

Current Account Surplus, Asset Prices and Wealth Effect in Japan, Korea and Taiwan*

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The unusual movements of the asset prices in Japan, Korea and Taiwan during the second half of 1980s need to be explained. In this paper we argue that they resulted from excess liquidity and this, in turn, a consequence of the accumulated current account surplus. Under the peculiar setting of these countries' asset markets, the excess liquidity was enough to trigger an inflationary spiral in asset markets. The high asset values tend to activate wealth effect to reduce excess saving. The resulting decline of current account surplus would shift the liquidity out of domestic asset markets and start a chain reaction to depress asset prices. Our analysis suggests that the sustainability based on the continued capital flows from the surplus countries is transient in nature.

I. Introduction

The issue of payment imbalances has been debated along two directions. One is over the solvability of the trade imbalance which is the ultimate source of payments imbalances.¹ The other is the sustainability of deficit financing.² The sustainability issue seems to

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¹The issue has been treated by two different approaches: managed trade policy (see Prestowitz 1988, Moreno 1989 among others) and misaligned market exchange rates (for example, Krugman 1985, 1988 and Williamson 1985).

²See Makin (1989), Gomel (1989) and the references cited there.
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have been deepened in its complexity and weight. The country with the largest deficit, the United States, still needs to go a long way to solve her twin deficits problem while Western Europe is preoccupied with economic and political restructuring within its own boundaries. West Germany in particular is in a position to meet its financial obligation to a united Germany. While Japan is expected to play a major role in the world financial market by recycling her huge surplus, the faith in her economy has been shaken.

Grave as the sustainability may be, the issue can not be analyzed properly in isolation from other imbalance, namely the trade imbalance. This is why, as we will argue in this paper, the two problems are interrelated much more closely than generally understood. Spectacular rise in Japanese asset values in the last period of 1980s and their subsequent fall in 1990 has embarrassed financial experts worldwide. In part this is due to the lack of a comprehensive understanding of how Japanese financial markets work. It is a complicated market in which fundamental market forces work within a peculiar setting of the Japanese financial system, a system characterized by, among other things, unique saving behaviors and scarcity of land space. In many important ways these characteristics, and not surprisingly the current account behaviors as well, are shared by Korea and Taiwan. Thus we will study these three countries in a group (henceforth denoted by JKT) in the most of our analysis to follow. A proper understanding of this process is important in its own right because of Japan's expected role in international finance, but it should be interpreted with caution since the rapid financial deregulation might alter the process in a significant way.

Our focus in this paper is to highlight the role of the current account surplus in the recent asset market boom and the resulting wealth effect on the JKT's economies. There is little doubt that the JKT's unique savings behavior as well as their high productivity is largely responsible for the huge accumulation of current account surpluses. It is the behaviors of the JKT's asset markets and their future courses that have been perplexing to many experts, academics and practitioners alike. The main purpose of the present paper is to interpret them in terms of a market process which can be explained by a theory, with a long-held historical root, working in a more subtle and a yet unrecognized way. The theoretical underpinning of our argument can be attributed to the celebrated Hume Specie-Flow mechanism but working in asset markets. The liquidity from the accumulated current account surplus first disturbs asset

markets, which is then taken over by a wealth effect to complete the self-correcting mechanism. This theoretical analysis enables us to derive implications for imbalance problems. In addition to giving the observed phenomenon in JKT a theoretical content, we also provide an organized view of the complexity and the peculiarity of the JKT's asset markets to help understand why such a market process is more likely to occur in these countries. Since our purpose is to emphasize the intuition behind and the implication for the market process, the formal analysis for the proposed theory will not be presented here.³

Section II shows the rapid rise in asset prices in Japan and other countries and examines conventional explanations for its causes. Section III investigates the process by which current account surplus appreciates asset value and its effect on capital flows. Section IV deduces the implications of our analysis for current issues like the sustainability or its future developments, and concludes the paper.

II. Current Account Surplus and Asset Prices in JKT: Some Facts and Conventional Explanation

One of the most striking phenomena happened during the 1980s in world economy is the diverging trend in the current account balance among major trading nations.⁴ The imbalance which was insignificant until 1982 has been consistently widening ever since. The combined surplus of the major trading countries as shown in Figure 1 more than offset the U.S. payments deficit toward the end of the decade.⁵

Of the major surplus countries, Japan, Korea and Taiwan deserve special attention considering the weight of the combined size of their trade surplus. These countries also share a high saving ratio, similar demographic trends, family structure, and a scarcity of land space, all of which have important bearings on their respective asset markets. Yet, some of these features are still not fully appreciated in interpreting their asset market behavior. JKT's domestic saving

³Debates on the exact nature of the specie-flow mechanism are well known. Good expositions on the issue include Bruce and Purvis (1985), Rich (1984), Samuelson (1971), and Frenkel (1976). The formal analysis for the theory proposed in the present paper can be found in Kim, Jaang and Kim (1991, 1992).

⁴The other problem is, of course, third world debt problem, which is beyond the scope of our analysis.

⁵Although Korea may not rank among the top five surplus countries, it is included here because the behavior of its surplus and asset prices shares common elements.

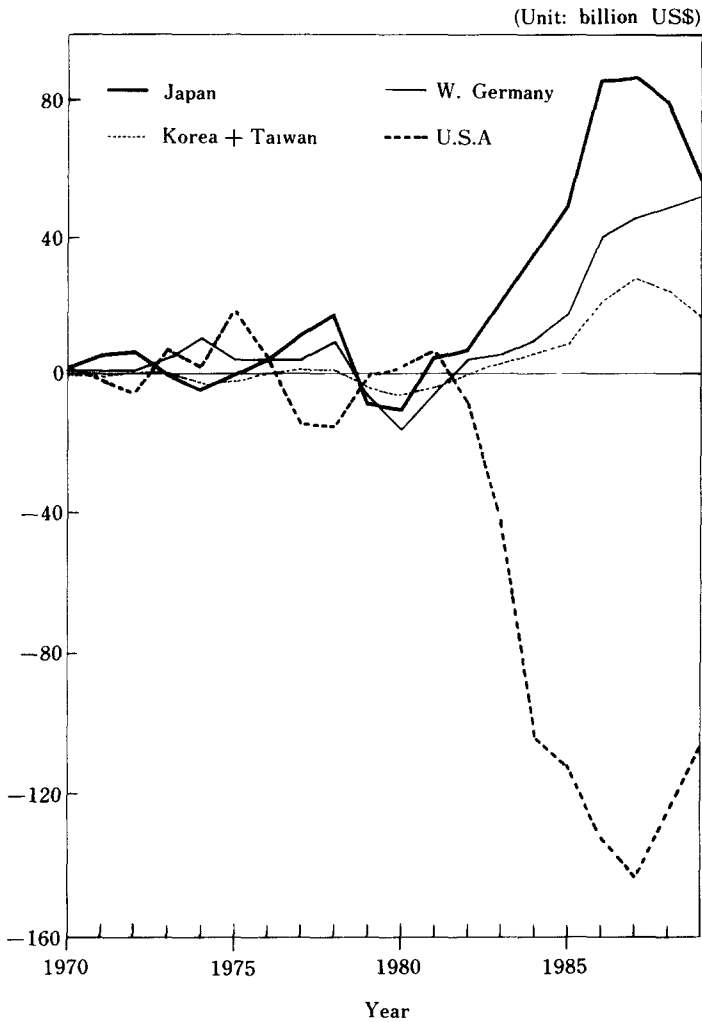


FIGURE 1
CURRENT ACCOUNT SURPLUS

Source: IMF, *International Financial Statistics*. *The Economist*, various issues.

ratios (31.6%, 29% and 34.2%, respectively) during 1980-89 are among the highest in the world. Compared with JKT the figures for the U.S. and West Germany are 15.2% and 23.4% respectively. A widely-held view is that the demographic factors, such as age distribution and population growth in these countries contribute to the high saving ratios (see Horioka 1988). Perhaps, the high land prices are just as important a contributing factor as discussed in Hayashi,

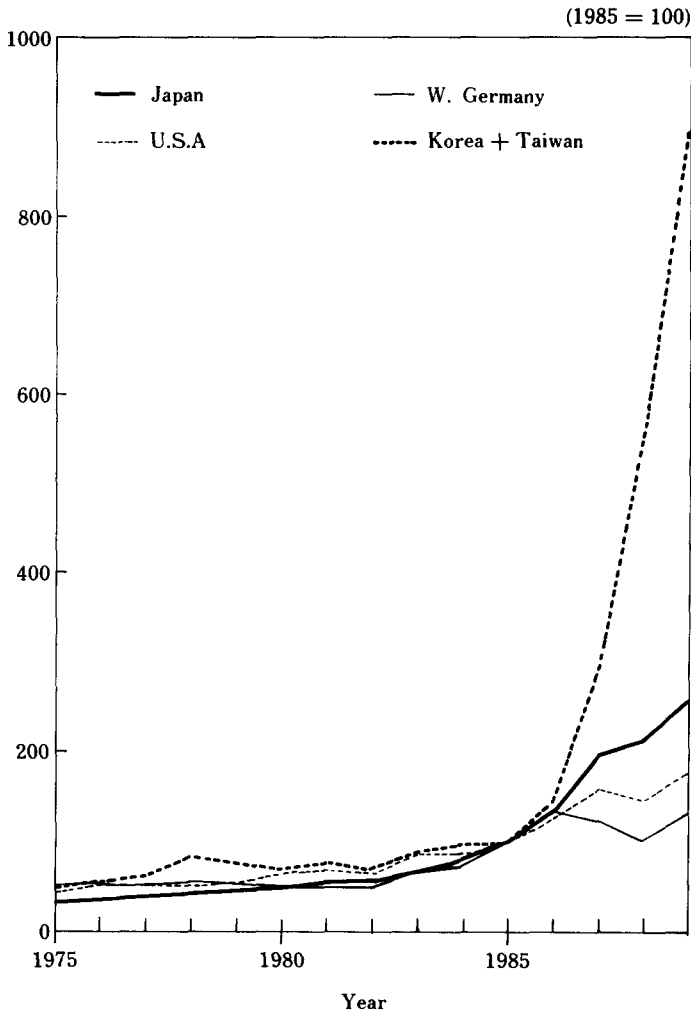


FIGURE 2
SHARE PRICE MOVEMENTS

Source: IMF, *International Financial Statistics*. The Central Bank of China, *Financial Statistics Monthly*. Securities Supervisory Board, Korea, *Monthly Review*.

Ito and Slemrod (1988). The most significant aspect of these is undoubtedly the behavior of their asset markets as shown contrastingly with other countries (see Figure 2). The changes in share prices in these countries essentially remained within close bounds in the early half of 1980. But their share prices took off around 1985.

By 1989, it reached two and half times its 1985 level for Japan and nine times its previous level for Korea and Taiwan combined in the same period.⁶ This should be contrasted with those of U.S. and West Germany. Note that the sharp turn of asset price curves in JKT was just barely preceded by the sharp increase in their current account surplus, a point highly unlikely to be coincidental. We will return to this point in the next section.

The JKT's asset markets also share a peculiar common characteristic; namely, the prominence of real estate in their national wealth.⁷ Figure 3 shows the rising trend of asset prices in Japan. The land price has been risen with a lag of about one year just as much as share price, if not higher.⁸ The conventional explanations for JKT's high asset values list the low interest rate and the high expected real growth rate as the most important factors (see Frankel 1989b). Another view, expressed by French and Poterba (1990), contends that Japan's unique accounting rule can explain a large proportion of its high share price.⁹ But they admit that the sharp rise in the Japanese stock market during the mid 1980s is too large to be explained by these factors. Still others seek to explain the high asset values with speculative bubbles. However, it is rather unconvincing to explain the unusually similar price behaviors observed in the three different countries only with the idea of bubble. Taking these three countries together, none of these factors are likely to explain the asset price movements toward the end of 1980s.

III. Asset Prices and Wealth Effect

The massive current account surplus in JKT (see Figure 1), a consequence of their excess saving over investment, has both similarities and differences. These three countries do have similarities in their life styles, family structures, and demographic trends. The lack of a social security system and the rapid urbanization and

⁶The ratios for Taiwan and Korea are 11.5 and 6.1 respectively.

⁷"The value of claims to land in Japan accounted for about 54 percent of financial wealth in Japan in 1984, as opposed to a mere 24% in the United States. The value of land equalled about 317 percent of GNP in 1984, as opposed to 80 percent of GNP in the United States." (Sachs and Boone 1988, p. 8)

⁸Officially reported land price upon which the figure was based tend to lag the market price. Had the market price been used, the land price change would have been much more closely in line with the share price changes.

⁹They estimated the P/E ratio for Tokyo Stock Exchange would have been 32.1, not reported 54.3, at the end of 1988 if Japanese firm used U.S. accounting rules.

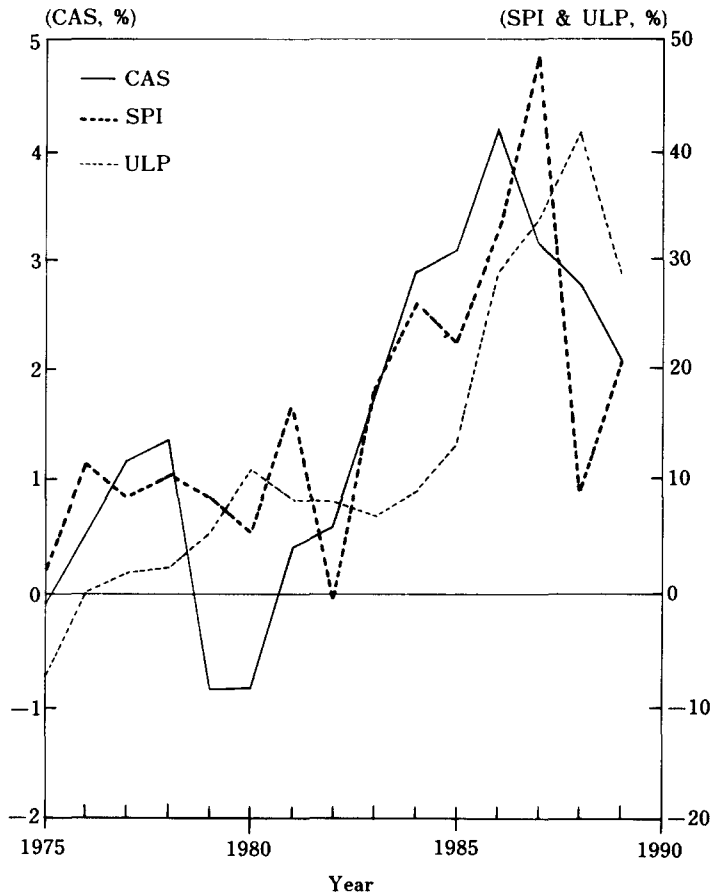


FIGURE 3

JAPANESE ASSET VALUES AND CURRENT ACCOUNT SURPLUS

Source: same as Figure 2.

Note: 1. CAS: current account surplus

2. SPI: stock price increase

3. ULP: land price increase (in 6 largest cities)

nucleitization of their family structures, though different in their speed, are all significant in their high saving propensity.

In Japan, restrictions on overseas investments have been steadily reduced since 1980. While the degree of capital mobility in Japan has been hotly debated over the years, researches have shown that a high degree of capital mobility was already achieved in early 1980s.¹⁰ Sachs and Roubini (1987) point out that in the absence of

¹⁰The issue is not without controversy and can be tested in many different ways.

liberalization of international capital movements, the large Japanese trade imbalances could not have occurred. This is why an excess saving would bring down interest rates and increase domestic investment and thereby reduce the surplus. However, this should not be interpreted to mean that the capital mobility is the cause of the large surplus.

Unlike the case of Japan, the large surplus in Korea and in Taiwan is clearly not related with the capital mobility per se.¹¹ Here the surplus has been achieved mainly through savings. Governments' role seems to have been particularly important in promoting savings and controlling capital outflows. Refraining from restricted fiscal expansion is a common element for the piling up of the current account surplus in the three countries throughout the 1980s.

A. Self-correcting Process of Balance of Payments Imbalance

Given the large accumulation of current account surpluses, the next logical question is what market process, if any, and how it would correct such an imbalance. On the theoretical level this issue in fact has long been recognized as the Specie-Flow mechanism, the exposition of which is generally credited to Hume. Though the exact nature of the mechanism has been extensively debated and given a few modern interpretations,¹² how the process might occur within domestic asset markets has not been appreciated. We will introduce a modified form of the Specie-Flow mechanism here to illustrate the general idea.

For an expositional purpose, consider a simplified economy with two assets, foreign reserve and land. Abstracting from the monetary problem, the former is considered to be the accumulation of trade surpluses and ultimately provides excess liquidity to the economy.¹³ Land, a nontradable asset, represents a domestic asset the access to which by foreigners is limited for some reasons, institutional or otherwise.¹⁴ In each period, income must either be consumed or used

However, tests based upon the correlation between savings and investments (Feldstein and Horioka 1980, Bayoumi 1989) or interest rate differential (Frankel 1989a among others) all tend to support the mobility.

¹¹Controls on capital outflows started to be relaxed only in 1987, 1989 respectively in Taiwan and Korea. The year end foreign direct investment positions were U.S. \$272 mil. in Taiwan and \$633 mil. in Korea.

¹²See, for example, Samuelson (1971), Frenkel (1976), Bruce and Purvis (1985).

¹³The liquidity aspect of current account balance had been studied by Viner (1937) along the line of price-specie flow mechanism. See Rich (1984) on this.

¹⁴Institutional restrictions make the land in JKT essentially nontradable. For the

to build up current account surplus. Suppose consumption is a function of wealth, following the Metzler (1952) tradition,¹⁵ which in this case is the sum of foreign reserve and the value of land. A short-run increase in income would first increase the liquidity via a current account surplus. The portfolio balance is then broken, which would induce investors to hold more nontradable asset to restore the equilibrium.¹⁶ The excess demand then drives up the domestic asset price, thereby increasing the wealth. Note that, under the given savings behavior, the excess liquidity would go to the asset market first. Now the increase in wealth would induce consumers to spend more, decumulating the foreign reserve built up, that is, wealth effect will be triggered. In this way saving raises wealth that in turn reduces saving, completing the automatic adjustment process proposed. The role of the nontradable asset is crucial here. Unlike the Price-Specie-Flow (PSF) mechanism¹⁷ where relative price between two countries changes, it is the increase in the level of domestic asset price and the resulting wealth effect that brings forth the correction mechanism. In the following two sections, we will give an organized account of how this process might have taken place in the actual setting of the JKT's economies.

B. Current Account Surplus and Asset Prices

The tremendous energy generated by the rapidly accumulating current account surplus was being trapped within the economies of JKT before they could find its outlets as shown clearly in their total foreign reserve positions (see Figure 4). In Japan, with little control on capital flows in and out of the country, a big surge in capital outflows, mainly in the form of foreign security acquisitions by institutional investors, occurred while a huge sum of foreign capitals flowed into Japan's asset market as well.¹⁸ Japan's foreign

reasons explained in subsection B below, equity market is also relatively segmented market.

¹⁵Such a specification is commonly employed in international finance literature. See Dornbusch (1976), Frenkel (1976) or Calvo and Rodriguez (1977) to give a few examples.

¹⁶The portfolio-balance relation, under perfect foresight, can be stated as following. Let's r , q , I , $\dot{q} = dq/dt$ denote the amount of the reserve, the price and the endowment of land and the change in land price respectively. The portfolio balance equation is then given by

$$\dot{q} = m(r/qI) \text{ with } m' < 0$$

¹⁷See Rich (1984).

¹⁸During 1985-88 the accumulated current account surplus is approximately 300 billion dollars, of which some 70 billion dollars, net of the outflow, is estimated to have been

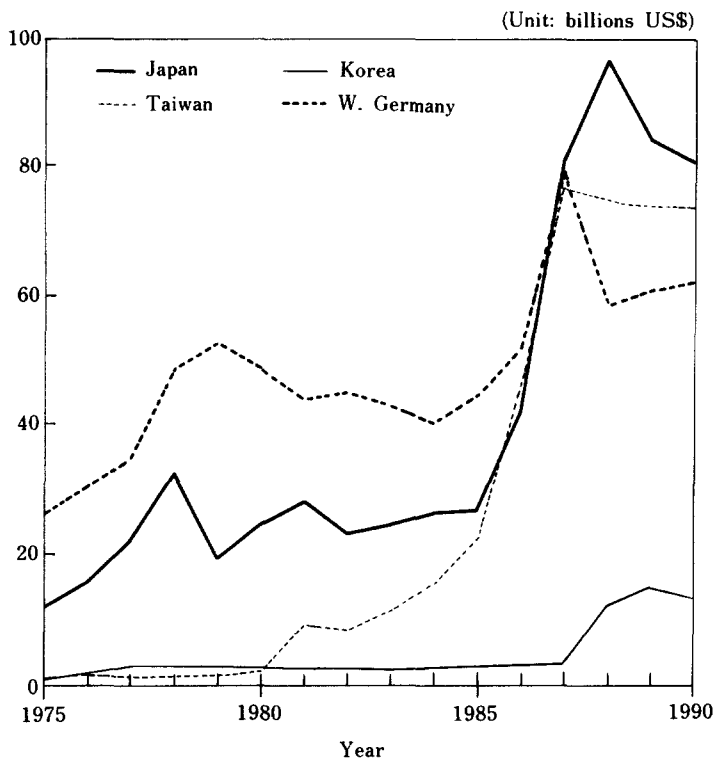


FIGURE 4
TOTAL FOREIGN RESERVES

Source: IMF, *International Financial Statistics*. *The Economist*, various issues.

reserve position, reflecting net capital flows, remains high. It should be noted, however, a high capital mobility does not apply to all asset markets alike. It is well-known that equity markets are the least to be effectively free of restriction. For example, with no institutional barriers, the U.S. equity markets are still mainly domestic markets in nature unlike bond markets.¹⁹ This is no exception in JKT. In addition, real estate markets are inaccessible to foreigners in Korea and Taiwan, and practical barriers do exist in Japan. Thus, even with complete deregulation of capital flows, it is highly unlikely that

released in Japan's asset markets. For the same period, the net long term capital outflows and the net short term inflows were U.S. \$445 bil. and 215 bil. respectively.

¹⁹As observed by Stockman (1988) asset prices, though highly correlated across countries, are not sufficiently correlated as to preclude any systematic gains from diversification. Another evidence suggests that foreign equity ownership in Japan is considered to be less than five percent.

capital flows in these two markets will become perfectly mobile. In Korea and Taiwan where capital outflows are virtually curtailed, the pressure of large foreign reserves was even greater.

Against this background the pressure initiated from the mounting current account surplus provided a fertile ground, by the mid-1980s, for excess liquidity in JKT's respective economies. Unless absorbed by a complete sterilization, this excess liquidity would find its way into the domestic markets to inflate the price of either goods or assets. In relation to this someone attribute the excess liquidity to the policy coordination to support the dollar out of the Louvre accord.²⁰ Considering Korea and Taiwan, who are not the members of the accord, that view is not necessarily persuasive.

In Japan, its monetary system did take the pressure off considerably as is evidenced in the steady growth of money supply throughout the 1980s. However, the remaining pressure did slip into the system as excess liquidity ready to set off an inflationary spiral. Peculiar to western eyes, the inflation started in the asset markets, rather than in goods market, first the equity market, then the real estate market. Although the capital was free to flow out and a big surge in capital outflows did take place mainly in foreign bonds markets, a segmented demand for domestic equity and real estate is bound to exist. Another equally important factor is the saving tendency of Japanese households whose incomes have soared by the years of sustained growth of their economy. The sense of general well-being coupled with the inadequate social security system and the rapid nucleitization of the family structure gave Japanese households enough incentive to play 'zaitech', an euphemism for a highly speculative money management game, on their home equity market.

Contributing to the demand for equity, an excess demand for land took place as well. The demand for housing, fueled by rapidly growing new families, soared. The housing investment jumped 22.36 percentage points²¹ in 1987. Even a small increase in the housing de-

²⁰*The Economist*, March 3, 1990.

²¹

TABLE N1
PRIVATE HOUSING INVESTMENT

(at 1980 constant prices, 100 mil. yen)

1984	1985	1986	1987	1988	1989
136,413	139,819	151,339	185,248	207,258	213,169
(-2.02)	(2.50)	(8.28)	(22.36)	(11.88)	(2.85)

mand would be sufficient to trigger a surge in the demand for land. The Japanese have known for decades that, with their land space so limited, a real estate boom almost always creates an even higher land prices. The ratio of the land value to the value of housing structure in Japan far exceeds that of other countries.²² The results of all these developments are predictable. It is impossible to tell exactly when the excess demands for domestic equity and land started to develop. But once started, Japanese households were quick to react. The large part of liquidity was taken out of the goods markets flowed into equity and land markets. With the two markets ever increasingly linked together,²³ excess demand in either market would put upward pressure on the other as well. Thus, while inflation has been kept low,²⁴ Japanese share prices and property values have taken an unprecedented rise peaking toward the end of the last decade (see Figure 2).

Essentially, the same thing happened in Korea and in Taiwan. Like Japan, inflation in these countries has been kept low, which gives a strong evidence for the liquidity effect. In these countries, however, the virtual immobility to absorb extra liquidity helped the share prices and land values jump to much more higher levels.

C. Wealth Effect as a Built-in Stabilizer

The inflated asset prices of JKT, the share price and the property value in particular, high by any historical or international standards, bewildered both the financial experts and the academic circle. Whatever reasons for the high prices might be its significance lies equally in "sustaining" world payment imbalances and in its impact on domestic macro variables. The first issue seems to have brought more attention. But the two can not be separate issues, as will be discussed below. The inescapable process of financial deregulation is underway in Korea and in Taiwan as well. This and the appreciation of their currencies could be interpreted as a mechanism to sustain the world payment imbalance, rendering support to the sustainability argument such as Makin (1989). However, extraordinarily

²²One estimates for the ratios, in terms of residential structure are 2.45 and 0.45 for Japan and U.S. respectively (calculations were based upon the data in Sachs and Boone 1988).

²³Japanese investors have borrowed heavily in recent years on collateral of property to buy shares or vice versa (see *The Economist*, April 7, 1990).

²⁴The average annual inflation in terms of CPI for the period of 1980-1989 was 1.9%. For the same period WPI even lowered.

high asset value or wealth represents an imbalance in itself and hence can not be sustained for long. The wealth effect would soon work to correct the imbalance in the form of higher consumption. Such a tendency would be reinforced by the opening up of the domestic market in response to foreign pressure, which tends to reduce the current account surplus. This in turn would shift the liquidity out of domestic asset markets and trigger a chain reaction to depress the asset prices. The process will likely continue until asset values fall low enough to cause a higher rate of saving again, completing a full cycle of wealth effect.

The duration of each phase in this cycle is difficult to determine and would be dependent on the time preference of the JKT's households and governmental policies among other things. It seems, however, the downhill phase of the wealth effect, from the perspectives of the domestic asset markets, has already started in Japan, in Korea and to a lesser extent in Taiwan as well. Japan's share price has fallen precipitously to a level, as of May 1990, almost 25% off its peak. Current account surplus and foreign reserve positions are also declining (see Figures 3 and 4). We expect that falling land prices will soon follow.

A similar trend is under way in Korea as well. Its share price took a nose dive in mid 1989, and it remains depressed while at the same time the current account surplus is expected to turn into red for the first time in five years.

IV. Concluding Remarks

The extraordinary divergence in the world payment balances in the 1980s should be attributed to external shocks. The top of the list undoubtedly includes the U.S. policy changes in the early 1980s that led to the artificially engineered appreciation of the dollar and the low saving started in the Reagan era, which triggered the start of the two payment imbalances.

We have argued that the rapid rise in the asset values in JKT resulted from excess liquidity, working in the peculiar setting of their asset markets, and the liquidity can be traced to its unusually strong current account position. Furthermore, their subsequent fall is nothing but the wealth effect correcting the imbalances and tending the system toward a long-run equilibrium. From this perspective, it is likely to be incomplete to address a payment imbalance problem in terms of only its financial aspects. The sustainability

based on the continued capital flows from the surplus countries can not be maintained.

One implication is that the solution to the U.S. deficit problem should be more inward-looking. Any policy prescription founded on transient market condition or non-market mechanism, such as protectionist trade measures, is unlikely to solve the problem. Such a measure would only disrupt the markets in the form of policy-induced external shocks and trigger yet another form of imbalances by denying the market's self-stabilizing functions.

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