

Platinum senior analyst John Hempton details the history of US finance since the 1970s and gives an interesting insight into modern securitisation and the complex issues of risk. This history partially explains how seemingly unsustainable growth in mortgage and other debt are sustained, thus partially explaining many things in our modern world from property prices to current account deficits. Some predictions are made.

The regulatory system which governed US banks and hence the US financial system into the 1970s had its roots in the Great Depression. During the Depression almost nine thousand banks collapsed prompting widespread regulation. Two regulations were dominant by the 1970s and set the stage for the Savings and Loan Crisis.

- A total leverage ratio regulation restricting the amount a bank could borrow against its shareholder equity.
- Regulation Q which restricted the amount banks could pay in interest on deposits. This was implemented to prevent banks from competing for deposits and hence to raise their profitability. By the 1970s the hard limits were set at a five percent interest rate on deposits for banks, with Savings & Loans (S&Ls – the American equivalent of “building societies”) allowed to pay up to five and a half percent for deposits. Deposits against which you could write a cheque were not allowed to pay interest at all.

The total leverage ratio restrictions were changed at various times – higher ratios encouraged lending and hence economic activity – at the cost of making banks more vulnerable during economic downturns. At the height of the Depression banks leverage was low. There is evidence that this exacerbated the Depression as banks stopped lending. Since the Depression, regulators have become progressively less concerned about bank capital adequacy: the total leverage ratio is now set at 20 times.

Regulation Q made possible the unusual interest rate terms of US mortgages. In the US the traditional mortgage has an interest rate that is fixed for thirty years but can be repaid at any time without penalty to the borrower. This means that if rates rise the borrower is protected (their rates are fixed). However, if rates go down the borrower can benefit with the opportunity to refinance their mortgage at the new lower rate.

In the absence of regulation Q these *no-lose* terms for US borrowers would be bad for lenders. If rates rose the lenders could not pass on the higher rates on their loans. If funding could only be obtained at market rates then the lender would face the problem of being stuck with long-dated low yielding mortgages (issued when rates were low) but being funded with high cost money. The potential for bankruptcy arising as a consequence of negative spreads in this arrangement was a serious structural flaw – a strong version of a general problem of interest rate risk facing US Banks.¹ [Just imagine running a bank when your assets are long-dated mortgages yielding seven percent while your deposit costs rise to twelve percent.]

Regulation Q however protected the lender by capping their funding cost. It didn't matter how high interest rates went, the banks (and S&Ls) would only need to pay five percent (five and a half percent) for their money. Regulation Q meant that banks were as protected against rising rates as home loan borrowers; a comfortable risk insulated position.

¹ Australian/New Zealand banks are unusual in facing very little interest rate risk. In Australia most mortgages are floating rate and get adjusted whenever rates change. Funding is similarly floating rate. Banks do not have substantial duration mismatch between assets and liabilities. Most countries have some mismatch as most loans are fixed for some time. The US has by-far the largest mismatch because of the preponderance of 30 year mortgages.

The group that suffered from rising rates was depositors. It didn't matter that inflation rose and rose again during the 1960s and 1970s – the depositor was stuck earning five to five and a half percent on their money. Unsurprisingly, depositors clamoured for change.

Where there is a group with a specific (and profit worthy) need, in this case depositors wanting to access high market rates, there will often be a clever entrepreneur willing to provide it. This time it was a long-haired banking consultant by the name of Andrew Kahr who was behind an enormous number of financial innovations in the 1970s. His most influential invention was the "checkable cash management account"², a conventional cash management account against which you could write cheques and on which interest continued to be paid.

In 1973 the "checkable cash management account" was revolutionary. This was an era where you still had to visit your home branch to withdraw money. Neighbouring branches did not share computer systems. Kahr's product was actually a funds management product – but the unit price was always a dollar – it was only the number of units that varied. This trick was called "dollar pricing". Merrill Lynch launched the product with national advertising and the dollar pricing made it look just like a bank account except that it was not anchored to a local branch.

Wall Street's new product was a national product from inception. It was dependent on computers and national distribution. Through this Merrill Lynch transformed itself from a standard Wall Street broker with a small affluent client list to a main-street firm with millions of middle-American clients. Some of the clients generated through the cash account became brokerage clients over time – and a whole generation was introduced to equities. Other Wall Street firms clambered to copy the cash management product.

The First Crisis

What was good for Wall Street however was not good for the banks. Banks (and S&Ls) were used to paying five percent (five and a half percent) for their money and having enough of it. Now depositors disdained local branch deposit rates for the generally more exciting market rates offered through Merrill Lynch and its competitors. This accelerated as rates, partly driven by inflation, went to unprecedented levels in the early 1980s. When given the choice of 5½ percent at your local S&L or 14 percent at Merrill Lynch it was an easy decision. The local S&L was doomed to run out of deposit money – a classic "liquidity crisis".

The result was the first Savings & Loan crisis. S&Ls owned predominantly fixed rate mortgages and their funding was disappearing. The regulators were left with invidious choices – either keep Regulation Q in place and have the S&Ls go bust very fast as they ran out of liquidity or allow S&Ls to pay market rates on deposits creating a negative spread versus their old fixed rate loans resulting in a slower slide to bankruptcy.

Politicians almost always defer a problem rather than face it: this was no exception – Regulation Q was removed. The solvency problems of banks and S&Ls became less critically urgent.

The legislators were aware however that if the S&Ls simply paid more for deposits while retaining their old low rate mortgages they would bleed to death. So the regulators enabled S&Ls to diversify their activities with a view to increasing profits. This was a substantial shift – until then the primary purpose of S&L regulation was to promote housing.

² There is an excellent book which goes through Andrew Kahr's inventions and this history. It is by Pulitzer prize winning journalist Joseph Nocera and called *A Piece of the Action: How the middle class joined the money class*.

To offset margin pressure S&Ls were encouraged to lend for things other than housing. Indeed they were encouraged to “sell” their low yielding mortgages and invest the proceeds in higher yielding assets. A second government chartered mortgage company (Freddie Mac) was started to facilitate this.

The “sale” of mortgages has become commonplace – but until the 1980s it was unusual. Generally the S&L still originated the mortgage. The homeowner still made his monthly payment to the local S&L. The local S&L remained responsible for the day-to-day servicing of the mortgage, but the loan payments were forwarded to a remote financial investor who was the actual owner of the right to receive interest and principal payments. [The S&Ls “sold” the loans and financial investors “purchased” them.] Nowadays, for the bulk of American mortgages, the ownership of cash flows is separate from the servicing of borrowers. The borrowers usually do not know that their payments are being forwarded to third parties.

Selling mortgages created a new business – *loan servicing*. The “servicer” sent statements, collected interest and principal and forwarded these to the owner of the mortgage. Loan servicers were also responsible for collecting difficult loans. Most borrowers did not know (or care) that the loan servicer was not the ultimate owner of the loan.

S&Ls were encouraged to sell mortgages by large investment banks even though the S&Ls had little idea how to value the loans they were selling. The difficulty being that a mortgage is typically of uncertain duration. A mortgage could theoretically last the full 30 years or it could be repaid tomorrow. The duration can be affected by interest rates because lower interest rates encourage borrowers to refinance. Several Wall Street firms made stupendous profits because S&Ls sold loans that they could not value to a bunch of mathematicians and traders who had a better idea what they were worth. *Liar’s Poker* is a well known book about the super-salesmen (Lewis Ranieri et al) and famous traders (John Meriwether et al) who revolutionised this business at Salomon Brothers. Similar ventures flourished in other investment banks.

Monies freed up from selling mortgages was invested in higher yielding (and presumably riskier) loans.

The Second S&L Crisis

What happened next should have been entirely predictable. S&Ls “sold” their safe (albeit low yield) mortgages and made riskier loans. In the some notorious cases crooks acquired control of S&Ls and lent to their friends. Wall Street also marketed low credit quality (“junk”) bonds to S&Ls. Because S&Ls retained a government guarantee on their deposits the government was ultimately responsible for repaying depositors. Insolvent institutions (of which there were many) had an incentive to make ever riskier loans (in the hope of earning higher rates). The legislation by which the Government funded its bailout responsibilities was passed in 1999. Initially regulators were given \$50 billion in borrowing authority – but it was nowhere near enough. The end cost to taxpayers was something between USD150 and 175 billion, roughly 15% of US tax revenue in 1992.

The massive rise in bad-lending activity (and the subsequent slowdown in lending) was a major cause of the (global) 1992 recession.³

An aside is worth mentioning here: Platinum makes investments with a time-frame of a few years. Even the ability to predict the economic result might not help in picking stocks (especially short positions). The first S&L legislation (prompted by the funding crisis) was in 1980 under President Carter. The legislation finally “solving” the problem was in 1989 under the First President Bush. The problem was visible for a few years either side of these dates – about a dozen

³ Most literature on the S&L crisis refers to a rolling crisis lasting a dozen years – not to two distinct crises. However it is clear that the problems were originally almost entirely to do with interest rate risk and by the end were almost entirely related to credit and fraud. It makes sense to divide these into two crises.

years all up. A dozen years is a long but not implausible time-frame for big issues of social and economic policy. *It is an eternity in the stock market.* If we had understood the S&L problem in its entirety in advance of the final crisis it would still have been difficult for a stock picker, especially on the short side.

Twelve years of mark-to-market on shorts would be beyond even the most tolerant fund manager's ability to cope. One of the lessons here is that 12 years is beyond the investment horizon of most of our clients. We feel this pain acutely when short selling stocks. It is easy to be right over a long time-frame but lose a considerable amount of money.

Securitisation: the traders' invention

The traders (eg John Meriwether) devised instruments which separated the cash flows of mortgages into "tranches" (quasi-bonds) which had very low levels of interest rate risk or very low levels credit risk or both. The process by which they did this is known as "securitisation". Brokers refer to selling these tranches to raise funds as "asset backed finance". Separating the cash flows of the mortgages from the servicing meant it was possible for remote investors to fund mortgages. For example, Japanese banks with no physical presence in America could invest in US mortgages.

Further, splitting the interest rate and credit risk allowed investors who would normally avoid particular types of risk to be involved in the funding of mortgages. Japanese banks in the mid 1990s were highly averse to credit risk (because of their own credit experience in Japan). However, they were not averse to interest rate risk and willingly accepted substantial amounts of this. On the other hand, some insurance companies with long-dated fixed liabilities were prepared to fund mortgages but only if the interest rate risk was removed. They were quite willing to accept credit risk.

This is best illustrated by example:

If you take a portfolio of 1000 mortgages it is unlikely that more than say 500 will default (50 percent frequency). It is also unlikely that the shortfall on foreclosure will be greater than 40%. Therefore it is highly unlikely that the loss on the whole portfolio will be greater than 20 percent.

If you sell a bond (tranche) fully backed by the first 80 percent of the cash flow from a portfolio of mortgages it is highly unlikely that those cash flows will fail and hence extremely unlikely that the bond will default. Such a bond would be rated AAA and could be sold to the most conservative investors at yields only 0.1 to 0.3 percentage points higher than government bonds.⁴

The ability to attract the most conservative investors to a risky class of assets by splitting up the cash flows and allowing external loan servicing is the most important innovation in finance during the last thirty years. This has allowed risk averse Asian and petrodollar investors to finance ordinary mortgages in the English-speaking world. It has been key to the current global financial imbalances where mortgage finance has been readily available in the English-speaking world *despite a shortage of deposits at their banks*. It has facilitated the giant property booms that we have seen and the enormous current account deficits of Australia, New Zealand and the US.

The credit risk inherent in these loans does not disappear – it is just reallocated. Selling bonds backed by the safest of cash flows leaves the *remaining cash flows with commensurately higher credit risk*. The risk in these residual pools was central in several financial failures in the early part of this century.

Securitisation can be used to split a portfolio of mortgages into a tranche with very low credit risk and a tranche with very high credit risk. Likewise it can be used to split mortgages into tranches with very low

⁴ Some AAA tranches trade at much higher spreads than this – contingent in the amount of interest rate risk contained.

levels of interest rate risk (highly certain timing of cash flows) and tranches with very high interest rate risk. The risk doesn't disappear – it is just concentrated in particular instruments. The high risk instruments are known colloquially as “toxic waste”.

Wall Street's super-salesmen were good at finding people to hold the toxic waste. A fine book from the perspective of the salesman is *FIASCO – the inside story of a Wall Street Trader*⁵ by Frank Partnoy. Partnoy was a salesman paid seemingly absurd amounts of money to find people willing to hold risks that they did not understand. The most famous victim of the residual interest rate risk was Orange County – a large municipality in Southern Los Angeles – which went bankrupt after having purchased several billion dollars worth of toxic waste. There were many other victims whose plight was exposed in 1994 when interest rates rose briefly, but very sharply.

Changes in the 1990s

The 1990s saw a massive resurrection of previously near-insolvent financial institutions. Big institutions which survived the second S&L crisis often saw their stock prices rise five fold or more. Money was plentiful and loans that were previously bad came good. Citigroup was the most prominent example. Below is a stock chart from 1987 to the end of 1994. (The stock is now over \$50). In a very short time a huge company stock rose 500 percent.



⁵ Non American editions of this book carried a different (and only slightly misleading) title: *FIASCO: Guns, Booze and Bloodlust – the Truth about High Finance*.

This effect was even more prominent at some S&Ls. Following is North Fork Bancorp's stock chart over the same period. North Fork was then a typical S&L.



The company looked precariously close to bankruptcy (reflected in its stock price). North Fork recovered strongly and eventually rose more than thirty fold.

As a result of developments during the S&L crisis the US system developed characteristics that pertain to this day.

- US Regulators are far more concerned about credit risk than interest rate risk. Banks in the US take relatively little credit risk and considerable interest rate risk. *Regulators are fighting the last financial crisis namely the second S&L crisis caused by credit. They have forgotten the first S&L crisis which was induced by rising interest rates. The first S&L crisis was more than twenty years ago.*
- The financial innovation which allowed a mortgage to be split up into its constituents has been extended to a level beyond even the comprehension of those operating in the mid 1980s. Nowadays all sorts of loans are pooled together and divided up into tranches whose repayment patterns are different from but contingent on the underlying loans. We have the mass securitisation of credit cards, junk bonds and LBO finance as well as mortgages. Moreover, mortgages are split into tranches which concentrate credit risk but are nearly devoid of interest rate risk and tranches which concentrate interest rate risk but are nearly devoid of credit risk. A typical mortgage securitisation now contains over a dozen tranches.

The changing status of bank branches

Computers and the separation of the deposit base of banks from the lending by banks changed the way that lenders did business beyond recognition.

Can you remember the high social status of the local branch manager? He was ultimately responsible for credit at his local branch – he could decide whether you got the loan or you didn't. He had a limited supply of deposits which he could lend so he rationed credit. It was his authority over the rationing of scarce credit that made the bank manager an important person.

This has changed totally. There is no longer any link between the deposit base of a financial institution and its ability to lend. (A financial institution can fund itself through securitisation.) Loans funded by securitisation meet "underwriting standards" often specified in the securitisation documents. A branch manager enters customer data into a computer – and the computer tells the manager whether the loan meets the standard – whereupon it is approved. Branch managers are now told to "sell" the loan – behaviour antithetical to the old function of branch managers which was to ration credit. Borrowers used to dress in a suit to visit the branch manager. Now the banker dresses in a suit to visit the borrower.

Securitisation separated the funding of loans from the taking of deposits. This enabled entirely new financial institutions – pools of capital without the ability to originate loans or take deposits – but which became important lenders. These new institutions made loans through mortgage brokers – a class of business that barely existed two decades ago. Countrywide Financial – the biggest US home lender⁶ – is not a bank and does not take deposits. Local examples include Wizard Home Loans (now owned by GE Capital).

Implications of the "new way" of lending

Splitting the financing of loans from the origination of loans has several implications. One of the most important is the change in incentives. A local branch of a bank used to earn its profits over time as a spread between deposit and lending. *The branch manager needed to think about the future.* This need not apply to a deal-driven loan originator. A broker is *paid for originating the loan* which is statistically assessed by computer. Inevitably this can lead to fraudulent appraisals, misstatement of income and other lax underwriting.

Once you have introduced *brokers* whose only role is to "sell" the loan they become separated from repayments and *debt collections* (whose purpose is to recover the loan that has gone bad). The broker's incentive is to see the deal done and some may be dissemble on the credit application to make the deal.

There have been other problems, usually in some smaller niches in the finance market. Heilig Meyers claimed to be America's largest furniture retailer with 870 stores. It specialised in selling furniture on instalment credit. The loans were packaged up, tranced and sold to the market. After Heilig Meyers went bankrupt it became evident that almost 15% of the "customers" did not have a correct address in the system and over 20% of the phone numbers did not actually belong to "real" borrowers. Tranches that looked like they were sound with enormous excess collateral (and were rated AAA) defaulted. This would not have happened if Heilig Meyers had been lending its own money.

Conseco – then a manufactured housing lender - was a far more important example. In the US a low-double-digit percentage of housing starts have typically been manufactured houses – pre-built at a factory and trucked to the site. Chattel loans were made against these (the homeowner often did not own the land so a traditional mortgage could not be secured). Loans against these homes were tranced and sold through Wall Street. Most of the loans were originated by dealers in manufactured homes. Dealers were (understandably) far more interested in selling the home than the credit worthiness of the buyer. [Had it been their money they would have been interested in the credit worthiness of the buyer.] Conseco required their borrowers to provide a down-payment – but the home vendor often circumvented that

⁶ Possibly the world's largest home lender.

requirement. A famous circumvention was to ask the buyer (who couldn't provide a down payment) if they owned a gun. The home-buyer would present the gun and the house-dealer would buy the gun at an inflated price of \$2500. This money was used as a down payment on the home. The house price was inflated (so the dealer would recover his \$2500), and thus a loan with no real down-payment was made to appear as if it met the lending criteria.

Soon people selling homes financed by Conseco were doing without the firearm fiction. It became common practice in the manufactured housing industry to sell houses at inflated prices but with cash rebates which were used to make the down-payment on the home. (No firearm and no real down-payment were necessary.) Conseco Finance collapsed with defaults to the AAA level. Conseco wound up as the third biggest bankruptcy in US history (behind Worldcom and Enron). Importantly, manufactured housing volumes fell by almost 50% and (five years later), have not fully recovered. Most of the manufactured housing industry went bankrupt on this slump.⁷

That said, the Heilig Meyers and Conseco examples are isolated in that they did not affect the core American securitisation businesses – the wrapping of corporate loans and mortgages. *These businesses were unimpaired and have continued.*

One thing of note was that almost all of the failures happened outside the banking sector. Neither Conseco nor Heilig Meyers were banks. The spike in bad debts that happened in 2002 was notable because not a single large US bank failed. Indeed most US banks went from strength to strength. The banks that had credit shocks largely had them on off-balance-sheet exposures (which were not covered by the total-leverage rules). For example, Bank of New York (one of very few large American banks whose stock trades below year 2000 prices) lost considerable money promising lines of credit to telecom and media companies. A small listed bank (Nextcard) which had a credit card securitisation business failed costing regulators (taxpayers) \$500 million. Nextcard was in the peculiar niche of giving money as unsecured (credit card) loans to people who asked on the internet. As with Heilig Meyers some of the customers probably didn't exist. The "bank" was funded with a mix of dot-com money, brokered deposits and securitisation. Superior bank – a privately owned bank failed when most of its assets were found to be lower rated securitisation residuals. In that case the rich controlling family bailed the bank out under threat of litigation. Both the failed banks involved securitisation (that is off balance sheet funding).

The US banking regulators came out of 2002 pleased with how the banking system had performed. Superior Bank and Nextcard prompted the regulator to reform their total leverage rules putting some of the securitisation on the balance sheet. Nonetheless relative to history the outcomes were very benign. There had been record levels of company failure and no associated big bank failure. Indeed the US regulators seem reluctant to adopt the international bank regulatory standard (Basel II) where it allows more leverage than the American standard. No institution regulated as a bank in the US has as much gross leverage as the European investment banks (or even Barclays or Royal Bank of Scotland). Thirty times leverage is fairly common in Europe and non-existent for banks in America.⁸ Moreover American regulators seem more determined than European regulators to focus on credit risk and less and less interested in interest rate risk (a problem which has not really occurred since the late 1970s and early 1980s). This reflects the last real crisis which was a credit risk crisis and the fact that the regulation appears to have been very successful in 2002.

2002 to now – the banks and interest rate risk

⁷ We were short Conseco throughout most of this period. We never shorted Heilig Meyers which was a pity because unlike Conseco it more or less went straight down and never gave short sellers the pain that came with Conseco. [Conseco doubled several times and tripled once on the way to zero.]

⁸ Large Wall Street firms such as Lehman Brothers and Goldman Sachs are generally not regulated as banks and are typically 30-40 times levered.

After 2002 the banks continued to avoid credit risk – allowing the market to absorb it. This has been possible because of the securitisation market and the willingness of investors to buy corporate debt. Wall Street keeps splicing and dicing mortgages and any other debt into tranches that are stripped of interest rate or credit risks or sometimes both.

Surprisingly (at least to us) the exposure of massive fraud at Fannie Mae (and to a lesser extent at Freddie Mac) – companies once central to the US mortgage market – did not slow the market. Fannie Mae and Freddie Mac have both shrunk their activity but securitisation structures have taken up the slack and the entire market has grown.

The market has developed with the most substantial credit risks being taken primarily outside the banking sector, and with considerable credit risk being traded through the securitisation market.

The interest rate risk of regional banks in the US is very high. One regional bank we track has almost 40 billion dollars in fixed rate assets (mostly mortgages and mortgage backed securities) financed with a similar number of short-dated deposits. The total tangible capital is just over \$2 billion. This balance sheet is as interest-rate risky as anything in the Regulation Q days. The bank in question makes few loans and the credit quality on those loans is very good. Despite this, the bank is spectacularly risky. If rates were to rise across the whole yield curve by five percentage points we calculate that this bank would erode its capital in under a year.

You might think that interest rates could never rise five percentage points. We don't think it is likely either – but in 1974 we would have said the same thing and we would have been wrong.

At Platinum we have been convinced that some of the US regional banks in particular have been taking insane amounts of interest rate risk and that much of their profits come from taking *financial market risk* as opposed to servicing clients. We consider the earnings that a bank makes from providing services to customers (servicing, originating loans, running transaction deposits, selling mutual funds) to be more sustainable than earnings that banks might make from accepting wholesale financial risks. We have had some limited success in shorting banks that had what appeared to be less sustainable profits. However as a theme it was not generally successful. Three banks which we were short had competent controlling shareholders who understood that their margins would sharply compress as interest rates rose. When the margin compression arrived the managers chose to sell out. Chronologically these were Charter One (sold to Royal Bank of Scotland), North Fork (sold to Capital One – a credit card securitisation firm) and Compass Bancshares (sold to the Spanish giant BBVA). It provides thin consolation, but no refund, that the purchase of Charter One (for over USD10 billion) is now almost universally considered to have been dramatically overpriced.

2002 to now – the securitisation market and credit risk

The securitisation market – functioning outside the view of the bank regulators – has become particularly aggressive in accepting and placing credit risk. The mortgage market and the Collateralised Debt Obligation (CDO) market are where there has been most action. CDOs are just securitisation of any cash flow – usually but not always the principal and interest from debt. The market became highly self-referential as CDOs were used to securitise other securitisations.

In 2002 several securitisation finance companies failed or nearly failed. None of them failed because of lending on property secured by a mortgage. Indeed in most of this period property prices went up. Mortgage rates also did not fall dramatically. This made mortgages a particularly attractive business. They were high yield and had very low default and loss experience. They were also relatively simple to administer.

Because of these factors a large number of new companies arose whose primary function was to bundle up mortgages for selling to the secondary market. Some of these companies were subsidiaries of S&Ls but

many were standalone. These companies grew very rapidly. Companies which most competent investors had never heard of in 2002 wound up becoming giants in mortgage origination. New Century Financial is a prominent example – its mortgage origination was equivalent in value to half the Australian mortgage market and it came from nowhere.

This was facilitated by the securitisation market. Because mortgage collateral had performed very well, the rating agencies and the market viewed it favourably. Securities backed by mortgages became very easy to sell. It literally became possible (as it was at the height of Conseco Finance) to bundle ten thousand mortgages in a pool, segregate the pool into 12 tranches and raise enough from selling the tranches to fund one hundred percent of the mortgages originated and make a profit. *As one could book a profit just by originating and selling mortgages it was not necessary to assess the credit on those mortgages.* New Century Financial (and plenty of others) did precisely this.

Indeed, a chain of people did entirely this. In the USA at peak (in 2006) just over 500,000 people worked for mortgage broking companies⁹. This is *almost one mortgage broker employee per 200 households* – an astounding use of resources. The securitisation industry provided so much money that it was possible for all these people to make a living just originating mortgages and on-selling them. A lot of mortgage brokers had six-figure incomes doing this. However this was not the end of mortgage industry employment. Wall Street employed tens of thousands of people on six figure salaries selling mortgage tranches globally. Typical securitisation documents run to a hundred or more pages of legalese employing many lawyers. Beyond that there is a considerable business in servicing the mortgages and refinancing defaulted mortgages. This was a vast fee-factory.

Companies downstream (such as New Century) purchased the mortgages from brokers and on-sold them to the market. They retained the right to service those mortgages (send statements, process principal and interest and collect bad debts) and to collect a fee for doing so. Companies had an incentive to ensure that those mortgages did not show bad credit performance as this would turn off the Wall Street spigot. The brokers facilitated this – whether they meant to or not. If a customer could not pay their mortgage (common enough without us knowing how common) then they could always get another mortgage. Moreover as their property price had risen the new mortgage could be for a larger amount (a “cash-out mortgage”). The cash out could repay other debts and give the appearance that the borrower was current. Cynically: *“a rolling loan gathers no loss”*.

Some originators (New Century amongst them) specialised in lending to people with less than perfect credit records. It didn't matter though because if loans could not be repaid they could be refinanced and thus “reported” credit performance remained good. The sorts of loans “sold” beggared belief. For a long time there has been a niche product in US mortgages which does not require the borrower to verify their income or their assets (a typical borrower might be an illegal immigrant). The usual catch was that the borrower paid a higher interest rate and had to have a 35 percent or more deposit against the property. These loans were known as “stated income, stated assets” loans and had low levels of credit risk because substantial deposits had been made. The lending criteria for this product progressively weakened and eventually “stated income” loans were made with loan to valuation ratios of 95 percent. The borrower no longer required much equity in the house. In many instances the 5 percent down was not against a genuine real estate purchase but against a valuation. Homebuilders sometimes sold homes with cash-back deals where the cash-back was used to fund the deposit. [This was the Conseco manufactured housing deal applied to regular real estate.] *Stated income loans exceeded half of all loans made in some States* – and half of those loans were made to regular W2 (that is pay-as-you-earn) taxpayers. These borrowers had an easily verifiable income but they chose not to verify it and to pay a higher interest rate.

⁹ Accurate figures are available for 2004. The *National Association of Mortgage Brokers* reported that at the end of 2004 there were 53,000 mortgage broking companies which employed an estimated 418,700 people. The 500,000 figure is more speculative – but a reasonable estimate as employment rose in this sector until the subprime mortgage market showed problems.

Presumably many borrowers were lying about their income¹⁰. Stated income loans to W2 taxpayers became known as “liars’ loans”.

Another product – the “option mortgage” has terms which almost seem designed to defer a borrower’s credit problems. “Option mortgages” allow borrowers the right to vary their repayment subject to overall repayment constraints. Usually the borrower could chose to pay minimal amounts for a period (often up to two years), however after that period the repayment rose by enough to eventually amortise the mortgage. Initially this was a niche product made available to people with highly variable incomes who chose to pay large amounts in good months and almost nothing the rest of the time. A Porsche salesman might have been a typical customer – one month selling six cars and earning a lot and another month selling none. Mortgage brokers however realised that they could originate this product far more widely by focussing on the minimum monthly repayment. Borrowers (particularly cash constrained borrowers) often chose mortgages based entirely on the “monthly”. *By 2006 over twenty percent of all mortgages originated in California and Florida were option mortgages* for which the borrower chose to pay the minimum. The minimum was often based on a 1-1.5 percent interest rate – but the debt was accumulating based on a 7 percent interest rate. When two years elapsed the borrower was going to have enormous “payment shock”. Credit problems in US mortgages started to emerge two years after the option mortgage became popular.

In the subprime area, covering about 10% of US mortgages by outstanding debt but maybe 20% by 2006 originations, the music has now stopped. The pools of loans originated in late 2006 in particular are showing spectacularly poor repayment patterns. Why? Because the “rolling loans” are in the most recent pools. In one instance (the now bankrupt Ownit mortgage) we know that more than five percent of the 2006 originations failed to make more than two of the first three mortgage payments. Most of these made no payments. Our guess (yet to be confirmed) is that these were mostly “rolling loans”. This is a problem for Ownit because Ownit had warranted that the loans involved real people, capable of making a payment, and the company has been called on those warranties. Ownit however is not an organisation on the fringe of American finance – it was 40 percent owned by Merrill Lynch and 20 percent owned by Nomura (the giant Japanese broker). Indeed the links between these new mortgage originators and the giants of Wall Street are very strong. The creditors list at New Century is as good a roll-call as any. New Century has defaulted on multi-billion dollar amounts from Morgan Stanley and Credit Suisse amongst others. When all these loans were originated and sold at a profit Wall Street got its slice. Wall Street however was exposed. It lent money to New Century et al to fund loans until a sufficiently large pool were available to securitise. When New Century filed bankruptcy Wall Street Banks took possession of the loans. They included many loans that were formerly “rolling” and are now going to show a loss.

The collapse of Ownit prompted a masterly understatement in the New York Times.

Officials at mortgage companies and Wall Street banks acknowledge that it may be too dangerous to allow borrowers with weak credit who are financing 100 percent of a home’s purchase price to borrow without documentation of their income.

But even after the collapse they were defending very weakened lending practice. This quote continues:

But they defend the practice as appropriate for buyers with better credit or those making a substantial down payment, arguing that it helps extend homeownership.¹¹

¹⁰ There have been small-scale studies matching incomes on stated income loans to incomes reported to the IRS (the United States Tax Department). One small study (100 loans) found that 95% of the loans had a discrepancy between stated income and taxable income of at least 5 percent. In sixty percent of loans the stated income was more than 50 percent higher than the tax income. There is no way of telling from this study whether the borrowers were lying to the loan officer or in their tax return or both. The incentives are present for both types of lies.

¹¹ These quotes from 8 May 2007 – “East Coast Money lent out West”.

Securitising securitisations – the CDO market

The securitisation market however had one last twist. It wasn't enough to separate the mortgage into various tranches with various credit and interest rate risks. The securitisation market grew till it securitised a very wide range of cash flows. Credit cards, road tolls, David Bowie's record royalties, corporate debt and many other cash flows were securitised. It was only a matter of time before Wall Street securitised the cash flows from other securitisations.

In particular lower rated tranches of mortgage securitisations (say BBB rated tranches) were pooled. The first cash flow on these tranches was sold as a AAA security – the argument being that it was improbable that most of the BBB securities would default. This would be true provided that the BBB pools are themselves not highly correlated. If they prove to be highly correlated (as appears to be happening in the subprime mortgage area) then just three BBB tranches defaulting would indicate it was likely that a majority would default. Then the seemingly safe AAA paper might actually be quite risky.

The securitisations of securitisations were *collateral debt obligations* (CDOs). The performance of a tranche of a CDO might be indirectly contingent on the performance of a million mortgages. *Of course this is not conceivable without powerful computers.* It is also the case that the owners of these CDOs have no idea of what they have really funded. It simply impossible to assess the credit performance in anything other than a highly abstract way. The Wall Street Journal reports that many European investors who have purchased CDOs are very surprised to learn they have US subprime mortgage exposure.

So where are we now

The two key characteristics of the US financial system are that:

- the banks (particularly the regional banks) take relatively little credit risk and a great deal of interest rate risk, and
- there is considerable credit risk being taken by investors in complex structures outside the banking system. This risk does not worry the banking regulators because it is not being funded by deposits. Largely, it seems, it is being funded by Asian and Petrodollar investors and is being reflected in the current account deficit.

Because the banks have not shown substantial solvency issues for some time they are not the location of regulatory pressure. The main pressure at the moment is in the narrow niche of US subprime mortgages. Financially this problem is large – but manageable.¹² The social implications of the crisis are possibly a greater pressure point.

Plausible estimates indicate that an extra million households will face foreclosure because of the mortgage credit crisis.¹³ Inevitably as a boom turns to bust unsavoury practices at the height of the boom

¹² The problems are relatively new so their ultimate scale is yet to be determined. However there were 1.2 trillion dollars in subprime mortgages outstanding at December 2006. A high (but plausible) estimate is that 30 percent of these mortgages default and that the losses on defaulted mortgage will be about 40 percent. Under these estimates total credit losses will be 12 percent of outstanding or less than 150 billion dollars. The pre-tax operating profit of listed US financial institutions is over 400 billion dollars. If the losses are spread over three years they will hardly be noticed in an aggregate sense. Even gargantuan credit losses such as this are manageable *provided they are well spread through the system.* Individual companies will be threatened but the system appears robust.

¹³ Currently US foreclosures are running at about 150 thousand a month almost double the rate of a year ago. Whilst the numbers move about quite a lot monthly the trend has been for increasing foreclosures for some time. This has happened even whilst employment conditions have been favourable. A million extra

are exposed. Brokers were paid to originate mortgages. At a minimum some neglected to explain to borrowers that the small monthly payment on their "option mortgage" did not represent full payment of interest and principal. Many a surprised borrower who finds that their payment has jumped from \$2000 a month to \$4500 a month (possibly more than their income) has chosen to sue when facing foreclosure. [With appreciating property prices they would not have sued – they would have sold the property and taken the profit.] Some borrowers have run to their Congressman.

Worse practices were common enough. At least one mortgage company encouraged brokers to mislead borrowers into accepting higher interest rates than they might have obtained elsewhere. For example they may have been placed in a mortgage with a 7.6 percent rate rather than a 7.2 percent. The broker was compensated with a hidden commission (often more than a percent of the amount borrowed). Presumably this practice was widespread because in many areas there was one mortgage broker employee per sixty mortgages outstanding. The brokers had to be paid a large amount per mortgage originated to make a reasonable living.

The political rhetoric about lenders has varied through history. Sometimes they are portrayed as evil people who prey on the temporarily needy. Sometimes borrowing is seen as a transaction between consenting adults which helps people own their own homes and businesses to develop. In the last decade political rhetoric has been very permissive towards borrowing – even talking about the "democratisation of credit". The subprime mortgage mess is changing that. Senator Dodd (the ranking Democrat on Banking and Finance issues) is arguing for *assignee liability* with mortgage sales. In Dodd's formulation the buyer of the mortgage will be responsible for any fraud or misrepresentation by the seller of the mortgage. This will severely impact the mortgage broking industry and crimp transactions in all but plain vanilla mortgages. It would undo the separation of servicing and ownership of mortgages and *effectively reinstate the bank as the arbiter of credit*. It will sharply reduce the availability of credit and do quite a deal to reverse the property price booms that were driven by that availability. It would however help reign in the current account deficit without appeals to protectionism. Whilst we are not good at predicting politics we doubt this will happen.

For want of something to do the Senate is running talk-fests under names such as "The Homeownership Preservation Summit". This Summit's goal was to "maximize the number of homeowners who are able to stay in their homes who would otherwise be threatened with default and foreclosure as subprime hybrid ARMs [mortgages with low initial payments] reset [payments] resulting in significant payment shocks". The problem is that the mortgage is a contract between a lender (the remote financial buyer of the mortgage) and the homeowner – and the homeowner generally has no idea who the real owner of their mortgage is. The ultimate financiers of the mortgage have no contact with the borrower and no method to negotiate restructuring.

This is another one of the effects of separating ownership of mortgages from the servicing of mortgages. In times past if an electrician fell off a ladder and broke his leg and was thus unable to pay his mortgage he would ring his bank manager who *knew him*. The bank manager may make a character judgement that the loan was sound and they would allow him to skip a few payments (in exchange for higher payments later). This would be better for both the bank and the borrower than (costly) foreclosure processes. The relationship between a loan servicer and the remote financier is more formalised. The "owner" of the mortgage does not know the borrower and is incapable of making the necessary character judgement. They do know that loan servicers would rather defer foreclosure expenses than take necessary action. So many contracts with loan servicers require the loan servicers to begin foreclosure once certain triggers are met. The process is impersonal. In America with some loan servicers the practice is that if a borrower

foreclosures is a plausible (perhaps low) estimate. We have seen estimates in the three million range. Looking at the loans in individual subprime securitisations make these estimates seem plausible – but to date actual foreclosures make those estimates look high.

misses one payment they get a nasty letter. If they miss two payments they get a threatening letter. If they miss three payments the loan servicer begins foreclosure proceedings.¹⁴

The social pressure caused by this is something that regulators/legislators cannot solve without the abrogation of the contract between the loan servicer and the owner of the mortgage.

Elected officials are taking a more indirect route. The Ohio Attorney General (Marc Dann, a recently elected Democrat) is looking for something he can target. On 15 May 2007 he said that he "won't hesitate to file civil racketeering charges against Wall Street investment banks if his investigation finds they had a hand in fraudulent subprime lending." Revealing that this is a politically driven witch-hunt he continued: "we're going to try to find a way to hold them accountable", and suggesting that Wall Street behaviour was no different to going "through Cleveland taking people's houses with guns".

We suspect it is likely that Wall Street investment banks will be forced to bail out some borrowers – but a witch-hunt does not provide a long-term sustainable solution to the problems caused by the separation of lending and the servicing of loans.

Real solutions will eventually be found. Our prediction: regulators will replace the bank manager of old and set some rules about who should and should not qualify for credit. Critics are already arguing that this will be just another form of middle class paternalism ... to get a loan first you will need to prove that you don't need one. However when faced with widespread evidence of broker abuse leading to foreclosure and hardship some reform seems likely.

To date the crisis in subprime mortgages has not affected the securitisation of conventional mortgages or corporate debt. We do not see any immediate reason why there should be contagion – but the perverse incentive structures for brokers in subprime mortgages are repeated in more conventional brokered mortgages and in the corporate debt market.

Interest rate risk and the traditional banks

None of these problems will cause real issues for large regulated banks in the US. The stock price of banks with large subprime exposure (Wells Fargo, Washington Mutual) might be weak – but their subprime businesses do not threaten their solvency. We expect banks to come through this credit crisis unscathed. If the stocks get very weak we would consider buying them.

For American banks in general there are few credit risks we can identify. There are exceptions – regional banks with undiversified portfolios of Florida apartment construction loans for instance, but these exceptions are rare.

What the banks have lots of is sensitivity to sharply rising interest rates. The credit risk of mortgages has been spread far-and-wide. The interest rate risk remains surprisingly concentrated in banks – especially regional banks. The position looks surprisingly like the Regulation Q days in the 1970s. If (both short and long dated) rates rise 5 percentage points there will be widespread solvency issues amongst US banks.

We do not think a rise in interest rates of 5 percentage points is likely. However periods of excessive borrowing (especially government borrowing) have often ended in inflation and that has tended to cause interest rates to rise sharply. The system is highly vulnerable.

The future

¹⁴ The same might occur in Australia in a sharp housing downturn. We expect the non-bank home loan lenders to react quite impersonally (and quickly) compared to banks when it comes to mortgagee sales. This will cause social friction in Australia if it ever happens.

Mortgage debt outstanding in the US grows by almost 600 dollars per household per month. Similar growth rates apply in Australia, New Zealand, Spain and other current account deficit countries. The financial innovations described in this article have made this possible.

Simple maths tells you that it can not go on forever. Herb Stein was an economics advisor to President Nixon, but he is best remembered for asserting that "things that can't go on forever don't". Stein however never thought that his "law" would apply with urgency. In Stein's view things could change gradually.

For several years at Platinum we have been searching for a trigger that might force Stein's law to apply with more urgency but have yet to find one. The subprime mortgage mess is as likely a trigger as any – however it has not yet caused a notable slowing in credit growth and hence does not appear to be the trigger. The legislative reaction to the subprime mortgage mess has more chance of being the trigger. The legislators (and their opponents) are playing with extreme rhetoric – but it seems unlikely that rhetoric will force action beyond some minimal regulation of credit standards.

How should Platinum invest your money in this situation?

This is a situation which (like the S&L crisis) appears as if it will play out over a period longer than the investment horizon of our investors. That makes it difficult for stock pickers.

From time to time Platinum will short stocks which appear unduly exposed to credit issues. We will hopefully find businesses where credit is improving and buy the relevant stocks.

Interest rate risk has caused us more problems. As described above, Platinum has not had much success in shorting banks with undue amounts of interest rate risk. Given the interest rate risks imbalances described Platinum is unlikely to hold any American regional banks. (Potentially we will hold large banks such as Citigroup which have more sophisticated interest rate risk management.) If European banks were to stop buying US regional banks whenever they put themselves up for sale we might resume short-selling US regional banking stocks where interest rate risks remain an issue.

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