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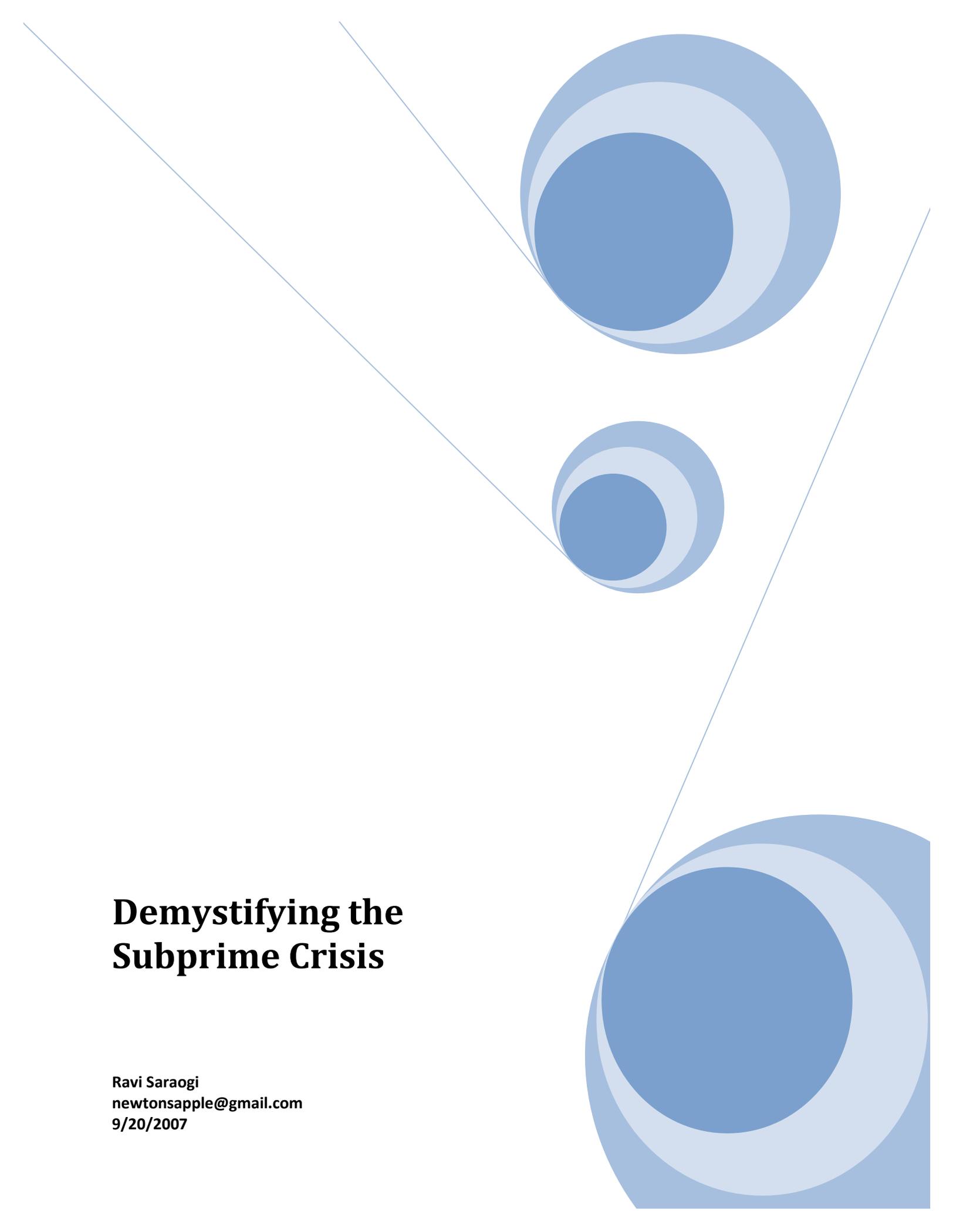
Demystifying Subprime Crisis

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An abstract graphic design featuring three blue circles of varying sizes, each composed of concentric layers of different shades of blue. The circles are arranged in a triangular pattern. Two thin blue lines intersect at the top left, forming a large 'V' shape that frames the circles. The bottom right corner of the page is partially obscured by a large blue shape that appears to be a corner of a page or a large graphic element.

Demystifying the Subprime Crisis

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The word 'subprime' has perhaps become the most often repeated word in the newspapers lately. It's there everywhere. And it lends itself to such complexities that many of us average mortals prefer to know as little of it as possible. Yet, the crisis is not as difficult to comprehend as it is made out to be. It is similar to any other crisis in the sense that it too is the result of 'irrational exuberance', a term coined by the previous Fed chief Alan Greenspan to describe asset bubbles. In this article, we try and explain in as simple terms as possible what this ugly subprime monster is all about.

The term 'subprime' and a little background to the crisis

Subprime credit refers to extension of credit facilities to borrowers who have deficient credit history or inadequate documentation. The interest rate applicable in the subprime market is higher because of the higher risk involved in lending to people who do not show adequate creditworthiness. The subprime mortgage market has expanded rapidly in recent years. A decade ago, five percent of mortgage loan were subprime; by 2005 the figure had jumped to approximately 20 percent. Currently, there are about \$1.3 trillion outstanding subprime loans; over \$600 billion of which originated in 2006¹.

The reason for such breakneck expansion of subprime credit is not difficult to fathom. Post 2000, in the aftermath of the dot com bust and the impending recessionary tendencies in the US economy, the Fed had cut interest rates to as low as 1.5 per cent in June 2003, their lowest levels since 1958². Credit was cheaply available and it was scouting for asset markets in which to exhaust itself. It was no surprise that the outlet for deployment of credit came in form of the housing market as home prices had begun to show an uptrend after having bottomed out.

¹ Nera Economic Consulting (2007), '*At a glance- The Chilling effects of the Subprime crisis*', www.nera.com/image/AAG_Subprime_1662_final.pdf

² PBS (2007), '*Federal Reserve Rate Cut*', http://www.pbs.org/newshour/bb/economy/jan-june03/fed_06-25.html

The story from the side of the subprime borrowers

So, the great 'American' dream of owning a house found a perfect partner in low interest rates and rising home prices. In early 2003, the rate on a 30-year fixed-rate mortgage was at the lowest levels seen in nearly 40 years³. Home loans were being disbursed at a hurried pace as borrowers did not want to miss out on making a fortune for themselves on the back of rising real estate prices. The rationale for taking out a mortgage loan was that with home prices in a secular uptrend, in a few years itself, the market value of a mortgaged house would outstrip both the principal and interest payment liability attached to it. The house can then be sold in the open market and the excess of the market value of the mortgaged house over the liability towards the mortgage would be the potential capital gain to the borrower.

If the subprime borrower does not want to sell off the mortgaged house, he can refinance his existing loan to cash out on home equity. Home equity refers to the difference between the market value of a house and the liability attached to it. Take a case in which a subprime borrower has taken a loan of \$20,000 to buy a house. With housing prices rising, the house may be worth \$30,000 after 6 months. However, the mortgage liability attached to it is only \$20,000. Thus, the borrower now has a positive home equity of \$10,000. At this point, he may refinance his existing loan to cash out on his positive home equity by taking another loan of \$30,000, out of which, \$20,000 can be used to pay off the previous loan, leaving the subprime borrower with a neat sum of \$10,000.

Any which way you look at it, taking out a mortgage loan seemed an immensely attractive option and if the borrowers were gung ho about obtaining a mortgage loan, the mortgage providing companies were not far behind in supporting their exuberance.

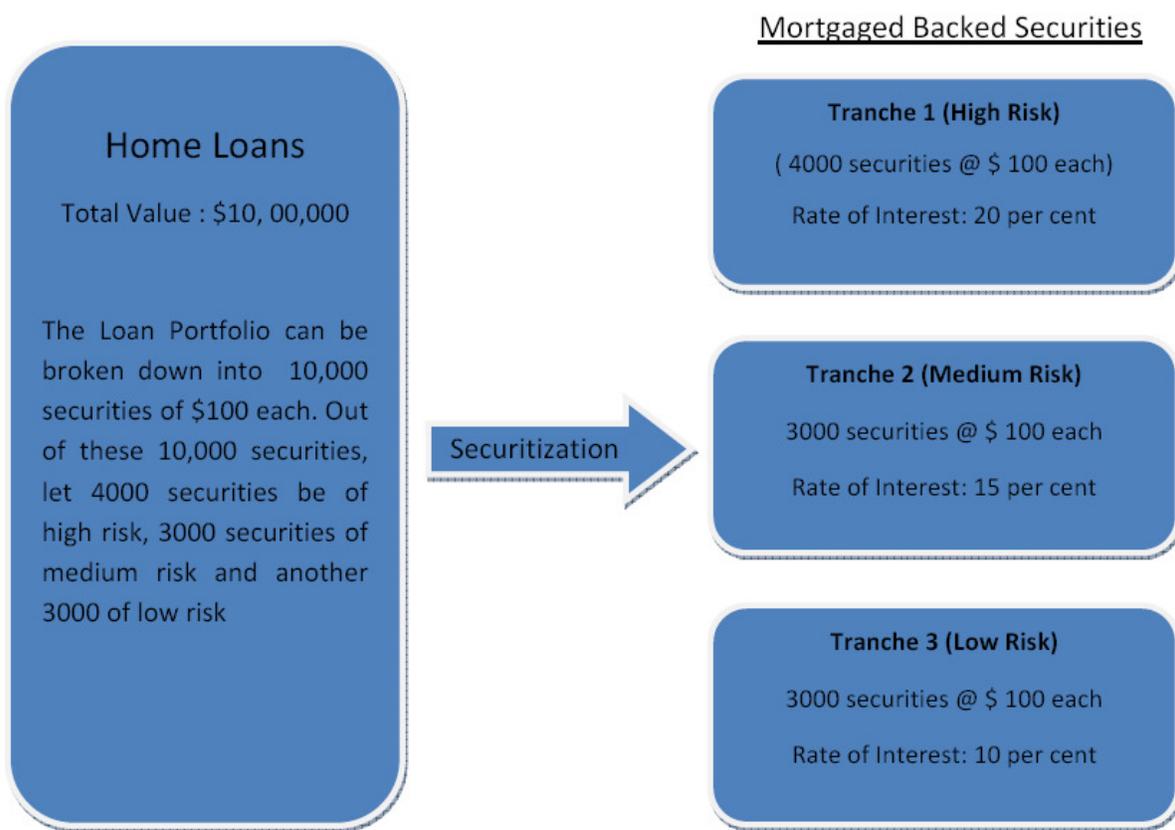
³ Investopedia (2007), 'The Fuel That Fed the Subprime Meltdown', <http://www.investopedia.com/articles/07/subprime-overview.asp>

The story from the side of the mortgage providing banks and institutions

The mortgage providing institutions cooked up enticing credit instruments like the adjustable rate mortgages to lure borrowers. An adjustable rate mortgage (ARM) is one in which the interest rates for an initial period of 2 years is very low and thereafter, every 6 months, the interest rates are jacked upwards. These mortgages were bundled with very low initial teaser rates, but after the initial period of low rates were over, the interest burden is hiked up significantly. After adjustments, the monthly payments on such adjustable loans could go up anywhere between 20-40 per cent, putting the borrower at risk of foreclosure.

The process of mortgage backed securitization provided a strong incentive to mortgage providing banks and institutions to rampantly make loans, irrespective of how ill conceived they were. Mortgage backed securitization refers to the process of issuing securities on back of loans disbursed by mortgage companies. For example, say XYZ Co. has disbursed mortgage loans of the value \$10, 00,000. This loan portfolio of a million dollars can be broken up into 10,000 mortgage backed securities of \$ 100 face value, with interest on such securities being paid according to the different risk levels involved in the recovery of the underlying mortgage (see diagram in next page).

A complex arrangement is made whereby the repayment collections of the disbursed home loans are deployed for the redemption of the mortgage backed securities. The risk of default is borne by the holders of the mortgaged backed securities, with high rates of interest being paid on tranches which will take the first hit in case of mortgage repayment defaults. Collateralized Debt Obligations (or CDOs as commonly referred to) have emerged as a very popular mortgage backed security in the run up to the crisis.



These shaky mortgage backed securities were labeled ‘investment’ grade by various credit rating agencies which ensured that with the higher interest payments that these securities carried, there was always sufficient demand for them in Wall Street. So all a mortgage lending company had to do was to disburse loans (no matter how ill conceived such loans were) at high subprime rates but packaged as ARMs to make the expensive loans look enticing and affordable, securitize such loans through the issue of mortgage backed securities, and pocket the profits to the tune of the difference between the interest received on the subprime loan and the interest paid on the corresponding mortgage backed security. The result: last year subprime loans were 20 per cent of the \$ 3 trillion mortgage market⁴.

⁴ Chris Arnold (2007), “Senate Panel Studies Subprime Loan Woes”, NPR, <http://www.npr.org/templates/story/story.php?storyId=9096735>

So, why did the party stop?

Like they say, everything that goes up must come down. So with housing prices. Early 2006, the housing market started showing signs of weakness. No longer could borrowers think of selling their houses and paying off their mortgage liabilities as the price of their houses started to fall below the mortgage liability attached to it. With housing prices crashing, borrowers could also no longer benefit from refinancing. After the initial honeymoon period with low interest rates on ARMs got over, the pinch of higher repayment burdens caused a massive increase in foreclosures. Out of the 10 million subprime borrowers in the US, about 2 million are struggling with their repayments⁵.

The foreclosed houses are sold in the open market leading to further tanking of housing prices. We thus have a vicious circle of falling housing prices causing a rise in foreclosures which tends to further deflate housing prices and more foreclosures. According to Christopher Cagan of First American CoreLogic, a research group, 13% of the 8.4 million adjustable-rate mortgages originated in 2004-2006 will ultimately wind up in foreclosure⁶.

Defaults on subprime loans have overnight transformed risky mortgaged backed securities into junk. On 20 June this year, two large hedge funds controlled by Bear Stearns representing over \$ 20 billion in investments were shut down because of losses on account of investing in mortgage related securities⁷. As the crisis is unfolding, funds which have invested in subprime backed securities are painfully realizing that an 'investment grade' credit rating stamp isn't always as dependable as it appears.

⁵ Eoin Callan & Jeremy Grant (18th Sep 2007), "Rescue loans lag behind subprime foreclosures", Business Standard

⁶ James R. Hagerty (2007), *'Economy can withstand more mortgage foreclosures'*, Wall Street Journal Online Guide to Realty, <http://www.realestatejournal.com/buysell/mortgages/20070320-hagerty.html>

⁷ Matthew Goldstein (2007), *"Bear Stearns' Subprime Bath"*, Business Week, http://www.businessweek.com/bwdaily/dnflash/content/jun2007/db20070612_748264.htm

Effect on the US economy

Subprime woes has resulted in U.S.'s largest mortgage lender Countrywide Financial to warn that a recovery in the housing sector is not expected to occur at least until 2009 because home prices are falling “almost like never before, with the exception of the Great Depression.”⁸ Housing prices play a very important role in an economy. When housing prices are rising, people feel wealthy on account of increased valuations of their homes. This spurs consumer spending and boosts economic growth. This is known as the ‘wealth effect’. Exactly the opposite happens when housing prices show a downturn- it hurts consumer spending. This spooks everybody with fears of an impending recession.

The Fed is trying to ease the recessionary concerns by cutting down on interest rates. It cut discount rate (the rate at which it lends to commercial banks) by half a percentage point to 5.75 per cent on Aug 17 this year. Then again on Sep 19 this year, it further lowered the discount rate to 5.25 per cent along with lowering the benchmark federal funds rate, charged on overnight loans between banks, by half a percentage point to 4.75 per cent⁹. It has also been trying to fight the situation of a credit crunch by injecting liquidity into the markets. The credit crunch is a fallout of indiscriminate and imprudent subprime lending that has resulted in losses for the lending institutions. Such losses in the recovery of loans is followed by a contraction of loan disbursement. Their capacity to disburse loans is also reduced because of the losses in past lending. The above causes a tightening of liquidity. Another factor adding to liquidity crunch is that banks now prefer to sit on cash piles rather than lend to each other as no one knows how much exposure each institution has taken to the subprime woes.

To mitigate this drying up of liquidity, not only the Fed, but the European Central Bank (ECB),

⁸ Steve Dickson (2007), ‘Countrywide says disruptions may hurt profit’, Bloomberg.com, www.bloomberg.com/apps/news?pid=20601103&refer=news&sid=awWmNtGguiq0

⁹ CNN Live, ‘Stocks surge after Fed rate cut’, <http://edition.cnn.com/2007/BUSINESS/09/19/world.markets.ap>

the Bank of Canada, the Bank of Japan and the Reserve Bank of Australia have all injected liquidity into the banking systems to calm jittery markets. As of Aug 10 this year, the Fed had injected \$38 billion into the US banking system while global central banks, like the ECB and the Bank of Japan have together injected over \$300 billion into their respective banking systems¹⁰.

The crisis is also expected to result in weakening of the dollar. Reduced risk appetite for US papers (in view of the crisis) given the large US current account deficit will cause the dollar to depreciate against the major currencies of the world. And the recent reduction in interest rates will only add to that effect.

It is perhaps too early to predict the final shape the crisis will take. It is estimated that lenders and the investors who hold securities backed by subprime mortgages will take a hit of \$113 billion as \$460 billion worth of mortgages default¹¹. And then there is the trillion dollar question on everybody's mind as to whether the present crisis will cause a recession in the world's largest economy. To answer this question, we need to wait and watch how the plot unfolds. However, one thing is for sure. The crisis has opened a can of worms of contentious issues like predatory lending, the credibility of credit rating agencies and the role of the regulatory bodies. How these issues are debated and acted upon will have far reaching implications on the working of the financial markets.

So much for the biography of the ugly subprime monster.

¹⁰ Reuters (Aug 10 2007), 'Yen falls after Fed injections calm credit fears', <http://www.reuters.com/article/hotStocksNews/idUSL0688826920070810>

¹¹ Dow Jones Market Watch (Jul 26,2007), 'Subprime could create global crisis', <http://www.marketwatch.com/News/Story/economist-world-one-hedge-fund-collapse/story.aspx?guid=%7BC9E3B6A4-A22E-43D2-BA2A-EC4A8F61D2E4%7D&dist=TNMMostRead>