

2008 GFC Causes and Cures: Key Lessons for Direct Investors

Key messages from the global financial system recovery packages

The question that is being posed by the popular media – namely, does the global financial markets crisis spell the end of our economic system as we know it? – drives straight at the heart of the logic which underpins your enrolment in the LPAC Program. To understand how to react to the financial markets crisis, we need to dissect the causes and effects of this global phenomenon. Does the sub prime crisis spell the end of our ability to rationally evaluate the worth of financial assets such as shares? The answer is: no! – when we understand the way in which assets are funded and invested in by large banks and financial institutions, which use gearing to amplify their balance sheets, we can see that this terrible problem does in fact boil down to a few very simple factors which are well on the way to being solved by the US and global government actions.

In short, as the viability of the US and global economies is renewed in coming months and years, fair values of asset prices will be restored by the proper functioning of the markets. The crisis was undoubtedly precipitated by a failure of public policy and regulation, but that's not to say that the cure will be ineffective. In many ways the reaction to the crisis has allowed the introduction of measures which would otherwise have been unthinkable, including the sharp reining in of toxic financial practices like short selling, wild speculation compounded by over leverage and exotic derivatives, and a long overdue cap on the greed of investment bankers (whose bonus plans clearly fuelled the aggressive and dangerous structures that caused the problem in the first place).

Why our markets are in this mess (and how and why it will get better)

The best way to make sense of the global banking bail out is to realise that it is the informed response to an old fashioned “run on the bank.” Banks lend out their customers’ deposits (which are essentially “at call”) to borrower’s who have longer term loans and who typically don’t have to repay those loans “at call.” A traditional bank run is no more than the attempted sale back to the bank of their holdings by bank depositors – in such volumes that there are more sellers than buyers, causing a liquidity shortfall that without check would erode the value of those deposits, by ruining the credit of the bank. Bank runs may start when a bank is in financial turmoil but normally spread to all banks, even those which are financially sound. Bank runs cause systemic market problems as investor’s panic and attack good banks, as well as bad ones.

The crisis which is now passing stems from the massive sell down of the holdings of sub prime and mortgage backed securities which have been accumulated by institutions in the excesses of the last 5 years of easy money, and which have often been funded by short term finance. Just like normal bank lending which matches short term liabilities (deposits) against longer term assets (loans), investment banks have been matching short term liabilities (money market and bank bill funding) against longer term assets (sub prime loans and bonds backed by them). And just like normal bank runs, the crisis saw the spread of panic from the few institutions which were undoubtedly unsound, into the mainstream financial markets themselves.

The implosion of the banking system was triggered by the unwinding of the massive bubble which had built up in the credit markets. The mismatch between short term funding and long term investing (which as we noted above is a usual part of the banking system) was destabilised by massive over leverage and massive over investment into over priced assets.

When interest rates rise, debt servicing suffers, assets begin to be sold forcing prices down very rapidly, as figure 1 below shows:

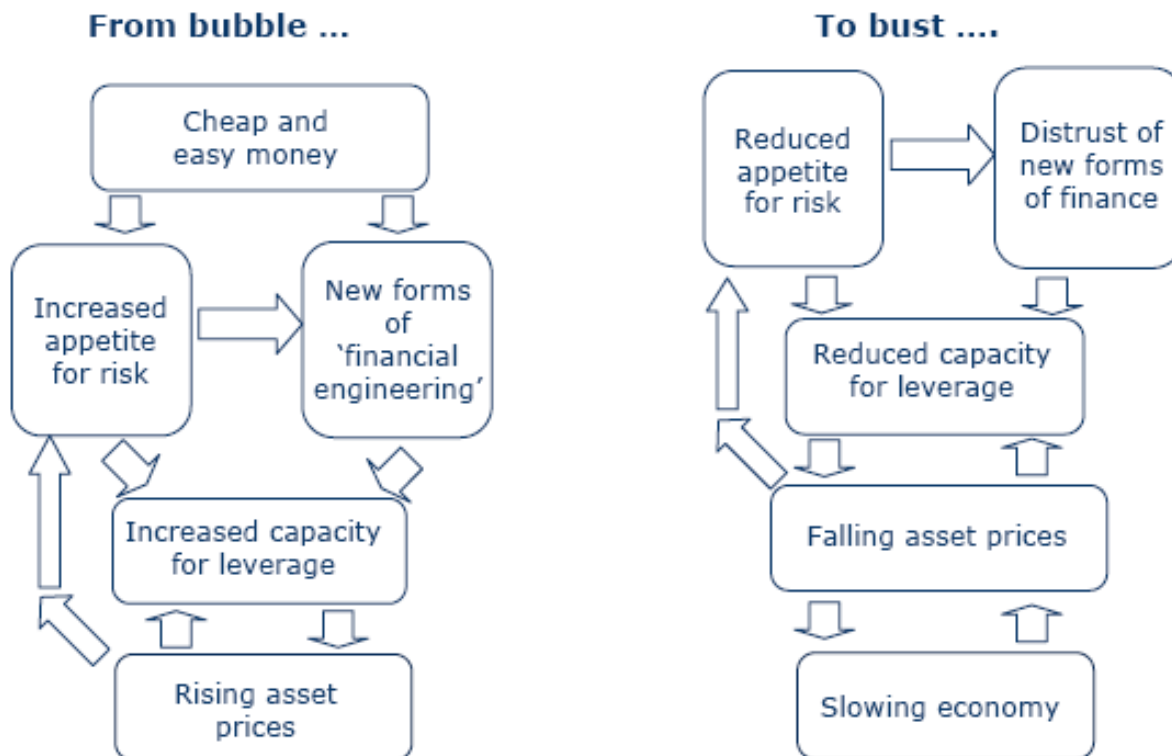


Figure 1: Elements of the credit market bubble

Source: ANZ Economics

In the case of sub prime bonds, since their expected default rates are now far higher than when they were initially packaged and sold, market values have dropped and holders have been engaged in a race to the bottom, trying to liquidate their holdings before everyone else.

In remembrance of the lessons of the Great Depression, when bank runs were not forestalled, the US Government bail out is simply the provision of support to the US investment banking system, at a time when the huge inventory of sub prime and mortgage backed securities has no buyers. The bail out provides an underpinning to prevent the fire sale of these assets, in volumes and prices that would otherwise far (under) exaggerate their real worth – just as a run on a bank causes the liquidation of the assets which back those deposits at prices which greatly devalue the real value of their backing.

Why should the banks be bailed out?

Over the last 12 months US regulators, led by Fed Reserve Chairman Ben Bernanke and Treasury Secretary Henry Paulson, have worked to prevent sub prime mortgage defaults from spilling over into the entire US economy. Their measures have included increased injections of cash into the system, lowering interest rates, forced buy outs of ailing banks and insurers, bans on short selling, all of which culminated in the calculated demise of Lehman Brothers.

As the crisis and its cost have deepened, it has opened up a serious economic and public policy debate, which has focussed on the prospects of success of the Government intervention and the “moral hazard” of bailing out financial institutions instead of punishing them for their failure. The debate is highlighted by the tension between its 3 main factions, which each put forward arguments with some fundamental validity:

- the “pure” free marketeers who argued that no bail out should be undertaken, (this was the position of the neo conservative Republicans prompted by Newt Gingrich);

- the left wing of the US Democratic party who argued that a bail out should focus on “Main Street” USA, with moratoriums on mortgage recoveries for defaulting mortgages, pro-consumer changes to insolvency laws, and
- the proponents of controlled intervention to re-liquify financial markets, led by Fed Reserve Chairman Bernanke, a professional observer of the Great Depression and driver of the intervention program.

The good news about the modified US Government bail out package is that it takes account of the best aspects of the positions of each faction. The unbridled laissez faire market as we have known it is dead and buried, and the real limits in the bail out on the worst excesses of the past decade, answer the rational criticisms of those excesses (at the same time as by passing the irrational criticisms).

But the US bail out tried to avoid the need for an immediate equity injection by the US Government into US banks. The massive sell off in US stock market in the few days after Congress signed the bail out package reflected concerns that it did not go far enough which led to market fears that the US Government may not do “all that it takes” to prevent a slide into depression. It was the prompt announcement by the UK Government that it was going to buy equity stakes in UK banks, and also that the UK banks’ deposits and inter bank loans would be guaranteed by the UK Government, that hastened the finalisation of US Government equity injections into US banks along with guarantees of US inter bank loans and deposits. The following weekend the G7, G8 and G20 Finance Ministers met and agreed to continue to do “whatever it takes” to stem the financial crisis. It was the market’s recognition of this global, co-ordinated regulatory determination that finally stabilised the markets.

US and global bail out will include greater regulatory controls

The US and global bail out packages are more than the result of political give and take – greater regulatory controls like the ban on short selling are a good and necessary thing. The short selling ban is long overdue (ASIC has been asleep at the wheel) and should be made permanent. Limited exemptions for short selling as part of hedging of related trades are needed, and the ASIC backflips over the first couple of days after it announced the measures reflect the need to allow hedging markets to continue to function. Short selling has been a main driver of the massive wealth destruction of the last 18 months and, despite the bleating of the hedge fund spruikers, it has the last legal bastion of market manipulation.

What caused the crisis in the first place?

To understand this story we need to go back to the origins of the problems we now face, beyond even the sub prime fiasco and the advent of leveraged CDOs. The roots of the problem lie with the massive injection of cheap money into the US and global financial systems after Sept 11, 2001. This has now been acknowledged by Alan Greenspan in his most recent testimony to US Congress. With the world awash with cheap money, investment banks used developments in financial engineering to find crazy ways to lend money in what were supposedly less risky ways. How the US regulators are working out this problem (and working it out, they are) will shape our future more profoundly than we realise. Bold issues require bold solutions – and the bail out package is part of that process.

First, let’s look at what has really been happening in the last month, where for the first time in recent times a large US financial institution has been allowed to fail (Lehman Brothers). Is the failure of Lehman’s followed by the huge new bail out package the sign of panic, or is there something more systematic at work? In my view, these two seemingly different outcomes are actually part of an integrated response that will serve to restore the stability of the US and global economies. For sure, the measures have been developed on the run - but after all, this is the normal hallmark of real time policy development.

The peak of the interest rate resets in sub prime mortgages has now passed. Ben Bernanke cut US interest rates earlier this year, not just to stimulate the US economy, but primarily to soften the impact of rate resets on sub prime mortgages. (Sub prime mortgages involve low rate holidays in the first couple of years, stepping up aggressively based on a higher margin over the prime lending rate). As a result, most sub prime borrowers are paying rates now that are not significantly higher than in the holiday period. As the first wave of weakness in securities prices that were linked to sub prime mortgages came last year, it triggered a sharp fall in the “mark to market” prices of those securities, feeding into problems with highly leveraged hedge funds and investment banks. Some hedge funds failed (eg. Basis Capital) and investment banks with large principal positions also suffered. Call this the first wave of the sub prime problems.

The “many waves” of the current crisis.

Leverage was the multiplier of these problems. Hedge funds use prime brokers to trade, clear and finance their businesses. The largest investment banks are also the largest prime brokers. The leverage is like a margin loan facility – as the mark to market value of the hedge funds portfolio falls, leverage must be repaid to restore Loan to Value Ratios (ie caps on gearing levels) – and since the prime broker controls the hedge fund’s assets (as secured lender) it can and does sell down those assets as and when required to do so.

In a normal market this is not a problem, since assets can be sold in an orderly fashion at prices close to the current market. It’s only when asset prices “gap” down that problems arise, as the lender has to sell more and more assets to repay its loan. Hedge funds know this and it’s no accident that the falling mark to market prices of sub prime linked assets were driven down even harder than they otherwise would have been by the practice of shorting in credit markets, following the first wave of the sub prime problems.

In Australia we now know that the big falls in our share market last Spring were compounded by the repatriation of funds back to the large global investment houses, who were forced to sell liquid assets like Aussie stocks to help meet margin calls. These sales of assets - that weren’t *directly* linked to deteriorating sub prime backed securities - were thus a proxy for the sale of the (by now) highly illiquid and weakly priced sub prime backed securities. Shorting and proxy selling drove down asset prices in equity markets and we can call this the second wave of the sub prime problems.

It’s important to note that the actual incidence of defaults in sub prime backed securities had not risen to dangerous levels by the time the second wave took hold. The majority of hedge funds that went under during the first and second wave did not experience high levels of defaults in their CDO portfolio’s, the damage was simply done in most cases by falling mark to market values.

The bank run started in Easter 2008

By Easter this year it was becoming clear that highly leveraged investment banks, especially those with large inventories of sub prime assets, were teetering on the brink of financial ruin. Long term assets funded by short term loans were being unwound with increasing losses, and inter bank credit concerns were rising. In the few days prior to Bear Sterns being bailed out by JP Morgan, it now seems clear that counterparties started to refuse to deal with them – and the pace at which this accelerated around the market led to the US Fed Reserve concluding that it had no alternative than to offer financial support to JP Morgan to assist its acquisition of Bear Sterns.

This financial support was primarily provided by the widening of the Fed Reserve’s “RePo” window – the short term funding facility which allows US Treasury bond holders to exchange them for cash, without selling the bonds outright. In Easter the RePo window was widened to allow banks to post AAA rated asset backed securities for cash – effectively underwriting their value and increasing liquidity in the system. JP Morgan has apparently taken advantage of this move as part of the funding it provided to buy Bear Sterns stock.

Why bail out some, let others fail?

The bail out of Bear Sterns started the third wave of the sub prime crisis. Ben Bernanke comes from a distinguished academic background where his specialised focus was on the Great Depression. He knew that a run on Bear Sterns would if unchecked trigger the sort of market panic that led to the Great Depression, and his move at that time was correct. It triggered insane bleating from the left wing press which cried foul of the moral hazard implied in bailing out wealthy investment banks. That argument is itself partly bankrupt – as the so called bail out was motivated to ensure that the capital markets stayed open, so that normal businesses and individuals continue to have access to savings and borrowing markets.

President Bush calls the process one of focussing on “Your Street,” not just on Wall St. But mindful of the moral hazard argument, after the forced bail out of Bear Sterns and with the benefit of time on their side, the US regulators started to develop a more considered view of the problem, and to think through the downside risks of simply bailing out every institution that experienced financial distress.

There is a precedent to this problem in the way that the Japanese Government responded to the post 1987 market, which in Japan triggered a near collapse of its banking system. Like the rest of the developed world in the mid 1980s, Japanese banks had lent money aggressively on real estate and stocks at highly inflated, “bubble market” prices. Unlike most other countries in which banks called in security when those loans defaulted (recall Bond Corp and Christopher Skase’s Qintex in Australia) – Japanese banks were reluctant to call in those loans and trigger insolvencies because many of the borrowers were part of the chain of interlinked corporate empires known as zaibatsu. These in turn are the engines of employment and social cohesion in Japanese society. Instead, the Japanese Government provided a rescue package for its financial system which allowed the banks to continue to carry many of these non performing loans. The resulting deflation led to the stagnation of the Japanese economy for almost the next 20 years.

As the US considered the longer term response to the sub prime crisis, it was mindful to avoid the Japanese problem. Alan Greenspan went on the record to say that the US economy could not begin to recover until the US housing market hit bottom, by which he meant that defaulting home loans had to be forced into mortgagee sales. US SEC chairman Chris Cox has said on several occasions in the last few months that “over the years he has come to realise that when Alan Greenspan speaks, he needs to be listened to.” In this context it should have come as no surprise that Lehman Brothers was not bailed out by the US Government when it experienced its own version of the Bear Sterns problem in early September this year.

Just prior to the Lehman Bros failure the US Government had lent massive amounts of money to the US housing systems backbone, Fannie Mae and Freddie Mac. It had supported the buyout of Merrill Lynch by Bank of America as well. Fannie Mae and Freddie Mac hold over half of the housing loans in the US and provide mortgage insurance for a large percentage of housing loans. For them to fail would have destroyed the US economy. Merrill Lynch was bought by BOA which apparently valued its franchise and did not perceive that its bad asset problems were so large as to be terminal.

Not so with Lehman Bros – and we can see evidence of the thinking of the US Government on this point in the way in which it effected the bail out of Fannie Mae and Freddie Mac. It chose to place these two bodies in a “conservatorship” –meaning that in return for the large funding facility the US Government acquired the stock in both bodies, and the right to appoint the board and management as well. But the chosen mechanism of “conservatorship” triggered the implosion of multi billions of dollars of credit default swaps written over those entities. These swaps are written under ISDA master swap contracts which contain a specific definition of default, which includes failure to pay interest on loans, appointment of insolvency administrators, and conservatorships.

Thus, even though neither Fannie Mae or Freddie Mac actually defaulted on any of their outstanding bonds, the mechanism of their bail out triggered the constructive default of all credit

default swaps written over them. This meant that swap counterparties were forced to make substantial payments to settle these defaulting swaps, even when there was no actual losses on the underlying Lehman Bros loans and bonds. It's not conceivable that the US Government could not have predicted that this would occur, and avoided it if it wished to do so (by adopting a different method of bail out). Call this the fifth wave of the sub prime crisis.

What the Fed did with the Bear Sterns problem was what banking regulators in Western developed economies normally do – they don't actually nationalise the failed bank, they "encourage" other banks to buy or merge with the failed bank, or to take "white knight" equity stakes in it. Recall the entry of AMP onto the share register of Westpac in late 1992/early 1993, following the failed \$2.90 rights issue that led to the appointment of American Bob Joss as CEO (the RBA was rumoured at that time to have encouraged AMP's purchase of 10% of WBC).

What was unprecedented in the case of Bear Sterns was that the US Fed helped finance the Bear Sterns acquisition by JP Morgan, and that it did this so quickly, over the space of a weekend. In the case of Lehman Bros, it's apparent that no willing buyer could be found, even with the support of the US Fed and its various funding mechanisms. To its credit (no pun intended) the Fed resisted going the next step after failing to find a buyer. The Fed did not step in to nationalise Lehmans, even though it had effectively done so only a few days earlier with Fannie Mae and Freddie Mac.

It seems that the US regulators had listened to Alan Greenspan and used Lehmans to start the process of unwinding of problem assets in the financial system, which was the obvious consequence of its refusal to step into bail out Lehmans. Contrast that with the action taken by the US Fed a few days later when it again stepped in to support the rescue of American International Group, the largest US insurance company and an entity whose failure raised the spectre of systemic market risk. Call the difference in treatment of Lehman Bros vs Fannie Mae/Freddie Mac/AIG the sixth wave of the sub prime crisis.

What does the current bail out actually do?

But that case by case action did not stabilise the market as it should have done. Each new event triggered huge market volatility (as our gyrating share market evinced) and heightened systemic risk and panic. In an effort to short circuit this and to further improve market certainty, the US Government announced and then finalised details of a broad market rescue fund. The fund will allow the purchase of questionable assets for a total of US \$750bn, at prices below their par value but above the depressed values that most are currently trading for. This does two important things – it stabilises and underpins prices, which will remove doubts about the solvency of institutions; and it injects cash and liquidity into the system. It's the need to do the latter that meant the rejection of calls for the US Government to simply provide insurance over the troubled bonds.

In return for its financial support the US Government has started to tighten oversight and regulation of the markets, to take equity stakes in banks that sell assets into the fund, to cap executive salaries in those banks, and to aggressively work to prevent a rise in mortgage foreclosures.

What about the ban on short selling?

Calls for increased regulation had already led to the rapid introduction of short selling bans in major markets like the US, UK and Australia. The actions of ASIC to ban short selling are a by product of regulation in the US, driven both by the obvious need to prevent market manipulation in Australia generally and also to stop short sellers moving from the US after the ban there took hold. Short sellers like liquid markets and Australia has proven to be a fertile ground for them in the past. Just ask ABC Learning, Allco, Babcock and Brown, Macquarie...in fact, just ask most major Australian companies!

The simplest form of "naked" short selling involves selling a stock today in such volume that the price drops. Stocks which are experiencing some price weakness or which are vulnerable because of high levels of geared investing are prime targets for short selling. By the time the seller has to

deliver the stock, it hopes to be able to buy that stock (which it never owned in the first place) for a lower price than what it sold it for a couple of days earlier. This profit comes at the expense of the share owners who have sold because of their perception that the price is falling – but since they are not aware that the short selling is occurring and is part of a naked attempt to manipulate prices, the real losers are the normal investors who have been duped into selling.

Hedge funds create short selling as part of large and intricate arbitrage programs, which further destroy wealth, in an even more pernicious manner. Short sellers know that there are many institutions that will be forced to sell stocks when they drop by a certain level. Traditional fund managers are set up this way – they are forced to sell stocks when indices drop, this is part of the normal mandate for our leading fund managers; the financial cost is compounded when those same fund managers buy stocks back when the market rises after short selling abates. Investors with margin lending positions are also forced to sell stocks if they can't cover margin calls in falling markets. Short selling succeeds because these forced sales further drive down share prices, perpetuating the causes and negative effects of the initial short selling activity.

Short selling is either naked (the seller doesn't own the stocks that they sell) or covered (where the seller has already borrowed the stocks that they will end up delivering when the sale is finalised). Only the most liquid stocks can be short sold "naked" in the Australian market, previous rules ban naked short selling except where the stock is on a list of approved short selling stocks. Short selling for other stocks must be covered by stock lending facilities. The ASIC ban extends to new short selling whether it is "naked" or "covered."

In my view ASIC has been extremely tardy in closing down this last bastion of market manipulation but the design of its initial ban was chaotic, since it prevented all short selling except where it is conducted by ASX market makers and warrant market makers, for hedging pre existing positions. Limited changes to that rule have been subsequently announced to allow short selling for a limited range of over the counter contracts derivative. The move has been hailed as an important step towards re-building market integrity. In fact, ASIC's original announcements made a disastrous blunder because they ignored the very real and legitimate role which short selling plays in the hedging of normal derivative risk management positions. Isn't now exactly the time when investors may decide that they need to protect their investments?

Investors who want to buy protection against downside risk (ie a "put" option) will do so in a transaction which involves the option writer covering its risk by short selling stock.

When an investor buys a put option or an investment like a "Protected Equity Loan" they do so from a bank or broker which has now assumed the risk that it will have to make a payment if the share price falls below a pre set level. To hedge this risk the bank or broker will sell stocks in precisely measured proportions, which are determined by the application of option pricing models which dictate the "delta" of the sold options. This delta is a number between 0 and 1, and a delta of (say) 0.5 means that for every 100 sold put options, the bank or broker must sell 50 shares immediately after the option is created. Every day the delta changes, shares must be sold or bought to line up with the required delta.

But there is a very large and important part of the market which was left completely out in the cold by the initially flawed ASIC rules. The ASX has used its monopoly power to carve out a safe harbour for market makers for listed options and warrants which involve short selling, but guess what? Many risk management positions are laid off with institutions that are *not* ASX market makers. The initial ASIC rules stopped the creation of *any* new risk management positions which involve short selling and precluded the majority of institutions from participating in the ongoing management of existing or new transactions *at all*.

There are an estimated \$20 billion of unlisted, retail and wholesale put options and packaged investment like Protected Equity Loans in the Australian market right now. The initial ASIC rules would have destroyed this market, as they would have stopped new risk management positions from being created, and concentrated the risk of management of existing positions in the hands of

a very small group of ASX approved market makers. Thankfully ASIC acted to remove the prohibition on creating new risk management positions which involve short selling.

Where to from here?

The market reaction to the US and global bail out confirms that the measures have started to work to restore the integrity of the global financial system. The bail outs underpin the prices of distressed assets and injects liquidity into the system, thus allowing it to return to its main role of pricing, trading and managing the provision of loans and equity into businesses and consumers.

As time passes the current crisis will be seen for what it is: the bursting of a bubble and the related financial distress that is caused by financial losses, compounded by massively over leveraged positions. Like all bubbles, the aftermath of these losses will drag the global economy for a couple of years at least. Global GDP will slow and this will be magnified in countries like the US and Europe that have high exposures to the bubble and losses.

Countries like China which is far less directly exposed will slow, but not by as much; and countries like Australia will fare reasonably well as a result of our export exposure to China and Asia. With the restoration of properly functioning financial and credit markets, market economic activity will resume its normal course, and asset prices and values will stabilise. And as long as new regulatory powers are properly and carefully exercised, excessive and irrational behaviour should be reduced as well – to the benefit of all. The process may be slow and painful (it took 3 years for the global economy to recover from the bursting of the tech bubble), but the recovery *will* occur.

As the charts below show, Australian GDP growth is expected to grow to a good level of 3% for the following year. Australian interest rates should fall to around 5% next year. While overall global growth will be low for the next year or two, China and India remain on track for high single digit growth going forward. This will underpin prices for key Australian commodity exports which will fall over the next 12 months but will still remain high by historical standards.

Tony Rumble