

COLLATERAL Damage

The cost for Canada of the U.S. subprime fiasco.

BY LAURENCE BOOTH

“UNREGULATED financial markets do not work. Canada has known that for a long time. I thought, frankly, we all knew that from events of many decades ago—but obviously the United States went on a different path.” Canadian Prime Minister Stephen Harper.¹

To have a Conservative Prime Minister criticize his Republican counterparts south of the border on economic and financial policy is quite remarkable. However, there are good grounds for Canada to feel angry about what has happened. We have a strong economy, ten years of balanced budgets, low inflation, record low unemployment, declining tax rates and a stable financial system. Yet no matter how strong our economy and sensible our financial policies, we are not immune to what is happening in the U.S.: our investment portfolios are being whacked along with theirs and the U.S. recession is now beginning to have an impact in Canada. So it is reasonable to ask how on earth did this happen?

Over the last year we have seen the following institutions fail, be taken over or brought under state control: Fannie Mae, Freddie Mac, Washington Mutual, Wachovia, Bear Stearns, Lehman Brothers, Merrill Lynch, AIG and National City in the U.S., Bradford and Bingley, Northern Rock and HBOS in the UK, Fortis in Belgium, Netherlands and Luxembourg, and Hypo Real Estate Holdings in Germany. Not only have banking institutions failed, the

nation of Iceland had to seek a \$6 billion bailout from Russia, and both Hungary and the Ukraine had to seek emergency loans from the International Monetary Fund (IMF). And the fallout is not over yet. U.S. hedge funds and investors are repatriating cash to the U.S. en masse to meet margin calls and redemptions leading to huge drops in international stock markets and an appreciating U.S. dollar.

And Canada? With the collapse in the price of oil from a high of \$147 to around \$55, the loonie has been sold off from parity to US\$0.77 in a little more than a month, and now seems to rise and fall with the price of oil, experiencing huge changes in a single day. Further, the S&P/TSX Composite Index is off 40% to 45% from its summer highs, with resource firms like Teck Cominco down from its high of \$53 in the summer. Indeed, the firm is struggling to avoid becoming a penny stock² and even deferring major energy projects in Alberta.^{3,4}

COST UNKNOWN


The cost of this disaster is anybody's guess at the moment. So far, banks have written off over \$500 billion and destroyed much of their bank capital. Indeed, a Republican U.S. government has had to put together a \$700 billion plan and inject \$250 billion directly into the banks by buying preferred shares. The UK has similarly injected \$63 billion into three of its banks and effectively nationalized Bradford and Bingley and Northern Rock, two large mortgage lenders.

Professor Laurence Booth is the CIT Chair in Structured Finance at the Rotman School of Management, University of Toronto.

The major bank regulator in Germany has indicated that the collapse of the U.S. investment bank, Lehman Brothers, has cost European banks at least \$300 billion.

However, the real cost has been reflected in the massive destruction of wealth in the stock market. The U.S. Congressional budget office has indicated that U.S. retirement accounts had lost over \$2 trillion by the end of September, and since then the U.S. market has lost another 20%-plus, so the loss must now be over \$3 trillion. The reason for the losses is not hard to find. Table 1 gives the losses in U.S. dollars year-to-date for the eight major equity markets around the world.⁵ As of the end of 2006 the total market value was about US\$36 trillion. Without counting any increased market values for 2007, so far in 2008 the losses from a U.S. perspective are at least US\$14 trillion.

To understand the root cause of the problem, we have to understand that the banking system operates on a fractional reserve system. This means that only a small part of the deposits in a bank are backed by cash and liquid marketable securities, the rest is loaned out. If these reserves are 10%, it means that, for every dollar of reserves, a bank will have a deposit liability of \$10 with the \$9 difference loaned out. The result is that no bank, however stable and well run, can meet all the demands of depositors for immediate cash. Banks therefore keep prudent reserves to meet unexpected liquidity shocks and have access to the central bank “discount window” for emergency funding.⁶



RIDICULOUS AS IT NOW SEEMS, GOLDMAN SACHS WAS ABLE TO PACKAGE A PORTFOLIO OF 8,274 CALIFORNIA SECOND MORTGAGES WORTH \$494 MILLION FOR RESALE TO SOPHISTICATED INSTITUTIONAL INVESTORS IN SPRING 2006

Table 1: MARKET LOSSES (YEAR-TO-DATE)

Index or Exchange (US Dollars)	Last Trade Date	1 Day Change	1 Day %	1 Month %	6 Month %	YTD %	2006 \$b Value
United States Composite	213.40 10/24/2008	-7.52	-3.40%	-27.53%	-37.17%	-40.46%	18,039
Japan Composite	82.39 10/24/2008	-2.74	-3.21%	-22.00%	-32.07%	-35.54%	4,422
United Kingdom Composite	149.79 10/24/2008	-11.63	-7.21%	-35.44%	-48.66%	-52.51%	3,441
Canada Composite	278.25 10/24/2008	-4.74	-1.67%	-40.46%	-48.15%	-49.61%	1,636
Germany Composite	218.89 10/24/2008	-14.62	-6.26%	-39.40%	-51.88%	-56.28%	1,426
Hong Kong Composite	186.44 10/24/2008	-10.10	-5.14%	-31.80%	-51.39%	-57.97%	1,361
Spain Composite	388.93 10/24/2008	-26.01	-6.27%	-34.22%	-50.24%	-51.93%	1,146
Switzerland Composite	374.65 10/24/2008	-10.44	-2.71%	-22.21%	-32.06%	-34.35%	1,111

The Bank for International Settlements (BIS) has set standards to try and ensure some international consistency in bank regulation. The BIS requires that every on-balance sheet loan and off-balance sheet commitment be risk-weighted and banks are then required to have 8% capital to support these risk weighted loans. In this way a loan to the government does not require the same amount of capital as a loan to a corporation. The BIS requires 8% risk-weighted capital, of which a minimum of 4% must be common equity-like securities (Tier 1) and the balance (Tier 2) in subordinated debt and preferred shares. However, while Canada has adopted these requirements, The Office of the Superintendent of Financial Institutions (OSFI) requires that Canadian banks have 7% Tier 1 capital and another 3% in Tier 2 capital.

This means that Canada has one of the most conservative capital standards anywhere in the world. Further, the Canadian banks exceed the OSFI requirements; the Royal Bank of Canada, for example, has almost 12% total capital. In contrast, U.S. and UK banks have operated with much less Tier 1 capital. In good times, operating with less equity-like capital increases the bank's financial leverage and enhances the return to the shareholder and the bank's stock price. However, in bad times the higher leverage comes back to bite them.

The use of leverage by the banks brings us to the sub-prime problem. It is axiomatic that bad loans are made at the top of the business cycle, not the bottom. At the top the financial system is flush with liquidity and demand by borrowers tends to drop off. As a result, there is intense pressure on banks to lend on narrower and narrower spreads over risk-free government bonds, so lending standards slip. After the fact, bankers always claim they have learned their lesson and next time will be different. However, the liquidity in the financial system through 2006 was enormous. By January 2007 new issues of non-investment grade debt were running at \$127 billion a year: twice the level of 2002. *Business Week*⁷ attributed this to the "enormous amount of money sloshing around and the changing structure of the debt market. Foreign investors are shipping gobs of cash into the U.S. ... Together, these factors have combined to create unheard-of pools of liquidity. Not only has that helped keep the lid on interest rates—holding debt payments down—it has also made funding readily available even for struggling companies."

The large pools of liquidity were in part coming from the enormous trade deficits run by the U.S. and the fact the U.S. would not allow China, in particular, to buy real assets or U.S. companies so that by default China was reinvesting

Figure 1: CASE-SHILLER INDEX OF U.S. HOUSE PRICES (2000-2006)

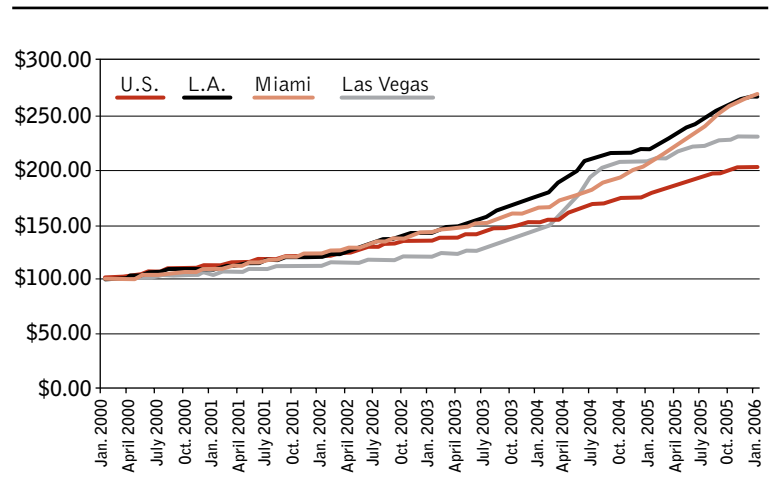
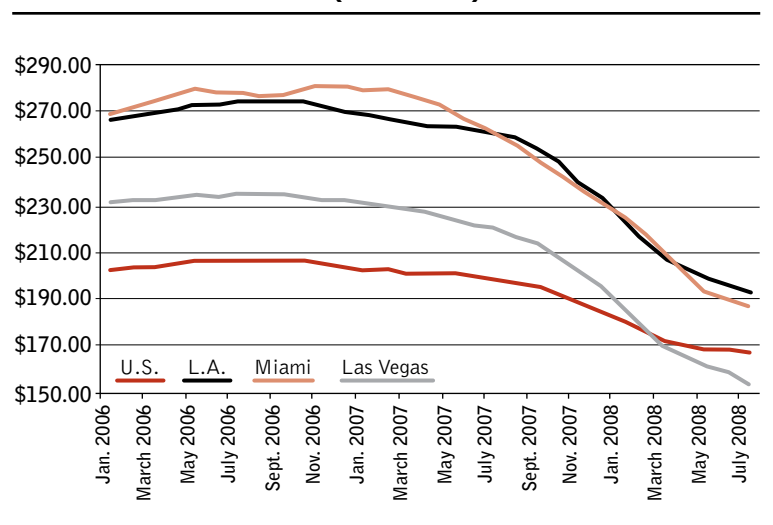


Figure 2: CASE-SHILLER INDEX OF U.S. HOUSE PRICES (2006-2008)



in U.S. government and agency debt, mainly the mortgage debt issued by Fannie and Freddie.⁸

The U.S. mortgage market is key to understanding this crisis. In 1999 the *New York Times* reported⁹ that the Clinton Administration was pressuring Fannie Mae to ease lending standards to make more mortgage money available to low and middle income borrowers. Peter Wallison of the American Enterprise Institute in a prescient remark noted: "From the perspective of many people, including me, this is another thrift industry growing up around us... If they fail, the government will have to step up and bail them out the way it stepped up and bailed out the thrift industry."

When President Bush took office there were no policy changes.¹⁰ In fact, several U.S. states tried to rein in “predatory” bank lending. However, in each case the office of the Controller of the Currency, which regulates U.S. banks, got the courts to over-rule the states on the basis that it was important to have one national banking standard.

For a time the reduction in underwriting and credit standards was not noticeable as house prices rose rapidly. Figures 1 and 2 show the Case-Shiller index of U.S. house prices for the overall country, and the key markets in Los Angeles, Miami and Las Vegas.

It is difficult to see much risk in a mortgage when house prices are increasing at 15% per year. This is especially true when the system is flush with cash and banks are under pressure to lend. As a result U.S. household indebtedness as a percentage of net worth increased dramatically from 16% in 2000 to 25% by 2008, while remaining stable in Canada.

The increased U.S. indebtedness was partly a result of financial innovation. The U.S. has always had a very strange financial system. Unlike most countries, there have traditionally been severe restrictions on banks branching outside their home state and sometimes even within their state. Further, there were interest rate restrictions that made it impossible for banks to offer competitive deposit rates. As a result, there was huge disintermediation as money flowed to money-market mutual funds, rather than through the banking system.

The final catalyst for the crisis was the development of securitization vehicles. Initially U.S. banks packaged their loans into special investment vehicles (SIVs) to sell to other banks to reduce their geographic exposure. However, increasingly they were sold to major investors, a process that was helped by technological developments that allowed the banks to outsource almost the whole intermediation function. FICO credit scores were used to judge the credit-worthiness of the applicant; mortgage brokers were used to generate the mortgages while even the routine check on the house value and the income of the applicant was outsourced or not done at all. The result was so-called Ninja loans: no income, no job, no assets!

Ridiculous as it now seems, Goldman Sachs was able to package a portfolio of 8,274 California second mortgages worth \$494 million for resale to sophisticated institutional investors in spring 2006.¹¹ The issue (GSAMP Trust 2006-S3) was one of 916 such issues in 2006 for a total of \$592 billion. The average mortgage was for 99.29% of the appraised house value, so the equity was 0.71%. Furthermore, 58% had no or low documentation and many had low or teaser rates to entice people into the house

IT REMAINS TO BE SEEN WHETHER A NEW KEYNES WILL EMERGE FROM THIS MARKET CHAOS

purchase. The remarkable thing is that Goldman Sachs was able to structure these mortgages such that 93% of the securities issued against them were rated investment-grade. As a result, they were easily sold to large institutions. More importantly, no financial institution took responsibility for the process and U.S. states that tried to impose such liability, like Georgia, were shot down in court.

U.S. house prices peaked in January 2007 with Miami at an index value of 270; since then it has been downhill and across the country house prices have dropped on average by 16.3% year to year: enough to wipe out a very large part of the subprime mortgage market as well as damage regular mortgages.¹² The result is that by August 2008 there has been a devastating decline in U.S. house construction with single family housing permits down 41% year over year.

In the face of this storm of defaults it is not surprising that U.S. banks have started writing off large numbers of subprime mortgages and taking huge hits to their capital. With this decline came concerns for their solvency and bank runs: not from retail deposits covered by insurance but from large institutions with no such coverage. First, Bear Stearns was “rescued” in March 2008 by a forced sale to J.P. Morgan Chase at a knock-down price, but the litmus test was when the U.S. Treasury Secretary refused to bail out Lehman Brothers, and instead forced it into bankruptcy. Afterwards the world quickly moved into a full-scale credit crunch.

MARKET IMPLICATIONS

As interbank spreads jumped and lending dried up, other banks, like Washington Mutual, failed as investors bolted to government securities and confidence collapsed.¹³ The problem is that you cannot make banks lend or individuals borrow even if you shore up bank capital. While the US\$700 billion rescue package has earmarked \$250 billion

for capital infusions, there is no requirement that they lend, and given the U.S. government's attitude, U.S. banks are doing the sensible thing: rebuild capital and avoid risky lending. In fact, they are behaving in a similar fashion to U.S. banks 75 years ago faced with bank runs. The contraction of credit that occurred then turned the 1929 stock market crash into the Great Depression.

There is a greater awareness of the problem today and more tools at the disposal of the U.S. government and to talk of a repeat of the Great Depression is alarmist. However, President Bush is doing an eerie imitation of Herbert Hoover given the lack of any economic initiatives coming out of Washington, despite the actions of governments elsewhere, and the fact that like the Great Depression this crisis started in the U.S. What is also important is that this episode confirms that as a result of deregulation, risk has undoubtedly increased in the U.S. financial system. The volatility in the Dow Jones Industrial Average can be tracked back to 1900. Volatility is measured in two ways: the standard deviation of five-day returns and a dummy variable for when the market moved by +/- 7% a day. Both measures show that there was a long period of relative calm in the markets after the Great Depression and the passage of the SEC Acts of 1933 and 1934. This period of calm ended with the introduction of derivatives and the development of program trading, which led directly to the October 1987 stock market crash.

Since then we have witnessed more crises, from that involving Long Term Capital to the Internet bubble and now the sub-prime bubble and credit crunch. It raises at least some questions as to whether the removal of the tick rule on short selling in the U.S., the reforms of the Commodity Futures Modernization Act of 2000, which allowed speculators greater access to the futures market,¹⁴ the removal of the barriers between investment and commercial banking in the U.S. and the decline in transactions costs and consequent increase in trading have taken the U.S. back to a pre-1930s financial system with a focus on short-term speculation, rather than investing.

In 1936, the greatest economist of the twentieth century, John Maynard Keynes, explained how speculation was inherently destabilizing rather than stabilizing when he said:¹⁵ "It might have been supposed that competition between expert professionals, possessing judgment and knowledge beyond that of the average private investor, would correct the vagaries of the ignorant individual left to himself. It happens, however, that the energies and skill of the professional investor and speculator are mainly occupied otherwise. For most of these persons are, in fact,

largely concerned, not with making superior long-term forecasts of the probable yield of an investment over its whole life, but with foreseeing changes in the conventional basis of valuation a short time ahead of the general public. They are concerned, not with what an investment is really worth to a man who buys it "for keeps," but with what the market will value it at, under the influence of mass psychology, three months or a year hence."

It remains to be seen whether a new Keynes will emerge from this market chaos or whether we will just reread what our grandparents learned 75 years ago. However, what we do know already is that Canada got it right and the U.S. got it wrong. Banks need to be regulated and the financial system is too important not to be under the active supervision of an effective regulatory agency. If the Americans don't like the Prime Minister of Canada telling them what a mess they have made of it, perhaps they might like to remember what Thomas Jefferson said: "I believe that banking institutions are more dangerous to our liberties than standing armies."¹⁶

The context was different but the sentiments are the same.¹⁷ ■

ENDNOTES

1. Quoted in the Toronto Star while at the G20 Summit, November 15, 2008.
2. Under US\$5 according to the SEC.
3. Teck along with its partners have deferred the Fort Hills project.
4. The bursting of the oil bubble has huge implications for Alberta.
5. Source Yahoo Finance <http://investing.businessweek.com/research/markets/world/worldmarkets.asp?region=Americas>
6. The Bank of Canada has an emergency lending facility (ELF) for Canadian banks. Funds are lent if there is a liquidity shock and the Office for Superintendent of Financial Institutions (OSFI) believes that the institution is sound.
7. January 29, 2007.
8. There is at least a suspicion that this is why the U.S. government guaranteed the debt of these institutions, while throwing the equity and preferred shareholders to the wolves.
9. September 30, 1999, "Fannie Mae eases credit to aid mortgage lending."
10. Unlike Canada, U.S. mortgage interest, for example, remains tax-deductible.
11. Alan Sloan, "House of Junk," *Fortune*, October, 29, 2007.
12. In addition, large numbers of mortgages with low interest or "teaser" rates were also coming up for reset to market rates.
13. WashMu had \$18 billion in cash but lost \$16 billion in 48 hours after the U.S. House of Representatives refused at first to pass the bailout bill and it was downgraded by Standard and Poors. It was then taken over by the Federal Deposit Insurance Corporation.
14. How much this contributed to the recent oil price bubble remains to be seen, but anyone who recently bought a house in Calgary would like to know.
15. The best single chapter on investment psychology remains chapter 12, the state of long-term expectations in *The General Theory of Employment Interest and Money*, Macmillan, London, 1936.
16. *The Debate Over The Recharter Of The Bank Bill* (1809).
17. Reuters reported (Nov 11, 2008) "Business leaders around the world back greater regulation in response to the global financial crisis, a survey showed on Wednesday, with support strongest for curbs on credit rating firms, hedge funds and structured finance."