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## **Big Bang, Bailouts and Bank Failures**

A Study of Japanese Government Intervention During the 1990's Banking  
Crisis and Parallels with the 2007-09 US Subprime Mortgage Crisis

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**Abstract**

The current financial crisis the US and the world finds itself embroiled in has all of the markings of a once-in-a-generation type of economic contraction. In times like these, it is natural to search for comparable frames of reference; Japan's own banking crisis during the "lost decade" of the 1990's provides significant parallels to the current state of affairs. Given the severity and relative recentness of the Japanese crisis, the policy levers implemented by the Japanese authorities in response hold considerable interest as US policymakers struggle to grapple with the present crisis. The 1996 implementation of Japanese Big Bang, nomenclature for sweeping financial sector reforms, bestowed upon Japanese authorities significant powers to either bailout troubled financial institutions or outright let them fail. The cases of Yamaichi Securities and the Long-Term Credit Bank of Japan, two casualties of the Japanese crisis, are examined in the context of these powers and compared to two similar US cases, Lehman Brothers and Fannie Mae. Market responses from the Yamaichi and LTCB cases suggest that clearly communicated actions taken by the Japanese authorities helped instill confidence and facilitate recovery in the financial sector, despite criticism leveled at the time. As such, key takeaways from the Japanese experience may provide a template for solving aspects of the current US-led financial crisis.

## Foreword

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## 1 Introduction

As at the time of writing, there is already little dispute that the current US-led financial crisis has all the markings of a once-in-a-generation type of economic contraction. Discouraging preliminary numbers suggest this is not going to be a mild recession. Although the stages of the crisis are still being played out, the worry amongst policymakers – and, obviously, affected people around the world – is that the economic malaise will linger indefinitely, with little relief in sight.

In times like these, the search for comparable frames of reference inevitably begins. One of the more popular eras being quoted by commentators is the Great Depression of the 1930's, given its tremendous scale and devastating worldwide effects. The banking crisis that ensnared the Nordic countries (Sweden, most notably) in the early 1990's is also getting considerable ink and airplay. And, of course, Japan's troubling banking crisis during its "lost decade" of the 1990's is gaining momentum among interested observers as a striking parallel to the current state of affairs.

The Japanese banking crisis provides the foundation for this Master's thesis in Asian studies. Given the severity and relative recentness of the Japanese crisis, the policy levers implemented by the Japanese authorities in response hold considerable interest as US policymakers presently struggle to grapple with its own crisis.

The Japanese authorities were widely criticized for their sluggish response to the bursting of the bubble economy. Sweeping financial sector reforms, in the configuration of the so-called "Japanese Big Bang", were not introduced until 1996, more than a half decade after the economy's zenith. Still, better late than never, Japanese Big Bang proved to be a watershed development. Among other things, the reforms bestowed significant legal powers upon Japanese authorities to make key decisions on what essentially amounts to the going concern of troubled financial institutions. In other words, the augmented ability of Japanese authorities to either inject public capital into (i.e., bailout) troubled

banks and financial institutions or outright let them fail is highly significant in the context of both the health of the financial sector and the economy as a whole.

Therefore, from this, a research question may be posed. Specifically, what do market responses to the Japanese authorities' interventionist efforts to stabilize the Japanese financial system say about the effectiveness of such measures, and what conclusions, if any, can be drawn in light of the current US financial crisis?

In the following pages, background is provided on the history of the Japanese financial sector, both pre- and post-bubble. Key responses of the Japanese authorities with respect to the Big Bang regulatory provisions and, in more detail, their actions in the specific cases of troubled financial institutions Yamaichi Securities and Long-Term Credit Bank of Japan are explored. Structured largely as comparisons, background on the current US financial crisis is also examined, as well as the US authorities' actions regarding two of its own distressed financial institutions – Lehman Brothers and the Federal Home Mortgage Association (Fannie Mae).

Based on the findings, it appears that the clearly communicated actions taken by the Japanese authorities in the Yamaichi Securities and Long-Credit Bank of Japan cases ultimately helped instill confidence and facilitate recovery in the Japanese financial sector. Applying learned lessons from the Japanese experience may go a long way in expeditiously overcoming the current crisis with a minimum of unnecessary hardship.

## **2 Research Methodology**

Obviously, researching all aspects of the Japanese banking crisis, Big Bang, and the US financial crisis is infeasible given the guidelines for this study. Therefore, specific focus on the decisions of Japanese authorities to either inject public capital (via bailout, nationalization) into troubled banks and financial institutions or let them fail – and then comparing selected situations to commensurate US cases – will be given priority.

Specifically, the cases of Yamaichi Securities and Long-Term Credit Bank of Japan will be examined against the US situations of Lehman Brothers and Fannie Mae.

Accordingly, the case method provides the structural foundation for this thesis. Attention will focus on the background and responses of the respective Japanese and US authorities in each of the four situations. However, measuring whether the authorities' actions are succeeding with respect to buttressing the health of the financial sector and the economy at large presents a significant challenge. With no single parameter able to perfectly gauge the effectiveness of the policy actions, a multi-pronged approach has been implemented.

Emphasis will be placed on qualitative observations in this study. Aspects of the qualitative include, but are not limited to, firms' historical background, the prevailing political and economic environment, details regarding the authorities' policy responses, and resultant consequences on the financial sector and economy at large. With respect to the Japanese cases, a mix of academic and news sources have been utilized. Such sources include, but are not limited to, literature from the National Bureau of Economic Research, *Harvard International Review*, *Euromoney*, *Japan Times*, and the *Far Eastern Economic Review*. Due to the very current nature of the US subprime mortgage crisis, articles from the financial press are prominent in the corresponding analysis. Sources here include, but are not limited to, literature from *The New York Times*, *The Guardian*, *CFA Institute Magazine*, and the Federal Reserve Bank of St. Louis.

Second, to bolster the qualitative analysis and also provide a more quantifiable angle on each case and the relative immediate success of the implemented policy measures, short-term movements of selected financial market indices comprise an important part of this study. Financial markets are acutely attuned to economic conditions and move accordingly in real-time. As such, when material information is disseminated into the public domain, market reaction is reflected in prices; this line of thinking is consistent with the efficient market hypothesis (Fama, 1991, p. 1575), a fundamental financial concept.



Information concerning public authorities' actions in the financial sector constitutes material information and, without a doubt, in both the Japanese and US crises, authorities have made consequential decisions. Markets have moved in response and such market reaction – when analyzed in conjunction with prevailing qualitative factors – provides information regarding the success of the authorities' efforts. In this vein, one-week market movements in the following financial market indices have been used in the analysis of the case discussions:

- *TED Spread*. This statistic, measured in basis points, is calculated as the difference between 3-month US Treasury bills (T-bills) and the 3-month Eurodollars contract as represented by the 3-month US dollar London Interbank Offered Rate (LIBOR). Coxe (2008, p. 26) notes:

“ ... the TED spread measures risk within the global banking system. Eurodollars are the primary instrument of inter-bank lending – unregulated and uninsured dollars. Therefore, the spread over T-bills reflects bankers' pricing of the risk in short-term loans to each other. It always spikes in advance of a financial crisis. It always falls when the crisis is past ... [the TED spread] has kept its 100% [forecasting] accuracy through all financial crises since 1974.”

Stated in other words, when there is a crisis of confidence in the financial system, bankers are less willing to lend to each other since they do not trust that their counterparties are on sound financial footing. Hence, when they lend to other banks in the Eurodollar market, they will demand a higher interest rate than normal. If one considers that lending to the US government through the purchase of US T-bills is risk-free (that is, the US government would never default), then the difference in yield demanded by the bank lender of another bank vis-à-vis the US government becomes a telling indicator of financial sector risk in the economy. Therefore, the TED Spread should decline if the actions of authorities are successful in re-instilling confidence in the financial sector. In this study, the TED Spread is used to examine this very sentiment in the money markets, in the wake of key interventionist decisions made by US authorities.

- *Japanese Yen 3-Month Tokyo Interbank Offered Rate (TIBOR)*. TIBOR represents rates at which banks lend one another funds in the short-term, Japanese money

- market (Japan Bankers Association, 2009). Similar to the TED Spread, TIBOR provides information on the confidence and risk present in the financial system – the higher the TIBOR, the higher the risk. In this study, the TIBOR is used to measure sentiment in money markets with respect to key interventionist decisions made by Japanese authorities.
- *Prices of financial sector stocks.* According to an empirical study by Hong et al. (2002, p. 16), the performance of US financial stocks is highly statistically significant in its ability to predict the direction of the overall market, “with a two standard deviation shock in its returns resulting in a movement of [overall] market returns that is 74% of market volatility.” Such market leadership by the financial sector is apparent by a period of up to two months (Hong et al., 2002, p.16). Therefore, if one accepts that the actions of the authorities have a significant impact on the direction of financial sector equities and the stock market as a whole, then examining price reactions of financial stocks may provide insight on both the success of the authorities’ implemented measures and the well-being of the entire economy. Financial sector equity price indices used in this study include the Nikkei Bank Index for Japanese financials and the Keefe, Bruyette, & Woods (KBW) Bank Index for US financials. In addition, where possible, moves in the share prices of the individual case financial companies have also been examined.
  - *Prices of the overall stock market.* To gauge reaction in the overall stock market and, by extension, the respective economies as a whole, the Nikkei 225 Index and the Standard & Poor’s 500 Index have been utilized in conjunction with the Japanese and US stock markets, respectively.

In sum, a combination of the qualitative and the quantitative are used to obtain a composite opinion on the success of implemented decisions. Certainly, given the limitations imposed by the guidelines of this study and restrictions concerning the collection of some quantitative data, such opinions are not to be judged as conclusive but rather as a contribution to the continuing debate regarding financial crises policy responses. Further, it should be stressed that all analysis conducted in this study only

takes into account events that have occurred to **15 January 2009**. It is noted that subsequent events may make aspects of this research study already dated at the time of publication.

### **3 Japanese Financial Sector**

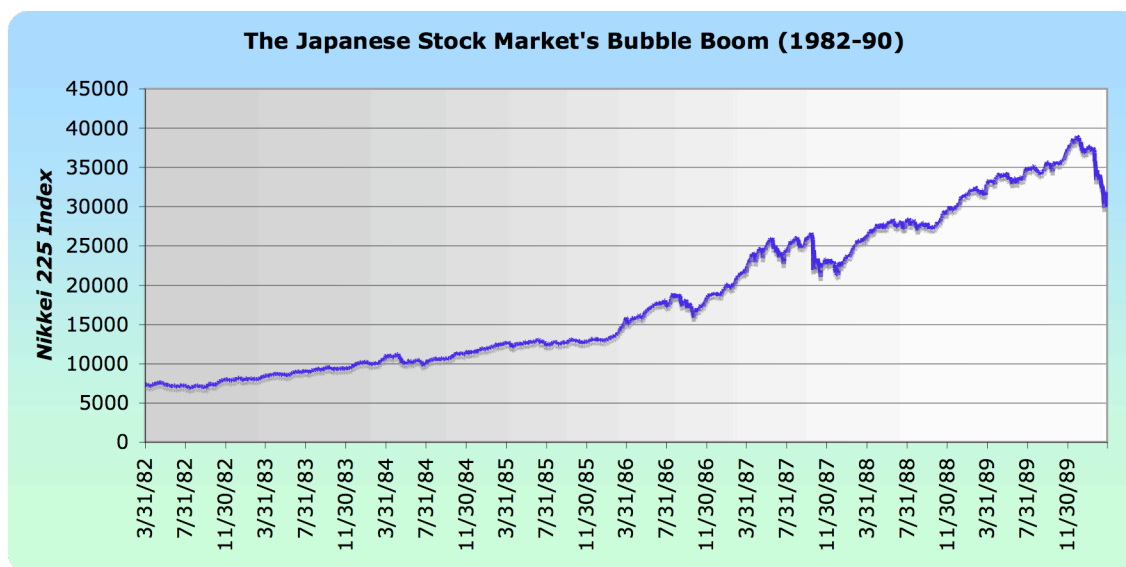
From an economic standpoint, modern Japan refers to the remarkable era subsequent to the Second World War, where the Pacific island nation's economy soared to unprecedented heights. Such export-led economic growth involved heavy doses of government intervention and support. With respect to the makeup of the Japanese financial sector, the market was highly regulated up until the end of the 1970s. This type of regulatory environment was common amongst sectors across the spectrum of the Japanese economy, and not peculiar to the financial sector in any way.

Overall, the Japanese financial system favoured banks. The banking sector was acutely segmented, banking and securities firms were separated, virtually all interest rates were controlled by the government, foreign exchange was tightly controlled, and the variety of available financial instruments was limited and, subject to, approval by *Zaimu-shō*, the Japanese Ministry of Finance (Lincoln and Litan, 1998). Monetary policy tended to operate through more interventionist quantitative measures such as varying the supply of central bank credit to the banking system rather than through interest rates, a more market-based approach (Lincoln and Litan, 1998). With interest rates set below market rates, the Japanese government was also in a position to influence commercial banks' allocation of credit to industry (Lincoln and Litan, 1998).

Given such a government-collaborative and business-segmented approach, the Japanese financial system came to be known as both a “convoy” and a “compartmentalized” system. Then, financial sector deregulation began slowly and gradually in the 1980s (Honda, 2003, p. 137). Key regulatory liberalizations included:

- Capital market deregulation. This included the lifting of the prohibition on short-term Euroyen loans (which were not subject to interest rate controls) to domestic borrowers, the removal of restrictions on access to the corporate bond market, and the creation of the commercial paper market (Kanaya and Woo, 2000, pp. 5-6).
- Relaxation of interest rate controls (Kanaya and Woo, 2000, p. 5).

Burgeoning Japanese stock and bond markets, coupled with this limited foray into deregulation, would change the landscape of the Japanese financial sector. Given the lofty prices and low yields afforded by the market to Japanese equities and debt issues – and, with deregulation, the newfound ability to take advantage of such conditions – large, blue chip, Japanese companies found it more attractive to raise money through the capital markets instead of borrowing it from the banks as they had in the past.



**Figure 1: The Japanese Stock Market's Bubble Boom (1982-90).** The roaring Japanese stock market during the 1980's brought the Nikkei 225 Index to the brink of 40,000 by late 1989. With such inflated equity prices, it was advantageous for Japanese companies to take advantage of market conditions and raise capital through stock issuance instead of borrowing from banks, which was previously the dominating form of financing. With fewer blue chip clients to lend to, many Japanese banks expanded their loan books to riskier clients. Quantitative data source: Alberta Investment Management Corporation (AIMCo), Bloomberg.

Domino effect in place, Japanese banks were forced to look for new borrowers.

However, the credit quality of these borrowers was generally lower than the blue chip customers associated with more traditional bank lending. According to Honda (2003, p.

137), banks tried to maintain or even increase their total loans outstanding probably in order to keep their employees – legacy of the Japanese tradition of lifetime employment. Further, it appears that the creditworthiness of potential borrowers was assessed more on the value of collateral than their business' cash flow generation potential. This was a failing of risk management, since the value of outstanding collateral was directly linked to inflated asset prices (e.g., real estate) instead of the actual ability to repay in cash.

With brewing issues perhaps blinded by a booming economy and rocketing markets, venturing into new lines of lending was encouraged by the Ministry of Finance and the large commercial banks moved heavily into real estate, consumer, and small and medium enterprise lending throughout the course of the 1980s. However, “lacking the ability to properly assess risk, their loan books quickly became marred in imprudence” (Lincoln and Litan, 1998).

The inability to properly assess risk by the banks is possibly attributable to the uneven deregulatory efforts of the Japanese government. As indicated by Ueda (1998, p. 259):

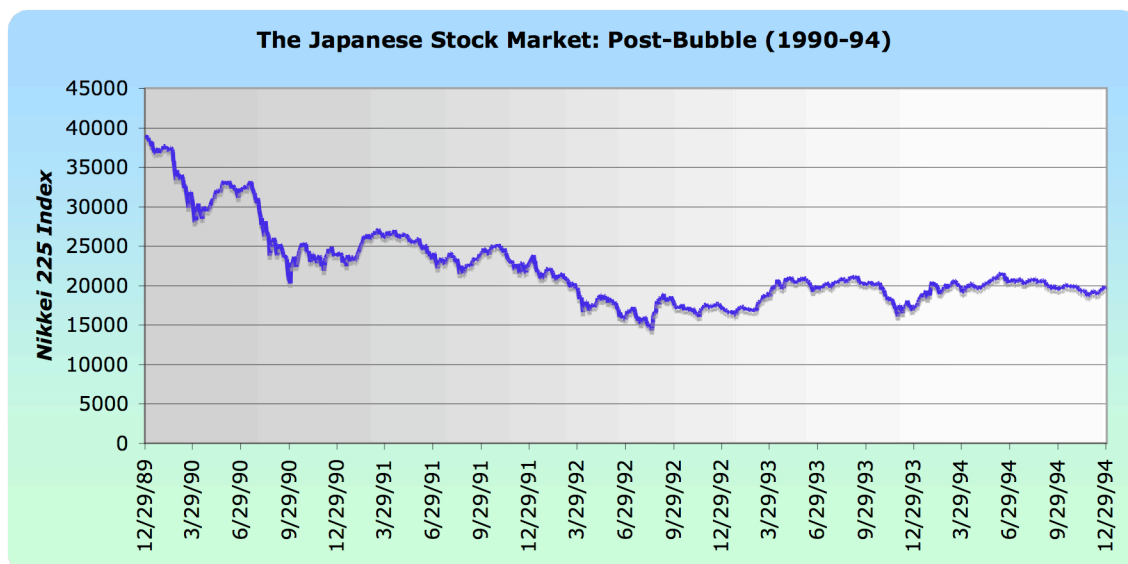
“Tight controls of bank behaviour by regulators had long been a substitute for risk management by banks themselves and for monitoring by shareholders and depositors. But the controls were successively relaxed in the 1970s and 1980s. On the other hand banks had not yet started using modern risk management techniques. Depositors still had faith in regulators' ability to protect them. Thus, a vacuum emerged in bank risk management.”

The banks' indiscretion – and hence, the abundant availability of liquidity and easy credit – played a large role in fueling real estate and stock market speculation during the late 1980s. The subsequent collapse of those speculative bubbles left the overmatched banking sector saddled with enormous volumes of nonperforming loans and badly tarnished reputations. As an example, at the end of the third quarter of 1997, nonperforming loans officially totaled ¥28 trillion or some US\$230 billion, a staggering amount (Lincoln and Litan, 1998). The weakened banking sector has, of course, had serious negative implications for the Japanese economy as a whole. Beyond the fiscal cost associated with the restructuring of banks – to 2000, funds equivalent to 12% of GDP have already been allocated by the government for this purpose (Kanaya and Woo,

2000, p. 4) – the banking crisis was probably responsible to a great extent for the stagnation of the Japanese economy during the 1990s (Kanaya and Woo, 2000, p. 4).

Indeed, the overvalued Japanese stock market peaked in 1989 and slid thereafter. When added to the steep decline in real estate prices, the strength of Japanese financial institutions was undermined. Essentially, the complications were threefold: (1) as the prices of property holdings by real estate companies dropped, the quality of loans to the real estate industry also deteriorated; (2) the value of existing collateral also eroded; and (3) overall, slowing economic growth nullified the ability of borrowers to effectively service their loans (Kanaya and Woo, 2000, p.8).

However, in spite of their damaged loan books, banks were slow to write off loans with a low probability of recovery. This was partly due to strict tax guidelines that permitted write-offs only after the loan loss amount had been established in bankruptcy proceedings (Kanaya and Woo, 2000, p.11). Also, it is believed that some banks were reluctant to write off bad loans for the fear that some distressed borrowers might perceive such action as a sign that the banks had given up on loan recovery and, thus, “it was okay” for clients to slow or stop repayments (Kanaya and Woo, 2000, p.11).



**Figure 2: The Japanese Stock Market: Post-Bubble (1990-94).** When the Japanese asset bubble popped, the stock market fell precipitously and never recovered to its previous highs. In the post-bubble period, Japanese financial institutions struggled terribly, along with the rest of the Japanese economy. Quantitative data source: AIMCo, Bloomberg.

The banks' lack of action in expediently responding to the post-bubble economy may also be associated with corporate governance issues. Though shares of most major financial institutions were widely distributed, concentration of ownership centred around four major groups: life insurance companies, corporate borrowers of the banks, bank employees, and other banks. For the main reasons listed in the parentheses – life insurance companies (weak governance themselves), corporate borrowers of the banks (more interested in securing beneficial borrowing terms than high returns on their bank shareholdings), bank employees (Japanese business culture that encouraged employees to side with management), and other banks (cross-shareholdings used as a means to discourage hostile takeovers, legacy of the “convoy system”) – corporate governance of the banks remained unobtrusive to management actions during this period (Kanaya and Woo, 2000, p. 20). As such, bank management was never really under constant pressure to focus on profitability, and instead concentrated on market share and providing stable employment and services for clients. As such, there was inadequate incentive to make difficult decisions for longer-term restructuring.

#### **4 Japanese Regulatory Response**

Infamously, the Japanese authorities did not proactively introduce reforms for the struggling financial sector during the immediate post-bubble, 1990-95 period. To be fair, dealing with this type of financial crisis was unprecedented in modern Japanese history. The authorities' inaction was due in part to what turned out to be a false hope that the economy would soon turn the corner and that a full economic recovery would buoy the banks (Nishimura in Kanaya and Woo, 2000, p. 26). After 1995, even though it had become clear that the banks' problems had considerably worsened and a more systematic public intervention would be inevitable, regulators hesitated to take strong action because of their fear in triggering a public panic (Kanaya and Woo, 2000, p. 26).

Still, the seeds for significant reform were being sown during this period, even if they would not manifest in overt action for several years. For instance, there were key

changes in Japanese political economy. The end of *Jiyū-Minshutō* (Liberal Democratic Party) one party-rule in 1993, however brief, was instrumental in proving that political inertia when action was needed could actually result in failure to get re-elected (Toya, 2006, p. 1). And, soon enough, reforms would come – in the image of the “Japanese Big Bang.”

In November 1996, Prime Minister Ryutaro Hashimoto introduced the Big Bang – nomenclature for extensive financial system reform. The Big Bang was to be based on the principles of free markets, fair trade backed by transparent and reliable rules, and global standards (Japan Ministry of Finance, 2000), and essentially featured vast deregulation and measures to strengthen banks and other financial institutions. This was done with a view of rebuilding the Japanese financial market into an international financial marketplace comparable to those in the United States and United Kingdom (Japan Ministry of Finance, 2000), whose own deregulations were seen at the time as glowing successes.

Big Bang consisted of a sweeping legislative package, reforming most existing financial laws and establishing new ones. Key reforms included the breaking down of the compartmentalized nature of Japanese financial sector, the introduction of new types of investment vehicles, and the allowance of trade in over-the-counter derivatives (Goto, 1999, p. 32). Further, the anti-monopoly laws were relaxed to allow for the establishment of financial holding companies, thereby making it easier for financial institutions to engage in different types of financial businesses. In addition, measures to enable greater securitization of assets were enacted (Goto, 1999, p. 32).

Highly significant changes were also made to the Japan’s financial regulatory infrastructure. Day-to-day supervision of financial markets was transferred from the Ministry of Finance to a new body, the *Kin’yūchō* (the Financial Supervisory Agency or FSA), effective June 1998. Operating at arm’s length from the government, the FSA sought to improve regulatory oversight through better responsiveness to the market. The FSA’s supervision and inspection of Japanese financial institutions was placed under the



auspices of another new government organization, *Kinyu Saisei Inkai* (the Financial Reconstruction Commission or FRC), which was established in December 1998. One of the main missions of the FRC was, and is, to handle issues related to failed financial institutions (Goto, 1999, p. 33).

With respect to safety nets provided in the event of failed institutions, a broad suite of measures were introduced by Big Bang. First, under the new “prompt corrective action” system, financial institutions were categorized by reference to their capital ratios, and subject to the FRC orders to take the corrective action where applicable (Goto, 1999, p. 33). Namely, financial institutions were required to pursue self-assessment of their assets and make appropriate write-offs and reserves for problem loans.

Second, the Early Stabilization Law provided emergency measures to increase the capital of financial institutions where it was deemed necessary. Specifically, the FRC was given the power, upon request by a distressed bank or financial institution, to make decisions on capital injections by having the *Yokina Hoken Kikou* (Deposit Insurance Corporation of Japan or DICJ) subscribe to the equity shares of that bank or financial institution (Goto, 1999, p. 34). Further, the FRC was given the authority to impose on such distressed financial institutions operating conditions such as a restructuring of management (Goto, 1999, p. 34).

Third, the *Kinyu Saisei Hou* (Financial Revitalization Law) provided powers to deal with failed financial institutions and to purchase assets of such institutions. Specifically, if the FRC deemed that a bank or financial institution was “failed”, a financial superintendent could be appointed to take control of the management of the assets of such an institution and search for another institution to take over its business (Goto, 1999, p. 34). If no financial institution to take over the business were found, the business could be transferred to a bridge bank established by the DICJ, which would continue the business while searching for another financial institution to take over the business (Goto, 1999, p.34). If the failure of an institution were deemed to have an extremely grave effect on domestic or foreign markets, such an institution could even be nationalized.

Fourth, in order to procure the significant funds required by the type of financial assistance envisioned above under the Early Stabilization and Financial Revitalization Laws, under the Deposit Insurance Law, the DICJ was entitled to borrow funds from the *Nihon Ginkō* (Bank of Japan) and issue its own bonds with full backing of the Japanese government (Goto, 1999, p. 34). These guarantee facilities were backed by deep pockets, in the aggregate amount of up to ¥60 trillion. If this was what was required to stabilize the Japanese financial system, the government appeared committed to do what was necessary.

And, during the late 1990's period, these new measures in "crisis management" were put into action. Nissan Life Insurance, Sanyo Securities, Hokkaido Takushoku Bank and Yamaichi Securities all failed in 1997. The blue chip, Long-Term Credit Bank of Japan was effectively nationalized in 1998 and subsequently re-sold to New York-based Ripplewood Holdings in 2000 (Dawson, 1999, p. 68). With emphasis, both the "convoy" and "compartmentalized" systems were no more and, in a relative blink of an eye, the shape of the Japanese financial sector was forever changed.

Indeed, although Big Bang promised deregulation, it also increased government involvement with respect to making decisions on the going concern of key financial institutions in the event of crisis and potential contagion to the rest of the economy. The Japanese government's exercise of such authority speaks volumes about the severity of its crisis. Later in this paper, a closer look will be taken at the specific cases of Yamaichi Securities and the Long-Term Credit Bank of Japan. Next, however, is an overview of the US financial crisis as it has transpired, and continues to unfold.

## **5 US Subprime Mortgage Crisis**

In his article, Clark (2008) quoted then US President George W. Bush in the wake of the Lehman Brothers bankruptcy: "America's economy is facing unprecedented challenges

and we are responding with unprecedented action ... there will be ample opportunities to debate the origins of this problem. Now is the time to solve it.”

Interestingly, the exceptional measures implemented by the US authorities to date have run in stark contrast to the very neoliberal conditions that arguably allowed for the precarious predicament to exist in the first place. As Harvey (2006, p. 145) suggests, if one accepts that neoliberalism is generally defined by “the maximization of entrepreneurial freedoms within an institutional framework characterized by private property rights, individual liberty, free markets and free trade,” then the state must keep interventions “to a bare minimum because the state cannot possibly possess enough information to second-guess market signals (prices), and because powerful interests will inevitably distort and bias state interventions (particularly in democracies) for their own benefit.” However, the swift – and, frankly, heavily interventionist – action taken by US authorities since being beset by the financial crisis would suggest that this ideology has been tossed aside, at least temporarily.

In essence, there appears to have been a major market failure here and, as it has been widely quoted in the press, this is a financial crisis that has its roots on Main Street. More specifically, this is the unraveling of a market bubble in real estate, and the negative implications are far-reaching not just for Americans but also anyone whose livelihood is linked to the global economy.

The causes of the current financial crisis are varied and complex. However, one may try to simplify, in a single short statement, the scenario to this: too many US homeowners, who never had the financial wherewithal to be buying homes in the first place, are figuring out that the notion of “consume now, pay later”, actually means having to, indeed, pay later. Although open to debate, many would suggest that private home ownership has been made out by North American society as a Holy Grail of sorts, even in situations where this belies basic financial common sense. This is perhaps a sad commentary on the materialistic culture of consumption that pervades North American behaviour. Competitively establishing personal prestige – or a sense of individualism, if

you will – is largely accomplished through the purchase of, ironically, increasingly commodified products. In North America, home ownership has become just another commodity. As Coxe (2008, p. 15) writes:

“It has become almost an article of political faith that all the blame for the current crisis falls on greedy denizens of Wall Street. When somebody who has never made a payment on his/her mortgage is foreclosed, this is presented as an utter tragedy for which a corrupt system must be blamed – not the people who lived rent-free in a house they couldn’t possibly have ever afforded.”

That said, Wall Street – including the bankers responsible for the mortgage lending which is now at the crux of the issue – is certainly not blameless in this fiasco. Greedily driven by quarterly reporting cycles and the prospects of extravagant performance bonuses, US financial institutions have aggressively lent to risky borrowers with little regard to the possible negative ramifications in the medium and long-term. Coxe (2008, p.15) even suggests that there are “many cases where people who really did intend to make their payments were sold unnecessarily complex and expensive products” by financial institutions of questionable scruples.

The mentality of short-term profit maximization has extended throughout the modern financial system to active participants in the secondary mortgage market, a list which includes investment banks (e.g. Lehman Brothers), quasi-public mortgage institutions (e.g., Fannie Mae), and institutional investors such as hedge and pension funds. Again, the one thing all involved have in common is the singular goal of maximizing returns and profits – all within a market mechanism that has been largely fostered by policies focused on letting it work with minimal regulatory interference.

As such, it can be argued that institutionalized neoliberal conditions in the financial and real estate markets have made the misguided actions of so many possible. These conditions have been conducive for the availability of cheap and easy credit – or liquidity, to use another term. As observed by Weber (2002, p. 529):

“The [US] government actively accommodated the drive for liquidity in real estate by creating new forms of property and incentives to invest in real estate through tax policies ... By creating a secondary mortgage market through quasipublic institutions ... the state

has increased the total size of capital flows with the unattainable aim of reducing cyclical instability of real-estate capital.”

The deluge of liquidity has created an environment for capitalism to run amok, enabling conspicuous consumption and the pursuit of profit with insufficient risk control. As Weber (2002, p. 522) further notes: “Schumpeter’s notion of ‘creative destruction’ captures the way in which capital’s restless search for profits requires constant renewal through galelike forces that simultaneously make way for the new and devalue the old.” The penchant for immediate gratification within the culture of consumption has overemphasized the maximization of utility in the short-term vis-à-vis potential future implications. Unfortunately, it is these implications that are coming back to “roost” at this point.

From the significant action taken in recent months, it can be inferred that the US authorities also believe the financial crisis has been spawned by a major market failure. Understandably, the measures taken to date have been far-reaching. For instance, from a monetary policy point of view, the US Federal Reserve (the Fed), through its Federal Open Market Committee (FOMC), has embarked on a very aggressive campaign of easing interest rates since August 2007, when many of the financial crisis’ ramifications began to openly emerge. In December 2008, the FOMC reduced its target for the federal funds rate – the benchmark at which the Federal Reserve lends to banks – to a rock-bottom range of between zero to 25 basis points. In doing so, US Federal Reserve Chairman Ben Bernanke (2009) has indicated that such action is intended “to cushion the direct effects of the financial turbulence on the economy and to reduce the virulence of the so-called adverse feedback loop, in which economic weakness and financial stress become mutually reinforcing.” In addition, the Fed has also been actively implementing other measures in its “policy toolkit”, namely lending to financial institutions, providing liquidity directly to key credit markets, and buying longer-term securities. All of these policy measures “allow the Federal Reserve to continue to push down interest rates and ease credit conditions in a range of markets” (Bernanke, 2009).

The US Treasury Department has also been active in moving quickly to avert potential worst-case scenarios of the financial crisis. One area in which such action is apparent is in its decisions to either bailout troubled financial institutions or let them fail. Although the list of news-making failed and/or troubled financial institutions during this current US financial crisis continues to grow, two examples are cited here – (1) the case of Fannie Mae, which is categorized as a government-sponsored enterprise (GSE) and (2) Lehman Brothers, an investment banking firm – to illustrate the Treasury’s implemented actions within this realm.

Notably, as the implications of the financial crisis worsened throughout the summer months of 2008, on 7 September, US Treasury effectively nationalized Fannie Mae and Freddie Mac (Federal Home Loan Mortgage Corporation), two GSE’s whose primary functions were to operate in the mortgage secondary market. A week later, on 15 September 2008, US Treasury stood by while troubled Lehman Brothers, a renowned Wall Street investment banking firm which was founded in the 19<sup>th</sup> century and had famously survived both the US Civil War and the Great Depression, slid into bankruptcy. The government’s steadfastness in not bailing out Lehman was, and is, considered to be a “line in the sand” of sorts, importantly signaling to the market that the US government is not willing to stand behind all risk-taking in the financial system which would thereby “create moral hazard that would take years to undo and [expand] taxpayers’ liability almost without limit” (*The Economist*, 2008).

In keeping with the format of this paper, both the cases of Lehman Brothers and Fannie Mae – and their significance in the context of the current US crisis – will be discussed at greater length in a following section.

The fear that the crisis would extend beyond financial and real estate markets has been well-founded and, in response to signs of a freeze in general credit markets, US authorities moved further to formalize its interventionist efforts in October 2008. Specifically, the Bush Administration, in conjunction with US Treasury, requested US\$700 billion in funds from US Congress to implement a financial rescue package,

which has since come to be known as the Troubled Assets Relief Program (TARP). The chief aim of TARP is to stabilize the financial system through the purchase of equity and troubled assets of banks and financial institutions. In essence, the main intentions of TARP are to bolster the capital positions of participating banks and financial institutions as well as to encourage the resumption of lending at normal levels. In a statement introducing the program, Treasury Secretary Henry Paulson (2008) stated the “goal is to see a wide array of healthy institutions sell preferred shares to the Treasury, and raise additional private capital, so that they can make more loans to businesses and consumers across the nation.”

In addition, the new Obama Administration and US Congress are presently discussing a substantial fiscal package that, if enacted, could provide a significant boost to economic activity according to Bernanke (2009). The US Federal Reserve Chairman further opines: “however, fiscal actions are unlikely to promote a lasting recovery unless they are accompanied by strong measures to further stabilize and strengthen the financial system. History demonstrates conclusively that a modern economy cannot grow if its financial system is not operating effectively” (Bernanke, 2009).

As a corollary, it would appear that most observers would agree that the US government’s actions have been very necessary. However, looking further afield, commentators such as McKenna (2008) wonder if “seeds of the next bubble [are being] sown in the process. As the government steps in, banks and homeowners will make the assumption that Uncle Sam will step in again the next time they're in trouble.” In other words, as previously indicated, the issue here is the classic economic problem of moral hazard – authorities that appear all too willing to bail out troubled financial actors run the risk that these actors will, in the presence of such a backstop, engage in risky behaviour that might be deemed sub-optimal for the good of society.

## **6 Japanese Experience and Significance of Study Given Current US Events**

If ingrained, moral hazard becomes nothing less than a blight on the efficient workings of the market system and, as such, revisiting the important measures implemented by Japanese authorities during the island nation's recent banking crisis becomes critical in light of current events in the United States. Japanese Big Bang granted significant power to authorities to make decisions on the going concern of financial institutions, which are vital to the operation of a global capitalist economy. In other words, the ability of Japanese authorities to either inject public capital into troubled banks and financial institutions or let them fail is rather striking in a broad financial sector reform initiative where arguably greater attention has been given to its deregulatory aspects. Surely, while the aspects of deregulation – greater competition among financial institutions, the allowance of foreign financial firms to operate on a more level playing field in Japan, more investment options for savers (*The Economist*, 2000) – have been significant, the increased willingness of the Japanese authorities to intervene, whether by action (capital injections, nationalization) or inaction (letting institutions fail) is especially notable.

Capitalism on the way up and socialism on the way down? Flippant as it sounds, in the face of the current financial crisis, this is a question that has been asked given responses of US authorities to troubled financial institutions such as Fannie Mae and Lehman Brothers. With such recent history, it seems inevitable that the Japanese experience with its own troubled financial institutions has served, at the very least, as a reference point for today's policymakers. Fixing the present financial system with a minimum of unnecessary hardship may well be the reward for heeding the lessons of history.

## **7 Case Studies**

### ***7.1 Yamaichi Securities***

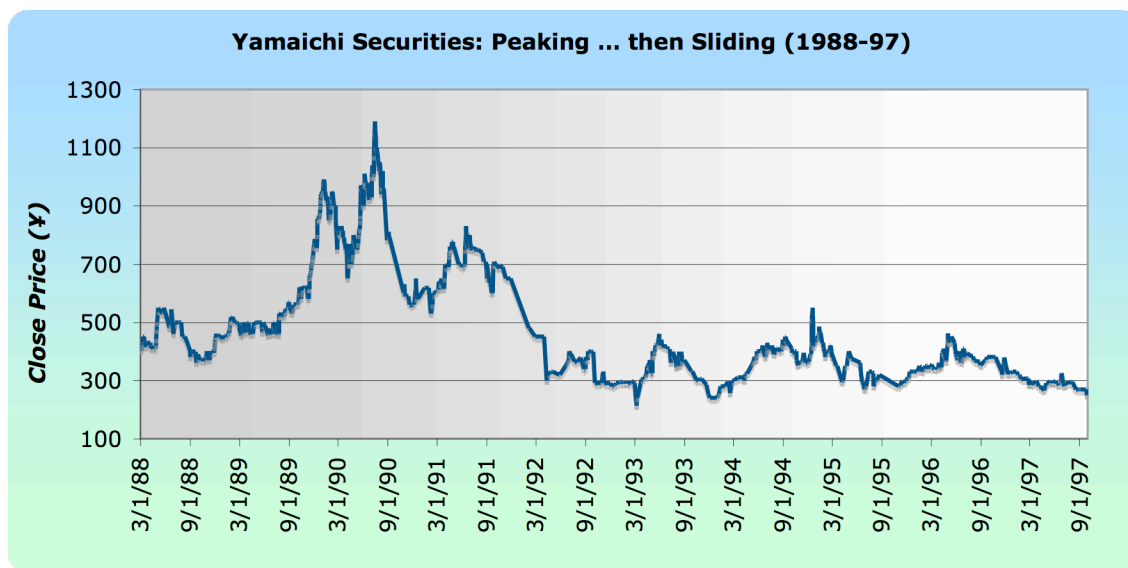
#### ***7.1.1 Background***

With roots dating back to the 19<sup>th</sup> century, Yamaichi Securities was a big name in Japanese finance. Still, Yamaichi Securities had been in trouble before. Back in 1965,



Yamaichi skirted dangerously close to bankruptcy – a three-year run of negative operating results culminated in highly negative press coverage which, in turn, compelled panicky investors to rapidly withdraw their funds thereby causing a run on the securities trading firm (Shale, 1995, p. 8). Of course, at the time, having a financial institution fail was very unpalatable for the authorities and, as such, the Bank of Japan stepped up to lend Yamaichi over ¥28 billion to help the firm out of its mess (Shale, 1995, p. 8).

Yamaichi ultimately recovered and, indeed, thrived. Along with Nomura, Daiwa, and Nikko, the firm became known as one of Japan’s so-called “Big Four brokerages.” Although Yamaichi was the smallest of the four, as the Japanese economy boomed, the firm became a major player in international securities markets and offices were opened in foreign financial capitals such as New York, London, Frankfurt, and Singapore. Like almost all Japanese financial institutions, it could seemingly do no wrong as fortunes soared during the 1980s. Then, the Nikkei peaked in late 1989 before subsequently plummeting – and everything for Yamaichi changed.



**Figure 3: Yamaichi Securities: Peaking ... then Sliding (1988-97).** Like many Japanese companies, Yamaichi Securities’ fortunes burst along with the asset Japanese asset bubble circa 1989-90. Quantitative data source: AIMCo, Bloomberg.

### 7.1.2 “Crisis” Event: Causes and Description

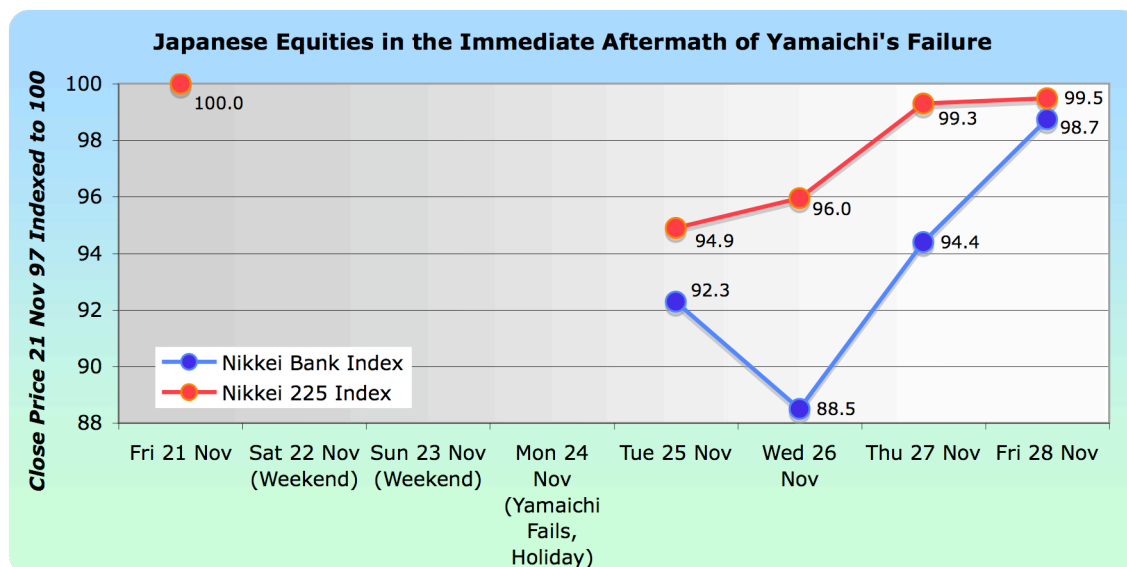
Like in many contexts, success during good times masked serious issues that became apparent when fortunes turned. For Yamaichi, the tumbling Nikkei meant its clients were losing money on their investment accounts, something that was unheard of in recent memory. Instead of simply letting the market work, Yamaichi’s greedy corporate and institutional clients put enormous pressure on the firm to compensate them on their losses. As any financial professional is aware, compensating select investors for their market losses is highly unethical – for one, the unfairness is obvious and two, it is utterly damaging to both the perceived and structural integrity of the markets. According to Horvat (1998, p. 59), as the smallest and weakest of the Big Four brokerages, Yamaichi was the least capable of standing up to such pressure. Yamaichi obliged – and the real trouble began.

To be fair, Yamaichi was not alone in compensating clients for trade losses and (somewhat incredulously) such practices did not appear to be clearly illegal before 1992. However, what set the Big Four firm apart was the lengths it went to assuage disgruntled institutional clients and stay ahead of regulatory authorities when the regulations did change. Specifically, Yamaichi executives resorted to an illegal *tobashi* scheme, which entailed temporarily hiding losses of a given client by shifting them to the accounts of another client (whether real or feigned) so as to permit the first client to artificially flatter or “window-dress” its results (Horvat, 1998, p. 59). However, in the absence of market recovery, this type of financial fraud always catches up with the perpetrator since losses cannot be moved around forever.

When Yamaichi’s involvement in *tobashi* came to light, it badly tarnished the firm’s reputation, eroded customer confidence and negatively affected the firm’s operating results (Efron, 1997). With the Nikkei entrenched in bear-mode, Yamaichi was ill-equipped to handle these additional issues it brought upon itself. Losses mounted. Debt soared. When the Asian financial crisis hit in the summer of 1997, Yamaichi was clearly on the ropes.

November 1997 became a time of reckoning for the Japanese financial sector, and the newly introduced provisions of Big Bang were put to the test. Was Japan really serious about the principles behind the ambitious reform? Yamaichi would test this resolve. While the failures of Sanyo Securities (a mid-sized brokerage firm) and Hokkaido Takushoku (a regional bank) during the month were newsworthy events, when Yamaichi executives announced on 24 November that the firm was effectively bankrupt and ceasing operations it was, quite frankly, a shocker. With approximately US\$190 billion of client assets under management at the time, Yamaichi's failure dubiously set the record for being the largest Japanese corporate failure since World War II (Efron, 1997).

### 7.1.3 Market and Government Response



**Figure 4: Japanese Equities in the Immediate Aftermath of Yamaichi's Failure.** In the immediate aftermath of the Yamaichi failure, Japanese equity markets responded negatively. Yamaichi failed on 24 November 1997; the Nikkei Bank Index closed down -7.7%, and the Nikkei 225 down -5.1%, the following day. However, by the end of the week, both indices largely recovered their losses suggesting Japan's decision not to return to the convoy system inspired confidence that they were serious about financial sector reform. Quantitative data source: AIMCo, Bloomberg.

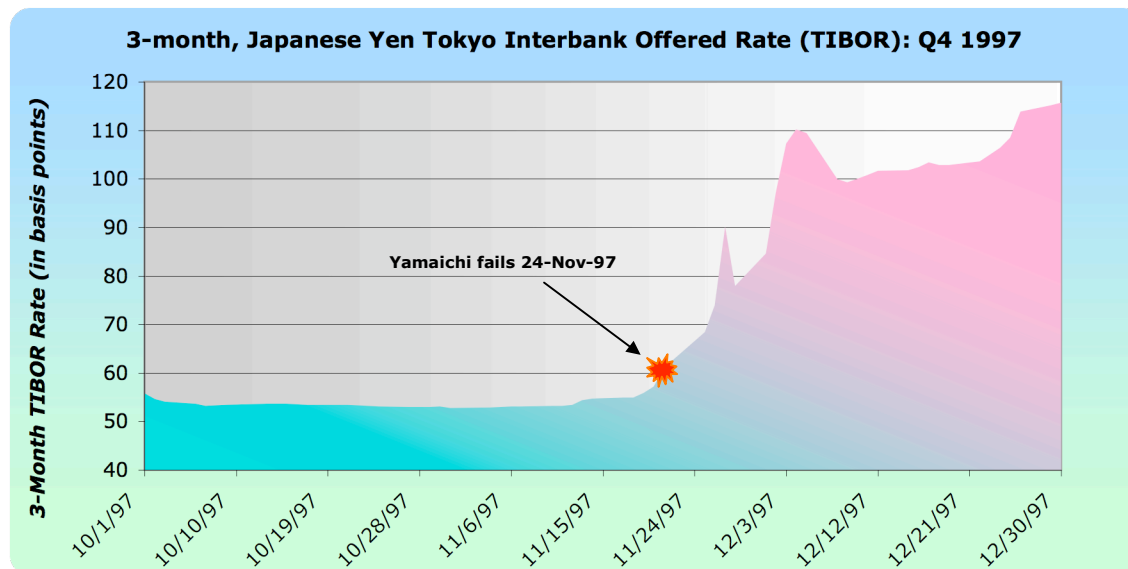
When Japanese equity markets opened the next day, they responded negatively. The banking sector led the overall market into negative territory, with the Nikkei Bank Index falling -7.7% and the Nikkei 225 sliding -5.1% by close of trading on 25 November. According to Peek and Rosengren (1999, p. 13), the Yamaichi failure took many investors by surprise and highlighted the resounding issues still residing in the Japanese

financial sector. The fear was that the extent of Japanese financial problems had not been fully disclosed and there was great uncertainty about creditor positions and the financial well-being of other similar financial institutions (Peek and Rosengren, 1999, p. 13). The pending response from the Japanese authorities was crucial.

Sticking steadfast to the Big Bang principle of “free and fair global markets”, Finance Minister Hiroshi Mitsuzuka confirmed it was the government’s intention to let Yamaichi – venerable name and all – go under (Efron, 1997). In order to restore calm to Japanese and international markets, Mitsuzuka further pledged that Yamaichi’s investors would be protected (Efron, 1997). Although Yamaichi, which had roughly a 5% market share in Japanese securities trades, was a major player, it was determined that its failure would not unduly destabilize financial markets and the government’s hard-line decision not to give in to the temptation of returning to the convoy system importantly signaled that Japan was serious about cleaning up its financial sector.

In retrospect, the decision to stand by was highly significant; it seemed that a turning point in battling the Japanese crisis had been reached. The equity markets responded accordingly – by the end of the week (28 November), both the Nikkei 225 and the Nikkei Bank Index had recovered sizable portions of the losses they posted in the immediate aftermath of the Yamaichi failure with one-week returns of -0.5% and -1.3%, respectively.

However, of course, Yamaichi’s de facto bankruptcy did not mean that the Japanese financial sector was “out of the woods”, and the risks were reflected by rates in the Japanese money market. The 3-month TIBOR leapt from 61 basis points (bps) to 116 bps between 21 November 1997 (the last trading day before Yamaichi’s failure) and 30 December 1997 (the last trading day of the year). Although some hard medicine had been taken, more trouble would lie ahead.



**Figure 5: 3-month Japanese Yen Tokyo Interbank Offered Rate (TIBOR): Q4 1997.** Risk in the Japanese financial sector, as measured by the 3-month TIBOR during the fourth quarter of 1997, can be distinctly divided into two periods: before and after the Yamaichi failure on 24 November. The Yamaichi crisis event pushed 3-month TIBOR above 60 basis points – and it remained elevated for the remainder of the year. Quantitative data source: AIMCo, Bloomberg.

More broadly, it can be implied that the Yamaichi failure was very influential in changing Japanese business culture. The fact that the government let a large firm such as Yamaichi go under surely compelled other like firms that had not emphasized operating performance and/or were involved in less than ethical business practices to shape up.

## 7.2 Long-Term Credit Bank of Japan

### 7.2.1 Background

The thing is, they were “nice guys”. Dawson (1999, p. 68) noted as much and pointed out that the “nice guys” moniker was exactly what rival firms used to describe Long-Term Credit Bank of Japan’s (LTCB) employees, who were laid-back and possessed a distaste for cutthroat competition. Unfortunately, in the post-Big Bang world of high finance, such a reputation was probably, more than anything, a damning indictment of just how much of a dinosaur LTCB had become by the mid-1990’s. For better or worse, “nice” LTCB would become the poster child for Japanese financial sector intervention in the thick of the banking crisis.

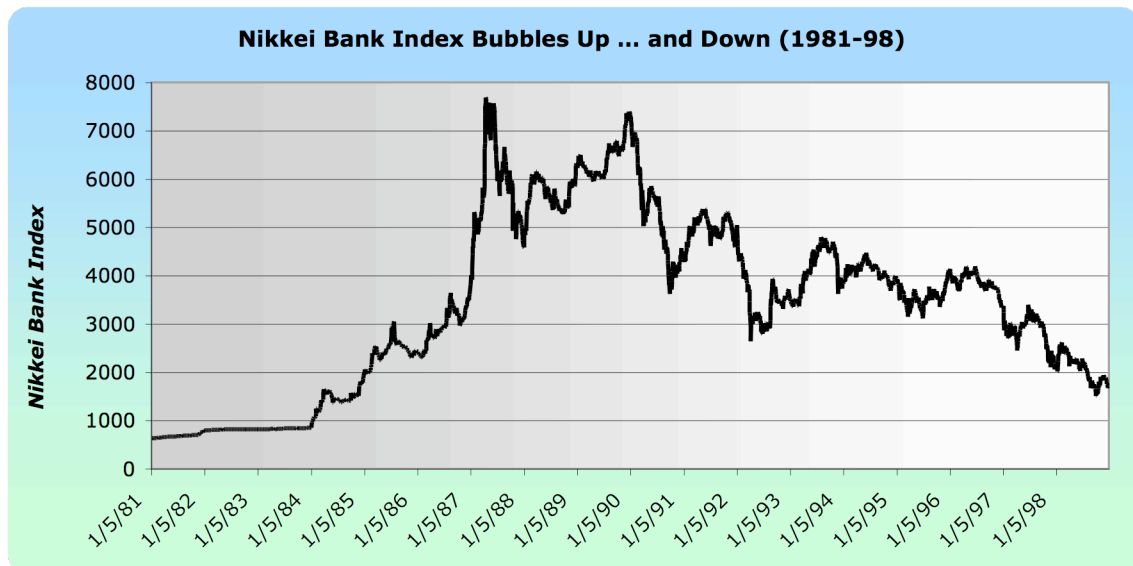
The story of LTCB closely mirrors the development of the Japanese economy since the end of the Second World War. Perhaps this should not be surprising since the LTCB was, after all, chartered by the government to provide long-term financing to key Japanese industries, and for many years it did so with success. The LTCB, along with the Industrial Credit Bank of Japan (and, later the Nippon Credit Bank), were unique organizations in Japanese finance. Created through the Long-Term Credit Banking Law of 1952, these so-called “long-term credit banks” were initially the only banks allowed to issue long-term loans to Japanese industry. In exchange for this exclusivity, these banks were not allowed to take short-term deposits and did not have retail branch networks. The biggest purchaser of LTCB’s debentures was the Bank of Japan and, hence, the central bank became the LTCB’s primary source of capital. The LTCB, in turn, channeled this capital sourced from the government by making loans to Japanese companies operating in fast-expanding basic industries (Funding Universe, 2009). These companies often secured their loans with blocks of shares, which would net LTCB board representation in these very companies. As the companies matured, they often repurchased their shares with cash, further bolstering LTCB’s growing capital base (Funding Universe, 2009).

Through much of the Japanese economic miracle, the preferred form of financing for Japanese companies was bank loans and, as a result, the LTCB profited handsomely and expanded accordingly. In essence, LTCB became one of the chief financiers to a blue chip client base that read like a “Who’s Who of Japan Inc.” (Dawson, 1999, p. 68). However, when the Japanese government began to slowly deregulate the financial sector in the early 1980s, the ground beneath LTCB’s privileged position soon shifted.

Specifically, the newfound ability of Japanese companies to directly access debt and equity markets for financing meant that LTCB was forced to look for new ways to compete. Margins were compressed to keep existing clients. Its traditionally conservative loan portfolio tilted toward a riskier brand of client – for instance, those active in the real estate, construction, services, and transportation industries. Further, LTCB sought to increase its footprint in overseas markets.

### 7.2.2 “Crisis” Event: Causes and Description

As long as the Japanese economy continued to boom, LTCB had no trouble riding the wave higher. Indeed, during the bubble years, the bank experienced excellent growth. However, the bursting of the asset bubble around 1990 left the Japanese economy with a swath of businesses that could no longer pay back their loans, and banks such as LTCB were suddenly left “holding the bag.” According to Fujii (2003, p. 14), banks that found themselves in similar situations in other developed economies would have more adamantly demanded repayment than those in Japan and, as a consequence, non-performing borrowers would have been more apt to go bankrupt. However, in Japan, corporate cultural pressures discouraged the banks from forcing their clients into bankruptcy since this would have caused mass unemployment – and thereby violated the (then unassailable) Japanese custom of providing lifetime employment for workers (Fujii, 2003, p. 14). Therefore, Japanese banks – LTCB included – simply shouldered the bad loans even though the likelihood of getting paid back was slim. As the Japanese economic recession dragged on and worsened, so too, did the beleaguered balance sheets of the banks, which were soon drowning in red ink.



**Figure 6: Nikkei Bank Index Bubbles Up ... and Down (1981-98).** Once among the highest of high-flyers, the struggles of Japanese banks were reflected in their stock prices after the asset bubble burst. Quantitative data source: AIMCo, Bloomberg.

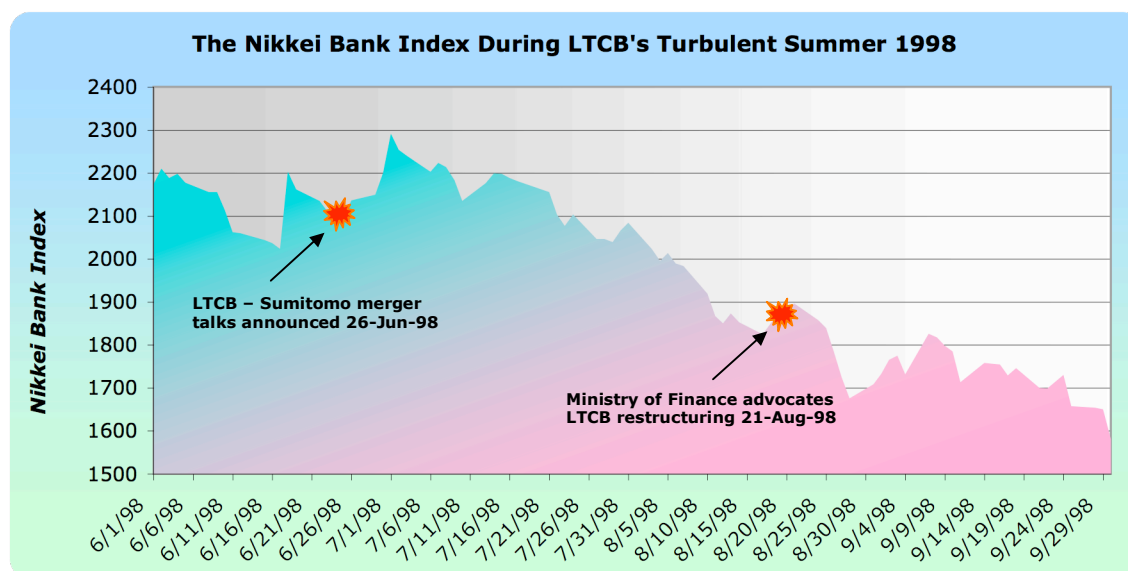
By 1995, conditions in the money markets strongly signaled of the severity of the situation for Japanese banks. For instance, Peek and Rosengren (1999, p. 1) noticed Japanese banks were paying higher interest rates vis-à-vis their American and European counterparts on interbank Eurodollar and Euroyen borrowings. This meant the market, in effect, considered Japanese banks to be more risky than their global peers. Interestingly, this phenomenon was a 180-degree reversal from the 1980s, when Japanese banks benefited from high stock prices, low deposit rates, and favourable credit ratings, which afforded them the luxury of enjoying funding rates lower than those their global competitors (Peek and Rosengren, 1999, p. 1). Further, the stock prices of Japanese financial institutions clearly reflected such an about-face in fortunes.

Big Bang was introduced in 1996, providing the foundation for significant financial sector reform. This was timely as the Asian Financial Crisis, which blew in like a cyclone in the summer of 1997, exacerbated contentious issues already prevalent in the battered Japanese financial sector. These issues culminated in a particularly tense three-week period in November 1997 when, in rapid-fire succession, Sanyo Securities (November 3), Hokkaido Takushoku Bank (November 17), and Yamaichi Securities (November 24) all collapsed. But as bad as November 1997 proved to be, more pain was coming and bigger firms – like LTCB – were lodged squarely in the crosshairs.

By 1998, LTCB's solvency concerns were well known. In its public filings, the bank had admitted to holding US\$10 billion in non-performing loans on its balance sheet (BBC News, 1998). Still, at the time, LTCB was the 10<sup>th</sup> largest bank in Japan (Dawson, 1999, p. 68) and 22<sup>nd</sup> largest in the world in terms of assets. Behind the scenes, the Ministry of Finance worked tirelessly to keep the bank from going under since its hefty size would certainly have implications for the greater economy. Merging LTCB with a stronger peer became a prime option and on 26 June 1998, it was announced that a merger between LTCB and the Osaka-based Sumitomo Trust and Banking was being considered. However, messaging from the two financial institutions was inconsistent. LTCB insisted that any amalgamation would be a merger of equals. Sumitomo seemed less keen, and openly suggested that LTCB was insolvent and government funds would



be needed for the deal to go through (Peek and Rosengren, 1999, p. 14). No deal was immediately reached, and initial optimism that LTCB would be saved soon faded. A subsequent announcement was made on 21 August 1998, when the Ministry of Finance advocated restructuring LTCB to make it a more palatable merger partner for Sumitomo (Peek and Rosengren, 1999, p. 14). Judging from the immediate subsequent trading of banking stocks on the Tokyo Stock Exchange, such an announcement did not exactly inspire confidence.



**Figure 7: The Nikkei Bank Index During LTCB's Turbulent Summer 1998.** LTCB's troubles certainly affected the Japanese banking sector. The announcement of a possible merger with Sumitomo buoyed some hope that LTCB would be saved at the end of June, but that hope was short-lived. By the time the Ministry of Finance publicly floated the idea that LTCB should be restructured, investors in the banking sector were already heading for the exits, weighing the potentially ugly consequences of an LTCB failure. Quantitative data source: AIMCo, Bloomberg.

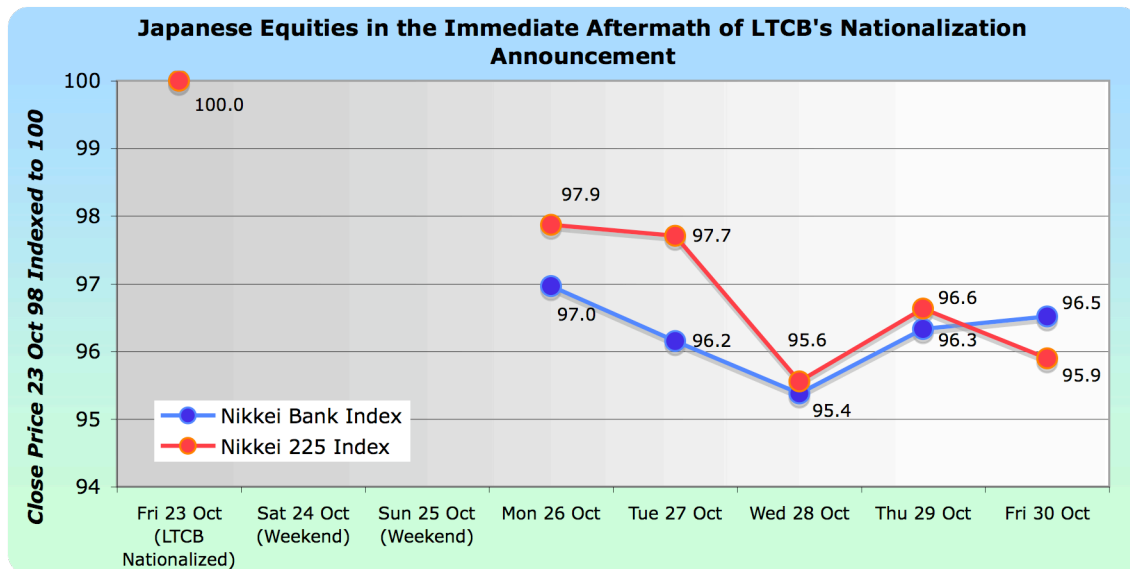
Fearing that LTCB's legacy problems would prove an albatross around its neck, Sumitomo soon abandoned merger talks. With no peer willing to play the role of white knight, LTCB was pushed to the brink of bankruptcy and appeared to be doomed. Then, on 23 October 1998, the Japanese government surprised everyone and announced that LTCB would be nationalized.

### 7.2.3 Market and Government Response

With the bad loans on LTCB's balance sheet piling up, the Japanese government had no choice but to undertake this unprecedented intervention. According to Landers (1998, p.

48), Prime Minister Obuchi had two reasons for using taxpayers' money. First, they were concerned that LTCB's collapse might trigger a chain reaction, bringing down the entire Japanese financial system. Second, if LTCB went down, the bank's many troubled corporate borrowers might also go bust and the consequences would be devastating for the entire Japanese economy.

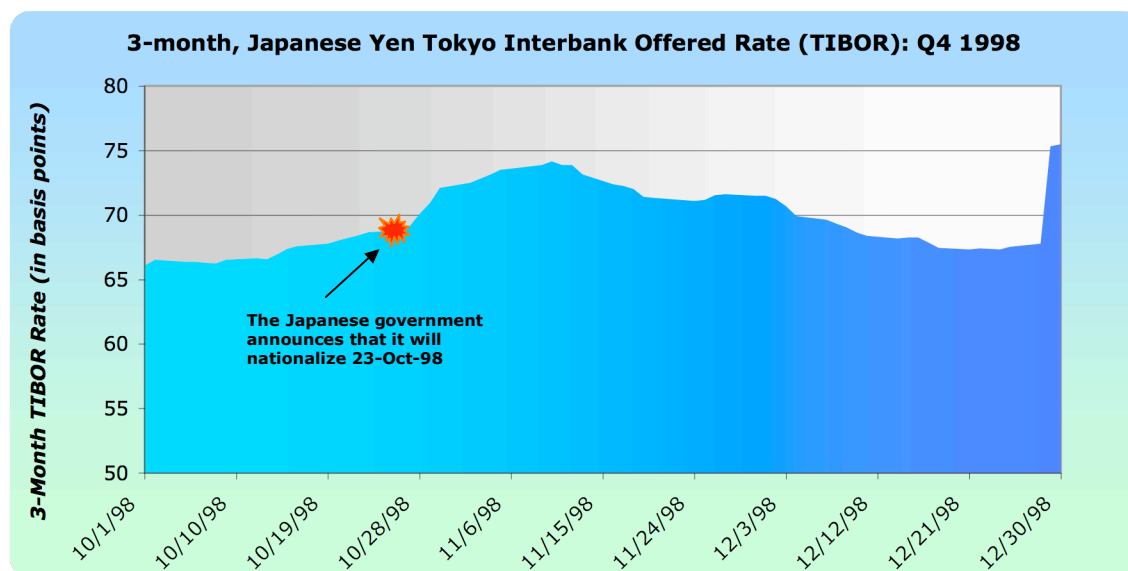
The LTCB became the first firm to be nationalized under the provisions of the new Big Bang financial sector laws; the bank also had the dubious distinction of being the first bank to be nationalized in Japan's postwar history (Daimon, 1998, p. 1). Nationalization of LTCB was intended to be temporary and on 28 October 1998, it was made official when all of the bank's shares were acquired by the Deposit Insurance Corporation of Japan. On 4 November 1998, a new management team with Takashi Anzai (a former Bank of Japan official) as president was appointed by DICJ following nomination by the Prime Minister (The Long-Term Credit Bank of Japan, 1999, p. 2).



**Figure 8: Japanese Equities in the Immediate Aftermath of LTCB's Nationalization Announcement.** Japanese equity markets responded negatively to the announcement of the government's intention to nationalize LTCB. On 26 October 1998, the first trading day after the news, the Nikkei Bank Index closed down -3.0%, and the Nikkei 225 down -2.1%. By the end of the week, both indices had stabilized somewhat. Quantitative data source: AIMCo, Bloomberg.

The Nikkei 225 and Nikkei Bank Index fell -2.1% and -3.0%, respectively, on 26 October 1998, the day after LTCB's nationalization announcement. One-week to 30 October 1998, the Nikkei 225 was down -4.1% and the Nikkei Bank Index had fallen -3.5%.

Interestingly, risk in the money markets was largely unmoved by LTCB's nationalization. In contrast to the Yamaichi failure in 1997, there was no discernible spike in the 3-month TIBOR, which only increased slightly from 69 bps to 75 bps between 23 October 1998 (the last trading day before announcement of LTCB's nationalization) and 30 December 1998 (the last trading day of the year). This perhaps suggested some measure of relief over the prevention of the negative spillovers of a possible LTCB bankruptcy, as well as confidence in the Japanese authorities' decisive response and actions concerning the nationalization of LTCB. In other words, the necessity of the LTCB nationalization ultimately proved to be another positive step in the quest to reform the Japanese financial sector.



**Figure 9: 3-month, Japanese Yen Tokyo Interbank Offered Rate (TIBOR): Q4 1998.** Upon LTCB's nationalization announcement, the Japanese money markets, as measured by the 3-month TIBOR, reacted with calm in contrast to the 1997 Yamaichi failure. The TIBOR remained in a tight range in the aftermath of the announcement. In other words, there was no panic: this suggests that the Japanese authorities were making progress with respect to reforming the financial sector. Quantitative data source: AIMCo, Bloomberg.

Under Japanese government stewardship, corporate restructuring of LTCB sought three basic objectives (The Long-Term Credit Bank of Japan, 1999, p. 2):

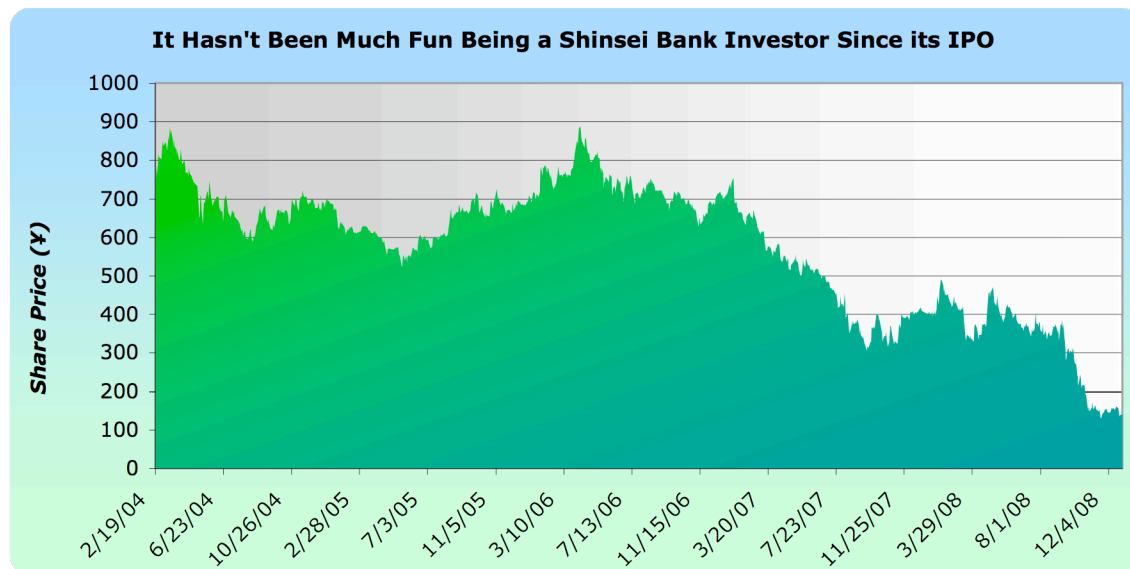
- *Early Emergence from Temporary Nationalization.* The Japanese government wanted the bank restructured and (re)privatized at the earliest possible date.
- *Reform of Operations and Improvement of Corporate Value.* To improve the LTCB's corporate value, non-performing loans were sectioned-off and sold to the Resolution and Collection Corporation (RCC). Further, the bank sought to improve its financial condition through streamlining business operations, reducing the number of employees, and disposing of certain properties.
- *Minimizing Costs to the Public.* Sensitive to the political dimension of the nationalization, the government had a strong interest in having the LTCB maintain and enhance its corporate value such as to minimize the burden on taxpayers. The LTCB was to strive to maintain a "superior customer base and asset portfolio", in addition to developing better financial technologies and skills.

In December 1998, the new management of the LTCB set up the Internal Investigation Committee, which was established to conduct investigations into the possible wrongdoing – and hence, the criminal and civil liability – of former LTCB executives (The Long-Term Credit Bank of Japan, 1999, p. 3). After the investigation in June 1999, the committee filed a criminal complaint against the former executives, accusing them of falsifying the bank's financial statements and illegally paying dividends to shareholders despite having insufficient profits (*Japan Times*, 1999). This set the stage for Japanese law enforcement authorities to launch formal criminal investigations, which would later result in charges being laid. It can be said that the willingness of the authorities to prosecute was significant for two reasons. First, it sent a message to other executives of publicly traded companies that wrongdoing would be met with strong action. Second, it helped to bolster flagging investor confidence.

In order to expedite its eventual sale, LTCB hired an external financial advisor in February 1999. Interestingly – and perhaps portending the makeup of the bank's future owners – a foreign firm in New York-based Goldman Sachs was selected. Indeed, in March 2000, with the blessing of the Financial Reconstruction Commission, the LTCB was sold to a consortium of investors led by US private equity firm Ripplewood

Holdings. Other principal investors included many large, foreign financial institutions (Shinsei Bank, 2000, p. 6), but no firms in the investment consortium were Japanese. It so happens that, the end of LTCB's temporary nationalization would result in the creation of Japan's first completely foreign-owned bank.

The purchase price of the restructured LTCB was ¥120 billion (US\$1.1 billion). In addition, in view of the large amount of losses incurred in the disposal of LTCB's non-performing assets, at the time of the termination of temporary nationalization, the bank made an application for financial assistance in the amount of ¥3,588 billion (US\$36 billion) from the Japanese government (Shinsei Bank, 2000, p. 6). The amount was granted and, somewhat controversially, represented a sum of taxpayers' money that would not be directly recovered. Further, in order to bolster the amount of capital on LTCB's balance sheet, the government agreed to purchase ¥240 billion (US\$24 billion) worth of preferred stock (Shinsei Bank, 2000, p. 7).



**Figure 10: It Hasn't Been Much Fun Being a Shinsei Bank Investor Since Its IPO.** Since its IPO in early 2004, Shinsei Bank has failed to deliver returns to its investors. Because of the high price of the IPO, the Japanese government was criticized for selling LTCB's assets to Ripplewood Holdings at below market value. Shinsei's rather sorry performance since then has blunted much of that criticism. Today, the re-made bank is struggling through the current US-led financial crisis. Quantitative data source: AIMCo, Bloomberg.

New ownership promptly renamed LTCB as Shinsei Bank (which means “new beginning”) and remade the financial institution in the image of a foreign-owned

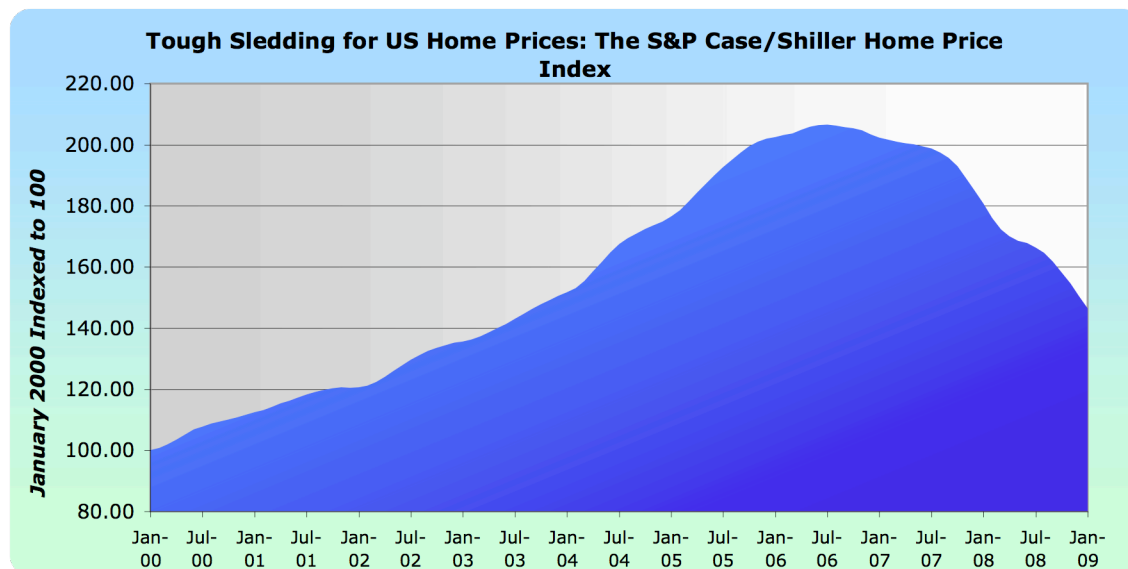
investment bank. Additional restructuring was deemed successful and Ripplewood accelerated its Shinsei investment toward an initial public offering (IPO) in only four years. According to Leahy (2004, p.1), the IPO caused considerable controversy since it came so soon after the 2000 re-privatization, and also because it earned such stellar returns for the Ripplewood-led consortium. The latter has given critics who say that Big Bang has only benefited foreign financial competition significant fodder. This said, however, over the long run, the Shinsei IPO has proven to be a poor investment as the bank is now struggling through the current financial crisis.

### ***7.3 Lehman Brothers***

#### ***7.3.1 Background***

Big name, risky profile, and smallest of the major Wall Street brokerage firms – indeed, the parallels between Lehman Brothers and Yamaichi Securities are many. On 15 September 2008, almost eleven years after the Yamaichi failure, the US Treasury Department made the difficult decision to let troubled Lehman slide into bankruptcy. With no bailout or rescue, Lehman’s failure stands as one of the key events in the US financial crisis so far.

Things started to go wrong in the summer of 2007 when rival firm, Bear Stearns, was forced to liquidate two hedge funds that had invested in different types of mortgage-backed securities, including those of the subprime variety (Federal Reserve Bank of St. Louis, 2009). Proverbial canary in a coalmine – this was the first obvious signal that an inflection point had been reached for those who had bet heavily in what had been a roaring US housing market. The decline had begun but the question, of course, was: just how severe would the decline be?



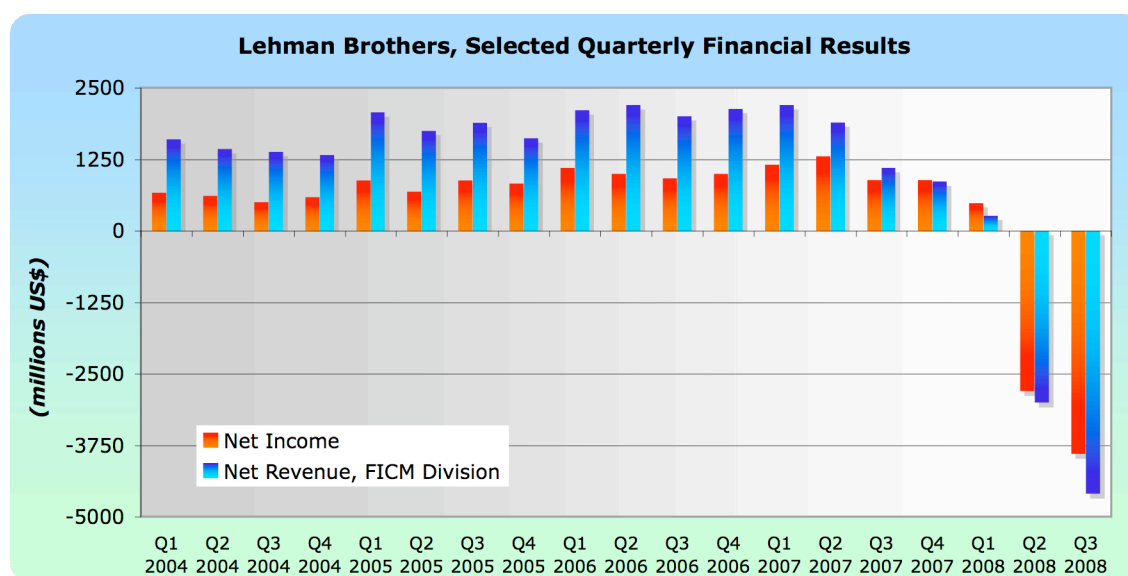
**Figure 11: Tough Sledding for US Home Prices: The S&P Case/Shiller Home Price Index.** A composite measure of US residential home prices in 20 metropolitan areas (Standard & Poor's, 2009), the S&P Case/Shiller Home Price Index suggests that US real estate peaked in late 2005 (note that the index is calculated on a 3-month moving average). The severe decline thereafter meant trouble for financial institutions like Lehman, which had bet heavily on a continued rise in prices. Further, the tumbling real estate market also sideswiped the rest of the US economy. Quantitative data source: Standard & Poor's.

We now know that the answer is: very severe. And for those firms such as Lehman that had based their previous outperformance on aggressive subsectors such as risky residential mortgages, such exposure would suddenly become a glaring Achilles' heel.

Financial market watchers knew that Lehman Brothers was a major player in the market for securitizing subprime and prime mortgages, and that as the smallest of the major Wall Street firms, it faced a larger risk that large losses could be fatal (*New York Times*, 2009). Few would have predicted the fall from grace could be so sudden, however. Lehman's bankruptcy set off tremors throughout the financial system that reverberate to this day. The uncertainty surrounding its billions of dollars of transactions with banks and hedge funds exacerbated a crisis of confidence that contributed to the freezing of credit markets that and forced governments around the world to take steps to try to calm panicked markets, including guaranteeing bank deposits (Story and White, 2008).

### 7.3.2 “Crisis” Event: Causes and Description

With a varied and colourful history, Lehman is among the more interesting stories on Wall Street – and this was even before its collapse. The Lehman Brothers that has been such a central part of the discussion in recent times, however, provides an archetypical example of the boom (and now, bust) US financial institution in the post-tech bubble and post-9/11 world, aggressively embracing “financial innovation” in a time of strong economic growth and, generally, geopolitical stability, to impressive operating results. Securitization of mortgages – and especially subprime mortgages – was a hot ticket, and Lehman parlayed their increasing involvement in this field into high fees and record profits. For example, Lehman’s net income of US\$1.3 billion during the second quarter of 2007, just prior to the unraveling of the subprime mortgage market, quadrupled its earnings of US\$296 million back in the second quarter of 2002 (Lehman Brothers, 2009).

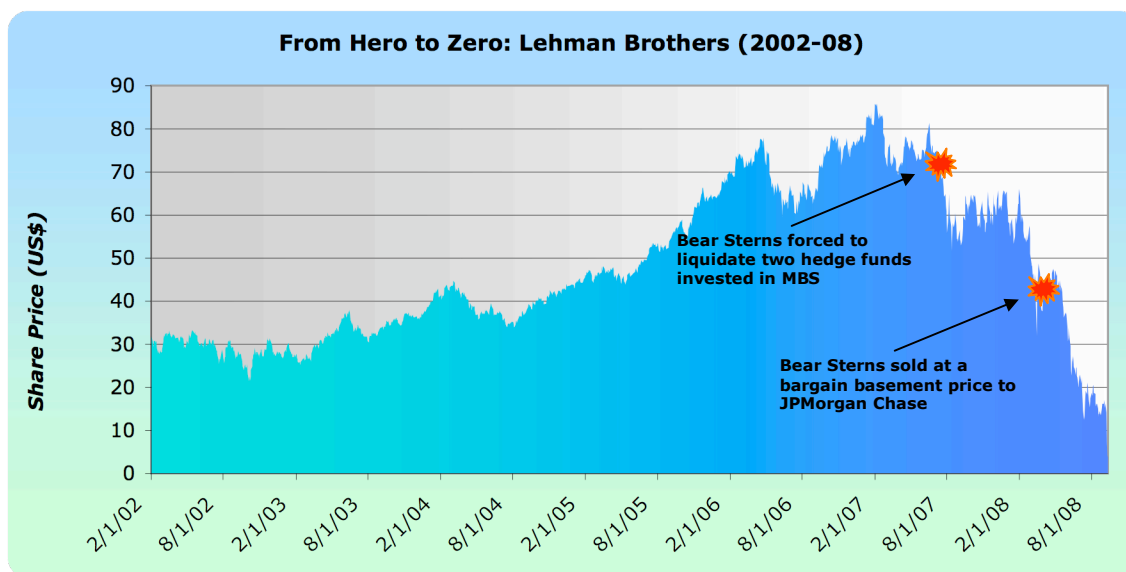


**Figure 12: Lehman Brothers, Selected Quarterly Financial Results.** Lehman’s Fixed Income Capital Markets Division, which oversaw its mortgage-backed securitization business, drove the firm’s operating results in the post-9/11 environment. However, when the US real estate market plummeted, it became painfully evident that the model of securitization was a double-edged sword. The effects of the subprime mortgage crisis began to show up in Lehman’s operating results by the third quarter of 2007 ... before the end of the third quarter of 2008, the once-venerable investment bank had filed for bankruptcy protection. Quantitative data source: Lehman Brothers.

Whether Lehman’s success begat complacency in areas such as risk-aversion and control is still up for debate, but what is clear is that Lehman, like many other firms involved in the same businesses, began to foray deeper into mortgages of the riskier subprime variety. This was fine as long as the real estate market continued to rise. However, of



course, housing prices would peak in late 2005, and its subsequent decline would bring everyone and everything that had tied their success to real estate down with it. As default rates on subprime mortgages soared, the overall US economy was sideswiped in the process as the housing industry slowed to a standstill and disposable income became scarce. For financial institutions such as Lehman, cash flow from mortgages dried up and operating losses accelerated in disturbing fashion.



**Figure 13: From Hero to Zero: Lehman Brothers (2002-08).** Once the subprime game was up, Lehman's share price collapsed in dramatic fashion. Two events involving Bear Sterns, a rival firm of Lehman, would ultimately prove catalysts for Lehman's spectacular crash. Quantitative data source: AIMCo, Bloomberg.

As mentioned previously, the Bear Sterns incident with two of its hedge funds in July 2007 became an early warning signal that the issues of subprime had come back to haunt those firms heavily involved with securitization. For Lehman, losses from subprime mortgages began to negatively affect the bottom line in the third quarter of 2007 and would soon swamp the firm.

The severity of the subprime crisis was made obvious when Lehman's rival, Bear Sterns, was sold in what amounted to a fire sale to JPMorgan Chase on Sunday, 16 March 2008. As reported by Sorkin and Thomas (2008), what stunned the financial world was the price at which Bear Sterns was sold – US\$2 per share or US\$236 million. Put in context, this price represented a jaw-dropping 93 percent discount to the US\$30 per share at

which Bear Sterns shares had closed only two days prior on Friday, 14 March 2008 (Sorkin and Thomas, 2008). To make matters worse, JPMorgan Chase only agreed to buy Bear Sterns after receiving US\$30 billion in US government funding guarantees as a buffer for losses in the face of Bear's staggering soured assets.

With Bear Sterns briskly wiped from the financial map, Lehman Brothers was left standing as the most vulnerable of Wall Street's independent brokerages. Rumours swirled that Lehman was in similar dire straits. On Monday, 17 March 2008, the first trading day after the Bear Sterns takeover, Lehman shares closed down -19.1%. Trouble was afoot.

Still, when Lehman reported its First Quarter 2008 numbers the next day on Tuesday, 18 March 2008, management put on a brave face. In the corresponding press release (Lehman Brothers, 2008), Lehman Chairman and CEO Richard S. Fuld, Jr., said:

“In what remains a challenging operating environment, our results reflect the value of our continued commitment to building a diversified platform and our focus on managing risk and maintaining a strong capital and liquidity position. This strategy has allowed us to support our clients through these difficult and volatile markets, while continuing to build and strengthen our global franchise for our shareholders”.

Net income for the quarter had come in at a disappointing US\$489 million, less than half of the US\$1.15 billion the firm had made during the first quarter of 2007. Further, although a profit of almost half a billion dollars seemed respectable on the surface, delving slightly deeper into Lehman's financials uncovered that net revenues from its Fixed Income Capital Markets division – the division responsible for securitization of mortgages – had plunged 88% from the fiscal first quarter of 2007 (Lehman Brothers, 2008).

As the subprime mortgage crisis continued to worsen, behind closed doors Lehman management worked hard to raise additional capital to shore up the condition of its balance sheet. Unfortunately, interested investors – not wanting to take on the likelihood of losses from Lehman's mortgage-backed securities portfolio – were few and far between. Time was ominously ticking. On 16 June 2008, Lehman announced its fiscal

second quarter results and the bottom line showed a net loss of -US\$2.8 billion (Lehman Brothers, 2008). Shockingly, its Fixed Income Capital Markets division recorded quarterly negative net revenue of -US\$3.0 billion (Lehman Brothers, 2008).

Unable to raise sufficient capital due to its plunging stock price and a dearth of willing investors, in July 2008 Lehman requested permission from US authorities to turn itself into a deposit-taking commercial bank. Taking deposits would have improved the liquidity of Lehman's balance sheet. However, US authorities said no (Story and White, 2008).

As the subprime maelstrom continued to engulf other financial institutions, Lehman began to grow desperate. The crisis of confidence that ensued would be the once-venerable investment bank's death knell. On Thursday, 4 September 2008, JPMorgan, which handled Lehman's trades, demanded that Lehman put up an additional US\$5 billion in cash and liquid securities due to its lack of confidence in Lehman's ability to honour its obligations (Story and White, 2008). Further, when GSEs Fannie Mae and Freddie Mac were effectively nationalized by US authorities at very high cost on Sunday, 7 September 2008, the likelihood of Lehman being bailed out by the US government dwindled considerably.

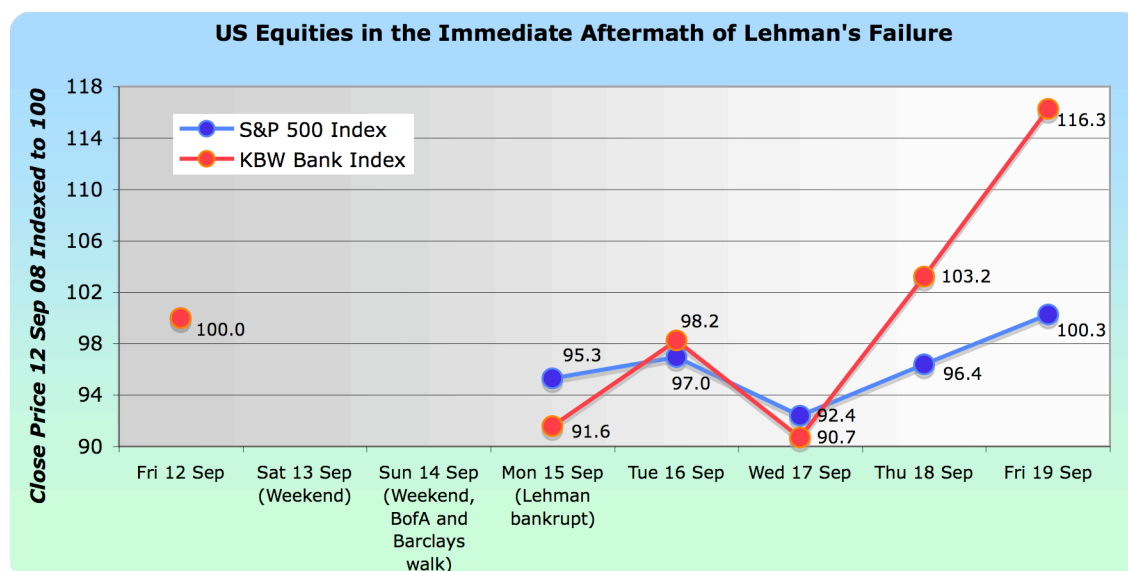
On Wednesday, 10 September 2008, Lehman pre-announced its fiscal Third Quarter earnings. A net loss of -US\$3.9 billion was estimated (Lehman Brothers, 2008). Negative net revenues from its Fixed Income Capital Markets division came it at -US\$4.6 billion. Mark-to-market adjustments (i.e., writedowns) on its residential mortgage-related and commercial real estate positions totaled -US\$7.0 billion. With these results, most observers accepted that Lehman's days as an independent brokerage firm were finished. The question now, was if a buyer could be found to save Lehman from bankruptcy.

US Treasury and Federal Reserve officials made it clear by the evening of Friday, 12 September 2008 that no bailout would be forthcoming. Lehman's frantic, last-ditch

efforts to sell itself to either the Bank of America or Barclays Bank over the weekend of 13-14 September 2008 bore no fruit when both potential buyers walked away and, with a thud, Lehman filed for bankruptcy protection on Monday, 15 September 2008.

### 7.3.3 Market and Government Response

Much like with Japan and Yamaichi a decade earlier, US authorities decided that, in spite of its name and status as a fixture on Wall Street, Lehman Brothers wasn't too big to fail. It is possible that after the nationalization of Fannie Mae and Freddie Mac a week before, the US Treasury didn't feel that it had the political capital to also bailout Lehman. Also, US authorities may have felt the need to draw "a line in the sand", fearing that moral hazard was pervasive in the US financial system. In other words, Lehman was made an example of by the US authorities.

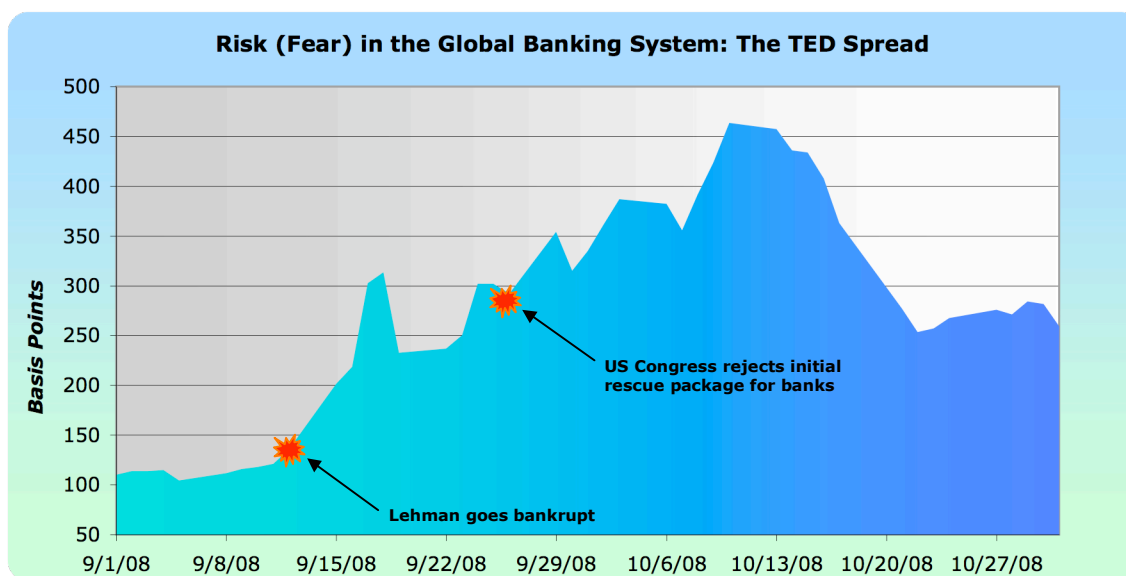


*Figure 14: US Equities in the Immediate Aftermath of Lehman's Failure. Confusion and volatility reigned during the week after Lehman's failure, as evidenced by wildly gyrating US equity markets. Initial fright gave way to speculation that a sweeping rescue plan would be implemented quickly by US policymakers. Quantitative data source: AIMCo, Bloomberg.*

Market reaction to the Lehman failure can best be described as frenetic and volatile. On 15 September 2008, the broad-based, benchmark Standard & Poor's 500 Index slid -4.7% and the KBW Bank Index, a measure of the financial sector, tumbled -8.4%. However, by the end of the week, speculation that US authorities would come through with a sweeping rescue plan for the faltering financial sector encouraged the S&P 500 to recover

its losses (+0.3%, 1-week return to 19 September) and the KBW Bank Index to soar (+16.3%, 1-week return to 19 September).

Meanwhile, the money markets were signaling big trouble. The TED spread, a measure of risk in the banking system, spiked 66 bps to 201 bps on Monday, 15 September 2008. All-out panic ensued as by Thursday, 18 September 2008, the TED spread had soared to 313 bps.



**Figure 15: Risk (Fear) in the Global Banking System: The TED Spread.** The TED Spread spiked alarmingly when Lehman failed, pushing the needle well into crisis country, if it wasn't already there. Fumbling by US policymakers in the weeks following only made it worse. In retrospect, one wonders if the initial rejection by US Congress of the Treasury department's draft rescue package legislation on Monday, 29 September 2008 unnecessarily exacerbated an already nasty situation. *Quantitative data source: AIMCo, Bloomberg.*

Critics such as Krugman (2008) harangue the US administration for not having a more coherent plan of action ready in the immediate aftermath of the Lehman failure, and surely, there were stumbles along the way as US Treasury scrambled to put together a rescue package when it became apparent that the Lehman fiasco had accelerated a global credit crunch. The politics of a rescue package for banks, however, proved highly unpopular among a public that was losing their homes, and US Congress rejected legislation submitted by US Treasury requesting authority to purchase troubled assets from financial institutions on Monday, 29 September 2008. In retrospect, this political

posturing by the politicians made the burgeoning crisis much worse if market reactions were any indication. By the time the Emergency Economic Stabilization Act of 2008 was signed into law on Friday, 3 October 2008, many were left wondering about the extent of the damage caused by questionable leadership shown by US authorities in the weeks following Lehman's demise.

#### ***7.4 Federal National Mortgage Association (Fannie Mae)***

##### ***7.4.1 Background***

Created by government charter, instrumental to the financial system due to its scale and breadth of operations, and eventually befalling to a similar fate after failing as a publicly-traded company, there are enough parallels between Fannie Mae and the Long-Term Credit Bank of Japan to make for intriguing comparison. Fannie Mae was initially created by the Roosevelt Administration during the Great Depression to ensure that sufficient funds were available to mortgage lenders (*New York Times*, 2009). In 1968, the entity was re-chartered by Congress and made into a publicly traded company; Freddie Mac, another so-called government-sponsored enterprise (GSE) with the same mandate, was created in 1970 to provide competition for Fannie Mae (*New York Times*, 2009). And thus began the strange, confused accountability of Fannie Mae – though technically for-profit with publicly traded shares, it also served a public policy function that was considered integral by the government. This confused accountability would later come back to haunt.

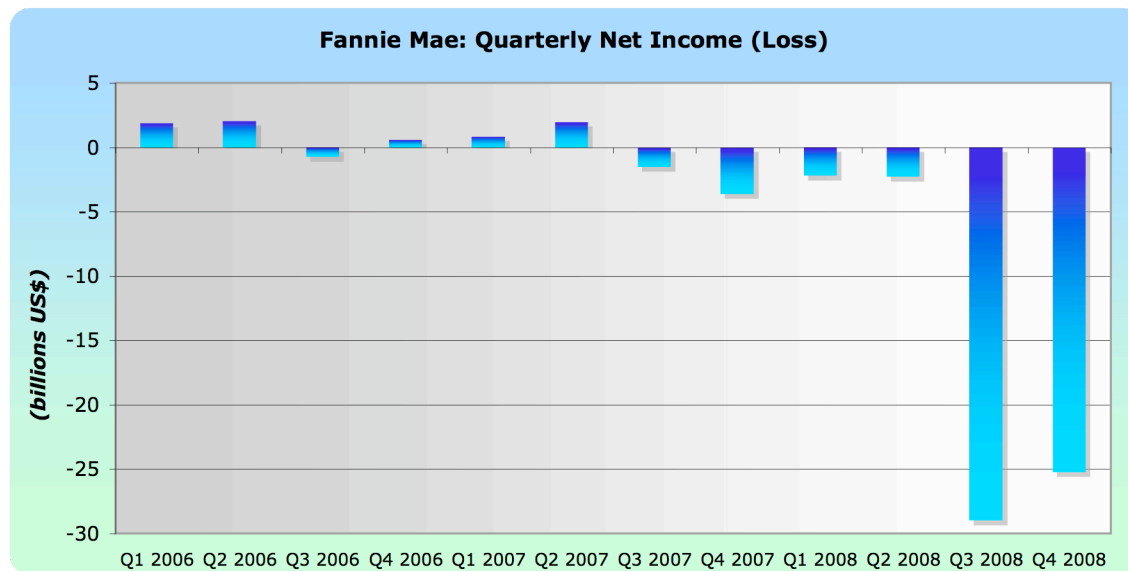
To date, the *raison d'être* of Fannie Mae has been little changed. Its primary function is to operate in the secondary mortgage markets through the purchase and securitization of home mortgages, thereby ensuring that other US financial institutions (such as banks or mortgage brokers) have access to sufficient funds and liquidity in order to, in turn, lend to American homebuyers at affordable rates (Fannie Mae, 2009). The mortgages that Fannie Mae purchases are then either held in investment portfolios or packaged and resold as mortgage-backed securities to investors.

As such, Fannie Mae is a vital cog in the securitization of mortgages and, along with Freddie Mac, the two GSEs are estimated to have underwritten nearly half of the US's US\$12 trillion in outstanding mortgage debt (Seager and Inman, 2008). To provide frame of reference for the scale of Fannie's and Freddie's operations, the sum of US\$12 trillion is roughly twice the GDP of the United Kingdom (Elliott, 2008).

#### 7.4.2 "Crisis" Event: Causes and Description

With respect to the securitization in which Fannie Mae was heavily involved, this "innovation" in financial engineering has become exponentially more prevalent over the past couple of decades. Sule (2009, p. 44) notes that prior to the widespread use of securitization and credit derivatives, banks would create mortgage loans and then retain the credit risk of these loans on their balance sheets until the loans matured or were paid off. However, securitization became a boon for the banks since they were able to offload the credit risks of these asset-backed securities to interested investors and, in turn, free up capital on their balance sheets to restructure and redistribute further pools of mortgages and other loans (Sule, 2009, p. 44). In other words, securitization could be viewed as a form of off-balance sheet transaction that allowed them to further leverage their operations – and potentially, their earnings.

Essentially, Fannie Mae was a "middleman" in the securitization process. Because the market considered Fannie a quasi-government agency due to its public policy mandate, the firm was able to borrow at preferential rates in debt markets and use these funds to purchase mortgages from banks, securitize them, and re-sell them to interested yield-starved investors such as insurance companies and pension funds (Mann, 2004). Fannie Mae provided a guarantee to these investors that they would be provided with interest and principal mortgage payments, regardless of defaults in the underlying mortgages. For its securitization services, Fannie pocketed high fees and spreads in the process, much to the delight of its shareholder base. As comfort levels with securitization increased, subprime mortgages began to surface in increasing numbers in Fannie's mortgage pools. This meant even higher profits – as long as the real estate market kept going up.



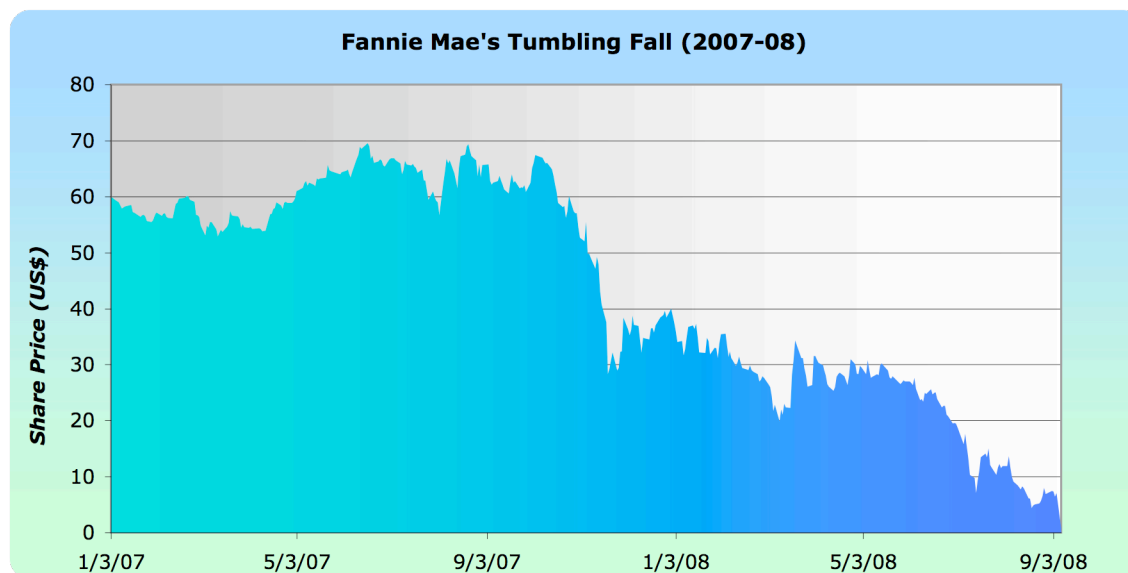
**Figure 16: Fannie Mae: Quarterly Net Income (Loss).** The surreal level of losses during the final two quarters of 2008 (picked up at the expense of the US taxpayer) dwarf Fannie Mae's earnings prior to the collapse of the subprime mortgage market. As it is, the price of greed, poor accountability and insufficient regulatory oversight in the financial sector is very high. Quantitative data source: Fannie Mae.

However, as previously written, when US housing prices peaked in late 2005, the unraveling of the subprime mortgage market was fast and brutal. When default rates soared, mortgage-backed securities became worthless, and suddenly Fannie Mae – the biggest guarantor for mortgages in the United States – was on the hook.

It can be argued that Fannie Mae's foray into risky subprime securitization is attributable to its muddled governance structure. As a GSE, the market consistently bet (and it was right, as it turns out) that the US government would never let Fannie fail. Even before the perils of subprime, commentators such as Mann (2004) raised red flags at Fannie Mae's unrivaled lobbying power in Washington DC, which was successful in keeping rigorous regulatory oversight at bay. Further, as a stockholder-owned, publicly traded corporation, Fannie's goal was to maximize quarterly profits, upon which management bonuses were also based. The combination of these factors made Fannie Mae a perfect storm of moral hazard – it was poorly regulated and its political connections kept it that way, management was motivated to maximize short-term profit with an implicit backstop provided by the US taxpayer, and its public policy mandate could be influenced by near-



term political whims with little regard to the long-term sustainability of the US financial system.



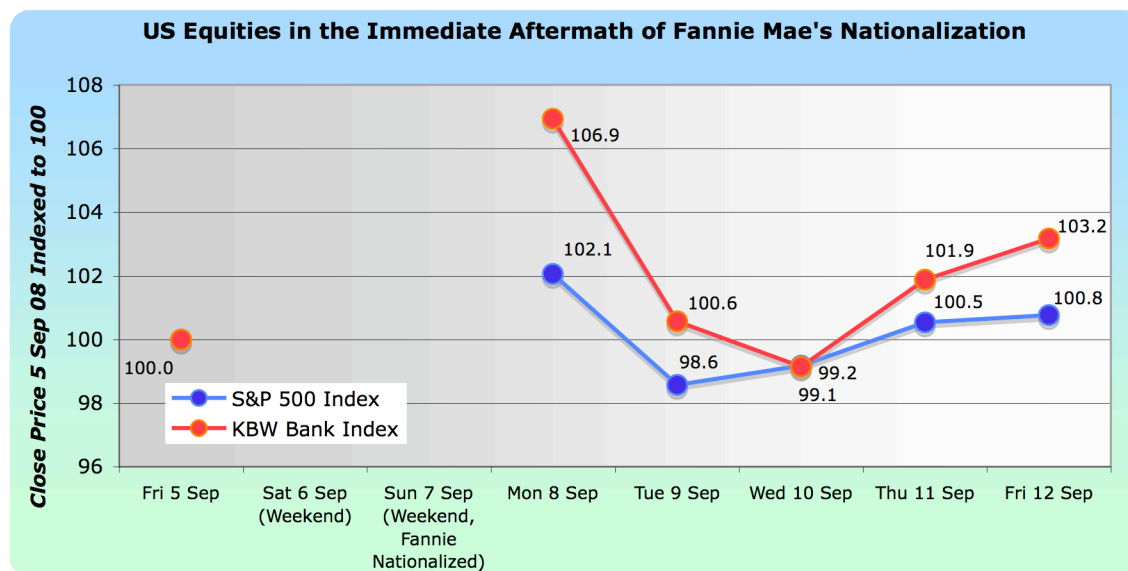
**Figure 17: Fannie Mae's Tumbling Fall (2007-08).** The collapse of the US housing market also caused a corresponding tumble in Fannie Mae's share price. Quantitative data source: AIMCo, Bloomberg.

As the subprime mortgage crisis worsened considerably during Summer 2008, Fannie Mae's ridiculously levered balance plunged into serious risk – and Fannie's tumbling share price reflected this. On 13 July 2008, in a vain attempt to assuage a nervous market, the US Treasury Department announced a temporary increase in the credit lines of both Fannie Mae and Freddie Mac, while the Federal Reserve Bank of New York was authorized to lend to both GSEs should such lending be necessary (Federal Reserve Bank of St. Louis, 2009). Foreshadowing things to come, on 30 July 2008, the Housing and Economic Recovery Act of 2008 was signed into law which, among other things, authorized the US Treasury to purchase GSE obligations and reform the regulatory supervision of Fannie Mae and Freddie Mac under the new Federal Housing Finance Agency (Federal Reserve Bank of St. Louis, 2009).

#### 7.4.3 Market and Government Response

Fearing that Fannie and Freddie could no longer meet its obligations, the US Treasury department made the decision to place both GSEs into conservatorship on 7 September

2008, thereby effectively nationalizing the two firms. According to the *New York Times* (2009), the rescue represented an extraordinary federal intervention and has the potential to be one of the most expensive in history. The rescue plan for Fannie and Freddie has committed the government to provide as much as US\$100 billion to each GSE to backstop any shortfalls in capital (*New York Times*, 2009).

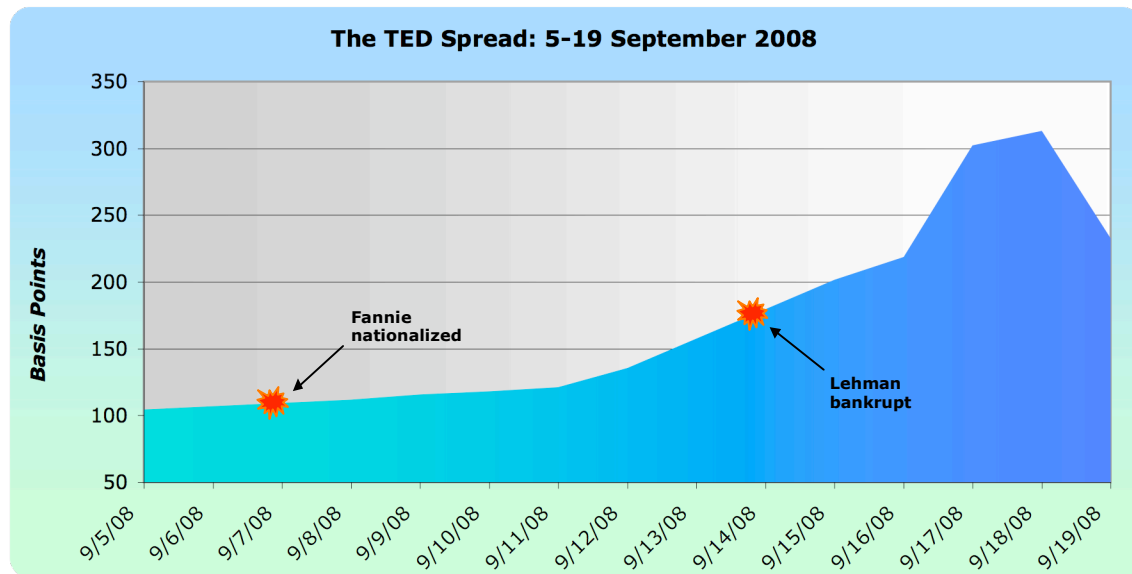


**Figure 18: US Equities in the Immediate Aftermath of Fannie Mae's Nationalization.** Equity markets breathed a sigh of relief upon announcement of Fannie's (and Freddie's) placement into conservatorship on 7 September 2008. However, initial optimism diminished quickly as the week progressed, just prior to the Lehman failure. Quantitative data source: AIMCo, Bloomberg.

The nationalization announcement proved correct the market's assumption that the GSEs would never be allowed to fail and, at least in the immediate aftermath, equity markets responded in relief. On Monday, 8 September 2008, the S&P 500 Index increased +2.1% and the KBW Bank Index jumped +6.9%. By the end of the week, these gains had moderated, with the S&P 500 registering a weekly gain of only +0.8% and the KBW Bank Index up +3.2%.

In contrast, risk in the money market remained elevated after the Fannie nationalization announcement. The calculated TED Spread increased slightly by 8 bps (from 104 bps on Friday, 5 September 2008 to 112 bps) on Monday, 8 September 2008. As the week progressed, the TED Spread climbed to 135 basis points by Friday, 12 September 2008,

an indicator of heightened risk awareness in the money market. The Lehman fiasco during the weekend of 13-14 September 2008 would confirm these suspicions.



**Figure 19: The TED Spread: 5-19 September 2008.** Unlike the equity market's initial optimism after the Fannie nationalization announcement, risk awareness in the money markets remained heightened during the trading week of 8-12 September 2008. The fallout from the Lehman failure during the weekend of 13-14 September 2008 proved these suspicions correct as the TED spread widened considerably thereafter. Quantitative data source: AIMCo, Bloomberg.

In November 2008, US Treasury Secretary Henry M. Paulson (2008) was quoted as saying: "... failure of the GSEs posed a huge risk to our financial system. We couldn't wait for them to fail formally." Indeed. But now a ward of the state, US taxpayers are paying dearly for Fannie's mistakes, highlighting the egregiousness of its actions, and the gaping holes in its governance.

## 8 Discussion and Data Analysis

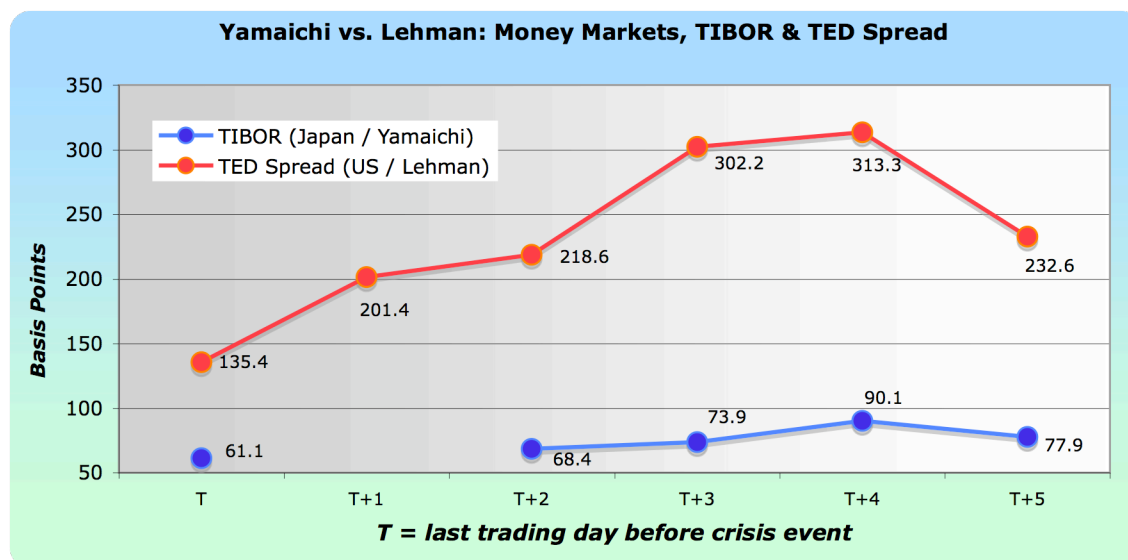
### 8.1 Yamaichi Securities vs. Lehman Brothers

Yamaichi and Lehman share many commonalities (refer to Appendix C: Summary of Case Studies, for a direct table comparison). Both were prestigious names with storied histories, among the largest independent brokerage firms in their home countries and, most importantly for the purposes of this research study, were allowed to fail by

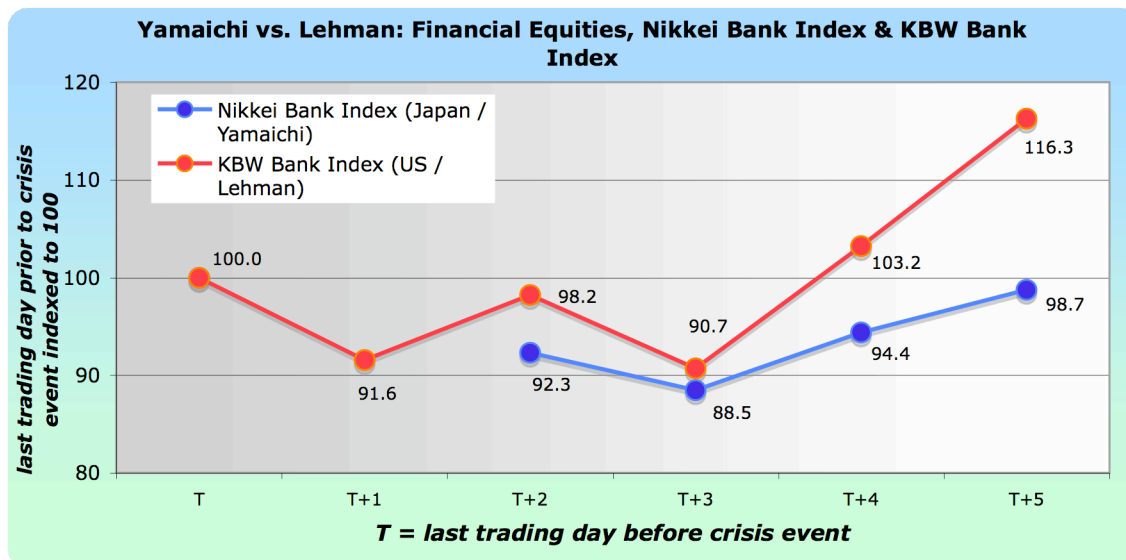
government authorities when each firm's actions put their respective businesses in serious trouble. A comparison of both the market and government responses, as well as a summary of key takeaways follow.

### 8.1.1 Market Response

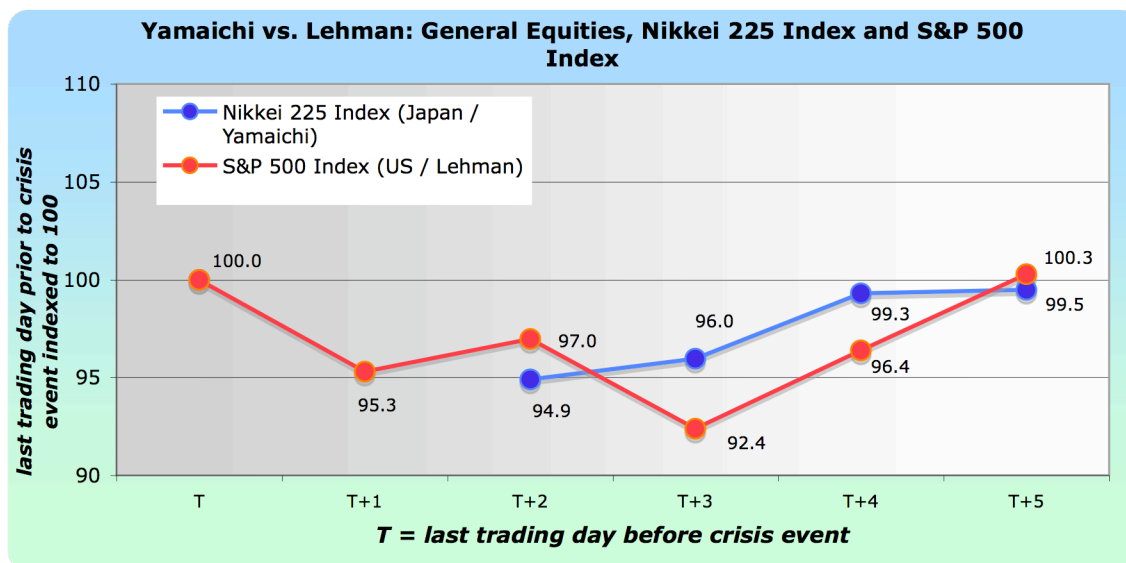
As per the research methodology section, three key parameters for comparison in this thesis are short-term reactions in (1) the money markets as measured by the TIBOR and the TED Spread; (2) financial sector equities as measured by the Nikkei Bank Index and the KBW Bank Index; and (3) general equities as measured by the Nikkei 225 Index and the Standard and Poor's 500 Index. These measures are compared against one another in the immediate aftermath of each firm's crisis event (i.e., bankruptcy) and each government's course of action (i.e., letting the firm fail). The immediate aftermath here is defined as the changes in the denoted indices within a one-week period (trading days only and exclusive of weekends and holidays).



**Figure 20: Yamaichi vs. Lehman: Money Markets, TIBOR & TED Spread.** As one can see from the graph above, risk in the money markets – an indicator of financial crises – increased in the immediate aftermath of both the Yamaichi and Lehman failures. However, the leap in the TED Spread after Lehman's failure is decidedly more significant than the corresponding jump in the TIBOR after Yamaichi's failure (over a doubling in Lehman's case at T+4 vs. an increase of about 50% in Yamaichi's case). This suggests that the panic level was more pronounced in the US situation. It can be argued that the respective government responses (see corresponding subsection below) in each case may have impacted, at least in part, the differences in reaction in the money markets. Further, it is possible that the Japanese Labor Day Holiday (denoted at T+1 in the Yamaichi case) before trading resumed may have allowed cooler heads to prevail. Quantitative data source: AIMCo, Bloomberg.



**Figure 21: Yamaichi vs. Lehman: Financial Equities, Nikkei Bank Index & KBW Bank Index.** Both the Nikkei Bank Index (-7.7%) and the KBW Bank Index (-8.4%) fall precipitously in the first trading days after the respective crises events of Yamaichi Securities and Lehman Brothers. In the Japanese situation, as the week progresses, initial losses are recovered as investors in the financial sector gain confidence in Japanese authorities’ determination to adhere to the principles of Big Bang, “let capitalism work”, and not return to the old convoy system. The US situation is marked with extreme volatility and, as the week progresses, speculators in the financial sector bet that US authorities will quickly have in place a comprehensive financial sector rescue plan. In a sense, the speculators are proven wrong as US authorities fumble politically with the proposed rescue plan and do not implement it until weeks after the fact. Quantitative data source: AIMCo, Bloomberg.



**Figure 22: Yamaichi vs. Lehman: General Equities, Nikkei 225 Index and S&P 500 Index.** Initial negative reactions in both the Nikkei 225 (-5.1%) and the S&P 500 (-4.7%) are not unexpected. Both indices recover as the week progresses – the Nikkei 225 because investors gain confidence in Japanese authorities’ determination to adhere to the principles of Big Bang; the S&P 500 on the hopes of a comprehensive US rescue package. There is an irony here – the Japanese market moves because the Japanese are letting capitalism work; the US market moves in the belief of more intervention. Quantitative data source: AIMCo, Bloomberg.

### 8.1.2 Government Response

In both the Yamaichi and Lehman cases, the government responses were similar: the authorities decided to stand by and let the venerable names go under. It was deemed, at the time, that the failure of the firms would not have profound effects on the rest of the financial sector and economy as a whole. However, with the benefit of hindsight, it would appear that the US government's handling of the Lehman failure pushed the global financial sector to edge of disaster.

The Japanese government's crisis control in the wake of the Yamaichi's failure appears superior to the US government's confused handling of the Lehman situation. Japan stuck to the principles of Big Bang and focused its communications on the protection of investors. Japan was seen to be taking hard (but needed) medicine by letting the markets work, punishing a mismanaged Yamaichi. On the other hand, in the US situation, financial sector conditions (and confidence) had worsened so quickly that things may have been needlessly made worse when the US government did not appear to have a credible plan in place immediately after the Lehman bankruptcy. Surely, the US political response was disappointing and, indeed, dangerous.

### 8.1.3 Key Takeaways

Key takeaways from the Yamaichi and Lehman cases may be summarized as follows.

- The market must be allowed to punish poorly managed firms, as illustrated with the case of Yamaichi. However, authorities must communicate clear direction in the wake of such failures. The Japanese had a plan in place in the aftermath of the Yamaichi failure (Big Bang and an emphasis on investor protection) and markets did not panic as a result. In contrast, the Americans had no definite plan after Lehman's failure, and may have done an awful disservice to the financial sector and the global economy by mishandling the situation.

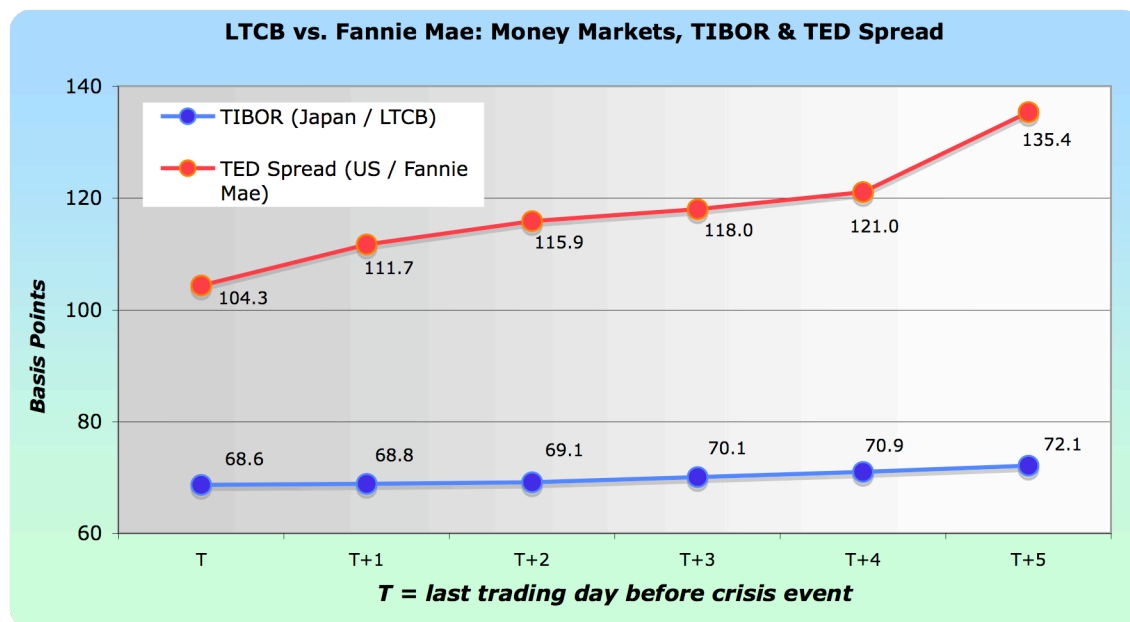
- For the sake of market and consumer confidence, financial regulations must be kept current with market developments and be stringently enforced to discourage against wrongdoing and unethical behaviour. Yamaichi's involvement with the tobashi scheme is one example of how such wrongdoing is damaging to confidence.
- Governments must be willing to undertake bold action to reform weaknesses in the ever-changing financial sector, even if such measures are politically unpopular. Big Bang and the job losses associated with the Yamaichi failure were unpopular but they needed to happen. Getting a financial sector rescue plan in place in the US – also highly unpopular – was unnecessarily delayed by ill-informed political posturing.
- Prudential rules concerning the solvency of financial institutions must be rigorously enforced, given the central role that banks and financial companies play in a modern economy. The speed of Lehman's fall from grace suggests that more may need to be done with respect to evaluating the off-balance sheet transactions of financial companies.

## ***8.2 Long-Term Credit Bank of Japan vs. Federal National Mortgage Association***

Like Yamaichi and Lehman, LTCB and Fannie Mae also share many similarities (refer to Appendix C: Summary of Case Studies, for a table comparison). Both were initially chartered to serve important public policy functions, eventually evolved into shareholder-owned and stock exchange-listed entities and, most importantly for the purposes of this research study, both were effectively nationalized by government authorities. A comparison of both the market and government responses, as well as a summary of key takeaways follow.

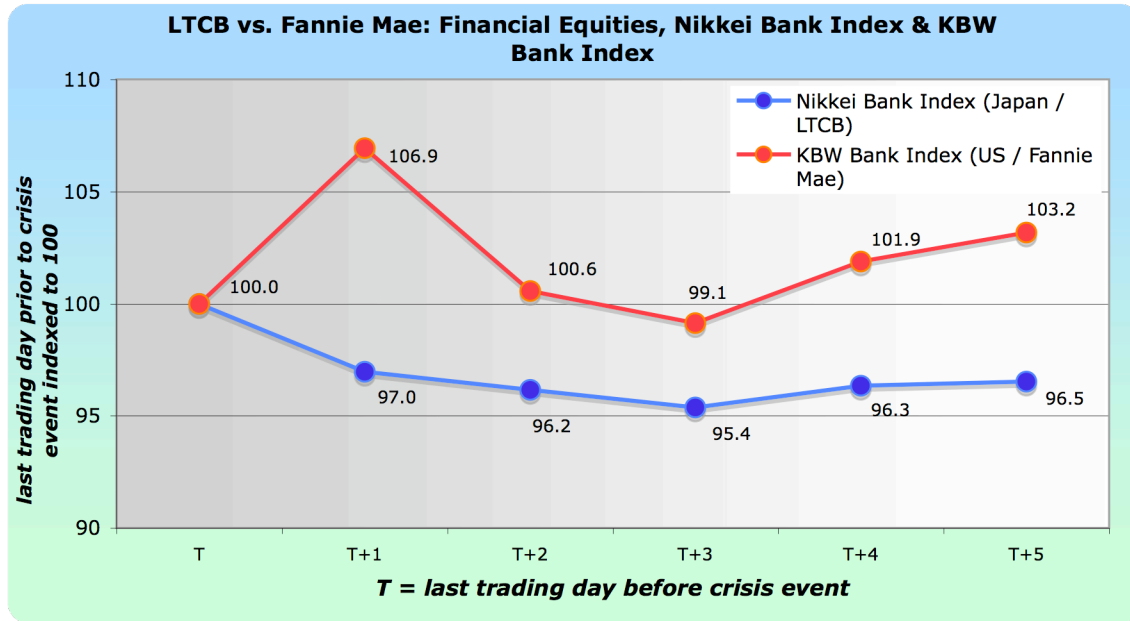
### 8.2.1 Market Response

As per the research methodology section, three key parameters for comparison in this thesis are short-term reactions in (1) the money markets as measured by the TIBOR and the TED Spread; (2) financial sector equities as measured by the Nikkei Bank Index and the KBW Bank Index; and (3) general equities as measured by the Nikkei 225 Index and the Standard and Poor's 500 Index. These measures are compared against one another in the immediate aftermath of each firm's crisis event and consequent government action (i.e., nationalization). The immediate aftermath is defined as the changes in the indices within a one-week period (trading days only and exclusive of weekends and holidays).

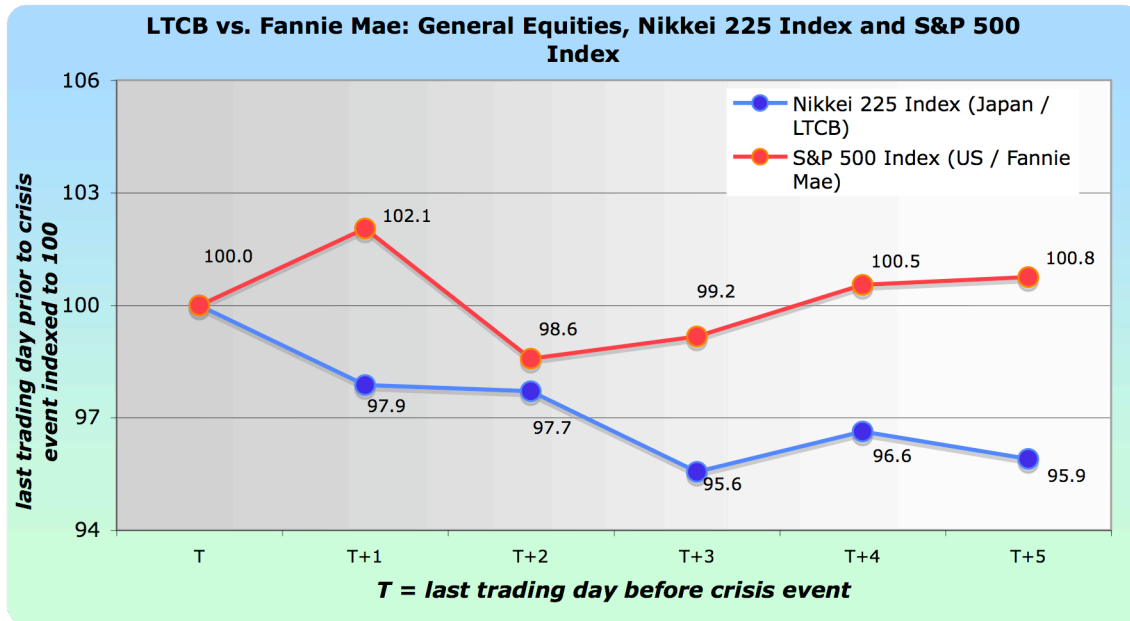


**Figure 23: LTCB vs. Fannie Mae: Money Markets, TIBOR & TED Spread.** The Japanese money markets, as measured by TIBOR, barely flinched in the days after the announcement of LTCB's nationalization – there definitely was no panic. The Japanese government's well-defined plan for LTCB may have assuaged fears in the market. In contrast, Fannie Mae's nationalization announcement caused a moderate increase in the TED Spread, as participants in the money markets priced in the expectation of greater risk. They were proven correct, as the Lehman failure occurred the following week and panic ensued. Quantitative data source: AIMCo, Bloomberg.





**Figure 24: LTCB vs. Fannie Mae: Financial Equities, Nikkei Bank Index & KBW Bank Index.** On the day following LTCB’s nationalization announcement, the Nikkei Bank Index fell (-3.0%) then quickly stabilized – similar to the money markets, there was no real panic. Fannie Mae’s nationalization was met with initial relief in the KBW Bank Index (+6.9%) but trading remained volatile as financial sector investors and speculators tried to properly gauge the environment while other firms (i.e., Lehman) remained in compromising states. Quantitative data source: AIMCo, Bloomberg.



**Figure 25: LTCB vs. Fannie Mae: General Equities, Nikkei 225 Index and S&P 500 Index.** Japanese equities, as measured by the Nikkei 225, closed down moderately (-2.1%) in the wake of the LTCB nationalization announcement and continued to trend slightly downward as the week progressed. Moves in the S&P 500 were similarly moderate after the Fannie Mae nationalization announcement (+2.1%) and chopped in mixed trading during the week. In both situations, a wait-and-see attitude tended to prevail. Quantitative data source: AIMCo, Bloomberg.

### 8.2.2 Government Response

In both the LTCB and Fannie Mae cases, the government responses were similar. Seeing that the firms were too large and too integral to the financial sector as a whole to fail, both the Japanese and US governments made the difficult decisions to nationalize the respective financial companies at great expense to the taxpayer. To the Japanese government's credit, an immediate nationalization plan for LTCB was put in place from the beginning, which helped to instill confidence and avert panic. In Fannie Mae's situation, the US government simply had no choice – a Fannie Mae default would have had a devastating impact on the financial sector and economy as a whole. However, the future path for Fannie Mae is still unclear as US authorities continue to analyze the GSE's options.

### 8.2.3 Key Takeaways

Key takeaways from the LTCB and Fannie Mae cases may be summarized as follows:

- Where a financial institution's viability as a going concern will have a significant impact on the health of the financial sector and economy as a whole, authorities must be willing to take dramatic and expensive measures (i.e., taking an equity stake, nationalization), even if such measures are politically unpalatable. LTCB's nationalization provides a textbook case, as does that of Fannie Mae.
- Communicating a clear action plan in the face of extraordinary intervention pays dividends in terms of calming the market and instilling confidence as evidenced by the Japanese government's handling of the LTCB nationalization.
- However, extraordinary government intervention should be used judiciously, and only where necessary, so as not to exacerbate the potential for moral hazard.
- There is reason to support the notion that firms that have become "too big to fail" may also be "too big to make all of their own decisions."
- The management of a financial institution (and any publicly traded company, for that matter) must be taken to task if its public disclosure is inaccurate, as was the

case with LTCB. The significance of consumer and market confidence cannot be overstated and accurate disclosure is essential.

- Prudential rules concerning the solvency of financial institutions must be rigorously enforced. The speed of Fannie Mae's staggering collapse suggest that more may need to be done with respect to evaluating the off-balance sheet transactions of financial companies.

## **9 Conclusion**

In the current US financial crisis, much of the interventionist action taken by US authorities has proven to be politically unpopular. The question is raised: why is the financial sector, and its apparent bad, risky behaviour being bailed out while homeowners and other sectors are largely being left to fend for themselves? The answer likely lies in the fact that today's global, capitalist system runs on the confidence of its participants – and a healthy financial sector is critical to the smooth functioning of the modern economy. In essence, to make an analogy, if the economy as a whole is like the body of a person, then the financial sector is like the oxygen. Although being able to breathe does not necessarily make a patient healthy (one might say that the Japanese economy since its banking crisis may be a bit like this), not having any oxygen available is guaranteed to bode badly for the patient. As such, the US patient, as it were, is currently getting the respirator treatment – even though in the eyes of many, it doesn't quite seem fair.

Whether the efforts of the US authorities are going to make a difference by either reducing the severity of the current recession and/or shortening its duration is still to be determined. Relative to the Japanese situation, the Americans have undoubtedly acted faster though, interestingly, many of the measures implemented to date bear a striking resemblance to the approaches taken in Japan. Certainly, heavy criticism was leveled at Japan for its handling of the banking crisis but given current events, maybe they didn't get it so wrong after all.

Japan's approaches toward Yamaichi Securities and LTCB – with the clear communication of action plans being especially noteworthy – have provided significant templates for cleaning up messes in the financial sector. The US experience with Lehman Brothers and Fannie Mae provides evidence that financial history doesn't necessarily repeat itself, but it does tend to rhyme. In these time of crisis, it would seem that acknowledgement of such an assertion provides foundation for designing a better-functioning financial system when the prospects of such opportunity appear ripe on the vine. After all, the well-being of literally billions around the globe hang in the balance, underscoring the great responsibility of policymakers to get it right.

## 10 Appendix A: Japanese Banking Crisis Timeline

Date	Event
29 December 1989	The Nikkei 225 Index peaks at 38,915.87 points.
8 February 1994	After several years of economic malaise, the Japanese government introduces a ¥15.25 trillion economic package.
30 August 1995	Hyogo Bank and Kizu Credit Cooperative fail.
11 November 1996	Ryutaro Hashimoto, the Prime Minister at the time, introduces the Japanese Big Bang – nomenclature for extensive financial system reform. The Big Bang is to be based on the principles of free markets, fair trade backed by transparent and reliable rules, and global standards.
21 November 1996	The Japanese government orders the suspension of business at Hanwa Bank.
Summer 1997	Asian Financial Crisis.
3 November 1997	Sanyo Securities, a middle-sized securities firm, files for bankruptcy protection.
17 November 1997	Hokkaido Takushoku Bank fails.
24 November 1997	Yamaichi Securities, one of Japan's Big Four securities firms, announces that it is effectively bankrupt and is ceasing operations. The Japanese government decides to stand by while Yamaichi goes under.
16 February 1998	The Japanese Diet passes the Financial Function Stabilization Law and the Deposit Insurance Law. The new laws allow the government to use ¥30 trillion of public funds for the purposes of stabilizing the financial sector (¥17 trillion for protecting depositors of failed banks and ¥13 trillion for bank recapitalization).
March 1998	The government uses ¥1.8 trillion out of the ¥13 trillion available for bank recapitalization.
23 October 1998	Teetering on collapse, the Long-Term Credit Bank of Japan is nationalized by the Japanese government under new legislation that contains provisions to deal with both undercapitalized and insolvent financial institutions.
15 December 1998	Financial Reconstruction Commission is established.
March 1999	Second major recapitalization of banks (in the sum of ¥7.5 trillion) through the use of mostly preferred share purchases occurs through the auspices of the Financial Reconstruction Commission.

## 11 Appendix B: US Financial Crisis Timeline

Date	Event
Late 2005	After an unprecedented boom, US residential home prices peak and begin to fall precipitously.
31 July 2007	One of the largest independent US investment banks, Bear Sterns, is forced to liquidate two hedge funds that invested in various types of mortgage-backed securities.
12 December 2007	The US Federal Reserve creates the Term Auction Facility (TAF), in which fixed amounts of term funds will be auctioned to financial institutions against a wide variety of collateral. In essence, this provides institutions in need with liquidity (i.e., cash) in the face of other non-performing assets.
21 December 2007	Only nine days after its creation, the Federal Reserve confirms that Term Auction Facility auctions will be conducted for as long as financial market conditions require.
11 January 2008	Bank of America, the second largest bank in the US, announces it will purchase Countrywide Financial, a large and troubled mortgage lender, in a transaction worth US\$4 billion.
17 February 2008	British mortgage lender Northern Rock is nationalized by Her Majesty's Treasury of the United Kingdom.
7 March 2008	Financial market troubles continue to intensify. The Federal Reserve announces US\$50 billion Term Auction Facility auctions on 10 March and 24 March, and further extends the program for at least an additional six months.
11 March 2008	More proactive maneuvering from the Federal Reserve. To further ensure liquidity for financial institutions, the US central bank announces the creation of the Term Securities Lending Facility, which will lend up to US\$200 billion of Treasury securities against a variety of securities eligible for collateral including both federal agency and private label mortgage-backed securities.
16 March 2008	JPMorgan Chase, the third largest bank in the US, acquires Bear Sterns, which has been ravaged by its exposure to subprime mortgage securities, for approximately \$236 million or just \$2 a share. The bargain-basement price sends shockwaves reverberating throughout the financial world as Bear Sterns stock had closed at \$30 on its last trading day (Friday, 14 March 2008). To make matters worse, JPMorgan Chase only agreed to the takeover after receiving \$30 billion of US federal government funding guarantees as a buffer in the face of Bear Sterns' staggering soured assets.
2 May 2008	In a sign that market conditions are badly worsening, the Federal Open Market Committee expands the list of eligible collateral for Term Securities Lending Facility auctions to include asset-backed securities, in addition to already eligible residential and commercial mortgage-backed securities and agency collateralized mortgage obligations. The Federal Reserve further expands Term Auction Facility auctions from US\$50 billion to US\$75 billion.
9 June 2008	Lehman Brothers announces losses of US\$2.8 billion for its fiscal second quarter.

Date	Event
11 July 2008	The US Office of Thrift Supervision closes IndyMac Bank, one of the country's largest savings and loan associations. At the time of its failure, IndyMac constitutes the fourth largest bank failure in US history.
13 July 2008	The Federal Reserve Board authorizes the Federal Reserve Bank of New York to lend to Fannie Mae and Freddie Mac should such lending be necessary. Further, the US Treasury Department announces a temporary increase in the credit lines of Fannie Mae and Freddie Mac, in addition to the power to purchase equity in either GSE should the need arise.
15 July 2008	Short sellers speculating on the continued plummeting of shares in financial institutions pile on the misery. By borrowing shares of companies to sell on the open market in the hopes of buying them back at a lower price at a later date, stock prices of financial institutions fall even further. In a surprise move, the US Securities and Exchange Commission grants a reprieve for the financial institutions by issuing an emergency order temporarily prohibiting the naked short selling in the securities of Fannie Mae, Freddie Mac, and primary dealers at commercial and investment banks.
30 July 2008	US President George W. Bush signs into law the Housing and Economic Recovery Act of 2008 which, among other things, authorizes the US Treasury Department to purchase GSE obligations and reforms regulatory supervision of GSEs under a new federal housing agency. The foundation is in place to nationalize troubled Fannie Mae and Freddie Mac, should the need arise.
8 September 2008	The US government effectively nationalizes Fannie Mae and Freddie Mac. There is speculation that the enormous cost of doing so may make it extremely unlikely that teetering Lehman Brothers will be bailed out.
10 September 2008	Lehman pre-announces a massive US\$3.9 billion loss for the fiscal third quarter. CEO Richard Fuld, Jr. says the firm will consider all "strategic alternatives", which is Wall Street code for the active pursuing a sale of the company.
12 September 2008	Top Wall Street executives meet on Friday night to discuss ways to resolve the crisis. The Fed and the Treasury signal that the government will not use taxpayer money to facilitate a takeover of Lehman.
14 September 2008	Barclays Bank abandons a potential bid for Lehman. Bank of America also leaves Lehman talks, instead agreeing to buy Merrill Lynch, the largest US retail brokerage, for US\$50 billion.
15 September 2008	Lehman Brothers files for Chapter 11 bankruptcy protection.
25 September 2008	The Office of Thrift Supervision closes Washington Mutual Bank, the largest savings and loans association (and sixth-largest bank) in the country.
29 September 2008	Influenced by public opinion, the US House of Representatives rejects legislation submitted by the US Treasury Department requesting authority to purchase troubled assets from financial institutions. Markets tumble worldwide.
3 October 2008	Congress passes and President Bush signs into law the Emergency Economic Stabilization Act of 2008, which establishes the \$700 billion Troubled Asset Relief

Date	Event
	Program (TARP).
8 October 2008	The Federal Reserve Board authorizes the Federal Reserve Bank of New York to borrow up to \$37.8 billion in investment-grade, fixed-income securities from American International Group (AIG) in return for cash collateral.
14 October 2008	US Treasury announces the Troubled Asset Relief Program (TARP) that will purchase capital in financial institutions under the authority of the Emergency Economic Stabilization Act of 2008. The US Treasury will make available \$250 billion of capital to US financial institutions. This facility will allow banking organizations to apply for a preferred stock investment by the US Treasury. Publicly, the plan proves to be very politically unpopular.
14 November 2008	US Treasury purchases a total of \$33.5 billion in preferred stock in 21 US banks under the Capital Purchase Program.
21 November 2008	The US Treasury Department purchases an additional \$3 billion in preferred stock in 23 US banks under the Capital Purchase Program.
5 December 2008	The US Treasury Department purchases an additional \$4 billion in preferred stock in 35 US banks under the Capital Purchase Program.
12 December 2008	The US Treasury Department purchases an additional \$6.25 billion in preferred stock in 35 US banks under the Capital Purchase Program.
19 December 2008	The US Treasury Department purchases an additional \$27.9 billion in preferred stock in 49 US banks under the Capital Purchase Program.
23 December 2008	The US Treasury Department purchases an additional \$15.1 billion in preferred stock in 49 US banks under the Capital Purchase Program.
12 January 2009	At the request of incoming President Barack Obama, President Bush submits a request to Congress for the remaining US\$350 billion in TARP funding for use by the incoming administration.



## 12 Appendix C: Summary of Case Studies

	Yamaichi Securities	Lehman Brothers	Long-Term Credit Bank of Japan	Fannie Mae
<b>Domicile</b>	Japan	US	Japan	US
<b>Founded</b>	1897	1850	1952	1938
<b>Description, Prior to Crisis Event</b>	Securities Brokerage Firm / Investment Bank	Securities Brokerage Firm / Investment Bank	Long-Term Credit Bank	Secondary Mortgage Market Liquidity Provider (Publicly-Traded Government-Sponsored Enterprise)
<b>Background, Prior to Crisis Event</b>	<p>Prestigious name, storied history.</p> <p>One of Japan's "Big Four" brokerage firms (along with Nomura, Nikko, Daiwa).</p> <p>Smallest firm of the Big Four.</p>	<p>Prestigious name, storied history.</p> <p>One of the US's big five independent brokerage firms (along with Goldman Sachs, Morgan Stanley, Merrill Lynch, Bear Sterns).</p> <p>Second-smallest firm of the five biggest independents (smallest, after the takeover of Bear Stearns by JPMorgan Chase in March 2008).</p>	<p>Initially created by government charter to serve a vital public function (financing basic industries through exclusive license to issue long-term debentures).</p> <p>Listed on the Tokyo Stock Exchange and publicly-traded since 1970.</p>	<p>Initially created by government charter to serve a vital public function (ensuring the availability of sufficient funds and liquidity to mortgage lenders, thereby indirectly enabling more financing options to encourage home ownership).</p> <p>Converted into a publicly-traded, shareholder-owned corporation in 1968 and listed on the New York Stock Exchange.</p>
<b>Success Factors During Boom / Bubble Years</b>	Financial sector deregulation that began in the early 1980's allowed Japanese companies to go directly to the capital markets for financing – as an	Lehman's asset management business benefited greatly from the secular bull market in US equities, which essentially lasted between 1983 and 2007.	Although financial sector deregulation that began in the early 1980's eroded LTCB's large corporate client base, the booming Japanese economy meant	Because of its status as a government-sponsored enterprise, Fannie Mae enjoyed preferential funding rates since the market

	<b>Yamaichi Securities</b>	<b>Lehman Brothers</b>	<b>Long-Term Credit Bank of Japan</b>	<b>Fannie Mae</b>
	<p>investment bank, Yamaichi provided underwriting services for many of these companies' debt and equity issues.</p> <p>Soaring Japanese markets during the 1980's meant corporate and individual clients that invested with Yamaichi grew wealthier – Yamaichi's revenues from fees and service charges increased accordingly.</p>	<p>Burgeoning US real estate markets (approximately between 1997 and 2005) facilitated the marked increase in the practice of securitizing mortgage loans. As a major player in the securitization of mortgage-backed securities, Lehman generated high fees and profits.</p>	<p>the bank still profited handsomely as riskier clients (e.g., real estate and construction companies) flourished during Japan's bubble years.</p>	<p>implicitly considered the firm's credit backed by the US government.</p> <p>Burgeoning US real estate markets (approximately between 1997 and 2005) facilitated the marked increase in the practice of securitizing mortgage loans. As a major player in the securitization of mortgage-backed securities, Fannie Mae generated high fees and profits.</p>
<b>Impetus / Triggers for Impending Crisis Event</b>	<p>After peaking in late 1989, sharply declining Japanese markets meant clients who had invested with Yamaichi had lost a lot of money.</p> <p>Yamaichi resorted to an illegal <i>tobashi</i> scheme to mollify large, disgruntled clients that had lost money. Being implicated in such unethical practices seriously damaged the reputation of the firm.</p> <p>The absence of any significant recovery in Japanese equity</p>	<p>US housing prices peaked in late 2005 and began to a sharp decline thereafter. This caused high default rates on subprime mortgages.</p> <p>A large player in the securitization of mortgages, Lehman was left holding vast quantities of illiquid securities based on bad mortgages. Lehman recorded heavy losses and its balance sheet deteriorated terribly.</p> <p>Lehman needed to</p>	<p>Economically sensitive client base suffered terribly after the bursting of the asset bubble. As a result, LTCB was left with a crippling amount of non-performing loans.</p> <p>Economic stagnation throughout the 1990's meant little chance of balance sheet recovery.</p> <p>Asian Financial Crisis of 1997 exacerbated negative conditions in the Japanese financial sector.</p>	<p>US housing prices peaked in late 2005 and began to a sharp decline thereafter. This caused high default rates on subprime mortgages.</p> <p>A large player in the securitization of mortgages, Fannie Mae was left holding vast quantities of illiquid securities based on bad mortgages. Fannie recorded heavy losses and its balance sheet deteriorated terribly.</p> <p>Worsening economic</p>

	<b>Yamaichi Securities</b>	<b>Lehman Brothers</b>	<b>Long-Term Credit Bank of Japan</b>	<b>Fannie Mae</b>
	<p>prices weighed heavily on Yamaichi's operating performance and deteriorating balance sheet.</p> <p>Asian Financial Crisis of 1997 exacerbated negative conditions in the Japanese financial sector.</p>	<p>raise more capital to shore up its balance sheet, but willing investors dissipated as the intensity of the financial crisis increased.</p> <p>Lehman rival Bear Sterns was JPMorgan Chase in March 2008 at a bargain basement price. Shockwaves re-verberated through markets and confidence plummeted.</p> <p>Lehman's last-ditch efforts to sell itself to either Bank of America or Barclays Bank failed during the weekend of 13-14 September 2008.</p>		<p>conditions and an accelerated credit crunch owing to the financial crisis put Fannie Mae's solvency at serious risk, in spite of assurances from the US government, during Summer 2008.</p>
<b>Crisis Event</b>	Announced on 24 November 1997 the firm was ceasing operations (de facto bankruptcy).	Filed for bankruptcy protection on 15 September 2008.	Announced on 23 October 1998 that the bank would be nationalized by the Japanese government.	Placed in the conservatorship of the Federal Housing Finance Agency on 7 September 2008 (de facto nationalization).
<b>Government Response</b>	Presumably deciding that Yamaichi was not too big to fail and holding steadfast to the principles of Big Bang, the Japanese government let Yamaichi fall into bankruptcy.	US authorities were adamant that no bailout would be forthcoming for Lehman during its final days, and they stuck to their word, letting Lehman fall into bankruptcy.  However, US	Japanese authorities officially nationalized LTCB on 28 October 1998.  Thereafter, LTCB was restructured under Japanese government stewardship.	US authorities placed Fannie Mae into conservatorship on 7 September 2008.  The US government's future plans for Fannie Mae are currently undecided.

	Yamaichi Securities	Lehman Brothers	Long-Term Credit Bank of Japan	Fannie Mae
Market Response	To avert panic in the financial markets, Japanese authorities reiterated that investors affected by the Yamaichi insolvency would be protected.	authorities struggled in getting a rescue plan in place when markets panicked in the Lehman aftermath.	In March 2000, LTCB was sold to a consortium led by US private equity firm Ripplewood Holdings.	
	Nikkei 225 and Nikkei Bank Index fell -5.1% and -7.7%, respectively, on Tuesday, 25 November 1997, the day after Yamaichi's failure.	The S&P 500 slid -4.7% and the KBW Bank Index tumbled -8.4% on 15 September 2008, the day Lehman filed for bankruptcy.	Nikkei 225 and Nikkei Bank Index fell -2.1% and -3.0%, respectively on Monday, 26 October 1998, the first trading day after it was announced that LTCB would be nationalized.	The S&P 500 increased +2.1% and the KBW Bank Index jumped +6.9% on 8 September 2008, the day after Fannie Mae was placed in conservatorship.
	After the initial shock, both the Nikkei 225 and the Nikkei Bank Index recovered most of its losses by Friday, 28 November 1997 (-0.5% and -1.3%, respective 1-week returns).	1-week to 19 September 2008, the S&P 500 recovered +0.2% and the KBW Bank Index soared +16.3%, as investors speculated on a bailout for the beleaguered financial sector.	1-week to Friday, 30 October 1998, the Nikkei 225 was down -4.1% and the Nikkei Bank Index had fallen -3.5%.	1-week to 12 September 2008, the S&P 500 increased slightly +0.7% and the KBW Bank Index rose +3.2%.
	However, risk appeared heightened in the money markets. The 3-month, Japanese Yen Tokyo Interbank Offered Rate (TIBOR) leapt from 61 basis points (bps) to 116 bps between 21 November 1997 (the last trading day before Yamaichi's failure) and 30 December 1997 (the last trading day of the year).	As a measure of risk in the money market, the calculated TED spread spiked 66 bps (from 135 bps, close spread on Friday, 12 September 2008 to 201 bps) on Monday, 15 September 2008, the day Lehman filed for bankruptcy. As the week progressed, panic ensued and by Thursday, 18	Risk in the money markets was largely unmoved by LTCB's nationalization. The 3-month TIBOR increased slightly from 69 bps to 75 bps between 23 October 1998 (the last trading day before announcement of LTCB's nationalization) and 30 December 1998 (the last trading day of the year).	As a measure of risk in the money market, the calculated TED spread increased slightly by 8 bps (from 104 bps, close spread on Friday, 5 September 2008 to 112 bps) on Monday, 8 September 2008, the day after Fannie Mae was placed in conservatorship. As the week progressed, the TED spread opened up to closing at 135 bps

	Yamaichi Securities	Lehman Brothers	Long-Term Credit Bank of Japan	Fannie Mae
<b>Impact, Results</b>		September 2008, the TED spread was at 313 bps.		on Friday, 12 September 2008, before the Lehman fiasco.
	<p>The Japanese administration's decision to let Yamaichi go under can be considered a turning point of sorts in the solving of the Japanese banking crisis.</p> <p>It underscored Japan's commitment to the principles of Big Bang and sent a message that poorly managed firms that were deemed not to have significant systemic risks would not be bailed out with taxpayers' money.</p> <p>Instead, Japan's emphasis on protecting investors seemed well-received.</p> <p>The equity market's short-term (1-week) reaction appeared supportive of the Japanese government's decision to let Yamaichi fail.</p> <p>However, indications in the Japanese money market to the end of 1997 suggested</p>	<p>Fearful of encouraging moral hazard, the US government was resolute in not using taxpayers' money to bailout Lehman.</p> <p>Equity markets gyrated wildly, and traded in overreacted fashion on every bit of potentially material information.</p> <p>The panicked spike in the TED spread provided a scary pulse on the severity of the situation around the time of Lehman's failure.</p> <p>Similar to Japan's experience with the Yamaichi situation, the US government needed to let a big-name like Lehman go under to ensure that the financial sector was clear that the US taxpayer should not underwrite needless risk-taking.</p> <p>However, it appears that the US government</p>	<p>The Japanese government made the assertion that LTCB was simply too large to fail, and the systemic risks – had it been allowed to do so – would have been too great.</p> <p>Investigation and prosecution of LTCB's former management for wrongdoing sent a strong message that regulations would be rigorously enforced and presumably helped bolster confidence in the financial system.</p> <p>In the short-term, equity markets cheered (were relieved?) by the Japanese government's decision to nationalize LTCB.</p> <p>The money market remained largely unchanged to the end of 1998, suggesting that risk in the financial system hadn't been completely diffused, but hadn't dramatically</p>	<p>Fannie Mae was too vital to the US financial system to fail. The US government's de facto nationalization of the GSE is testament to this line of thinking.</p> <p>In the short-term, equity markets were relieved by the US government's actions and rallied. However, the Lehman failure was only a week away at this time.</p> <p>The money market did not necessarily panic at Fannie Mae's nationalization but also did not price in a lower level of risk in the financial system, either. The suspicions in the money market were proven a week later after the Lehman failure, when panic broke loose.</p> <p>Currently, Fannie Mae continues its function as secondary mortgage market liquidity provider under US</p>

	Yamaichi Securities	Lehman Brothers	Long-Term Credit Bank of Japan	Fannie Mae
	<p>that risks in the financial system were still apparent (which were proven given other failures, such as the LTCB 11 months after the fact).</p>	<p>has had little choice but to provide an unprecedented amount of stimulus to stem the worsening of the credit crunch and the economy as a whole, and its fumbling in getting a rescue package together may have negatively affected the economy as a whole.</p>	<p>increased either.</p> <p>Nevertheless, the proactive nationalization of LTCB reiterated to the market that the Japanese government would work expediently to do what was necessary in the best interests of the financial sector and the economy as a whole.</p> <p>LTCB's ambitious re-structuring under Japanese government stewardship is commendable though its hurried sale to Ripplewood Holdings in 2000 garnered criticism that Japan did not get full value for taxpayers.</p> <p>However, Shinsei's (LTCB's new name) anemic performance since its 2004 IPO suggests, perhaps, the Japanese government did not sell too cheaply after all.</p>	<p>government stewardship. Its future role in financial markets, however, is unclear.</p> <p>Still, some assertions can be made. For instance, the confused accountability of Fannie Mae led to improper governance. Risk-taking at Fannie Mae was excessive; moral hazard was certainly at play. These issues clearly need to be rectified.</p>

	Yamaichi Securities	Lehman Brothers	Long-Term Credit Bank of Japan	Fannie Mae
<b>Key Lessons</b>	<ul style="list-style-type: none"> <li>• The market must be allowed to punish poorly managed firms, as illustrated with the case of Yamaichi.</li> <li>• Where a financial institution's viability as a going concern will have a significant impact on the health of the financial sector and economy as a whole, authorities must be willing to take dramatic and expensive measures (i.e., taking an equity stake, nationalization), even if such measures are politically unpalatable. Long-Term Credit Bank of Japan's nationalization is a textbook case of this, as is that of Fannie Mae.</li> <li>• However, extraordinary government intervention should be used judiciously, and only where necessary, so as not to exacerbate the potential for moral hazard.</li> <li>• This said, there is reason to support the notion that firms that have become "too big to fail" may also be "too big to make all of their own decisions."</li> <li>• For the sake of market and consumer confidence, financial regulations must be kept current with market developments and be stringently enforced to discourage against wrongdoing and unethical behaviour. Yamaichi's involvement with the tobashi scheme is one example of how such wrongdoing is damaging to confidence.</li> <li>• Prudential rules concerning the solvency of financial institutions must be rigorously enforced, given the central role that banks and financial companies play in a modern economy. The speed of the collapses of Lehman and Fannie Mae suggest that more may need to be done with respect to evaluating the off-balance sheet transactions of financial companies.</li> <li>• The management of a financial institution (and any publicly traded company, for that matter) must be taken to task if the public disclosure does not accurately reflect the going situation of the financial institution, as was with the case of the Long-Term Credit Bank of Japan. The significance of consumer and market confidence cannot be overstated and accurate disclosure is essential.</li> <li>• Governments must be willing to undertake bold action to reform weaknesses in the ever-changing financial sector, even if such measures are politically unpopular.</li> </ul>			

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