

Challenger Financial Services Group Limited

Report on the US sub-prime crisis and the impact
on the Australian mortgage lending market



May 2008

Investments, Mortgages, Possibilities.

The state of the market – an introduction from Steve Weston



'Unfortunately few in the media or the wider public appear to realise that the cost of the majority of debt funding for all lenders, both bank and non-bank, is not determined solely by RBA cash rates.'

You simply can't overstate the magnitude of the US sub-prime collapse and the flow on impact to the global economy.

We're in the midst of the most significant financial crisis the world has faced in decades – if not generations – and right now there's no immediate end in sight.

Australian lenders both large and small have watched capital markets tighten, limiting a significant source of liquidity for mortgage lending. The reality is that right now the limited pools of funds that are available to lenders comes at a premium.

Make no mistake, with increases in the cost of funding lenders have had to make increases above the official RBA rate rises. With the cost of funding having risen faster than official rates you can expect these above RBA rate rises to continue.

If the cost to manufacture a product increases, those incremental costs may be borne by the business for a period, but ultimately, should shareholders want to continue to generate commercial returns, those costs are going to be passed on to the end consumer. Whether it's the mortgage industry or some other sector, these fundamental dynamics do not differ.

For mortgages in Australia, if the cost of funds increases materially, and those higher costs are sustained, then lenders may absorb those higher costs for a period – but ultimately they will be passed on to borrowers.

Public uproar broke out when major banks started increasing their rates above those announced by the RBA earlier this year. However there now seems to be growing recognition that the cost of the majority of debt funding for all lenders, both bank and non-bank, is not determined solely by RBA cash rates.

Lenders' wholesale funding costs are substantially determined by bank bill rates – the rates at which Australian banks lend to (and borrow from) each other – as well as a margin known as a credit spread. Since the unfolding of the credit crisis last year, both of these rate components have increased significantly and concurrently, creating a painful cocktail of higher wholesale funding costs for lenders.

Despite market conditions dominating the headlines, there is still confusion over how issues concerning US sub-prime mortgages started, who's to blame, and how Australia – even though it has a comparatively small, more conservatively structured and hence materially better performed sub-prime market – has been dragged into the whole mess.

Since the market dislocation began to bite in Australia in August last year, I've spent a lot of time on the road presenting to mortgage managers, brokers and other industry stakeholders to help clarify how the contagion of reckless US lending to sub-prime borrowers has spread so dramatically across the global market. I have also taken a crystal ball view of what is likely to occur in the coming months.

I had always planned to make my presentation available to those who attended my sessions, however looking back over the slides, without commentary the presentation only told half the story.

I therefore felt that a series of articles, supported with key statistics and graphs from the presentation, would be of considerably more value to those that attended and those unable to do so. This report is intended as an easily digestible, high-level overview to help participants in the mortgage industry to piece together the sub-prime crisis puzzle. While the topic could certainly be covered as a book or an expert thesis, I will leave this to the many other people who in time to come will inevitably write about this subject in more detail.

I hope this report will help to build your understanding of today's funding landscape and be of benefit when you are talking to your own clients and colleagues.

Regards,

Steve Weston
General Manager
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US sub-prime lending and how it collapsed

Poor underwriting, overzealous investors and greed plunged the US into one of its worst financial crises since the Second World War.

'The belief that the US property bull-run would last forever fuelled a lending frenzy that is now hard to comprehend.'

A quick visit to the US implode-o-meter website (which now receives nearly 100,000 visitors a day) reveals that as of May 23, 2008, 260 major US lending operations have collapsed due to their exposure to sub-prime mortgages and/or an inability to access new funding lines.

Easy money and slack lending standards, coupled with free-falling house prices and foreclosures, made for the perfect financial storm that has battered the US since mid 2007 – resulting in the demise of these mortgage lenders. And there are still more dominos to fall.

So how did lenders get in so deep, and how did sub-prime mortgages get to represent such a significant chunk of the US mortgage market?

The belief that the US property bull-run would last forever fuelled a lending frenzy that is now hard to comprehend. US property price growth rates had run (on average) at double digit levels between the late 1990s and 2005. Consumers in the US were anxious to buy their own home to avoid being stuck in a rental trap – not too dissimilar to the Australian experience.

Easy money; heady times

Whilst house prices were growing strongly, the borrowing capacity of individuals was also strong – primarily due to the generationally low interest rates that followed a US recession in the early part of the new millennium. Not only was borrowing capacity at historically high levels, access to credit was just as easy. Many that would not have qualified for a 'traditional' home loan could now do so via sub-prime loans designed specifically for non-qualifying borrowers.

In 2003, sub-prime mortgages accounted for just eight per cent of total US mortgage originations. In 2006 their share exploded to a staggering 28 per cent of all new US mortgages written. This compares to less than one per cent in Australia!

Alarming, of those sub-prime mortgages written from 2004 to 2006, a whopping (circa) 90 per cent were two year adjustable rate mortgages (ARMs), with interest rates that jumped in many cases from seven to 12 per cent on the second anniversary of the loan. (Source: Centre for Responsible Lending.) These loans worked in a similar way to the honeymoon rate loan we are familiar with in Australia, but with much higher interest rate step ups.

The majority of these mortgages were made to borrowers without any meaningful deposit. About half were approved without any form of independent employment or income verification. Lower socio-economic communities were successfully targeted with sub-prime loan offers that allowed borrowers to purchase a home, despite being unemployed or not having any deposit to contribute. These loans are commonly referred to as NINJA loans (no income; no job; no assets).

Inevitably, trouble erupted when interest rates were reset. Almost overnight, tens of thousands of sub-prime borrowers' loans were resetting each month. In many cases borrowing capacity was not stress-tested at the interest rate levels at which the loan would ultimately reset. As a result, many borrowers couldn't afford the higher reset rate and defaults surged.

Disturbingly, the monthly resets of ARMs don't peak until August 2008 – so there is still significant pain ahead. It is predicted that of those sub-prime mortgages made in 2005-2006, 20 per cent will end in foreclosure.

A recent sample review of early defaulted sub-prime loans written in 2006 found that up to 70 per cent included at least one element of fraudulent misrepresentation. Alarming, 80 per cent of this fraud was said to have been aided and abetted by 'insiders', which may have included a broker, valuer or staff member of the mortgage lender. The role of fraud in the sub-prime crisis cannot be understated.

US sub-prime number crunch

28 – percentage of all US mortgage originations that were sub-prime loans in 2006, compared to only eight per cent in 2003.

292 – percentage growth of the US sub-prime mortgage market between 2003 and 2006.

1.3 – current amount, in trillions of US dollars, of outstanding sub-prime loans compared to US\$332 billion outstanding in 2003.

70 – percentage of sub-prime loans written between 2004 and 2006 with adjustable interest rates (ARMs) that will reset. Between 89 and 93 per cent of these loans have 'exploding' interest rates.

1.8 – million: number of ARM loans which will reset in 2008, valued at US\$450 billion.

20 – percentage of US sub-prime loans written between 2005 and 2006 that are projected to end in foreclosure.

2.2 – million: number of US families with sub-prime loans that have, or will lose their home through foreclosure in the next few years.

Securitisation of sub-prime mortgages – where it went wrong

Mortgage securities enjoy unprecedented demand and then fall out of favour as the market turns for the worse.

‘While there is still a strong demand for debt capital around the world, the supply is now severely limited. ... And mortgages, even here in Australia, have not been immune, with the cost of debt funding increasing materially.’

Until recently, investors – which include pension funds, insurance companies, investment banks, hedge funds and the like – were attracted to investing in residential mortgage backed securities (RMBS) since they provided strong risk-adjusted returns compared to other asset classes.

Most institutional investors require the debt assets in which they invest to be rated by a ratings agency. Typically about 80 per cent of US sub-prime RMBS were afforded the highest (AAA) rating available, and for a good period of time the bonds performed accordingly.

Unknown to the investors and the ratings agencies, poor lending practices had begun to take hold in the form of two year sub-prime adjustable rate mortgages that became prevalent in the US mortgage lending market. In 2006 alone, around 28 per cent of all new US mortgage originations were sub-prime loans, including a proportion of loans subject to dubious underwriting and fraud. In contrast, during the same period Australian securitised loans in general continued to maintain their traditionally high underwriting standards, with consumer lending underpinned by the UCCC regulatory framework.

Money to burn

On Wall Street, excess market liquidity – institutions had cash to burn – meant that weaker underwriting standards were not punished ... rather they prospered. Moreover, Wall Street institutions allowed poor compliance and the payment of large upfront commissions throughout the origination process, which further exacerbated the situation.

Whilst AAA rated RMBS bonds were in high demand, lower rated bonds were more difficult to sell, often because the investors could only invest in assets with minimum rating levels. By utilising a more highly structured form of security called CDOs (collateralised debt obligations) Wall Street institutions were able to find much deeper and more liquid markets for their unloved lower rated RMBS tranches through selling them to CDO investors seeking greater yields at the AAA rating category than what had previously been on offer.

However, the party began to turn sour. In an environment where it looked as though the housing market could do nothing but rise, the unexpected began to happen. The numbers of borrowers with resetting (or ‘exploding’) ARMs began to increase, and many borrowers that should never have been given loans in the first place quickly realised they could no longer afford their mortgages.

In the US (unlike Australia), most home loans are non-recourse, meaning the lender only has access to the security property to repay the debt – not any other assets the borrower may have. Accordingly, borrowers with homes worth less than their mortgages began returning their keys to lenders. This happened in such significant numbers that the term ‘jingle-mail’ was coined in the US to describe the house keys that were received in the mail from borrowers.

For the first time in many years, lenders incurred material and systemic mortgage losses. This was something foreign to most investors and it didn’t align to the strong ratings given to the RMBS bonds by the ratings agencies. Once losses gained momentum, the ratings agencies were forced under their rating methodologies to begin downgrading a large number of bonds.

Estimated sub-prime losses as at March, 2008

Estimated Losses (US\$ bn)	US	Europe	Other	Total
Sub-prime and Alt A	\$29	\$15	\$0	\$44
Asset backed securities	\$12	\$27	\$11	\$50
Collateralised Debt Obligations	\$90	\$53	\$10	\$153
Conduits and SIVs	\$13	\$27	\$0	\$40
Total – Estimated	\$144	\$123	\$21	\$287
Total – Reported	\$80	\$95	\$18	\$193

As borrowers defaulted in increasing numbers, properties were sold by both borrowers and lenders to repay the loans. The laws of supply and demand applied: house price growth slowed and eventually home prices began to fall.

Yard sale

In the early part of the decade, the easy option for distressed borrowers was to offload their property and repay the debt – often pocketing some change. However, as the crisis took hold falling property prices meant that the sale of the property did not always meet the outstanding balance of the loan.

Due to the ratings downgrades, many investors were required to liquidate their RMBS investments. Unfortunately, by the time this occurred investors were already spooked and while sellers were plentiful, buyers were scarce. This meant that many bonds were sold at increasingly distressed prices.

The obvious result of this was that the investors doing the selling took heavy losses. Due to the accounting convention of marking assets to fair value, other holders of RMBS had to mark down the value of their bonds to the distressed sale prices, given this was considered to be the true market price. This 'mark-to-market' issue has been a primary driver of the billions of dollars of write-downs that you read about, rather than the traditional 'realised' losses which are incurred when a lender obtains insufficient proceeds from the sale of a security property to repay a defaulting loan.

For financial institutions that invested heavily in RMBS the fallout has been massive. As panic swept through debt markets, institutions that had previously aggressively bought into RMBS cleared out tens of billions of dollars of bonds, or wrote down the value if they did not, or could not, sell them.

Further fallout

It is likely that there are still more losses waiting to surface – though the worst news is probably now out. The lingering downside is that many investors are currently either concerned about fund redemptions, have lost confidence in most asset classes, or are concerned about further potential mark-to-market losses and are consequently hoarding their investments in cash safe havens.

While there is still a strong demand for debt capital around the world, the supply is now severely limited. The laws of supply and demand apply: the cost of capital has been repriced globally, in all asset classes. And mortgages, even here in Australia, have not been immune, with the cost of debt funding increasing materially.

The absence of buyers has resulted in some RMBS and CDOs being marked down to bargain basement prices. In typical financial markets fashion, everyone scrambles to either jump in or bail out at the same time, creating a tendency to overshoot the mark, both on the upside and downside. The current lopsided market for mortgage bonds, with plenty of sellers and few buyers, means that there are probably some good buying opportunities available for investors who know how to properly analyse and price the assets.

The 64 million (or more accurately billion) dollar question is when will the RMBS markets and capital markets more generally re-open? It's one of the most widely-debated questions today.

The answer is that when confidence is restored in the financial markets, capital will return. And you can be sure of one thing: investors will be far more discerning in the assets they invest in going forward. Perhaps as a silver lining on a dark cloud, Australian RMBS will most likely be amongst the leaders in attracting demand when the markets do finally recover, given that our securities have historically performed well and are likely to avoid much of the fallout experienced by US securities.

The state of the Australian market

Despite a healthy housing market, overall tight underwriting standards and a robust Australian economy, domestic mortgage lenders (both bank and non-bank) have been hit hard by the fallout from the US sub-prime crisis

'The reality is that lenders will have to pass on substantially all of the increased funding costs to borrowers; if they are unable or unwilling to do so they are likely to ration credit.'

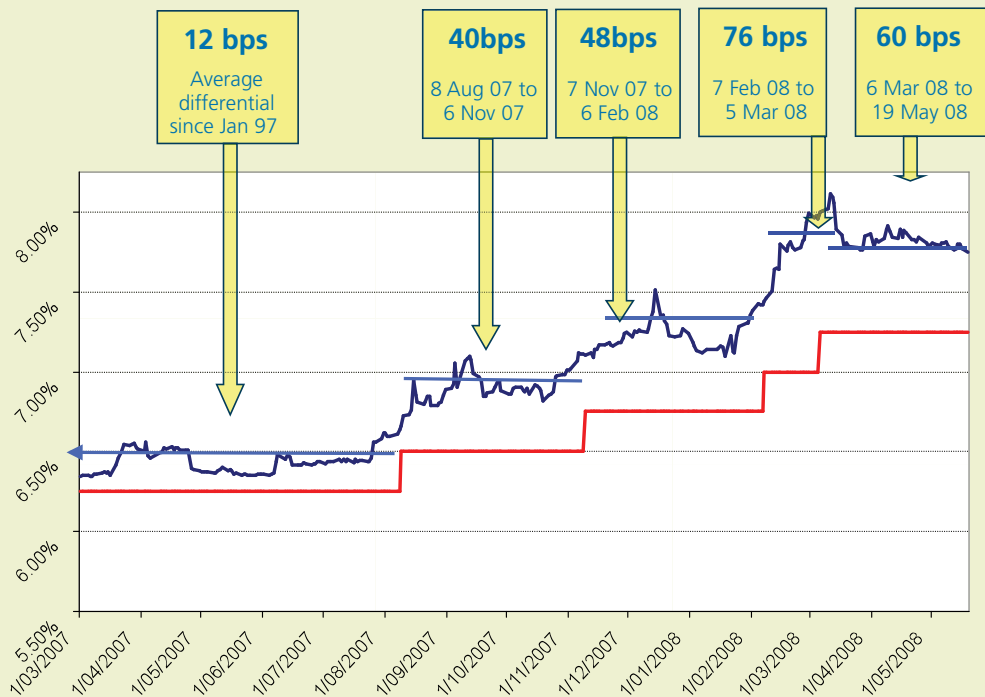
The problems that Australian lenders currently face have little to do with the local mortgage or property markets. The problem is about access to funding, centred on how mortgage lenders – banks and non-banks – raise the money required to fund their loans. What began as a crisis of credit quality is now evolving into a crisis of liquidity. Institutional investors with access to funds are taking what they perceive to be the safe option, by retaining a higher-than-usual proportion of their investments in shorter-term investments.

With capital markets in hibernation and investors hard to find, Australia's lenders are currently limited in their ability to tap into the global markets on which they have relied so heavily in recent years.

The relatively small debt issues, with shorter than usual duration, that have been placed into the global markets by major Australian bank issuers this year have been priced with spreads on average of in excess of 100 basis points over the applicable reference rate. Comparatively, similar deals placed before the crisis hit last year would have priced at around 20 basis points over. In other words, the funding cost margins within capital markets for these issuers, which carry investment grade credit ratings, have increased by over five times within the space of some nine months.

Compression Spread – Daily 90 day BBSW to RBA Target Cash Rate

Daily BBSW 90 to RBA Target Cash Rate – 1 March 2007 to 19 May 2008



The fact that Australian mortgages are among the best performing in the world matters little; neither does the comparatively strong position of the Australian financial system. We are now at the mercy of a supply and demand market where there is plenty of debt for sale, but limited buyers. Similarly, corporate issuers in the debt capital markets, including banks, are finding limited demand for their important longer-dated bond issues, despite offering investors yields that were unimaginable less than a year ago.

Consequently, as liquidity has evaporated, the cost of funding has soared. Inevitably, these higher costs must be passed-on to borrowers.

Confusion reigns

But what the media and the majority of Australians haven't realised, although they are now beginning to, is that funding costs have increased at a far greater rate than the RBA's interest rate rises.

For mortgage lenders it is the bank bill swap reference rate (BBSW) and the credit spread that determines the cost of funds, not the RBA cash rate. (Refer to the article below for further details: How mortgage interest rates are determined.)

Most new mortgage home loans in Australia are currently being written at the thinnest of margins.

While it is true that banks have access to retail deposits to fund their loans, this only makes up a fraction of their funding – leaving them dependant on the capital markets. To make it even harder for banks, the cost of retail deposits is also increasing materially as they fight a price war to attract funding. Internet savings accounts and term deposits have attracted a significant share of deposit growth at interest rates that are commonly close to or above the RBA cash rate. In years gone by, a proportion of this money would have been sitting in transaction accounts, with interest rates very close to zero.

So where do lenders go from here?

One thing is for certain – banks should not and will not write loans at a loss over a sustained period of time. While there’s no doubt that market share is typically a key leading indicator of a bank’s financial prospects, profit is the key driver. Put simply, it doesn’t make sense for shareholders to invest in a business where the sale price of the product doesn’t even cover the manufacturing costs – an issue we’ve addressed above.

The reality is that lenders will have to pass on substantially all of the increased funding costs to borrowers; if they are unable or unwilling to do so they are likely to ration credit. The consequences of credit rationing would be calamitous for the Australian economy, starving borrowers and businesses of the funding needed to fuel growth.

The first signs of rationing have already emerged overseas with many UK lenders pushing rates up and/or tightening credit standards to such a level that they become ‘uncompetitive’.

The mortgage industry and ultimately borrowers need to recognise the reality that we are in a period where funding costs have been rising much faster than official rates. And while history suggests that investors will return and prices will fall once the capital markets regain their momentum, it is likely to be some time before we see plentiful and readily available credit.

In the meantime, we are likely to see lenders passing on further rate rises to borrowers outside of RBA movements and reducing the discounts available on selected products. Looking forward, it is reasonable to assume that we are at, or near, the peak of the RBA’s rate cycle, bearing in mind that the US and UK central banks have been easing (reducing) their cash rates over recent months. You can expect to see that when the RBA starts to reduce the Australian cash rate, lenders will claw-back some of the higher costs they had absorbed by not passing on the rate reductions in full.

Variable rate increases in excess of the RBA

Lenders’ variable interest rates have risen for both wholesale and retail mortgages since the August 2007 credit crunch as follows:

Wholesale mortgages

Lender	Non RBA increases since August 2007*
Challenger	+0.55%
Adelaide Bank	+0.55%
GE Money (AFIG)	+0.60%
First Mac	+0.40%
Macquarie Bank (Puma)	+0.75% [†]
Resimac	+0.40%
ING Mortgage Management	+0.55%

Retail mortgages

Lender	Non RBA increases since August 2007*
ANZ	+0.40%
NAB	+0.39%
CBA	+0.37%
Westpac	+0.40%
St. George	+0.40%
ING DIRECT	+0.45%
Suncorp	+0.40%
Citibank	+0.45%
BankWest	+0.53%
Wizard	+0.47%
Macquarie Mortgages	+0.78% [†]

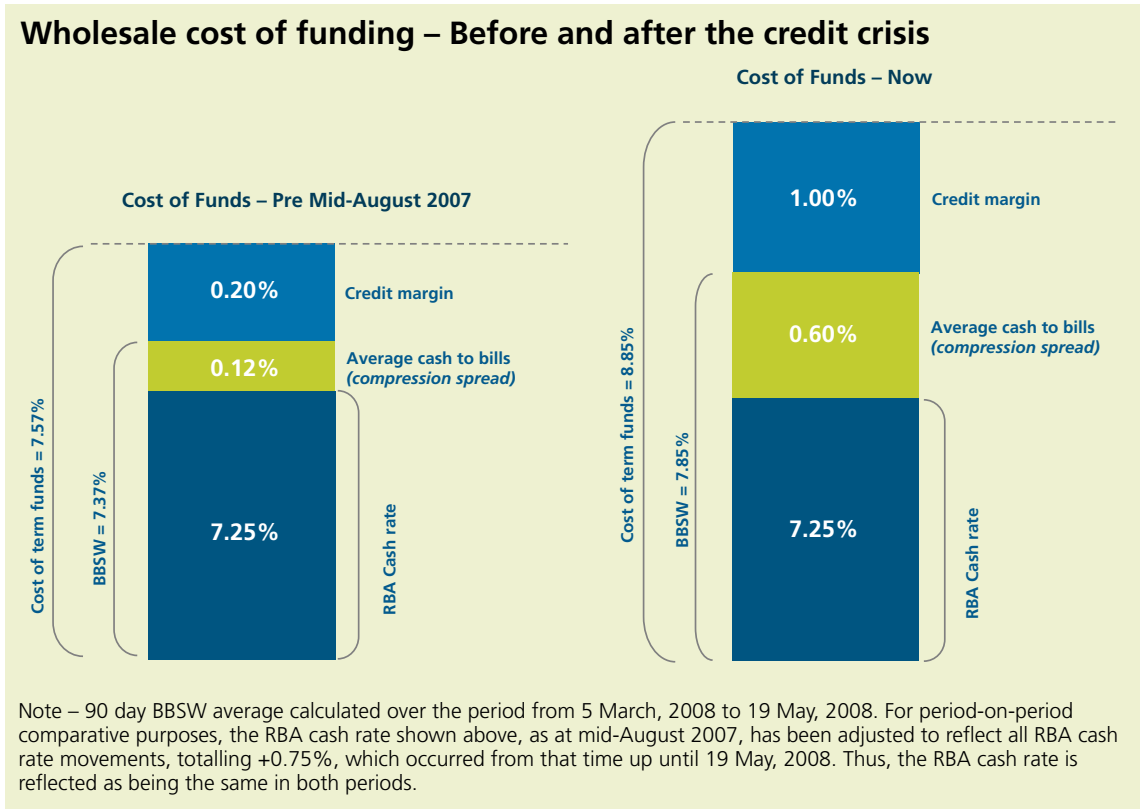
* Increases to reference rate or equivalent, in excess of RBA movements, for existing full doc residential mortgages since August 2007 until May 19, 2008. Data compiled from media releases, lender websites, pricing updates, call centre contact and media reports and are applicable only to the dates noted. This list is compiled for reference purposes only. It must not be published, reproduced or on-forwarded. No responsibility taken for errors or omissions. Rate increases refer to the lenders’ published or commonly available standard variable rates for residential loans. Note that lenders may apply discounts or loadings to their rates, depending on the loan characteristics such as product, loan amount, LVR and/or borrower. Rate increases noted may apply only to specific loan products, or specific loan categories.

[†] Ceased writing new business March 2008

How wholesale funding costs for mortgages are determined

Some simple arithmetic allows us to calculate the cost of funding a new loan, highlighted by the commentary and table below.

- Since the last RBA rate movement at the beginning of March 2008 to the present time (as at 19th May, 2008), 90 day BBSW has averaged 60 basis points over the RBA cash rate of 7.25 per cent – a level of 7.85 per cent. Add a conservative assumed credit spread on either RMBS, or bank three year medium-term notes, of 1.00 per cent. This adds up to 8.85 per cent – which is the raw cost of wholesale funding.
- Next add the direct costs and overheads that a lender requires to run their business. The result is that the total real cost for any lender to originate and fund a new mortgage, while keeping staff paid, the doors open and lights on, is most likely to be well over 9.00 per cent.
- After taking into account commonly available discounts such as ‘propacks’, many new residential variable rate loans are currently being written at borrower rates under 9.00 per cent.
- So there you have the current position for lenders in the Australian home lending market today. The incremental and fixed cost to lenders of writing a new loan is often over 9.00 per cent, while the rate offered to borrowers is generally less than 9.00 percent.



About Challenger Mortgage Management

Challenger Mortgage Management is part of the Challenger Financial Services Group. A diversified financial services company listed on the Australian Stock Exchange, regulated by the Australian Prudential Regulatory Authority and rated BBB+ by Standard and Poor's.

Challenger is one of Australia's largest non-bank mortgage providers, offering residential and commercial loan products via third-party distribution channels, including mortgage managers, originators and brokers.

Challenger first entered commercial funding with the acquisition of the Howard Mortgage Fund and its commercial lending origination arm in 1997.

In 2003, the acquisition of Interstar Securities moved Challenger into wholesale residential mortgage lending. Challenger further strengthened its residential mortgage business with the acquisition of a 15 per cent stake in aggregator PLAN Australia in December 2005, followed by a 40 per cent stake in non-bank lender Homeloans Ltd in May 2007.

More recently Challenger has consolidated its position as the largest mortgage platform aggregator by acquiring 19 per cent of FAST and 100 per cent of Choice Aggregation Services in 2007, with the intention to acquire the other 85 per cent of PLAN later in 2008.

As at March 31, 2008 Challenger Mortgage Management had mortgages under management of \$22.6 billion and \$24.4 billion of mortgages under administration. It recorded a divisional EBIT in the half year to 31 December, 2007 of \$52 million.

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Disclaimer: The material in this report is general background information about Challenger Financial Services Group activities and is current at the date of publishing. It is information given in summary form and does not purport to be complete. It is not intended to be relied upon as advice to investors or potential investors and does not take into account the investment objectives, financial situation or needs of any particular investor. These should be considered with or without professional advice when deciding if an investment is appropriate.

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