

Financial crisis: neither the first nor the last A return on historical crisis of the past 30 years

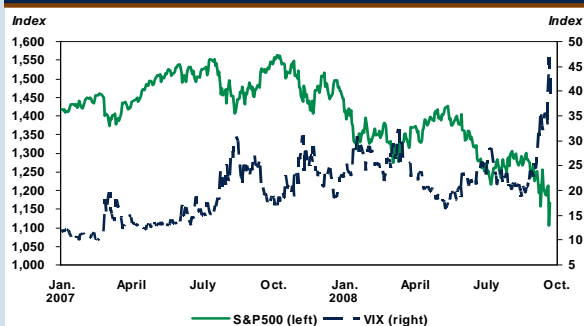
The crisis currently rocking the world's financial system recently took a near-apocalyptic turn (graphs 1 and 2). Within the same week, two of the largest investment banks in the United States stopped doing business and the biggest insurance company in the country had to be rescued by the financial authorities, forcing the Treasury to hammer out a far-reaching rescue plan.

While the sums of money needed to contain the effects of this crisis are staggering and without precedent, financial crises have a long and storied history. A study by the International Monetary Fund (IMF) showed that since 1970, approximately 125 systemic banking crises have been recorded around the world.

In this three-part series, we will try to determine whether the US\$700B bailout proposed by the U.S. Treasury will be sufficient to restore order to the financial system. We will also assess the potential impact the significantly increasing public debt will have on real interest rates, the U.S. dollar and the current account balance. In the mean time, this *Economic Viewpoint*, we will trace the history of previous financial crises. To contain our research and draw a relevant parallel with the mortgage credit crisis currently unfolding, we will limit our recounting of history to the banking crises that posed a systemic risk to the global financial system. We will summarize the main causes behind the crises and list the potential repercussions that could ripple through the economy and financial markets.

A look back at previous episodes shows that the triggering elements and duration of any financial crisis vary widely from one episode to the next. However, what we can draw from the past is that after instituting a host of measures to limit the bleeding, in most cases a full resolution is only obtained once the State has taken swift and decisive action. It now seems clear that the outcome of the current subprime mortgage loan crisis rests on the inevitable adoption of the Paulson Plan.

Graph 1 – The crisis reached a climax in September



Sources: Datastream and Desjardins, Economic Studies

Graph 2 – Markets have turned risk averse



* vs. U.S. bonds.
Sources: Datastream and Desjardins, Economic Studies

François Dupuis
Vice-President and Chief Economist

Hendrix Vachon
Economist

Martin Lefebvre
Senior Economist

Yves St-Maurice
Director and Deputy Chief Economist

514-281-2336 or 1 866 866-7000, ext. 2336
E-mail: desjardins.economics@desjardins.com

NOTE TO READERS: The letters **k**, **M** and **B** are used in texts and tables to refer to thousands, millions and billions respectively.

IMPORTANT: This document is based on public information, obtained from sources that are deemed to be reliable. Desjardins Group in no way guarantees that the information is complete or accurate. The document is provided solely for information purposes and does not constitute an offer or solicitation for purchase or sale. The document may under no circumstances be construed as a commitment by Desjardins Group, which takes no responsibility for the consequences of any decision made based on the information herein. The prices and rates shown are for information purposes only as they may change at any time based on market conditions. Past returns are no guarantee of future performance, and Desjardins Group does not hereby purport to provide any investment advice. The opinions and forecasts contained herein are, unless otherwise indicated, those of the document's authors and do not represent the official position of Desjardins Group. Copyright © 2008, Desjardins Group. All rights reserved.

CAUSES AND REPERCUSSIONS

In the past few decades, many financial crises have occurred that were caused by many different and multiple factors. These crises reflected failures in a country's banking system (like weak balance sheets or excessive credit), unsuitable macroeconomic policies (for example exchange rate system and high foreign debt) or massive inflows of foreign capital. Most crises have occurred in developing countries grappling with severe structural problems, ill-defined financial markets that are poorly regulated, and a general lack of competence and know-how from local authorities. However, this does not mean that industrialized countries are immune to financial crises; many have already had their fair share.

Given the flexible exchange rate regime that we usually associate with an industrialized economy, the financial crises that have occurred in the past 30 years were mostly bank-related. A banking crisis occurs when financial institutions are no longer able to repay their short-term loans. The result can be an increase in the number of defaults by businesses that in turn leads to a marked increase in under-performing loans and a depletion of bank capital. A crisis is sometimes triggered when there's a bank run—usually when there's a widespread loss of confidence among small savers—but mostly, crises reflect the difficulties of financial institutions, that could pose a systemic risk (see box below for an overview of the different types of financial risks).

Financial crisis can cause widespread damage to a country, which can infect the entire planet through the effects of contagion. To begin with, the crisis reverberates mainly through the financial markets via a stock market—or real estate market—correction. That said, any further aggravation of the crisis can lead to a marked deterioration of the real economy, i.e. a recession. This generally starts with tighter credit conditions, which leads to a drop in investment and consumer spending.

FINANCIAL CRISES: A BRIEF HISTORY OF PAST EPISODES¹

In the United States alone, at least six financial crises have been recorded. Taking into account the Great Depression of the 1930s, the United States is in fact going through its third major crisis, and that country's history has been impacted by three other banking crises that were smaller in scope. As such, without minimizing the severity and complexity of the current crisis, this episode falls within the “standard” scope of the history of finance and economics in the United States.

U.S. financial crisis of 1966

The first financial crisis of modern times erupted in 1966. At a time when the Federal Reserve (Fed) was trying to combat an overheated economy by adopting a restrictive monetary

¹ See the [Special report on financial crises](#) (available in French only).

A few definitions of risk

Risk refers to the probability that a danger, a financial loss or other unfortunate event could occur. In the world of finance, there are three types of risk: systemic risk, specific risk and systematic risk.

Systemic risk: This risk suggests that a major dysfunction exists in the financial system across a wide geographic zone or worldwide through intersecting commitments made by different market players. This risk can be reduced through diversification. Oversight of financial markets reduces systemic risk, but when this risk rears its ugly head, the central banks—as the last-resort lenders—are the only ones who can solve the problem.

Specific risk: This risk is specific to individual businesses. The risk elements usually affect a single specific business without spreading to the overall sector. These elements include poor company management, losses on bad investments, a fire on company property, internal sabotage, etc.

Systematic risk: Also called market risk, this risk is attributed to general fluctuations in the markets and in different economies. Unlike specific risk, systematic risk affects an entire business sector, perhaps even several sectors when business activities are interrelated. The risk can pertain to economic growth, interest rates, inflation, currency exchange rates, prices for raw materials, climate conditions, etc.

In terms of portfolio management, systematic risk caused by general fluctuations in the market is the most difficult to eliminate through diversification. However, the specific risk related to each security held in an individual portfolio can be reduced through proper diversification.

policy, the crisis unravelled on the heels of a much-too-sharp increase in the number of business loans granted. To find the funds they needed, banks liquidated their bond assets that carried less risk. In addition to increasing the risk incurred by financial institutions, this exerted upward pressures on bond rates and increased the rate spreads on the credit market.

- To resolve this crisis, the Fed had to intervene by granting longer-term loans to banks, on the condition that they reduce their business financing.

U.S. crisis of 1969

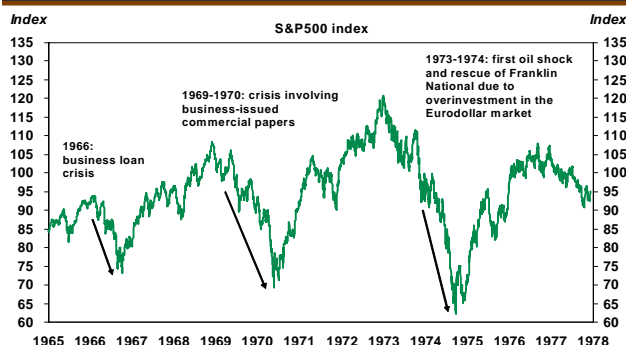
In 1969, instead of turning to banks to seek financing, businesses started issuing short-term debt securities in the form of commercial paper. Prior to being issued, the businesses would secure a line of credit from a bank they could use when the holder of the commercial paper would not buy back the paper at maturity. The problems began in the first quarter of 1970 when a major railway company, Penn Central, declared bankruptcy and all those who held commercial papers started to worry. The credit spreads quickly increased and the major concern was that banks would be unable to meet their commitments on the pre-approved lines of credit extended to businesses.

- To resolve the situation, the Fed once again extended funds to businesses in distress to help them meet their commitments, which, in practice, guaranteed the commercial papers.

U.S. crisis of 1974

In 1974, a third financial crisis less than 10 years later rocked the U.S. banking system (graph 3). At this time, the Franklin National Bank had adopted an aggressive expansion strategy in Europe that was funded by massive borrowing on the Eurodollar market via negotiable deposit certificates. The

Graph 3 – Credit crisis of 60s and 70s: proximity of crises hurt stock market growth



Sources: Datastream and Desjardins, Economic Studies

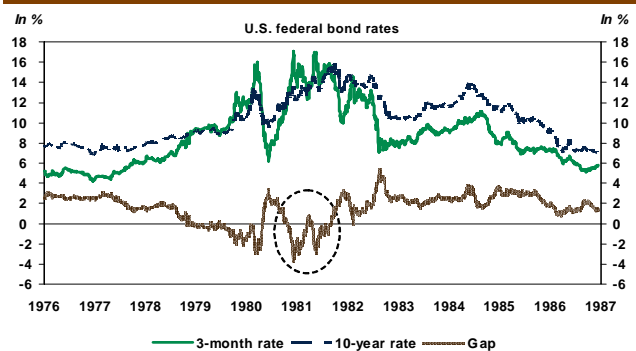
weakness of the U.S. dollar, coupled with poor economic conditions caused by the recent oil shock and rising inflation due to a restrictive monetary policy, pushed the bank to the brink of bankruptcy in May 1974. Concerns that setbacks at Franklin National would have a very negative impact on the deposit certificate market, and the U.S. dollar compelled the State to intervene once again.

- The Fed resolved to lend the sums needed to support the bank until the credit crisis and the inflationist thrust had dissipated. Despite this intervention, Franklin National Bank declared bankruptcy on October 8, 1974.

The Savings and Loan crisis (1986-1992)

A regulation stemming from the New Deal of 1933 was at the core of the crisis that gave rise to the Savings and Loan (S&L) debacle during the 1980s. Distressed by a mismatched balance-sheet structure while assets were to be invested in fixed-rate, long-term real estate loans and liabilities rose from short-term deposits, the S&Ls had trouble dealing with the inverted interest rate curve due to the Fed's restrictive monetary policy designed to fight inflation (graph 4). In an environment of deregulated banking with little oversight, economic difficulties and a bad blend of monetary and fiscal policies, 118 deposit institutions ended up seeking protection and the Federal Savings and Loan Insurance Corporation (FSLIC) picked up the tab for US\$3.5B.

Graph 4 – The inverted yield curve was costly for S&Ls in the first half of the 80s



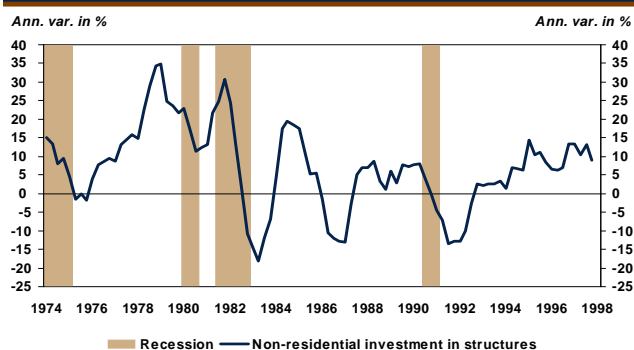
Sources: Bloomberg and Desjardins, Economic Studies

In an effort to restore profitability to S&Ls, regulations were slackened to allow them to diversify their activities. No longer limited to the residential real estate market, financial institutions took on more risk by staking important positions in consumer credit and in commercial real estate.

As of 1986, several other shocks set the pool of oil on fire. The drop in oil prices and raw materials hurt the economy of

several U.S. states, pushing the commercial real estate sector—stimulated by easy credit and accommodating tax policies—to drop sharply. At the end of the 1980s, the number of defaults began to rise. The weak economy and the decline in real estate spread across the United States and the number of S&Ls in distress exploded (graph 5).

Graph 5 – S&L crisis reflected bursting of commercial real estate bubble in the 80s



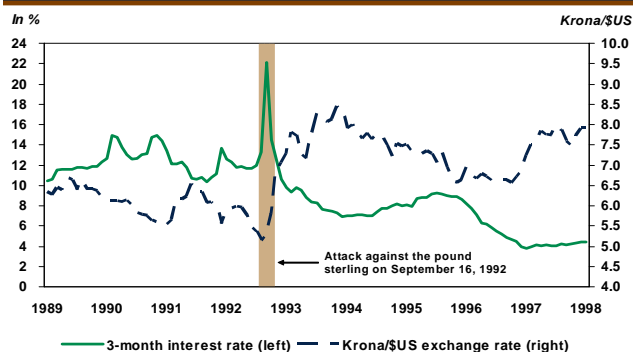
Sources: Datastream and Desjardins, Economic Studies

- At the end of 1987, the FSLIC's coffers were replenished with US\$10.8B to reimburse depositors and close bankrupt institutions. This measure proved to be insufficient. In August 1989, a US\$115B plan was rolled out to close or sell insolvent businesses, reimburse depositors and replenish the FSLIC. The total net cost of this crisis reached close to \$153B, of which US\$123B was absorbed by U.S. taxpayers.

Banking crisis in Sweden (1990-1992)

Deregulation and a drop in real estate prices also shook up other OECD (Organization for Economic Cooperation and Development) countries. The Scandinavian countries, especially Sweden, have felt the sting of a severe banking crisis. In addition to causes shared by most industrialized countries, Sweden also suffered from a surge in currency speculation and the fact that banks held many loans in dollars. While the real estate crisis was hitting, pressures on the currency mounted and the authorities were forced to devalue the Swedish krona (graph 6), which only added to the debt load of banks that were already dealing with serious difficulties. The Swedish economy was also reeling from interest rates that had reached dizzying proportions—an attempt by the monetary authorities to prevent any currency devaluation. With banks awash in currency debt, a devalued currency, and the collapse of real estate assets, nothing was going right in Sweden's financial system or its economy.

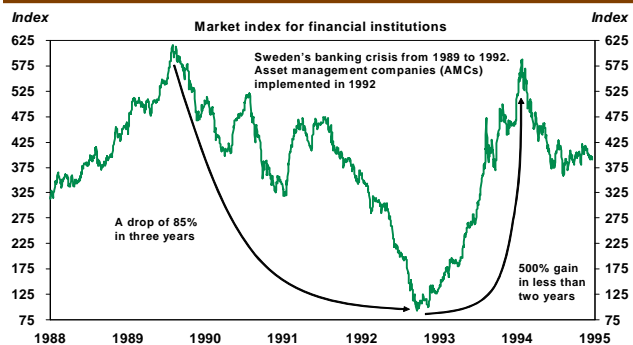
Graph 6 – The krona was devalued after George Soros' attack on European currencies



Sources: Datastream and Desjardins, Economic Studies

- To prevent the financial system from collapsing, the State had to take the bull by the horns (graph 7). The banks were nationalized and their bad assets were taken over by independent entities, known as asset management companies. Almost 12 billion was needed to roll out this plan, about 4% of the Swedish GDP. However, a large portion of this sum was recovered when the assets were resold on the market.

Graph 7 – The Swedish government plan corrected the situation rapidly



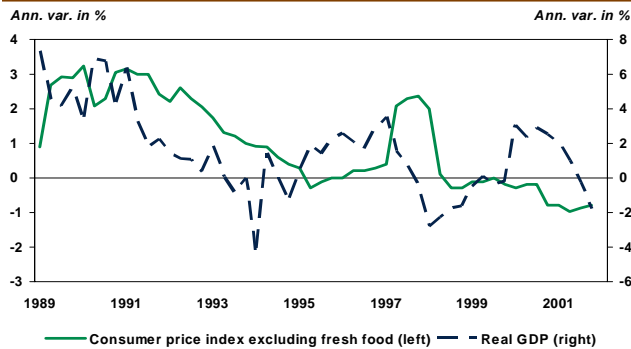
Sources: Datastream and Desjardins, Economic Studies

Japan (1990-2000)

In Japan, the financial liberalization destabilized the foundations of a system that relied on close ties between the banks, business and the State. As in other countries around the world, Japan's economy saw its stock market and real estate prices rise sharply in the 1980s. In fact, the banks held major stock and real estate portfolios. Their advances appeared to inflate the solvency of banks, which only increased their capacity to give credit. Japan was not spared from the global interest rate hikes at the end of the 1980s and the reverse trend by asset markets that followed. When the bubble burst in early 1990, the repercussions quickly rippled

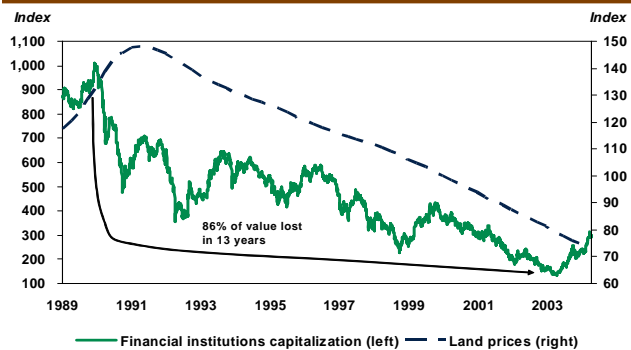
through the credit market and economic growth. In the absence of swift and decisive State intervention, the financial and economic difficulties persisted throughout the decade (graph 8). Incidentally, the Japanese banks were not compelled to disclose their losses based on the drop in their asset prices, which kept financial institutions that were in precarious situations on artificial life support (graph 9).

Graph 8 – Japan experienced a long period of economic stagnation after markets tumbled



Sources: Datastream and Desjardins, Economic Studies

Graph 9 – State inaction and lack of transparency hurt profitability of financial institutions



Sources: Datastream and Desjardins, Economic Studies

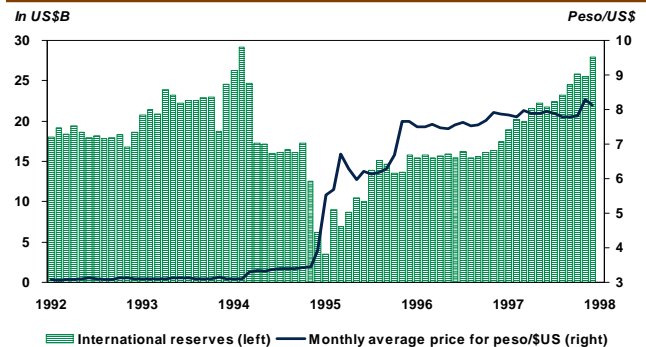
- The State finally decided to intervene in 1998. The cost to taxpayers of the various measures adopted was approximately \$500B, or 12% of Japan's GDP. The funds were allocated to clean up the banks' balance sheets (recapitalization, nationalization and buy-back of bad debt) and to kick-start the economy. At the same time, a highly accommodating monetary policy was adopted.

Mexican peso crisis of 1994-1995

The crisis involving the Mexican peso was caused by a confluence of four factors: a fixed and overvalued exchange rate, a current account deficit, an over-reliance on foreign

capital and a fragile banking sector. The current account deficit suggested that the peso was overvalued, which required additional efforts from the authorities to maintain the currency exchange value. Interest rates were to remain high and foreign currency reserves were highly sought after. In December 1994, these efforts were deemed insufficient to cover Mexico's commitments and devaluation seemed inevitable. Foreign investors started to withdraw their assets from the country in droves, which only intensified the pressures on foreign reserves and interest rates. The peso was devalued and left to free float (graph 10). At the same time, it became more expensive for Mexicans to repay their debts using foreign currency, which paralyzed the economy and the financial system. The crisis also had important repercussions on American and Canadian markets.

Graph 10 – Weak level of international reserves of Mexican currency led to peso's devaluation



Sources: Datastream and Desjardins, Economic Studies

- Confronted with the meltdown of their new trade partner's² economy and financial system, the U.S. intervened with a \$9B loan, in addition to a \$12.5B swap in exchange for future oil revenues. The IMF also contributed to the rescue by granting a \$17.8B loan.

Asian financial crisis of 1997-1998

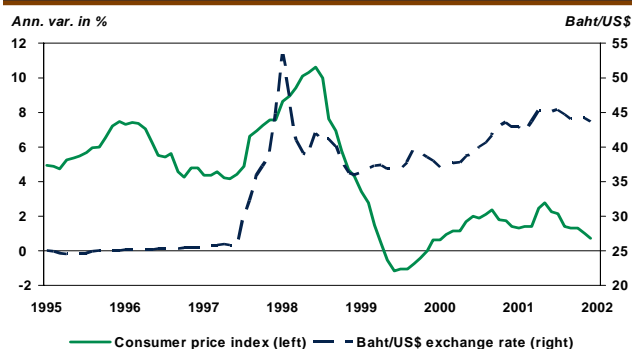
In the 1990s, emerging countries benefited from mass capital inflows to fund their many investments. At the end of 1996, an inflation surge, due to over-investment and an over-heated economy, and a slowdown in exports have exerted downward pressures on Asian currencies. Since all debt incurred was short term and in U.S. dollars, the depreciation of local currencies increased debt repayment costs. Central banks tried to limit falling currency values by upping interest rates,

² The North American Free Trade Agreement (NAFTA), signed by Canada, the United States and Mexico, entered into effect on January 1, 1994.

but the effort was in vain. A wave of currency devaluations unfurled (graph 11) that increased the risk premium on loans granted to emerging countries. In the midst of this financial squeeze, Russia imposed a 90-day moratorium on its debt payments. This situation led to the near bankruptcy of the Long-Term Capital Management (LTCM), a U.S. hedge fund that held more than 50% of Russian bonds and was an important player in the issuances made by several emerging countries. Since the fund itself was financed by large banks and American brokers, its failure threatened the United States and international financial systems.

Wall Street and a few European banks. The global systemic crisis was avoided, but several emerging countries were left weakened by the upheaval, and the IMF was required to provide substantial financial support.

Graph 11 – Thailand opened devaluation floodgates on July 2, 1997



Sources: Datastream and Desjardins, Economic Studies

➤ In response to these events, the Fed cut its key interest rates and orchestrated the rescue of the LTCM through the main investment banks on

CONCLUSION: STATE INTERVENTION REQUIRED

The triggering elements, the scope and lastingness of any financial crisis vary. We can however draw several conclusions from previous episodes. First of all, in most cases, credit crises were usually led by a major correction in real estate. The crisis we are currently dealing with will not buck this trend.

After adopting many measures designed to contained the bleeding, it appears a full resolution can only occur once the State has intervened in a decisive, quick and targeted fashion, regardless of the underlying causes or origins of the crisis. It is often a big problem for the State to intervene during a financial crisis. The State finds itself rescuing people or institutions that are partly responsible for the crisis. The ideal remedy revitalizes the markets, restores confidence and kick-starts the credit wheel, but it must also include measures that discourage bad behaviour moving forward. The IMF concluded that 86% of systemic banking crises required government-sponsored restructuring plans that included closing banks, nationalizing banks, or merging banks. In many cases the fiscal costs were extreme, reaching on average 13.3% of the GDP (table 1).

**Table 1
Summary of recent crises**

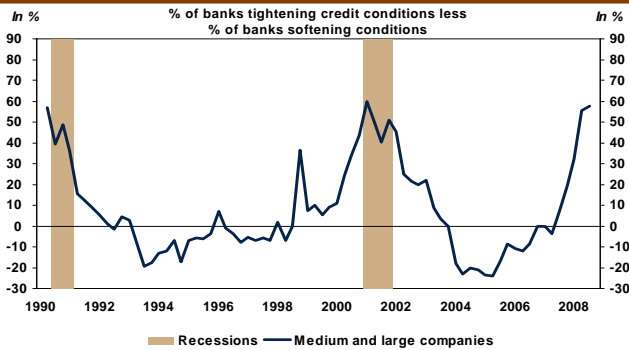
	Share of NPLs* at peak	Gross fiscal cost (in % of GDP)	Output loss (in % of GDP)	Solutions
Crisis of S&L 1986-1992	4.1	3.7	4.1	\$153B to close and sell the insolvent institutions: 3% of GDP
Banking crisis in Sweden 1990-1992	13.0	3.6	0.0	Nationalization of banks at a cost of \$12B, i.e. 4% of GDP
Japanese crisis 1990-2000	35.0	24.0	17.6	\$500B plan to clean up the balance sheets of banks and revive the economy: 12% of GDP
Mexican peso crisis 1994-1995	18.9	19.3	4.2	Using \$21.5B from the United States with a loan of \$17.8B granted by the IMF
Asian crisis (Thailand) 1997-1998	33.0	43.8	97.7	LTCM rescue orchestrated by the Fed and IMF intervention

* Non performing loans.

Sources: International Monetary Fund and Desjardins, Economic Studies

That said, the repercussions can be far more expensive by not acting. If the situation is not rectified quickly, the tendency of banks to further tighten credit conditions for consumer loans and investment can lead to a severe and long-lasting recession (graph 12). In the classic case of Japan, which maintained counter-productive fiscal and monetary policies at the worst of the crisis, the situation translated into deflation that can still be felt almost 20 years after the real estate correction was triggered in that country at the end of the 1980s.

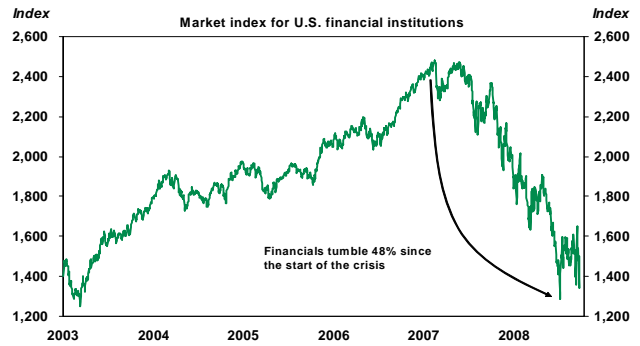
Graph 12 – Credit conditions becoming increasingly difficult in the United States



Sources: Federal Reserve Board and Desjardins, Economic Studies

In this context, it seems clear that the outcome of the current subprime mortgage loan crisis rests on the inevitable adoption of the Paulson Plan. It remains to be seen whether the Plan will meet expectations and restore some semblance of order to the U.S. financial system (graph 13). In our opinion, other than buying back securities that are in distress, the Plan will

Graph 13 – The subprime crisis had a significant impact on the financial system's health



Sources: Datastream and Desjardins, Economic Studies

have to delve into the heart of the problem: stabilizing the real estate market in the United States. This will no doubt require direct government intervention on household mortgage loans that are in trouble in order to limit the number of defaults and put a stop to foreclosures. We will discuss this further in our next *Economic Viewpoint*.

François Dupuis
Vice-President and Chief Economist

Martin Lefebvre
Senior Economist

Hendrix Vachon
Economist