG, KHM, KHM, LAO, HKG, KWN, KHM, LAO, CHN, DN, KHM, LAO, MYS, AUS, NZL, AUS, NZL SCP, MAC MMR, PHL, AN, MAC, SCP, MAR MAC, AUS, NZL, CAN Pre- crisis 3 KHM, IDN, CAN LAO, MMR, PHL, CAN IDN, THA CHN, DN, KHM, LAO, HKG, KWN, KHM, NZL HKG, CAN, KHK, MAC, CAN 4 PHL CAN KHM, NZL HKG, CAN, CAN HKG 5 SVM CHN BRN JPN MAC, CAN 4 PHL CAN KHM, NZL HKG, CAN, CAN 6 BRN JPN MAC PHL PHL 5 VNM CAN CAN WMM ND		Do	ollar	Currenc	y Basket	Y	en	E	uro	Y	uan
1 HKG, KOR, CHN, HKG, CHN, KOR, CHN, HKG, KOR, MYS, HKG, KOR, CHN, HKG, KOR, TWN, KOR, TWN, SKOR, TWN, PHL, IND, TWN, KHM, KHM, KHM, KOR, TWN, IND, SGP IDN, KOP, TWN, SKOP, TWN, SKOP, TWN, PHL, IND, TWN, KHM, KHM, KHM, KOP, TWN, SGP, MYS, SGP, MYS, SGP, MYS, SGP, THA, MAC, SGP, THA, THA, VNM, THA, VNM, CA, MAC, BRN, JPN, AUS, NZL, SGP, THA, MAC, SGP, MAC, MAR, JPN, AUS, NZL, SGP, THA, AUS, NZL MYS, SGP, MYS, SGP, THA, MAC, CAN 2 CHN, IND, KHM, LAO, HKG, KHM, KHM, LAO, HKG, TWN, KHM, LAO, CHN, IDN, KHM, LAO, MYS, AUS, NZL, AUS, NZL MMR, VNM NZL, CAN Pre- BRN THA, MAC, SGP, MAC, MMR, SGP, MAC, MMR, PHL, IND, MMR, VNM NZL, CAN MMR, VNM NZL, CAN Y THA, MAC, NMR SGP, MAC MMR, PHL, IND, MMR, VNM NZL, CAN Y THA, MAC, SGP, MAC MMR, PHL, IND, MMR, VNM NZL, CAN MMR, VNM NZL, CAN Pre- THA, MAC, SGP, MAC MMR, PHL, IND, MMR, PHL, IAN MMR, VNM NZL, CAN 4 PHL CAN KHM, NZL HKG, MAC, PHL, IND, PHL, THA, AUS, CAN 4 PHL CAN KHM, NZL HKG, MAC, PHL, IND, PHL, THA, AUS, CAN 4 PHL CAN KHM SP, MAC, SP, MAL,		1	2	1	2	1	2	1	2	1	2
2 CHN, IND, KHM, LAO, HKG, KHM, LAO, HKG, KHM, LAO, HKG, KHM, LAO, MKG, TWN, KHM, LAO, MYS, THA AUS, NZL MMR IDN, SGP, MMR SGP, MAC MMR, PHL, IND, MMR, VNM NZL, CAN Pre- BRN VNM, NZL AUS, NZL BRN PHL, IND, MMR, VNM NZL, CAN 4 MHA, IDN, CAN LAO, MMR, PHL, CAN IDN, THA CHN, PHL, IND PHL, THA, AUS, CAN 5 YNM CHN ND, CAN VNM IND 4 PHL CAN KHM, NZL HKG, MAC PHL, IND 4 PHL CAN KHM, NZL HKG, MAC PHL, IND 5 YNM CHN BRN IND MAC 6 BRN BRN JPN MAC 7 LAO LAO LAO LAO 10 CAN VNM VNM LAO 11 MMR MMR MMR NZL 14 KOR, MYS, CHN, HKG,		1 HKG, KOR, TWN, MYS, SGP, MAC	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL	CHN, KOR, TWN, MYS, PHL, IND, AUS, NZL	CHN, HKG, KOR, TWN, IDN, MYS, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL	KOR, MYS, PHL, IND, AUS	HKG, KOR, TWN, IDN, MYS, SGP, THA, MAC, BRN, AUS	HKG, KOR, TWN, KHM, MYS, SGP, THA, MAC, BRN, JPN, CAN	CHN, HKG, KOR, TWN, IDN, MYS, SGP, THA, MAC, BRN, JPN, AUS, NZL, CAN	KOR,TWN, IDN, SGP	KOR, TWN, IDN, SGP
Grisis 3 KHM, IDN, CAN LAO, MMR, PHL, CAN IDN, THA CHN, PHL, LAO, MMR, PHL, IND PHL, THA, AUS, CAN 4 PHL CAN KHM, NZL HKG, MAC PHL, IND 5 VNM CHN BRN IND IND 6 BRN BRN HKG BRN HKG 6 BRN BRN JPN MAC 7 LAO LAO LAO BRN 8 MMR MMR MMR IPN 9 CAN VNM VNM LAO 10 CAN KHM VNM IAO 11 MMR MMR MMR NZL 1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, TWN, MYS, PHL, HAA NSL 1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CAN, HKG, TWN, KOR, TWN, SGP, IND, THA, VNM, KHM, MYS, SGP, MAC, SGP, THA, KHM, PHL, KHM, MYS, AUS, NZL, AUS, NZL AUS, NZL 1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, WAC, SGP, THA, KHM, PHL, K	Pre-	2 CHN, IND, AUS, NZL	KHM, LAO, MMR	HKG, KHM, IDN, SGP, THA, MAC, BRN	KHM, LAO, MMR	HKG, TWN, SGP, MAC	KHM, LAO, MMR, VNM, NZL	CHN, IDN, PHL, IND, AUS, NZL	KHM, LAO, MMR, VNM	MYS, AUS, NZL, CAN	MYS, THA
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	crisis	3 KHM, IDN, THA, JPN	CAN	LAO, MMR, VNM	PHL, CAN	IDN, THA	CHN, PHL, IND, CAN	LAO, MMR, VNM	PHL, IND	PHL, THA, IND	AUS, CAN
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		4 PHL		CAN		KHM, NZL				HKG, MAC	PHL, IND
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		5 VNM				CHN				BRN	HKG
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		6 BRN				BRN				JPN	MAC
8 MMR MMR MMR JPN 9 CAN VNM VNM LAO 10 CAN VNM LAO 10 CAN KHM VNM 11 KHM VNM KHM 12 MMR NZL 13 NZL NZL 14 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, TWN, KHM, TWN, KHM, SGP, ND, SGP, IND, SGP, IND, SGP, IND, SGP, IND, SGP, IND, SGP, IND, THA, VNM, KHM, MYS, SGP, MAC, SGP, THA, KHM, PHL, KHM, MYS, AUS, NZL, AUS, NZL, BRN, NZL PHL, SGP, PHL, SGP, BRN VNM, BRN, IND, MAC, PHL, KHM, MYS, AUS, NZL, AUS, NZL, BRN, NZL PHL, SGP, PHL, SGP, BRN VNM, BRN, IND, MAC, PHL, THA, CAN CAN 100, MAC, IND, MAC, IND, MAC, BRN, AUS, AUS, NZL MUS, NZL VNM, BRN, IND, MAC, IND, MAC, PHL, MAC, IND, IND, IND, IND, IND, IND, IND, IND		7 LAO				LAO				LAO	BRN
9 CAN VNM VNM LAO 10 CAN KHM VNM 11 CAN KHM 12 MMR 13 NZL I KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, TWN, MYS, PHL, THA MYS, PHL, KOR, TWN, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, THA, VNM, KHM, MYS, SGP, MAC, SGP, THA, KHM, PHL, KHM, MYS, AUS, NZL, AUS, NZL, BRN, NZL PHL, SGP, PHL, SGP, PHL, SGP, BRN VNM, BRN, IND, MAC, PHL, THA, CAN DAMAC, IND, MAC, MAC, JPN Crisis 2 TWN, KHM, IDN, MMR HKG, KHM, VNM, AUS, HKG, KHM, MYS, SGP, SGP, BRN, HKG, KOR, HKG, KOR, HKG, KOR, MAC, JPN 3 CHN, HKG, LAO LAO AUS, NZL AUS, NZL 4 IDN CAN CAN IDN MAR 1ND KHM, CHN, IDN MAR IND MAR 1ND CAN CAN IDN MMR 4 IDN CAN CAN IDN MMR 1ND KHM, CHN, IDN MMR IMR MAC 1ND CAN CAN IDN IDN 6 MMR MMR MAR LAO LAO		8 MMR				MMR				MMR	JPN
10 CAN KHM VNM 11 II KHM KHM 12 MMR 13 NZL 1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, TWN, MYS, PHL, THA MYS, PHL, KOR, TWN, SGP, IND, SGP, IND, SGP, IND, SHL, SGP, SGP, MAC, SGP, THA, KHM, PHL, KHM, MYS, AUS, NZL, AUS, NZL, BRN, NZL PHL, SGP, PHL, SGP, BRN VNM, BRN, IND, MAC, PHL, THA, CAN CAN Crisis 2 TWN, KHM, IDN, MMR IDN, MAC, BRN, AUS, AUS, NZL MKG, KHM, VNM, AUS, HKG, KHM, MYS, SGP, SGP, BRN, HKG, KOR, HKG, KOR, IND, AUS MAC, JPN 2 TWN, KHM, IDN, MMR IDN, MMR HKG, KHM, VNM, AUS, HKG, CAN MAC, JPN 3 CHN, HKG, LAO LAO AUS, NZL TWN, SGP, CHN, IDN AUS, NZL 4 IDN CAN CAN IDN MAR MMR 5 LAO LAO LAO HKM, MR, IDN MMR IDN 6 MMR MMR MMR CAN LAO LAO 6 MMR MMR CAN LAO LAO LAO	-	9 CAN				VNM				VNM	LAO
11 KHM 12 MMR 13 NZL 1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, TWN, MYS, PHL, THA MYS, PHL, KOR, TWN, KOR, TWN, KOR, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, THA, VNM, KHM, MYS, SGP, MAC, SGP, THA, KHM, PHL, KGP, PHL, SGP, PHL, SGP, BRN VNM, BRN, IND, MAC, PHL, THA, CAN CAN BRN, NZL PHL, SGP, PHL, SGP, BRN VNM, BRN, IND, MAC, PHL, THA, CAN CAN CAN MAC, JPN BRN, JPN, BRN, AUS, AUS, NZL AUS, NZL JPN VNM, IND, MAC, PHL, THA, NZL, CAN MAC, JPN Crisis 2 TWN, KHM, IDN, MMR IDN, MMR HKG, KHM, VNM, AUS, HKG, KHM, MYS, SGP, SGP, BRN, HKG, KOR, HKG, KOR, IND, AUS PHL, THA, NZL, CAN MMR, IND, THA, VNM, CAN PHL, MAC, PHL, MAC, PHL, MAC, PHL, MAC, IPN 3 CHN, HKG, LAO LAO AUS, NZL TWN, SGP, CHN, IDN AUS, NZL MYS, THA, MYS, THA, MYS, THA, MYS, THA, MYS, THA, BRN 4 IDN CAN CAN IDN KHM, MMR, LAO IDN MMR 5 LAO LAO HAO HKG, MAC LAO IDN IDN MMR 6 MMR MMR MMR CAN CAN LAO IDN		10				CAN				KHM	VNM
12 MMR 13 NZL 1 13 1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, KOR, TWN, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, THA, VNM, KHM, MYS, SGP, BRN 1 KOR, NZL 1 KOR, NZL 1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, THA, VNM, KHM, MYS, SGP, BRN, VNM, BRN, IND, MAC, PHL, HAA, CAN 1 KIA, VNM, THA, VNM, THA, VNM, AUS, NZL 1 MAC, IND, MAC, IND, MAC, BRN, AUS, AUS, NZL 1 KIM, IDN, MMR 1 NMR 1 KIG, KHM, VNM, AUS, AUS, NZL 1 Y 1 TWN, KHM, IDN, MMR 1 NZL 2 TWN, KHM, IDN, MMR 1 IDN, MMR 3		11									KHM
13 NZL 1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, TWN, MYS, PHL, THA MYS, PHL, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, SGP, IND, THA, VNM, KHM, MYS, SGP, BRN NZL PHL, SGP, KOR, TWN, KOR, TWN, TWN, MYS, PHL, THA MYS, PHL, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, SGP, IND, SGP, IND, THA, VNM, KHM, MYS, SGP, BRN SGP, THA, KHM, PHL, KHM, MYS, AUS, NZL, AUS, NZL, AUS, NZL, BRN, NZL PHL, SGP, PHL, SGP, PHL, SGP, BRN VNM, BRN, IND, MAC, PHL, THA, CAN MAC, IPN THA, VNM, THA, VNM, THA, VNM, AUS, MKG, KHM, MYS, SGP, SGP, BRN, HKG, KOR, HKG, KOR, BRN, IND, AUS, NZL MAC, IPN Crisis 2 TWN, KHM, IDN, MMR IDN, MMR AUS, NZL NZL YMM, IND AUS, NZL AUS, AUS PHL, THA, NZL, CAN MMR, IND, THA, VNM, CAN YMM, IND MAC, CAN PHL, MAC, PHL, MAC, PHL, MAC, PHL, MAC, PHL, MAC, VNM, IND AUS, AUS YNM, IND MAC, CAN MAC, PHL, MAC, PHL, MAC, VNM, IND 3 CHN, HKG, LAO LAO AUS, NZL TWN, SGP, CHN, IDN AUS, NZL 4 IDN CAN CAN IDN KHM, MMR, LAO IDN MMR 5 LAO LAO HKG, MAC LAO IDN MMR 5 LAO LAO HKG, MAC LAO IAO 6 MMR MMR		12									MMR
1 KOR, MYS, CHN, HKG, CHN, HKG, CHN, KOR, KOR, MYS, KOR, TWN, CHN, HKG, CHN, HKG, TWN, KHM, TWN, KHM, PHL, SGP, KOR, TWN, KOR, TWN, TWN, MYS, PHL, THA MYS, PHL, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, THA, VNM, KHM, MYS KHM, MYS, SGP, MAC, SGP, THA, KHM, PHL, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, MAC, BRN, NZL PHL, SGP, KOR, TWN, KOR, TWN, TWN, MYS, SGP, MAC, SGP, THA, VNM, KHM, MYS KHM, MYS, SGP, BRN WIN, KOR, TWN, KOR, TWN, SGP, IND, SGP, IND, SGP, IND, SGP, IND, MAC, CAN WIN, KHM, KHM, KIN, MIR, IND, MMR, IND, MMR, IND, MAC, CAN Crisis 2 TWN, KHM, IDN, MMR IDN, MMR HKG, KHM, VNM, AUS, HKG, KHM, MYS, SGP, SGP, BRN, HKG, KOR, HKG, KOR, VNM, IND MAC, JPN BRN PHL, THA, NZL, CAN MMR, IND, THA, VNM, CAN PHL, MAC, PHL, MAC, PHL, MAC, PHL, MAC, VNM, BRN 3 CHN, HKG, LAO LAO AUS, NZL TWN, SGP, CHN, IDN AUS, NZL AUS, NZL 4 IDN CAN CAN IDN MMR IMMR MMR 4 IDN CAN CAN IDN MMR IDN MMR 5 LAO LAO HKG, MAC LAO LAO IDN IDN		13									NZL
Crisis 2 TWN, KHM, IDN, MMR IDN, MMR IND, MMR, IND, MMR, IND, MMR, IND, THA, VNM, CAN PHL, MAC, PHL, MAC, PHL, MAC, PHL, MAC, PHL, MAC, PHL, MAC, IND, MAC, CAN 3 CHN, HKG, LAO LAO AUS, NZL TWN, SGP, CHN, IDN AUS, NZL AUS, NZL MYS, THA, MYS, THA, MYS, THA, MYS, THA, MSR, NMR, IND 4 IDN CAN CAN IDN KHM, MMR, LAO IDN IDN MMR 5 LAO LAO HAG, MAC LAO LAO IDN IDN 6 MMR MMR CHN, IDN MMR MMR LAO 7 CAN CAN CAN LAO LAO		1 KOR, MYS, PHL, SGP, THA, VNM, BRN, NZL	CHN, HKG, KOR, TWN, KHM, MYS PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL	CHN, KOR, TWN, MYS, SGP, MAC, BRN	KOR, MYS, PHL, THA	KOR, TWN, MYS, PHL, SGP, THA, VNM, BRN, AUS, NZL	CHN, HKG, KOR, TWN, KHM, PHL, IND, MAC, JPN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, THA, VNM, IND, MAC, JPN	TWN, KHM, SGP, IND, AUS, NZL, CAN	TWN, KHM, SGP, IND, AUS, NZL, CAN
3 CHN, HKG, LAO MAC, JPN LAO AUS, NZL AUS, NZL BRN TWN, SGP, CHN, IDN BRN AUS, NZL AUS, NZL MYS, THA, MYS, THA, VNM, BRN 4 IDN CAN CAN IDN KHM, MMR, LAO IND IDN IDN MMR 5 LAO LAO HKG, MAC LAO LAO IDN IDN 6 MMR MMR CAN CAN CAN LAO 7 CAN CAN LAO LAO	Crisis	2 TWN, KHM, IND, AUS	IDN, MMR	IDN, MMR	HKG, KHM, PHL, THA, VNM, IND	VNM, AUS, NZL, CAN	HKG, KHM, MMR, IND, MAC, CAN	MYS, SGP, THA, VNM, BRN, CAN	SGP, BRN, CAN	HKG, KOR, PHL, MAC, JPN	HKG, KOR, PHL, MAC, JPN
4 IDN CAN CAN IDN KHM, MMR, LAO IDN IDN MMR MMR 5 LAO LAO HKG, MAC LAO LAO IDN IDN 6 MMR MMR CHN, IDN MMR MMR LAO LAO 7 CAN CAN LAO LAO IDN IDN		3 CHN, HKG, MAC, JPN	LAO	LAO	AUS, NZL	TWN, SGP, BRN	CHN, IDN	AUS, NZL	AUS, NZL	MYS, THA, VNM, BRN	MYS, THA, VNM, BRN
5 LAOLAOHKG, MACLAOLAOIDN6 MMRMMRCHN, IDNMMRMMRLAOLAO7 CANCANLAOLAOLAO		4 IDN	CAN	CAN	IDN	KHM, MMR IND	,LAO	IDN	IDN	MMR	MMR
6 MMR MMR CHN, IDN MMR MMR LAO LAO 7 CAN CAN LAO		5 LAO			LAO	HKG, MAC		LAO	LAO	IDN	IDN
7 CAN CAN LAO		6 MMR			MMR	CHN, IDN		MMR	MMR	LAO	LAO
		7 CAN			CAN	LAO					

	De	ollar	Current	rv Basket	1	/en	E	uro	Y	uan
	1	2	1	2 2	1	2	1	2	1	2
	1 CHN, HKG,	CHN, HKG,	CHN, HKG,	CHN, HKG,	CHN, HKG,	CHN, HKG,	CHN, HKG,	CHN, HKG,	HKG, TWN,	TWN, KHM.
	TWN, KHM	, TWN, KHM	, KOR, TWN,	KOR, TWN,	TWN, KHM	, TWN, KHM	, KOR, TWN,	KOR, TWN,	KHM, MYS,	MYS, SGP,
	MYS, PHL,	MYS, PHL,	KHM, MYS,	KHM, MYS,	MYS, PHL,	MYS, PHL,	KHM, MYS,	KHM, IDN,	PHL, SGP,	THA, VNM,
	SGP, THA,	SGP, THA,	PHL, SGP,	PHL, SGP,	SGP, THA,	SGP, THA,	PHL, SGP,	MYS, PHL,	THA, VNM,	IND, BRN,
	VNM, IND,	VNM, IND,	THA, VNM,	THA, MAC,	VNM, IND,	VNM, IND,	THA, VNM,	SGP, THA,	IND, MAC,	JPN, CAN
	MAC, JPN	MAC, JPN	IND, MAC,	BRN	MAC	MAC	MAC, JPN	VNM, IND,	JPN	
			BKN					MAC, BRN,		
								NZL CAN		
	2 IDN, AUS,	IDN. AUS.	IDN. AUS.	IDN. AUS.	KOR, IDN,	KOR, IDN.	IDN, IND,	LAO, MMR	KOR, IDN,	HKG, KOR.
Post-	NZL	NZL	NZL	NZL	LAO, MMR,	LAO, MMR,	AUS, NZL,		LAO, MMR,	PHL, MAC
crisis					BRN, AUS,	BRN, AUS,	CAN		BRN, AUS,	
/ v					NZL, CAN	NZL, CAN			NZL, CAN	
	3 KOR, BRN	KOR, BRN	MMR	VNM, IND,			LAO			IDN, LAO
	4140	LAO	CAN				DDN			ALIS NZI
	5 MMR	MMR	LAO	LAO, MIMIK			MMR			MMR
	6 CAN	CAN	LAO				MMK			WINIK
	7	C. II V								
	8									
	9									
	10									
	1 HKG, MAC	CHN, HKG,	CHN, KOR,	CHN, KOR,	MYS, PHL	TWN, MYS,	HKG, KOR,	CHN, HKG,	AUS, NZL,	TWN, SGP
		TWN, MYS,	TWN, MYS,	TWN, MYS,		SGP, THA	TWN,	KOR, TWN,	CAN	
		PHL, SGP,	PHL, IND	SGP, MAC,			KHM,, JPN	MYS, THA,		
		THA, VNM,		BRN				MAC, JPN		
All		IND, MAC, IPN								
Periods	2 MYS SGP	AUS NZL	HKG KHM	HKG KHM	TWN SGP	KOR BRN	MYS SGP	SGP BRN	HKG MAC	MYS THA
7V	2	1100,1122	SGP, THA,	PHL, THA,	1 111, 501	AUS	THA	CAN	11110, 11110	
			MAC, BRN							
	3	KOR, BRN	AUS, NZL	VNM, IND	HKG, MAC	HKG,,MAC,	CHN, PHL	PHL, IND	TWN, SGP	
	4			AUS, NZL			AUS, NZL	AUS, NZL		
	3							KHM, VNM		
	1 CHN, TWN.	CHN. HKG.	CHN. HKG.	CHN, HKG,	CHN. HKG.	CHN, HKG,	CHN, TWN,	CHN. HKG.	HKG, SGP.	HKG. TWN.
	MYS. THA.	KOR, TWN.	KOR, TWN.	KOR, TWN.	TWN, KHM	TWN. KHM	VNM. IND	KOR, TWN.	JPN	KHM. MYS.
	VNM, IND	KHM, MYS,	KHM, MYS,	KHM, MYS,	MYS, PHL,	MYS, SGP,		KHM, MYS,		PHL, SGP,
		PHL, SGP,	PHL, SGP,	PHL, SGP,	SGP, THA,	THA, VNM,		PHL, THA,		THA, VNM,
		THA, VNM,	THA, VNM,	THA, VNM,	VNM, IND,	IND, MAC,		VNM, IND,		IND, MAC,
		IND, MAC,	IND, MAC,	IND, MAC,	MAC	BRN, CAN		MAC, JPN		JPN
	2 HKG SCP	IDN MMP	IDN AUS	IDN AUS	KOP IDN	KOP IDN	HKG MVS	IDN AUS	TWN KHM	RDN AUS
	JPN	AUS. NZL	NZL	NZL	LAO, MMR.	PHL, AUS.	SGP. THA	NZL	I WIN, KIIWI	NZL, CAN
					AUS, NZL,	NZL	,			,
Post-					CAN					
crisis	3 KHM, PHL,	LAO	LAO	LAO	BRN	LAO, MMR	KOR, KHM,	SGP, BRN,	MYS, THA	IDN, LAO
8V	A AUS NZI	CAN	MMD	MMD			MAC, JPN	LAO	VNM IND	KOR MMD
	5 KOR	CAN	CAN	CAN			IDN	MMR	AUS NZL	KOK, MIMK
	6 IDN						BRN		CAN	
	7 BRN						PHL		PHL	
	8 LAO						LAO		MAC	
	9 MMR						MMR		KOR	
	10 CAN						CAN		IDN	
	12								LAO	
	13								MMR	
	-									
	1 -	CHN, HKG,	CHN, KOR,	CHN, KOR,	MYS, PHL	KOR, TWN,	KOR, KHM,	CHN, HKG,	AUS, NZL	TWN, SGP
		KOR, TWN,	TWN, MYS,	TWN, MYS,		MYS, SGP,	MAC, JPN	KOR, TWN,		
		MYS, PHL,	PHL, IND	SGP, MAC,		THA, BRN,		MYS, THA,		
		VNM IND		DKIN		AUS		MAC, JFN		
		MAC, BRN.								
All Dori - J		JPN								
renous 8V	2	AUS, NZL	HKG, KHM,	HKG, THA,	HKG, MAC	HKG, MAC	MYS, SGP,	AUS, NZL		MYS, THA
5.			SGP, THA,	vnm, IND			THA			
	3		AUS N7I	AUS NZI	TWN SGP	IND CAN	CHN IND	SGP RPN		AUS CAN
	5		100, NZL	100, NZL	1 111, 501	IND, CAN		CAN		105, CAN
	4						AUS, NZL			

Table 6.43 MBC clusters by equal and by weighted criteria (continued)

	Dollar	Currency Basket	Yen	Euro	Yuan
	1 HKG, KOR, TWN, MYS,	CHN, KOR, TWN, MYS,	HKG, TWN, SGP, MAC	HKG, KOR, TWN, MYS,	KOR, TWN, IDN, SGP
	SGP, MAC	IND, AUS, NZL		SGP, THA, MAC, BRN,	
				JPN, CAN	
Pre-crisis	2 CHN, IND, AUS, NZL	HKG, IDN, SGP, THA, MAC, BRN	KOR, MYS, AUS	CHN, IDN, AUS, NZL	AUS, CAN
	3 IDN, THA, JPN	LAO, MMR	PHL, IND	LAO, MMR, VNM	PHL, IND
	4		IDN, THA	PHL, IND	
	5		KHM, NZL		
	1 KOR, MYS, PHL, SGP,	CHN, KOR, TWN, MYS,	KOR, MYS, PHL, THA	CHN, HKG, KOR, TWN,	TWN, KHM, SGP, IND,
	THA, VNM, BRN, NZL	SGP, MAC, BRN		KHM, PHL, IND, MAC, JPN	AUS, NZL, CAN
	2 TWN, KHM, IND, AUS	HKG, KHM, PHL, THA,	VNM, AUS, NZL	MYS, THA, VNM	HKG, KOR, PHL, MAC,
Crisis		VNM, IND			JPN
	3 CHN, HKG, MAC, JPN	AUS, NZL	TWN, SGP, BRN	SGP, BRN, CAN	MYS, THA, VNM, BRN
	4		KHM, MMR, IND	AUS, NZL	
	5		HKG, MAC		
	0		CHN, IDN		
	1 CHN HKG TWN KHM	CHN HKG KOR TWN	CHN HKG TWN KHM	CHN HKG KOR TWN	TWN KHM MYS SCP
	MYS PHL SGP THA	KHM MYS PHL SGP	MYS PHL SGP THA	KHM MYS PHL SGP	THA VNM IND IPN
	VNM. IND. MAC. JPN	THA, MAC, BRN	VNM, IND, MAC	THA, VNM, MAC, JPN	1111, 1100, 1102, 0110
Post-	2 IDN, AUS, NZL	IDN, AUS, NZL	KOR, IDN, LAO, MMR,	IDN, IND, AUS, NZL,	HKG, PHL, MAC
Crisis	, ,	<i>, ,</i>	BRN, AUS, NZL, CAN	CAN	, ,
/ V	3 KOR, BRN	VNM, IND			BRN, CAN
	4				IDN, LAO
	5				AUS, NZL
All	1 HKG, MAC	CHN, KOR, TWN, MYS	HKG, MAC	HKG, KOR, TWN, MAC, JPN	TWN, SGP
Periods	2 MYS, SGP	SGP, MAC, BRN	TWN, SGP	AUS, NZL	
7V	3	AUS, NZL			
	4	HKG, THA			
			am	0101 million 1000 (1000	
	I CHN, TWN, MYS, THA,	CHN, HKG, KOR, TWN,	CHN, HKG, TWN, KHM,	CHN, TWN, VNM, IND	HKG, SGP, JPN
	VINM, IND	KHM, MYS, PHL, SGP,	MYS, SGP, THA, VNM,		
Post-		RRN	IND, MAC		
crisis	2 HKG SGP IPN	IDN AUS NZI	KOR IDN AUS NZI	KOR KHM MAC IPN	TWN KHM
8V	3 KHM PHL MAC	IDIA, MOD, MEL	LAO MMR	HKG MYS THA	MYS THA
	4 AUS, NZL		Lito, mint	AUS, NZL	VNM. IND
	5				AUS, NZL
A 11	1 -	CHN, KOR, TWN, MYS	TWN, SGP	KOR, MAC, JPN	-
All	2	SGP, MAC, BRN	HKG, MAC	MYS, THA	
8V	3	AUS, NZL		AUS, NZL	
	4	HKG, THA			

Table 6.44 MBC cross-weighting subclusters

Table 6.45 MBC cross-weighting-anchor subclusters

	PRE	CRS	J	PST	Al	1		PRE	CRS	I	PST	A	All
			7V	8V	7V	8V	7			7V	8V	7V	8V
DB	1 CHN, IND, AUS, NZL	KOR, MYS, SGP, BRN	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, MAC	CHN, TWN, MYS, THA, VNM, IND	-	-	DY	HKG, TWN, SGP, MAC	KOR, MYS, PHL, THA	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC	CHN, TWN, MYS, THA, VNM, IND	HKG, MAC	-
	2 KOR, TWN, MYS	PHL, THA, VNM	IDN, AUS, NZL	HKG, SGP, JPN			_	KOR, MYS	SGP, BRN	IDN, AUS, NZL	HKG, SGP		
	3 HKG, SGP, MAC	KHM, IND	KOR, BRN	KHM, PHL, MAC			_	IDN, THA	VNM, NZL	KOR, BRN	КНМ, МАС		
	4 IDN, THA	CHN, MAC	VNM, IND	AUS, NZL			-		KHM, IND		AUS, NZL		
	5								HKG, MAC		VNM, IND		
DE	1 HKG, KOR, TWN, MYS, SGP, MAC	CHN, HKG, MAC, JPN	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC, JPN	CHN, TWN, VNM, IND	HKG, MAC	-	DR	KOR, TWN	TWN, KHM, IND, AUS	TWN, KHM, MYS, SGP, THA, VNM, IND, JPN	HKG, SGP, JPN	-	
	2 CHN, AUS, NZL	MYS, THA, VNM	IDN, AUS, NZL	MYS, THA			-		MYS, THA, VNM, BRN	HKG, PHL, MAC	AUS, NZL		
	3 THA, JPN	TWN, KHM, IND		КНМ, МАС			-		HKG, MAC, JPN	AUS, NZL	MYS, THA		
	4	SGP, BRN		AUS, NZL			_		KOR, PHL		VNM, IND		
	5	KOR, PHL							SGP, NZL				
BY	1 KOR, MYS, AUS	KOR, MYS	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, MAC	CHN, HKG, TWN, KHM, MYS, SGP, THA, VNM, IND, MAC	-	-	BE	SGP, THA, MAC, BRN	CHN, KOR, TWN, MAC	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, MAC	CHN, TWN, VNM, IND	AUS, NZL	AUS, NZL
	2 SGP, MAC	TWN, SGP, BRN	IDN, AUS, NZL	IDN, AUS, NZL				KOR, TWN, MYS	HKG, KHM, PHL, IND	IDN, AUS, NZL	KOR, KHM, MAC	KOR, TWN	
	3 IDN, THA	AUS, NZL	VNM, IND	_				LAO, MMR	THA, VNM	VNM, IND	HKG, MYS, THA		

	<u>4</u> 5	KHM, IND PHL, THA				-	AUS, NZL	SGP, BRN AUS, NZL		AUS, NZL	
BR	1 KOR, TWN	KOR, MAC	TWN, KHM, MYS, SGP, THA	HKG, SGP		YE	HKG, TWN, SGP, MAC	KOR, PHL	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM MAC	CHN, TWN, VNM, IND	HKG, - MAC
	2 IDN, SGP	TWN, SGP	HKG, PHL,	TWN, KHM		-	KOR, MYS	MYS, THA	AUS, NZL,	HKG, MYS,	
	3	MYS, BRN	AUS, NZL	MYS, THA		-	PHL, IND	AUS, NZL	CAN	KHM, MAC	
	4 5	HKG, PHL THA, VNM	VNM, IND	VNM, IND AUS, NZL		-		SGP, BRN KHM, IND		AUS, NZL	
	6	AUS, NZL						HKG, MAC			
YR	1 TWN, SGP	KOR, PHL	TWN, KHM, MYS, SGP, THA, VNM, IND	VNM, IND	TWN, - SGP	ER	KOR, TWN, SGP	HKG, KOR, PHL, MAC, JPN	TWN, KHM, MYS, SGP, THA, VNM, JPN	MYS, THA	
	2 PHL, IND	MYS, THA	HKG, PHL,	MYS, THA		-	PHL, IND	MYS, THA, VNM	HKG, PHL,	AUS, NZL	
	3	AUS, NZL	BRN, CAN	AUS, NZL		-		TWN, KHM,	AUS, NZL		
	4	TWN, SGP	IDN, LAO			-		SGP, CAN			
	6	KHM, IND HKG, MAC	AUS, NZL			-		AUS, NZL			
DBY	1 HKG, SGP,	KOR, MYS	CHN, HKG,	CHN, TWN,		DBE	CHN, AUS,	SGP, BRN	CHN, HKG,	CHN, TWN,	
	MAC		TWN, KHM, MYS, PHL, SGP, THA, MAC	MYS, THA, VNM, IND			NZL		TWN, KHM, MYS, PHL, SGP, THA, MAC	VNM, IND	
	2 IDN, THA	SGP, BRN	IDN, AUS, NZL	HKG, SGP		-	KOR, TWN, MYS	THA, VNM	IDN, AUS, NZL	MYS, THA	
	3 KOR, MYS	PHL, THA	KOR, BRN	AUS, NZL		-	HKG, SGP, MAC	KHM, IND	VNM, IND	KHM, MAC	
	4	KHM, IND	VNM, IND			-		CHN, MAC		AUS, NZL	
DBR	1 KOR, TWN	MYS, BRN	TWN, KHM, MYS, SGP, THA,	HKG, SGP, JPN		DYE	HKG, TWN, SGP, MAC	MYS, THA	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC	CHN, TWN, VNM, IND	HKG, - MAC
	2	THA, VNM	HKG, PHL, MAC	MYS, THA		-	KOR, MYS	KOR, PHL	IDN, AUS, NZL	MYS, THA	
	3 4 5	KHM, IND	AUS, NZL VNM, IND	VNM, IND AUS, NZL		-		SGP, BRN KHM, IND HKG, MAC		KHM, MAC AUS, NZL	
DYR	1 TWN, SGP	KOR, PHL	TWN, KHM,	HKG, SGP		DER	KOR, TWN,	HKG, MAC,	TWN, KHM,	MYS, THA	
	2	MNC THA	MYS, SGP, THA, VNM, IND	MVC THA		_	SGP	JPN	MYS, SGP, THA, VNM, JPN		
	2	MIS, IHA	MAC	MIS, INA		_		VNM	MAC		
	3	KHM, IND	AUS, NZL	VNM, IND		_		IND	AUS, NZL	AUS, NZL	
DVE	4	HKG, MAC		AUS, NZL		DVD		KOR, PHL	TWO KING	UKG SGD	
BIE	I KOK, M I S	AUS, NZL	TWN, KHM, MYS, SGP, THA,	VNM, IND		BIK	-	AUS, NZL	TWN, KHM, MYS, SGP, THA	HKG, 5GP	
	2 SGP, MAC	SGP, BRN	HKG, PHL, MAC	KHM, MAC		-		TWN, SGP	HKG, PHL, MAC	TWN, KHM	
	3	KHM, IND	AUS, NZL	HKG, MYS,		-		KHM, IND	AUS, NZL	MYS, THA	
	4			AUS, NZL		-			VNM, IND	VNM, IND	
BER	1 KOR, TWN	KOR, MAC	TWN, KHM, MYS_SGP	MYS, THA		YER	TWN, SGP	KOR, PHL	TWN, KHM, MYS_SGP	VNM, IND	
	2	HKG, PHL	THA HKG, PHL,	VNM. IND		-	PHL, IND	MYS. THA	THA, VNM, HKG, PHL,	MYS, THA	
	3	KHM IND	MAC AUS NZI	AUS NZI		-		AUS NZI	MAC	AUS NZI	
	4	THA, VNM	MOS, MEE	NOD, NEE		-		KHM, IND	NOS, NEE	Neb, NZE	
DB	1 HKG SCP	AUS, NZL	CHN HKG	CHN TWN		DB		KHM IND	TWN KHM	HKG SGP	
YE	BRN	501, BRIV	TWN, KHM, MYS, PHL, SGP, THA,	VNM, IND		YR	-	KIIW, IND	MYS, SGP, THA	11K0, 501	
	2 KOR, MYS	KHM, IND	IDN, AUS, NZI	MYS, THA		-			HKG, PHL, MAC	MYS, THA	
	3		NZE	AUS, NZL		-			VNM, IND	AUS, NZL	
DB ER	1 KOR, TWN	THA, VNM	TWN, KHM, MYS, SGP,	VNM, IND		DY ER	TWN, SGP	MYS, THA	TWN, KHM, MYS, SGP,	VNM, IND VNM, IND	
	2	KHM, IND	THA HKG, PHL,	MYS, THA		-		KOR, PHL	THA HKG, PHL,	MYS, THA	
	3		MAC AUS, NZL	AUS, NZL		-		KHM, IND	MAC AUS, NZL	AUS, NZL	
	4							HKG, MAC			
BY ER	1 -	AUS, NZL	TWN, KHM, MYS, SGP, THA,	VNM, IND		DB YER	-	KHM, IND	TWN, KHM, MYS, SGP, THA	VNM, IND	
	2	KHM, IND	HKG, PHL, MAC	MYS, THA					HKG, PHL, MAC	MYS, THA	
	3		AUS, NZL	AUS, NZL		-	-		AUS, NZL	AUS, NZL	

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi)

6.4.3 Assessment of Preparedness

The preceding analysis may indicate relatively homogenous subsets of countries with respect to the OCA dimensions. This section compares the results involving the dollarized and euroized benchmarks with the original results to infer the levels of preparedness amongst the countries. The level of preparedness for monetary unification can be inferred by looking at the associations with which benchmarks. Associations with post-dollarization (PAN, GTM3, ECU3, and ELS3) and post-euro (EMU3) benchmarks might indicate higher degrees of preparedness. Previous MBC methodology applies.

The first part presents the results using the original unweighted criteria and the second part provides the analysis using weighted criteria.

6.4.3.1 Preparedness Assessment using Unweighted Criteria

Table 6.46 exhibits the solutions for preparedness assessment using the original unweighted criteria. Columns '1' display the original groupings containing only Asian cases while columns '2' provide the solutions involving the Asian cases and benchmarks.

For the pre-crisis period, the general level of preparedness for exchange rate fixation and monetary union centered on the dollar, basket, and euro anchors could have been greater since the bulk of the Asian cases in columns 2 are being grouped with the post-dollarization and/or post-euro benchmarks.

Likewise, for crisis period the readiness for yen and euro pegs might have been higher; for post-crisis 7V that for dollar, basket, and yuan pegs could be greater; and for post-crisis 8V the levels of preparedness for any of the monetary anchors appear to be equally high.

Against this backdrop, except for the crisis period, the region on the whole could have been comparatively ready for dollar, basket, or euro peg. Interestingly, in pre-crisis and post-crisis 7V basket solutions, Canada is connected with almost all dollarized benchmarks but not even one euroized benchmark, signifying relatively high preparedness for unilateral peg rather than multilateral monetary union centered on the basket reference.

Meantime, those linked with pre-dollarization cases (e.g. ELS1, GTM1) such as Laos and Myanmar in some of the findings could also be relatively feasible for unilateral peg on the respective anchor than those not linked with any benchmarks.

Clearly, the groupings of the Asian cases are somewhat different when benchmark cases are added in the analysis. Hence, it is compelling to identify common groupings between the with- and without-benchmarks results. When a subset of Asian countries in column 1 intersects with that in column 2, the common set of countries might most probably maintain common OCA features and level of preparedness.

These common sets of countries are presented in the bottom part of Table 6.46. Remarkably, without the labor criterion, the effective dollar areas of Hong Kong and Macau, and the adjacent neighbors of Malaysia and Singapore are indicated to share similar OCA characteristics and levels of preparedness over the periods under the US reference. The finding is line with the currency board systems implemented by Hong Kong and Macau. The existing monetary union members of Singapore and Brunei do share some groupings but not consistently over the periods.

Table 6.47 provides the common sets of countries which are robust across anchors. Most of these subgroups can be found in the post-crisis 8V solutions where HongKong-Singapore, Malaysia-Thailand, Vietnam-India, and Australia-NewZealand are the common subgroups across all the five anchors.

The characteristics shared by the Asian cases and the benchmarks can be seen in Table 6.48. In general, Asian cases sharing the same clusters with EMU benchmarks exhibit more favorable conditions for exchange rate fixation in business cycle symmetry, inflation convergence, and real exchange rate stability with the reference country and

high degree of export diversification.

	De	ollar	Curren	cy Basket	asket Yer		Yen Euro) Yu	
	1	2	1	2	1	2	1	2	1	2
	1 HKG, KOR, TWN, MYS,	CHN, HKG, KOR, TWN,	CHN, KOR, TWN, MYS	CHN, HKG, KOR, TWN,	KOR, MYS PHL, IND,	, IDN, THA, BRN, AUS,	HKG, KOR,	CHN, HKG, KOR, TWN,	KOR,TWN, IDN, SGP	HKG, KOR, TWN, IDN,
	SGP, MAC	KHM, IDN, MVS PHL	AUS NZI	IDN, MYS, PHL SGP	AUS	NZL, PAN, FLS1 GTM1	I WN, KHM	IDN, MYS, PHL SGP		MYS, PHL, SGP THA
		SGP. THA.	AUS, ILL	THA, IND.		ELS2, GTM2	.MYS. SGP.	THA. IND.		IND. MAC.
		IND, MAC,		MAC, BRN,		ECU3, ELS3,	THA,	MAC, BRN,		BRN, JPN,
		BRN, JPN,		AUS, NZL,		GTM3,	MAC,	JPN, AUS,		AUS, NZL,
		AUS, NZL,		EMU1,		EMU1,	BRN, JPN,	NZL, CAN,		CAN
		CAN, PAN,		EMU2,		EMU2,	CAN	EMU1,		
		ELS2, GIM2, ECU3 ELS3		EMU3		EMU3		EMU2, EMU3		
		GTM3.						LINOS		
		EMU1,								
		EMU2,								
		EMU3		CLAR BANK		anni mua		DANK FORM		D 1 1 1 1 1 1 1 1 1
Pre-	2 CHN, IND,	LAO, MMR,	HKG,	CAN, PAN, ELS1 GTM1	HKG, TWN SCP	CHN, HKG,	CHN, IDN,	PAN, ECUI,	MYS, AUS,	PAN, ELS2, GTM2
Cr1515	AUS, NZL	ELS1. GTM1	SGP. THA.	ELS2, GTM2	MAC	MYS. PHL	AUS. NZL	ELS2, GTM2,	NZL, CAN	ECU3. ELS3.
		,	MAC, BRN	ECU3, ELS3,		SGP, IND,		ECU3, ELS3,		GTM3,
				GTM3		CAN		GTM3		EMU1,
										EMU2,
	3 KHM IDN	ECU2	LAO	KHM LAO	IDN THA	KHM I AO	LAO	KHM LAO	ρηι την	EMU3
	THA. JPN	LCUZ	MMR.	MMR. VNM		MMR. VNM.	MMR.	MMR. VNM	IND	MMR, VNM.
			VNM	,		MAC	VNM			ELS1, GTM1
	4 PHL		CAN	ECU1, ECU2	KHM, NZL	ECU1, ECU2		ECU2	HKG, MAC	ECU1, ECU2
	5 VNM				CHN				BRN	
	6 BRN				BRN				JPN	
	8 MMR				MMR				MMR	
	9 CAN				VNM				VNM	
	10				CAN				KHM	
			-				-			
	1 KOR, MYS,	CHN, HKG,	CHN, HKG,	CHN, HKG,	KOR, MYS	CHN, HKG,	CHN,	CHN, HKG,	TWN,	HKG, KOR,
	THA VNM	MVS PHI	KUK, IWN	KUK, IWN,	PHL, IHA	KUR, I WN,	KOR	KUK, I WN,	IND AUS	IPN NZL
	BRN, NZL	SGP, THA,	MYS, PHL,	PHL, SGP,		PHL, SGP,	TWN,	MYS, MMR,	NZL, CAN	PAN, ELS2,
		VNM, MAC,	SGP, THA,	THA, VNM,		THA, VNM,	KHM,	PHL, SGP,		ELS3, GTM3,
		BRN, JPN,	VNM, IND,	IND, MAC,		IND, MAC,	PHL, IND,	THA, VNM,		EMU1,
		NZL, EMU2	MAC, BRN,	BRN		BRN, AUS,	MAC, JPN	IND, MAC,		EMU2, EMU2
			AUS, NZL			NZL, CAN, EMIII		BKN, JPN, AUS NZI		EMU5
						EMU2.		CAN, PAN.		
						EMU3		ECU1, ELS1,		
								GTM1, ELS2,		
								GTM2,		
								ECU3, ELS3, GTM2		
								EMU1.		
								EMU2,		
Crisis								EMU3		
	2 TWN, KHM,	KHM, IND,	IDN, MMR	CAN, PAN,	VNM,	PAN, ELS1,	MYS, SGP,	LAO, ECU2	HKG,	TWN, KHM,
	IND, AUS	AUS, CAN,		ELS2, ELS3, GTM2	AUS, NZL,	GTM1, ELS2	,THA, VNM		KOR, PHL,	IND, AUS,
		FIS2 GTM2		GIMS, FMUI	CAN	ECU3 FLS3	BRN CAN		MAC, JEN	CAN, ELSI,
		ECU3, ELS3,		EMU2,		GTM3	bidit, chit			
		GTM3,		EMU3						
		EMU1,								
	3 CHN HKG	EMU3	LAO	ммр	TWN SCP	IDN MMP	AUS NZI		MVS THA	VNM GTM1
	MAC, JPN	MMR. ECU1	LAO	ECU1. ELS1	BRN	ECU1	AUS, NZL		VNM. BRN	GTM2. ECU3
	- /	ELS1, ECU2	,	,						- ,
	4 IDN		CAN	IDN, AUS,	KHM,	LAO	IDN		MMR	MYS, SGP,
	5 LAO			GTM1	HKG MAC	ECU2	LAO		IDN	IDN. MMR
				GTM2, ECU3	inco, mac	2002	2110			ECU1
	6 MMR			LAO	CHN, IDN		MMR		LAO	LAO
	7 CAN			ECU2	LAO					ECU2

Table 6.46 OCA-MBC preparedness assessment

	D	ollar	Curren	cy Basket		Yen	1	Euro	١	Zuan
	1	2	1	2	1	2	1	2	1	2
	1 CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, CAN, PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU13	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN	CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2 EMU3	CHN, HKG, TWN, KHM MYS, PHL, SGP, THA, VNM, IND, MAC	CHN, HKG, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC	CHN, HKG, KOR, TWN, KHM, MYS PHL, SGP, THA, VNM, MAC, JPN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, MAC, BRN, JPN, NZL	HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN	HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, CAN, PAN, ELS2, GTM2, ELS3, GTM3, EMU1, EMU2 EMU3
Post- crisis 7V	2 IDN, AUS, NZL	JPN, GTM1, GTM2, ECU3	IDN, AUS, NZL	CAN , PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	KOR, IDN, LAO, MMR, BRN, AUS, NZL, CAN	AUS, CAN, EMU1, EMU2 EMU3	IDN, IND, , AUS, NZL, CAN	IDN, VNM, IND, AUS, CAN, EMU1, EMU2, EMU3	KOR, IDN, LAO, MMR, BRN, AUS, NZL, CAN	IDN, LAO, MMR, AUS, NZL , ECU1, ELS1, GTM1, ECU2, ECU3
	3 KOR, BRN	LAO, MMR , ELS1	MMR	IDN, MMR, AUS, NZL		KOR, BRN, NZL, ELS1	LAO	PAN, ELS2, GTM2, ELS3, GTM3		
	4 LAO	IDN, AUS, NZL	CAN	ECU1, ECU2		GTM1, GTM2 ECU3	,BRN	ELS1, GTM1, ECU3		
	5 MMR	ECU1, ECU2	LAO			PAN, ELS2, ELS3, GTM3	MMR	ECU1		
	6 CAN					ECU1, ECU2		ECU2		
	8					MMR		MMR		
All	1 HKG, MAC	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, MAC, BRN, IPN NZI	CHN, KOR, TWN, MYS, PHL, IND	CAN	MYS, PHL	BRN, NZL	HKG, KOR, TWN, KHM, MAC, JPN	IDN, IND, AUS, CAN	AUS, NZL, CAN	КНМ
7V	2 MYS, SGP	KHM, IND, CAN	HKG, KHM, SGP, THA, MAC BRN		HKG, MAC	AUS	MYS, SGP, THA		HKG, MAC	MMR
	3	LAO, MMR	AUS, NZL		TWN, SGP		CHN, PHL		TWN, SGP	VNM
	4						AUS, NZL			
	1 CHN, TWN, MYS, THA, VNM, IND	CHN, HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP, THA,	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC,	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND,	CHN, HKG, TWN, KHM MYS, PHL, SGP, THA, VNM, IND, MAC	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND,	CHN, TWN, VNM, IND	CHN, HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP, THA,	HKG, SGP, JPN	HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP, THA, VNM,
Post-		VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, PAN, ECU1, ELS1, GTM1, GTM2, ELS3, GTM3, EMU1, EMU2, EMU3	BRN	MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1 EMU2, EMU3	,	MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1 EMU2, EMU3	,	VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, EMU1, EMU2, EMU3		IND, MAC, BRN, JPN, AUS, NZL, CAN, PAN, ECU1, ELS1, GTM1, GTM2, ELS2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3
crisis 8V	2 HKG, SGP, JPN	ECU2	IDN, AUS, NZL	LAO, MMR, ECU1, ELS1, GTM1	KOR, IDN, LAO, MMR, AUS, NZL, CAN	LAO, MMR, ECU1, ELS1, GTM1	HKG, MYS, SGP, THA	PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	TWN, KHM	ECU2
	3 KHM, PHL,		LAO	ECU2	BRN	ECU2	KOR, KHM	, ECU2	MYS, THA	
	4 AUS, NZL		MMR				AUS, NZL		VNM, IND	
	5 KOR		CAN				IDN		AUS, NZL	
	6 IDN						BRN		CAN	
	7 BRN						PHL		PHL	
	o LAU						LAU		KOP	
	10 CAN						CAN		IDN	
	11								BRN	
	12								LAO	
	13								MMR	
All Periods	1 -	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, MAC, BRN, JPN, NZL	CHN, KOR, TWN, MYS, PHL, IND	CAN	MYS, PHL	THA, BRN, AUS, NZL	KOR, KHM MAC, JPN	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, JPN, AUS, NZL CAN	AUS, NZL	КНМ
8V	2	KHM, IND, AUS, CAN	HKG, KHM, SGP, THA, MAC BBN		HKG, MAC		MYS, SGP, THA	INZE, CAIN		MMR
	3 4 5	LAO, MMR	AUS, NZL		TWN, SGP		CHN, IND AUS, NZL			VNM

Table 6.46 OCA-MBC preparedness assessment (continued)

Common sets	of countries				
	Dollar	Currency Basket	Yen	Euro	Yuan
	1 HKG, KOR, TWN, MYS	, CHN, KOR, TWN, MYS	, IDN, THA	HKG, KOR, TWN, MYS	, -
	SGP, MAC	PHL, IND, AUS, NZL		SGP, THA, MAC, BRN,	
Pre-crisis				JPN, CAN	
110-011313	2 CHN, IND, AUS, NZL	HKG, IDN, SGP, THA,		CHN, IDN, PHL, IND,	
		MAC, BRN		AUS, NZL	
	3 KHM, IDN, THA, JPN				
	1 KOR, MYS, PHL, SGP,	-	KOR, MYS, PHL, THA	CHN, HKG, KOR, TWN,	TWN, KHM, IND, AUS,
	THA, VNM, BRN, NZL			KHM, PHL, IND, MAC,	CAN
			VALUE NOL CAN	JPN MVG SCD THA VNM	IWC KOD DUI MAG
Crisis	2 CHN, HKG, MAC, JPN		VNM, AUS, NZL, CAN	MYS, SGP, THA, VNM,	HKG, KOR, PHL, MAC,
	2 KIDA DID ALIC		TWAL COD DDN	BRN, CAN	JPN
	3 KHM, IND, AUS		I WN, SGP, BKN	AUS, NZL	
	4		KHM, IND		
	3		HKG, MAC		
	1 CHN HKG TWN KHM	CUN UKG KOP TWN	KOD BDN N7I	IDN IND AUS CAN	UKC TWN KUM
	MVS DUI SCD TUA	KUM MVS DUI SCD	, KOK, BKN, NZE	IDN, IND, AUS, CAN	MVS DUL SCD TUA
	VNM IND MAC	THA VNM IND MAC			VNM IND MAC IPN
Post-crisis	VIUM, IND, MAC	BRN			vitili, iteb, wrac, ji t
7V	2 KOR, BRN	DRIV	AUS, CAN		KOR, BRN, CAN
	3				IDN, LAO, MMR, AUS,
					NZL
All Periods	1 HKG, MAC	-	-	-	-
7V	2 MYS, SGP				
	1 CHN, TWN, MYS, THA	, CHN, HKG, KOR, TWN,	, CHN, HKG, TWN, KHM	,CHN, TWN, VNM, IND	HKG, SGP, JPN
	VNM, IND	KHM, MYS, PHL, SGP,	MYS, PHL, SGP, THA,		
		THA, VNM, IND, MAC,	VNM, IND, MAC		
Post-crisis		BRN			
8V	2 HKG, SGP, JPN	IDN, AUS, NZL	KOR, IDN, LAO, MMR,	HKG, MYS, SGP, THA	TWN, KHM
			AUS, NZL, CAN		
	3 KHM, PHL, MAC			KOR, KHM, MAC, JPN	MYS, THA
	4 AUS, NZL			AUS, NZL	VNM, IND
	5				AUS, NZL
All Periods	1 -	-		-	-
8V					

Table 6.46 OCA-MBC preparedness assessment (continued)

Table 6.47 OCA-MBC-preparedness cross-anchor subclusters

DB I	1 HKG, SGP, MAC	-	7V CHN, HKG,	8V	7V 8V				711	01/	7W 0W
DB 1	1 HKG, SGP, MAC	-	CHN, HKG,						/ v	8 V	/ V 8 V
_	MAC			CHN, TWN,		DY	IDN, THA	KOR, MYS,	KOR, BRN	CHN, TWN,	
_			TWN, KHM,	MYS, THA,				PHL, THA		MYS, THA,	
_			MYS, PHL,	VNM, IND						VNM, IND	
_			SGP, THA,								
_			VNM, IND,								
			MAC			-					
2	2 CHN, IND,		KOR, BRN	KHM, PHL,				SGP, VNM,		KHM, PHL,	
_	AUS, NZL			MAC		-		BRN, NZL		MAC	
2	3 KOR, TWN,			HKG, SGP				KHM, IND		HKG, SGP	
_	MYS					_					
4	4 IDN, THA			AUS, NZL				HKG, MAC		AUS, NZL	
DE 1	1 HKG, KOR,	MYS, SGP,	-	CHN, TWN,		DR	-	KHM, IND,	-	MYS, THA	
	TWN, MYS,	THA, VNM,		VNM, IND				AUS			
	SGP, MAC	BRN									
	2 CHN, IND,	CHN, HKG,		HKG, SGP		-		HKG, MAC,		HKG, SGP,	
	AUS, NZL	MAC, JPN						JPN		JPN	
-	3 THA, JPN	KOR, PHL		KHM, MAC		_		KOR, PHL		VNM, IND	
2	4	KHM, IND		AUS, NZL		-				AUS, NZL	
BY	1 IDN, THA	-	KOR, BRN	CHN, HKG,		BE	CHN, PHL,	-	-	CHN, TWN,	
				TWN, KHM,			IND, AUS,			VNM, IND	
				MYS, PHL,			NZL				
				SGP, THA,							
				VNM, IND,							
_				MAC		_					
	2			IDN, AUS,			HKG, SGP,			HKG, MYS,	
				NZL			THA, MAC,			SGP, THA	
_						_	BRN				
2	3						KOR, TWN,			KOR, KHM,	
							MYS			MAC	

	PRE	CRS	1	PST	All		PRE	CRS		PST	All
			7V	8V	7V 8V				7V	8V	7V 8V
BR	1 -	-	HKG, TWN,	HKG, SGP		YE	-	KOR, PHL	AUS, CAN	CHN, TWN,	
			PHL, SGP.							VINM, IND	
			THA, VNM,								
			IND, MAC,								
	2		KOR, BRN	TWN, KHM		-		MYS. THA		HKG, MYS.	
				,		_		,		SGP, THA	
	3			MYS, THA		_		VNM, CAN		KHM, MAC	
	4			VNM, IND		-		AUS, NZL		AUS, NZL	
	6			A05, NZL		-		KHM, IND			
	7					-		HKG, MAC			
		HOD DIV	WOR BRY	THE ADD					1011 1110	1337 335	
YR	1 -	KOR, PHL	KOR, BRN	HKG, SGP		ER	-	HKG, KOR, PHI MAC	IDN, AUS	VNM, IND	
								JPN			
	2	AUS, CAN		TWN, KHM		-		TWN, KHM,		HKG, SGP	
	2	UKC MAC		MVS THA		-		IND		MVS THA	
	4	KHM, IND		VNM. IND		-				AUS, NZL	
	5	,		AUS, NZL		-					
DBY	1 IDN, THA	-	KOR, BRN	CHN, TWN, MVS THA		DBE	CHN, IND,	-	-	CHN, TWN, MYS THA	
				VNM. IND			AUS, NZL			VNM. IND	
	2			HKG, SGP		-	KOR, TWN,			KHM, PHL,	
						-	MYS			MAC	
	3			KHM, PHL,			HKG, SGP,			HKG, SGP	
	4			AUS, NZL		-	MAC			AUS, NZL	
	· · · · · · · · · · · · · · · · · · ·										
DBR	1 -	-	HKG, TWN,	HKG, SGP		DYE	l -	SGP, VNM,	-	CHN, TWN,	
			KHM, MYS, PHI SGP					BRN		MYS, THA, VNM IND	
			THA, VNM,							VINI, IND	
			IND, MAC			_					
	2		KOR, BRN	MYS, THA				KOR, PHL		KHM, PHL,	
	3			VNM IND		-		MVS THA		MAC HKG SGP	
	4			AUS, NZL		-		KHM, IND		AUS, NZL	
	5			,		-		HKG, MAC			
DVD	4	KOD DIH	KOD DDN	UWG AGD		DED		UWG MAG		UKG GGD	
DYR	1 -	KOR, PHL	KOR, BRN	HKG, SGP		DER	-	IPN	-	HKG, SGP	
	2	KHM, IND		MYS, THA		-		KOR, PHL		VNM, IND	
	3	HKG, MAC		VNM, IND		_		KHM, IND		AUS, NZL	
	4			AUS, NZL							
BYE	1 -	-	-	CHN HKG		BYR		-	KOR BRN	HKG SGP	
DIL	1			TWN, KHM,		DIN			ROR, BRIV	111(0, 501	
				MYS, PHL,							
				SGP, THA,							
				MAC							
	2			IDN, AUS,		-				TWN, KHM	
	2			NZL		-				MVS THA	
	4					-				VNM IND	
	5					-				AUS, NZL	
BER	1 -	-	-	HKG, SGP		YER	-	KOR, PHL	-	HKG, SGP	
	2			MYS, THA		-		HKG, MAC		MYS, THA	
	4			VINN, IND		-		KIIW, IND		AUS, NZL	
										,	
DB	1 -	-	-	CHN, TWN,		DB	-	-	KOR, BRN	HKG, SGP	
YE	2			VNM, IND		YR				MVS THA	
	2			MAC						M15, 1HA	
	3			HKG, SGP		-				VNM, IND	
	4			MYS, THA,						AUS, NZL	
	5			AUS, NZL							
DB	1-	-		HKG, SGP		DY	-	KOR, PHI	-	HKG, SGP	
ER	2			MYS, THA	-	ER		KHM, IND		MYS, THA	-
	3			VNM, IND		-		HKG, MAC		VNM, IND	
	4			AUS, NZL						AUS, NZL	
PV	1.			HKC SCD		Π₽				HKC SCD	
ER	2	-	-	TWN, KHM		YER		-	-	MYS. THA	
-	3			MYS, THA						VNM, IND	
	4			VNM, IND		_	_			AUS, NZL	
	5			AUS, NZL							

Table 6.47 OCA-MBC-preparedness cross-anchor subclusters (continued)

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi)

	Dollar									
	Cluster	TRA	BUS	INF	RER	INT	EXP	DEB	LAB	N^2
	Pre-crisis	(%)		(%)						
	All Cases	25.002	.182	7,752	6.813	.215	3.253	2,539	-	
1	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA,									
	IND, MAC, BRN, JPN, AUS, NZL, CAN, PAN, ELS2, GTM2,								-	
2	ECU3, ELS3, GTM3, EMU1, EMU2, EMU3	25.1/1	.244	3.539	1.883	.274	3.494	1.655		4
3	ECU2	33 514	- 879	51 111	4.704	121	2.350	2 760	-	2
<u> </u>	Crisis	00.014	075	51.111	147.15	.751	2.400	2.700	_	
	All Cases	24.964	.121	9.006	7.790	.048	3.188	1.591	-	
1	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC,								-	
2	BRN, JPN, NZL, EMU2	18.001	201	2.622	3.140	.191	2.760	.820		2
2	KHM, IND, AUS, CAN, PAN, GIMI, ELS2, GIM2, ECU3, ELS3 GTM3 EMUI EMU3	34 069	696	3 838	1 819	- 120	3 653	1 502	-	1
3	IDN, LAO, MMR, ECU1, ELS1, ECU2	21.483	375	35.100	31.579	.070	3.178	3.138	-	1
	Post-crisis 7V									
_	All Cases	24.154	.264	6.190	6.454	159	3.266	1.351	-	
1	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM,									
	IND, MAC, BKN, CAN, PAN, ELS2, ELS3, GIM3, EMUI, EMU2 EMU3	24 475	365	1 997	1 137	- 217	3 259	840	_	2
2	JPN. GTM1, GTM2, ECU3	32.917	.748	6.842	3.035	676	2.394	1.587	-	1
3	LAO, MMR, ELS1	13.695	290	14.140	3.096	.232	2.863	2.773	-	0
4	IDN, AUS, NZL	11.715	119	2.659	4.946	086	5.535	1.722	-	1
5	ECU1, ECU2	37.607	364	42.282	76.421	.764	2.282	3.023	-	3
_	Post-crisis 8V	24 154	264	6 100	6 454	150	3 266	1 251	68.66	
1	CHN, HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL	24.134	.204	0.150	0.434	155	0.200	1.001	00.00	
	SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN,									
	PAN, ECU1, ELS1, GTM1, GTM2, ELS2, ECU3, ELS3, GTM3,									
~	EMU1, EMU2, EMU3	23.862	.299	4.786	2.058	190	3.293	1.294	68.66	5
2	ECU2	33.514	879	51.111	147.15	./91	2.406	2.760	-	3
	Currency Basket									
		TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N ²
	Cluster	(%)		(%)						
_	Pre-crisis									
-	All Cases	23.772	.104	8.208	7.704	.148	3.292	2.539	-	
1	CHN, HKG, KOK, IWN, IDN, MYS, PHL, SGP, IHA, IND, MAC BRN AUS NZI EMUI EMUI EMUI	17 104	042	4 107	3 024	206	3 670	1 367	_	3
2	CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	39.615	.374	5.445	3.130	029	3.200	1.476	-	2
3	KHM, LAO, MMR, VNM	9.543	010	14.813	3.526	.004	2.396	7.942	-	1
4	ECU1, ECU2	37.607	364	42.282	76.421	.764	2.282	3.023	-	1
_	Crisis	00.070	010	0.005	0.004	050	0.000	4 504		
1	CHN HKG KOR TWN KHM MYS PHI SGP THA VNM	22.070	.212	9.235	9.321	.053	3.220	1.591	-	
•	IND, MAC, BRN	14.554	.123	3.276	5.864	.057	2.653	.999	-	0
2	CAN, PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	32.985	.580	1.691	1.140	.343	4.045	1.199	-	2
3	MMR, ECU1, ELS1	28.190	279	23.669	5.677	.330	2.532	2.800	-	0
			005	8 261	9.020	361	5.427	1 / 1 / - 1 /-		
4	IDN, AUS, NZL GTM1 GTM2 FCU3	12.864	.025	0.100	2 1 0 2	660	0 475	1 507	-	1
4 5 6	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO	37.207 4.070	.025 .687 .127	8.133 68.106	3.183 12.122	668 188	2.475 2.674	1.587		1 2 1
4 5 6 7	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2	12.864 37.207 4.070 33.514	.025 .687 .127 879	8.133 68.106 51.111	3.183 12.122 147.15	668 188 .791	2.475 2.674 2.406	1.587 5.252 2.760	- - -	1 2 1 1
4 5 6 7	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V	12.864 37.207 4.070 33.514	.025 .687 .127 879	8.133 68.106 51.111	3.183 12.122 147.15	668 188 .791	2.475 2.674 2.406	1.587 5.252 2.760	- - -	1 2 1 1
4 5 6 7	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases	12.864 37.207 4.070 33.514 22.670	.025 .687 .127 879 .212	8.133 68.106 51.111 9.235	3.183 12.122 147.15 9.321	668 188 .791	2.475 2.674 2.406 3.226	2.416 1.587 5.252 2.760 1.591	- - - - -	1 2 1 1
4 5 6 7 1	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM IND MAC RN EMILI EMIL?	12.864 37.207 4.070 33.514 22.670	.025 .687 .127 879 .212	8.133 68.106 51.111 9.235 6.753	3.183 12.122 147.15 9.321	668 188 .791 .053	2.475 2.674 2.406 3.226	2.416 1.587 5.252 2.760 1.591		1 2 1 1
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	12.864 37.207 4.070 33.514 22.670 14.821 39.361	.025 .687 .127 879 .212 .185 .537	8.133 68.106 51.111 9.235 6.753 5.155	3.183 12.122 147.15 9.321 5.362 2.395	668 188 .791 .053 .100 - 066	2.475 2.674 2.406 3.226 2.964 3.176	2.416 1.587 5.252 2.760 1.591 1.303 1.426	-	1 2 1 1 0 4
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNN, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005	.025 .687 .127 879 .212 .185 .537 115	8.133 68.106 51.111 9.235 6.753 5.155 12.440	3.183 12.122 147.15 9.321 5.362 2.395 8.182	668 188 .791 .053 .100 066 265	2.475 2.674 2.406 3.226 2.964 3.176 4.923	2.418 1.587 5.252 2.760 1.591 1.303 1.426 2.838	- - - - - - - - - - - - - - - - - -	1 2 1 1 0 4 1
4 5 6 7 1 2 3 4	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607	.025 .687 .127 879 .212 .185 .537 115 364	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421	668 188 .791 .053 .100 066 265 .764	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282	2.418 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023	- - - - - - - - - - - - - - -	1 2 1 1 0 4 1 2
4 5 6 7 1 2 3 4	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607	.025 .687 .127 .879 .212 .185 .537 .115 .364	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421	668 188 .791 .053 .100 066 265 .764	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023		1 2 1 1 0 4 1 2
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKC, KOP, TWN, KHM, IDN, MYS, PHL, SCP, THA	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010	.025 .687 .127 879 .212 .185 .537 115 364 .217	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892	668 188 .791 .053 .100 066 265 .764 .071	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351	- - - - - - - - - - - - - - - - - - -	1 2 1 1 2 0 4 1 2
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892	668 188 .791 .053 .100 066 265 .764 .071	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301	2.410 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351	- - - - - - - - - - - - - - - - - - -	1 2 1 1 0 4 1 2
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, YNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, YNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .217	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961	668 188 .791 .053 .100 066 265 .764 .071	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.301	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162	- - - - - - - - - - - - - - - - - - -	1 2 1 1 0 4 1 2
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNN, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MNR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .217 .272 .017	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561	668 188 .791 .053 .100 066 265 .764 .071 .071	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.301 3.461 2.572	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654	- - - - - - - - - - - - - - - - - - -	1 2 1 1 2 0 4 1 2 2 1 4 1 2
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .272 .017 .879	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791	2.475 2.674 2.406 3.226 2.964 3.126 4.923 2.282 3.301 3.461 2.572 2.406	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760	- - - - - - - - - - - - - - - - - - -	1 2 1 1 0 4 1 2 4 1 3
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514	.025 .687 .127 .879 .212 .185 .537 .115 .537 .115 .364 .217 .217 .272 .017 .879	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15	668 188 .791 .053 .100 066 265 .764 .071 .071 .039 032 .791	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760	- - - - - - - - - - - - - - - - - - -	1 2 1 0 4 1 2 4 1 3
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514	.025 .687 .127 .879 .212 .185 .537 .115 .537 .115 .364 .217 .217 .272 .017 .879 .879	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15	668 188 .791 .053 .006 265 .764 .071 .071 .039 032 .791	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB	- - - - - - - - - - - - - - - - - - -	1 2 1 0 4 1 2 4 1 3
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU2, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 TRA (%)	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .272 .017 .879 .879	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB	- - - - - - - - - - - - - - - - - - -	1 2 1 1 2 0 4 1 2 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 TRA (%)	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .272 .017 .879 BUS	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%)	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 RER ¹	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .032 .791	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB	- - - - - - - - - - - - - - - - - - -	$1 \\ 2 \\ 1 \\ 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ $
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ $	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNN, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MNR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 TRA (%) 25.216	.025 .687 .127 .879 .212 .859 .537 .115 .364 .217 .272 .017 .879 BUS .054	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .032 .791 .011 .032 .791	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP EXP	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNN, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MNR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNN, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 All Cases	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 TRA (%) 25.216	.025 .687 .127 .879 .212 .185 .337 .115 .364 .217 .217 .364 .217 .272 .017 .879 BUS	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 RER [†]	668 188 .791 .053 .100 066 265 .764 .071 .071 .039 032 .791 .032 .791	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP 3.292	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB DEB	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ 1 \\ 2 \\ 3 \\ - \\ - \\ 1 \\ 2 \\ 3 \\ - \\ - \\ 1 \\ 2 \\ 3 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CLUST CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 TRA (%) 25.216 15.814 32.567	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .217 .364 .217 .364 .217 .879 .054 .054 .054	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 RER ¹ 9.257 9.074 2.643	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .039 032 .791 .032 .791	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP 3.292 4.026 3.330	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.396	- - - - - - - - - - - - - - - - - - -	$ \begin{array}{c} 1 \\ 2 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 2 \\ 1 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 3 \\ \hline 1 \\ 2 \\ 3 \\ 3 \\ \hline 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 $	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 TRA (%) 25.216 15.814 32.567 13.656	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .217 .217 .217 .272 .017 .879 BUS .054 .054 .209	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 RER ¹ 9.257 9.074 2.643 3.886	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .039 032 .791 .039 032 .791 .039 .032 .791 .039 .032 .791	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP EXP 4.026 3.3292 4.026 3.323	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.395	- - - - - - - - - - - - - - - - - - -	1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ $	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 7RA (%) 25.216 15.814 32.567 13.6566 37.607	.025 .687 .127 .879 .212 .859 .537 .115 .537 .115 .364 .217 .217 .272 .017 .879 BUS .054 .054 .101 .275 .364	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894 42.282	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 RER' 9.257 9.074 2.643 3.886 6.76.421	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .039 032 .791 .031 .791 .032 .791 .039 032 .791 .032 .791 .033 .215 .214 .214 .764	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP 3.292 4.026 3.330 2.253 2.282	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.654 2.654 2.654 2.654 2.539 1.106 1.306 1.305 1.106 1.305 1.106 1.3023	67.89 67.89 69.44 LAB	1 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 \\ 2 \\ 3 \\ 3 \\ 1 $	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN , EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 7RA (%) 25.216 15.814 32.567 13.656 37.607	.025 .687 .127 .879 .212 .879 .212 .537 .115 .364 .217 .217 .272 .017 .879 BUS .054 .054 .209 .364	8.133 8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894 42.282	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .039 032 .791 .032 .791 .032 .791 .033 .039 032 .764	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP 3.292 4.026 3.330 2.253 2.282	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.396 7.154 3.023	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2$	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNN, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MNR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis All Cases	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 7RA (%) 25.216 15.814 32.567 13.656 37.607 21.558	.025 .687 .127 .879 .212 .537 .115 .364 .217 .217 .364 .217 .272 .017 .879 BUS .054 .054 .054 .209 .364 .209 .364	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894 42.282 9.357	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 RER ¹ 9.257 9.074 2.643 3.886 76.421 9.290	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .032 .215 .215 .215 .215 .215 .215 .215 .21	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP 3.292 4.026 3.330 2.253 2.282 3.3226	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.396 7.154 3.023 1.591	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 2 1 1 1 1 2 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ $	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNN, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MNR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNN, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis All Cases	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 7RA (%) 25.216 15.814 32.567 13.656 37.607 21.558	.025 .687 .127 .879 .212 .185 .337 .115 .364 .217 .217 .217 .217 .364 .217 .217 .364 .217 .017 .879 BUS .054 .054 .054 .209 .364 .209 .364	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894 42.282 9.357	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 9.257 9.074 2.643 3.886 76.421 9.290	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .032 .791 .032 .791 .032 .791 .04 .032 .791 .04 .04 .05 .215 .214 .764	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP 4.026 3.330 2.253 2.282 3.301 3.226	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.396 7.154 3.023 1.591	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ $	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis All Cases CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, EMU1, EMU2, EMU3	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 7RA (%) 25.216 15.814 32.567 13.656 37.607 21.558	.025 .687 .127 .879 .212 .185 5.537 .115 .364 .217 .217 .364 .217 .364 .217 .364 .217 .364 .217 .364 .217 .364 .054 .054 .209 .364 .423	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894 42.282 9.357 2.722	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .032 .791 .032 .791 .032 .791 .032 .791 .032 .791 .032 .791 .04 .053 .214 .764	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 EXP 3.292 4.026 3.3292 4.026 3.3292 3.226	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.396 7.154 3.023 1.591	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 3 \\ 5 \\ 6 \\ 7 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 3 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 3 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 $	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis All Cases CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, EMU1, EMU2, EMU3 PAN, ELSL, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 7RA (%) 25.216 15.814 32.567 13.656 37.607 21.558 14.050 39.674	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .217 .217 .364 .217 .217 .364 .217 .364 .217 .364 .217 .364 .054 .054 .209 .364 .225 .209 .364 .212	8.133 8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894 42.282 9.357 2.732 5.682	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 9.257 9.257 9.257 9.257 9.257 9.257 9.257 9.257 9.264 2.643 3.886 76.421 9.290	668 188 .791 .053 .100 066 265 .764 .071 .032 .791 .032 .791 .032 .791 .032 .791 .032 .791 .032 .791 .032 .791 .017 .066	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 2.406 3.300 2.253 2.282 3.292 4.026 3.3203 2.282 3.226 3.226 3.226	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.305 1.106 1.391 1.106 1.391 1.106 1.391 1.591 1.591	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$ \begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 2 \\ 3 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1$	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MAC ECU1, ECU2 Crisis All Cases CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, EMU1, EMU2, EMU3 PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, ECU1	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 7 82.314 7 82.567 15.814 32.567 13.656 37.607 21.558 14.050 39.674 22.934	.025 .687 .127 .879 .212 .185 .537 .115 .364 .217 .217 .217 .217 .217 .217 .364 .217 .217 .364 .217 .017 .879 .054 .054 .209 .364 .423 .462 .510 .311	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894 42.282 9.357 2.732 5.682 2.732 5.682 2.7209	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 9.257 9.074 2.643 3.886 6.76.421 9.290 9.290	668 188 .791 .053 .100 066 265 .764 .071 .039 032 .791 .039 032 .791 .039 032 .791 .017 .066 843 .214 .764 .017 .017	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 3.301 EXP 5.252 2.406 3.292 4.026 3.300 2.253 2.282 3.2267 3.2267 3.016	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.391 1.106 1.392 1.106 1.391 1.106 1.392 1.106 1.392 1.106 1.392 1.591 1.426 2.838 3.023 1.351 1.426 2.760 	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
$\begin{array}{c} 4 \\ 5 \\ 6 \\ 7 \\ \hline 1 \\ 2 \\ 3 \\ 4 \\ \hline 1 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\$	IDN, AUS, NZL GTM1, GTM2, ECU3 LAO ECU2 Post-crisis 7V All Cases CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU3 CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, AUS, NZL ECU1, ECU2 Post-crisis 8V All Cases CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, MMR, ECU1, ELS1, GTM1 ECU2 Yen Cluster Pre-crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis All Cases IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN KHM, LAO, MMR, VNM, MAC ECU1, ECU2 Crisis All Cases ICHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, EMU1, EMU2, EMU3 PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR, ECU1 LAO	12.864 37.207 4.070 33.514 22.670 14.821 39.361 11.005 37.607 22.010 19.785 24.862 33.514 7RA (%) 25.216 15.814 32.567 13.656 37.607 21.558 14.050 39.674 22.934 3.221	.025 .687 .127 .879 .212 .879 .212 .537 .115 .364 .217 .217 .272 .017 .879 BUS .054 .054 .054 .364 .364 .423 .462 .510 .311 .639	8.133 68.106 51.111 9.235 6.753 5.155 12.440 42.282 6.524 3.558 17.948 51.111 INF (%) 8.757 5.513 4.786 13.894 42.282 9.357 2.732 5.682 27.209 69.312	3.183 12.122 147.15 9.321 5.362 2.395 8.182 76.421 6.892 1.961 4.561 147.15 9.257 9.074 2.643 3.886 676.421 9.290 4.946 2.200 8.909 11.836	668 188 .791 .053 .100 066 265 .764 .071 .039 039 032 .791 .039 032 .791 .039 032 .791 .017 .066 843 .215 .215 .215 .215 .215 .764	2.475 2.674 2.406 3.226 2.964 3.176 4.923 2.282 3.301 3.461 2.572 2.406 	2.416 1.587 5.252 2.760 1.591 1.303 1.426 2.838 3.023 1.351 1.162 2.654 2.760 DEB 2.539 1.106 1.396 7.156 3.023 1.591 .426 2.539 1.106 1.396 3.023 .426 2.988 5.252	- - - - - - - - - - - - - - - - - - -	1 1 2 1 1 1 1 1 1 1 1 2 1 1 1 1 2 1 1 1 2 1

Table 6.48 OCA-MBC-preparedness clusters (continued)

	Yen									
	Cluster	TRA	BUS	INF	RER ¹	INT	EXP	DEB	LAB	N ²
	Post-crisis 7V	(%)		(%)						
	All Cases	20.644	.265	7.133	7.179	.380	3.301	1.351		
1	CHN, HKG, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND,	11.000	470	0.776	2 800	057	0.061	964		
2	AUS, CAN, EMU1, EMU2, EMU3	15.316	.473	1.966	2.000	.288	4.973	.004 n.a.	-	2
3	KOR, BRN, NZL, ELS1	23.055	516	4.952	3.937	021	2.392	.838	-	0
4	GTM1, GTM2, ECU3 PAN ELS2 ELS3 GTM3	37.207	.687	8.133 2.227	3.183	668 330	2.475	1.587	-	1
6	ECU1, ECU2	37.607	364	42.282	76.421	.764	2.282	3.023	-	0
7	LAO	1.644	.489	9.059	2.432	838	2.442	4.457	-	1
0	Post-crisis 8V	4.401	720	20.301	2.074	739	4.115	2.009		0
_	All Cases	20.644	.265	7.133	7.179	.380	3.301	1.351	67.89	
1	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND MAC BRN AUS NZL CAN PAN ELS2 GTM2 ECU3 ELS3									
	GTM3, EMU1, EMU2, EMU3	19.392	.361	3.219	2.269	.488	3.475	.954	67.82	4
2	LAO, MMR, ECU1, ELS1, GTM1	24.578	001	18.690	4.717	243	2.572	2.654	69.44	1
3	EC02	33.514	079	51.111	147.13	.791	2.400	2.760	-	3
	Euro									
	Cluster	TRA	BUS	INF (%)	RER	INT	EXP	DEB	LAB	N^2
	Pre-crisis	(70)		(<i>n</i>)						
_	All Cases	20.536	.021	8.032	7.594	.158	3.253	2.539	-	
1	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, RPN IPN AUS NZL CAN EMULTEMU2 EMUL3	12 514	- 088	3 951	3 406	110	3 654	1 367		2
2	PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	40.241	.365	8.917	2.595	.024	2.880	1.677	-	3
3	KHM, LAO, MMR, VNM	11.061	012	14.657	3.843	.443	2.396	7.942	-	1
4	Crisis	33.314	079	51.111	147.13	.791	2.400	2.760	-	1
	All Cases	19.532	.176	8.919	11.521	.062	3.188	1.591	-	
1	CHN, HKG, KOR, TWN, KHM, IDN, MYS, MMR, PHL, SGP, THA VNM IND MAC RPN IPN AUS NZL CAN PAN ECUI									
	ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2,									
	EMU3	19.404	.217	5.638	7.068	.051	3.230	1.390	-	4
2	LAO, ECU2 Post-crisis 7V	21.513	451	59.779	80.546	.231	2.540	4.006	-	3
	All Cases	19.220	.145	6.286	7.030	.175	3.266	1.351		
1	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, MAC, BRN,	0 1 9 0	100	1 705	0 705	250	0.600	696		
2	IDN, VNM, IND, AUS, CAN, EMU1, EMU2, EMU3	13.770	.405	2.752	2.735	.352	5.130	1.164	-	1
3	PAN, ELS2, GTM2, ELS3, GTM3	41.305	.608	2.664	0.841	.042	2.993	1.208	-	1
4	ELS1, GIM1, ECU3 ECU1	36.124	.249	10.853 33.452	4.574	317	2.266	1.846	-	0
6	ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	1
7	LAO	9.068	.772	7.239	2.625	639	2.442	4.457	-	2
0	Post-crisis 8V	5.475	970	24.004	2.215	020	4.115	2.009		0
_	All Cases	19.220	.145	6.286	7.030	.175	3.266	1.351	68.66	
1	CHN, HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP, THA, VNM, IND, MAC, BRN, IPN, AUS, NZL, CAN, EMUL									
	EMU2, EMU3	10.616	.076	3.348	2.662	.211	3.541	1.094	72.41	3
2	PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	39.622	.438	8.815	2.624	006	2.658	1.651	50.83	3
5	EC02	33.314	079	51.111	147.13	.791	2.400	2.760	-	2
_	Yuan									~
	Cluster	TRA (%)	BUS	INF (%)	RER	INT	EXP	DEB	LAB	N^2
	Pre-crisis	(,c)		(,0)						
_	All Cases	17.692	.237	10.527	8.285	.086	3.218	2.610	-	
1	ING, NUK, I WIN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, JPN, AUS, NZL, CAN	4,788	,215	9,149	4,804	,227	3,457	1,421	-	0
2	PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3	33.779	.497	2.925	.852	.122	3.650	1.381	-	4
3	KHM, LAO, MMR, VNM, ELS1, GTM1 ECU1 ECU2	19.181 37.607	.099 - 364	14.791 42 282	5.426 76.421	518 764	2.287	5.881	-	1
<u> </u>	Crisis						02	0.020		
_	All Cases	17.000	007	10 507	0.005		0.010	0.010		
$\frac{1}{2}$	HI Cases HKG, KOR, PHL, MAC, JPN, NZL, PAN, FLS2, FLS3, GTM3	17.692	.237	10.527	8.285	.086	3.218	2.610	-	
ĩ	EMU1, EMU2, EMU3	21.708	.326	5.296	2.650	.322	3.525	1.628	-	2
3	TWN, KHM, IND, AUS, CAN, ELS1,	8.361	.274	9.930	4.661	.024	3.671	3.002	-	1
5	MYS, SGP, THA, BRN	1.774	.490	9.984	4.614	002	2.093	.545	-	0
6	IDN, MMR, ECU1	23.721	.171	17.707	5.218	.294	2.530	4.994	-	0
8	LAO ECU2	8.611 33.514	177 879	16.614 51.111	ь.139 147.15	086	1.927	2.760	-	1 2
_	Post-crisis 7V		2.9							
1	All Cases	20.995	.286	6.616	6.731	.360	3.268	1.388	-	
1	MAC, BRN, JPN, CAN, PAN, ELS2, GTM2, ELS3, GTM3, EMUI.									
_	EMU2, EMU3	20.298	.373	2.349	1.316	.564	3.096	.889	-	4
2	IDN, LAO, MMR, AUS, NZL, ECU1, ELS1, GTM1, ECU2, ECU3 Post-crisis 8V	23.283	.001	16.009	18.600	024	3.453	2.471	-	3
_	All Cases	20.995	.286	6.616	6.731	.360	3.268	1.388	69.0	
1	HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP,									
	ELS1, GTM1, GTM2, ELS2, ECU3, ELS3, GTM3, EMU1, EMU2.									
_	EMU3	20.592	.324	5.181	2.202	.346	3.295	1.330	69.0	6
2	ECU2	33.514	879	51.111	147.15	.791	2.406	2.760	-	2

Notes: 1 Standard deviation $(x10^2)$ of the log difference in bilateral real exchange rate. 2 Number of variables with highest degree of conformity to OCA criteria. 3 'n.a.' for not applicable. Source: Model-based cluster analysis. See Appendix A for data description.

6.4.3.2 Preparedness Assessment using Weighted Criteria

Table 6.49 puts together the Asian-plus-benchmark groupings using the original unweighted criteria (columns '1') and those using the weighted criteria (columns '2'). Recall that under weighted criteria, the sum of the 'benefit' criteria and the sum of the 'cost' criteria are weighted equally.

Cross-weighting Asian-plus-benchmark subgroupings are placed in columns 2 of Table 6.50. Columns 1 contain the cross-weighting Asian-only subgroups. The common set of countries between the two subgroups should maintain common OCA features and levels of preparedness even when the criteria are weighted. Non-singleton common sets are shaded in columns 1.

For pre-crisis period, three common subclusters can be seen under dollar and euro anchors. For crisis period, all anchors except the basket anchor exhibit common sets of countries. For post-crisis 7V period, substantial common sets can be found under dollar and basket anchors. For post-crisis 8V period, substantial common sets are present under dollar and yen anchors.

Remarkably, based on 7-variable findings the subclusters of Hong Kong and Macau, the effective dollar areas and Malaysia-Singapore possess common OCA features and levels of preparedness regardless of criteria weighting and period under the dollar anchor. Singapore and Brunei are seen together in some of the common sets but not consistently over the periods.

Using 8 variables for post-crisis period, the subcluster of Australia-NewZealand displays common OCA features and level of preparedness regardless of criteria weighting over the periods under the euro anchor.

In light of the above, the US reference seems to have consistently produced more substantial common sets and hence might be more suitable as the monetary anchor country compared to other references.

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	Dollar		Currency Basket		Yen		E	uro	Yuan		
Pre-	1 1 CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, JPN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3 GTM2, ECU3, ELS3 GTM3, EMU1, EMU2, EMU3	2 CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3	L T CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, AUS, NZL, EMU1, EMU2, EMU3	2 CHN, HKG, KOR, TWN, IDN, MYS, IDN, MYS, IND, MAC, BRN, NZL	1 IDN, THA, BRN, AUS, NZL, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU2, EMU3	2 HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, AUS, BRN, AUS, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU1, EMU2, EMU3	I CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, JPN, AUS, NZL, CAN, EMU1, EMU2, EMU3	2 CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, JPN, AUS, NZL, CAN, EMU1, EMU2, EMU3	I HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, JPN, AUS, NZL, CAN	2 HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP, THA, VNM, PHL, SGP, THA, VNM, AUS, MZL, CAN	
crisis	2 LAO, MMR VNM, ECU1, ELS1 GTM1	,KHM, LAO, MMR	CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 GTM3	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	CHN, HKG, KOR, TWN, MYS, PHL, SGP, IND, CAN	CHN, KHM, LAO, MMR, VNM, CAN, ECU1, ECU2,	PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3 ,GTM3	PAN, ELS2, GTM2, ECU3, ELS3, GTM3, ,EMU1, EMU2, EMU3	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3	
	3 ECU2	ECU1, ECU2	KHM, LAO, MMR, VNM	PHL, AUS, CAN, EMU1, EMU2, FMU3	KHM, LAO, MMR, VNM MAC	,	KHM, LAO, MMR, VNM	KHM, LAO, MMR, VNM	KHM, LAO, MMR, VNM, ELS1, GTM1	ECU1, ECU2	
	4		ECU1, ECU2	KHM, LAO, MMR, VNM	ECU1, ECU2	!	ECU2	ECU1, ECU2	ECU1, ECU2		
	5			ECU1, ECU2							
	1 CHN, HKG, KOR, TWN MYS, PHL, SGP, THA, VNM, MAC BRN, JPN, NZL, EMU2	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, SGP, THA, BRN, JPN, NZL, EMU2	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, NZL	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, EMU1, EMU1, EMU2, EMU3	HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, IDN, MYS, MMR, PHL, SGP, THA, VNM, IND, MAC, BRN, NZL, CAN, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3 LAO, ECU2	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, MAC, BRN, JPN, AUS, EMU1, EMU2, EMU3	HKG, KOR, PHL, MAC, JPN, NZL, PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	TWN, KHM, MYS, SGP, THA, VNM, IND, BRN, AUS, NZL, CAN	
Crisis	AUS, CAN, PAN, GTM1 ELS2, GTM2, ECU3, ELS3 GTM3, EMU1, EMU3	AUS, CAN, PAN, GTM1, ELS2, GTM2, ,ECU3, ELS3, GTM3, EMU1, EMU3	CAN, FAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	CAN, FAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	LAO, MMR, ECU1, ECU2		GTM1, ECU2, ELS2 GTM2, ECU3, ELS3 GTM3	KHM, IND, AUS, CAN, ELS1	GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	
	3 IDN, LAO, MMR , ECU1, ELS1 ECU2	IDN, LAO, MMR, ,ECU1, ELS1, ECU2	MMR, ECU1, ELS1	IDN, AUS, EMU1, EMU2, EMU3	IDN, MMR , ECU1			MMR, ECU2	VNM, GTM1, GTM2, ECU3	HKG, KOR, PHL, MAC, JPN, EMU1, EMU2, EMU3	
	4		IDN, AUS, NZL	ECU1, ECU2	LAO				MYS, SGP, THA, BRN	IDN, MMR	
	5		GTM1, GTM2, ECU3	LAO, MMR	ECU2				IDN, MMR, ECU1	ECU1	
	6 7		LAO ECU2						LAO ECU2	LAO ECU2	

Table 6.49 OCA-MBC-preparedness-weighting assessment

	Dollar		Currency Basket		Y	'en	E	uro	Yuan		
	1	2	1	2	1	2	1	2	1	2	
	1 CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, CAN, PAN, ELS2, ELS3, GTM3, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU12, EMU13	CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU2	CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, EMU1, EMU2, EMU2	CHN, HKG, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC	CHN, HKG, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, EMU1, EMU3	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, MAC, BRN, JPN, NZL	CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, MAC, BRN, JPN	HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, CAN, PAN, ELS2, GTM2, ELS3, GTM3, EMU1, EMU2, EMU3	HKG, TWN, KHM, IDN, PHL, SGP, VNM, IND, JPN	
Post- crisis 7V	 2 JPN, GTM1, GTM2, ECU3 3 LAO, MMR, 	IDN, MMR, AUS, NZL, CAN, ELS1, GTM1 ECU1, ECU2	CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR,	CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 IDN, MMR,	AUS, CAN, EMU1, EMU2, EMU3	BRN, PAN, ELS1, GTM1, 3ELS2, GTM2, ECU3, ELS3, GTM3 KOR, AUS,	IDN, VNM, IND, AUS, CAN, EMU1, EMU2, EMU3 PAN, ELS2,	PAN, ELS1, GTM1, ELS2, GTM2, BECU3, ELS3, GTM3 IDN, MMR ,	IDN, LAO, MMR, AUS, NZL, ECU1, ELS1, GTM1, ECU2, ECU3	MAC, PAN, ELS2, ELS3, EMU2, EMU3 ELS1, GTM1,	
	ELS1		AUS, NZL	AUS, NZL	NZL, ELS1	NZL, CAN, EMU2	GTM2, ELS3, GTM3	IND, AUS, NZL, CAN, EMU1, EMU2, EMU3	3	GTM2, GTM3	
	4 IDN, AUS, NZL		ECU1, ECU2	ECU1, ECU2	GTM1, GTM2, ECU3	MMR	ELS1, GTM1, ECU3	ECU1, ECU2		KOR, MYS, THA, BRN, CAN, EMU1	
	5 ECU1, ECU2				PAN, ELS2, ELS3 GTM3	ECU1	ECU1			MMR, AUS, NZL	
	6				ECU1, ECU2	ECU2	ECU2			LAO, ECU3	
	7				LAO	LAO	LAO			ECU1, ECU2	
	8				MMR		MMR				
All	1 CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, MAC, BRN, JPN, NZL,	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, JPN	CAN	CAN	BRN, NZL		IDN, IND, AUS, CAN		КНМ		
Periods 7V	2 KHM, IND,	AUS, CAN			AUS				MMR		
, •	CAN 2 LAO MMB	IDM							VNM		
	4 LAO, MMR	NZL							VINIM		
	5	IND									
	6										
Post- crisis 8V	1 CHN, HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, PAN, ECU1, ELS1, GTM1, GTM2, ELS2, ECU3, ELS3, GTM3. EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, MYS, THA, VNM, MAC, BRN	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, EMU1, EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN, PAN, ELS2, GTM2, ECU3, ELS3, GTM3, EMU1, 3EMU2, EMU3	CHN, HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP, THA, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, EMU1, EMU2, EMU3	IDN, MMR, PHL, SGP, IND, JPN, AUS, NZL, CAN, EMU1, EMU2, EMU3	HKG, KOR, TWN, KHM, IDN, LAO, MYS, MMR, PHL, SGP, 3 THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN, PAN, ECU1, ELS1, GTM1, GTM2, ELS2, ECU3, ELS3, GTM3, EMU1, EMU1, EMU2, EMU3	PHL, MAC, PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	
	2 ECU2	LAO, MMR, ECU1, ELS1, GTM1, ECU2	LAO, MMR, ECU1, ELS1, GTM1	IDN, MMR, PHL, SGP, IND, AUS, NZL, EMU1, EMU2, EMU3	LAO, MMR, ECU1, ELS1, GTM1	LAO, MMR, ECU1, ELS1, GTM1, ECU2	PAN, ECU1, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3	CHN, HKG, KOR, TWN, KHM, MYS, THA, VNM, MAC, BRN	ECU2	KOR, TWN, KHM, IDN, LAO, MMR, VNM, IND, EMU1, EMU2, EMU3	
	3		ECU2	CAN, PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 LAO	ECU2		ECU2	PAN, ELS1, GTM1, ELS2, GTM2, ECU3, ELS3, GTM3 ECU1, ECU2		HKG, MYS, SGP, THA, BRN, JPN, AUS, NZL, CAN ECU2	
	5			ECU1, ECU2				LAO			
All Periods 8V	1 CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, MAC, BRN, JPN, NZL	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, JPN, NZL	CAN	CAN	THA, BRN, AUS, NZL	HKG, KOR, TWN, MYS, PHL, SGP, THA, IND, MAC, BRN, AUS, NZL	CHN, HKG, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, JPN, AUS, NZL, CAN	IDN, PHL, SGP, IND, JPN, AUS, NZL, CAN	КНМ	-	
0 V	2 KHM, IND, AUS, CAN	IND, AUS, CAN		AUS		LAO, MMR			MMR		
	3 LAO, MMR	IDN				KHM, VNM			VNM		
	4					IDN					
	5					CAN					
	~										

Table 6.49 OCA-MBC-preparedness-weighting assessment (continued)

	Dollar		Currency Basket		Ŋ	len	E	luro	Yuan		
		2 CUN UKC	1 CUN KOP	2	1 UKC TWN	2	1	2 CUN UKC	1 KOD TWN	2	
	TWN, MYS, SGP, MAC	KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, IPN AUS	TWN, MYS, IND, AUS, NZL	FIIL, AUS	SGP, MAC	BRN, AUS, NZL	TWN, MYS, SGP, THA, MAC, BRN, JPN, CAN	CHIN, HIKO, KOR, TWN, IDN, MYS, PHL, SGP, THA, IND, MAC, BRN, IPN AUS	IDN, SGP	-	
Pre-	_	NZL, CAN						NZL, CAN			
Crisis	2 CHN, IND, AUS, NZL	VNM	HKG, IDN, SGP, THA, MAC BPN	CAN	KOR, MYS, AUS		CHN, IDN, AUS, NZL		AUS, CAN		
	3 IDN, THA,		LAO, MMR		PHL, IND		LAO, MMR,		PHL, IND		
	JPN 4	_			IDN THA	_	VNM PHL IND	_			
	5				KHM, NZL		,				
Crisis	1 KOR, MYS, PHL, SGP, THA, VNM, BRN, NZL	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, JPN, NZL	CHN, KOR, TWN, MYS, SGP, MAC, BRN	CAN	KOR, MYS, PHL, THA	HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN	CHN, HKG, KOR, TWN, KHM, PHL, IND, MAC, JPN	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL, CAN	TWN, KHM, SGP, IND, AUS, NZL, CAN	HKG, KOR, PHL, MAC, JPN	
CHSIS	2 TWN, KHM, IND, AUS	KHM, IND, AUS, CAN	HKG, KHM, PHL, THA, VNM, IND		VNM, AUS, NZL	IDN, MMR	MYS, THA, VNM	MMR	HKG, KOR, PHL, MAC, JPN		
	3 CHN, HKG,	IDN, LAO,	AUS, NZL		TWN, SGP,	CHN	SGP, BRN,		MYS, THA,		
	4 MAC, JPN	MMR			KHM, MMR,		AUS, NZL	-	VINM, BRN		
	5				IND HKG. MAC	_		_			
	6				CHN, IDN						
Paget	1 CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, JPN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC,	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, MAC, BRN	CHN, HKG, KOR, TWN, KHM, LAO, MYS, PHL, SGP, THA, VNM, IND,	CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC	AUS, CAN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, MAC, JPN	IDN, IND, AUS, CAN	TWN, KHM, MYS, SGP, THA, VNM, IND, JPN	KOR, MYS, THA, BRN, CAN	
crisis	2 IDN AUS	BRN	IDN AUS	MAC, BRN	KOR IDN	KOR NZI	IDN IND		HKG PHI	LAO	
7V	NZL	Chit	NZL	Chiv	LAO, MMR, BRN, AUS, NZL, CAN	KOR, NEE	AUS, NZL, CAN		MAC	Eno	
	3 KOR, BRN		VNM, IND			BRN			BRN, CAN	MAC	
	4 5								IDN, LAO AUS, NZL		
All Periods	1 HKG, MAC	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, MAC, BRN	CHN, KOR, TWN, MYS	CAN	HKG, MAC	AUS	HKG, KOR, TWN, MAC, JPN	IDN, IND, AUS, CAN	TWN, SGP	-	
7V	2 MYS, SGP	IND	SGP, MAC, BRN		TWN, SGP	NZL	AUS, NZL				
	3	MAC	AUS, NZL			BRN					
	4	CAN	HKG, THA								
Post- crisis	I CHN, TWN, MYS, THA, VNM, IND	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, JPN, AUS, NZL CAN	CHN, HKG, KOR, TWN, KHM, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN	IDN, PHL, SGP, IND, AUS, NZL	CHN, HKG, TWN, KHM, MYS, SGP, THA, VNM, IND, MAC	CHN, HKG, KOR, TWN, KHM, IDN, MYS, PHL, SGP, THA, VNM, IND, MAC, BRN, AUS, NZL, CAN	CHN, TWN, VNM, IND	IDN, MMR, PHL, SGP, IND, JPN, AUS, NZL, CAN	HKG, SGP, JPN	KOR, TWN, KHM, IDN, LAO, MMR, VNM, IND	
0 V	2 HKG, SGP,	LAO, MMR	IDN, AUS,	MMR	KOR, IDN,	LAO, MMR	KOR, KHM,		TWN, KHM	PHL, MAC	
	3 KHM, PHL,		NZL	CAN	AUS, NZL		HKG, MYS,		MYS, THA		
	4 AUS, NZL						AUS, NZL	-	VNM, IND		
	5								AUS, NZL		
All Periods 8V	1 -	CHN, HKG, KOR, TWN, MYS, PHL, SGP, THA, VNM, MAC, BRN, JPN, NZL	CHN, KOR, TWN, MYS	CAN	TWN, SGP	THA, BRN, AUS, NZL	KOR, MAC, JPN	IDN, PHL, SGP, IND, JPN, AUS, NZL, CAN,	-	-	
	2	IND, AUS, CAN	SGP, MAC, BRN		HKG, MAC		MYS, THA				
	3		AUS, NZL				AUS, NZL				
	4		HKG, THA								

Table 6.50 MBC cross-weighting and cross-preparedness-weighting subclusters

6.4.4 Recapitulation

The section has discussed the results using model-based cluster analysis and OCA criteria. The following are the key findings using 7 variables unless specific mention to 8 variables is given.

Classifications

Using the original unweighted criteria, based on the average silhouettes over all objects, the reference country consistent with best partitioning is virtually the weighted-G3 reference and based on the structure of the partitions, the G3 anchor consistently generates highly convergent solutions for every period even when 8 variables are used for the post-crisis period.

Regardless of the post-crisis labor criterion, more substantial cross-period subsets are found under the basket and euro anchors. Particularly, the current monetary union members of Singapore and Brunei consistently share the same grouping over the periods under the basket anchor regardless of labor.

For the dollar areas of Hong Kong and Macau, they constantly share the same grouping over the periods by any anchor and by basket and yen anchors when 8 variables are used, compatible with their parallel exchange regimes.

For post-crisis period, HongKong-Singapore and Australia-NewZealand maintain their links over all anchors regardless of the labor criterion.

Classifications using Weighted Criteria

How have the configurations changed when benefits and costs are treated equally? In general, putting more weight on trade openness, the benefit variable which is measured relative to a reference, on the whole putting more weight on trade has brought the region closer together against Germany/EMU and against US but farther apart against China.

Specifically, the subcluster of Australia-NewZealand is not only unmoved by the
weighting but is also robust through the periods under the basket and the euro anchor regardless of the post-crisis labor criterion.

The effective dollar areas of Hong Kong and Macau are still stable in such a manner for dollar, yen, and euro anchors. The monetary union members of Singapore and Brunei still share the same grouping over the periods under the basket anchor even when the labor criterion is included.

For post-crisis period, irrespective of the labor criterion the subgroupings of Malaysia-Thailand and Australia-NewZealand are stable across all anchors.

Assessment of Preparedness using Unweighted Criteria

Based on the number of countries connected with the post-dollarization and/or post-euro benchmarks, in general the region on the whole could have been comparatively more ready for dollar, basket, or euro peg.

Remarkably, the effective dollar areas of Hong Kong and Macau, and the adjacent neighbors of Malaysia and Singapore are indicated to share similar OCA characteristics and levels of preparedness over the periods under the US reference. The existing monetary union members of Singapore and Brunei do share some groupings but not consistently over the periods.

No subgroupings which are present in the same Asian-only and Asian-plusbenchmark clusters are also at the same time present across all anchors.

Assessment of Preparedness using Weighted Criteria

Extremely few countries are indicated to commonly share OCA features and levels of preparedness regardless of criteria weighting. In general, the US reference appears to have consistently produced more of these countries for all periods when compared to other references.

Remarkably, the subclusters of Hong Kong and Macau, the effective dollar areas and Malaysia-Singapore still possess common OCA features and levels of preparedness over the periods under the dollar anchor even when criteria are weighted. This confirms the strict dollar pegs implemented by Hong Kong and Macau since the 1980s.

Meantime, using 8 variables for post-crisis period, Australia and New Zealand display common OCA features and level of preparedness regardless of criteria weighting over the periods under the euro anchor.

Singapore and Brunei are seen together in some of the common sets but not consistently over the periods.

6.5 Comparisons across Methods

The preceding sections have presented the results from three cluster analysis methods, namely hierarchical cluster analysis (HCM), fuzzy cluster analysis (FCM), and model-based cluster analysis (MBC) using OCA dimensions and the findings are somewhat different across the methods, most probably due to differences in the respective methodologies and algorithms used. The following general observations based on 7-variable results, unless specified 8 variables, may be noteworthy.

- Based on the average silhouettes over all objects, the reference country consistent with best partitioning differs depending on period for HCM and FCM but for MBC the weighted-G3 reference virtually corresponds to the most appropriate partitions over the periods.
- By HCM, the G3 reference is associated with more convergent arrangements; by FCM, it is the Germany/EMU reference; and by MBC it is the G3 reference once again.
- Weighted criteria have made the configurations more convergent against US by HCM, against Japan by FCM, and against US and against Germany/EMU by MBC.
- Based on the number of countries connected with the post-dollarization and/or post-

euro benchmarks, in general throughout the periods the region could have been more prepared for a fixed basket peg by HCM, for dollar peg by FCM, and for dollar, basket, or euro peg by MBC.

- By HCM, Singapore-Malaysia and Singapore-Korea-Malaysia-Taiwan are the links suggested to constantly maintain common OCA features and levels of preparedness over the periods by US and G3 references respectively. By FCM, no such links are found. By MBC, HongKong-Macau and Malaysia-Singapore links maintain those features by US reference; the same Singapore-Malaysia link has been found by HCM.
- For HCM and FCM, no countries which are indicated to share common OCA features and level of preparedness regardless of criteria weighting are also at the same time suggested to maintain those features over all the periods. Quite the opposite, by MBC, the subclusters of Hong Kong and Macau, and Malaysia and Singapore are found to share those features consistently over the periods by the US reference.

The succeeding sections compare the findings across the methods in detail and identify the subgroupings which are robust over the methods.

6.5.1 Classifications and PCA

First part of Table 6.51 collects the individual silhouettes of the countries by HCM, FCM, and MBC. Silhouette width is used here to assess the results over clustering methods (the reason for its use has been explained in Chapter 5). A high positive silhouette for an object indicates that it is more appropriately classified, that is, more tightly connected with its assigned cluster.

The second part of Table 6.51 shows the average number of clusters and some measures based on the silhouettes by reference country, period, and method from 7-variable findings.

Looking at the first item, the average number of clusters over methods, increasingly convergent configuration approximated by reduced clusters through periods can be observed when the reference of US, Japan, or China is used; the greatest reduction in the number of clusters on the whole is shown by the Japan reference. Based on the averages over periods, the smallest number of clusters is seen by the basket anchor.

From the second item, the average number of clusters over periods by method, over the reference countries FCM is associated with the fewest clusters. This could be due to the 'fuzzy' partitioning approach employed by FCM.

The rest of the items are measured over periods: the percentage of positive individual silhouettes, mean silhouette, and median silhouette. Based on the averages over the methods and over the references respectively, the basket anchor and the MBC are consistent with the most fitting partitions for the data. FCM, with its 'fuzzy' approach in assigning objects to clusters, provides the lowest mean and median silhouettes.

On the above evidence, in general the G3 reference appears to be consistent with the most symmetrical cluster configurations and the most data-fitting solutions whilst MBC is compatible with the most data-fitting solutions.

Despite the above, it is still compelling to compare the cluster solutions across the methods and identify subsets of countries which consistently appear across the three methods. These subgroupings can be regarded as 'robust' over the clustering methods.

Table 6.52 compares the original solutions over the cluster analysis methods for the US reference. Figure 6.21 exhibits the principal component analysis (PCA) plots which provide spatial distances between the objects.⁵⁷ Using the PCA plots as a reference, it is clear that the three clustering methods have partitioned the objects in different ways, justifying the importance to recognize linkages of countries which are robust over the

 $^{^{57}}$ Recall that for PCA used here, the chosen number of components depends on the *k*th component at which the slope in the scree plot starts to level off markedly. If that condition is not present, the components should collectively explain at least 60-70 percent of the variation in the data.

methods. These countries should be so close to each other as different ways of partitioning could not separate them. Tables and Figures E.1–E.4 in Appendix E present the results by other monetary anchors.

The cluster silhouettes are also given in the tables. Remarkably, the dollar-based post-crisis 8V Australia-NewZealand pair (see Table 6.52) obtains very high silhouette regardless of clustering method (even when compared to other clusters in the whole set of OCA results).

Cross-method subclusters are collected by monetary anchor in Table 6.53. Using 7 variables, notably the subclusters of Korea-Malaysia-Taiwan and Malaysia-Philippines are not only stable over the methods but also over the periods under the basket and the yen anchor respectively.

When labor criterion is included for post-crisis period, only Hong Kong and Macau, the effective dollar areas are robust over methods and periods and only against Japan. Also notable, they are linked consecutively over pre-crisis and crisis periods by the US and the China reference.

The monetary union constituents of Singapore and Brunei are placed together in some of the results but not consecutively over periods.

Table 6.54 displays the cross-method-and-anchor subclusters by period. No sets of countries which are robust over all methods and all periods are also robust across all anchors. Amongst the stable subgroups, HongKong-Singapore and Australia-NewZealand are robust over all anchors in the post-crisis 8V solutions. Since China is a reference country, China-HongKong and China-Vietnam are also robust over all anchors in the post-crisis 7V and post-crisis 8V solutions respectively.

HEM FRE CRS PST PRE CRS PST PRE CRS PST No. of clusters 8 9 10 5 0 10 4 9 1 11 9 1			Dol	lar		Cu	rrency	Baske	t		Ye	n			Eu	:0			Yu	in	
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$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	2 HKG	.76	.40	.54	.52	.54	.05	.73	.50	.45	.52	.20	.26	.20	.53	.62	.57	.55	.54	.18	.29
TWN 64 -24 30 17 -05 83 12 23 66 51 -24 30 17 -05 18 12 23 35 66 51 -24 30 17 100 45 55 51 31 20 45 55 31 20 45 55 33 66 51 70 45 55 33 56 33 50 50 00	3 KOR	.51	.50	.00	.00	.42	.03	.49	.46	.58	.66	.00	.00	.32	.08	.69	.45	.74	08	.00	.00
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$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	5 KHM	.40	.00	.52	.56	.22	.39	.54	.64	.54	02	.88	.30	.00	.64	.61	.37	.00	.45	.65	.31
LMNS 25 66 23 00 06 06 07 00 00 07 00 0	6 IDN 7 LAO	.69	.00	.00	.00	.36	.00	.53	.00	.68	.54	.59	.00	.00	.00	.00	.00	.57	.00	.00	.00
YMMR 52 20 0	8 MYS	.25	.00	.00	.00	.53	.00	.00	.00	.00	.00	.00	.00	.00	.00	23	.00	.00	.00	.00	00.
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$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	11 SGP	.80	.55	.26	.79	07	.55	.63	.40	09	.73	28	.26	.03	.20	.19	.09	.67	.06	.32	.35
I v NM .00 .20 .40 .49 .40 .40 .35 .47 .40 .41 .19 .00 .48 .48 .24 15 BRX .40 .63 .53 .55 .55 .57	12 THA	.38	.57	.47	.41	.43	.56	.56	.42	.59	.54	.56	.40	.49	.39	.24	.23	.54	.36	.46	.40
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	13 VNM	.00	.20	.40	.49	.00	.08	.48	.40	.00	.53	.15	.47	.00	.41	.19	01	.00	.48	.48	.47
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	14 IND 15 MAC	27	.37	.50	.39	.55	10.	.39	.25	.20	.33	.27	01	.51	.00	.40 59	.21	.63	.45 64	.40	.52
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	16 BRN	.00	.31	.00	.00	.51	.40	.56	.00	.00	.56	.00	.00	.57	.00	.00	.00	.00	.41	.00	.00
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	17 JPN	.62	.06	01	.58	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	.49	.20	.68	27	.00	.08	.39	.45
19 NZL 60 0.4 60 7.2 3.2 0.0 <td>18 AUS</td> <td>.65</td> <td>.76</td> <td>.31</td> <td>.64</td> <td>.39</td> <td>.00</td> <td>.76</td> <td>.38</td> <td>.00</td> <td>.35</td> <td>.12</td> <td>.49</td> <td>.00</td> <td>.00</td> <td>.22</td> <td>.55</td> <td>.58</td> <td>.43</td> <td>.44</td> <td>.42</td>	18 AUS	.65	.76	.31	.64	.39	.00	.76	.38	.00	.35	.12	.49	.00	.00	.22	.55	.58	.43	.44	.42
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Nerne .39 .27 .29 .33 .37 .22 .32 .24 .35 .30 .24 .26 .31 .24 .35 .30 .24 .20 FCM TV RV	20 CAN	.00	.00	.00	.00	.00	.00	.00	.00	.00	09	.45	.00	.44	.55	.00	.00	.55	.35	.00	.00
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$ \begin{array}{ c c r r r r r r r r r r r r r r r r r $	No. of clusters	5	6	6	5	5	4	6	7	4	5	4	5	3	5	3	4	5	5	5	4
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	1 CHN	.59	01	.84	60	.01	.54	.56	.29	.05	.36	.67	.00	.49	06	.80	.43	n.a.	n.a.	n.a.	n.a.
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2 HKG	.77	.43	.82	.78	.41	.08	.63	.76	35	.51	.09	.48	.51	.70	.64	43	32	.44	.23	.38
SKHM .45 .08 .16 .10 .11 .10 .10 .10 .11 .10 .10 .10 .10 .11 .10 .11 .10 .10 .10 .10 .10 .11 .10 <td>5 KUK 4 TWN</td> <td>34 57</td> <td>39</td> <td>.01</td> <td>.00</td> <td>.07</td> <td>.09</td> <td>.00</td> <td>.00</td> <td>.76</td> <td>.51</td> <td>30</td> <td>.21 .23</td> <td>.50</td> <td>.39</td> <td>.04</td> <td>25</td> <td>- 06</td> <td>.03</td> <td>11</td> <td>07</td>	5 KUK 4 TWN	34 57	39	.01	.00	.07	.09	.00	.00	.76	.51	30	.21 .23	.50	.39	.04	25	- 06	.03	11	07
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8 MYS -44 -44 -71 55 .60 -04 .46 .06 .79 .69 .64 .07 .07 .01 .11 .04 .05 .03 .07 .04 .29 .07 .01 .11 .05 .03 .14 .02 .02 .02 .03 .03 .03 .04 .29 .07 .04 .14 .03 .09 .03 .03 .04 .03 .04 .04 .04 .04 .04 .05 .03 .04 .04 .05 .03 .04 .04 .05 .03 .01 .02 .05 .03 .04 .03 .05 .07 .66 .04 .06 .06 .05 .04 .06 .05 .02 .03 .07 .68 .00 .03 .03 .03 .03 .00 .03 .03 .03 .03 .03 .03 .04 .04 .04 .04 .04 .04 .04 .04 .04 .04 .03 .03 .03 .04	7 LAO	.55	.06	.10	.00	.61	.00	34	28	.56	.24	32	.04	.28	.00	.11	.28	.52	.00	.00	09
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IDFRIL 22 .32 .32 .92 .92 .36 .94 .35 .33 .34 .01 .36 .39 .36 .33 .33 .34 .16 .43 .39 .39 .36 12 THA .29 -26 .59 .44 .35 .57 .57 .50 .50 .50 .51 .40 .66 .77 .10 .20 .50 .54 .44 .66 .47 .21 .08 .59 .27 .68 .40 .66 .57 .56 .00 .77 .68 .50 .07 .68 .50 .07 .68 .00 .40 .66 .44 .19 .36 .00 .57 .55 .68 .68 .44 .71 .77 .33 .32 .44 .29 .23 .69 .03 .60 .53 .42 .71 .77 .68 .68 .44 .27 .41 .12 .74 .60 .37 .44 .69 .77 .68 .66 .74 .70	9 MMR	.36	.05	.00	.00	.09	.33	.06	.00	.03	07	.04	.29	07	.01	11	.04	.05	.03	14	.02
In Solit 1.7 1.00 1.7 1.30 1.03 <th1.03< th=""> <th1.03< th=""> 1.03</th1.03<></th1.03<>	10 PHL	.22	.32	52	09	.07	.36	06	.38	.60	.40	.35	49	.55	30	.61	.36	.59	.66	.53	39
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	12 THA	.73	- 26	- 59	- 44	.05	- 04	./4	.00	- 36	.55	09	.59	.00	- 07	34	01	.43	.39	.39	- 06
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	13 VNM	.40	.48	16	.08	.40	.46	.27	.21	.01	20	.50	.54	24	.40	.66	.47	.02	.07	.56	.53
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	14 IND	39	.57	64	30	.32	46	.66	60	55	46	.03	10	.21	08	.59	.27	.63	.41	.68	.53
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	15 MAC	.60	.36	33	31	.52	.23	69	03	07	.68	.10	.49	.32	53	.60	.07	04	.56	47	37
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	16 BRN	.14	47	.42	06	.40	.06	.44	.19	.36	.60	52	.35	29	.42	17	.07	.33	32	44	.29
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	I / JPN	.48	.58	.63	./1	n.a.	n.a. 27	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	25	.66	.69	01	45	.04	.27	.46
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	10 AUS 19 NZI	.74	.70	.71	.//	- 02	- 23	.73	.70	- 08	.52	.00	.00	.44	.27	- 12	.00	.37	.45	.09	.74
Average .34 .09 .22 .11 .29 .18 .25 .15 .22 .36 .22 .27 .26 .20 .31 .23 .21 .17 .23 .25 MBC PRE CRS PST PRE CRS </td <td>20 CAN</td> <td>.03</td> <td>03</td> <td>.22</td> <td>.01</td> <td>.00</td> <td>.29</td> <td>.08</td> <td>27</td> <td>.00</td> <td>.51</td> <td>.02</td> <td>.26</td> <td>.31</td> <td>.08</td> <td>.02</td> <td>07</td> <td>.62</td> <td>.34</td> <td>.06</td> <td>.37</td>	20 CAN	.03	03	.22	.01	.00	.29	.08	27	.00	.51	.02	.26	.31	.08	.02	07	.62	.34	.06	.37
MBC PRE CRS PST PRE CRS PST <td>Average</td> <td>.34</td> <td>.09</td> <td>.22</td> <td>.11</td> <td>.29</td> <td>.18</td> <td>.25</td> <td>.15</td> <td>.22</td> <td>.36</td> <td>.22</td> <td>.27</td> <td>.26</td> <td>.20</td> <td>.31</td> <td>.23</td> <td>.21</td> <td>.17</td> <td>.23</td> <td>.25</td>	Average	.34	.09	.22	.11	.29	.18	.25	.15	.22	.36	.22	.27	.26	.20	.31	.23	.21	.17	.23	.25
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$						r				<u> </u>				<u> </u>							
TW TV TO TO <thtd< th=""> TO TO TO<</thtd<>	мвс	PRF	CRS	PS	т	PRF	CRS	PS	Т	PRF	CRS	PS	т	PRF	CRS	PS	Т	PRF	CRS	PST	ſ
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	-	TRE	ens	7V	8V	TRE	cito	7V	8V	TRE	ens	7V	8V	TRE	ens	7V	8V	TRE	ens	7V	8V
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	No. of clusters	9	7	6	10	4	4	5	5	10	7	2	3	3	6	5	10	10	6	2	13
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 CHN	.45	.55	.86	.30	.34	.44	.76	.73	.00	.25	.86	.81	.60	.39	.73	.03	n.a.	n.a.	n.a.	n.a.
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2 HKG	.76	.49	.82	.59	.60	.74	.73	.64	.65	.66	.85	.76	.26	.51	.66	.43	.50	.58	.76	.05
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 KOR	.51	.54	.61	.00	.30	.64	.49	.48	.04	.60	25	32	.38	.09	./5	.30	./5	.36	15	.00
6 IDN 69 .00 .31 .00 .01 .01 .101 .	4 I WIN 5 KHM	.34	- 05	.00	23	51	.23	.70	.05	.05	20	.04	.73	.31	.30	.77	.01	.09	.01	.04	21
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6 IDN	.69	.00	.31	.00	.40	.07	.53	.08	.68	.42	35	31	.00	.00	.15	.00	.72	.00	25	.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	7 LAO	.00	.00	.00	.00	.63	.00	.00	.00	.00	.00	13	05	.49	.00	.00	.00	.00	.00	03	.00
9 MMR .00 .00 .00 .00 .23 37 .00 .00 .50 .15 .21 .03 .00 <t< td=""><td>8 MYS</td><td>.35</td><td>.69</td><td>.75</td><td>.00</td><td>.43</td><td>.75</td><td>.76</td><td>.71</td><td>.51</td><td>.48</td><td>.86</td><td>.78</td><td>.27</td><td>.42</td><td>.71</td><td>.38</td><td>27</td><td>.75</td><td>.77</td><td>.67</td></t<>	8 MYS	.35	.69	.75	.00	.43	.75	.76	.71	.51	.48	.86	.78	.27	.42	.71	.38	27	.75	.77	.67
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	9 MMR	.00	.00	.00	.00	.23	37	.00	.00	.00	.50	.15	.21	.03	.00	.00	.00	.00	.00	.20	.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10 PHL	.00	.31	.70	.51	.51	.63	.58	.56	.63	.41	.65	.60	.62	.48	.54	.00	.59	.56	.60	.00
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11 SGP	.80	.52	.83	.79	.07	.67 E0	.63	.46	.45	68	.84	.68	.54	.40	01	.09	.74	18	.73	.13
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	12 I HA 13 VNM	.38 00	.03 32	.02	.09 42	.45	.08 51	.50 42	.ാპ ⊿Ջ	.59	.31 - 47	./1 74	.୦2 ନନ	.24	.29 - 28	.52 45	.23 21	.52	.59 48	.04 66	.00 79
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	14 IND	27	.37	.33	.05	.43	.59	.40	.41	.00	.50	.72	.65	.10	.20	34	.39	63	.40	.62	.73
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	15 MAC	.46	.65	.52	.21	.65	.68	.75	.70	.35	.76	.76	.73	.23	.65	.73	.65	.66	.64	.42	.00
17 JPN .62 .60 .75 .60 n.a. <	16 BRN	.00	.36	.40	.00	.57	.72	.56	.47	.00	04	14	.00	.43	.41	.00	.00	.00	.60	.41	.00
18 AUS .65 .38 .76 .64 .40 .20 .76 .64 .01 .41 14 05 .58 .61 .51 .55 .44 .49 .31 .42 19 NZL .60 .21 .38 .72 .26 .48 .58 .46 .09 07 .05 .01 .43 .35 .20 .67 03 .28 .27 .43 20 CAN .00 .00 .00 .00 .00 .00 .00 .60 .43 .60 .25 .13 .00 .33 .48 .04 .00 Average .34 .33 .55 .29 .39 .43 .24 .23 .36 .35 .32 .33 .41 .36 .23	17 JPN	.62	.60	.75	.60	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	.45	.70	.79	.06	.00	.53	.71	.21
19 NZL .00 .21 .38 .72 .26 .48 .58 .46 .09 -07 03 .35 .20 .67 .43 20 CAN .00 .00 .00 .00 .00 .00 .00 .43 .60 .48 .00 .25 .13 .00 .33 .48 .04 .00 Average .34 .33 .55 .29 .39 .43 .52 .42 .23 .36 .35 .32 .33 .41 .36 .23	18 AUS	.65	.38	.76	.64	.40	.20	.76	.64	.01	.41	14	05	.58	.61	.51	.55	.44	.49	.31	.42
Average .34 .33 .55 .29 .39 .43 .52 .45 .24 .23 .36 .35 .32 .33 .41 .36 .23	19 NZL 20 CAN	.60	.21	.38	.72	.26	.48	.58	.46	.09	07 12	05	.01	.43	.35	.20	.67	03	.28 10	.27	.43
	Average	.34	.33	.55	.29	.39	.43	.52	.45	.00	.23	.36	.35	.32	.32	.38	.23	.33	.41	.36	.23

Table 6.51 OCA silhouettes

Note: 1 'n.a.' for not applicable.

Aggregate measures (7 variables)							
		Dollar	Basket	Yen	Euro	Yuan	Average
1 Average number of clusters over	Pre-crisis	7.3	4.7	8.0	5.7	8.7	6.9
methods	Crisis	7.0	6.0	5.3	7.3	6.3	6.4
	Post-crisis 7V	7.0	5.3	5.0	5.7	6.0	5.8
Average		7.1	5.3	6.1	6.2	7.0	
2 Average number of clusters over	HCM	8.3	6.7	7.7	10.3	10.0	8.6
periods	FCM	5.7	5.0	4.3	3.7	5.0	4.7
	MBC	7.3	4.3	6.3	4.7	6.0	5.7
Average		7.1	5.3	6.1	6.2	7.0	
3 Positive individual silhouettes (%)	HCM	70.0	77.2	70.2	68.3	66.7	70.5
over periods	FCM	68.3	77.2	75.4	70.0	71.9	72.6
	MBC	75.0	87.7	64.9	81.7	71.9	76.2
Average		71.1	80.7	70.2	73.3	70.2	
4 Mean silhouette over periods	HCM	.32	.37	.34	.29	.30	.32
	FCM	.22	.24	.26	.26	.21	.24
	MBC	.41	.44	.28	.34	.39	.37
Average		.32	.35	.29	.30	.30	
5 Median silhouette over periods	HCM	.38	.43	.43	.26	.36	.37
	FCM	.31	.32	.36	.32	.23	.31
	MBC	.48	.51	.41	.39	.49	.46
Average		.39	.42	.40	.32	.36	

Table 6.51 OCA silhouettes (continued)

Table 6.52 OCA-dollar cross-method subclusters

		HCM	SW	FCM	SW	MBC	SW	Cross-method
	1	HKG, SGP, TWN, KOR, MYS, MAC	.57	KOR, MYS, PHL, IND, CAN	12	HKG, KOR, TWN, MYS, SGP, MAC	.57	HKG, TWN, SGP, MAC
	2	CHN, IND, AUS, NZL	.36	KHM, IDN, THA, BRN, JPN	.37	CHN, IND, AUS, NZL	.36	KHM, IDN, THA, JPN
	3	KHM, IDN, THA, JPN	.53	HKG, TWN, SGP, MAC	.65	KHM, IDN, THA, JPN	.51	CHN, AUS, NZL
	4	LAO, MMR	.39	CHN, AUS, NZL	.62	PHL	.00	KOR, MYS
Pre-crisis	5	BRN	.00	LAO, MMR, VNM	.42	VNM	.00	
	6	VNM	.00			BRN	.00	
	7	PHL	.00			LAO	.00	
	8	CAN	.00			MMR	.00	
	9					CAN	.00	
Average			.39		.34		.34	
	1	KOR, MYS, THA, NZL, PHL, BRN, TWN, SGP, VNM	.39	KOR, TWN, MYS, SGP, BRN, CAN	22	KOR, MYS, THA, NZL, PHL, BRN, SGP, VNM	.45	KOR, MYS, SGP, BRN
	2	CHN, HKG, MAC, JPN	.45	CHN, HKG, KHM, MAC, JPN	.21	TWN, KHM, IND, AUS	.18	CHN, HKG, MAC, JPN
Crisis	3	IND, AUS	.57	MMR, THA, NZL	04	CHN, HKG, MAC, JPN	.57	PHL, VNM
	4	KHM	.00	IND, AUS	.63	MMR	.00	THA, NZL
	5	MMR	.00	IDN, LAO	13	LAO	.00	IND, AUS
	6	LAO	.00	PHL, VNM	.40	IDN	.00	
	7	IDN	.00			CAN	.00	
	8	CAN	.00					
Average			27		09		33	
Average			.21		.05		.00	
	1	TWN, MYS, THA, CHN, HKG, SGP, IND, JPN, VNM		CHN, HKG, TWN, MYS, SGP, JPN		CHN, HKG, TWN, KHM, MYS, PHL, SGP, THA,		CHN, HKG, TWN, MYS, SGP, JPN
			.39		.76	VNM, IND, MAC, JPN	.72	
	2	KHM, PHL, MAC	.50	KHM, LAO, PHL, MAC	29	IDN, AUS, NZL	.48	KHM, PHL, MAC
	3	AUS, NZL	.45	THA, VNM, IND, CAN	34	KOR, BRN	.50	THA, VNM, IND
Post-crisis	4	KOR	.00	IDN, AUS, NZL	.45	LAO	.00	AUS, NZL
7V	5	BRN	.00	KOR, BRN	.52	MMR	.00	
	6	IDN	.00	MMR	.00	CAN	.00	
	7	LAO	.00					
	8	CAN	.00					
	9	MMR	.00					
	10)						
Average			.29		.22		.55	
				TUBL COD				
All	1	SGP, IWN, MYS		IWN, SGP		HKG, MAC		-
7V	2					MYS, SGP		
	1	MYS, THA, CHN, TWN, IND, VNM	.33	KOR, TWN, KHM, LAO, PHL, MAC, BRN	16	MYS, THA, CHN, TWN, IND, VNM	.31	CHN, THA, VNM, IND
	2	KHM, PHL, MAC	.48	CHN, IDN, THA, VNM, IND, CAN	19	HKG, SGP, JPN	.63	KHM, PHL, MAC
	3	HKG. SGP. JPN	.63	HKG, SGP, JPN, MYS	.71	KHM, PHL, MAC	.48	HKG, SGP, JPN
Post-crisis	4	AUS, NZL	.68	AUS, NZL	.79	AUS, NZL	.68	AUS, NZL
8V	5	KOR	.00	MMR	.00	KOR	.00	
	6	IDN	.00			IDN	.00	
	7	BRN	.00			BRN	.00	
	8	LAO	.00			LAO	.00	
	9	MMR	.00			MMR	.00	
	10) CAN	.00			CAN	.00	
	_		00				00	
Average			.33		.11		.29	
All	1	MYS, TWN		-		-		-
Desirale	-							
Periods	2							



Post-crisis 7V

Post-crisis 8V

Figure 6.21 OCA-dollar PCA plots

Table 6.53 OCA cross-method subclusters

	Dollar	Currency Basket	Yen	Euro	Yuan
	1 HKG, SGP, TWN, MAC	HKG, IDN, MAC, BRN,	KOR, MYS, PHL, AUS	KOR, MYS, CAN,	KOR, TWN, IDN, SGP
		KHM, THA		TWN, THA	
	2 KHM, IDN, THA, JPN	KOR, TWN, MYS, PHL,	TWN, SGP	PHL, IND, AUS	PHL, THA, IND
Pre-crisis		IND			
	3 CHN, AUS, NZL	CHN, AUS, NZL	HKG, MAC	BRN, JPN	HKG, MAC
	4 KOR, MYS	LAO, MMR	IDN, THA	HKG, SGP	AUS, CAN
	5			CHN, NZL	
	1 KOR, MYS, SGP, BRN	HKG, SGP, KHM, KOR,	KOR, MYS, PHL, THA	HKG, JPN, KHM, TWN	HKG, KOR, PHL, MAC,
		MYS, TWN			JPN
	2 CHN, HKG, MAC, JPN	PHL, MAC, BRN	VNM, NZL, CAN	CHN, PHL, MAC	MYS, THA, VNM, BRN
Crisis	3 PHL, VNM	CHN, VNM	TWN, SGP, BRN	SGP, CAN	IND, AUS, CAN
	4 THA, NZL		MMR, IND	VNM, NZL	KHM, SGP
	5 IND, AUS		HKG, MAC		
	6		CHN, IDN		
	1 CHN, HKG, TWN, MYS,	KOR, TWN, MYS, THA,	CHN, TWN, MYS, HKG,	CHN, HKG, MYS,	VNM, IND, TWN, MYS,
	SGP, JPN	VNM	THA, VNM, PHL	KOR, JPN, MAC	THA
Post-	2 KHM, PHL, MAC	CHN, HKG, SGP, IND	KHM, MAC	KHM, SGP	KHM, JPN
crisis 7V	3 THA, VNM, IND	IDN, AUS, NZL	IDN, AUS	PHL, THA	HKG, PHL
	4 AUS, NZL	KHM, MAC		AUS, NZL	AUS, NZL
	5	PHL, BRN			

Table 6.53	OCA cross-met	hod subc	lusters ((continued))
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	Dollar	Currency Basket	Yen	Euro	Yuan
All Periods 7V	1 -	KOR, MYS, TWN	MYS, PHL	-	-
	1 CHN, THA, VNM, IND	CHN, TWN, VNM	CHN, TWN, THA, VNM,	MAC, JPN, KOR, KHM	HKG, SGP, JPN
Post-	2 KHM, PHL, MAC	MYS, THA	HKG, SGP, KHM, MAC	CHN, TWN, VNM, IND	AUS, NZL
crisis 8V	3 HKG, SGP, JPN	KOR, PHL	AUS, NZL	HKG, SGP	VNM, IND
	4 AUS, NZL	HKG, SGP		MYS, THA	
	5	AUS, NZL		AUS, NZL	
All Periods 8V	1 -	-	HKG, MAC	-	-

	DDE	CPS	D	ST.		A 11		DDE	CPS	D	ST.		A 11
	TRE	CRS	7V	8V	7V	8V		TKL	CRS	7V	8V	7V	/ 8V
DB	1 CHN, AUS, NZL	KOR, MYS, SGP	CHN, HKG, SGP	CHN, VNM	-	-	DY	HKG, MAC	KOR, MYS	CHN, TWN, MYS	CHN, THA, VNM, IND	-	-
	2 IDN, THA, KHM		TWN, MYS	HKG, SGP			_	SGP, TWN	SGP, BRN	KHM, MAC	KHM, MAC		
	3 HKG, MAC		KHM, MAC	AUS, NZL			_	IDN, THA	HKG, MAC		HKG, SGP		
	4 KOR, MYS		THA, VNM				_	KOR, MYS			AUS, NZL		
	5		AUS, NZL				-						
DE	1 HKG, SGP	HKG, JPN	CHN, HKG, MYS, JPN	CHN, VNM, IND	-	-	DR	TWN, SGP	MYS, BRN	VNM, IND, THA	HKG, SGP, JPN	-	-
	2 CHN, NZL	CHN, MAC	AUS, NZL	КНМ, МАС			_	HKG, MAC	HKG, MAC, JPN	TWN, MYS	AUS, NZL		
	3 KOR, MYS			HKG, SGP			_		IND, AUS	AUS, NZL	VNM, IND		
	4			AUS, NZL									
BY	1 KOR MYS	SGP TWN	TWN MYS	CHN TWN	-		BF	KOR TWN	HKG KHM	CHN HKG	CHN TWN	-	-
DI	PHL	561,1010	THA, VNM	VNM			DL	MYS	TWN	cint, into	VNM		
	2 HKG, MAC	KOR, MYS	CHN, HKG	HKG, SGP			-	PHL, IND	PHL, MAC	KOR, MYS	MYS, THA		
	3 IDN, THA		IDN, AUS	AUS, NZL			-	CHN, NZL		AUS, NZL	HKG, SGP		
	4		KHM, MAC				_				AUS, NZL		
		und non	100/00000	THE SOL				NOD MUS		aun. 1997a			
вк	I HKG, MAC	HKG, KOR	WNM, TWN, MYS, THA	HKG, SGP	-	-	YE	KOR, MYS	VNM, NZL	CHN, HKG, MYS	VNM, IND	-	-
	2 KOR, TWN	SGP, KHM	AUS, NZL	AUS, NZL			-	PHL, AUS			HKG, SGP		
	3 PHL, IND	PHL, MAC		VNM, IND			-				KHM, MAC		
	4										AUS, NZL		
YR	2 TWN, SGP	KOR, PHL	VNM, TWN, MYS, THA	HKG, SGP	-	-	ER	PHL, IND	HKG, JPN	AUS, NZL	HKG, SGP	-	-
	3 HKG, MAC	MYS, THA	HKG, PHL	AUS, NZL			-		PHL, MAC		AUS, NZL		
	4	HKG, MAC		VNM, IND			-				VNM, IND		
BBU		HOD MUS	anni uura							auni 1997a			
DBA	I IDN, THA	KOR, MYS	CHN, HKG	CHN, VNM			DBE	CHN, NZL	-	CHN, HKG	CHN, VNM		-
	2 HKG, MAC		TWN, MYS	HKG, SGP			-	KOR, MYS		AUS, NZL	HKG, SGP		
	<u>3 KOR, MYS</u>		KHM, MAC	AUS, NZL			-				AUS, NZL		
	4		THA, VINN										
DBR	1 HKG, MAC	-	TWN, MYS	HKG, SGP	-	-	DYE	KOR, MYS	-	CHN, MYS	CHN, VNM, IND	-	-
	2		THA, VNM	AUS, NZL			-				KHM, MAC		
	3		AUS, NZL				_				HKG, SGP		
	4										AUS, NZL		
DVP	1 HKG MAC	HKG MAC	TWN MVS	HKC SCP			DED		HKC IDN	AUS NZI	UKC SCP		
DIK	2 SGP TWN	TIKO, MAC	1 W N, W115	AUS NZI	-	-	DER	-	IIKO, JEN	AUS, NZL	AUS NZI	-	-
	3			VNM IND			-				VNM IND		
	5			, i i i i i i i i i i i i i i i i i i i							, i uii, ii u		
BYE	1 KOR, MYS	-	CHN, HKG	CHN, TWN, VNM	-	-	BYR	HKG, MAC	-	TWN, MYS, THA, VNM	HKG, SGP	-	-
	2			HKG, SGP			_				AUS, NZL		
	3			AUS, NZL									
DED	1 KOP TWN		AUS NZI	HKC SCP			VED				UKC SCP		
DEK	2 PHL IND	FIIL, MAC	AUS, NZL	AUS NZI	-	-		-	-	-	AUS NZI	-	-
	3			MOD, MEL			-				VNM, IND		
	-										,		
DBYE	1 KOR, MYS	-	CHN, HKG	CHN, VNM	-	-	DBYR	HKG, MAC	-	TWN, MYS	HKG, SGP	-	-
	2			HKG, SGP			_			THA, VNM	AUS, NZL		
	3			AUS, NZL									
DBED	1.		AUS NZI	HKG SGP			DYFP				HKG SCP	-	
DDEK	2		AUD, INZL	AUS N7I	-	-	DIEK	-			AUS NZI	-	-
				.100, INZL			-				VNM. IND		
	-												
BYER	1 -	-	-	HKG, SGP	-	-	DBYER	-	-	-	HKG, SGP	-	-
	2			AUS, NZL			_				AUS, NZL		

Table 6.54 OCA cross-method-anchor subclusters

Note: D=Dollar; B=Currency Basket; Y=Yen; E=Euro/Mark; R=Yuan (Renminbi)

6.5.2 Classifications using Weighted Criteria

Table 6.55 compares the cross-weighting subclusters across methods by the US reference. Those by other references are shown respectively in Tables E.5–E.8 in Appendix E. Table 6.56 collects the cross-weighting-and-method subclusters by anchor. These subsets of countries are stable over methods even when criteria are weighted

No cross-weighting-method subcluster is also robust over all periods or all anchors. Hence, it may be appealing to look at the subclusters which are robust across four of the five anchors.

In this regard, the cross-method Korea-Malaysia is robust across the first four anchors for the pre-crisis period and across dollar and basket anchors for the crisis period even when criteria are weighted.

For post-crisis 8V, the cross-method Australia-NewZealand which is robust across all anchors previously is also robust here over all anchors but the yen anchor. For postcrisis 7V, Australia-NewZealand is stable over the same set of anchors, similar to the previous finding when criteria are not weighted.

What about the pairs of countries associated with similar exchange rate regimes? Hong Kong and Macau, the dollar areas are only seen together for the crisis period by the US reference. The rest of the previous linkages are not seen when criteria are weighted. Singapore and Brunei are not seen together in any solution.

			Cross-weighting		Cross-weighting-method
		HCM	FCM	MBC	
	1	HKG, SGP, TWN, KOR,	IDN, THA, BRN, JPN	HKG, KOR, TWN, MYS,	IDN, THA, JPN
		MYS, MAC		SGP, MAC	
Dre crisis	2	CHN, IND, AUS, NZL	HKG, TWN, SGP	CHN, IND, AUS, NZL	HKG, TWN, SGP
FIE-CIISIS	3	IDN, JPN, THA	CHN, AUS, NZL	IDN, THA, JPN	CHN, AUS, NZL
	4	LAO, MMR	KOR, MYS, PHL		KOR, MYS
	5		LAO, MMR		
	1	KOR, MYS, THA, NZL, SGP	KOR, TWN, MYS, SGP, BRN	KOR, MYS, PHL, SGP, THA,	KOR, MYS, SGP
_				VNM, BRN, NZL	
Crisis	2	CHN, HKG, MAC	CHN, HKG, MAC	TWN, KHM, IND, AUS	CHN, HKG, MAC
CHSIS	3	IND, AUS	KHM, JPN	CHN, HKG, MAC, JPN	IND, AUS
_	4	PHL, VNM	PHL, VNM		PHL, VNM
	5		IND, AUS		
	1	TWN, MYS, THA, CHN,	CHN, HKG, TWN, MYS	CHN, HKG, TWN, KHM,	CHN, HKG, TWN, MYS
		HKG, SGP, IND, JPN, VNM		MYS, PHL, SGP, THA, VNM	,
_				IND, MAC, JPN	
Post-crisis 7V	2	KHM, PHL, MAC	KHM, PHL, MAC	IDN, AUS, NZL	KHM, PHL, MAC
_	3	AUS, NZL	IDN, AUS, NZL	KOR, BRN	AUS, NZL
_	4		KOR, BRN		SGP, JPN
	5		SGP, JPN		
All Periods 7V-	1	MYS, SGP	-	HKG, MAC	-
7 m r eriods 7 v	2			MYS, SGP	
	1	MYS, THA, CHN, TWN, IND	, KHM, PHL, MAC	CHN, TWN, MYS, THA,	KHM, PHL, MAC
_		VNM		VNM, IND	
_	2	KHM, PHL, MAC	KOR, TWN, BRN	HKG, SGP, JPN	AUS, NZL
Post-crisis 8V	3	HKG, SGP, JPN	HKG, MYS	KHM, PHL, MAC	CHN, THA
_	4	AUS, NZL	CHN, THA	AUS, NZL	
_	5		AUS, NZL		
	6		IDN, IND		
All Periods 8V	1	-	-	-	-

Table 6.55 OCA-dollar cross-weighting-method subclusters

Table 6.56 OCA cross-weighting-method subclusters

	Dollar	Currency Basket	Yen	Euro	Yuan
	IDN, THA, JPN	KOR, TWN, MYS	KOR, MYS	KOR, TWN, MYS,	KOR, TWN, IDN, SGP
				THA	
Pre-crisis	HKG, TWN, SGP	HKG, BRN	TWN, SGP	CHN, NZL	PHL, IND
	CHN, AUS, NZL	LAO, MMR		PHL, IND	AUS, CAN
	KOR, MYS				
	KOR, MYS, SGP	MAC, BRN	MYS, THA	CHN, PHL, MAC	IND, AUS, CAN
Crisis	CHN, HKG, MAC	KOR, MYS	VNM, NZL	HKG, KHM,	MYS, THA, VNM
Clisis	IND, AUS		KOR, PHL	SGP, CAN	HKG, PHL
	PHL, VNM				KOR, JPN
	CHN, HKG, TWN, MYS	IDN, AUS, NZL	CHN, TWN, MYS, THA,	CHN, TWN, JPN, MAC	MYS, THA
			VNM		
Post-crisis 7V	KHM, PHL, MAC	KOR, THA	KHM, MAC	HKG, KOR, MYS	AUS, NZL
1 030-011313 7 4	AUS, NZL	CHN, HKG		AUS, NZL	KHM, JPN
	SGP, JPN	KHM, MAC			
	:	TWN, MYS			
All Periods 7V	1	-	-	-	-
	KHM, PHL, MAC	CHN, TWN	CHN, TWN, THA, VNM	CHN, TWN, VNM	HKG, JPN
	AUS, NZL	MYS, THA	HKG, SGP	KOR, KHM	AUS, NZL
Post-crisis 8V	CHN, THA	AUS, NZL	KHM, MAC	MAC, JPN	VNM, IND
				MYS, THA	
				AUS, NZL	
All Periods 8V	1	-	-	-	-

6.5.3 Assessment of Preparedness

The first part compares over the methods the assessment preparedness findings using the original unweighted criteria and the second part compares those using weighted criteria.

6.5.3.1 Preparedness Assessment using Unweighted Criteria

Table 6.57 puts together the subsets of countries which are shown to share similar OCA features and degrees of preparedness by method for the US reference. Subsets which are robust over methods are also shown. The findings by other references are shown respectively in Tables E.9–E.12, Appendix E.

Table 6.58 compares the cross-method sets of countries by anchor. Very few countries still share the same cluster under the considerations here. Nevertheless, one can see more cases by the dollar anchor. Against the US, Korea and Malaysia are linked consecutively over pre-crisis and crisis periods. Against US also, Hong Kong and Singapore belong to same grouping in the pre-crisis and post-crisis 8V solutions.

In another respect, Vietnam and India are always together for dollar, yen, euro, and yuan anchors in the post-crisis 8V solution; in the post-crisis 7V solution they only share the same grouping for yuan anchor. Hence, Vietnam and India should have been predominantly linked by the labor criterion between themselves and with the dollarized and/or euroized benchmarks by each of the four reference countries.

Hong Kong and Macau are not seen together whilst Singapore and Brunei share the same grouping only for the US-reference crisis period.

	HCM	FCM	MBC	Cross-method
	1 HKG, SGP, TWN, KOR, MYS	S, KOR, MYS, PHL	HKG, KOR, TWN, MYS, SGP MAC	, CHN, AUS, NZL
Des estate	2 CHN, IND, AUS, NZL	HKG, SGP, MAC	CHN, IND, AUS, NZL	KOR, MYS
Pre-crisis	3	CHN, AUS, NZL	KHM, IDN, THA, JPN	HKG, SGP
	4	IND, CAN		
	5	THA, BRN		
		KOD MYG GOD DDN	KOD MYC DIH COD THA	KOD MYG GCD DDN
	BRN, SGP, VNM	KOR, MYS, SGP, BRN	VNM, BRN, NZL	KOR, MYS, SGP, BRN
	2	HKG, KHM, JPN	CHN, HKG, MAC, JPN	THA, NZL
Crisis	3	MMR, THA, NZL	KHM, IND, AUS	PHL, VNM
	4	PHL, VNM		
	5	CHN, MAC		
	6	TWN, CAN		
	1 TWN MYS THA CHN	VUM DUI MAC	CHN HKC TWN KHM	VUM DUI MAC
	I IWN, MIS, IRA, CRN, HKG SGP IND IPN VNM	KHM, FHL, MAC	MVS DUI SCID TUA VNM	KHM, FHL, MAC
Post-crisis 7V			IND, MAC	
	2 KHM, PHL, MAC		KOR, BRN	
All Periods 7V	1 SGP. MYS	-	HKG, MAC	-
	2		MYS, SGP	
	1 MYS THA CHN TWN IND	TWN KHM MAC BRN	CHN TWN MYS THA	CHN VNM IND
	VNM	, i wit, itilit, inite, biet	VNM IND	
	2 KHM PHL MAC	CHN THA VNM IND	HKG SGP IPN	HKG SGP IPN
Post-crisis 8V	3 HKG, SGP, JPN	HKG, MYS, SGP, JPN	KHM, PHL, MAC	KHM, MAC
	4	KOR, LAO	AUS. NZL	
	5	AUS. NZL		
All Periods 8V	1 -	-	-	-

Table 6.57 OCA-dollar-preparedness cross-method subclusters

Table 6.58 OCA-preparedness cross-method subclusters

	Dollar	Currency Basket	Yen	Euro	Yuan
	1 CHN, AUS, NZL	TWN, MYS, PHL, IND	-	PHL, IND, AUS	-
Pre-crisis	2 KOR, MYS	CHN, AUS		MYS, CAN	
	3 HKG, SGP				
	1 KOR, MYS, SGP, BRN	-	-	-	-
Crisis	2 THA, NZL				
	3 PHL, VNM				
Doct origin 7V	1 KHM, PHL, MAC	THA, VNM	-	-	VNM, IND
FOST-CIISIS / V	2	PHL, BRN			AUS, NZL
All Periods 7V	1 -	-	-	-	-
	1 CHN, VNM, IND	-	VNM, IND	VNM, IND	VNM, IND
Post-crisis 8V	2 HKG, SGP, JPN				
	3 KHM, MAC				
All Periods 8V	1 -	-	-	-	-

6.5.3.2 Preparedness Assessment using Weighted Criteria

Table 6.59 puts together the US-based common sets of countries which are relatively symmetrical in OCA features and degree of preparedness regardless of criteria weighting. The cross-method sets of countries are also provided. The tables for other anchors are placed in Tables E.13-E.16, Appendix E. For all anchors, larger common sets can be seen by MBC.

Table 6.60 collects the cross-method sets by anchor. It is apparent that only the USbased pre-crisis Australia-NewZealand and crisis period Philippines-Vietnam, and the Germany/EMU-based pre-crisis Philippines-India maintain the above stated features.

	HCM	FCM	MBC	Cross-method
	1 HKG, SGP, TWN, KOR, M	YS AUS, NZL	HKG, KOR, TWN, MYS, SGP	, AUS, NZL
Pre-crisis			MAC	
	2 CHN, IND, AUS, NZL		CHN, IND, AUS, NZL	
	3		IDN, THA, JPN	
	1 PHI VNM	KOP MVS SCP PPN	KOP MYS PHI SCP THA	PHI VNM
		KOR, M15, 501, BRN	VNM, BRN, NZL	
Crisis	2	KHM, JPN	CHN, HKG, MAC, JPN	
-	3	PHL, VNM	KHM, IND, AUS	
-	4	CHN, MAC		
	1		CUN LIKE TWAI KUM	
Post crisis	1 -	-	MVS DUI SCID THA VNM	-
7V			IND. MAC	
	2		KOR, BRN	
All Dariada	1		HKC MAC	
7V	2	-	MYS. SGP	-
	1 KHM, PHL, MAC	-	CHN, TWN, MYS, THA,	-
Doct origin			VNM, IND	
PUSE-CHISIS	2 SGP, JPN		HKG, SGP, JPN	
0 V	3		KHM, PHL, MAC	
	4		AUS, NZL	
All Pariods	1			
8V	1 -	-	-	-

Table 6.59 OCA-dollar-preparedness cross-weighting-method subclusters

Table 6.60 OCA-preparedness cross-weighting-method subclusters

		Dollar	Currency Basket		Yen	Euro		Yuan
Pre-crisis	1	AUS, NZL -		-		PHL, IND	-	
Crisis	1	PHL, VNM -		-		-	-	
Post-crisis 7V	1	-		-		-	-	
All Periods 7V	1	-		-		-	-	
Post-crisis 8V	1	-		-		-	-	
All Periods 8V	1	-		-		-	-	

6.5.4 Recapitulation

The section has assessed and compared the OCA findings across the cluster analysis methods as well as detected subsets of countries which are robust over the methods in the original classification, criteria weighting, preparedness assessment, and preparedness assessment with criteria weighting exercises. The following are the key general findings from the original classifications:

- On average, over methods; increasingly convergent configuration approximated by consistently fewer clusters over the periods can be observed when the US, Japan, or China is the reference country where the greatest reduction in the number of clusters is shown by the Japan reference.
- On average, over methods and periods; the smallest number of clusters is produced when the G3 reference (basket anchor) is used.
- On average, over methods and periods; the G3 reference is compatible with the greatest number of positive and higher silhouettes.
- On average, over anchors and periods; MBC generates the greatest number of positive and higher silhouettes. FCM produces the lowest silhouettes.

In view of the findings above, the G3 reference appears to be consistent with most convergent and most data-fitting arrangements whilst MBC is compatible with most data-fitting solutions. Indeed, based on the number of East Asian countries associated with the post-dollarization and/or post-euro benchmarks from the HCM and MBC findings, in general throughout the periods the countries could have been more prepared for a fixed common currency basket peg.

Other key findings, including some notable cross-method subsets of countries will be revisited in Chapter 8 Discussion and Conclusion. The subsequent section presents some analyses on the OCA variables.

6.6 Subsidiary Analysis

Whilst the preceding exercises concern about classifications of the countries given the OCA variables, this subsidiary analysis concerns about the variables instead. The first part of this section presents the criterion dominance exercise and the second part presents the variable selection exercise.

6.6.1 Criterion Dominance

This section investigates whether certain criteria are dominant or representative of the rest of the criteria in generating the original cluster solutions. At the same time, the less important criteria can also be recognized. Basically, the exercise is done by removing the original OCA variables one at a time using all possible ways of sequencing as long as the objects displaced from their original position do not exceed 3. The rest of the discussion sequentially presents the criterion dominance findings from HCM, FCM, and MBC, before ending with a comparison over the methods.

The HCM results are shown in Table 6.61. Columns '1' display the original groupings using all variables, that is, 7 variables for pre-crisis and crisis periods and 8 variables (inclusive of labor criterion) for post-crisis period. Columns '2' contain the solutions generated by smaller sets of more dominant variables. The number of objects 'moved' is also given.

The subsets of dominant criteria differ depending on period and anchor. Nonetheless, the business cycle (BUS), interest rate cycle (INT), and export (EXP) variables are the more dominant criteria as they indicated more frequently; BUS has a count of 12, INT a count of 11, and EXP a count of 11. In contrast, the less dominant criteria are the debt (DEB), exchange rate (RER), trade (TRA), and inflation (INF) variables in which each is present 8, 7, 7, and 4 times respectively. Labor flexibility (LAB) which is available only for the post-crisis period is indicated to be dominant for all anchors.

Moving across the anchors by period, INT consistently appears in the pre-crisis subsets of dominant criteria. For the crisis and post-crisis periods, BUS, and BUS and LAB, respectively are always present.

The bottom of Table 6.61 shows the criteria which are consistently indicated and not indicated to be dominant over the periods. Under dollar anchor, RER is not indicated throughout the periods, implying that real dollar rate volatility is not dominant in molding the cluster configurations; hence, the region could have been highly homogeneous with respect to this dimension. By G3 reference, EXP is constantly indicated to be dominant while TRA is not; by Japan, BUS, RER, and EXP dominant while TRA and DEB are not; by Germany/EMU, TRA, BUS, and INT dominant while INF is not; and by China, TRA and EXP are dominant.

The FCM results are arranged in Table 6.62. The more dominant criteria are INT, BUS, and EXP which have been indicated 12, 11, and 11 times respectively. The smaller counts are from the inflation criterion with count of 9, and the exchange rate (RER), trade (TRA), and debt (DEB) dimensions with counts of 7 each. Labor flexibility (LAB) which is only available for the post-crisis period is present for all anchors.

Inspecting the results by period, only LAB is consistently indicated to be dominant across anchors and only for the post-crisis period. For other periods, no variable is constantly dominant for all anchors.

The bottom of the table shows the criteria which are constantly found to be dominant and not dominant over the periods. Against US, TRA and RER are not indicated as dominant. Viewed in this light, trade intensity with US and real dollar rate volatility may not be as important as other criteria in shaping the partitions. One possible explanation is that the region could be highly symmetrical in these two dimensions. Similarly, the inflation dimension should be relatively unimportant when the reference is Germany/EMU. Meanwhile, INT and EXP are always dominant in the dollar and yuan solutions.

The MBC results are collected in Table 6.63. There are four criteria which are indicated to be dominant more frequently; they are INT, TRA, and DEB that obtain counts of 11, 9, and 8 respectively. Those for the crisis period yen and post-crisis euro

solutions where not even one variable can be dropped are not counted. Meantime, the less dominant criteria are BUS, INF, RER, and EXP that respectively obtain counts of 7, 7, 7, and 4.

Looking at the findings by period, no variable is dominant across all anchors for the pre-crisis period. For the crisis period, TRA is dominant over all anchors and for the post-crisis period, INT.

The bottom rows of the table list the cross-period variables. Interestingly, unlike other anchors, the basket anchor does not have any variable which is always dominant but it is the only anchor which has at least one consistently not dominant variable, namely BUS.

Comparisons across Methods

The dominant criteria indicated by the clustering methods are collected in Table 6.64. Criteria which are indicated to be dominant across methods are given too. The following common findings may be noteworthy.

For pre-crisis period, INT is dominant across methods for all anchors except for euro anchor. For crisis period, BUS and INT are common across methods for dollar, euro, and yuan anchors. For post-crisis period, EXP is common for dollar, basket, and yuan anchors. No criterion is consistently dominant across all methods and periods for any anchor.

In conclusion, different dominant variables are indicated by different clustering method.

		De	ollar	Currenc	v Basket	}	Zen	E	uro	Y	uan
		1	2	1	2	1	2	1	2	1	2
		All	TRA, INF,	All	INF, INT,	All	BUS, INF,	All	TRA, BUS,	All	TRA, INT,
			INT		EXP		RER, INT,		RER, INT,		EXP, DEB
M			2		2		EXP		EXP, DEB		
Moved	1	UKC SCD		KOD MVS	2 KOD MYS	TWAL COD	TWN CD	KOD MVC	I KOD MYS	KOD TWN	2 KOD TWN
	1	TWN KOR	TWN KOR	SGP IND	SGP IND	KOR MYS	KOR MYS	CAN TWN	CAN TWN	IDN MYS	SGP IDN
		MYS, MAC	MYS, MAC	TWN, PHL,	TWN, PHL,	PHL, IND,	PHL, IND,	THA	THA	SGP	NZL
				CHN, NZL,	CHN, NZL,	AUS	AUS				
				AUS	AUS, CAN						
	2	CHN, IND,	CHN, IND,	HKG, IDN,	HKG, IDN,	HKG, MAC	HKG, MAC,	, PHL, IND,	PHL, IND,	AUS, CAN	PHL, IND,
		AUS, NZL	AUS, NZL, BRN	MAC, BKN,	MAC, BKN, KHM		MMK	AUS	AUS		IHA
	3	KHM. IDN.	KHM, IDN.	LAO, MMR	LAO, MMR	IDN. THA	IDN. THA	HKG, SGP	HKG, SGP	PHL, THA.	AUS, CAN
Pre-crisis		JPN, THA	JPN, THA							IND	,
	4	LAO, MMR	MMR	VNM	VNM	KHM, NZL	KHM, NZL	CHN, NZL	CHN, NZL	HKG, MAC	HKG, MAC
	5	BRN	LAO	CAN	THA	LAO	LAO	BRN, JPN	BRN, JPN	NZL	MYS
	6	VNM	VNM			BRN	BRN	IDN	IDN, VNM	BRN	BRN
	-/	DUI	DUI			VNM	VNM	MAC KUM	MAC KUM	JPN	JPN
	9	THL	THL			CAN	CAN	LAO	LAO	MMR	MMR
	10					MMR		VNM	MMR	VNM	VNM
	11							MMR		KHM	KHM
		All	BUS, INT,	All	BUS, EXP,	All	BUS, RER,	All	TRA, BUS,	All	TRA, BUS,
			DEB		DEB		EXP		RER, INT,		INT, EXP,
									DED		DEB
Moved			3		2		2		0		1
	1	KOR, MYS,	KOR, MYS,	HKG, SGP,	HKG, SGP,	VNM, NZL,	VNM, NZL,	HKG, JPN,	HKG, JPN,	HKG, KOR,	THA, VNM,
		THA, NZL,	THA, NZL,	KHM, KOR,	KHM, KOR,	THA, KOR,	THA, KOR,	KHM, TWN	KHM, TWN	PHL, MAC,	MYS, BRN,
		PHL, BRN,	PHL, BRN,	MYS, TWN	MYS, TWN	PHL, MYS,	PHL, MYS,			JPN	SGP
		VNM	VNM CAN			CAN HKG	CAN HKG				
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			MAC, KHM	, MAC,				
						BRN	KHM, BRN,				
							LAO, MMR				
	2	CHN, HKG,	CHN, HKG,	PHL, MAC,	THA, IND,	MMR, IND,	IND, AUS	CHN, PHL,	CHN, PHL,	MYS, THA,	HKG, KOR,
		MAC, JPN	MAC, JPN	BKN	NZL	AUS		MAC	MAC	VINM, BKN	JPN, PHL, MAC
Crisis	3	IND. AUS	KHM, IND,	CHN, VNM	PHL, MAC,	CHN, IDN	CHN. IDN	KOR, MYS.	KOR, MYS.	IND. AUS.	IND, CAN.
		. ,	AUS	,	BRN	- ,	- , ,	THA	THA	CAN	AUS
	4	MMR	IDN, MMR	THA, IND	CHN, VNM	LAO		SGP, CAN	SGP, CAN	TWN, KHM	,TWN, KHM
				100						SGP	
	5	KHM	LAO	MMR	AUS, IDN			VNM, NZL	VNM, NZL	MMR	NZL
	7	IDN		NZI	CAN			BRN	BRN		IDN
	8	LAO		CAN	LAO			MMR	MMR	NZL	LAO
	9			IDN				AUS	AUS		
	10			LAO				IDN	IDN		
	11							LAO	LAO		
		4.11	DUC EVD	4.11	DUC DED	4.11	DUC DED	A 11	TDA DUG	4.11	TDA DUG
		All	DER LAR	All	BUS, KEK, INT EXP	All	BUS, KEK, INT EYP	All	IKA, BUS, INT LAB	All	IKA, BUS,
			DED, EAD		DEB, LAB		LAB		INT, LAD		EXP. LAB
Moved			1		1		2		2		1
	1	MYS, THA,	MYS, THA,	MYS, THA,	MYS, THA,	CHN, MYS,	CHN, MYS,	MAC, JPN,	MAC, JPN,	MYS, THA,	MYS, THA,
		CHN, TWN,	CHN, TWN,	CHN, TWN,	CHN, TWN,	TWN, THA,	TWN, THA,	KOR, KHM	KOR, KHM,	VNM, IND	VNM, IND
		IND, VINM	IND, VINIM	PHI	PHI	IND	VINNI, IND	VNM IND	VNM IND		
				THE	THE	I (D		VI (101, 11 (D	IDN		
	2	KHM, PHL,	KHM, PHL,	KHM, MAC	KHM, MAC	HKG, SGP,	HKG, SGP,	HKG, MYS,	HKG, MYS,	TWN, KHM	TWN, KHM,
		MAC	MAC			KHM, MAC	КНМ,	THA, SGP	THA, SGP		LAO
		UWG COD	UNG COD	HIVE GOD	und cop		MAC, PHL			HUG GOD	UNC COD
D .	3	HKG, SGP,	HKG, SGP,	HKG, SGP,	HKG, SGP	AUS, NZL	AUS, NZL	AUS, NZL	AUS, NZL	HKG, SGP,	HKG, SGP,
Post-	4	AUS NZI	AUS NZI	AUS NZI	AUS NZI	KOR	KOR MMR	IDN	LAO CAN	IDN	BRN
011515		NOS, NEE	CAN	MOD, MEL	NOS, NEE	ROR	Ron, minin	IDIA	Lito, citit	ibit	DIG
	5	IDN	IDN	IDN	IND, CAN	IDN	IDN	CAN	BRN	PHL	KOR
	6	KOR	KOR	BRN	BRN	CAN	CAN	BRN	MMR	MAC	PHL
	7	BRN	BRN	CAN	IDN	BRN	BRN	LAO	PHL	KOR	MAC
	8	LAO	LAO	LAO	LAO	LAO	LAO	MMR		BRN	IDN
	9	MMR	WIWK	WIWK	WIWIK	WIWK		гПL		CAN	CAN
	11	14114117								LAO	MMR
	12									MMR	
All	Yes		-		EXP		BUS, RER,		TRA, BUS,		TRA, EXP
Periods	Nn		RER		TRA		TRA. DEB		INF		-
	· r′						,				

Table 6.61 HCM clusters by all and by subsets of criteria

		De	ollar	Currenc	v Basket	Y	en	E	uro	Y	uan
		1	2	1	2	1	2	1	2	1	2
		All	BUS, INF, INT, EXP	All	INF, RER, INT	All	TRA, BUS, INF, INT, DEB	All	RER, EXP, DEB	All	BUS, INT, EXP, DEB
Moved	1	HKG, TWN, SGP, MAC	3 HKG, MMR SGP, MAC	, KOR, TWN, MYS, PHL, SGP, IND	2 KOR, MYS, SGP, IND	IDN, THA, BRN	2 IDN, THA, BRN, AUS	CHN, IDN, PHL, IND, AUS, NZL	3 CHN, IDN, PHL, VNM, AUS, NZL	KOR, TWN, IDN, SGP, BRN	3 HKG, KOR TWN, IDN, SGP, BRN, NZL
-	2	LAO, MMR, VNM	LAO, MMR	HKG, KHM, IDN, THA, MAC, BRN	HKG, TWN, KHM, IDN, THA, MAC, BRN	CHN, HKG, IND, MAC, NZL, CAN	CHN, HKG, KHM, IND, MAC, NZL, CAN	HKG, KOR, TWN, MYS, SGP, THA, MAC, CAN	HKG, KOR, TWN, MYS, SGP, THA, IND, CAN	LAO, MMR VNM, JPN	, LAO, MMR JPN
Pre- crisis	3	CHN, AUS, NZL	CHN, TWN, AUS, NZL, CAN	CAN	CAN	KOR, TWN, MYS, PHL, SGP, AUS,	KOR, TWN, MYS, PHL, SGP	KHM, LAO, MMR, VNM, BRN, JPN	KHM, LAO, MMR, MAC, BRN, JPN	HKG, KHM MAC	, KHM, MAC
	4	KHM, IDN, THA, BRN. JPN	KHM, IDN, THA, BRN. JPN	LAO, MMR, VNM	, LAO, MMR, VNM	KHM, LAO, MMR, VNM	LAO, MMR, VNM			PHL, THA, IND	PHL, THA, VNM, IND
	5	KOR, MYS, PHL, IND, CAN	KOR, MYS, PHL, IND,	CHN, AUS, NZL	CHN, PHL, AUS, NZL					MYS, AUS, NZL, CAN	MYS, AUS, CAN
		All	BUS, INF, INT, EXP, DEB	All	BUS, INF, RER, EXP	All	INF, RER, INT, EXP	All	TRA, BUS, INT, DEB	All	TRA, BUS INF, RER, INT, EXP
Moved			2		3		3		3		1
	1	CHN, HKG, KHM, MAC JPN	CHN, HKG, , KHM, MAC JPN	CHN, MMR ,PHL, THA, VNM, MAC BRN	, CHN, MMR PHL, VNM, , MAC, BRN	, KOR, TWN, MYS, PHL, SGP, THA, BRN	KOR, TWN, MYS, PHL, SGP, BRN	HKG, KOR, TWN, KHM JPN	HKG, KOR, ,TWN, KHM JPN	HKG, KOR, , MMR, PHL, MAC, JPN	HKG, KOR, MMR, PHL MAC, JPN
=	2	IDN, LAO	IDN, LAO, MMR	HKG, KOR, TWN, KHM MYS, SGP, CAN	HKG, KOR, ,TWN, KHM MYS, SGP	LAO, MMR, , IND	LAO	MMR, THA, VNM, AUS, NZL	MYS, THA, VNM, AUS, NZL	IDN, MYS, THA, VNM, BRN	MYS, THA, VNM, BRN
Crisis	3	PHL, VNM	PHL, VNM, BRN	LAO	IDN, LAO	HKG, KHM, MAC	HKG, KHM, MMR, IND, MAC	LAO	IDN, LAO, MMR	TWN, IND, AUS, CAN	TWN, IND, AUS, CAN
	4	MMR, THA, NZL	THA, NZL	IDN, IND, AUS, NZL	THA, IND, AUS, NZL, CAN	VNM, AUS, NZL, CAN	THA, VNM, AUS, NZL, CAN	MYS, SGP, BRN, CAN	SGP, BRN, CAN	KHM, SGP, NZL	KHM, SGP, NZL
-	5	IND, AUS	IND, AUS			CHN, IDN	CHN, IDN	CHN, IDN, PHL, IND, MAC	CHN, PHL, IND, MAC	LAO	IDN, LAO
-	6	KOR, TWN, MYS, SGP, BRN, CAN	KOR, TWN, MYS, SGP, CAN								
	,	All	INF, INT, EXP, DEB, LAB	All	TRA, BUS, INF, RER, INT, EXP, LAB	All	TRA, BUS, RER, LAB	All	TRA, BUS, INT, EXP, LAB	All	TRA, BUS, INT, EXP, DEB, LAB
Moved			3		3		3		2		2
_	1	HKG, MYS, SGP, JPN	HKG, MYS, SGP, BRN, JPN, CAN	CHN, TWN, KHM, VNM	CHN, TWN, KHM, VNM, IND, CAN	HKG, KHM, MYS, SGP, MAC, CAN	HKG, MYS, SGP, CAN	AUS, NZL	MMR, AUS, NZL, CAN	KOR, LAO, MMR, PHL, MAC	KOR, LAO, MMR, MAC
	2	MMR	MMR	AUS, NZL	AUS, NZL	KOR, PHL, BRN	KOR, MMR PHL, BRN	, KOR, KHM, LAO, MAC, JPN	KOR, KHM, LAO, MAC, JPN	TWN, IDN, THA, VNM, IND	TWN, IDN, THA, VNM IND
Post-	3	AUS, NZL	AUS, NZL	MMR	LAO, MMR	AUS, NZL	AUS, NZL	CHN, TWN, IDN, MYS, PHL, THA, VNM, IND	CHN, TWN, IDN, MYS, PHL, THA, VNM, IND	HKG, KHM MYS, SGP, BRN, JPN	, HKG, KHM MYS, PHL, SGP, JPN
crisis -	4	KOR, TWN, KHM, LAO, PHL, MAC, BRN	CHN, KOR, TWN, KHM LAO, PHL, MAC	IDN, LAO, ,IND, CAN	IDN	LAO, MMR	KHM, LAO, MAC	HKG, MMR SGP, BRN, CAN	,HKG, SGP, BRN	AUS, NZL, CAN	BRN, AUS, NZL, CAN
	5	CHN, IDN, THA, VNM, IND, CAN	IDN, THA, VNM, IND	HKG, SGP	нк G, S GP	CHN, TWN, IDN, THA, VNM, IND	CHN, TWN, IDN, THA, VNM, IND				

	D	ollar	Currence	cy Basket	Y	'en	E	uro	Y	uan
	1	2	1	2	1	2	1	2	1	2
	All	TRA, BUS, INF, RER, INT	All	INF, INT, DEB	All	TRA, BUS, RER, INT, DFB	All	INF, RER	All	TRA, INF, RER, INT
Moved		3		2		3		3		3
	1 HKG, KOR	, HKG, KOR,	CHN, KOR,	CHN, KOR,	KOR, MYS,	KOR, MYS,	HKG, KOR,	HKG, KOR,	KOR,TWN,	KOR, TWN,
	TWN, MYS	, TWN, MYS,	TWN, MYS,	MYS, PHL,	PHL, IND,	PHL	TWN, KHM	TWN, KHM	, IDN, SGP	IDN, SGP,
	SGP, MAC	SGP, MAC	PHL, IND,	IND, AUS,	AUS		MYS, SGP,	MYS, SGP,		CAN
			AUS, NZL	NZL, CAN			THA, MAC,	THA, MAC,		
							CAN	CAN		
	2 CHN, IND,	CHN, AUS,	HKG, KHM,	HKG, TWN,	HKG, TWN,	HKG, TWN,	CHN, IDN,	CHN, IDN,	MYS, AUS,	JPN, AUS,
	AUS, NZL	NZL	IDN, SGP,	KHM, IDN,	SGP, MAC	SGP, IND,	PHL, IND,	LAO, MMR,	NZL, CAN	NZL
			THA, MAC,	SGP, MAC,		MAC	AUS, NZL	PHL, VNM,		
Pre-			BKN	BKN				IND, AUS, NZI		
Crisis	3 KHM, IDN,	KHM, IDN,	LAO, MMR.	LAO, MMR.	IDN. THA	IDN. THA.	LAO, MMR.		PHL, THA,	PHL, THA,
	THA, JPN	THA, JPN	VNM	VNM		VNM, AUS	VNM		IND	IND
	4 PHL	MMR, PHL	CAN	THA	KHM, NZL	KHM, NZL			HKG, MAC	HKG, MAC
	5 VNM	VNM			CHN	CHN			BRN	MYS, BRN
	6 BRN	BRN LAO VNM			BRN	LAO			JPN	LAO
	8 MMR	CAN			MMR	BRN			MMR	VNM
	9 CAN	C. III			VNM	CAN			VNM	KHM
	10				CAN				KHM	
								-		-
	All	IRA, BUS,	All	TRA, EXP,	All	All	All	IKA, BUS,	All	TRA, BUS,
		DEB		020				INT, DEB		
Moved		2		0		0		0		3
	1 KOR, MYS	, KOR, TWN,	CHN, HKG,	CHN, HKG,	KOR, MYS,	KOR, MYS,	CHN, HKG,	CHN, HKG,	TWN, KHM	, TWN, KHM,
	THA VNM	SGP THA	KUR, TWN, KHM MYS	KUK, IWN, KHM MYS	PHL, IHA	PHL, IHA	KUK, IWN, KHM PHL	KUK, IWN, KHM PHL	AUS NZL	AUS NZL
	BRN, NZL	VNM, BRN,	PHL, SGP,	PHL, SGP,			IND, MAC,	IND, MAC,	CAN	CAN
		NZL	THA, VNM,	THA, VNM,			JPN	JPN		
			IND, MAC,	IND, MAC,						
			NZL	NZL						
	2 TWN, KHM	I, KHM, IND,	IDN, MMR	IDN, MMR	VNM, AUS,	VNM, AUS,	MYS, SGP,	MYS, SGP,	HKG, KOR,	HKG, KOR,
Crisis	IND, AUS	AUS			NZL, CAN	NZL, CAN	THA, VNM,	THA, VNM,	PHL, MAC,	MMR, PHL,
	3 CHN HKG	CHN HKG	LAO	LAO	TWN SGP	TWN SGP	AUS NZI	AUS NZI	JPN MYS THA	IDN LAO
	MAC, JPN	MAC, JPN	LIIO	LITO	BRN	BRN	NOD, NEE	NOS, NEE	VNM, BRN	MYS, THA,
										VNM, BRN
	4 IDN	IDN, MMR	CAN	CAN	KHM, MMR IND	KHM, MMR IND	IDN	IDN	MMR	
	5 LAO	LAO			HKG, MAC	HKG, MAC	LAO	LAO	IDN	
	6 MMR	CAN			CHN, IDN	CHN, IDN	MMR	MMR	LAO	
	7 CAN				LAO	LAO				
	All	TRA, BUS,	All	TRA, RER.	All	BUS, INT.	All	All	All	INF. RER.
		INT, EXP,		INT, EXP		DEB				INT, EXP,
		DEB		-		-		0		DEB, LAB
Moved	1 CHN TWN	3 TWN MYS	CHN HKG	CHN HKG	CHN HKG	CHN HKG	CHN TWN	CHN TWN	HKG SGP	SGP IPN
	MYS, THA	THA, VNM	KOR, TWN,	TWN, KHM	TWN, KHM	, TWN, KHM	, VNM, IND	VNM, IND	JPN	501, 5110
	VNM, IND		KHM, MYS,	MYS, PHL,	MYS, PHL,	IDN, MYS,				
			PHL, SGP,	SGP, THA,	SGP, THA,	PHL, SGP,				
			IND MAC	VNM, IND, MAC	VNM, IND, MAC	THA, VNM, IND MAC				
			BRN			CAN				
	2 HKG, SGP,	CHN, HKG,	IDN, AUS,	IDN, AUS,	KOR, IDN,	KOR, MMR	, HKG, MYS,	HKG, MYS,	TWN, KHM	KHM, PHL,
	JPN	SGP, JPN	NZL	NZL	LAO, MMR,	BRN, AUS,	SGP, THA	SGP, THA		MAC
					CAN	INCL				
Post-	3 KHM, PHL,	KHM, PHL,	LAO	KOR, LAO,	BRN	LAO	KOR, KHM,	KOR, KHM,	MYS, THA	HKG, MYS,
Cr1S1S	MAC	MAC	100	MMR			MAC, JPN	MAC, JPN	VAD C P T	THA
	4 AUS, NZL	MMR, AUS	MMR	вкn, CAN			AUS, NZL	AUS, NZL	VNM, IND	VNM, IND
	6 IDN	KOR	CAN				BRN	BRN	CAN	KOR
	7 BRN	BRN					PHL	PHL	PHL	IDN
	8 LAO	LAO					LAO	LAO	MAC	LAO
	9 MMR	NZL					MMR	MMR	KOR	MMR
	10 CAN	CAN					CAN	CAN	IDN	CAN
	12								LAO	TWN
	13								MMR	
						DUG DUT				DIT
All Periods	Yes	TRA, BUS, INT		-		BUS, INT, DEB		INF, RER		INT
	Np	-		BUS				-		-

Table 6.63 MBC clusters by all and by subsets of criteria

		Do	llar		0	Currenc	y Baske	et		Y	en			Eι	iro			Yu	ıan	
	HCM	FCM	MBC	All	HCM	FCM	MBC	All	HCM	FCM	MBC	All	HCM	FCM	MBC	All	HCM	FCM	MBC	All
	TRA,	BUS,	TRA,	INF,	INF,	INF,	INF,	INF,	BUS,	TRA,	TRA,	BUS,	TRA,	RER,	INF,	RER	TRA,	BUS,	TRA,	INT
	INF,	INF,	BUS,	INT	INT,	RER,	INT,	INT	INF,	BUS,	BUS,	INT	BUS,	EXP,	RER		INT,	INT,	INF,	
Pre-	INT	INT,	INF,		EXP	INT	DEB		RER,	INF,	RER,		RER,	DEB			EXP,	EXP,	RER,	
crisis		EXP	RER,						INT,	INT,	INT,		INT,				DEB	DEB	INT	
			IIN I						EXP	DEB	DEB		EAP,							
-													DEB							
	BUS	BUS	TR A	BUS	BUS	BUS	TR A	EXP	BUS	INE	A11	REB	TR A	TR A	TPA	TR A	ΤΡΔ	ΤΡΔ	TR A	TRA
	INT	INF	BUS	INT	EXP	INF	EXP	LM	RER	RER	All	EXP	BUS							
<u> </u>	DEB	INT,	INF,	DEB	DEB	RER,	DEB		EXP	INT,			RER,	INT,	INF,	INT,	INT,	INF,	INT	INT
Crisis		EXP,	INT,			EXP				EXP			INT,	DEB	RER,	DEB	EXP,	RER,		
		DEB	DEB										DEB		INT,		DEB	INT,		
															DEB			EXP		
	BUS,	INF,	TRA,	EXP,	BUS,	TRA,	TRA,	RER,	BUS,	TRA,	BUS,	BUS	TRA,	TRA,	All	TRA,	TRA,	TRA,	INF,	EXP,
	EXP,	INT,	BUS,	DEB	RER,	BUS,	RER,	INT,	RER,	BUS,	INT,		BUS,	BUS,		BUS,	BUS,	BUS,	RER,	LAB
Post-	DEB,	EXP,	INT,		INT,	INF,	INT,	EXP	INT,	RER,	DEB		INT,	INT,		INT,	INF,	INT,	INT,	
crisis	LAB	DEB,	EXP,		EXP,	RER,	EXP		EXP,	LAB			LAB	EXP,		LAB	RER,	EXP,	EXP,	
		LAD	DED		LAD	INI, EVD			LAD					LAD			EAP,	LAD	DED,	
					LAD	LAB											LAD	LAD	LAD	
						D . 1D														
	-	INF,	TRA,	-	EXP	INF,	-	-	BUS,	-	BUS,	-	TRA,	-	INF,	-	TRA,	BUS,	INT	-
In		INT,	BUS,			RER			RER,		INT,		BUS,		RER		EXP	INT,		
		EXP	INT						EXP		DEB		INT					EXP		
Out	RER	TRA,	-	n.a.	TRA	-	BUS	n.a.	TRA,	-	-	n.a.	INF	INF	-	n.a.	-	-	-	n.a.
Out		RER							DEB											

Table 6.64 Cross-method dominant OCA criteria

Note: 'n.a.' for not applicable.

6.6.2 Variable Selection

Exercises in the main analysis have involved criteria or variables 'prescribed' by the OCA theory. Alternatively, this section seeks to identify subsets of variables which are compatible with the best partitions as suggested by validation indexes associated with the clustering methods. The rest of the discussion sequentially presents the findings from HCM, FCM, and MBC before ending with a comparison over the methods.

Hierarchical Cluster Analysis

For HCM, combinations of variables are sequentially entered into analysis and the ones which produce the highest cophenetic correlation coefficients are selected. Remember that cophenetic correlation is a measure indicating how well the hierarchical configurations represent the inherent dissimilarities between objects in the data. Coefficients closer to 1 represent better partitioning.

Results are put together in Table 6.65. *p* represents the number of variables entered, columns '1' contain the subsets of criteria corresponding to the highest cophenetic correlations, columns '2' display the corresponding coefficients (the highest values are

shaded), and columns '3' show the coefficient means (computed from the coefficients generated by all combinations of variables for each number of variables).

On the whole, since the crisis period, classifications using only INF produce the highest coefficients regardless of anchor. Other than that, one can also find that certain variables do appear more frequently in the subsets of criteria corresponding to the highest cophenetic correlations (columns 1). These criteria should be relatively necessary in producing the best partitions as far as HCM and cophenetic correlation are concerned.

The counts of the variables are gathered in Table 6.66. Since every variable is included in the all-variable solutions, those variables are not counted. Also, recall that the labor criterion is only available for the post-crisis period. Hence, its counts will be much smaller.

As the grand totals show, INF obtains the highest count, followed by DEB, RER, and so forth. Judging by the counts, INF and DEB should be more important.

The next question: which criteria are more important for which anchor? TRA is more important for dollar and basket anchors while RER is more important for basket and yen anchors. For euro and yuan, only INF and DEB are relatively important.

Fuzzy Cluster Analysis

Subsets of variables which are consistent with best partitions by FCM are explored here. Combinations of variables are sequentially entered and the ones whose solutions obtain the lowest Xie-Beni's indexes (XBI) are selected. To recap, XBI measures how well generated fuzzy partitions fit the structure of the data where lower values correspond to better fit.

Results are displayed in Table 6.67. p is the number of variables entered, columns '1' show the variables which yield the lowest XBIs, columns '2' the respective XBI values, and columns '3' the XBI means (computed from all combinations of variables for each number of variables). By and large, the more the variables the lower the XBIs.

The counts of variables compatible with lowest XBIs are collected in Table 6.68. Since all variables are included in the all-variable solutions, those variables are not counted. Also, recall that the labor criterion is only available for the post-crisis period. Hence, its counts will be much smaller.

Looking at the grand totals of counts, EXP records the largest sum, followed by BUS, INT, and so forth. On this evidence, these variables should be relatively important in producing classifications which reflect the intrinsic structure of the data.

Other observations can also be made. The importance of EXP, reflected by its high count is true for all anchors. Meanwhile, TRA is more important for basket and euro anchors while BUS is more important for basket and yen anchors.

Model-based Cluster Analysis

For MBC, combinations of variables are sequentially entered and the ones which produce the highest BICs are selected. Higher BIC indicates better fit between the model and the data structure, signifying better classification.

Results are placed in Table 6.69. p is the number of variables entered; columns '1' show the variables consistent with the highest BICs; columns '2' display the respective BIC values; columns '3' provide the corresponding model; columns '4' present the BIC means computed from all combinations of variables by each number of variables; and columns '5' contain the mod of the model, that is, the model which is indicated the most.

By and large, as signified by the means, the more the variables, the lower the BICs. Besides that, for most of the time, models 1 and 3 correspond to highest BICs. As signified by the mod, models 1 and 3 are also compatible with appropriate BICs most of the time.

The number of times the variables are indicated is given in Table 6.70. Since all variables are included in the all-variable solutions, their counts are not considered.

Recall that the labor criterion is only available for the post-crisis period. Hence, its counts are much smaller.

The grand totals show that higher counts are attained by INF, RER, and DEB. Hence, these variables ought to be relatively crucial in generating best partitions. Indeed, INF and RER are important for all anchors. Meantime, TRA is somewhat important for dollar, basket, and yuan anchors and INT is more important for dollar and yen anchors.

Comparisons across Methods

Table 6.71 collects the variables that are compatible with best partitioning as signified by the validation statistics for the respective clustering methods. The cross-method variables are also shown and their counts are placed in Table 6.72. Variables with more counts can be regarded as more important. Recall that LAB is only available for the post-crisis period.

For dollar anchor, the totals show that the highest count is attained by RER; for basket anchor, TRA; for yen anchor, DEB; for euro anchor, EXP; and for yuan anchor, INF and RER. Notice that for yen and euro, the variables with the highest counts are not reference-dependent; the variables are not measures against a reference. In this respect, the measures in relation to each of these reference countries may not be as important in generating well-partitioned configurations.

The grand totals reveal that INF, RER, and DEB record the top three counts. Hence, inflation convergence, real exchange rate volatility, and external indebtedness on the whole ought to be more important in producing the most appropriate partitions.

		Dol	lar		Current	cy Basket			Yen			Euro			Yuar	1	
	р	1	2	3	1	2	3	1		2	3	1	2	3	1	2	3
	1	INT	.97	.86	RER	.92	.87	RER		.99	.88	INF	.90	.84	TRA	.95	.87
	2	INF, DEB	.96	.86	INF, DEB	.96	.86	INF, RER		.96	.87	INF, DEB	.96	.82	TRA, DEB	.95	.87
	3	TRA, INF,	.95	.85	TRA, INF,	.94	.85	INF, RER,		.96	.87	INF, RER,	.92	.81	TRA, INF,	.96	.88
		DEB			DEB			DEB				DEB			DEB		
	4	TRA, INF,	.93	.85	TRA, INF,	.95	.85	BUS, INF,		.93	.87	BUS, INF,	.91	.80	TRA, INF,	.96	.89
D		INT, DEB			RER, DEB			RER, DEB				EXP, DEB			RER, DEB		
Pre-	5	TRA, INF,	.89	.84	TRA, BUS,	.93	.84	TRA, INF,		.92	.87	BUS, INF,	.88	.79	TRA, INF,	.95	.90
CLISIS		RER, INT,			INF, RER,			RER, EXP,				INT, EXP,			RER, INT,		
		DEB			DEB			DEB				DEB			DEB		
	6	TRA, BUS,	.87	.83	TRA, BUS,	.90	.84	TRA, BUS,		.88	.86	BUS, INF,	.85	.80	TRA, BUS,	.93	.91
		INF, RER,			INF, RER,			RER, INF,				RER, INT,			INF, RER,		
		INT, DEB			EXP, DEB			EXP, DEB				EXP, DEB			EXP, DEB		
	7	All	.80	.80	All	.83	.83	All		.85	.85	All	.80	.80	All	.93	.93
	1	INF	.99	.89	INF	.99	.89	INF		.99	.90	INF	.90	.84	INF	.99	.88
	2	TRA, INF	.98	.89	INF, RER	.98	.89	INF, RER		.98	.89	INT, DEB	.96	.82	INF, DEB	.97	.87
	3	INF, RER,	.97	.89	INF, RER,	.98	.89	INF, RER,		.97	.88	INF, RER,	.92	.81	INF, RER,	.97	.85
		DEB			DEB			DEB				DEB			DEB		
	4	TRA, INF,	.97	.90	TRA, INF,	.97	.90	INF, RER,		96	.88	BUS, INF,	.91	.80	INF, RER,	.95	.85
		RER, DEB			RER, DEB			INT, DEB				EXP, DEB			INT, DEB		
Crisis	5	TRA, INF,	.95	.91	TRA, INF,	.95	.90	BUS, INF,		.94	.88	BUS, INF,	.88	.80	INF, RER,	.93	.85
		RER, EXP,			RER, EXP,			RER, INT,				INT, EXP,			INT, EXP,		
		DEB			DEB			DEB				DEB			DEB		
	6	TRA, BUS,	.93	.90	TRA, INF,	.95	.91	BUS, INF,		.92	.89	BUS, INF,	.85	.80	BUS, INF,	.91	.85
		INF, RER,			RER, INT,			RER, INT,				RER, INT,			RER, INT,		
		EXP, DEB			EXP, DEB			EXP, DEB				EXP, DEB			EXP, DEB		
	7	All	.91	.91	All	.89	.89	All		.89	.89	All	.80	.80	All	.85	.85
	1	INF	.99	.87	INF	.99	.87	INF		.98	.89	INF	.99	.87	INF	.99	.87
	2	INF, DEB	.99	.88	INF, DEB	.98	.87	INF, DEB		.98	.88	INF, DEB	.98	.87	INF, DEB	.99	.87
	3	TRA, INF,	.98	.89	INF, RER,	.97	.87	INF, RER,	•	.97	.88	INF, RER, INT	.97	.87	INF, INT, DEB	.97	.86
		DEB	07	00	DEB	07		DEB		07	00	DE DED	07			07	
	4	INF, KEK,	.97	.89	TRA, INF,	.97	.88	INF, KEK,	•	.97	.89	INF, KEK,	.97	.88	INF, KEK,	.97	.86
	5	INI, DEB	05	00	TDA DIE	05	00	INT, DEB		00	00	DUG DUG	00	00	INT, DEB	00	00
	3	IKA, INF, DED INT	.95	.90	IKA, INF, DED INT	.95	.09	INF, KEK,	•	90	.90	DUS, INF, DED INT	.90	.09	DUS, INF, DED INT	.90	.00
Post-		DER			DER			DER				DER			DER		
crisis	6	TPA INF	0/	01	TPA INF	03	80	BUS INF		95	01	TDA BUS	0/	80	BUS INF	03	86
	0	REP INT	.34	.91	REP INT	.55	.03	REP INT		.55	.91	INE RER	.94	.03	REP INT	.50	.00
		FXP DFB			EXP DEB			EXP DEB				INT DEB			DEB LAB		
	7	TRA BUS	93	92	TRA BUS	92	90	TRA BUS		93	91	TRA BUS	93	90	TRA BUS	۹N	86
	'	INF RER	.55	.52	INF REP	.52	.00	INF REP	•		.01	INF RER	.55	.00	INF RER	.50	.00
		INT. DEB			EXP. DEB			INT. DEB				INT. EXP.			INT. DEB.		
		LAB			LAB			LAB				DEB			LAB		
	8	All	.92	.92	All	.91	.91	All		92	.92	All	.91	.91	All	.86	.86

Table 6.66 HCM variable count

		TRA	BUS	INF	RER	INT	EXP	DEB	LAB	Total
	Pre-crisis	4	1	5	2	4	0	5	-	21
Dollar	Crisis	4	1	6	4	0	2	4	-	21
	Post-crisis	4	1	7	4	4	1	6	1	28
	Total	12	3	18	10	8	3	15	1	70
a	Pre-crisis	4	2	5	4	0	1	5	-	21
Currency	Crisis	3	0	6	5	1	2	4	-	21
Dasket	Post-crisis	4	1	7	5	2	2	6	1	28
	Total	11	3	18	14	3	5	15	1	70
	Pre-crisis	2	2	5	6	0	2	4	-	21
Yen	Crisis	0	2	6	5	3	1	4	-	21
	Post-crisis	1	2	7	5	4	2	6	1	28
	Total	3	6	18	16	7	5	14	1	70
	Pre-crisis	0	3	6	2	2	3	5	-	21
Euro	Crisis	0	3	5	2	3	3	5	-	21
	Post-crisis	2	3	7	5	5	1	5	0	28
	Total	2	9	18	9	10	7	15	0	70
	Pre-crisis	6	1	4	3	1	1	5	-	21
Yuan	Crisis	0	1	6	4	3	2	5	-	21
	Post-crisis	1	3	7	4	5	0	6	2	28
	Total	7	5	17	11	9	3	16	2	70
	Grand Total	35	26	89	60	37	23	75	5	350

	р	Do	llar	Currenc	y Baske	et	Y	'en	E	iro	Y	uan	
		1	2	3 1	2	3	1	2	3 1	2	3 1	2	3
	1	DEB	1.63	2.45 DEB	1.64	2.24	RER	.02	1.72 EXP	1.60	1.91 INF	1.50	2.12
	2	RER, DEB	1.11	1.51 TRA, BUS	1.23	1.42	TRA, BUS	.79	1.43 BUS, RER	1.06	1.35 RER, EXP	.95	1.42
	3	BUS, RER,	1.03	1.25 TRA, EXP,	.88	1.21	RER, INT,	1.01	1.28 TRA, INF,	.90	1.19 BUS, INT,	1.04	1.27
		DEB		DEB			EXP		INT		EXP		
	4	BUS, INF,	.91	1.14 BUS, RER,	.89	1.12	BUS, RER,	.91	1.16 INF, RER,	.85	1.05 INF, RER,	.94	1.15
		INT, EXP		INT, DEB			EXP, DEB		INT, EXP		INT, EXP		
Pre-crisis	5	BUS, INF,	.90	1.03 TRA, BUS,	.84	.97	BUS, RER,	.80	1.05 BUS, INF,	.75	.96 BUS, INF,	.87	1.10
		RER, EXP,		RER, EXP,			INT, EXP,		RER, INT,		RER, INT,		
		DEB		DEB			DEB		EXP		EXP		
	6	TRA, BUS,	.78	.95 TRA, BUS,	.79	.86	BUS, INF,	.81	.91 BUS, INF,	.76	.83 BUS, INF,	.91	1.04
		INF, INT,		RER, INT,			RER, INT,		RER, INT,		RER INT,		
		EXP, DEB		EXP, DEB		0.2	EXP, DEB	70	EXP, DEB		EXP, DEB	05	05
	7	All	.93	.93 All	.82	.82	All	.79	.79 All	.//	.// All	.95	.95
	1	INT	2 11	2 94 RFR	1.75	7.66	TRA	1 42	2 00 DFB	1 56	3 60 INT	1.62	2.31
	2	TRA RER	1 10	1 45 BUS DEB	1.13	1.54	INT DEB	1 13	1 46 EXP DEB	1.00	1 42 TRA EXP	1 15	1 44
	3	BUS INT	88	1 19 TRA RER	98	1.25	INF INT	1 01	1 28 TRA EXP	99	1.32 TRA RER	87	1 23
	2	EXP	.00	INT	.,0	1.20	EXP	1.01	DEB	.00	INT	.07	1.20
	4	BUS, RER.	.88	1.09 TRA. BUS.	.87	1.14	BUS, INF.	.91	1.16 TRA, BUS,	.88	1.19 TRA. INF.	.97	1.13
		INT, DEB		INT, EXP			EXP, DEB		INT, EXP		RER, INT		
Crisis	5	BUS, RER.	.81	1.01 TRA, BUS,	.77	.99	BUS, INF.	.80	1.05 TRA, BUS,	.74	1.07 TRA, BUS,	.88	1.08
		INT, EXP,		RER, INT,			INT, EXP,		RER, INT,		RER, INT,		
		DEB		EXP			DEB		EXP		EXP		
	6	TRA, INF,	.85	.92 TRA, BUS,	.79	.91	BUS, INF,	.81	.91 TRA, BUS,	.70	.93 TRA, BUS,	.87	.95
		RER, INT,		INF, RER,			RER, INT,		INF, RER,		INF, INT,		
		EXP, DEB		INT, EXP			EXP, DEB		INT, EXP		EXP, DEB		
	7	All	.89	.89 All	.85	.85	All	.79	.79 All	.76	.76 All	.93	.93
	1	EVD	1.00	0.50 520	1.(7	2.07	DUC	1 07	0.04 DED	1.04	O FF FYD	1.05	0.00
	-	EAP DUC EVD	1.96	2.32 EAP	1.0/	1.57	BUS TDA LAD	1.37	3.34 KEK	1.34	3.33 EAP	1.20	2.30
	2	DED EXD	.09	1.47 INF, KEK	1.20	1.37	TRA, LAB	1.00	1.32 KEK, LAB	1.19	1.31 BUS, EAP	1.10	1.04
	3	KEK, EAP,	1.01	1.20 IKA, BUS,	.94	1.50	IKA, BUS,	.91	LAP	1.00	LAP	.00	1.29
	4	BUS DED	80	1 14 BUS INT	66	1 1 8	TDA BUS	85	1 21 TDA BUS	86	1 14 TDA BUS	88	1 15
	4	EXP LAB	.00	FXP LAB	.00	1.10	FXP LAB	.05	INT FXP	.00	INF FXP	.00	1.15
	5	BUS RER	77	1 03 BUS INF	61	1.07	TRA BUS	74	1 10 TRA REP	77	1 02 TRA BUS	78	1 04
_	5	INT EXP		INT EXP	.01	1.07	EXP DEB	., .	EXP DEB	.,,	INF RER		1.01
Post-		LAB		LAB			LAB		LAB		EXP		
crisis	6	BUS, INF.	.74	.93 TRA, BUS,	.53	.93	TRA, BUS,	.74	1.01 TRA, BUS,	.69	.94 TRA. BUS.	.72	.92
		RER, INT,		INT, EXP,			INT, EXP,		INT, EXP,		INF, RER,		
		EXP, LAB		DEB, LAB			DEB, LAB		DEB, LAB		INT, EXP		
	7	TRA, BUS,	.71	.85 TRA, BUS,	.54	.79	TRA, BUS,	.77	.87 TRA, BUS,	.66	.83 BUS, INF,	.72	.81
		INF, RER,		INF, INT,			INF, INT,		INF, INT,		RER, INT,		
		EXP, DEB,		EXP, DEB,			EXP, DEB,		EXP, DEB,		EXP, DEB,		
		LAB		LAB			LAB		LAB		LAB		
	8	All	.69	.69 All	2.08	2.08	All	.78	.78 All	.77	.77 All	.74	.74

Table 6.67 FCM selection of variables

Table 6.68 FCM variable count

		TRA	BUS	INF	RER	INT	EXP	DEB	LAB	Total
	Pre-crisis	1	4	3	3	2	3	5	-	21
Dollar	Crisis	2	3	1	4	5	3	3	-	21
	Post-crisis	1	5	2	5	2	7	1	5	28
	Total	4	12	6	12	9	13	9	5	70
-	Pre-crisis	4	4	0	3	2	3	5	-	21
Currency	Crisis	4	4	1	4	4	3	1	-	21
Dasket	Post-crisis	3	5	3	1	4	5	2	5	28
	Total	11	13	4	8	10	11	8	5	70
	Pre-crisis	1	4	1	5	3	4	3	-	21
Yen	Crisis	1	3	4	1	4	4	4	-	21
	Post-crisis	6	6	1	0	2	4	3	6	28
	Total	8	13	6	6	9	12	10	6	70
	Pre-crisis	1	3	4	4	4	4	1	-	21
Euro	Crisis	4	3	1	2	3	5	3	-	21
	Post-crisis	5	3	1	3	3	5	3	5	28
	Total	10	9	6	9	10	14	7	5	70
	Pre-crisis	0	3	4	4	4	5	1	-	21
Yuan	Crisis	5	2	2	3	5	3	1	-	21
	Post-crisis	3	5	4	3	2	7	2	2	28
	Total	8	10	10	10	11	15	4	2	70
	Grand Total	41	57	32	45	49	65	38	23	350

	I	Dollar	Curre	ncy Bask	et	Yen		Euro		Yuan	
	p 1	2 3	4 5 1	2 3	4 5 1	2 3	4 5 1	2 3	4 5 1	2 3	4 5
-	1 TRA	31 2	-68 2 DEB	-50 1	-76 1 EXP	152	-50 2 RER	-47 1	-68 2 RER	-20 1	-44 1
	2 TRA, INT	-62 4	-100 1 RER, DEB	-88 2	-104 1 EXP.DEB	39 5	-77 1 BUS, INT	-4 5	-124 1 EXP. DEB	11 5	-93 1
	3 TRA, INT,	-122 3	-159 3TRA,	-110 3	-153 1 BUS,RER,	-68 3	-136 3 INF, RER,	-152 1	-172 1 RER, INT,	21	-133 1
	DEB	-	BUS, RER		INT		DEB		EXP		
	4 BUS, INF.	-184.3	-209 3TRA, INF.	-169 1	-207 1 TRA, INF.	67.2	-181 3BUS, INF.	-216.1	-235 1 TRA, INF.	-156.3	-205 1
	RER. INT		RER, DEB		RER.DEB	0. 2	EXP.DEB	2.0.	RER, DEB		200 .
Pre-	5 TRA, INF.	-207 4	-262 3INF. RER.	-238 4	-274 1 TRA, INF.	-159 3	-239 1 BUS, INF,	-268 1	-287 1 TRA, INF.	-200 1	-251 1
crisis	RER, INT,		INT, EXP,		RER, INT,		RER,INT,		RER, INT,		
	DEB		DEB		DEB		DEB		DEB		
	6 TRA, BUS,	-298 3	-320 3 TRA, INF,	-285 4	-319 1 TRA, BUS.	-299 3	-313 3 TRA, BUS,	-340 5	-349 1 TRA,	-265 1	-305 1
	INF, RER,		RER, INT,		RER, INT,		RER,INT,		BUS, INF,		
	INT, EXP		EXP, DEB		EXP, DEB		EXP,DEB		RER,		
									EXP, DEB		
	7 All	-372 3	-372 3 All	-371 4	-371 4 All	-370 3	-370 4 All	-409 1	-409 1 All	-340 3	-340 3
	1 BUS	-4 2	-65 2 INF	-7 2	-62 2 BUS	-92	-57 2 INT	0 2	-55 2 INF	-17 5	-57 1
	2 TRA, EXP	28 5	-93 3EXP, DEB	192	-96 1 TRA,DEB	135	-85 3 BUS, INF	56 5	-81 1 INF, EXP	34 2	-96 1
	3 TRA, INF,	-80 3	-143 3INF, RER,	-59 3	-136 1 BUS, INF,	-100 3	-149 3 INF, RER,	-70 1	-148 3 BUS,		
	DEB		DEB		DEB		DEB		RER, EXP	03	-1423
	4 TRA, INF,	-1393	-193 3 TRA, INF,	-113 3	-189 3 INF, RER,	-87 3	-180 3 INF, RER,	-142 1	-199 3 TRA,		
	RER, INT		RER, DEB		INT, DEB		EXP, DEB		RER, INT,		
									EXP	11	-1823
Crisis	5 TRA, INF,	-204 3	-246 3TRA, INF,	-185 3	-246 3 BUS, INF,	-188 3	-238 3 BUS, INF,	-218 3	-253 3 BUS, INF,		
	RER,EXP,		RER,		RER,EXP,		RER,		RER, INT,		
	DEB		EXP, DEB		DEB		EXP, DEB		DEB	-210 3	-242 3
	6 TRA,	-270 3	-295 3TRA, INF,	-250 3	-285 3 TRA, INF,	-246 3	-298 4 TRA, BUS,	-280 3	-305 3 TRA, INF,		
	BUS, INF,		RER, INT,		RER, INT,		INF,RER,		RER, INT,		
	RER, INT,		EXP, DEB		EXP, DEB		EXP, DEB		EXP, DEB		
	DEB									03	-252 3
	7 All	-351 3	-351 3 All	-332 3	-332 4 All	-341 4	-341 4 All	-343 3	-343 3 All	03	03
	1 EXP	-27 2	-84 1 EXP	-16 2	-75 1 INT	31 2	-54 1 INT	-48 2	-91 2 INT	135	-64 1
	2 EXP, LAB	-3 2	-110 1 TRA,LAB	28 5	-110 1 INF, INT	-39 3	-88 1 RER, EXP	-58 3	-101 1 TRA, INF	53 5	-721
	3 INF, INT,	-104 1	-156 1 TRA,	-80 1	-143 1 INF, INT,	-39 1	-138 3 INF, RER,	-101 1	-156 1 TRA, INF,	62 5	-1221
	DEB		BUS, INF		DEB		DEB		RER		
	4 RER, INT,	-129 3	-210 1 BUS, INF,	100 2	-189 3 BUS, INF,	-117 3	-185 3 INF, RER,	-154 1	-212 3 TRA, INF,	66 5	-1743
	EXP, DEB		RER, LAB		RER, INT		INT, DEB		RER, EXP		
	5 BUS, INF,	-211 1	-265 3 TRA, INF,	-193 1	-250 3 TRA, INF,	-159 3	-234 3 INF, RER,	-224 1	-268 3 TRA,	-1363	-2301
	RER, INT,		RER,DEB,		INT, DEB,		INT, DEB,		BUS, INF,		
Post-	DEB		LAB		LAB		LAB		INT, LAB		
crisis	6 BUS, INF,	-290 1	-323 3TRA,BUS,	-254 1	-305 3 TRA, BUS,	-258 4	-270 4 TRA, INF,	-287 5	-329 1 TRA,	-230 1	-2844
	RER, INT,		INF, RER,		INF, RER,		RER, INT,		BUS, INF,		
	DEB, LAB		DEB,LAB		INT, LAB		EXP, DEB		RER, INT,		
									DEB		
	7 TRA,	-355 1	-375 3TRA,	-336 5	-356 3 TRA, BUS,	-328 5	-345 4 TRA,INF,	-369 4	-388 1 TRA,	-277 4	-3465
	BUS, INF,		BUS, INF,		INF, RER,		RER, INT,		BUS, INF,		
	RER, INT,		RER, INT,		INT, DEB,		EXP,DEB,		RER, INT,		
	DEB, LAB		EXP, DEB		LAB		LAB		DEB, LAB		
	8 All	-421 1	-421 1 All	-402 3	-402 3 All	144 2	144 2 All	-454 1	-454 1 All	-424 1	-424 1

Table 6.69 MBC selection of variables

Notes:

1 Variables which yield highest BICs; 2 Highest BICs; 3 Models corresponding to highest BICs; 4 BIC mean; 5 BIC mode.

Table 6.70 MBC variable count

		TRA	BUS	INF	RER	INT	EXP	DEB	LAB	Total
	Pre-crisis	5	2	3	3	5	1	2	-	21
Dollar	Crisis	5	2	4	3	2	2	3	-	21
	Post-crisis	1	3	4	4	5	3	5	3	28
	Total	11	7	11	10	12	6	10	3	70
C	Pre-crisis	3	1	3	5	2	2	5	-	21
Rocket	Crisis	3	0	5	4	1	3	5	-	21
Dasket	Post-crisis	5	4	5	4	1	2	3	4	28
-	Total	11	5	13	13	4	7	13	4	70
	Pre-crisis	3	2	2	4	3	3	4	-	21
Yen	Crisis	2	3	4	3	2	2	5	-	21
	Post-crisis	3	3	6	3	7	0	3	3	28
	Total	8	8	12	10	12	5	12	3	70
	Pre-crisis	1	4	3	4	3	2	4	-	21
Euro	Crisis	1	3	5	4	1	3	4	-	21
	Post-crisis	2	0	5	6	5	3	5	2	28
	Total	4	7	13	14	9	8	13	2	70
Yuan	Pre-crisis	3	1	3	5	2	3	4	-	21
	Crisis	2	2	4	4	3	4	2	-	21
	Post-crisis	6	3	6	4	4	1	2	2	28
	Total	11	6	13	13	9	8	8	2	70
	Grand Total	45	33	62	60	46	34	56	14	350

			Do	llar		0	Currenc	y Baske	et		Y	en			Eu	ro			Yu	an	
		HCM	FCM	MBC	All	HCM	FCM	MBC	All	HCM	FCM	MBC	All	HCM	FCM	MBC	All	HCM	FCM	MBC	All
	1	INT	DEB	TRA		RER	DEB	DEB		RER	RER	EXP		INF	EXP	RER	-	TRA	INF	RER	-
	2	INF	DED	TPA		INF	TDA	DED		INF	TDA	EVD		INF	BUS	BUS		TPA	DED	EVD	
	2	DED	DED	INT	-	DED	DUC	DED	-	DED	DUC	DED	-	DED	DED	DUS,	-	DED	EVD	DED	-
		DED	DED	INI		DED	603	DED	-	KEK	BUS	DEB		DEB	KEK	INI		DED	EAF	DEB	
	3	TRA,	BUS,	TRA,	DEB	TRA,	TRA,	TRA,	TRA,	INF,	RER,	BUS,	RER	INF,	TRA,	INF,	INF	TRA,	BUS,	RER,	-
		INF,	RER,	INT,		INF,	EXP,	BUS,		RER,	INT,	RER,		RER,	INF,	RER,		INF,	INT,	INT,	
		DEB	DEB	DEB		DEB	DEB	RER		DEB	EXP	INT		DEB	INT	DEB		DEB	EXP	EXP	
	4	TRA,	BUS,	BUS,	INF,	TRA,	BUS,	TRA,	RER,	BUS,	BUS,	TRA,	RER,	BUS,	INF,	BUS,	INF,	TRA,	INF,	TRA,	INF,
		INF.	INF.	INF.	INT	INF.	RER.	INF.	DEB	INF.	RER.	INF.	DEB	INF.	RER.	INF.	EXP	INF.	RER.	INF.	RER
		INT	INT	RFR		RFR	INT	RFR		RFR	FXP	RFR		FXP	INT	FXP		RFR	INT	RFR	
		DEB	EXP	INT		DER	DEB	DEB		DER	DER.	DER		DEB	EXP	DEB.		DEB.	EXP	DEB	
Pre-	-	TDA	DUC	TDA	DUE	TDA	TDA	DLD	DED	TDA	DLD	TDA	DED	DLD	DUC	DLD	DUC	TDA	DUC	TDA	DUE
crisis	Э	IKA,	BUS,	IKA,	INF,	IKA,	IKA,	INF,	RER,	IKA,	BUS,	IKA,	RER,	BUS,	BUS,	BUS,	BUS,	IKA,	BUS,	IKA,	INF,
		INF,	INF,	INF,	RER,	BUS,	BUS,	RER,	DEB	INF,	RER,	INF,	DEB	INF,	INF,	INF,	INF,	INF,	INF,	INF,	RER,
		RER,	RER,	RER,	DEB	INF,	RER,	INT,		RER,	INT,	RER,		INT,	RER,	RER,	INT	RER,	RER,	RER,	INT
		INT,	EXP,	INT,		RER,	EXP,	EXP,		EXP,	EXP,	INT,		EXP,	INT,	INT,		INT,	INT,	INT,	
		DEB	DEB	DEB		DEB	DEB	DEB		DEB	DEB	DEB		DEB	EXP	DEB		DEB	EXP	DEB	
	6	TRA.	TRA.	TRA.	TRA.	TRA.	TRA.	TRA.	TRA.	TRA.	BUS.	TRA.	BUS.	BUS.	BUS.	TRA.	BUS.	TRA.	BUS.	TRA.	BUS.
		BUS	BUS	BUS	BUS	BUS	BUS	INF	RER	BUS	INF	BUS	RER	INF	INF	BUS	RER	BUS	INF	BUS	INF
		INE	INE	INE	INE	INE	RER	RER	EXP	RER	RER	RER	EXP	RER	RER	RER	INT	INE	RER	INE	RER
		DED	INT,	DED	INT,	DED	INIT	INIT	DED	INE	INT	INIT	DED	INT	INIT	INIT	EVD	DED	INIT	DED	EVD
		ALA,	EVD	INT	11 1 1	EVD	EVD	EVD	DED	EVD	EVD	EVD	DED	EVD	EVD	EVD	DEP	KEK,	EVD	EVD	DEP
		INI,	EAP,	IN I,		EAP,	EAP,	EAP,		EAP,	EAP,	EAP,		EAP,	EAP,	EAP,	DER	EAP,	EAP,	EAP,	DER
		DEB	DEB	EXP		DEB	DEB	DEB		DEB	DEB	DEB		DEB	DEB	DEB		DEB	DEB	DEB	
	1	INF	INT	BUS	-	INF	RER	INF	-	INF	TRA	BUS	-	INF	DEB	INT	-	INF	INT	INF	-
	2	TRA	TRA	TRA	TRA	INF.	BUS	EXP	-	INF.	INT.	TRA	-	INT.	EXP	BUS	-	INF.	TRA	INF.	-
	-	INF	RFR	EXP		RER	DEB	DEB.		RER	DFB	DEB		DFB	DEB	INF		DEB	EXP	EXP	
	2	INF	BUS	TP A	-	INF	TP A	INF	RED	INF	INF	BUS	INF	INF	TR A	INF	DEB	INF	TR A	BUS	RED
	3	INF,	DUS,	IKA,	-	INF,	IKA,	INF,	KEK	DED	INF,	воз, вт	плг	INF,	TKA,	INF,	DED	DED	IKA,	DED	KEK
		RER,	INT,	INF,		RER,	RER,	RER,		RER,	INT,	INF,		KEK,	EAP,	RER,		KEK,	RER,	KEK,	
		DEB	EXP	DEB		DEB	INT	DEB		DEB	EXP	DEB		DEB	DEB	DEB		DEB	INT	EXP	
	4	TRA,	BUS,	TRA,	RER	TRA,	TRA,	TRA,	TRA	INF,	BUS,	INF,	INF,	BUS,	TRA,	INF,	EXP	INF,	TRA,	TRA,	RER,
		INF,	RER,	INF,		INF,	BUS,	INF,		RER,	INF,	RER,	DEB	INF,	BUS,	RER,		RER,	INF,	RER,	INT
		RER,	INT,	RER,		RER,	INT,	RER,		INT,	EXP,	INT,		EXP,	INT,	EXP,		INT,	RER,	INT,	
		DEB	DEB	INT		DEB	EXP	DEB		DEB	DEB	DEB		DEB	EXP	DEB		DEB	INT	EXP	
Crisis	5	TR A	BUS	TRA	RER	TRA	TRA	TRA	TRA	BUS	BUS	BUS	BUS	BUS	TRA	BUS	BUS	INF	TRA	BUS	RER
	0	INE	DED,	INE	EVD	INF	BUS	INF	DED	INF	INF	INF	INF	INF	BUS	INF	EVD	DED	RUS	INF	INT
		DED	INT	DED	DED	DED	DED	DED	EVD	DED	INT,	DED	DED	INT,	DED	DED	LAI	INT	DED	DED	1141
		KEK,	INT,	KEK,	DED	KEK,	KEK,	KEK,	EAP	KEK,	INT,	KEK,	DED	INT,	KEK,	KEK,		INT,	KEK,	KEK,	
		EXP,	EXP,	EXP,		EXP,	INT,	EXP,		INT,	EXP,	EXP,		EXP,	INT,	EXP,		EXP,	INT,	INT,	
		DEB	DEB	DEB		DEB	EXP	DEB		DEB	DEB	DEB		DEB	EXP	DEB		DEB	EXP	DEB	
	6	TRA,	TRA,	TRA,	TRA,	TRA,	TRA,	TRA,	TRA,	BUS,	BUS,	TRA,	INF,	BUS,	TRA,	TRA,	BUS,	BUS,	TRA,	TRA,	INF,
		BUS,	INF,	BUS,	INF,	INF,	BUS,	INF,	INF,	INF,	INF,	INF,	RER,	INF,	BUS,	BUS,	INF,	INF,	BUS,	INF,	INT,
		INF,	RER,	INF,	RER,	RER,	INF,	RER,	RER,	RER,	RER,	RER,	INT	RER,	INF,	INF,	RER,	RER,	INF,	RER,	EXP,
		RFR	INT	RFR	DFR	INT	RFR	INT	INT	INT	INT	INT	FXP	INT	RFR	RFR	FXP	INT	INT	INT	DFR
		EXP	EYP	INT	DLD	EXP	INT	EYP	EXP	EXP	EXP	EYP	DEB	EYP	INT	EXP	Lm	EXP	EXP	EYP	DLD
		DEP.	DER	DEB		DER	EVD	DEP	LAI	DEP	DEP	DER	DLD	DEP	EVD	DER		DEP	DEP	DEP	
		DED	ענוע	ענוע		ענוע	LAI	DED		ענוע	ענוס	DED		DED	L/11	ענוע		DED	ענוס	DED	
		DIE				ne		THE STATE		DIF:	DUG	D.I.S.		nre	DES	1.1		DVE	-	DIT	
	1	INF	EXP	EXP	-	INF	EXP	EXP	-	INF	BUS	INT	-	INF	RER	INT	-	INF	EXP	INT	-
	2	INF,	BUS,	EXP,	-	INF,	INF,	TRA,	-	INF,	TRA,	INF,	-	INF,	RER,	RER,	-	INF,	BUS,	TRA,	-
		DEB	EXP	LAB		DEB	RER	LAB		DEB	LAB	INT		DEB	LAB	EXP		DEB	EXP	INF	
	3	TRA.	RER	INF.	-	INF.	TRA.	TRA.	-	INF.	TRA.	INF.	-	INF.	TRA.	INF.	-	INF.	EXP.	TRA.	-
		INF	EXP	INT		RER	BUS	BUS		RER	BUS	INT		RER	EXP	RER		INT	DEB	INF	
		DFR	LAB	DFB		DFB	LAB	INF		DFB	LAR	DFB		INT	LAR	DFB		DFB	LAB,	RFR	
	1	INE	DUC	DED	DED	TPA	DITE	DUC		INE	TDA	DUC		INF	TDA	INE	INT	INE	TDA	TDA	INF
	4	INF,	BUS,	KEK,	KEK	IKA,	БUS ,	вUS,	-	IINF,	IKA,	БUS ,	-	IINF,	IKA,	INF,	118.1	INF,	IKA,	IKA,	INF
		KER,	KER,	INT,		INF,	INT,	INF,		KER,	BUS,	INF,		KER,	BUS,	KER,		KER,	BUS,	INF,	
		INT,	EXP,	EXP,		RER,	EXP,	RER,		INT,	EXP,	RER,		INT,	ÍNT,	INT,		INT,	INF,	RER,	
		DEB	LAB	DEB		DEB	LAB	LAB		DEB	LAB	INT		DEB	EXP	DEB		DEB	EXP	EXP	
	5	TRA.	BUS.	BUS.	RER.	TRA.	BUS.	TRA.	INF	INF.	TRA.	TRA.	DEB	BUS.	TRA.	INF,	RER.	BUS.	TRA.	TRA.	BUS.
		INF.	RER	INF.	INT	INF.	INF.	INF.		RER.	BUS.	INF.		INF.	RER.	RER.	DEB	INF.	BUS.	BUS.	INF
		RFR	INT	RFR		RFR	INT	RFR		INT	EXP	INT		RFR	EXP	INT		RFR	INF	INF	
Post-		INT	EVD	INT		INT	EYP	DEP		EYD	DEP	DEB		INT	DEP.	DEB		INT	RED	INT	
crisic		DED	LAF,	DED		DED	LAF,			DEP	LAD	LAD		DED	LAD	LAD		DED	EVD	11 VI,	
011515	_	DED	LAD	DEB	DIE	DED	LAD	LAD	7075 ·	DEB	LAD	LAD	DUC	DED	LAD	LAD		DED	EAP	LAD	DUG
	6	TRA,	BUS,	BUS,	INF,	TRA,	TRA,	TRA,	TRA,	BUS,	TRA,	TRA,	BUS,	TRA,	TRA,	TRA,	TŔA,	BUS,	TRA,	TRA,	BUS,
		INF,	INF,	INF,	RER,	INF,	BUS,	BUS,	DEB	INF,	BUS,	BUS,	INT	BUS,	BUS,	INF,	INT,	INF,	BUS,	BUS,	INF,
		RER,	RER,	RER,	INT	RER,	INT,	INF,		RER,	INT,	INF,		INF,	INT,	RER,	DEB	RER,	INF,	INF,	RER,
		INT,	INT,	INT,		INT,	EXP.	RER.		INT,	EXP.	RER.		RER,	EXP.	INT,		INT,	RER.	RER.	INT
		EXP.	EXP.	DEB.		EXP.	DEB.	DEB.		EXP.	DEB.	INT.		INT.	DEB.	EXP.		DEB.	INT.	INT.	
		DEB	LAB	LAB		DEB.	LAB,	LAB		DEB.	LAB	LAB		DEB	LAB	DEB.		LAB	EXP	DEB	
	7	TD A	TP A	TPA	TP A	TP A	TP A	TD A	TD A	TP A	TP A	TP A		TD A	TD A	TD A	TP A	TP A	BIIC	TP A	BUG
	/	DUC	DUC	DUC	DUC	DUC	DUC	DUC	DUC	DUC	DUC	DUC	DUC	DUC	DUC	INTE	INTE	DUC	DUS,	DUC	DUS,
		BUS,	BUS,	BUS,	BUS,	BUS,	BUS,	BUS,	BUS,	BUS,	BUS,	BUS,	вUS,	BUS,	BUS,	INF,	IINF,	BUS,	INF,	вUS,	INF,
		INF,	INF,	INF,	INF,	INF,	INF,	INF,	INF,	INF,	INF,	INF,	INF,	INF,	INF,	RER,	INT,	INF,	RER,	INF,	RER,
		RER,	RER,	RER,	RER,	RER,	INT,	RER,	EXP,	RER,	INT,	RER,	INT,	RER,	INT,	INT,	EXP,	RER,	INT,	RER,	INT,
		INT,	EXP,	INT,	DEB,	EXP,	EXP,	INT,	DEB	INT,	EXP,	INT,	DEB,	INT,	EXP,	EXP,	DEB	INT,	EXP,	INT,	DEB,
		DEB,	DEB,	DEB,	LAB	DEB,	DEB,	EXP,		DEB,	DEB,	DEB,	LAB	EXP,	DEB,	DEB,		DEB,	DEB,	DEB,	LAB
		LAB	LAB	LAB		LAB	LAB	DEB		LAB	LAB	LAB		DEB	LAB	LAB		LAB	LAB	LAB	

Table 6.71 Cross-method selection of variables

Note: 'n.a.' for not applicable.

		TRA	BUS	INF	RER	INT	EXP	DEB	LAB
Dollar	Pre-crisis	1	1	3	1	2	0	2	-
	Crisis	2	0	1	3	0	1	2	-
	Post-crisis	1	1	2	4	2	0	1	1
	Total	4	2	6	8	4	1	5	1
	Pre-crisis	2	0	0	3	0	1	3	-
Currency	Crisis	3	0	1	3	1	2	0	-
Basket	Post-crisis	2	1	2	0	0	1	2	0
	Total	7	1	3	6	1	4	5	0
Yen	Pre-crisis	0	1	0	4	0	1	3	-
	Crisis	0	1	4	1	1	1	3	-
	Post-crisis	1	2	1	0	2	0	2	1
	Total	1	4	5	5	3	2	8	1
	Pre-crisis	0	2	3	1	2	2	1	-
Euro	Crisis	0	2	1	1	0	3	1	-
	Post-crisis	2	0	1	1	3	1	3	0
	Total	2	4	5	3	5	6	5	0
Yuan	Pre-crisis	0	1	3	3	1	1	1	-
	Crisis	0	0	1	3	3	1	1	-
	Post-crisis	0	3	4	2	2	0	1	1
	Total	0	4	8	8	6	2	3	1
	Grand Total	14	15	27	30	19	15	26	3

Table 6.72 Cross-method variable count

6.7 Chapter Conclusion

The chapter has presented and discussed the findings using OCA criteria. The findings are expected to answer the corresponding research questions. The discussion on how the results address the research questions is provided in Chapter 8 Discussion and Conclusion. The key findings from this chapter will also be revisited in that final chapter.

In brief, the chapter has explored the OCA features of the countries under review and delivered the findings by each clustering method, including the classifications using the original unweighted criteria and those using weighted criteria; and assessment of preparedness using unweighted and weighted criteria. Results from criterion dominance and variable selection were also discussed. Comparisons of findings across periods, monetary anchors, and clustering methods were also made.

The next chapter, Chapter 7 Results using Maastricht Treaty Criteria presents the findings by Maastricht criteria.