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'It' Happened, but Not Again : A Minskian Analysis of Japan's Lost Decade.

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For most of the 1980s, it was difficult to find a media newspaper story or academic article in North America that did not look at Japan without equal parts reverence, awe, and disdain. The appellation "Japan Inc." captured the popular perception of a country more like a bee colony than a human settlement: Japanese workers were industrious, self-sacrificing and guaranteed lifetime employment; Japanese corporations eschewed the western preoccupation with short-term profits in favor of long-term gains. And the Japanese government and its bureaucratic apparatus were the figurative queen bee, nurturing a strange economy that was two parts capitalism and one part socialism/planned economy. What was frightening about Japan was that somehow it all seemed to work despite strictures from orthodox economics. What was awe inspiring was that Japan had grown from a demolished, disheartened nation following the devastation of World War II into the world's second biggest and richest economy, complete with some of the world's biggest banks, automobile, steel and electronics companies. What was disdainful was Japan's unwillingness to play by western rules.

Until early 1990 at least, most news articles still spoke of Japan's "miraculous" growth, about its huge trade surplus and the threat this posed to the U.S., and how the country's "more or less permanent bull market makes investors content with low dividends."⁽¹⁾ The suggestion that Japan enjoyed some kind of "permanent bull market" proved to be disastrously wrong. The Nikkei Index of Japanese stocks fell 39% that year. As early as spring of 1990, media reports spoke of the possibility of a recession despite economists' predictions of continuing positive economic growth.⁽²⁾ While a degree of optimism persisted even after the crash, the mere suggestion that Japan might be susceptible to a western-style economic downturn amounted to a rupture in sentiment.

Indeed, the tone in the 1990s could hardly have been more different. Articles trumpeted the superiority of western, and especially American, economic and industrial organization. "Japan Inc." now referred to a country going broke rather than to an unstoppable behemoth and to some extent, they were right. Real economic growth averaged 1.7%, down from 4.1% in the 1980s, 4.02% in the 1970s and 10.5% in the 1960s. Japan's financial system is in disarray. The cost of bailing out Japan's banking system will likely exceed \$500 billion.⁽³⁾

Japan's descent into a murky decade of slow economic growth occurred despite the vigorous application of fiscal, monetary and institutional policies that conformed, in all their minutia, to conventional wisdom. Including pension surpluses, Japan ran a budget surplus a full three years before its stock market crashed. The Bank of Japan, concerned about sky-high prices in the real estate market and the "threat" of inflation (less than 2.5%), aggressively increased interest rates prior to the stock market crash and continued to do so well after it was clear to most analysts that a recession was in sight. Meanwhile, Japan allowed its formidable institutional and regulatory structure to die on the vine. Again, this seemed like an eminently sensible strategy (and one actively encouraged by U.S. policy makers and pundits) in light of the seemingly "obvious" need to free its markets to the cool and nourishing breeze of full-blown global competition.

The reader will be forgiven if they detect a note of familiarity and irony in the last few sentences. The parallels to the modern day economy in both Canada and the U.S. are eerie, with pundits today lauding the federal government's ever-expanding budget surpluses, the central bank's "cautious" and "wise" increases in interest rates--especially in the United States where speculation and hype in the ".com" businesses seem excessive--and the dismantling of the country's already thin regulatory (banking and environmental) and institutional structure (health care, public and private unions) through the North American Free Trade Agreement and other international arrangements.

Consequently, this paper makes two arguments. First, and contrary to popular perception, Japan's economy could only be labeled "speculative" or a "bubble" in three areas: stocks, real estate and banking. Firm-level balance sheet data as well as macro-economic data suggest the vast majority of firms were on a sound financial footing. Second, by following orthodox inflation "remedies", supposedly "sound" fiscal policy, and conceding to the "our hands are tied" logic of the globalization argument, policy makers precipitated and exasperated a crisis. This suggests the ongoing fixation with surpluses, higher interest rates and deregulation, both in Canada and the U.S., is equally misguided and dangerous.

A LITTLE BIT OF THEORY

A key underlying theme in this paper is that finance matters. This may seem trite after crises in Mexico, Southeast Asia, and Russia, but it conflicts with the orthodox view of the relationship between financial activity and the so-called "real" economy, the world of physical things like buildings and equipment. For orthodoxy, financial markets are informational devices and money is a veil to real economic activity. Money is therefore of no consequence to the real functioning of the economy, at least in the long run.

Miller and Modigliani (1958), for example, are well known for extending the core insights of a model built on perfect information and competition into the world of corporate finance. In a seminal American Economic Review paper, they showed that given certain restrictive assumptions it made no difference whether a firm financed investment out of retained earnings or debt. In other words, the value of the firm is independent of its financing decisions and whether or not it pays dividends. This is a strikingly counter-intuitive proposition, especially to anyone who has worked in the financial realm, and yet it passes for received wisdom in most textbooks. Relating the world of money, debts, balance sheets and cash flow statements to the real world therefore demands a set of analytical and theoretical tools associated with heterodox economists such as John Maynard Keynes.

Second, the thrust of our argument is conducted through the lense of theoretical work by an economist named Hyman Minsky, a disciple of Keynes', who took great pains to show how and why the U.S. economy grew increasingly fragile in the post-war period. The thrust of his argument was that financial innovation, driven by the profit motive, continuously threatened the regulatory structure with obsolescence. To continue achieving the great benefits observed in the economic expansion of the 1950s and 1960s, policy makers had to be vigilant and develop a deep understanding of how financial market innovations challenged and threatened the stability of the overall economy. This does not, in any way, imply that Minsky believed free markets should be invoked to solve all our problems. On the contrary, the free market is only one form of institution, albeit a very thin and weak one, something the vast majority of economists tend to forget. The question then is always what institution does the best job of meeting our needs, which from a classical (Smith, Ricardo, Marx) and moralist perspective amounts to asking how best we can a) provision society and b) share the fruits of society equitably. Minsky's other great contribution was to suggest that large institutions such as the central bank and the federal government could play key roles in keeping capitalism afloat. These insights, while seemingly trite in the modern context, were seminal and important contributions in his day. The vast majority of modern heterodox economists, especially of the post-Keynesian persuasion, continue to use some of Minsky's key insights as powerful analytical tools.

Finally, it is worth noting Minsky made much use of theoretical work by a Polish economist named Kalecki, whose models demonstrated that, among other things, aggregate savings, especially at the government budgetary level, were a drain on profits (and hence posed a threat to economic stability) and that investment, as well as trade surpluses, were key and net contributors to corporate profits. These insights are distilled in Kalecki's famous equation, depicted below. [\(4\)](#)

$$\text{Kalecki Equation: } ATP = I + (G-T) - TD + c_F - sW$$

These theoretical observations will play crucial roles in our analysis of the data.

DATA REVIEW

In this section we quickly review the overall economic climate in Japan leading up to the 1990 crash. Beginning with the money supply, two things are apparent. First, the moving average line in Figure 1 shows there was a surge in the growth of the money supply beginning in 1987. Second, there was a dramatic decline in the 1990 growth rate. The 1987 spike in the base money growth rate coincided roughly with the first spike in the growth rate of real estate prices in the 1980s and the subsequent slowing of real estate price growth in 1990. An endogenous money perspective suggests that from 1987 to 1990, bank lending (or lending in general) was increasing at a quicker pace than it had in the past. [\(5\)](#) It also suggests that lending growth slowed dramatically in 1990 and even turned negative. [\(6\)](#)

Virtually all other important macro-economic measures of economic activity show a similar break in 1990 from previous growth patterns. While real output growth in 1990 was still almost 4%, it fell to 1% the following year. Similarly, the volume of private bond issues surged in the last half of the 1980s and peaked in 1989 before falling dramatically thereafter. We have already seen that the surge in stock prices was cut off abruptly in 1990. The decline in real estate prices started in 1991 and gained momentum in 1992.

Firm-level data show similar patterns. We calculated a variety of accounting ratios to gage the solvency or relative financial fragility of Japanese firms by using balance sheet data from 66 of Japan's largest companies in five key Japanese sectors. These sectors reflect a mix of export (automotive, electronics, and steel) and domestic-oriented firms (textile and real estate). [\(7\)](#) Virtually all the ratios show most Japanese firms--including the real estate sector--were more solvent in fiscal 1990 than in fiscal 1985. [\(8\)](#) While we will not examine these ratios in detail, the thrust of the story can be gleaned from Figure 2, which shows a simple debt-to-equity (DE) ratio for all five sectors combined relative to the DE ratio for the real estate sector. [\(9\)](#) Two things are worth noting. First, real estate DE ratios worsened in 1987-1988 before improving dramatically (and more so than in other sectors) in fiscal 1989 and 1990. Second, in 1991, DE ratios edged up slightly for the five-industry average and leveled off thereafter but rose sharply, and continued to rise in the real estate sector. This suggests that profits in the real estate sector were mostly speculative, characteristic of what Minsky said one would observe for "Ponzi-financed" firms, i.e. firms whose viability depends on their ability to find someone foolish enough to buy their already-overpriced asset. The extent of real estate speculation can be gleaned from the case of Sapporo Breweries Ltd., which valued its Tokyo real estate at \$2.5 million while in fact the plot was thought to be worth more than \$9 billion. [\(10\)](#)

It is worth noting that in Canada, the U.S. and most other western countries, the rule of thumb says prudent DE ratios should not exceed 0.5, up to a maximum of 1.5 for utility firms (Canadian Securities Course handbook (CSC) 1992, 98). While these standards were obviously exceeded in Japan and especially in the real estate sector, it is important to bear in mind that Japan had a long tradition of highly leveraged financing. Abegglen and Stalk (1985) make this point repeatedly in their discussion of the Japanese corporation (*Keisha*), arguing that a leverage ratio of 2:1 or higher was not at all unusual. During the high growth period

(1945-1970) for example, success depended on aggressively expanding debt. The motorcycle industry is a classic example. In 1950, a company called Tohatsu was the acknowledged market leader with 22% of the domestic Japanese motorcycle market. It was widely believed to be a very sound company, especially relative to its apparently reckless rival, an up and coming company called Honda which had 20% of the market. In less than five years, Honda grew its market share to 44% by aggressively expanding through debt while Tohatsu's fell to 4%. In 1964, Tohatsu filed for bankruptcy. The moral of the tale is that DE ratios that appear precarious at one point in the cycle can be "cleaned up" by rapid growth. What appears to be prudent behavior is in fact not and those that behave by "prudent" standards get punished. "The kaisha have been built on a very rapid growth economy. They have been witnesses to the fate of companies that failed to grow faster than their competitors" (Abegglen and Stalk, 6). These arguments echo those made about the accounting practices of Internet and hi-tech companies today with the important difference that the modern U.S. economy is far more deregulated than the Japanese economy of the 1950s and 1960s.

Table 1 outlines aggregate, nationwide data on overall industrial and manufacturing DE levels. It shows debt to equity ratios declined steadily beginning in the mid-1970s for both the overall industrial sector and the manufacturing sector. This is equally true for both the short-term and long-term components of debt. The table also indicates that long-term borrowing from financial institutions declined steadily starting in the mid-1970s. As we will see, this represents an important dramatic shift from previous financing trends because banks made up for this decline by lending to the real estate sector.

Two things should be retained from our brief review of the data. First, the 1990 market crash affected all manner of economic indicator, from output growth right down to corporate balance sheets. Second, while most industries felt some pain as a result of the crash (hence the slight rise in DE ratios for example), only the real estate sector (and, as we will see, banking sector) suffered in any lasting and important way, suggesting that we should be particularly alert to policy measures that would affect the domestic, real estate sector more than say export industries..

AN INSTITUTIONAL ANALYSIS OF JAPANESE ECONOMIC HISTORY

In this part of the paper we step back a bit to get a better understanding of the historical and institutional context that made it possible for Japanese firms to survive and prosper despite highly levels of debt by western standards. The first thing to remember is that for each economic cycle, there is a particular set of financial, governmental and social institutions that can amplify or lessen the effects of these cyclical tendencies. In the 1930s, the absence of any large "lean against the wind" institutions is widely seen as a key factor in exasperating and extending the crisis. As noted earlier, this was a key thrust of Minsky's analysis. "Keynesian analysis, most especially in the alternative formulation, is institutional, in the sense that actual behavior, which determines how the transition in which we spend our time develops, depends upon how the existing institutions behave" (Minsky 1975, 163).

In keeping with this approach, Minsky argued that his belief in the fundamentally unstable nature of capitalism applied first and foremost to a "decentralized capitalist economy" (Minsky 1982, vii). It is hard to imagine Japan's post-war economy as "decentralized." Despite some post-war influences from the U.S.-dominated Supreme Commander of Allied Powers (SCAP), Japan's institutional structure was radically different from the one Minsky spent his life studying. Chalmers Johnson (1995) for example coined the term "Developmental State" because he believes Japan is Mercantilist in its foreign policy and operates in a coherent and directed fashion relative to its competitors: ". . . .The Japanese state has always taken precedence over interests based on the economy, the society, or other private concerns. Japan's postwar achievement...is the result of state-society relations that are utterly different from what Anglo-American democracies think of as the norm" (Johnson 1995, 8). Similarly, Johnson and others argue that Japanese corporations have traditionally been more concerned with market share than strictly maximizing corporate profits. In the U.S., fear of takeover plays a key role in inciting a firm to take advantage of uncovered or newly discovered "goodwill," i.e. the newfound value linked directly to the pervasive euphoria of an asset price boom. Japan's corporate sector has traditionally been characterized by a complex system of cross-ownership that precludes this effect.⁽¹¹⁾ The institutional analysis conducted in next two sections suggests that deregulation and outside pressure for change created the conditions in which bad policy making could have particularly bad effects.

1945 - 1972: Stability ⁽¹²⁾

**"Financial advantages and disadvantages can offset
production advantages and disadvantages"
--Stabilizing an Unstable Economy, p. 229**

The notion of fundamental uncertainty is central to the theoretical work of Minsky, Keynes and other heterodox economists. This is uncertainty in the sense that there are a great number of things for which we cannot assign a reasonable probability. In socialist societies, state central planners shoulder the uncertainty burden. In capitalist societies, everyone does: investors must invest, builders must build, entrepreneurs must make ideas reality, and consumers must buy cars, homes, and other essential items. To invest, build, create or buy today normally requires some level of indebtedness. This can only happen if one presumes that today's events will be repeated tomorrow or, at the very least, that the conventional opinion of the future will unfold as expected. Investors must believe that the economy will continue growing, builders must trust that people will buy homes, entrepreneurs must have faith their ideas will come to fruition in a vibrant economy, and consumers must assume that they will have an income flow over the duration of their debt. Individuals and enterprise must behave this way because debt payments--at least in nominal terms--are a certainty spelled out in the debt contract.

During this early period, Japan found what in retrospect at least seems an optimal mix of the two extreme strategies (laissez-faire capitalism versus socialism) for dealing with fundamental uncertainty: while individuals and corporations made the bulk of day-to-day investment decisions, they did so within an institutional context of reduced uncertainty (relative to a more

freewheeling, U.S.-style economy), secure in the knowledge the state would save a fragile bank--the so-called "no failures" policy (Tachibanaki 1991)--prop up a weak industry, reduce exchange rate volatility through capital controls, and assure a constant stream of steady and cheap credit. They did so secure in the knowledge they had easy access to U.S. markets and their government would assist them in their technological needs, trade disputes, and temporary solvency problems.

Japan's financial system was particularly important during this era and implicitly followed many of the practices that Minsky prescribed. The system was built on three regulatory pillars (Table 2) that assured a high level of investment, savings and a steady supply of cheap loans to targeted industries. Government regulation of the financial system amounted to ¥451 billion in banking industry subsidies during the 1966-1970 period and ¥1,006 billion during the 1971-1975 period (Teranishi 1994).

Table 2: Three Regulatory Pillars

Market segmentation

By setting up clear guidelines on deposit rates and loan size, the regulatory framework guaranteed a highly specialized financial system with very little overlap. For example, long-term and city banks dealt primarily with large corporate clients, regional banks were concerned with small and medium sized business and the postal savings system amassed household deposits. Segmentation was enforced by the Ministry of Finance (MoF) and the BoJ.

Direct regulatory control

The BoJ and MoF exercised strict control over short and long-term interest rates, dividends, the number of bank branches, reserve requirements and the volume of lending. So-called "window-guidance" was a form of moral suasion rather than legal authority. These controls guaranteed market segmentation and prevented interest rate competition, which was deemed detrimental to the profitability of industry. In return, banks were virtually assured profitability because of the spread between what they paid on deposits, which was regulated, and what they took in on loans, which often was not. Profitability, therefore, could be increased by augmenting loan volume with little concern for expanding liability costs.

Close scrutiny of financial soundness

The BoJ and MoF assured bank solvency by demanding that certain operating and balance sheet standards be met. Banks were examined annually by either the MoF or the BoJ.

The combination of close government scrutiny plus a segmented financial system and the traditional main bank relationship in the Keiretsu resulted in what Suzuki (1990) called a system of "over-borrowing" and "over-loan." Over-borrowing was "a state of affairs in which the raising of funds by the corporate sector relied to an extremely high degree on borrowing from banks," while over-loan "denotes a condition in the private banking sector in which banks chronically extended more credit...than they acquired from deposits or own capital"(Suzuki, 23). (13) Suzuki attributed the former to the inability of firms to generate sufficient internal funds and strict capital controls, which limited the availability of foreign credit either through bond sales or direct borrowing. (14) The latter was attributed to the willingness of the BoJ, under guidance from the Ministry of Finance, to meet the money needs of the banking system.

Japan's financial market policies were complemented by a host of relatively restrictive policies, including regulations both explicit and implicit to prevent foreign ownership of key industries and the gathering and dissemination of technological and market information to targeted industries. The combination of domestic and foreign policy made it possible for speculative and even Ponzi-financed firms to exist and prosper. As Minsky notes, "speculative financing units can fulfill their commitments as long as their longer-term income prospects are favorable and as long as funds are forthcoming at non-punitive terms from the markets in which they finance and refinance their positions" (Minsky 1982, 33). This was precisely the institutional environment that Japan created.

Japan's pallet of policies did not exist in an international vacuum. While more pronounced and sweeping than in other countries, Japan's financial policies nevertheless "fit" with the international culture of the time. At least until the 1960s, most countries were still suspicious of prosperity and financial systems reflected the memory of the roaring 20s, the Great Depression and World War II. (15) Japan's export and investment-led development growth in the three decades after the war was also consistent with cold-war considerations. (16) Further, Japan's corporations benefitted from sustained growth in the rest of the world, thereby validating the speculative nature of their financial structure. Finally, one must recall the war relegated Japan to semi-industrialized status. In the early years of its post-war development, most Japanese production was focused in low-tech products that did not pose a serious threat to vital U.S. industries. Japan's post-war development was both the product of an internally consistent set of policy measures and an externally favorable international environment that made those policies possible. The next three decades would show just how unique that period had been--both for Japan and other developing and developed countries.

1973-1979: Slower Growth an Nascent Deregulation

If the 1945-1972 period can be characterized as one of a highly centralized capitalist structure with mostly tranquil progress, then 1973-1979 should be seen as one where fissures in that structure first appear. The abrupt change is generally attributed to three factors: the dismantling of the Bretton-Woods system in 1971 and the floating exchange rate system after 1973, the Organization of Petroleum Exporting Countries (OPEC) oil crisis in late 1973 and 1974, and Japan's metamorphosis into a full-fledged industrial power. In short, Japan could no longer continue business as usual. The first important trade tensions between the U.S. and Japan were felt in the early part of the decade. By the 1980s, they would become important and contentious issues. The period 1973-1979 yielded three major changes that would forever change the country's financial landscape.

First, the government cushioned the effects of these shocks by, for example, subsidizing oil-dependent industries and increasing social spending. In fiscal 1975 government spending jumped 55% to 21.8 trillion yen as the economy suffered its first calendar year of negative growth since the war. This was accompanied by a surge in the volume of government bonds, the value of which almost doubled to ¥15.8 trillion in 1975 from a year earlier (Teranishi, 52). In the first two-and-a-half decades after the war, the government bond market was virtually nonexistent because of balanced budget legislation.⁽¹⁷⁾ By the end of the 1970s, there were ¥57 trillion worth of government bonds outstanding. A large portion of the bonds, and especially the long-term issues, paid less than market rates because the government wanted to "contain the debt-servicing burden" (Tavlas and Ozeki, 1992, 10). Yet the government had little difficulty selling its bonds because the law forced the banking sector to take up virtually all of its long-term (10 year or more) issues.

Second, the surge of government bonds coincided with increasing pressure on bank profits which led to growing demands for deregulation. By the late 1970s, banks were given permission to issue certificates of deposits with interest rates set in the market in order to regain some of the deposits lost earlier in the decade to other branches of the financial sector. The composition of Japan's money supply began an irreversible shift towards instruments of differing yields and margins of safety. This represented an important institutional change that paralleled, albeit with a lag, developments Minsky described in the U.S.

Third, slower economic growth led to reduced demand for bank loans from Japan's largest companies, who were at the same time relying increasingly on retained earnings for their financing needs. In response, the banks put pressure on government officials to do away with Japan's policy of financial segmentation so that they could enter the real estate and consumer loan markets.

1980 to present: The Western Financial Model Triumphs

Under pressure from internal and external forces, Japanese deregulation gained momentum in the 1980s. In effect, Japan created the conditions for fragility by gradually doing away with the three financial pillars as well as capital controls and accommodative monetary and fiscal policy. This is especially true because of the failure to put anything in place that would make the transition workable.

The decade began with the Foreign Exchange and Trade Control Law, which established the principle that "capital flows should be free unless they were specifically restricted" (Tavlas and Ozeki 1992, 11). Until the mid-1970s, Japan discouraged the use of the yen internationally because monetary authorities "were concerned that extensive foreign holdings of their currency would reduce their degree of control over the money supply and would increase the variability of the exchange rate" (Frankel 1984, 33-34). The U.S. was not appeased by the country's tentative steps towards liberalization, nor were certain elements within Japanese society. This led to two historic accords designed to broaden the 1980 Foreign Exchange Law: the Yen-Dollar accord of 1983 and the Plaza Accord of 1985. In the Yen-Dollar accord, Japan agreed to reduce barriers on the flow of capital, internationalize the yen, treat U.S. banks and other financial institutions more favorably and, to a lesser extent, deregulate domestic capital markets while allowing more interest rates to be market determined. We shall discuss the Plaza Accord at length when we look at institutional factors that contributed to the 1990 crash.

Meanwhile, the trend away from direct bank borrowing gained momentum as firms increasingly looked to bond and equity markets, as can be seen in Table 3. Until the mid to late 1980s, the rules on bond issues were so restrictive that even as late as 1983, Toyota Motors and Matsushita Electric were the only two Japanese companies allowed to issue domestic unsecured bonds. The standards were gradually relaxed so that by 1987, 180 firms were permitted to issue unsecured debt and 330 firms were allowed to issue unsecured convertible debt (Kang and Stulz 1994, 19). The decline in large-scale industrial and investment loan demand reverberated throughout the Japanese economy and, most importantly for our purposes, in the bond and real estate markets. Faced with declining loan demand, Japan's largest banks pressed for and were largely successful in their demands for an end to the country's strict market segmentation. Faced with new competition, financial institutions moved into lending businesses that were either unfamiliar or risky or both. The chief outlet for this lending was the real estate sector.

'IT' HAPPENED, BUT NOT AGAIN

While Japan's growth rate in the 1980s was less than half of what it had been during the tranquil period, the country's economic performance certainly looked good relative to other developed countries. Japan weathered the second oil shock admirably, keeping unemployment rates low and inflation under control. Table 4 gives an indication of Japan's relative performance and forms the backdrop to the growing sense in the international community that Japan was threatening the U.S. for global economic dominance. The 1985 Plaza Accord, which was signed in September, sought to alleviate some of these concerns. Japan and other members of the G5 countries agreed to take steps to appreciate their currencies relative to the U.S. dollar. The Plaza Accord is interesting for three reasons. First, it shows how dependent Japan was on the U.S. consumer market. Second, its implementation reveals some of the budding "schizophrenia" that has characterized Japanese economic policy ever since.⁽¹⁸⁾ Less than a year after signing the agreement to buy yen, the BoJ reversed course to stall the yen's appreciation. Third, the Plaza Accord contributed to the real estate boom by making Japan, and especially Tokyo,⁽¹⁹⁾ a key financial center.⁽²⁰⁾ It was also symbolic of Japan's entry onto the world stage. Beginning at least in 1985, there was increasing talk of the yen as a second major international currency alongside the U.S. dollar.⁽²¹⁾ With financial liberalization in full swing, large numbers of foreign banks and financial companies vied for limited real estate in Tokyo and surrounding areas. In less than a decade, the number of foreign institutions in Japan jumped almost 72% to 443 in 1989 (Tavlas and Ozeki 1992, 12).⁽²²⁾ Ito (1990) also suggests that the increased value of the yen also drove many domestic firms to "rediscover" the domestic market and led the government to pursue a more aggressive expansionary policy in fiscal 1987 and 1988.

Nineteen-eighty-five was a watershed in another important way: financial firms were given two new deposit-raising instruments

with free-floating interest rates: money market certificates (MMC) and large time deposits. Both instruments represented a new and important way for large Japanese banks to raise funds and an acceleration of the process of deposit deregulation that hit its apogee in 1994 with the complete elimination of restrictions on deposit-account interest rates. In 1980, about 6.3% of all deposits bore market-determined interest rates. By 1989, the percentage had increased to 57.3% (Cargill, Hutchison and Ito, 52). The increasing pace of deregulation was also evidenced by the privatization of several key industries that same year. Ito (1990, 188) argues that all these changes reflected Japan's assimilation into the Western mainstream, which we will recall was dominated by conservative, pro-free market, pro-deregulation leaders such as President Reagan in the U.S., Prime Minister Brian Mulroney in Canada and Prime Minister Thatcher in England.

In light of the recent Southeast Asian crisis, even conservative analysts accept that deregulation can entail heavy costs. An important study of financial and bank crises by Kaminsky and Reinhart (1996, 15), for example, found that financial liberalization "plays a significant role in explaining the probability of a banking crisis." There are other repercussions of course. Teranishi, by no means an heterodox economist, laments the fact that during the 1980s, natural sciences graduates preferred to work in the financial sector because of more lucrative salaries. Between 1980 and 1990, employment in the finance and real estate sectors combined grew at an annual rate of 3.9% versus only 1.1% for the manufacturing sector. Meanwhile, Japanese corporations distanced themselves from their traditional, formerly long-term relationships with banks and increasingly financed spending through bond and equity issues or internal funds. Ultimately, Japan's financial system bore the brunt of foreign pressure for change. The financial system not only translated or acted as a filter for the normal whimsical tendencies of capitalism but it was also the buffer or safety valve for Japan's foreign policy difficulties.

THE BANKING SECTOR

Deregulation was accompanied by an increasing tendency for bank lending to the real estate sector. This has been a recurring side-effect of financial deregulation the world over. The U.S. Savings and Loans crisis and the 1997 collapse of the Southeast Asian economies are just two well-known examples. In Table 5, we see that real estate loans grew from less than 4% of total bank loans in 1970 to more than 11% in 1990. Real estate loans by Japanese city banks, which traditionally concerned themselves with lending to large industrial companies, more than quadrupled as a percentage of total loans during the same period. Direct loans to the real estate sector, however, tell only part of the story. The OECD suggests that small and medium-sized enterprises were increasing their land-related investments in the late 1980s and were relying increasingly on bank debt to do so. Large scale lending to the real estate sector also came from *non-bank* financial institutions who in turn took their funding from the banking sector. Ito and Iwaisako (1995, 25) point to evidence suggesting this was a convenient way for the large banks to "use non-banks as an indirect way to lend to risky borrowers." Lending to finance companies increased almost tenfold from 1970 to 1990. Long-Term banks, which showed the smallest increases in real estate loans, increased their loan volume to finance companies almost twenty-fold to 22.7% of total loans.

In Figure 3, we plot the annual percentage change in loans outstanding by sector. It shows that the annual growth rate in total loans and discounts outstanding to the finance and real estate sectors (and to a lesser extent the construction sector) surged from 1980 forward, while the rate of increase in loans to the manufacturing sector declined and even turned negative (i.e. net repayment of loans) in the two years prior to the 1990 stock market crash. This would suggest that the manufacturing sector was becoming more solvent, precisely what the micro-data examined earlier indicate. The growth rate of loans outstanding to the real estate and finance sectors fell in 1988: growth in total loans outstanding (not shown) leveled off at about 8.5% in 1988-1990, down from an average of 10.5% in the preceding seven years, suggesting the real estate market may have been cooling off at least two years before the actual collapse in prices.

Flow of funds data show that firms were increasingly looking to equity and bond markets for their financing needs. In 1985, nonfinancial corporations raised more than three times as much funding (about ¥73 billion) from bank loans as they did from securities. By 1989, money raised from securities issues exceeded the amount raised from bank loans by a small margin (Katz 1998, 335). OECD data (1993, 49) tell a slightly more nuanced story. While large Japanese corporations issued increasing amounts of equity and "straight" bonds, the biggest increase in non-bank financing came from bonds issued with warrants.⁽²³⁾ In 1989, large Japanese corporations issued more than ¥9.7 trillion worth of bonds with warrants, up from less than ¥703 billion in 1985. Figure 4 shows a dramatic decline in the ratio of banking claims to nominal GDP in 1987. Media reports also strongly suggest that a large part of corporate Japan was highly "liquid." Kenneth Curtis, an economist with Deutsche Bank in Tokyo, was quoted as saying in 1990 that "Japanese corporate liquidity had reached historic peaks."⁽²⁴⁾

REAL ESTATE

There were some uniquely Japanese institutional features that facilitated but probably did not cause real estate speculation. For example, Japan's inheritance tax assessed land-holdings at significantly less than market value, while real estate loans were fully deductible in inheritance taxation. Further, Abegglen and Stalk suggest that most capital gains were not taxed at all. "Although dividends paid to individuals are heavily taxed in both countries (Japan and the U.S.), capital gains are not usually taxed in Japan" (Abegglen and Stalk, 172-173). Japanese corporations of all stripes have a long history of paying low dividends. In return, the implicit promise has always been to generate high growth and hence capital gains. The real estate sector was no different and indeed benefitted from this traditional emphasis on capital gains.

While these institutional factors were in place well before the 1990 crash, the widespread and easy availability of credit for housing and real estate investment in general was a more recent phenomenon. During the high-growth period for example, government regulations channeled savings to the investment sector so that virtually all housing loans came from the Japan Housing Loan Corporation (JHLC).⁽²⁵⁾ This, plus the fact that Japanese homes have traditionally been expensive, contributed to Japan's high savings rate: would-be homeowners needed to accumulate large savings to obtain financing. Much of these savings were held in

small regional banks with chronic fund surpluses and these, in turn, were channeled to the City Banks via the interbank loans market, itself heavily regulated by the MoF and the BoJ. As loan activity to the corporate sector began to wane in the 1970s, banks, securities firms and life insurance companies looked increasingly to the home market for profit potential and created subsidiaries known as *jusen*, which were dependent on their parent corporations for financing because by law they could not accept deposits. *Jusen* and other non-bank financial companies targeted the real estate sector particularly aggressively in the second half of the 1980s (Cargill, Hutchison and Ito, 121). It is important to note that these non-bank financial firms fell outside the purview of the MoF, which had an intimate and long-established link with the traditional banking sector. Non-bank financial companies could simply ignore pleas from the MoF to restrain real estate loans, which they did in the period leading up to the real estate crash, prompting the executive director of the BoJ to lament: "Our big headache now is the non-banks. We have no direct route to exercise control over them."⁽²⁶⁾ The collapse in real estate prices effectively destroyed the *jusen* corporations. In 1995, 74% of the *jusen* loans (out of a total of ¥13 trillion) were nonperforming. About 67% of these were unrecoverable. By 1996, the seven *jusen* companies were dissolved and regrouped into the *Jusen* Resolution Company.

Why would the *jusen* companies (as well as other non-bank institutions) have taken on such precarious financial positions? The answer is, as Minsky might have suggested, because the whole post-war history of Japan showed that it was not only prudent but necessary to do so. Institutional features such as a long history of low dividend payments, an emphasis on market share and growth, as well as generous tax treatments made highly leveraged positions both desirable and necessary. Highly leveraged loans to the industrial sector had reaped huge rewards, why would a similar approach not work for the real estate sector? "Between 1950 and 1981, the average price per acre of farmland in the U.S. rose by about 14 times. By contrast, the price of Japanese industrial acreage has increased 150 times from 1950 to 1981 and over 6,000 times since just before the start of World War II" (Abegglen and Stalk, 165). Seko (1994, 54) makes a similar point but in a different way:

"In the mid-1980s, banks actively sought to boost property-related lending. They mistakenly credited the myth that land prices always go up and thus ran little risk if loans were secured by property. The banks have traditionally lent heavily to manufacturing firms, but this source of business dried up in the mid-1980s as manufacturers increasingly turned to equity markets to raise money."

The 1980s were radically different from what had come before. In the past, there were clear and unambiguous policies of full financial support from the BoJ and the Japanese financial infrastructure. This was not true in 1990. Whereas the MoF might have been able to exert some control over real estate lending in the first two growth periods, this was less true in the 1980s. While Japanese manufacturing corporations and other companies with international exposure and clout were adopting relatively safe financial positions by virtue of their size and their growing need to conform to foreign financing rules, the real estate and financial services sectors were not. Both were still relatively new to the international rules that were fast being foisted on Japan.

There are other institutional and historical factors that make real estate a particularly desirous investment. Banks in Japan have traditionally been more willing to lend to firms and individuals if they already have or intend to acquire land. Also, the carrying costs of land are relatively low : land does not physically depreciate and Noguchi (1994, 24) suggests that property taxes actually fell from 0.1% of land value in the early 1980s to 0.06% by the end of the decade. In the context of rising prices, people therefore had an incentive to hoard and treat land as a speculative rather than productive asset. Finally, from a purely geographic perspective, Japan is a small mountainous island with a paucity of good arable and habitable land.⁽²⁷⁾ Japanese ultra-nationalists have long justified military exploits on the grounds that the country was overpopulated. While the historical evidence invalidates this claim, it is a sentiment shared by many and increases the prestige associated with ownership.⁽²⁸⁾ If humans are indeed subject to animal spirits and whimsical emotions, then surely the presumed security of real estate must count among those assets most likely to assuage the restless human spirit. This appears to be particularly true of Japan.

RATE HIKES AND BALANCED BUDGETS

Minsky believed the U.S. avoided a serious economic crisis in the post-war period because of two relatively new and important institutions: big government and an activist central bank, both of which owe their existence to the Great Depression. Through its sheer preponderance in the national economy, government could cushion the economy from shocks through its spending and taxing power, while the central bank could act as a Lender of Last Resort assuring liquidity during credit crunches and other crises of confidence, as was done during the 1987 U.S. stock market crash (Wolfson, 1996). This can be seen very clearly in Minsky's "Truth Table" of policy options, which we have reproduced as Table 6:

Table 6 : Minsky's "Truth Table" of Policy Options
from: "Can 'It' Happen Again?"

		Lender-of-Last-Resort Intervention	
		Yes	No
Government deficit	Yes	Yes-Yes	Yes-No
	No	No-Yes	No-No

Minsky believed that during much of the post-war period, the U.S. administered a "yes-yes" strategy of government deficits combined with lender-of-last-resort intervention. By contrast, he believed that the Great Depression was characterized by a "no-no" strategy: government was too small and monetary policy too timid. Monetary policy, via control of interest rates, alters debt costs and can turn speculative firms into Ponzi and puts Ponzi out of business. Fiscal policy works its way to firm balance sheets through its Kaleckian repercussions on macro-economic profits. We will argue that for a brief time, Japan adopted a "no-no"

strategy that led to one of the most prolonged slumps in its modern history.⁽²⁹⁾

Figure 5 shows that the cost of debt in Japan was falling throughout much of the 1980s. In May 1989 however, the BoJ launched a pre-emptive strike against the perceived threat of inflation, increasing the discount rate by 75 basis points to 3.25%. By the end of 1990, the discount had been increased an additional four times to 6%. These increases occurred despite the fact that inflation remained below 2% for most of the 1980s. Why did the BoJ behave so aggressively? Japan fell in line with the rest of the world's central banks, which by that point had all but given up on full employment as highest order policy objective.⁽³⁰⁾ By 1990, the BoJ's policy stance had swung around so radically that the Governor of the BoJ, Yasushi Mieno, argued that "it is essential to foster an environment and infrastructure through which strong economic performance can be realized. First and foremost, this means price stability...To this end, when conducting monetary policy, it is of utmost importance that the BoJ places priority on securing price stability" (Tavlas and Ozeki 1992, 7). Other sources noted a similar shift in policy. For example, the OECD said in a June 1990 review of Japan's economy that "the policy stand has shifted in emphasis towards containing inflation pressures and expectations" because of concerns about "tight" labor markets and a weakening currency (OECD 1990, 1-2). This represented a serious rupture with the past. Throughout most of the post-war boom period, price stability was given "somewhat less emphasis" than other policy objectives such as strong economic growth, low unemployment, and a neutral balance of payment (Tavlas and Ozeki 1992, 7). Similarly, Abegglen and Stalk suggest the government's monetary policy had long been to "maintain low interest rates and to avoid a liquidity crisis" (Abegglen and Stalk, 167). Figure 6 shows that Japan suffered a serious bout of hyperinflation immediately after the war but it subsided by the end of the 1950s, with inflation settling at a presumably acceptable 5%--well in excess of the 3.27% peak rate witnessed in 1991. The shift in policy towards price stability had a dramatic effect on the country's banking and real estate sectors, where profits depended increasingly on asset inflation. Consumers were also affected. Prior to 1983, virtually all home loans were negotiated at fixed interest rates, with the bulk of these coming from the JHLC. By 1989, roughly two-thirds of all home loans had floating interest rates (Seko, 55).

The government sector also used its spending power in precisely the wrong way. Despite a brief 9.5% surge in spending during fiscal 1989, the government was on track to post a budget surplus by fiscal 1991 and actually registered consolidated surpluses (i.e. including the country's pension surpluses) beginning in 1987. Moreover, in 1989 the government introduced a 3% consumption tax as part of a general effort to "shore-up" its pension system. This too acted as a drag on corporate profits by discouraging consumer spending, which had been increasing monotonically since at least 1981 but was halted by the 1990 stock market crash and the consumption tax. Figure 7 shows that the household savings rate as a percent of disposable income fell from 1981 to 1989 but increased abruptly in 1991. A Kaleckian approach tells us that household consumption enhances corporate profits so the taxation policy would have exerted a negative effect on profits via consumption. There were of course other fiscal policy measures that may have contributed to the asset price boom while at the same time increasing the government's take of the economy thus reducing corporate profits. For example, in April 1988, the MoF "revoked the tax-free status of \$2.4 trillion in small, low-yield savings accounts," effectively driving many consumers into the stock market seeking higher returns.⁽³¹⁾

The combined effect of fiscal and monetary policy was designed to "wring speculative excesses from the stock and real estate markets" (Central Intelligence Agency, 1997). The policies were very successful but only at the cost of the country's overall economic well-being.

As Minsky might have said, the combined effect of contractionary fiscal and monetary policy is a "no-no."

THE CRISIS AFTERMATH

We have suggested that the years leading up to the crisis were framed by two broad historical and institutional trends : first, Japan's ascendancy threatened U.S. economic hegemony. This led to the death of the Bretton-Woods agreement, trade tensions, the 1985 Plaza Accord and a broad agreement to deregulate its financial system. Why would Japan--the second largest economy in the world--accede to U.S. demands? Japan believed it had to acquiesce to U.S. pressure in order to maintain access to the richest consumer market in the world, much like Canada's pro-free trade forces argued in the 1980s and early 1990s. Second, Japan's financial structure was undergoing serious institutional changes that were directly related to the first trend. This led to the erosion of Japan's early postwar policy of segmentation, which in turn contributed to real estate and stock price inflation. The catalysts to the financial crisis were monetary and fiscal.

The collapse of the stock market exposed the speculative nature of the real estate sector and banking sector : while various solvency ratios may have been improving in the period leading up to the crisis, the gains were based largely on asset inflation. This is evidenced by the abrupt change in sentiment towards both the real estate and banking sector. Less than a month after the precipitous stock market decline and in the midst of rising interest rates, Moody's Investors Service Inc. lowered its debt ratings on three large Japanese banks because "there is potential weakness in Japanese real estate prices even though institutional arrangements have prevented serious losses so far."⁽³²⁾ This warning was issued well before the fall in real estate prices and indicates the extent to which the stock market crash changed sentiment. Bond agencies are often slow (or loath) to recognize debt problems so this warning, in the context of falling stock prices, was a particularly important signal that all was not well with Japan's financial system.⁽³³⁾ It also meant that these banks--as well as other banks not affected by the rating--would probably face higher interest costs when issuing bonds or debentures.

Thus, by virtue of its power over credit and its own preference for liquidity in the context of collapsing asset prices and the Basle Accord, which tied loan volume to retained earnings and a portion of unrealized capital gains, the financial sector amplified the crisis into the rest of the economy. As Wolfson (1990, 333-334) notes, "Problems in the banking system can disrupt the overall economic and financial systems; conversely, problems elsewhere in the financial system will have a much magnified effect on the overall economy if they spread to the banking system." At least some portion of the banking sector's preference for liquidity was foisted upon it by a MoF edict that "imposed a zero-growth restriction on the total amount of bank lending to real estate companies

in April 1990" (Noguchi, 26). This occurred a scant three months after the initial stock market crash and pre-dated the collapse in real estate prices, as shown in Figure 8. "If demands for credit are indeed necessitous, then an inability to obtain the needed funds would be expected to result in defaults on debt obligations, the collapse of the debt structure that had been built up during the expansion, and a cumulative downward spiral characteristic of financial crises" (Wolfson 1986, 126).

Again, it is important to place these events in an historical context. Figure 8 also shows that Japan's suffered a more abrupt collapse in real estate prices in 1974-75 after the demise of Bretton Woods and the oil shocks without engendering the severe economic crisis that followed the 1990 stock and real estate price crash. The key difference between that crisis and the 1990 collapse was the institutional structure: in 1974-75, Japan's post-war banking system--which had imparted stability to the financial structure--was largely intact; in 1990 it was being consciously disassembled. In 1974-75, the government stepped in with massive fiscal stimulus--precisely as prescribed by Minsky. In 1990 it did not. In 1974-75, the dramatic decline in prices was transient, in 1990 it was anything but.

Looking at trends in the post-1990 period, we see a decline in corporate and bank profitability. Debt-equity levels worsened for the real estate sector. Short-term debts increased. Bankruptcies more than doubled to 14,000 in 1992 from less than 7,000 in 1990. The economy stagnated. The financial sector was particularly hard hit. As noted earlier, the government was eventually forced to rescue the entire usen industry. According to the OECD, this rescue engendered considerable "political fallout" that made further aid to the financial industry unpalatable. As a result, official policy until late 1998 was that the banking sector should deal with its nonperforming loans problem on its own. (34) All told, the OECD estimates that the financial sector lost about \$1.3 trillion worth of capital in the 1990s, roughly 19% of the total capital lost in all industries as a result of the financial crisis. More than 80% of these losses came from losses on the banks' securities holdings, i.e. shares in other companies and financial institutions. At the urging of the U.S. and international agencies such as the OECD, as well as domestic interests, financial deregulation continued apace despite turmoil in the financial markets, culminating in what has been termed Japan's "big bang" in 1998. A cornerstone of this reform was the new BoJ Law, which sought to "enhance the independence and transparency" of the BoJ (OECD 1998, 102).

The policy dyslexia that had characterized the latter half of the 1980s persisted and worsened: policymakers seemed unable to decide whether they wanted a strong or weak yen. Even today, Japan seems to be lurching back and forth, clearly lacking the single-minded focus that carried it so far after the Second World War. This in part stems from Japan's reliance on the U.S. consumer market to take up its exports, especially after the collapse of the Southeast Asian economies : the country must walk a fine line between reviving its economy through a weak yen and angering the U.S., which is its biggest export market. Japan's fiscal policy has also been inconsistent. While the government incurred large budget deficits beginning in 1992, it also acted quickly to "remedy" its fiscal situation in 1997 just as the economy appeared to be recovering from a four-year old slump. The OECD euphemistically calls this a period of "fiscal consolidation" and deems that it was "quite appropriate" in the context of a growing economy. However, "With the benefit of hindsight, it is now clear that ...the expansion...was not strong enough to absorb the significant fiscal tightening in 1997" (OECD 1998, 2). This effectively represented a "no-yes" strategy because the BoJ left the discount rate below 1%, where it had been since 1995. Only with recent rounds of combined fiscal and monetary stimulus does Japan appear to have learned its lesson.

PARALLELS

Early in this paper, we suggested there were striking parallels between what happened in Japan in the 1980s and what is going on now in the U.S. and Canada. To some considerable extent, this can be verified simply by comparing what is written in today's newspapers with what was written about Japan back in the 1980s. It can also be confirmed by citing the discourses of major politicians. While the words may not be exactly the same, the underlying themes are very similar, with, for example, the modern-day Internet sector being directly analogous to Japan's real estate sector. As Mark Twain reportedly said, history may not repeat itself but it certainly rhymes.

One can also get a sense of how well it rhymes by comparing movements in broad economic data. In Figures 9, we compare output growth in the U.S. and Canada with developments in Japan during the 1980s and assume that Japan's experience in the 1990s is a fairly good predictor of what might happen in North America during the next 10 years. To arrive at our projections, we employed an admittedly crude and somewhat ad hoc approximation by transposing Japan's growth rate from 1981 forward over data for 1991-2000 for the U.S. and Canada. In other words, the chart shows that Japan's 1991 growth rate was 3.5% when in fact this is really the growth rate observed in 1981. Data after 2000 are what was actually observed in Japan for 1991 forward. Clearly, the future is not very bright if we were to go by Japan's recent experience.

We employed the same technique in Figure 10, where we compare the central government of Japan's budget balance with those of the U.S. and Canada. Note that this Figure reverses the signs on surpluses and deficits to conform with the logic of Kalecki's model : surpluses are given negative signs because they represent a drain on aggregate profits while deficits are given a positive sign because they add to corporate profits. Again, this figure suggests we may expect another year or two of surpluses before a recession sets in and what remains of the social safety net drives the government (mercifully) into a deficit. Finally, Figure 11 conducts the same type of analysis and suggests that Canada and the U.S. may be in for a decade of low inflation if not deflation.

Clearly, one would not want to put too much faith into this kind of analysis. Quite apart from the data issues, it abstracts from culture, institutions and history. Also, economic projections of any kind are almost always wrong simply because they assume that what was observed in the past will continue into the future. A reading of far more sophisticated budgetary projections from the early 1990s in both the U.S. and Canada should make that abundantly clear. That being said, projections are useful in that they can at least tell us what is likely to happen if all else is held constant and history rhymes. Indeed, these pictures do suggest that there are striking parallels in the broad patterns of the data and at least demand that we pay some attention to the possibility that Japan's recent experience may presage our future.

CONCLUSION AND REFLECTIONS

We have suggested that Japan's crisis followed what might be best labeled a "Minskian" pattern, which can be found in Minsky's discussions of financial deregulation (see, for example, the chapter on banking in his 1986 tome) as well as the important and stabilizing role of government deficits and central bank lender-of-last resort policy. We can group the causal factors into two broadly defined groups. First, we have the contextual facts. They are as follows:

- The real estate sector was highly leveraged relative to other sectors. Even though DE ratios moved lower in the period leading up to the crash, the subsequent worsening of DE ratios--especially in light of the continued improvement in other sectors--suggests these improvements were insufficient or illusory. When the speculation ended, so did the improvements. The importance of the real estate sector cannot be underestimated because of its impact on the banking sector, which we revisit next. In other words, the real estate sector constituted a "critical mass" of firms needed to trigger a crisis.
- The banking sector grew ever more exposed to the real estate sector and stock market because of a broad decline in demand for financing from its traditional clients, the large Japanese corporations. The collapse of stock and then real estate prices, interacting with Basle accord provisions and other institutional changes, induced a "liquidity preference" on the part of banks.
- The U.S., seeking to redress trade imbalances, put pressure on Japan to stimulate domestic and deregulate its financial markets.

The catalysts to the crisis were:

- A sharp spike in interest rates by the BoJ, which abandoned its earlier commitment to high growth. The increase collapsed first the stock market and then the real estate sector by reducing the demand price and increasing the supply price. The collapse of the former and its impact on the banking industry and overall sentiment contributed to the collapse of the latter.
- A government budget surplus, which impinged on corporate profits and a consumption tax that slowed consumption, thereby further eroding corporate profits.

The broad over-riding theme in Minsky's work and in most non-mainstream work for that matter is that of a capitalist economy that naturally moves in and out of crises. The only constant is constant change. There certainly is no static equilibrium, as the most simple textbook presentations (and even many of the more sophisticated mathematical models) seem to suggest. If anything, the absence of large scale non-market institutions (big governments, central banks) make crises worse, not better. The best institutions adapt quickly to these constant changes. And still the transition from one set of institutions to another imparts inherent fragility precisely because the adjustment process ventures into the unknown. The pallet of "uncertain" events grows with the adjustment process. And yet that does not imply hopelessness and defeatism, as many latter day laissez-faire preachers seem to suggest. Rather, it demands a more vigorous and creative attempt to design better economic institutions. This is where economists should direct the brunt of their intellectual energy, as Paul Davidson and a whole tradition of American and Canadian Institutionalists and Keynesians have repeatedly suggested.

This paper has kept Japan's institutional and economic history front and center. Minsky thought this was essential for a clear understanding of financial processes. Our brief analysis of the parallels between Japan, the U.S. and Canada explicitly abstracts from this kind of analysis. To the extent that there is a growing "homogenization" of institutional practices and customs in the developed countries, this may be justified. In any case, a vulgarized version of our Japan story would say that institutional and historical realities meant the country could not easily escape its relatively rigid past. This was a great weakness in a fast-changing world. This was Minsky's main message and it is one of the few things we can say with certainty about economies and, for that matter, people.

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1. "How to Conquer Japan by Playing for Keeps Today; for Once, Short-Term Thinking may be the Right Answer for American Business", *Business Month* , 1990, March.
2. "Japan Faces Growing Fear of Recession", *USA Today* 1990, April 3.
3. "The Sound of a Japanese Bank Falling : Very Quiet," *Christian Science Monitor* , 1998, October 30
4. ATP is after-tax corporate profits, I is investment, G is government spending, T is government taxation and TD is the Balance of Trade Deficit, c is consumption out of profits and sW is savings out of wages. This type of equation corresponded to an "open economy with big government in which workers' income is high and stable enough so that workers can save and finance consumption through debt, and in which the administrative structure of business is bureaucratized and expensive so that a large part of profits is assigned to paying salaries and financing ancillary activities such as advertising." (Minsky, 1982, 41)
5. The thrust of endogenous money theory is that bank lending is not constrained by reserves. In fact, banks can and will make whatever amount of loans is profitable and seek reserves afterwards. For the banking system as a whole, this may mean borrowing reserves from the central bank, which at that point is presented with a fait-accompli. Failure to provide the necessary reserves would cause chaos in the system so the bank's only effective policy tool is to set the price of reserves, not the quantity. See Lavoie (1994) for a full discussion.
6. Note also that Figure 1 seems to provide some evidence against the monetarist hypothesis of Friedman and Schwartz, who have argued that the Great Depression was caused by a contraction in the stock of money (Wolson 1986, 29). Friedman and Schwartz point to, among other things, a decline in the stock of money from 1927 to 1929. This clearly did not happen in Japan during the years leading up to the crisis.
7. The data are from Toyo Keizai and were obtained via the Bloomberg L.P. network.
8. The Japanese fiscal year end in March so that 1990 data are more reflective of events in 1989. In another version of the paper we look at five other ratios in greater detail. They include the the short and long-term debt to equity ratio, the working capital ratio, the quick ratio and the short to long-term debt ratio.
9. Equity is here defined as shareholder's equity, the difference between total assets and total liabilities.
10. "Why Tokyo's Stock Market is Still Soaring After All These Years", *Business Week* 1988, July 25
11. Ramseyer (1997) for example notes that Japanese firms prefer to acquire a large controlling stake over suppliers rather than full, outright ownership, which is much more common in the U.S.. This, he argues, can be explained by the greater ease with which shareholders in the U.S. can bring lawsuits against management.
12. The decade immediately after the war (1945-1954) cannot be accurately labeled as "stable." During that period , Japan experienced serious bouts of inflation, labor unrest and political upheaval. By 1955 however, American assistance in the form of massive military procurement for the Korean war coupled with government intervention laid the foundations for what was to be an exceptional surge of industrial development (Beasley 1990, 246, and Ito, 1990).
13. Suzuki's term "over-loan" is a relatively accurate description of an endogenous money process : the volume of bank lending was generally not constrained by deposits but only by window-guidance.
14. From a Kaleckian perspective, a lack of internal reserves is consistent with Japan's high DE ratios because it suggests firms in the aggregate paid out more in wages than they get back in sales. In other words, it suggests Japanese consumers were saving large amounts of their salaries, which is precisely what we observe.
15. Minsky shows that by the mid to late 1960s there was increasing pressure to relax some of the Great Depression legislation that had played a pivotal role in ensuring the country's strong growth after the second world war. Minsky divides the post-war U.S. economy into two periods. The first, from 1948-1966, he labeled an era of "largely tranquil progress" (Minsky 1982, xii). It was followed by an era of "increasing turbulence" which continues to this day. Minsky argues that the 1966 credit crunch was the first manifestation of this turbulence.
16. After losing China to the communists in 1949, the U.S. needed a solid and prosperous Asian ally to show that capitalism could and did work. Japan was thereby accorded preferential access to the U.S. market.
17. See Ito (1990, 159), Boltho (1991) and Teranishi (1994) for a discussion of Japan's balanced budget law. The law was created at the insistence of Joseph Dodge, architect of the "Dodge Plan" which sought to cure Japan of its post-war hyper-inflation. While Dodge was successful in pressuring Japan to adopt this highly unfashionable balanced budget policy, he was less successful in having the BoJ adopt price stability as one of its key policy objectives. See Appendix D for a lengthier discussion.
18. Japanese policymakers recently engaged in a similar bout of "flip-floping." In February 1999, Japanese officials took actions to

weaken the Yen after only weeks earlier making it known that they wanted a stronger yen ("Japan Shifts Policy; Dollar Gains on Yen", *U.S.A Today* 1999, February 17).

19. Japan's industrial base is highly concentrated on a strip of land facing the Pacific Ocean and enveloping Tokyo. Smith (1997) discusses this at length, noting that areas distant from this concentrated economic might more aptly resemble third-world areas in terms of their economic development needs.

20. Noguchi (1994) and Ito (1994) make similar arguments.

21. See for example "The Internationalization of Currencies: An Appraisal of the Japanese Yen," (IMF, January 1992.) and Jeffrey A. Frankel's "The Yen/Dollar Agreement: Liberalizing Japanese Capital Market." (Institute for International Economics, December 1984)

22. Foreign institutions include banks and securities firms. These figures include all bank and security company branches, subsidiaries and representative offices.

23. A warrant give the owner the option to purchase securities at predetermined values within a stipulated time period.

24. "How to Conquer Japan by Playing for Keeps Today; for Once, Short-Term Thinking may be the Right Answer for American Business," *Business Month* , 1990, March.

25. Before 1965, the JHLC financed virtually all of the country's housing loans. By the 1980s, only 20% to 30% of housing loans were financed by the JHLC (Seko, 1994, 52-53)

26. "While Land Prices in Japan Soar, Officials Fight Back with Words" 1990. *New York Times* , March 25.

27. Japan is actually larger than Germany or the United Kingdom in terms of square kilometers (all three obviously lag far behind the U.S.), but much of this is comprised of mountainous regions ill-suited to agriculture, industry or even settlement. The actual land masses in square kilometers are: 376,520 for Japan, 359,720 for Germany, 241,760 for the UK and 9,159,120 for the U.S..

28. While Japan was explicitly isolationist during the Tokugawa era, Boulding and Gleason (1972) claim that Japan has a long history of territorial ambition that predates the surge in population growth and industrialization of the last century and a half.

29. We are not suggesting Japan experienced anything akin to the Great Depression, even though it is the most serious economic slump since World War II. The Japanese government continues to play a large role in the economy and the central bank on numerous occasions acted to shore up the financial system through liquidity support. The central bank also dropped interest rates to record lows.

30. While the BoJ lacks an explicit full employment objective (unlike many western central banks born out of the Great Depression), article 2 of the 1942 BoJ revisions states that the BoJ shall act so as to assist the economic in achieving its "potential of economic activities." Of course, the goal of full-employment in western central banks has not been heeded. Most central banks now regard price stability as their most important policy objective.

31. "Why Tokyo's Stock Market is Still Soaring After All These Years," *Business Week* , 1998, July 25.

32. "Moody's Drops Ratings for 3 Japanese Banks," *The New York Times*, 1990, February 7.

33. UNCTAD (1998) for example notes that New York bond rating agencies did not reduce their ratings on Southeast Asian country debt until well after the crisis was manifest.

34. In October 1998, the Japanese government announced a \$517 billion bailout package for the banking sector.

Figure 1: Monthly Percent Change in Base Money Supply (Seasonally adjusted and a Five Month Moving Average). Source: Bank of Japan.

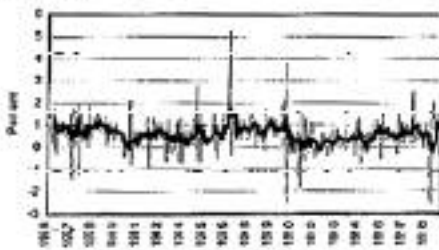


Figure 2: Debt to Equity Ratio in the Real Estate Industry Versus Economy Average

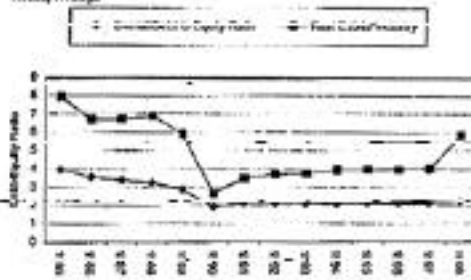


Figure 3: Outstanding by Sector: Approximate Economic Sector by Month

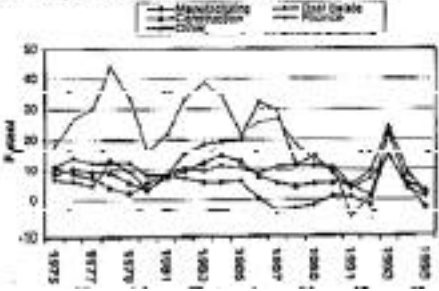


Figure 4: Percent of GDM

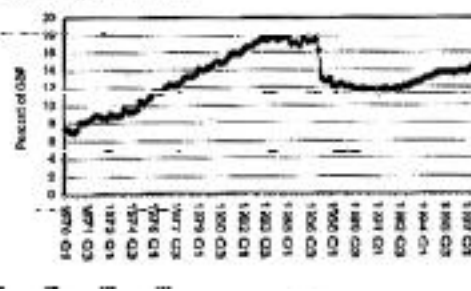


Figure 5: Nominal and Real Interest Rates



Figure 6: Japan's Inflation as Measured by the Consumer Price Index (CPI). Source: IMF International Financial Statistics

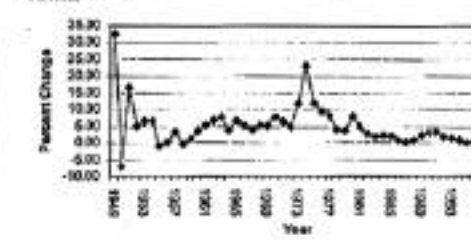


Figure 7: Japan's Savings Rates

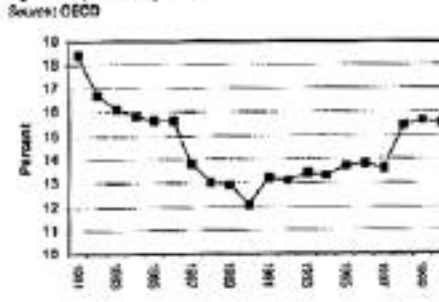


Figure 8: Percentage Change in Real Estate Prices for 20 Japanese Cities. Source: Japan Real Estate Institute

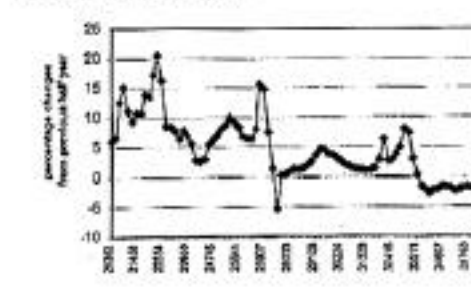
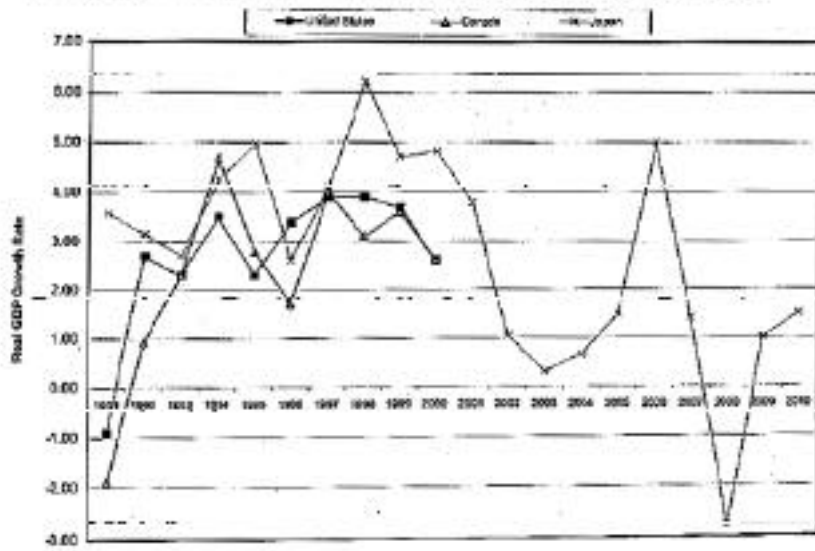
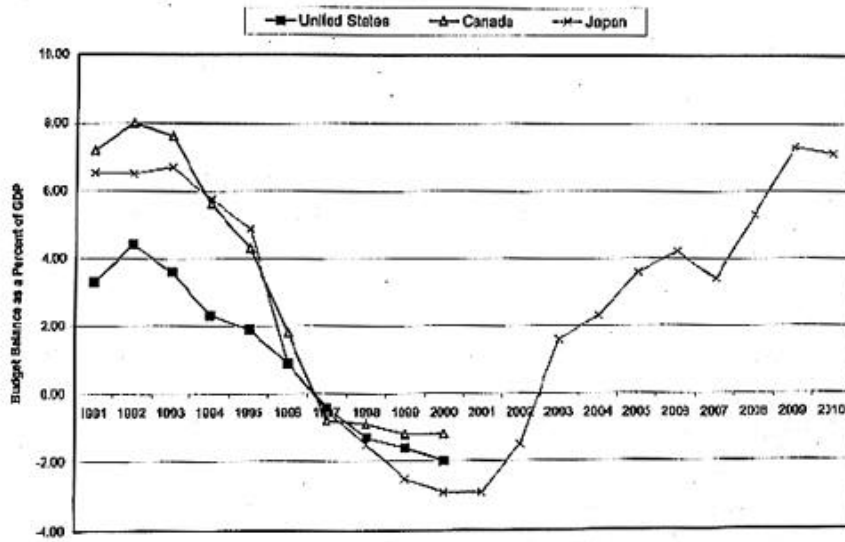


Figure 9: Japan's 1991-2000 GDP Growth Rate Transposed Over 1991-2000 Economic Growth in Canada and the U.S.



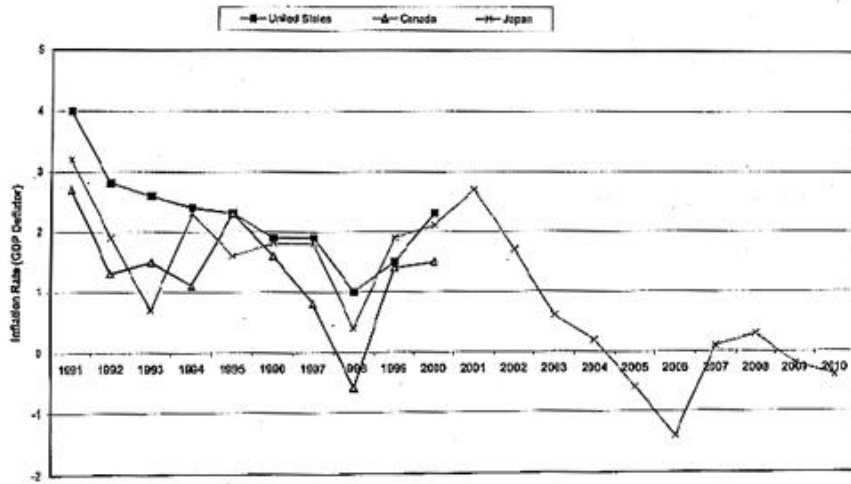
Note: We have crudely transposed Japan's experience from 1991 through to 2000 over data from the U.S. and Canada from 1991-2000, implicitly assuming Japan's experience during the 1990s presages events in the U.S. and Canada. Source: International Monetary Fund; data for 2000 are IMF projections.

Figure 10: Japan's 1991-2000 Budget Balance as a Percent of GDP Transposed Over Budget Balances in Canada and the U.S. for 1991-2000



Note: Budget surpluses are given a negative sign to reflect their presumed (in Kaldor's) negative effect on corporate profits. We have crudely transposed Japan's experience from 1991 through to 2000 over data from the U.S. and Canada from 1991-2000, implicitly assuming Japan's experience during the 1990s presages events in the U.S. and Canada. Source: International Monetary Fund; data for 2000 are IMF projections.

Figure 11: Japan's 1981-2000 Inflation Rate Transposed Over the Inflation Rate in Canada and the U.S. for 1991-2000.



Note: We have crudely transposed Japan's experience from 1981 through to 2000 over data from the U.S. and Canada from 1991-2000, implicitly assuming Japan's experience during the 1980s presages events in the U.S. and Canada. Source: International Monetary Fund; data for 2000 are IMF projections.