

A Tale of Two Liquidities¹

I would like to talk specifically about two issues. First, the credit crisis, where it came from, and how it may be resolved. Second, what does it say about incentives in financial markets?

An important difference between this period of sustained growth and previous periods is the low level of both short and long term real interest rates over the last 5 years, certainly relative to the last two decades. These very low rates have created the most important risk now facing the world economy, the overpriced housing markets, the attendant risks of financial sector turmoil, and the possible consequences on household consumption.

Let me explain. The low short rates resulted from extremely accommodative monetary policy as G-3 central banks cut rates sharply to stave off deflation after the recession of 2001, and were not equally quick to raise rates as economies improved. By contrast, the long rates fell following the collapse in investment in both emerging markets and developed countries after the crises in 1998 and the ICT bubble in 2001. Emerging market governments became more circumspect and increased budgetary surpluses, even while cutting back on public investment. For instance, in Philippines, investment fell from 24% of GDP in 1996 to 17% in 2006, while its savings rose from 14% to 20%. From borrowing 10% of its GDP, it now pumps out 2.5 percent as a current account surplus.

Moreover, as industrial economies recovered, corporate investment did not pick up, at least not to the extent warranted by the growth. As a result, the worldwide excess of desired

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savings over actual investment – the so-called savings glut -- pushed its way into the main markets that were open to investment, housing in industrial countries, lifting house prices and raising residential construction.

The US was not by any means the highest in terms of prices. Housing prices have reached higher values relative to rent or incomes in Ireland, Spain, the Netherlands, the United Kingdom, and New Zealand for example, though not in Germany or Japan. Then why did the crisis first manifest itself in the US? Probably because the US went further on financial innovation, thus drawing marginal buyers into the market.

With steadily rising housing prices, easy financing brought more low-income households into the market. There was certainly a logic to the financing, and it went something like this; With such a strong housing market, all I need is to get this buyer into the house. I can structure the loan so that she has to pay very little over the first few months – the so called negative amortization loans. By the time she has to pay anything significant, the house will have appreciated 10 percent, and she will have the equity to refinance or make future payments.

Indeed, credit quality mattered little. If the buyer could not make even the nominal payments involved on the initial teaser rates, the lender could repossess the house, sell it quickly in the hot market, and recoup any losses through the price appreciation. In the liquid housing market, so long as she could scrawl X on the dotted line, she could own – indeed, loans to the bottom of the pyramid were called NINJA loans, loans to those with NO Income, No Jobs, and No Assets.

And so it went till the Fed started raising rates. With fewer buyers able to afford normal mortgages, the first reaction of lenders was to increase the volume of exotic loans so

as to keep the buyers coming. So like the cartoon characters who run off a cliff but stay in place for a while with their legs pumping furiously, the housing market stayed in place for a while with lower and lower quality loans being furiously pumped out. But eventually the housing market gave, and houses stayed on the market longer and longer. U.S. builders were quick to cut building, but sales fell even faster than construction. And so they are now sitting on about 10 months of inventory, perhaps significantly more because sale cancellations tend to be undercounted. Estimates suggest it will take a year to two years to clear the back log, with a further fall of about 7 to 10 percent in house prices to bring about balance.

As more and more teaser rates started resetting higher, and buyers had negative equity in the house, more and more of them started defaulting. Adjustable-rate mortgages to subprime borrowers accounted for only 7.3 percent of all home loans but 44 percent of all new foreclosures in the third quarter. Given that repossessed houses could not be sold, the underlying credit quality of the buyer – whether they had a job, whether they had income, whether they had assets, started mattering more, for that would indicate whether they were liable to default.

To understand what happened next in financial markets, we have to understand the financial engineering that had taken place. The original mortgage had been bundled into a pool, and then securities of different seniority sold against it, with the equity tranche bearing the first loss. However, the financial engineers were not content to stop here. They created more complicated pools, bundling the securities sold by the mortgage pools into securities pools, and selling tranching claims against them. Of course, even these could be pooled and tranching further. Thus were born the CDO, the CDO squared and so on. Rating agencies went along certifying senior tranches of these as of the highest credit rating. Risk was sliced

and diced but no one knew exactly what was in what. And because nearly everyone was paying, it did not matter.

Why were these assets created? Go back to the savings glut. Financial institutions in countries with excess savings like Germany and Japan were looking to invest their foreign exchange. Many of these institutions were constrained to invest in high quality debt instruments. The highly rated tranches of mortgage backed securities or of CDOs was exactly what they wanted, especially if the AAA tranche of the CDO paid 60 basis points above corporate AAAs. They did not investigate the details of the underlying collateral, even if they could get the information or knew how to, for the rating was guarantee enough.

It was not just the foreigners. Low interest rates made even usually staid domestic institutions like pension funds and insurance companies hungry for yield. So long as the rating companies were willing to certify these securities, and ensure they fit the rating thresholds of the institutions, they were willing to buy them for the extra yield. Of course, there is an old adage in finance – there is no return without risk – but this was forgotten in the frenzied search for yield.

The demand for highly rated bonds paying above market rates was expanded by other strategies. One was simply borrowing short term and investing in these longer term assets, the oldest investment strategy in the book – always good for a few basis points. This was the strategy followed by banks in setting up special investment vehicles or conduits, or by Northern Rock, the UK bank that nearly failed. A second was to multiply a few basis points spread between borrowing and lending many-fold through additional leverage. So there were plenty of investors following these strategies willing to snap up the low quality housing loans transformed into high yielding high quality securities through securitization.

As liquidity drained from the housing market, everything changed. Securitized mortgage pools were easy to understand and undifferentiated when the housing market was liquid – they all had low risk. But as liquidity started drying up and defaults increased, pools became differentiated based on how careful the originator had been, how well documented the loans were, who they were to, etc. Information about the quality of underlying pools started mattering more and much of it was hard to get at. Ratings became suspect.

This immediately created a problem for those who owned claims on the mortgage pools, and wanted to borrow against, or sell them. In the same way as a used car salesman has to sell a car at a significant discount because the buyer suspects the car may be a lemon, once the mortgage pool has become differentiated and information asymmetries have arisen, arm's length buyers like foreigners or pension funds are reluctant to buy, and lenders are unwilling to lend, without knowing much more.

But if mortgage pools became harder to value, the securities issued by CDOs and CDO squared became doubly hard to value, because not only were they subject to the same underlying information asymmetries besetting the underlying mortgages, but also because they were leveraged claims on these assets, which were really complicated to value when defaults rose. Thus illiquidity in the housing market created information risk, which coupled with complexity risk, destroyed liquidity for asset backed securities in the financial market.

Furthermore, many of the investors in the market do not have the capability of going beyond the now unreliable ratings to ascertain quality. Indeed, to restore demand to these markets, we need deep pocketed investors who have the capability of investigating these assets closely, understand how to value them, and therefore can put a price on them and take them on their books. Unfortunately, the obvious such investors, the large money center

banks, have been preparing their balance sheets to take on other commitments that might devolve on them. These include loans to private equity transactions that they were earlier hoping to sell easily in liquid financial markets, the assets of the special investment vehicles they have set up that are no longer finding commercial paper financing, as well as mortgages they were preparing for sale.

So financing in the asset backed paper market will take time to reappear, which means there will be less financing for housing. The housing market will thus take a longer time to stabilize, and will stabilize at lower prices. In the meantime, defaults will continue to rise as more loans reset to higher rates – about 350 billion subprime over the next year -- and as more loans made in the later, more lax, periods come to the fore.

Initial estimates of the extent of the crisis were too small, but some are now positively alarmist. Ultimately, the resolution will come about as savvy investors such as hedge funds and large banks go “bottom fishing” in markets and establish prices even for complex securities. Prices will recover. But before they recover, there will be more pain. Also, we still do not know the extent to which rising house prices have created a sense of economic well-being amongst the American public that has offset stagnant median wages. To the extent that that has been important, we could be in for a rougher economic ride.

Let me now touch on a second issue, that of incentives. Or put more colloquially, what were they thinking? By “they” I mean the horde of banks, investment bankers, pension funds, and insurance companies who bought into these instruments. To understand that, we have to examine their incentives.

One, I have already alluded to: The bureaucratic motive -- the search for extra yield wherever you can get it, because you have high liabilities to service, while covering your rear

end through the fig leaf of the rating. This sort of behavior is what one would expect from bureaucratic fund managers, who are given a set of parameters based on which they can invest (including the rating level of securities) and are paid a fixed salary to do a competent job. They will take returns if they can get them, provided the investments have the ratings. Their inability to look beyond ratings did create problems.

But what about those paid based on their ability to generate higher risk adjusted returns than their competitors? Let me explain. The typical manager of financial assets generates returns based on the systematic risk he takes – the so called beta risk – and the value his abilities contribute to the investment process – his so called alpha. Shareholders in any asset management firm are unlikely to pay the manager much for returns from beta risk – for example, if the shareholder wants exposure to large traded U.S. stocks, she can get the returns associated with that risk simply by investing in the Vanguard S&P 500 index fund, for which she pays a fraction of a percent in fees. What the shareholder will really pay for is if the manager beats the S&P 500 index regularly, that is, generates excess returns while not taking more risk.

In reality, there are only a few sources of alpha for investment managers. One comes from having truly special abilities in identifying undervalued financial assets – Warren Buffet, the US billionaire investor, certainly has this, but special ability is by definition rare.

A second source of alpha is from what one might call activism. This means using financial resources to create, or obtain control over, real assets and to use that control to change the payout obtained on the financial investment. A venture capitalist who transforms an inventor, a garage, and an idea into a full fledged profitable and professionally managed corporation is creating alpha. A private equity fund that undertakes a hostile corporate

takeover, cuts inefficiency, and improves profits is also creating alpha. So is a vulture investor who buys up defaulted emerging market debt and presses authorities through various legal devices to press the country to pay more.

A third source of alpha is financial entrepreneurship or engineering – investing in exotic financial securities that are not easily available to the ordinary investor, or creating securities or cash flow streams that appeal to particular investors or tastes. Of course, if enough of these securities or streams are created, they cease to have scarcity or diversification value, and are valued like everything else. Thus this source of alpha depends on the manager constantly innovating and staying ahead of the competition.

Finally, alpha can also stem from liquidity provision. For instance, investment managers, having relatively easy access to finance, can hold long term illiquid positions to maturity and earn a premium for doing so.

This discussion should suggest that alpha is quite hard to generate since most ways of doing so depend on the investment manager possessing unique abilities – to pick stock, identify weaknesses in management and remedy them, or undertake financial innovation. Unique ability is rare. How then do most managers of pension funds, mutual funds, and insurance companies justify their fees? The answer is probably liquidity provision, which is the activity that depends least on special managerial ability and could be termed the poor manager's source of alpha.

The problem when the world has excess desired savings relative to investment is that it is awash in liquidity. Many investment managers can enter the business of liquidity provision, and even as they take ever more illiquid positions, they compete away the returns

from doing so. Problems emerge, of course, when liquidity dries up, as we have seen occur with Northern Rock, and the SIVs.

But even more perverse behavior can be engendered by the search for alpha. As spreads narrow for even the most illiquid and risky investments, the temptation is to take on yet more hidden risk to distinguish themselves from the crowd. For instance, a manager can enter the credit derivative market to sell guarantees against a company defaulting. Essentially, he will collect a steady premium in ordinary times from people buying the guarantees. Given that premium income is not volatile, he will look like a genius, making money for nothing and returns for free. With very small probability, however, the company will default, forcing the guarantor to pay out a large amount. The investment managers are thus selling disaster insurance or, equivalently, taking on “peso” or “tail” risks, which produce a positive return most of the time as compensation for a rare very negative return.

Indeed, this could generate similar behavior to that of the bureaucratic fund manager. I buy the AAA tranche of a CDO, not because I am confused by the rating, but because I am selling a deep, out of the money put option, which will give me a steady return most of the time, but default with serious adverse consequences occasionally. By the time it defaults, I have hopefully made my money and am enjoying my own private beach in the Bahamas. A number of managers including Stan O Neill of Merrill Lynch did generate higher returns for their firms for some time, but alas we now realize it was hidden risk. Of course, his parting compensation did nothing to dissuade the rest of the flock from following his example in the future.

The broader point I am making is that we need to think about incentives of financial market participants as an important factor in the current crisis. How to improve those

incentives will, no doubt, be an important issue for discussion in the years to come. I would be happy to take any questions now.