Chapter 1 Introduction

Objective: to examine the mechanism of capital flows

Capitalism as a political economic system has survived and proved its superiority over other competing systems throughout the history of mankind. Nevertheless, it has been plagued repeatedly by the phenomenon of the bubble where wealth is artificially created. Although everyone, particularly the Japanese in the 1990s, has known, and experienced serious damage from, the boom and bust of a bubble economy, little is known about its mechanism. In addition, the Japanese economy changed its nature in that the accumulated value of national wealth had already reached a much higher level than the flow variables of output, and stock variables had much more impact on the whole economy. This was named the "stock-economy" phenomenon (Noguchi, 1991, pp. 11-17). Accordingly, the first issue considered here is how credit circulation in the boom and bust of a bubble economy, and how its disequilibrium, is created and adjusted in the so-called stock-economy.

Two other issues will also be considered: firstly, whether the Asian financial crisis that erupted in mid-1997 was a purely monetary phenomenon, in which the more complicated processes of the bubble phenomenon were passed on across borders, and where many currencies were involved. A currency plays the role of a unit of account in its own domain, but its stability of value is always threatened under the present system of international financial architecture. We would like to examine how this stability is affected by the mechanism of international capital flows. Politicians and policy makers in the effected economies have begun discussions to monitor and to regulate prudently short-term capital flows for private financing (e.g., Manila Framework Group, 1998; Asia-Pacific Economic Cooperation [APEC], 1998). We

must strengthen the international financial architecture better to prevent future financial instability and to resolve the crises more effectively when they occur. It is the right time to effect changes aimed at strengthening the international financial system, in order to capture the full benefits of international capital flows and global markets, while minimizing the risk of destructive disruptions.

Secondly, we have to ask here whether the integration of Asia is possible or not, in particular from a monetary perspective. The monetary integration of Asia is a concept that considers regionalism as an intermediate stage between globalism and nationalism. Like European Monetary Union (EMU), it aims not only at economic integration but also ultimately at the goal of political integration in the region (Sutherland, 1997, pp. 1-14). The main actors of regional integration in Asia are Japan and the East Asian countries. However, there lies a giant behind them, i.e., the United States. Whenever we discuss the problems of Japan and Asia, we cannot ignore the role played by the United States. While economic interdependence has deepened in East Asia, Japan could not really assume a leadership role in Asian integration, because, in a substantial sense, she has not fully regained the power of decision making in her own security and foreign policy since defeat in World War II. Japan is still restrained from striving towards economic and political integration in Asia due to the memories of the past and the constraints of the Japan-US relationship. However, the problem for Japan is not simply making a choice between the two alternatives, i.e., Asia or the United States, but finding how Japan and Asia can achieve integration within these limitations.

Two hypotheses that will be demonstrated here are how money and credit can be viewed as a social substructure, and also as an engine of world history. First, the creation of money and credit can, and must, be socially controlled through the

operations of monetary authorities in order to keep the appropriate level of monetary and credit aggregates. Money and credit are the most essential substructure of our economic lives. It will only be possible for us to control money and credit effectively if we fully understand the mechanism of credit flows and the knock-on effects of the reflexive (i.e., self-perpetuating but converging) repercussions on economies as a whole.

The views of Friedrich A. Hayek and Milton Friedman on currency competition might be worth considering with regards to the social control of money and credit. Since the late 1970s and early 1980s, due to the unsatisfactory performance of monetary authorities in most countries, it has become more widely recognized that it is necessary to find a way to reduce the role of government in the production of money. In his pioneering studies (1978; 1984), Hayek launched and promoted the idea of 'currency competition,' where "everybody should be free to offer money of differing denominations to the public" (1984, p. 30). Hayek assumed that "it would be the public that would ultimately decide which of these monies would become generally accepted . . . [and] that a private institution which must issue money in competition with others, can only remain in business if it provides the people with a stable money which it can trust" (1984, p. 30). In his theory of currency competition, Hayek intentionally used the term 'acceptability' instead of 'liquidity' to expand the range of credit instruments from perfect liquidity, i.e., gold or money, to commodities of a kind which are very illiquid. Hayek continued his contention as follows:

> We know, of course, that the general reason why people use money as a medium of exchange is that such a commodity possesses a greater degree of acceptability or that it is likely to be more accepted than other commodities. In modern times the word acceptability is often replaced by liquidity, which is very useful because it brings out another aspect which has been neglected for a long time. It is the question about the distinction between a money and a commodity. There exists a whole range of types of liquidity which particular commodities possess. When you have perfect liquidity your [sic] really are at

> the start of the basic money. Then there are all sorts of more or less close substitutes. The range goes from gold, which is liquid, to commodities of a kind which are very illiquid. This distinction is important because it shows that another concept, that of the stability of money, is not an ambiguous concept. Commodities may, for instance, be stable in value provided we are not being forced to sell them rapidly. As regards money, if several currencies have the same degree of acceptability, they may have different degrees of stability. Therefore, . . . if people were wholly free to choose which money they wished to use in their daily transactions, it would soon appear that those did best who preferred a money with a stable purchasing power. . . . People want, as a medium of exchange, something which reduces as much as possible the uncertainty of future prices. (Hayek, 1984, pp. 32-33)

Milton Friedman, however, submitted a rebuttal in his "Currency competition: A sceptical view" (1984) as follows:

> The fundamental problem is how to establish monetary discipline. Friedrich Hayek has presented an extremely stimulating idea directed at trying to achieve this result by the private issue of money by competing private banks. I may say that I am all in favour of the changes in legislation he proposes which would give private banks the greatest latitude in the way of offering substitutes for money. But I do not predict the same outcomes he does. I am very much less optimistic than he is that such a system would lead to a money of constant purchasing-power and of high quality. The fundamental problem is that in the present circumstances of the world there are no assets which banks could acquire to match purchasing power obligations. Let a bank undertake to pay out money which will have a fixed purchasing power, how can it be sure to guarantee that result? Only if it can match those liabilities with assets which can be assured of fixed purchasing power. That will be possible when and only when governments in turn issue purchasing-power securities. (M. Friedman, 1984, p. 43)

Instead of currency competition, Milton Friedman insisted on "the establishment of a fixed monetary rule under which the monetary authorities are committed by law to increasing the quantity of money at a steady non-inflationary rate, the same rate from year to year" (1984, p. 46).

The above-discussed quality of money as a generally accepted means of payment is inherently linked to the function of money as a unit of account—or measure of value, which may be explained as follows:

> Money is generally accepted as a means of payment when people have confidence in this money and this confidence is basically founded on its purchasing-power-value stability. Confidence belongs to the domain of

> information and information is based on past experience and future expectations. It follows that newly created monies and existing monies imply completely different degrees of confidence. Thus, for instance, a newly created money which lacks, by definition, any historical dimension of (good or/and bad) value-stability behavior has to be equipped by resources which create confidence, and these resources may consist of backing the money by commodities, by other currencies as reserves, by respectable names in bank management or by various other techniques. Consequently, the money producer has costs of selling (and not only producing) the money which are equivalent to the investment cost of building up a 'brand-name capital' . . . , which assures a certain degree of monetary confidence. (Claassen, 1984, pp. 53-54)

In other words, these are questions of the stability of value, where monies (and other forms of credit means of payment) are recognized as the balance sheet liabilities of money- (or credit securities) producers. The stability of value could be measured by the concept of risks. For instance, non-performing loans are a problem of stability of value in banking systems. It would lead to a contraction of the money supply.

Second, the human desire for money and credit (in other words, the desire for wealth accumulation) has always played a role as an engine of world history (see Hegel, 1988; 1991).[1] In this way, we answer the question, which Karl R. Popper raised, whether history has any meaning in a monetary perspective (1945b, pp. 259-280; 1952). The essence of economic development may be the outbreak of revolutionary changes in production, which Joseph A. Schumpeter labeled the carrying out of "new combinations of productive means" (1989, p. 66). It is not brought about by the normal and static circular flow of an economy, but is financed through the creation of "credit means of payment."[2]

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[1] This hypothesis on the interactive structure between money and the international political economy originate in the stage theory of economic development (see Lenin, 1956). Although communism as a political economic system ended in failure with the collapse of the Soviet Union in 1991, Lenin's analytical framework on capitalism and international politics has not yet lost its philosophical significance.

[2] 'Credit means of payment' can be defined as the "means of payment which are created for the purpose and by the act of giving credit, serve just as ready money [i.e.,

Considering the interaction between economic and historical processes, George Soros, one of the most successful fund managers of our time, expressed a unique view on money and credit and his belief in historical processes as follows:

> Money values do not simply mirror the state of affairs in the real world; valuation is a positive act that makes an impact on the course of events. Monetary and real phenomena are connected in a reflexive fashion; that is, they influence each other mutually. The reflexive relationship manifests itself most clearly in the use and abuse of credit.
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> Loans are based on the lender's estimation of the borrower's ability to service his debt. The valuation of the collateral is supposed to be independent of the act of lending; but in actual fact the act of lending can affect the value of the collateral. This is true of the individual case and of the economy as a whole. Credit expansion stimulates the economy and enhances collateral values; the repayment or contraction of credit has a depressing influence both on the economy and on the valuation of the collateral. (Soros, 1987, p. 17)

It is found that the expansion and contraction of credit can affect the debtors' ability and willingness to pay. Soros called this interaction 'reflexivity,' using the word as the French do when they describe a verb whose subject and object are the same. Furthermore, to elaborate the usage of the term, we should better employ the concept of 'spiral reflexivity' to express more precisely the circular movements between component parts when the entire system of reflexivity itself is in motion.

We can recognize the historical processes in reflexive interaction between the subject (first coordinate system) and the object (second coordinate system), which reciprocally drive each other "from creature to creator" (Nishida K., 1941, p. 147). The famous words of Karl Marx's dialectical materialism state that "it is not the consciousness of men that determines their existence, but their social existence that

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liquidity] in trade, partly directly, partly because they can be converted immediately into ready money for small payments or payments to the non-banking classes—in particular to wage-earners." Credit means of payment are created which are, in their external form, represented as mere claims to money, but which differ essentially from claims to other goods in that they perform exactly the same service—at least temporarily—as money, so that, under certain circumstances, they may function as money substitutes (see Schumpeter, 1989, p. 73).

determines their consciousness" (1970, p. 21). However, we can make our mark on the course of history. This is the core meaning of the concept of spiral reflexivity. This is an attempt to show that spiral reflexivity is one of the historical processes that drives economic development.

Analytical frameworks

In considering the three issues raised above, three analytical frameworks will be used. These are the frameworks of monetary economics, of international political economy, and of public policy implications. Regarding the first framework, when addressing the credit-flows mechanism of boom and bust in a bubble economy, we must cover the whole spectrum of money and credit instruments in both domestic and international economies. In order, therefore, to explore the comprehensive interaction and dynamism of whole financial intermediaries, we decided to develop a suitable analytical framework for this study. This is the 'T-accounts matrix analysis,' consisting of a two-dimensional matrix, which was transformed from the one-dimensional structure of a balance sheet (i.e., parallel lines of debit and credit). It is based upon the integrated methodologies of the Brainard-Tobin type of portfolio approach (Tobin, 1987c, pp. 322-338) and the Leontief type of matrix approach (Leontief, 1966a).

The T-accounts matrix analysis will clearly demonstrate the entire structure of credit flows within the whole economy. It will give us a macro-financial perspective in order to understand the credit-flows mechanism for both economic development and dynamism in a bubble economy. It will also show the interaction between foreign exchange and domestic financial markets. Utilizing this approach, we will explore the "general multi-equation equilibrium of the entire spectrum of assets and debts; all financial markets, and all financial institutions replace the narrower traditional

concentration on the quantity of money and the commercial banking system" (Tobin, 1987e, p. xiii).

The second analytical framework comes from the international political economy. Money and the whole spectrum of credit instruments are recognized as the substructure of the world system. Purchasing power represented by money and credit instruments has been the historical preference of mankind and has functioned as an engine of world history. It is supposed that the 'monetary stages,' which expanded as the technologies of financial intermediaries became more sophisticated, interrelate with the evolution of international political regimes. As the concepts of money and financial assets expanded from valuable metals, bank notes, stocks, bonds to derivatives or even electronic money, the rules of the game in the pursuit of profit (in other words, the purchasing power of money or value added-proper) through international economic activities also changed, that is to say, from mercantilism, classical liberalism, imperialism to transnational or interdependent ones. The framework of international political economy provides a useful perspective to examine historical developments in monetary phenomena. It will give us a new and unique interpretation of the correlation between the developments in monetary phenomena and human history.

Together with this, we can recognize that money and credit represent two contradictory attributes, i.e., globalism and nationalism. Huge capital flows that circulate on global networks cover the whole surface of this planet. Currencies flow in and out with very few foreign exchange controls in the major financial markets. At the same time, every currency is denominated in its respective national unit of account. Since the convertibility of US dollars into gold was suspended in 1971, the value of each currency henceforth could only be measured by a relative scale. There is no

global currency in the sense that its value is assured and it circulates everywhere in the world like gold did in the past.

As to the third analytical framework, we will concern ourselves primarily with public policy implications. By exploring both the economic and political preconditions necessary to bring about monetary integration in Asia, we intend to make a practical contribution to setting up Japan's public policies toward Asia. In particular, we will focus on international financial policies, comprising complex elements of both foreign and monetary policies. The monetary integration of Asia will have extensive and far-reaching effects not only upon the regional economies but also the rest of the world. In this connection, some positive signs concerning regional monetary cooperation have come from both Japan and Asia.

Positive signs from neighboring countries have also appeared. On November 28, 1998, South Korean Prime Minister Kim Jong-pil proposed that Japan and South Korea initiate a $300 billion "Asian Monetary Fund" in cooperation with other Asian countries.[1] Kim met Japanese Prime Minister Obuchi Keizo at a joint ministerial meeting in Kagoshima, southern Japan, and told him that if Japan took the lead in setting up the fund, South Korea was ready to support it with a commensurate contribution. Kim also suggested an initial $30-50 billion to establish the fund. Through the discussions on establishing the monetary integration of Asia, we seek to find a future role for Japan in the region to which she belongs in the sense of geopolitics and where integration in both economic and political areas has been accelerating. Leaders of Japan must be more active and challenging, if they are to achieve a common goal among Asian neighbors, i.e., the monetary integration of Asia.

[1] See "Korea Proposes $300 Bln Asia Fund to Japan," Nikkei, 1998; "S Korea PM Proposes 300 Bln Dollar Asia Monetary Fund," Reuters, 1998.

A short history of international financial developments in Asia since 1990

During the first half of the 1990s, the rapid growth of cross-border capital flows has brought change to the structure of the global economy. Activities in international financial markets were characterized by a record volume of securities issues and a further expansion in banking intermediation. Estimated total net financing in international markets grew from $355.0 billion in 1991 to $745.0 billion in 1996 (BIS, 1997a, pp. 118-119). At the same time, the overlap between the two market segments of securities issues and banking intermediation was accentuated, with financial institutions accounting for the bulk of new securities issues and banks' acquisition of securities accounting for the entire upswing in bank claims. "Behind these developments lie fundamental shifts in market practices and structures, which are related to the dismantling of regulatory barriers and technological innovation but also to deeper market forces. The issuance of international securities is increasingly becoming a substitute for more traditional funding channels. Meanwhile, repurchase agreements (repos) are gradually replacing outright interbank depositing, permitting participation by a broadening range of actors and further blurring the distinction between banking and securities transactions. Moreover, the rapid development of loan trading and the growing popularity of instruments such as asset-backed securities, structured notes and asset swaps are contributing to a greater interpenetration between market segments" (BIS, 1997a, p. 119-120).

The sharp increase of private capital flows into the emerging markets in Asia occurred at a time of considerable fragility in the banking systems of most recipient countries. The financial crisis that erupted in Asia in mid-1997 has led to sharp declines in the currencies, stock markets, and other asset prices of a number of Asian

countries, has threatened these countries' financial systems, and disrupted their real economies with large contractions in activity. Thus, after the crisis erupted in Thailand with a series of speculative attacks on the baht, contagion spread rapidly to other economies in the region that seemed vulnerable to an erosion of competitiveness after the devaluation of the baht or were perceived by investors to have similar financial or macroeconomic problems. As the contagion spread to Korea, the world's eleventh largest economy, the possibility of a default by Korea raised a potential threat to the international monetary system. The Bank for International Settlements gave the particulars of these developments as follows:

> Amidst the greater uncertainty, activity in international financial markets subsided in the fourth quarter of 1997. Total announcements of new international bonds and medium-term notes fell by 30% in comparison with the near-record pace of the third quarter. The decline was even sharper after allowing for repayments (60% including short-term financing), suggesting a shift of investment funds back to domestic and/or more liquid markets. The slackening of business was particularly pronounced for emerging countries borrowers, with a virtual drying-up of new issuance. Asian names were mostly denied access to the market and entities from other regions refrained from introducing new debt securities in view of the less favorable conditions. However, the better terms available in the syndicated loan market and the high volume of precautionary borrowing undertaken in the earlier part of the year may have alleviated some borrowers' need for capital market funds. (BIS, 1997c, pp. 2-3)

The crisis in Asia is still unfolding and further disturbances cannot be ruled out, especially in light of significant, unanticipated setbacks. The magnitude of the recessions in the effected Asian countries has exceeded all initial expectations. Political instability and the related social and economic disturbances in Indonesia in May 1998 hindered progress there. The further weakening of the Japanese economy and the yen in 1998 has had a particularly large, and negative impact on demand in the region and on international financial market sentiment. In addition to its severe effects in Asia, the crisis has put pressure on emerging markets outside the region and contributed to virulent contagion and volatility in international financial markets.

Russia became a new source of contagion during August 1998, causing confidence to deteriorate further globally. There is a real risk that market confidence may not recover for some time, which could imply significant net outflows of foreign capital from many economies, as witnessed in the Asian crisis countries, with prolonged depressive effects on trade and commercial activity. The crisis is expected to halve the rate of world growth in 1998 from the 4% rate that was projected pre-crisis to an estimated outcome of about 2% (International Monetary Fund [IMF], 1998).

As the crisis developed, the Ministry of Finance and Central Bank officials in the region often met or communicated with each other to work out countermeasures. On the occasion of IMF/World Bank annual meeting held in Hong Kong in September 1997, ASEAN countries led by Japan tried to launch a new initiative for a special Asian standby facility or so-called "Asian Monetary Fund" (AMF) (see Tanioka, 1992b). Although this was the first ambitious move towards a regional framework of monetary cooperation, all efforts were in vain because of strong opposition from the United States and the IMF. Instead, the Finance and Central Bank deputies from 14 countries agreed on the formation of the "Manila Framework" in November 1997, which read as follows:

> Recognizing the central role of the IMF, this framework included the following initiatives: (a) a mechanism for regional surveillance to complement global surveillance by the IMF; (b) enhanced economic and technical cooperation particularly in strengthening domestic financial systems and regulatory capacities; (c) measures to strengthen the IMF's capacity to respond to financial crises; and (d) a cooperative financing arrangement that would supplement IMF resources. (Manila Framework Group, 1997, par. 3)

Early in December 1997, Finance Ministers of the region confirmed the Manila Framework (Association of Southeast Asian Nations [ASEAN], 1997a). Two weeks later, the second ASEAN informal summit meeting was held in Kuala Lumpur and the Heads of State/Government "strongly endorsed the ASEAN Finance Ministers'

agreement on the early implementation of the Manila Framework to enhance regional surveillance, strengthen economic and technical cooperation, support measures to strengthen the IMF's capacity to respond to financial crises, and support the proposed cooperative financing arrangements that would supplement the IMF's resources" (ASEAN, 1997b, par. 2).

However, international policy coordination with the IMF-supported programs revealed its own limitations in dealing with the problems. Even the total capacity of the foreign reserves of the major economic powers appeared much less than the normal turnover of international capital markets. We have entered a new age, in which we must live together with huge short-term capital flows.

Survey of theoretical literature

Here are considered some important academic works in modern monetary economics, which focus more on the stock variables than the flows of output.

Keynes and Hicks

A treatise on money (1953) was first published in 1930, in which John Maynard Keynes reviewed traditional theories of money, and subsequently propounded the fundamentals of the 'theory of liquidity preference.' He refined his ideas in his revolutionary work on macroeconomics, The general theory of employment, interest, and money (1964), which was first published in 1936. The monetary theory originated by Keynes, and further developed by his followers, can be labeled as the liquidity theory of money. Money was recognized as the most liquid asset of all financial and real assets. Hence, in the theory of liquidity preference, Keynes focused on the function of money as means of payment—or medium of exchange—, and regarded it as the leading rationale for money holding.

Despite being highly renowned as a Keynesian, John Richard Hicks propounded a different perspective in his theory of money. By inference from the general equilibrium theory, Hicks suggested that the concept of marginal utility of money should be employed here as well (1967a, pp. 61-82). He insisted on the following:

> In value theory [the theory of marginal utility], we take a private individual's income and expenditure account; we ask which of the items in that account are under the individual's own control, and then how he will adjust these items in order to reach a most preferred position. On the production side, we make a similar analysis of the profit and loss account of the firm. My suggestion is that monetary theory needs to be based again upon a similar analysis, but this time, not of an income account, but of a capital account, a balance-sheet. We have to concentrate on the forces which make assets and liabilities what they are. (Hicks, 1967a, p. 74)

Chapter 2 Credit: T-account perspective

'T' represents a style of balance sheet for accounting purposes.[1] The structure of the T-account (i.e., socially combined balance-sheet) consists of a parallel of one dimensional lines with debit and credit. The T-account has been a central tool for monetary economics. In this chapter, the T-account perspective is fully utilized for the analysis of money and other credit instruments.

2.1 Critique of monetary theories up to now

It has traditionally been recognized that the functions of money could be classified into three major categories: money as a means of payment—or medium of exchange, money as a store of value, and money as a unit of account—or measure of value (Hicks, 1967b, pp. 1-16).[2] Based on these categories of monetary functions, the ideal styles of monetary theories can be classified roughly into the following four approaches: (a) traditional approach, (b) liquidity approach, (c) portfolio approach, and (d) credit risk approach.

2.1.1 Traditional approach

The neo-classical theories of money can be classified as the traditional approach, in which money is postulated only as a veil. The quantity theory of money represents the essence of the traditional approach. It is characterized as "in the first instance, a

[1] To give a clearer picture of the credit and debit position both in general and in relation to specific persons, the double-entry bookkeeping system was invented at the beginning of the fourteenth century, and first described in detail by a Venetian, Lucas Pacioli, in his "Summa de Arithmetica, Geometrica, Proportioni, et Proportionalita" (1494).

[2] Some contemporary scholars add a fourth function of 'money as a standard for deferred payment' as a derivative of its function as a unit of account. See Scott, 1995, pp. 88-89.

As a natural and logical consequence, this type of capital account perspective naturally led to the analysis of portfolio selection, in which the variables of rates of return and risks were presumed to influence the marginal utility of asset holding, and eventually the demand for money. For example, when an asset holder distributes his portfolio among both relatively safe and relatively risky investments, he will take into account the expected yields of investments and risks. Here, money is recognized as an item of portfolio selection on the asset side of the balance sheet of the asset holder. In short, we can find that Hicks shifted his focus onto the function of money as a store of value from that of means of payment (i.e., liquidity).

Gurley and Shaw

John Gurley and Edward Shaw propounded a "new view" in their Money in a theory of finance (1960) in terms of the functions of various financial intermediaries. James Tobin summarized this "new view" of money as a choice of portfolio selection from the perspective of store of value as follows:

> A more recent development in monetary economics [i.e., the "new view"] tends to blur the sharp traditional distinctions between money and other assets and between commercial banks and other financial intermediaries; to focus on demands for and supplies of the whole spectrum of assets rather than on the quantity and velocity of "money"; and to regard the structure of interest rates, asset yields, and credit availabilities rather than the quantity of money as the linkage between monetary and financial institutions and policies on the one hand and the real economy on the other. (Tobin, 1987a, p. 274)

In their general equilibrium model, Gurley and Shaw divided financial assets into the following two types, i.e., 'primary securities' and 'indirect securities':

> Primary securities, in the broadest sense, include all liabilities and outstanding equities of nonfinancial spending units, that is of spending units whose principal function is to produce and purchase current output, and not to buy one type of security by issuing another. . . . Primary securities include corporate equities and bonds, accounts payable, short-term business debt to banks, consumer debt, mortgages, federal and state and local government debt, foreign securities, and all the varieties of each of these main types. Gold is not included since it is treated as a real asset. . . . The other component is indirect

> securities, the debt issues of financial intermediaries including the monetary system. Indirect securities may also be divided, for some purposes, into those issued by the monetary system (monetary indirect debt) and those issued by other financial intermediaries (nonmonetary indirect debt). In addition, depending on the problem, monetary indirect debt may itself be divided into means of payment (currency and demand deposits) and others (time deposits). (Gurley & Shaw, pp. 59, 93-94)

Utilizing these concepts of primary securities and indirect securities, Gurley and Shaw clearly showed the mechanism of financial intermediation as follows:

> Financial intermediaries may be divided into two main groups: the monetary system and nonmonetary intermediaries. The monetary system, in its intermediary role, purchases primary securities and creates money. In its role as administrator of the payments mechanism, the monetary system transfers deposit credits on its ledgers between spending units. Nonmonetary intermediaries, in contrast, perform only the intermediary role of purchasing primary securities and creating nonmonetary claims on themselves, which take the form of savings deposits, shares, equities, and other obligations. These claims are nonmonetary indirect debts or financial assets, depending on whether they are looked at from the standpoint of the issuer or the holder. (Gurley & Shaw, p. 192)

The concepts of primary securities and indirect securities are extremely useful in understanding the general equilibrium model of financial intermediation. Gurley and Shaw's model is valuable because they considered the liability side of a balance sheet, and dealt with a wider spectrum of financial assets and debts. However, it is regrettable that the scope of their discussion was limited to the normal and static circular flow of the economy. There was no dynamism of economic development. Furthermore, they did not take account of cases, in which either or both of the primary and indirect securities are not fully covered by collateral assets. They did not address the issues of stability of value of either primary or indirect securities, despite these securities being turned into collateral financial assets for their monetization through the monetary system. In order to explore the credit-flows mechanism of economic development and a bubble economy, we have to know more about the issues of stability of value of both primary and indirect securities.

Benjamin Friedman

Benjamin M. Friedman introduced a new paradigm of 'credit aggregate' as an intermediate target for monetary policy in his series of empirical studies (1983a; 1983b). He differentiated between monetary aggregate and credit aggregate from the viewpoint of the public's balance sheet. Namely, "money is, after all, an asset held by the public, and each monetary aggregate is just a different way of adding up the public's assets. . . . The more fundamental issue stems from the underlying reality that any balance sheet has two sides. . . . Merely redefining ways of adding up the various items on the asset side of the public's balance sheet is not sufficient if there is also valuable information contained on the liability side" (B. M. Friedman, 1983b, pp. 189, 162). He also noted that "a two-target framework combining one monetary and one credit aggregate offers some advantages over the current emphasis on monetary aggregates alone in that it would at least facilitate the formal incorporation into the monetary policy structure of information from both sides of the public's balance sheet" (1983b, p. 165).

Utilizing the data from the flow of funds accounts of the United States, Benjamin M. Friedman analyzed the multiple regressions of monetary and credit aggregates to gross national product (GNP).[4] "In sum, the evidence provided by a variety of methodologies shows that at least one aggregate measure of outstanding credit liabilities [aggregate] in the United States—total nonfinancial debt—consistently exhibits just as much stability in relation to U.S. economic activity as do the more familiar asset [monetary] aggregates" (1983b, p. 174). He also stated that "macroeconomic analysis should be sufficiently broad to include both the money

[4] Benjamin Friedman defined credit aggregate as the total nonfinancial debt, i.e., the total credit market liabilities of all U.S. nonfinancial sectors. Monetary aggregates were divided into subcategories, Monetary Base and Money Stock (M1, M2 and M3).

market and the credit market" (1983b, p. 179), and in this context, he quoted Don Patinkin's static neoclassical monetary equilibrium framework. In a final point, he stated as follows:

> The chief advantage of an explicit two-target framework based on money and credit in comparison to a two-target framework based on two separate definitions of the money stock [i.e., M1 and M2], however, would be the incorporation of a more diverse information base in the set of signals that presumptively matter for monetary policy. . . . The combination of an M1 and an M2 target therefore relies solely on the asset side of the economy's balance sheet, although it aggregates those assets in two separate ways. A framework based on a money target and a credit target would instead establish a presumption that the central bank would respond to signals from both sides of the economy's balance sheet, and the evidence presented here indicates that both sides of the balance sheet do contain information that is relevant to the determination of nonfinancial economic activity. (1983b, p. 189)

Benjamin M. Friedman elaborated his ideas in another article, "Monetary policy with a credit aggregate target" (1983a). In this paper, he showed a principal criterion for the selection of an intermediate target for monetary policy as follows:

> (1) the target be closely related to the nonfinancial objectives of monetary policy, (2) it contain information about the future movements of those relevant aspects of the nonfinancial economy, (3) it be closely connected to the instruments over which the central bank can exert direct control, and (4) data on it be readily available on a timely basis. (1983a, p. 141)

Following an empirical analysis of multiple regression in these criteria, he concluded the arguments with positive support for the potential use of total net credit (i.e., credit aggregate) as an intermediate target variable in comparison with the major monetary aggregates as follows:

> First, the relationship between total net credit and aggregate measures of nonfinancial economic activity, judged by several different methodological approaches, is as stable and reliable as the corresponding relationship for any of the monetary aggregates (or the monetary base). Second, dynamic analysis based on exogeneity tests and decomposition of variance shows that the information about subsequent movements in nonfinancial activity contained in total net credit is at least comparable to that contained in the M1 money stock. Third, relationships between total net credit and either the quantity of nonborrowed reserves or the federal funds rates are roughly comparable to the

> corresponding relationships for the principal monetary aggregates.[5] . . . Finally, data for a close approximation to total net credit are available on a monthly basis, and the relevant relationships based on the monthly data are also roughly comparable to the corresponding relationships for the monetary aggregates. (1983a, pp. 143-144)

In the empirical analysis conducted by Benjamin M. Friedman, the term 'credit aggregate' corresponds to the concept of 'primary securities' as used by Gurley and Shaw. Benjamin M. Friedman sought to find a stable and reliable co-relationship between credit aggregate and nonfinancial economic activities such as the real growth rate of GNP. His attempts seem to have succeeded, and it might be right to observe an economy from both the asset and liability sides of the public's balance sheet.

However, according to Gurley and Shaw, nonfinancial spending units such as business firms and consumers can acquire either primary securities or money, or both of them, as their financial asset portfolio. This means that, to a certain extent, the same amount of primary securities are double-entered on both the asset and liability sides of the combined balance sheet of the nonfinancial private sector, and these amounts should have been cancelled out. There is another problem: if a depository financial institution purchases a certain amount of primary securities that has been issued by nonfinancial spending units, it leads to the creation of money (i.e., the monetization) to the same value in the economy overall. On the other hand, if a non-depository financial institution (here, for example, an insurance company) purchases a certain amount of primary securities, this time it leads not to the creation of money but to an increment in financial assets in the form of indirect securities (in this case, insurance policies). The difference is dependent upon the structure of financial

[5] With regard to the direct controllability of credit aggregate through the instruments of central bank, Benjamin M. Friedman examined the results of multiple regressions, and concluded that "the connection between total net credit and either a reserves or an interest-rate monetary policy instrument is roughly comparable to the relationship for the monetary aggregates (see 1983a, p. 138).

systems as a whole, and the characteristics of each economy. Briefly stated, if the indirect finance ratio[6] fluctuates in one economy, the credit aggregate will lose its stable relationship with the monetary aggregate, and consequently with nonfinancial economic activities such as the real growth rate of GNP.

James Tobin

James Tobin wrote a large number of articles on monetary phenomena, especially from the perspective of money as a store of value. In "Money, capital, and other stores of value" (1987f, pp. 217-228), Tobin propounded a prototype of the aggregative model of capital account, which then evolved into the general-equilibrium portfolio approach. Tobin introduced Hicks's "A suggestion for simplifying the theory of money," in which he called for a "marginal revolution in monetary theory" (Hicks, 1967a, pp. 61-62). With regard to the marginal utility of money, the Cambridge tradition, i.e., the neo-classical school, has long been aware that the imputed rate of return on money varies "inversely with the size of money holdings relative to the transactions needs and total wealth of the holder. This return stands for the convenience and economy of having wealth readily available as means of payment, as well as the safety of money compared with other stores of value. The only alternative asset that these elders of the Cambridge school explicitly envisaged was capital investment. . . . In short, an individual adjusts his money holding so that its marginal imputed return is equal to the rate available to him in capital investment" (Tobin, 1987f, p. 218).

In this manner, Tobin reconstructed the Cambridge tradition of quantity theory, but added an important modification. That is, instead of giving up the constant-

[6] Indirect finance ratio (or financial intermediary ratio) = Indirect securities/Primary securities. See Gurley & Shaw; Iwata, 1993, pp. 38-50.

velocity tradition, in which "the demand for money became a constant proportion of income" (1987f, p. 218), Tobin adopted a new demand-for-money function, in which "the demand for money depends not only on the volume of transactions but also on the yield of capital" (1987f, p. 222). He elaborated his ideas for the general-equilibrium portfolio approach as follows:

> The new tools [the theory of optimal inventory holdings, the theory of risk aversion, etc.] are constructing a bridge between general economic theory and monetary economics. More than that, they give promise at last of a general equilibrium theory of the capital account. Such a theory would explain both the balance-sheet choices of economic units as constrained by their net worths and the determination of yields in markets where asset supplies and demands are balanced. What characteristics of assets and of investors determine the substitutabilities or complementarities among a set of assets? Among relevant properties with which the theory must deal are: costs of asset exchanges; predictability of real and money asset values at various future dates; correlations—positive, negative, or zero—among asset prospects; liquidity—the time it takes to realize full value of an asset reversibility—possibility and cost of simultaneously buying and selling an asset; the timing and predictability of investors' expected needs for wealth. (1987f, p. 219)

He then demonstrated the difference between the Keynesian model which is based on the theory of liquidity preference and the general equilibrium model of the capital account as follows:

> In a world of financial assets and well-developed capital markets, Keynes was right in perceiving the tactical advantage to the theorist of treating separately decisions determining total wealth and its rate of growth and decisions regarding the composition of wealth. A theory of income account [the Keynsian model] concerns what goods and services are produced and consumed, and how fast nonhuman wealth is accumulated. The decision variables are flows. A [general equilibrium] theory of the capital account concerns the proportions in which various assets and debts appear in portfolio and balance sheets. The decision variables are stocks. Income and capital accounts are linked by accounting identities—e.g., increase in net worth equals saving plus capital appreciation—and by technological and financial stock-flow relations. Utilities and preference orderings attach to flows of goods and services; the values of stocks are entirely derivative from their ability to contribute to these flows. Some stock-flow relationships are so tight that this distinction is pedantic: the only way an art collector can obtain the flow of satisfactions of owning a particular *chef d'oeuvre* is to own it. But there is a vast menu of assets whose yields are generalized purchasing power, nothing less or more—investors do not have intrinsic preferences among engraving of security certificates. (1987f, p. 219)

As regards the rate of interest, money supply and monetary policy, he continued:

> The Keynes-Patinkin [the Keynsian] model [of income account] assumes that all debt instruments are perfect substitutes for capital. The interest rate to be explained is the rate common, with the appropriate constant corrections, to all assets other than money itself. What explains this rate is the supply of money relative to transactions requirements and to total wealth.[7] Monetary policy, altering the demand debt component of government debt, can affect the terms on which the community will hold the capital stock. . . . The money-capital [the general equilibrium] model [of capital account], in contrast, casts debt instruments on the side of money and focuses attention on the relationship between the total real value of government debt [money stock], monetized or unmonetized, and the rate of return the community requires of the capital stock. It contains no role for monetary policy; only the aggregate net position of the public as borrowers and lenders is relevant, not its composition. (1987f, pp. 224-225)

Tobin further elaborated his models, which evolved into the general-equilibrium portfolio model to cover the entire spectrum of financial assets and debts. Tobin stated that "[a] model of the capital account of the economy specifies the factors that determine the demands and supplies of the various assets, and the manner in which asset prices and interest rates clear these interrelated markets" (1987c, p. 322). Thus, he completed the so-called "Brainard-Tobin type of general-equilibrium portfolio approach" (Tobin & Brainard, 1987b, pp. 352-377).

Tobin should be valued because he restructured the neo-classical theory of money into the capital account model in a unique way. However, as Tobin stated, the general-equilibrium portfolio approach treated "separately the decisions determining total wealth and its rate of growth and the decisions regarding the composition of wealth" (Tobin, 1987f, p. 219), and narrowed its own scope by focusing only on the latter. In order to explore the credit-flow mechanism of economic development and

[7] Thus, Keynes had only one yield differential to explain within his theoretical model: the difference between the zero yield of money and *the* interest rate. "This differential he explained in his theory of liquidity preference, which made the premium of bond yields above money depend on the stock of money relative to the volume of transactions and, presumably, aggregate wealth" See Tobin, 1987f, p. 222.

the bubble economy, it is necessary for us to broaden the Keynsian theory of income account into the stock version of the capital account.

Considering the above, it is my opinion that modern monetary economics up to the present day has unfortunately explained little about decisions determining total wealth accumulation and its rate of growth. In order to explore the credit-flow mechanism of economic development and the bubble economy, we must employ the credit risk approach, and the concept of monetary stages as its consequence. 'Credit risk' means the probability that debtor's liabilities result in not being covered by collateral assets, namely, of becoming non-performing loans. Among various categories of risks, we will particularly focus on the credit risk, because it is distinctive in being applicable to all types of credit instruments, i.e., from reserve money of central banks to bonds or loans to the public. By formulating a general equilibrium model based on the collateral preference (in other words, the credit demand function), we will examine the credit-flows mechanism in the following chapters.

On regime theories, from the viewpoint of the political economy, the following academic works were reviewed to examine the concepts of 'regime' and 'regime change' in the historical processes.

Keohane and Nye

In their Power and interdependence (1989), Robert Keohane and Joseph Nye, first, presented the definitions of 'power' and 'interdependence.' "Power can be thought of as the ability of an actor to get others to do something they otherwise would not do (and at an acceptable cost to the actor)" (Keohane & Nye, p. 11). On the other hand, interdependence can be conceived in two dimensions, i.e., sensitivity and

vulnerability. "In terms of the costs of dependence, sensitivity means liability to costly effects imposed from outside before policies are altered to try to change the situation. Vulnerability can be defined as an actor's liability to suffer costs imposed by external events even after policies have been altered" (Keohane & Nye, p. 13).

'Complex interdependence' is the counter concept to 'realist views' in international politics. It has three main characteristics, comprising (1) multiple channels, (2) in absence of hierarchy among issues, and (3) a minor role of military force. Namely:

> The three main characteristics of complex interdependence give rise to distinctive political processes, which translate power resources into power as control of outcomes. . . . In the realist world, military security will be the dominant goal of states. It will even affect issues that are not directly involved with military power or territorial defense. Nonmilitary problems will not only be subordinated to military ones; they will be studied for their politico-military implications. . . . In a world of complex interdependence, one expects some officials, particularly at lower levels, to emphasize the *variety* of state goals that must be pursued. In the absence of a clear hierarchy of issues, goals will vary by issue, and may not be closely related. Each bureaucracy will pursue its own concerns; and although several agencies may reach compromises on issues that affect them all, they will find that a consistent pattern of policy is difficult to maintain. Moreover, transnational actors will introduce different goals into various groups of issues. (Keohane & Nye, pp. 29-30)

Based on these analytical tools, Keohane and Nye propounded the concept of 'international regimes' as follows:

> Relationships of interdependence often occur within, and may be affected by, networks of rules, norms, and procedures that regularize behavior and control its effects. We refer to the sets of governing arrangements that affect relationships of interdependence as international regimes. . . . International regimes are intermediate factors between the power structure of an international system and the political and economic bargaining that takes place within it. The structure of the system (the distribution of power resources among states) profoundly affects the nature of the regime (the more or less loose set of formal and informal norms, rules, and procedures relevant to the system). The regime, in turn, affects and to some extent governs the political bargaining and daily decision-making that occurs within the system. (Keohane & Nye, pp. 19, 21)

Keohane and Nye explained the change in international regimes by using four models, based respectively on changes in (1) economic processes, (2) the overall power structure in the world, (3) the power structure within issue areas, and (4) power capabilities as affected by international organization. As an example of the applied models of regime change, Keohane and Nye described changes in the international monetary regime between World War I and the 1970s (Keohane & Nye, pp. 67-86).

The regime approach, which Keohane and Nye introduced in this book, provided powerful tools for us to understand the politics of interdependence. It showed the political framework within which the processes of international political economy occur. It is appropriate to employ the regime approach when examining the propriety of the present international monetary regime, i.e., the "US dollar standard" (see Iwai, pp. 66-83; Seki, pp. 84-98) and the probability of transition into new monetary arrangements in the region where we are committed, i.e., the monetary integration of Asia.

Ekelund and Tollison

Mercantilism is the economic theory and practice common in Europe from the sixteenth to eighteenth century that promoted governmental regulation of a nation's economy for the purpose of augmenting state power at the expense of rival national powers. It is the economic counterpart of political absolutism. Among the most often stressed tenets of the mercantilists are the equation of specie with wealth, regulation of the trade sector to produce specie inflow, and emphasis upon population growth and low wages (Ekelund & Tollision, 1981, p. 4). The monetary policy of mercantilism has been dubbed bullionism, which calls for national regulation of transactions in foreign exchange and in precious metals (i.e., bullion) in order to maintain a 'favorable balance' in the home country.

In their Mercantilism as a rent-seeking society (1981), Robert Ekelund and Robert Tollison explained mercantilism in England, and the process of its modification into laissez-faire from the viewpoint of the theory of public choice (see Buchanan & Tollison, 1972; Buchanan & Tullock, 1967). According to James M. Buchanan, "[t]he term rent seeking is designed to describe behavior in institutional settings where individual efforts to maximize value generate social waste rather than social surplus" (Buchanan, 1995, p. 47). In addition, Ekelund and Tollison noted that "[t]o the extent that resources are spent to capture monopoly rents in such ways as lobbying, bribery, and related activities, these resources are basically wasted (create no value) from a social point of view. It is this activity of wasting resources in seeking transfers that we call rent seeking" (Ekelund & Tollision, p. 19). In their discussion:

> The ascension of mercantilism in the early part of the era is readily explained by the institutional setting facing the participants in the process of monopolization. Since the transaction costs required to seek rents were low with a unified state authority (the monarch), the flowering of mercantilism as an extensive system of monopolization and economic regulation of the economy may be easily explained. That is, since the cost of seeking monopolies was relatively low under absolute monarchy and since the monarchy found it efficient to seek revenues from the granting and enforcement of monopolies. . . . Every 'projector' who presented a scheme to his ruler stressed the benefit that would directly or indirectly flow into the royal coffers. (Ekelund & Tollision, p. 4)

They also explained as well the decline of mercantilism in England as follows:

> As the power of English monarchy declined, the movement to a form of representative democracy shifted the locus of rent-seeking activity to new forums, primarily to the legislature and the common law judiciary, with predictable implications for the decline of rent seeking. For example, with respect to the legislature, the costs of lobbying a representative body for monopoly charters are higher than the costs of lobbying a unified monarchy, because there are multiple decision-makers unevenly distributed across legislative houses. The rational rent seeker will reduce his bid for a monopoly right when lobbying costs rise. . . . This meant that even if a rent seeker could obtain a monopoly grant from the king or Parliament, he had no guarantee that it could be sustained against interlopers. Seeking monopoly through the shelter of the state was clearly going to be a less profitable activity under these circumstances. (Ekelund & Tollision, pp. 27-28)

Scope of the study

When considering the international political economy, it is, however, beyond the realistic scope of this study to address military security issues such as the balance of power in Asia. Instead, we will focus on the issues of money and credit to examine the hypotheses by utilizing and combining the above-mentioned analytical frameworks, i.e., monetary economics, international political economy, and public policy implications.

Besides, in a technical sense, T-accounts (i.e., socially combined balance-sheets) show the stock values of assets and liabilities held at one point in time by each unit or sector or the economy as a whole. The coverage of assets is limited to those assets which are subject to ownership rights and from which economic benefits may be derived by their owners by holding them or using them in economic activity. Most consumer durables, human capital, culture as such and natural resources that are not capable of bringing economic benefits to their owners are outside the scope of assets (see United Nations, World Bank, International Monetary Fund [IMF], Organisation for Economic Co-operation and Development [OECD], & Commission of the European Communities [Eurostat], 1993, par. 2.41).

Data sources

Data will be obtained from:

a) The statistics and publications of multilateral institutions

We will utilize the statistics and publications of multilateral institutions as data resources. For instance, the Annual report (BIS, 1997a; 1998b) and the other publications of the Bank for International Settlement, the International financial statistics (IMF, 1997a; 1997b) and the others of the International Monetary Fund, the

World development report (World Bank, 1985; 1997) of the International Bank for Reconstruction and Development (IBRD), the Economic outlook (OECD, 1997a) of the Organisation for Economic Co-operation and Development, and some publications of the Asian Development Bank (ADB).

b) The statistics and publications of governments

We will also use the statistics and publications published by the governments of relevant countries. For Japan, we will use the various statistics published by governmental agencies such as the Ministry of Finance (MOF), the Bank of Japan (BOJ), and the Economic Planning Agency (EPA). For the United States, we will use the Survey of current business (U.S. Dep. of Commerce, 1983; 1998a; 1998b) published by the U.S. Department of Commerce.

c) Internet web sites

In addition, it is useful for us to utilize internet web sites to obtain not only current affairs articles but also information about official publications of international conferences such as the Group of Seven countries (G-7), the IMF/World Bank annual meetings, the Asia-Pacific Economic Cooperation (APEC), and so on.

Chapter outlines

Chapter 2, which is titled "Credit: T-account perspective," will present the basics for the concepts of money and credit from the T-account (i.e., a socially combined balance-sheet) perspective. After a critical review of monetary theories up to the present, we will employ a credit risk approach, and subsequently introduce the conceptual framework of monetary stages to establish a general equilibrium model on T-accounts.

Chapter 3, which is titled "Credit flows: T-account matrix analysis," is the main part of the theoretical analysis in monetary economics. We will introduce the 2-

dimensional T-account matrix model, and use it to examine the credit-flows mechanism of economic development and the bubble economy. Subsequently, we will develop it into the 3-dimensional T-account matrices model to deal with international credit flows.

In chapter 4, we will address the issues of the "Political economy and the international monetary regime." Adopting a conceptual framework of monetary political economy, which is based on the preferences (i.e., utility functions) of money issuers[8] in a foreign asset/debt position, and on the technical development of monetary stages, we will review the historical changes in international monetary regimes, and restructure the models on them.

In chapter 5, we will address the issues of "Asian monetary integration." Following an applied analysis on the Japanese economy since the 1980s, particularly the changes in the international investment position and the boom and bust of a bubble economy, we will introduce technical backgrounds for monetary integration in Asia such as the theories of optimum currency areas. In addition, we will deal with the Japanese dilemma over Asian integration from the perspective of public policy implications.

Chapter 6 is the conclusion of this study. Corresponding to the hypotheses that have been propounded in the present chapter, i.e., 1) whether or not money and credit to be controlled as a social substructure, and 2) whether or not money and credit is an engine for change in world history, we will conclude our discussions about them. In addition, we will summarize the arguments on how to overcome the Japanese dilemma over Asian integration from a monetary perspective.

[8] Conventionally, governments (or central banks) have monopolized the right to issue legal tender, i.e., money.