CHAPTER 4: Analysis and Results

4.1 Motivations for the M&A

4.1.1 Government Legislation – Liberalization and Competition in the Telecommunication Industry

The strategic motivations of the M&As are related to certain government initiatives to liberalize and promote healthy competition in the telecommunications industry. Privatization and liberalization of the sector in the 1980s ushered in an era of regulatory reforms and competition in the sector. According to Lee (2002), the initial effort to liberalize the telecommunications industry was driven by shortage of terminal equipment as well as the private sector's ability to convince the government they could remedy the problem. The inability for the government to remedy the many problems needed for further growth in the industry resulted in further liberalization in other telecommunications markets that included the cellular market in 1988, fixed line market between 1993 – 1995 and the Internet service provider (ISP) market in the late 1990s.

The incumbent in the ISP market is MIMOS Bhd. that started providing Internet service since 1987. A second ISP license was then issued to TMB in 1996. By 1998, five more licenses were issued. To date, a majority of this market remains under MIMOS and TMB. This has deterred the latter license holders from effectively

competing over the years. License holders such as Maxis and Celcom concentrated instead in the cellular market where they have a better level-playing field.

By the early 1990s, five additional licenses to operate in the fixed line market were issued. As a result, competition was introduced to the market that was previously monopolized by Telekom Malaysia Berhad (TMB) in which the government still has a substantial shareholding interest. However, TMB's market share remained unchallenged because the cost of building the fixed line network is too high and license holders have not focus on competing with TMB in the market. Instead, license holders preferred going into the cellular line market which the needed less initial investment with better growth opportunities. As such, the issuance of new licenses for the cellular market led to TMB having to face heighten competition in cellular line market, starting with Celcom Sdn. Bhd. in 1990. By 1992, Celcom's subscriber base overtook TMB's subscriber base. TMB's market share continued to decline with three additional licenses to major operators Maxis (formerly Binariang), Digi (formerly Mutiara Communications) and TIME DotCom (formerly Sapura Digital) in 1995 (Appendix II - Table 1). Subsequently as the competition for market share intensified, TMB acquired Emartel from MRCB in 1996 and the rest of its stake in the Mobikom in 1998 to form TM Cellular, obtaining additional market shares.

Concurrently with the heightened competition in the cellular market in 1998, the Malaysian Government restructured the Ministry of Energy, Telecommunications,

and Post into the Ministry of Energy, Communications and Multimedia. According to Lee, a major reason for this restructuring exercise was to bring the regulatory structure in line with technological developments in the telecommunication and multimedia industries[3]. As a result of this restructuring, the Malaysian Communications and Multimedia Commission (MCMC) was formed in 1998. The MCMC assume the responsibility of regulating the CMA 1998 and CMCA 1998. CMA 1998 states the regulatory institutions and structure for the industry whilst the CMCA states the function, powers and operational aspects of the CMC.

A major contribution of the CMA 1998 towards a liberalized and competitive industry is the participation of the public in the devising the current regulatory framework. The MCMC published Discussion Papers, which encouraged opinions from the operators during the drafting of the regulatory framework. The CMA 1998 was introduced to ensure that the industry is (1) efficient, (2) consumers' needs in terms of access, affordability and service quality are protected, and (3) to ensure technical inter-operability of networks, efficient allocation of resources and the safety, security and integrity of network services and applications services. This is done through the implementation and enforcement of three types of regulatory policies – licensing, competition policy and service access. According to the CMA 1998, (1) the ownership or provision of any network facilities, (2) the provision of any network

[3] More information on the regulatory reforms in Malaysia can be found in Lee (2002).

services, (3) the provision of any application services, or (4) the provision of any content applications services, requires a license[4].

According to the MCMC, the CMA 1998 is designed and implemented to ensure that the industry is open for competition, and contains provisions that enable monitoring and promotion of competition within the communications and multimedia sector for the benefit of consumers at large[5]. The CMA 1998 provided that market-based pricing is applied to the cellular services while the fixed-line market (TMB still controls the majority market share) remains regulated to ensure affordability for the mass consumers. Additionally, guidelines are published to ensure no anti-competition conducts in the industry. As a result the reforms between the late 1980s and throughout 1990s, the industry has transformed from a monopolistic regime with TMB's monopoly over mobile, fixed line and international telephony services to the current more transparent, more liberalized structure promoting healthy competition.

The government encouraged foreign investors to provide the necessary capital investment and technological know-how and experience. It has, however, limited foreign ownership in Malaysian telecommunications companies up to 61 per cent in 1999 due to the financial crisis. This is provided that the ownership percentage of

[4] Refer to Appendix I for the classification of licenses in detail
[5] Taken from the MCMC report of public inquiry "*Assessment of Dominance in the Communications Market*".

foreign investors is reduced to 49 per cent within five years of achieving the 61 per cent threshold[6].

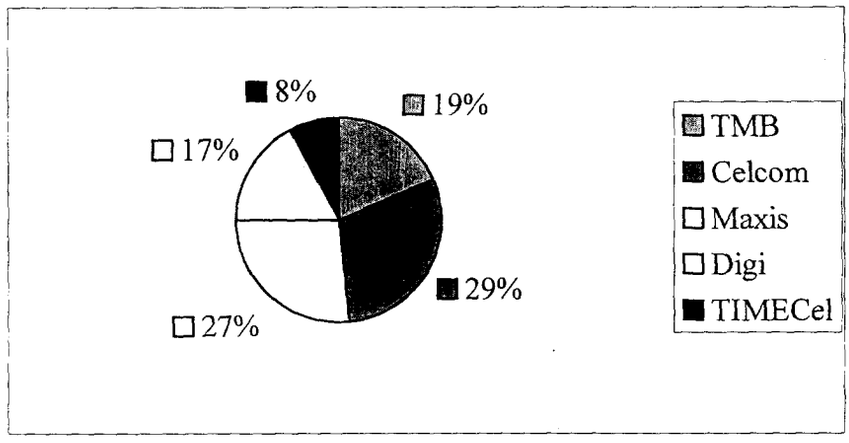
4.1.2 Competition for Market Share

Within 5 years since its launch, Celcom and Maxis respectively overtook TMB's subscribers in the mobile market, each comparatively having a considerably larger market share than TMB. If it were not for its consolidation of Mobikom and Emartel into TMTouch in the late 1990s, TMB's market share of the cellular market would have been even less compared to latecomers Maxis and Celcom. TMB had to consolidate its cellular business to be a more significant player in the market as the incumbent was faced with technological change – analogue to digital GSM, which all the new players had. It purchased GSM 1800 operator Emartel and renamed its consolidated business as TMTouch.

In the year 2000, there left only five companies – TMB, Celcom, Maxis, Digi and TIME – fighting for market share in the cellular market (Figure 4.1). The total cellular subscribers were 5.2 million by December 2000. By then, TMB's market share in the cellular market was eroded by Celcom, Maxis, Digi, TIME with 30%, 27%, 17% and 8% of the market shares, respectively. It was evident at that time that TMB even after its internal consolidation was losing out to the newer players in the market as competition intensified between the remaining five telcos in the industry.

[6] Refer to Appendix II for more detail on Foreign Ownerships among the local telcos.

Figure 4.1: Market Shares in the Cellular Market Year 2000



Source: Various

According to the MCMC, the total number of mobile subscribers increased from 2.7 million at the end of 1999 to 7.5 million at the end of 2001 while mobile penetration increased from 12.0 per cent to 31.4 per cent during the same period. In comparison, fixed line subscribers increased from 4.4 million to 4.7 million over the same period. According to the ITU, this trend in developing countries has been largely driven by the favorable regulatory environment, declining entry cost for subscribers and lower tariffs of mobile services through the introduction of prepaid services.

In Malaysia, Digi and Celcom were the first firms to launch pre-paid services in January 1998. TMB and Maxis then followed suit in December 1998 and October 1999 respectively. The fight for market share intensified between the five telcos in the growing cellular market in 2000. The cellular market has since been driven by the

pre-paid services. This eventually led to price wars among the remaining telcos in 2003.

A year after the introduction of the pre-paid services, the overall growth rate of cellular phones peaked at 88.5% in 2000 from 26.4% in 1999[7]. By 2001, the overall pre-paid subscribers in the market exceeded the post-paid subscribers[8]. The pre-paid market has been primarily targeted at the growing population that is between ages 15 to 24. According to the ITU, prepaid mobile attracts young people with low budgets, parents who want to remain in control over their children's telephone expenses, or those who purchase a mobile phone for security reasons.

In the competition for market share, the five telcos used brand names to differentiate among themselves; TMB – TMTouch, Celcom, Maxis, Digi, TIME dotCom - Adam. Despite being a latecomer, Maxis successfully used its brand name to secure its subscribers and commanded a premium among consumers. In 2001, Maxis boasts the highest market share with 28% in the cellular market followed by Celcom, Digi, TMB (despite the restructuring efforts in the late 90s) and TIME with 26%, 18%, 16% and 12% respectively (Figure 4.2).

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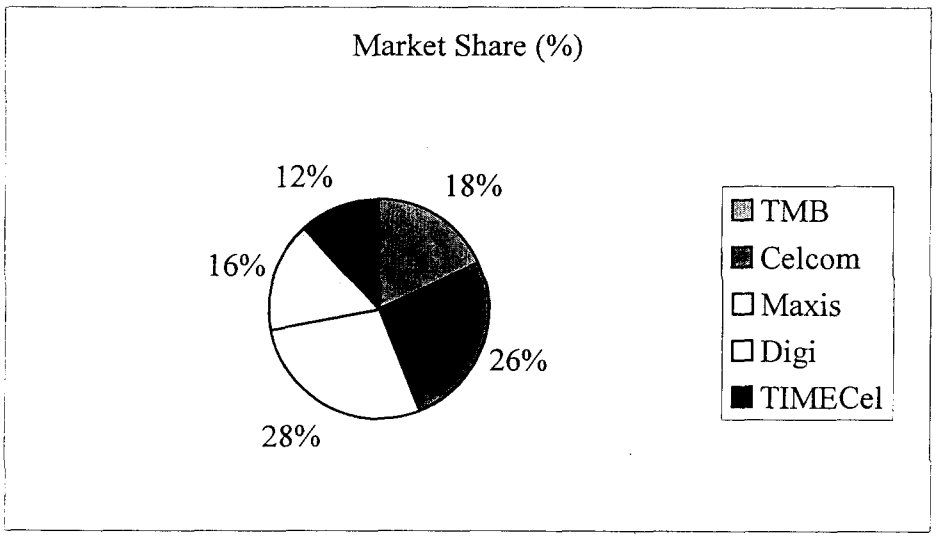
[7] Statistics taken from MCMC website Facts and Figures Cellular Market 1998-2004

[8] Summarized from a figure from the paper "Mobile Overtakes Fixed – Implications for Policy and Regulation" by the ITU showing countries with more mobile than fixed-line telephone subscribers.

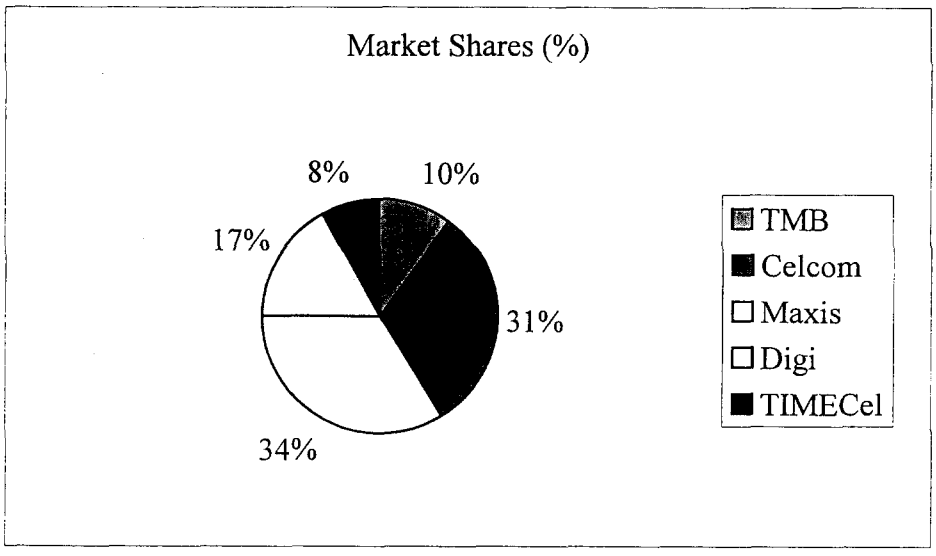
Figure 4.2: Market Shares in the Cellular Market in 2001



Source: Various

The situation worsened into 2002 (Figure 4.3) for the smaller players. For TMB and TIME, their market shares decreased to 10% and 8% respectively while Celcom, Maxis and Digi posted increases to 31%, 34% and 17% respectively.

Figure 4.3: Market Shares in the Cellular Market in 2002



The year 2002 saw the start of the price slashing of pre-paid starter packs by the telcos to capture the market share. There was a continual decline in cellular subscriber growth (Appendix II - Table 4) and the five operators resorted to aggressive pricing of the pre-paid starter packs. Digi was the first to slash its price of the pre-paid starter pack (Table 4.1). Aggressive pricing has raised affordability and thus, the continuation of mobile subscribers growth.

Table 4.1
Aggressive Pricing in the Pre-paid Market by Celcom and Digi

Year	Celcom	Maxis	Digi
1Q 2002			RM199 to RM68
2Q 2002		RM 200 to RM 123	Reload discounts 5 – 10%
4Q 2002	3-tier starter packs with RM168, RM 128 and RM48		RM68 to RM48

In order to compensate for the short fall in the average revenue per user (ARPU) due to the price-cutting, the volumes have to be there. With the main players slashing its prices, TIME found itself in dire straits due to its lack of economies of scale with only around 660,000 subscribers between its post-paid and pre-paid markets in 2000-2001. It was unable to compete efficiently with the big players, such as Maxis and Celcom, and was heavily in debt due to its unprofitable cellular business unit.

Meanwhile, TMB's TMTouch failed to find a niche in the market to compete with Digi, its nearest competitor in terms of market share. Digi provides a variety of value-added services with low pricing in the pre-paid market that made it a niche player in

the cellular market, particularly in the prepaid segment for younger consumers. In terms of marketing, TMB's TMTouch failed to foster the brand awareness and thus, did not become the popular choice for pre-paid customers. If TMB were to compete efficiently in the cellular market, it needs to be on par with Maxis, Celcom or Digi in terms of brand recognition and services.

4.1.3 Technology and Its Costs

The first generation of mobile phones consisted of the analog models that emerged in the early 1980s. The second generation of digital mobile phones appeared about ten years later along with the first digital mobile networks. During the second generation (2G), the mobile telecommunications industry experienced exponential growth both in terms of subscribers as well as new types of value-added services. 2G wireless technology can handle some data capabilities such as fax and short message service at the data rate of up to 9.6 kbps, but it is not suitable for web browsing and multimedia applications. Subsequently the 2G+ wireless technology was introduced to compensate for the limitations of the 2G but it is restricted a rather low data transmission speed and roaming. With the adoption of third-generation (3G) wireless technology, mobile communication can be done globally without any restriction and data transmission speed increased from 836kbps to 2Mbps. Thus, it allows for wireless communications service which combines high-speed fixed and mobile access with Internet Protocol (IP) based services. Although popularly referred to as 3G, the service is also known as International Mobile Telecommunication 2000 (IMT-2000)

while in Europe it is referred to as the Universal Mobile Telecommunication (UMTS). The imminent delivery of this technology is caused by the current technology that imposes limitation on the introduction of new multimedia services, which require large amounts of bandwidth for mobile wireless access to the Internet. Third Generation (3G) mobile devices and services will transform wireless communications into on-line, real-time connectivity. 3G wireless technologies will allow an individual to have immediate access to location-specific services that offer information on demand. According to the MCMC and the ITU, however, the 3G is yet to be proven and should be approached with caution considering the amount of investment needed.

The recent years, Malaysia's twenty billion ringgit telecommunication market is seen as too small to support all its five firms, given the capital intensive nature of the industry and its need to support a continuous rollout of expensive new technology, in this case the 3G. Additionally with the foreign ownership restriction by the government, the opportunities to meet the substantial investment cost on technology and infrastructure through foreign investors are limited (Appendix I – Table 2). The foreign ownership restriction is felt most in the incorporation of the 3G-technology into the current cellular technology. This is particularly so when the use of this technology requires a high upfront cost, which is the licensing fee and the building of the infrastructure.

Additionally, the MCMC has taken a unique approach to 3G by awarding sufficient 3G spectrum for three network facilities providers based on "beauty contest", in which the awarded firms would be able to construct the physical infrastructure while there would be multiple service provider licenses. The winning firm would have to pay RM50 million payable over 10-15-year life of the spectrum award as well as annual spectrum maintenance fees. It has been estimated by the ITU that it would cost an operator RM 2.5 to 3.5 billion to construct a 3G network in Malaysia. In July 2002, only Maxis and TMB were announced as successful in the bidding while Celcom, TIME and E-Touch (an non-telecommunication company) missed out on the allocation. As such, the above unsuccessful firms are not allowed by the MCMC to provide 3-G services in the future and thus, stand a chance in losing any competitive edge they might have in the fight for market share once the consumer market catch on with the technology.

This lack of access to the 3-G wireless technology poses a new problem for the TIME and Celcom. TIME's cellular business has not been performing up to par with the rest of the players and has been losing out in the competition for market share since 2000. Its other businesses (mainly fixed line, broadband, payphones and Internet) were doing much better than its cellular branch, and it is virtually impossible that it would have been allocated a 3G license by the MCMC due to its lack of presence in the cellular market and posted losses for the financial years preceding and during the

licensing selection[9]. Similarly, despite Celcom having the second largest market share in the cellular market in 2002, it was making losses associated to its operations since 1999 when the competition heightened[10]. Thus, its inability to secure the 3-G licensing predicts its eventual fall in the competition for more market share. Without access to the 3-G spectrum from MCMC as a result from poor financial standings, both Celcom and TIME would not have survived this technological-paced industry in the long run.

Additionally, Maxis with the most market share in the cellular sector, started to face problems in terms of network congestion, due to the increasing number of subscribers. There was not enough network infrastructures to support the frequency of calls during peak hours and eventually its 3-G services. This means that its focus would have to be on both competition for market share and the building of the infrastructure. A viable alternative to self-sufficiency would be to acquire the infrastructure needed while in addition gain additional market share.

4.2 Impact of M&As on the Firms

4.2.1 Economic Impact

4.2.1.1 Profitability Ratios:

I. Return on Assets (ROA)

[9] Exact figures of the losses are available in TIMEdotCom's financial statements in the Annual Reports. Its IPO offering failed to raise the necessary amount needed by investors. TIMEdotCom accumulated significant debts in years preceding the M&A.
[10] Exact figures of the losses are available from Celcom (M) Bhd.'s financial statements in the Annual Reports. Celcom was later controlled by TMB in 2001 after being taken over by Danaharta due to heavy debts. The transaction was discussed briefly in Chapter I.

II. Return on Equity (ROE)

III. Return on Sales

ROA, ROE and Return on Sales ratios are used to measure the profitability of the firms pre- and post-M&A. There are no signs of decline in terms of profitability for both Maxis and TMB after the M&A activities. For TMB, the ROA has a rate of change of –53.8% in 2002 after a continual increase since 2000 (pre-M&A)[11]. The ROE and Return on Sales showed similar patterns; ROE and Return on Sales decreased with rates of -55.1% and -52.9% respectively in 2002[12]. The ROA, ROE and Return on Sales went back to its continual increase in 2003 and 2004; the ROA, ROE and Return on Sales increased with rates of 33.3%, 45.6% and 37.1% respectively in 2003 (post-M&A). The ROA, ROE and Return on Sales increased at rates of 77.5%, 66.3% and 65.6% respectively in 2004.

For Maxis, the ROA and Return on Sales showed continual increases at various rates from 2000 to 2003[13]. The ROE decreased with a rate of –26.8% in 2002 breaking its increases since 2000. From 2001 to 2002, the ROA and Return on Sales increased with rates of 15.3% and 27.3% respectively. From 2002 to 2003, the ROA, ROE and Return on Sales increased at rates of 41.9%, 19.5% and 55.9% respectively. For year 2004, there are decreases in the ROA, ROE and Return on Sales at rates of -20.7%, -

[11] Refer to Appendix III – Table 6 – 8

[12] This is attributed to the year 2002 lower profit before taxation. The lower profit before taxation is the result of an inclusion of an exceptional gain on disposal of an associated company, Digital Phone Company Limited (DPC) in the 2001 financial statement that was reapportioned in 2002. The secondary data used is based on the Group financial statement and thus, includes other subsidiaries. Thus, there is no significance to the M&A activity in 2002. The ROA, ROE and Return on Sales in year 2003 (post-M&A) is a more accurate reflection of the M&A activity.

[13] Refer to Appendix III – Table 6 – 8

26.4% and -28.5% respectively. However, these are not due to increase in revenue but to taxation[14].

4.2.1.2 Earnings per Share (EPS)

EPS is used to measure any changes in shareholder's wealth for TMB and Maxis. There were continual increases in EPS from 2000 to 2004 for both TMB and Maxis. For TMB, there were no signs of earnings dilution post-M&A[15]. The EPS increased from 26.8 sen in 2002 to 43.6 sen in 2003. For 2004, the EPS increased significantly to 78.2 sen. For Maxis, there was no sign of earnings dilution post-M&A in 2003[16]. The EPS increased from RM42.42 in 2002 to 75.07 sen in 2003. For 2004, there was a decrease in EPS to 64.9 sen but it is higher than pre-M&A years.

Overall, the profitability ratios support favorable economic impacts from the post-M&A for TMTouch-Celcom and TimeCel-Maxis.

4.2.2 Strategic Impact

4.2.2.1 Market Share:

Table 4.2
Comparison of Market Shares Pre- and Post-M&A in Cellular Market

Company	Market Share (%)

[14] This is a result of the deferred tax asset of RM760 million s recognized in year 2003 and the reversal of ¾ of the deferred tax asset recognized from that year in year 2004. This made the net profit after taxation for year 2004 lower than the previous year. There is a difference of RM1000 million in profit before taxation between years 2003 and 2004. Operational aspect can be found in part 4.2.2 under Gain in Infrastructure and Operational Efficiency. Further details on the taxation can be found from the Maxis' 2004 Financial Statements.
[15] Refer to Appendix III – Table 9
[16] Refer to Appendix III – Table 9

	Pre-M&A	Post-M&A	
	2002	2003	2004
Maxis Communications Bhd.	34	41	41
TIME dotCom	8		
Celcom (M) Bhd.	31	39	38
TMTouch	10		
Digi Telecommunications Bhd.	17	20	22

Source: MCMC

In year 2003, the absorption of TMTouch into Celcom provided TMB with an additional 880,000 subscribers, bringing its market share to 39%. Meanwhile, Maxis announced an addition of 660,000 subscribers as a result of the acquisition of TIMECel, the cellular branch of Time dotCom. The combined market share placed it in the lead in terms of market share at 41% between the three remaining telcos. Digi had the remaining market share of 20% (Table 4.2).

In 2004, Celcom continued to trail closely behind Maxis with 37% while Maxis remaining its 41% market share. Digi increased its market share to 22% in 2004. The M&A activities lessened competition in the cellular market and the three remaining telcos gained a larger share of the market respectively compared to the pre-M&A market. Overall, the market shares between telcos have remained relatively stable after the post-M&A increase in numbers in 2003 (Table 4.2).

4.2.2.2 Competition and Aggressive Pricing:

Although competition was reduced as a result of the M&As, aggressive price-cutting among the three telcos – Maxis, Celcom and Digi – continues well into year 2004 (Table 4.3). The telcos, however, are able to maintain their current low prices of RM18-20 as a result of economies of scale. Pre-paid market continues to drive the total number of subscribers for all telcos.

Table 4.3
Pre-paid Starter Pack Pricing History Between 3 Major Players

	Company		
Year	**Celcom**	**Maxis**	**Digi**
1Q 2002			RM199 to RM68
2Q 2002		RM200 to RM123	Reload discounts 5 – 10%
4Q 2002	3-tier starter packs RM 168, RM128 and RM48		RM68 to RM48
1Q 2003		Free talk-time from RM50 to RM88 for RM123 pack	
2Q 2003		RM123 to RM88	
4Q 2003		RM88 to RM68	
2Q 2004		RM68 to RM48	
4Q 2004	X-pax starter pack RM20	RM48 to RM20	RM38 to RM18

Source: Various sources

4.2.2.3 Gains in Infrastructure and Operational Efficiency:

CAPEX/Sales ratio was used as an indication on the capital expenditure efficiency as a result of the merger. The capital expenditure is primarily on network infrastructure expansions for future sustainability of their networks. OPEX/Sales ratio was used to measure the changes in operational efficiency as a result of the merger.

I. Capital Expenditure (CAPEX/Sales Ratio):

Analysis shows that Maxis has been showing a continual decrease in capital expenditure from 2001 to 2003[17]. Between 2003 and 2004, the Maxis' CAPEX/Sales ratios remained relatively stagnant despite 3G infrastructure investments. The strategic gain from network infrastructure (25Mhz in total) for Maxis solved its problem with network congestion and capital investments can be concentrated on the 3G infrastructure.

For TMB, the CAPEX/Sales ratio remained relatively stagnant between 2000 and 2001. There is a rate of change of +15.2% from 2001 to 2002 as a result of the additional investment on plant and equipment for better network coverage. The 2002 hike in the CAPEX/Sales ratio is followed by a rate of change of –32.3% in 2003 despite the 3G-spectrum license fee and a rate of change of –7.8% in 2004. Capital expenditures for its cellular business unit had reduced significantly as a result of the combined network infrastructure, plant and equipment of Celcom and TMTouch following the M&A.

II. Operational Expenditure (OPEX/Sales Ratio)

For Maxis, the OPEX/Sales ratio shows rate of change of +13.5% in 2003 that broke the declining trend since 2001. The 2003 hike in OPEX/Sales ratio is

[17] Refer to Appendix III

associated to the additional administrative expenses and network operations costs as a result of the management and network integration of TimeCel into Maxis as expected. In 2004, a rate of change of -20.7% followed.

For TMB, the OPEX/Sales ratio shows rate of change of +2% in 2003 that broke the declining trend since 2000[18]. The 2003 hike in OPEX/Sales ratio is associated to the additional administrative expenses and network operations costs as a result of the management and network integration of TMTouch into Celcom as expected. The restructuring in its management and operations from the M&A activity resulted in reduced operations spending. For 2004, upon successful integration, Celcom's OPEX/Sales ratio decreased significantly at the rate of -44.4%.

[18] Refer to Appendix III