Australian Mortgage Industry - Volume 6

Mortgage Stress - Are Australian Households In A Pickle?

Australian Banks

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This report is the result of a joint effort between Fujitsu Consulting and JPMorgan, focusing on developments in the Australian mortgage industry. We use the Fujitsu Mortgage Market and Yield Improvement Modelling.

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Executive Summary

This report is the result of a joint effort between Fujitsu Consulting and JPMorgan, focusing on developments in the Australian Mortgage Industry. We use the Fujitsu Mortgage Market and Yield Improvement Modeling. In relation to the mortgage industry generally, the key findings are:

- **Borrower gearing levels have risen** – In recent years there has been a dramatic upshift in the gearing tolerance of new home loan borrowers given the combination of a strong domestic economy, low unemployment, falling interest rate environment, and a loosening of bank credit underwriting standards. **However, the predominance of variable rate loans which account for 85.2% of the Australian home loan balances sees this increased "gearing tolerance" likely vulnerable to rising interest rates.** By way of example, each 25bp increase in interest rates increases the interest burden on home loan borrowers by an estimated A$1.75bn (i.e. A$874bn x 80% x 0.25% = A$1.75bn). Again extending the view out to 2010, as noted above, total household debt could be A$1.3tr, at which point, each 25bp increase in interest rates increases the interest burden on home loan borrowers by an estimated A$2.6bn (i.e. A$1.3tr x 80% x 0.25% = A$2.6bn).

- **CY2007 sees housing loan growth coming to terms with tightening monetary policy and broader market instability** – Having peaked at a 3 month annualized growth rate of 23.4% pa in November 2003 (refer Figure 5), CY2004 and CY2005 saw a sustained slide in housing credit growth to a low of 9.4% 3 month annualized in September 2004. The first half of CY2006 saw a sharp rebound in the growth rate of Australian housing mortgage loan outstandings, peaking to a three month annualized growth rate of 15.6% in June 2006, only to fade again over the second half of CY2006 as the weight of contractionary monetary policy took hold of the market, bottoming at a three month annualized growth rate of 10.3% in December 2006. Thus far over the course of FY07, housing credit growth again accelerated over the first half of CY2007 to reach a three month annualized growth rate of 14.3% in June 2007, only to ease modestly over July 2007, with aggregate system home loan outstandings of A$874.1bn. The recent easing reflects (i) a rise in interest rates, (ii) a tighter global liquidity environment, which will ultimately see lending standards again lifted, and (iii) a correction of, and continued volatility in, equity markets, has seen households skittish again.

The proportion of all loans across the industry through brokers has capped out at 38% – We are beginning to see a stagnation in the level of outstanding loans initially written through a broker (refer Figure 9). This is explained by the slowing in new loans originated through brokers. Broker originated share of new loans has not grown in the last six months – the first time in four years. This indicates that the major investments in primary distribution capacity are having some impact. Each of the major banks has lost market share in their branch networks, with overall housing marketshare data for individual banks distorted by the use of third party brokers, which now account for an estimated 45% of new housing lending volumes. However, the rate of decay has slowed noticeably over the last 6 to 12 months, with the increased branch presence and focus on customer satisfaction seeing the proprietary performance slide addressed.

- **The current liquidity squeeze sees banks between a rock and a hard place** – Recently, a steepening of the short end of the yield curve (refer Figure 12) has savaged the incremental spreads on domestic home loan portfolios. While some non-bank lenders have passed on this increased cost of funding, the Australian major banks have thus far resisted the urge. At the ANZ trading update on August 30, 2007, CEO John Macfarlane noted that *"If this high liquidity premium between cash and bill funding rates is sustained, it would put upward pressure on mortgage rates."* Similarly, Ahmed Fahour, head of NAB's Australian Region has commented *"We have had three weeks of significantly higher cost of funds and what we have done is we have absorbed that and looked after our customers. . . Depending on how long this thing lasts for, we will review that in due course, because we can't absorb it in perpetuity."* All banks are adversely impacted, BUT to varying degrees, with ANZ and NAB impacted the worst, with modestly countervailing factors for CBA (largest portfolio of retail deposits of any of the major banks) and WBC (less discounting on packaged home loans and a reduced proportion of new loans originated in lower margin fixed rate product). It is by no means certain that the Australian major banks will pass on the increased funding costs associated with a steeper yield curve to mortgage customers.
- **In the last year, the profit signatures of loan portfolios have become more extreme** – The most profitable customers are becoming more profitable, whereas unprofitable customers are becoming ever more unprofitable. This is largely explained by higher churn in intrinsically unprofitable customer groups. The changes over the preceding 12 month period are primarily a function of competitive behaviour. Deeper rate discounting, lower application fees, slightly reduced broker commissions and increased marketing and advertising costs have all eroded profitability, which has been slightly offset by higher exit and discharge fees, as well as a greater proportion of lower cost short form valuations (refer *Australian Mortgage Industry – Volume 4* for a broader discussion on valuation practices).
- **Fujitsu Consulting have undertaken their most comprehensive survey to date, asking 26,000 banking customers for their views on servicing issues as part of an omnibus survey** – The survey found that (i) Customer attitudes to brokers continue to be positive, (ii) Customer needs vary by age, (iii) Customers are influenced by price, service and rewards, before product features, (iv) Players are targeting aggressive customer acquisition, but do not focus on sufficiently servicing the basics, creating significant churn.

We have also undertaken a detailed review of levels of mortgage stress experienced by borrowers in Australian mortgage industry based on Fujitsu Consulting analysis. At the macro level, housing affordability has worsened as house price appreciation has outstripped growth in disposable income. As a direct consequence, initial LVR's have increased to allow first time buyers into the market, and, accordingly, the dynamic LVR across all outstanding loan balances has risen. The specific effects of this set of circumstances are: (i) these higher LVRs translate into higher debt burdens, which may be measured by interest servicing rations, (ii) This disturbing acceleration in interest payments relative to disposable income since 2002 is mirrored by the number of mortgage repossessions in New South Wales, (iii) The contrasting result of *"what can I borrow"* versus *"what can I afford to pay"* supports the hypothesis that lenders have simply increased their tolerable gearing levels and lowered their underwriting standards and valuation practices, as evidenced by lender's use of the Henderson Poverty Line in assessing debt serviceability.

Fujitsu Consulting have modelled the profile of discreet segments to identify differences across LVRs, gross income, and ultimately, levels of mortgage stress. This provides a more focused analysis of mortgage stress, with segmentation based on analysis of life stage, affluence, demographics, and psychographics. The key findings are:

- **LVRs have been rising in recent years, but not all segments to the same extent** – Lenders appear to have flexed their policies to allow more headroom for segments which have the need for more funding help, with Young Affluent (Segment 1) and Young Growing Families (Segment 2) having the highest ratios. Also of note is the fact that (i) new loans have a higher LVR, on average, and (ii) non conforming loans have a higher LVR for both existing and new loans.
- **A higher proportion of gross income spent on mortgage repayments is a necessary, but not sufficient condition towards mortgage stress** – Fujitsu Consulting segment analysis highlights the distinction between those segments which spend a high proportion of their gross income on repayments, and the proportion of each segment under mortgage stress. By way of example, at first glance, Battling Urban (Segment 4) has the highest proportion of its segment under stress (8.9%) and also has a significant 39% of gross income spent on mortgage repayments. Young Growing Families (Segment 2) also fit this profile, with 42% gross income spent on mortgage repayments, exhibiting the second highest proportion of its segment under stress (7.1%). However, Young Affluent (Segment 1), Suburban Mainstream (Segment 6), Mature Stable Families (Segment 7), and Exclusive Professional (Segment 8) all have over 35% of gross income spend on mortgage repayments, yet in all cases, less than 2% of each segment's respective populations are experiencing mortgage stress.
- **Fujitsu Consulting estimate that 70,000 households are now experiencing severe stress across Australia, with hot spots in Sydney, Melbourne, & Perth** – This may rise from 70,000 to 113,000 if we assume prime lending will be repriced by 0.15% and the most risky lending repriced by 2.0% before then end of the year, driven by the recent US sub-prime issues and subsequent increased cost of wholesale funding. Whilst the traditional Battlers continue to be hit hard, a broader base of households are under mild stress. There is an important feedback loop here – because as stress gets worse, and households rush to sell, house prices in specific suburbs will fall and this can make stress worse, and create pockets of negative equity.

So what does this mean for the profitability of Australian Banks – The abovementioned "contagion" holds both direct and indirect impacts which can be summarized as: (i) Correlation risk will increase regulatory capital requirement, (ii) Credit growth will slow from lower "churn" on existing housing, (iii) Credit growth will slow as previously mis-priced segments of the market shrink, and (iv) Major banks should regain marketshare.

Separately we have conducted a half hour interview with Jennifer Nielsen – Chief Executive Officer X Inc. Financial Services Pty Ltd, a mortgage aggregator, and **Hamish Carlisle** – Managing Director QuickDirect Online Mortgages

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Asia Pacific Equity Research
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Mortgage Industry Update

Mortgage Industry Update

Conventional wisdom dictates that Australian home loan loss rates will remain low even if interest rates rise, unemployment rises and housing prices fall. Given the increasing signs of mortgage stress exhibited by households, "Stress testing" results become even more important. We note that:

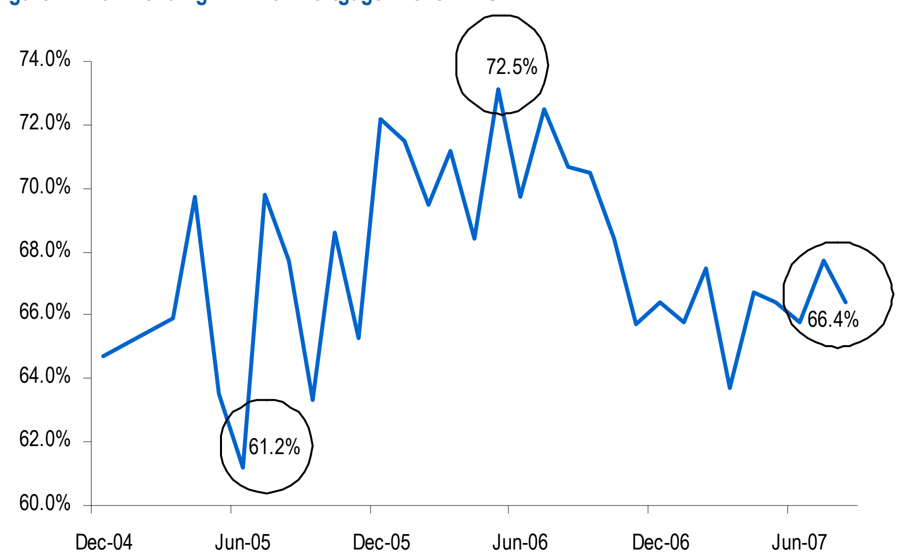
- **Stress test results are consistently worsening** – By way of example, potential losses on CBA's home loan stress testing profile has expanded significantly since FY05. At June 2005, CBA disclosed that the expected default rate for no decrease in property value was A$3.1m. As at June 2007, that comparable figure had grown to A$11.8m (refer Table 1).
- **Continuation of status quo growth rates will see security coverage decline further** – Based on the data provided by the largest Australian mortgage broker AFG, the Loan to Value Ratio on new lending approvals has trended up from a recent low of 61.2% in June 2005 to 66.4% in August 2007 (refer Figure 1). Notwithstanding the strong appreciation in housing prices of recent years (refer Figure 7) the total system dynamic LVR (i.e. total housing mortgage debt to the market value of Australian residential property) has risen from 12.1% in December 1992 to 23.6% in December 2006 (refer Table 5). Excluding the estimated 35% of residential properties with no debt, the dynamic LVR on geared residential properties is 36% (refer Figure 4). Taking this argument one step further, extending circa 12% system housing credit growth out to 2010 increases the total household debt outstanding from A$874bn today to A$1.3bn generating a dynamic LVR in excess of 30%. Excluding the estimated 35 % of residential properties with no debt, the dynamic LVR on geared residential properties in 2010 under this scenario is a staggering 48% (refer Figure 4).
- **Borrower gearing levels have risen** – In recent years there has been a dramatic upshift in the gearing tolerance of new home loan borrowers given the combination of a strong domestic economy, low unemployment, falling interest rate environment, and a loosening of bank credit underwriting standards. **However, the predominance of variable rate loans which account for 85.2% of the Australian home loan balances sees this increased "gearing tolerance" likely vulnerable to rising interest rates.** (refer Figure 2)By way of example, each 25bp increase in interest rates increases the interest burden on home loan borrowers by an estimated A$1.75bn (i.e. A$874bn x 80% x 0.25% = A$1.75bn). Again extending the view out to 2010, as noted above, total household debt could be A$1.3tr, at which point, each 25bp increase in interest rates increases the interest burden on home loan borrowers by an estimated A$2.6bn (i.e. A$1.3tr x 80% x 0.25% = A$2.6bn).
- **Pricing premiums are being eroded** – Competition between the incumbent banks and wholesale market funded new non-bank entrants, and perceptions of "home loan credit invincibility" have seen bank home loan underwriting standards decline (higher LVRs, Low Doc, No Doc, High LVR etc) with the previous rate premiums on these higher risk home loan segment products eroding quickly (refer Figure 3). However, this dynamic is beginning to unwind, given the recent liquidity disruptions in funding markets.

Table 1: CBA Home Loan Portfolio Stress Testing
A$ in millions

	Expected Default Rate (PD)			
Property Value	**PD**	**x2**	**x4**	**x6**
FY07				
No Decrease	11.8	16.1	22.6	27.1
10% Decrease	29.2	40.7	59.0	72.0
20% Decrease	60.9	87.0	130.0	161.0
30% Decrease	107.2	156.6	239.2	298.8
FY06				
No Decrease	10.3	14.1	20.1	24.8
10% Decrease	27.3	38.4	56.7	70.8
20% Decrease	58.6	84.8	128.6	161.8
30% Decrease	103.6	153.1	236.4	299.4
FY05				
No Decrease	3.1	6.2	11.8	15.4
10% Decrease	8.5	17	32.3	42.9
20% Decrease	22.8	45.6	87.1	118.5
30% Decrease	48.5	97.1	186.4	255.4

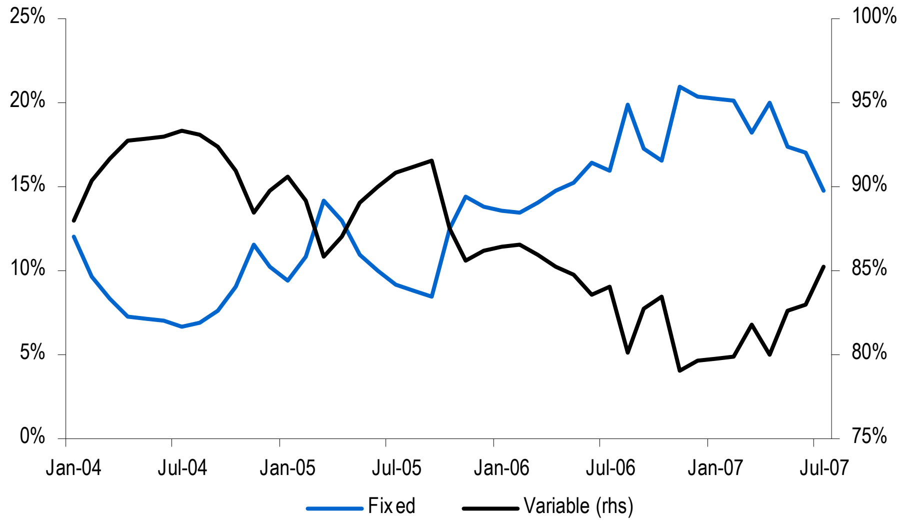
Source: Company.

Figure 1: New Lending LVR For Mortgage Broker AFG



Source: AFG.

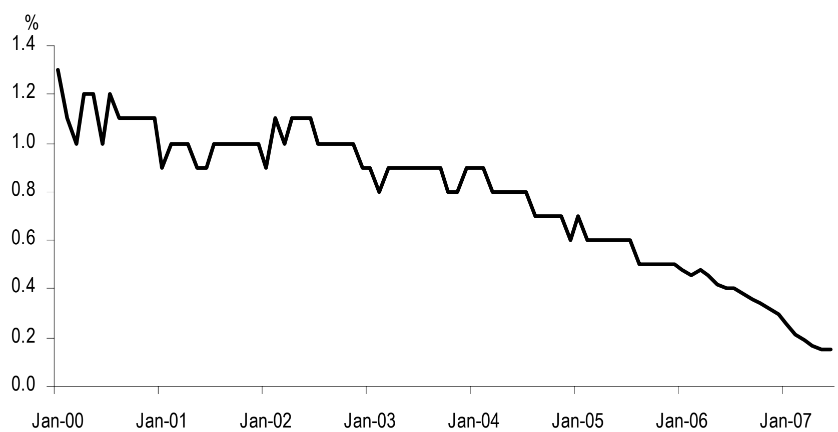
Figure 2: Australian Housing Lending - Proportion of Loans Outstanding - Fixed vs Variable



Source: ABS.

Figure 3: Margin Between Low-doc and Full-Doc Loans

Percent



Source: RBA, ABS.

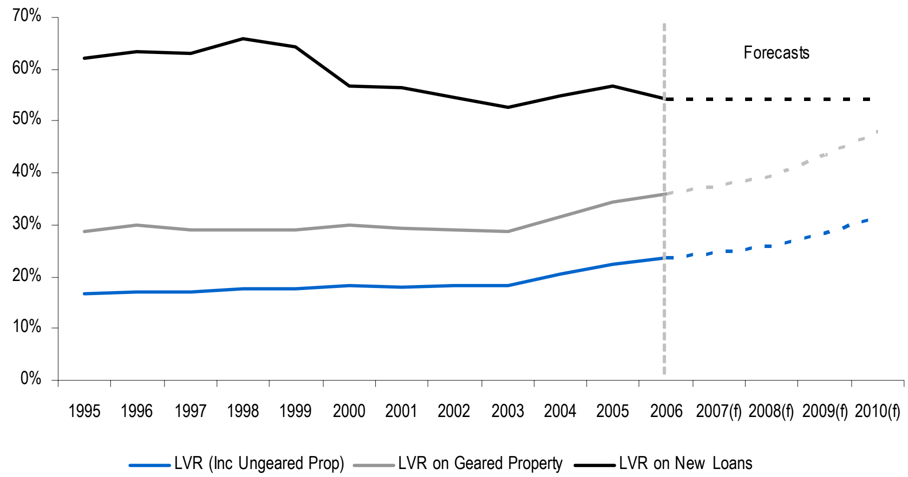
Table 2: Australian Dynamic Housing LVR Forecasts

A$ in millions

	2006	2007E	2008E	2009E	2010E
Loans Outstanding	820,039	913,112	1,018,350	1,142,868	1,279,210
Average Dwelling Wealth	3,480,000	3,706,566	3,946,199	4,005,392	4,065,473
Dynamic LVR	23.6%	24.6%	25.8%	28.5%	31.5%

Source: RBA, JPMorgan estimates.

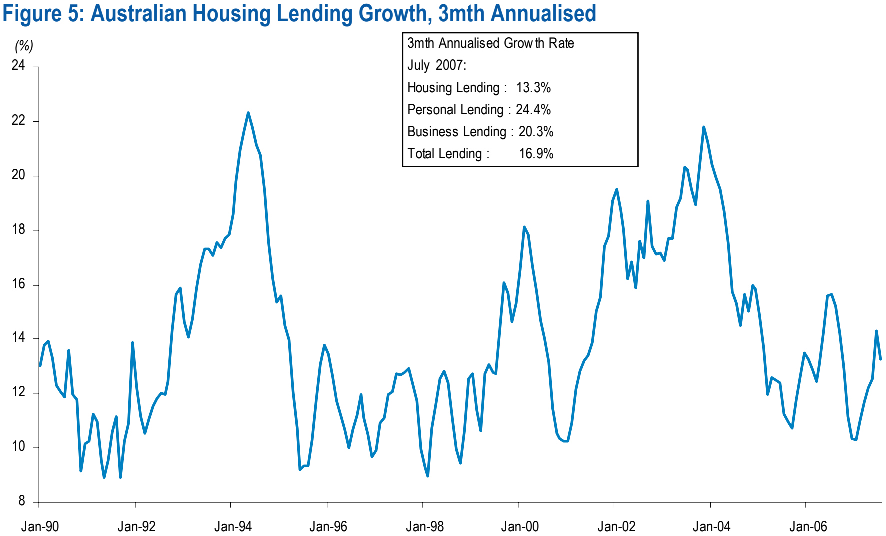
Figure 4: Estimated Australian Home Loan LVR Dynamic
Percent



Source: ABS, APRA, RBA, Real Estate Institute of Australia, JPMorgan.

Up until November 2003 Australian housing credit had shown phenomenal strength peaking at a 3 month annualized growth rate of 23.4% pa in November 2003 (refer Figure 5). CY2004 and CY2005 saw a sustained slide in housing credit growth to a low of 9.4% for September 2004. Following a period of slowing housing growth over the preceding two years, the first half of CY2006 saw a sharp rebound in the growth rate of Australian housing mortgage loan outstandings, peaking to a three month annualized growth rate of 15.6% in June 2006. The second half of CY2006 saw a slowing growth profile for Australian housing lending as the weight of contractionary monetary policy took hold of the market, bottoming at a three month annualized growth rate of 10.3% in December 2006.

Figure 5: Australian Housing Lending Growth, 3mth Annualised



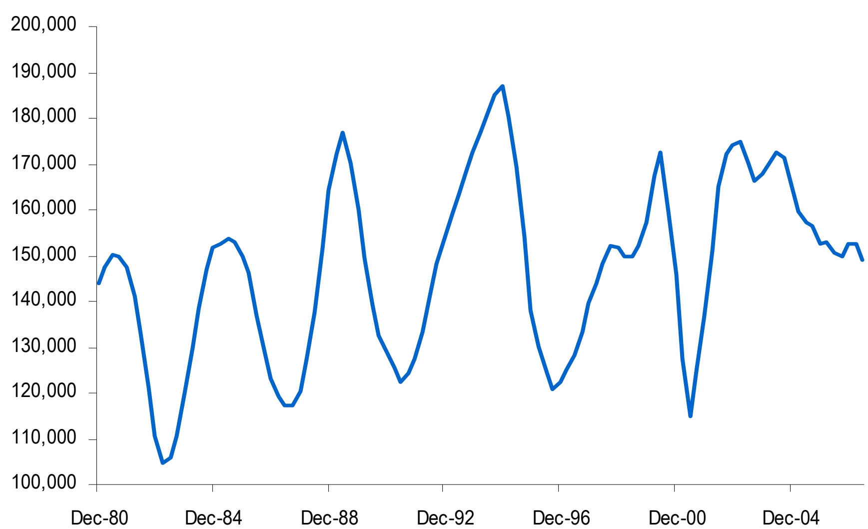
Source: RBA..

Thus far over the course of FY07, housing credit growth again accelerated over the first half of CY2007 to reach a three month annualized growth rate of 14.3% in June 2007, only to ease modestly over July 2007, at 13.3% growth, with aggregate system home loan outstandings reaching A$874.1bn. Overall, CY2007 sees housing loan growth coming to terms with tightening monetary policy and broader market instability. Households appeared to have adjusted to the CY2006 rate rises quickly, with housing growth again recovering over the fist half of CY2007 as consumer confidence and equity markets continued to shine. However, more recently, (i) a rise in interest rates , (ii) a tighter global liquidity environment, which will ultimately see lending standards again lifted, and (iii) a correction of, and continued volatility in, equity markets, has seen households skittish again.

Structurally, the strong growth in housing credit is being driven by increased borrower gearing which in itself is likely a major driver of housing prices:

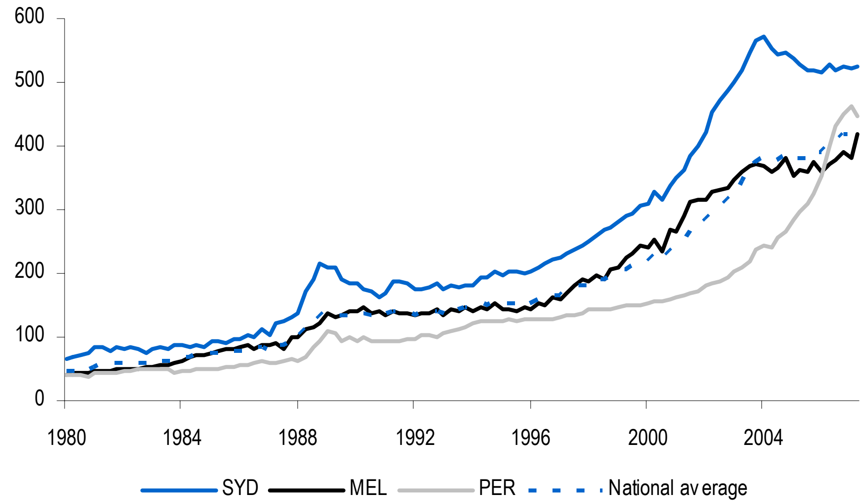
- **Rebounding housing growth reflects a modest upswing in housing prices and an increased willingness of borrowers to gear into residential property which are offsetting a marked slowdown in new housing start construction activity** – The rebound in housing credit growth, against the backdrop of further declines in new housing start construction activity (refer Figure 6), reflects a modest upswing in national house prices (with a stabilization in Sydney offset by surging prices in every other capital city - refer Figure 7) and an increased willingness by borrowers to borrow on higher LVRs (Loan to Valuation Ratio) (refer Figure 1).
- **Based on normalised housing starts of circa 150,000pa and a typical "home renovation cycle" any growth in housing credit over and above 4% pa is entirely attributable to rising house prices and / or an increasing Loan to Valuation Ratio on new lending** – These dynamics were clearly demonstrated in the sharp slow down in housing loan growth over 2004 and 2005 and the sharp rebound over 1HCY2006. Conversely, any weakness in national housing prices, particularly outside of Sydney, accompanied by a more conservative stance by new borrowers with regards to Loan to Valuation Ratios would trigger a sharp slowdown in housing lending growth.

Figure 6: Australian Housing Starts



Source: ABS.

Figure 7: Median Australian House Prices



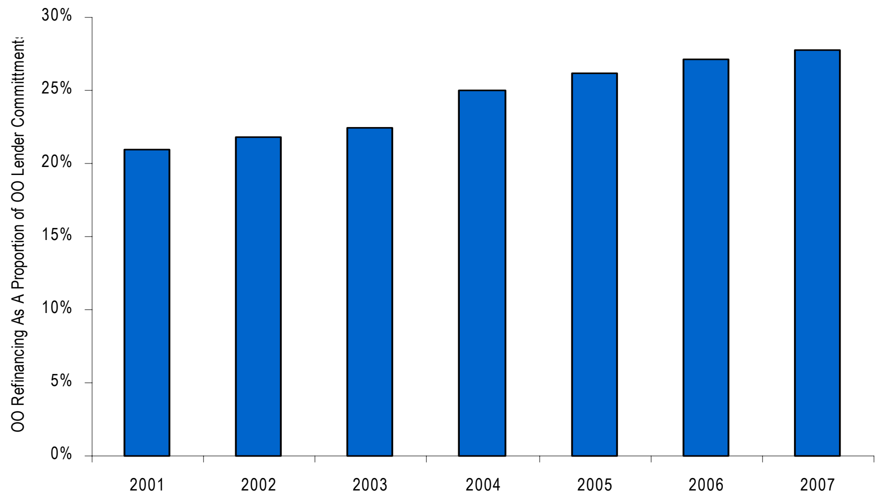
Source: Real Estate Institute of Australia.

Taking a closer look at the composition of the current mortgage market, we note:

- **Owner occupied re-financing is making up a larger share of total loans** – The rising interest rate environment has stimulated consumers to actively seek out better financing deals. Significantly, mortgage brokers have demonstrated a consistent capacity to stimulate demand, and are capturing a larger share of refinancing, up from 20% in 2000, to 55% in 2007. Refinancing as a proportion of owner occupier commitments continues to increase (refer **Error! Not a valid bookmark self-reference.**) which is likely contributing to increasing systemic LVRs and creating the opportunity for marketshare shifts and accelerating backbook repricing downwards as historical standard variable rate home loans are refinanced onto discounted packaged products (refer Figure 11).

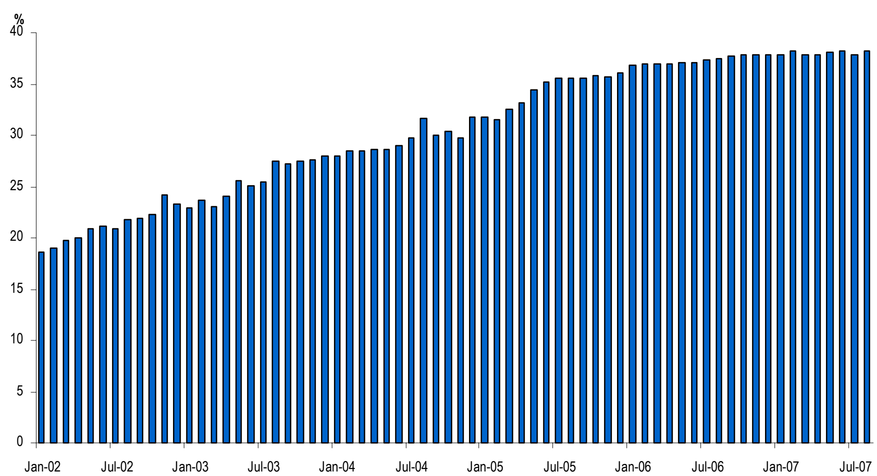
The proportion of all loans across the industry through brokers has capped out at 38% – We are beginning to see a stagnation in the level of outstanding loans initially written through a broker (refer Figure 9) This is explained by the slowing in new loans originated through brokers. Broker originated share of new loans has not grown in the last six months – the first time in four years. This indicates that the major investments in primary distribution capacity are having some impact. Over the last several years, sales through the branch network have underperformed relative to sales through other channels for the major banks. As illustrated in Table 4, each of the major banks has lost market share in their branch networks, with overall housing marketshare data for individual banks distorted by the use of third party brokers, which now account for an estimated 45% of new housing lending volumes (refer Figure 10). However, the rate of decay has slowed noticeably over the last 6 to 12 months, with the increased branch presence and focus on customer satisfaction seeing the proprietary performance slide addressed.

Figure 8: Owner Occupied Refinancing



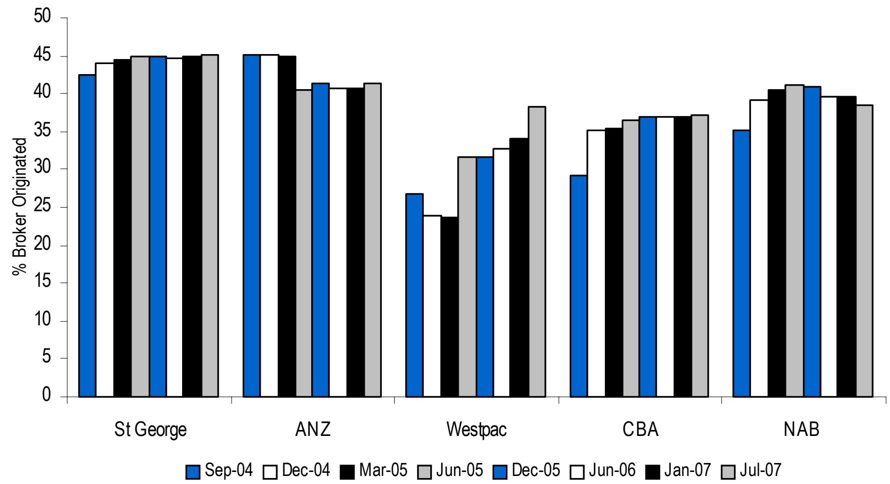
Source: Fujitsu Consulting estimates.

Figure 9: Broker Originated Loans as a Proportion of Total Housing Loans Outstanding



Source: Fujitsu Consulting estimates.

Figure 10: New Third Party Originated Housing Loans by Lender



Source: Fujitsu Consulting estimates.

In assessing the competitive dynamics of the current mortgage market, we note:

- **Major banks' reliance on brokers is still increasing but banks must act to reclaim the pricing power associated with the distribution function** – Dependence on third party mortgage brokers represents a major point of emerging strategic weakness for the major banks. The recent trend by all of the major banks to reinvest in their proprietary branch networks, after many years of active dis-investment, denotes a major shift by the incumbent banks to "wean" themselves off this potentially value destroying distribution channel by way of a program of aggressive discounting through their own proprietary channels. By way of history, bank branches were practically pensioned off at the end of the 1990s as the major banks saw their future interactions with customers revolving around the internet, telephone and ATM. Some 2000 branches were shut down by the Big Four banks between 1998 and 2004, exacerbating the traditional antipathy of Australians towards their banks and creating a void that banking competitors and brokers moved quickly and often successfully to fill. While historically high housing spreads allowed banks to maintain profitability, spreads have continued to fall in response to competition, with the impact being absorbed by lenders rather than brokers. The continued tacit support of mortgage brokers by banks is weakening the distribution strength, and ultimately, the pricing power, of the banks. In response to this, banks are reinvesting in their branch networks in order to reclaim lost distribution capacity and preserve pricing power. As such we highlight a subtle change in the relationship between banks and mortgage brokers, with a number of banks offering exclusive low rate offers through their proprietary branch and direct channels.

- **The last six months has seen significant competitive pressures on the industry, with margin compression and back-book repricing continuing.** The recently reported results of several Australian banks highlighted significant margin compression from competition on the asset side of the balance sheet, with bank earnings holding up due to the favourable spread dynamics on "sticky" retail deposits in a rising interest rate environment. Margins will continue to be subject to competitive pressure on both assets and liabilities, as HBOS execute their long-awaited East coast expansion with 160 new branches to be opened under the BankWest brand. Spreads and returns on regulatory capital on Australian home loans remain high by international standards, leaving scope for new players to be more aggressive in this market. Coupled with increasingly competitive pricing from the incumbents, this has manifested itself in the banks increasingly promoting substantial rate discounts of at least 70-80bp on their respective discounted "professional choice" package offerings. To some extent, this reduces the churn of marketshare to rivals, but ultimately accelerates back-book repricing downwards as the heritage "standard variable rate" home loan portfolio is replaced by the new discounted "professionals choice" loan portfolio (refer Figure 11).

- **The current liquidity squeeze sees banks between a rock and a hard place** – The last time the standard variable rate on a housing loan moved independent of the Official Cash Rate was in 1996 when Aussie Home Loans entered the Australian market. Since that time, competition in the banking system has largely been pursued via a "professional" or "package" discount of up to 90bp offered off the standard variable rate. Recently, a steepening of the short end of the yield curve (refer Figure 12) has savaged the incremental spreads on domestic home loan portfolios. While some non-bank lenders have passed on this increased cost of funding, the Australian major banks have thus far resisted the urge. At the ANZ trading update on August 30, 2007, CEO John Macfarlane noted that *"If this high liquidity premium between cash and bill funding rates is sustained, it would put upward pressure on mortgage rates."* Similarly, Ahmed Fahour, CEO of NAB's Australian Region has commented *"We have had three weeks of significantly higher cost of funds and what we have done is we have absorbed that and looked after our customers. . . Depending on how long this thing lasts for, we will review that in due course, because we can't absorb it in perpetuity."* All banks are adversely impacted, BUT to varying degrees, with ANZ and NAB impacted the worst, with modestly countervailing factors for CBA (largest portfolio of retail deposits of any of the major banks) and WBC (less discounting on packaged home loans and a reduced proportion of new loans originated in lower margin fixed rate product). CBA CFO David Craig said in a recent statement *"The Group's approach to funding continues to be conservative and comprises a consistently high proportion of retail deposits, representing about 55% of total funding, together with highly diversified wholesale funding across a wide range of markets and maturities. As a result, we remain very comfortable with our overall position."* Similarly, WBC noted at a recent strategic update that the *"current market conditions create more opportunities than risks"*, expecting the current yield curve to be sustained for between 3 to 6 months. **It is by no means certain that the Australian major banks will pass on the increased funding costs associated with a steeper yield curve to mortgage customers.**

Table 3: Strategic Positioning of Australian Banks in Housing Lending

	1H07 / FY07		Medium Term Outlook
Mortgage Broker Flow	ANZ (1H07) CBA (FY07) NAB (1H07) WBC (1H07) SGB (1H07)	39% 34% 25% 39% 43%	Likely +50%
% of Balances Originated By Brokers	ANZ (1H07) CBA (FY07) NAB (1H07) WBC (1H07) SGB (1H07)	41% 28% 23% 31% 41%	Likely +50%
Commissions Paid	Est 4% of NPBT		Likely greater than 8% of NPBT
Commission Rates	Upfront 65bp Trail 20bp pa		Likely unchanged as brokers direct flow based on commission levels
Banks Strategic Positioning	Manufacturer & Distributor		Less of Distributor More Manufacturer
Banks Pricing Power	Strong but weakening as new players emerge		Weaker as Brokers and new entrants squeeze existing wide housing spread
Barriers to New Entrants	Disappearing as access to third party distributors with no drag of funding proprietary branch Network.		No barriers to entry as new entrants exploit full access to market via third party brokers

Source: JPMorgan.

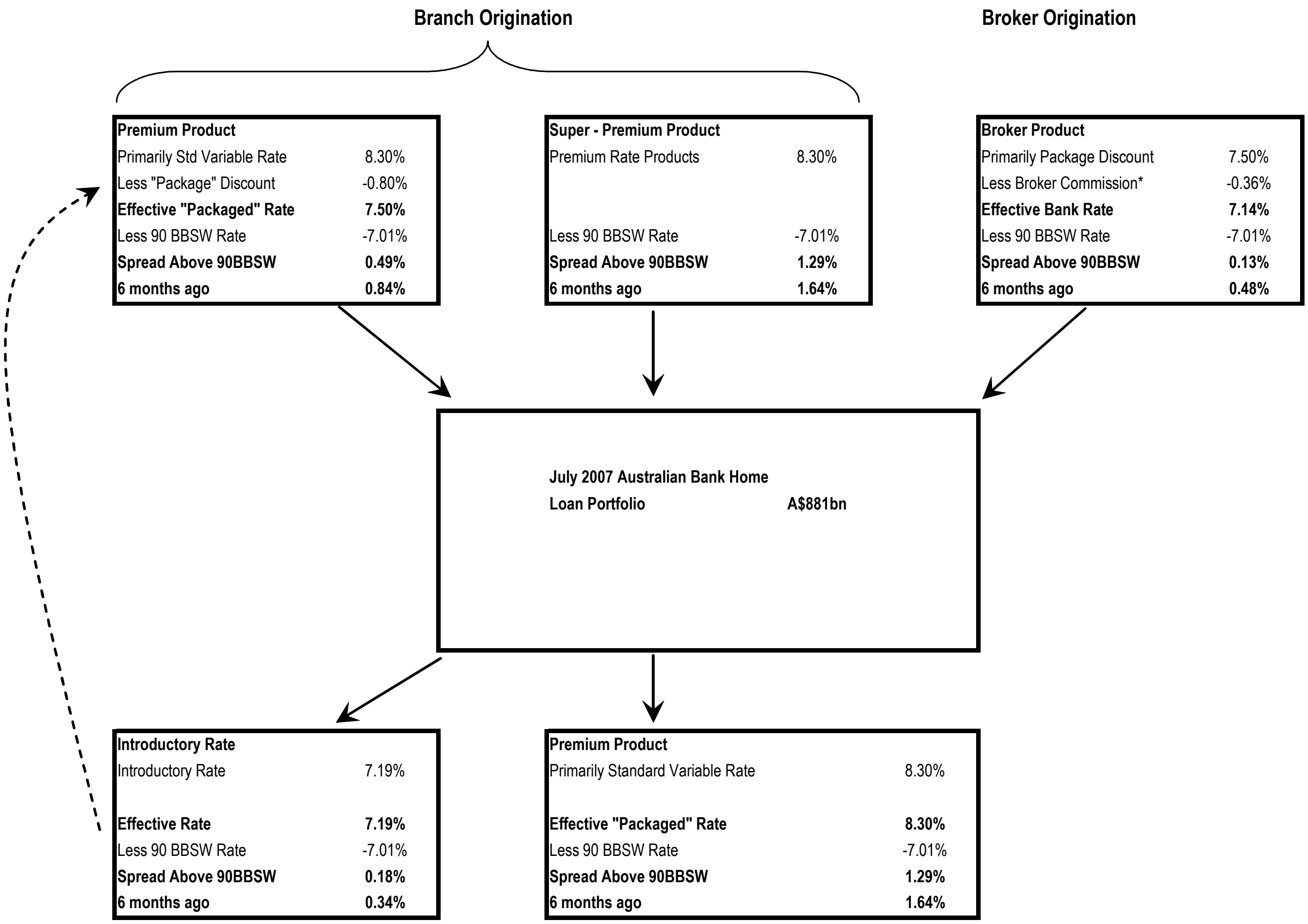
Table 4: Australian Bank Housing Loan Market Share – Branch Originated vs. Broker Originated

	ANZ					NAB				
Outstanding Loans	**1H05**	**2H05**	**1H06**	**2H06**	**1H07**	**1H05**	**2H05**	**1H06**	**2H06**	**1H07**
On Balance Sheet	84.5	89.6	96.8	101.9	107.0	109.6	117.7	123.9	129.4	134.2
Securitised Home Loans	1.9	1.6				2.3	1.9			
Gross Home Loans	**86.4**	**91.2**	**96.8**	**101.9**	**107.0**	**111.9**	**119.6**	**123.9**	**129.4**	**134.2**
Balance Of Which Originated by										
Branches + Other Proprietary	60%	57%	58%	58%	59%	74%	70%	72%	77%	77%
Third Parties	40%	43%	42%	42%	41%	26%	30%	28%	23%	23%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
System Home Loans (Incl Sec'n)	660.9	697.9	746.9	785.4	843.5	660.9	697.9	746.9	785.4	843.5
Gross Home Loan Marketshare	**13.07%**	**13.06%**	**12.97%**	**12.98%**	**12.68%**	**16.94%**	**17.14%**	**16.58%**	**16.48%**	**15.91%**
Balance Of Which Originated by										
Branches + Other Proprietary	7.84%	7.45%	7.52%	7.53%	7.48%	12.53%	12.00%	11.94%	12.69%	12.25%
Third Parties	5.23%	5.62%	5.45%	5.45%	5.20%	4.40%	5.14%	4.64%	3.79%	3.66%

	CBA						WBC				
Outstanding Loans	**1H05**	**2H05**	**1H06**	**2H06**	**1H07**	**2H07**	**1H05**	**2H05**	**1H06**	**2H06**	**1H07**
On Balance Sheet	115.3	119.1	126.9	132.2	140	145.8	90.7	96.0	104.9	111.2	117.2
Securitised Home Loans	6.4	10.8	9.1	12.6	10.8	15.6	3.8	3.1			
Gross Home Loans	**121.7**	**129.9**	**136.0**	**144.8**	**150.8**	**161.4**	**94.5**	**99.0**	**104.9**	**111.2**	**117.2**
Balance Of Which Originated by											
Branches + Other Proprietary	81%	79%	78%	76%	74%	72%	73%	71%	69%	69%	69%
Third Parties	19%	21%	22%	24%	26%	28%	27%	29%	31%	31%	31%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
System Home Loans (Incl Sec'n)	639.2	682.4	717.9	771.8	824.3	871.8	660.9	697.9	746.9	785.4	843.5
Gross Home Loan Marketshare	**19.04%**	**19.04%**	**18.94%**	**18.76%**	**18.29%**	**18.51%**	**14.30%**	**14.19%**	**14.05%**	**14.15%**	**13.89%**
Balance Of Which Originated by											
Branches + Other Proprietary	15.42%	15.04%	14.78%	14.26%	13.54%	13.33%	10.44%	10.08%	9.70%	9.77%	9.53%
Third Parties	3.62%	4.00%	4.17%	4.50%	4.76%	5.18%	3.86%	4.12%	4.36%	4.39%	4.36%

Source: Company, JPMorgan estimates.

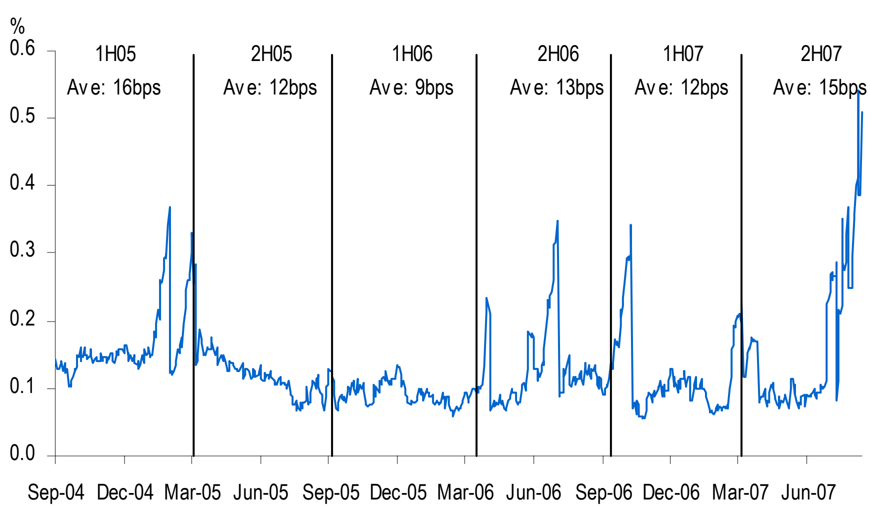
Figure 11: Australian Housing Loan Portfolio Back Book Repricing



* Upfront commission of 65bp, trailing commission 20bp per year over 4 year loan life = average 36bp per year

Source: Company, JPMorgan estimates.

Figure 12: Cash / 30 Day Bank Bill Spread (Australia)



Source: IRESS.

Table 5: Australian Housing Loan Growth Rates (A$m)

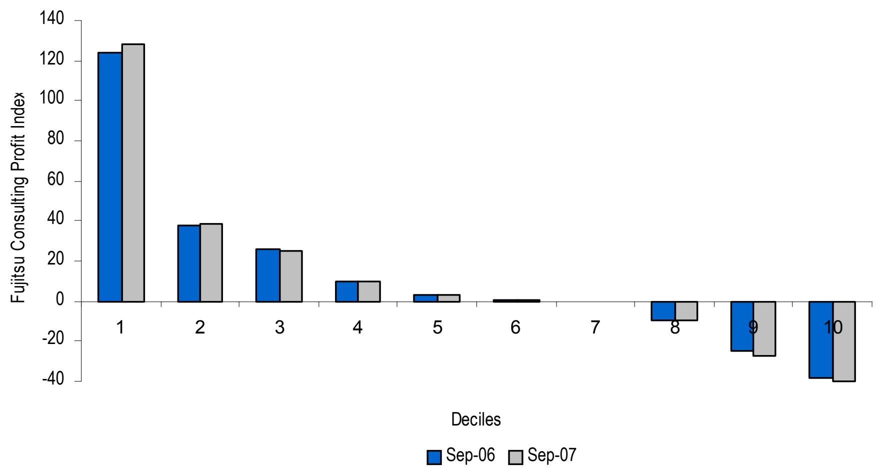
		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Opening Balance																
Owner Occupied	A	81,899	91,257	107,386	127,884	141,977	155,593	167,790	181,892	201,063	226,827	263,936	308,012	359,934	419,619	476,743
Investment Property	B	16,404	20,106	23,968	30,841	36,333	42,840	54,841	67,511	84,306	99,182	113,913	140,600	183,000	219,724	243,789
Total Outstandings	**C=A+B**	**98,303**	**111,363**	**131,353**	**158,724**	**178,310**	**198,433**	**222,631**	**249,403**	**285,370**	**326,009**	**377,849**	**448,612**	**542,933**	**639,343**	**720,532**
New Approvals																
New Housing	D	6,810	8,972	11,025	8,826	8,880	11,510	11,977	13,631	11,589	13,372	17,007	18,053	18,018	18,599	19,349
Alterations / Additions	E	1,475	2,070	3,431	3,483	3,409	2,818	2,669	3,253	3,042	3,628	4,657	6,298	6,115	5,603	5,661
Established Houses	F	32,069	42,614	51,287	46,643	53,097	65,752	68,158	85,979	88,556	114,042	140,931	182,805	175,326	193,079	214,422
Total Approvals	**G=D+E+F**	**40,353**	**53,655**	**65,743**	**58,952**	**65,387**	**80,079**	**82,804**	**102,863**	**103,187**	**131,042**	**162,595**	**207,156**	**199,459**	**217,281**	**239,432**
Repayments	**H=K-C-G**	**-27,293**	**-33,665**	**-38,372**	**-39,366**	**-45,264**	**-55,881**	**-56,031**	**-66,897**	**-62,547**	**-79,203**	**-91,832**	**-112,834**	**-103,049**	**-136,093**	**-139,924**
Closing Balance																
Owner Occupied	I	91,257	107,386	127,884	141,977	155,593	167,790	181,892	201,063	226,827	263,936	308,012	359,934	419,619	476,743	548,227
Investment Property	J	20,106	23,968	30,841	36,333	42,840	54,841	67,511	84,306	99,182	113,913	140,600	183,000	219,724	243,789	271,812
Total Outstandings	**K=I+J**	**111,363**	**131,353**	**158,724**	**178,310**	**198,433**	**222,631**	**249,403**	**285,370**	**326,009**	**377,849**	**448,612**	**542,933**	**639,343**	**720,532**	**820,039**
Key Ratios																
Overall Growth Rate (Annualised)	**L=K_C/K_O**	**13.3%**	**18.0%**	**20.8%**	**12.3%**	**11.3%**	**12.2%**	**12.0%**	**14.4%**	**14.2%**	**15.9%**	**18.7%**	**21.0%**	**17.8%**	**12.7%**	**13.8%**
% of Growth Attributable to																
New Housing	M=D/(K-C)	52%	45%	40%	45%	44%	48%	45%	38%	29%	26%	24%	19%	19%	23%	19%
Alterations and Additions	N=E/(K-C)	11%	10%	13%	18%	17%	12%	10%	9%	7%	7%	7%	7%	6%	7%	6%
Sub Total	**O=M+N**	**63%**	**55%**	**53%**	**63%**	**61%**	**59%**	**55%**	**47%**	**36%**	**33%**	**31%**	**26%**	**25%**	**30%**	**25%**
Churn of Existing Housing	P=(F+H)/(K-C)	37%	45%	47%	37%	39%	41%	45%	53%	64%	67%	69%	74%	75%	70%	75%
Total	**Q=O+P**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Housing Starts																
By Number	R	153,906	172,520	187,111	138,234	122,180	139,726	151,923	157,177	145,936	136,942	174,296	167,999	166,150	152,389	152,484
Value Per Start	S=D/R	A$44.2K	A$52.0K	A$58.9K	A$63.8K	A$72.7K	A$82.4K	A$78.8K	A$86.7K	A$79.4K	A$97.6K	A$97.6K	A$107.5K	A$108.4K	A$122.1K	A$126.9K
Inflation Factor	T=SC/SO	7%	18%	13%	8%	14%	13%	-4%	10%	-8%	23%	0%	10%	1%	13%	4%
Repayment Ratio (Annualised)	U=-H/C	27.8%	30.2%	29.2%	24.8%	25.4%	28.2%	25.2%	26.8%	21.9%	24.3%	24.3%	25.2%	19.0%	21.3%	19.4%
Alteration Ratio (Annualised)	V=E/C	1.500%	1.86%	2.61%	2.19%	1.91%	1.42%	1.20%	1.30%	1.07%	1.11%	1.23%	1.40%	1.13%	0.88%	0.79%
New Lending Est Houses / O/B (Annualised)	W=F/C	32.6%	38.3%	39.0%	29.4%	29.8%	33.1%	30.6%	34.5%	31.0%	35.0%	37.3%	40.7%	32.3%	30.2%	29.8%
Aggregate Dwelling Wealth	X	922,000	966,000	1,056,000	1,070,000	1,163,000	1,306,000	1,421,000	1,614,000	1,776,000	2,092,000	2,454,000	2,982,000	3,124,000	3,202,000	3,480,000
LVR	**Y=K/X**	12.1%	13.6%	15.0%	16.7%	17.1%	17.0%	17.6%	17.7%	18.4%	18.1%	18.3%	18.2%	20.5%	22.5%	23.6%
Increase In Dwelling Wealth	Z=X_C-X_O	36,000	44,000	90,000	14,000	93,000	143,000	115,000	193,000	162,000	316,000	362,000	528,000	142,000	78,000	278,000
Lending New Houses	AA=D	6,810	8,972	11,025	8,826	8,880	11,510	11,977	13,631	11,589	13,372	17,007	18,053	18,018	18,599	19,349
Lending Additions	AB=E	1,475	2,070	3,431	3,483	3,409	2,818	2,669	3,253	3,042	3,628	4,657	6,298	6,115	5,603	5,661
Residual Ungeared Appreciation	**AC=Z-AA-AB**	27,716	32,959	75,544	1,691	80,711	128,673	100,354	176,116	147,370	299,000	340,336	503,649	117,867	53,798	252,990
Lending Existing Houses	AD=F	32,069	42,614	51,287	46,643	53,097	65,752	68,158	85,979	88,556	114,042	140,931	182,805	175,326	193,079	214,422
Lending Existing / Housing Wealth	AE=AD/X	3.5%	4.4%	4.9%	4.4%	4.6%	5.0%	4.8%	5.3%	5.0%	5.5%	5.7%	6.1%	5.6%	6.0%	6.2%

Source: RBA. JPMorgan Estimates.

The Fujitsu Consulting Mortgage Industry Profit Model

- **In the last year, the profit signatures of loan portfolios have become more extreme** – The most profitable customers are becoming more profitable, whereas unprofitable customers are becoming ever more unprofitable. This is largely explained by higher churn in intrinsically unprofitable customer groups. The changes over the preceding 12 month period are primarily a function of competitive behaviour. Deeper rate discounting, lower application fees, slightly reduced broker commissions and increased marketing and advertising costs have all eroded profitability, which has been slightly offset by higher exit and discharge fees, as well as a greater proportion of lower cost short form valuations (refer *Australian Mortgage Industry – Volume 4* for a broader discussion on valuation practices).

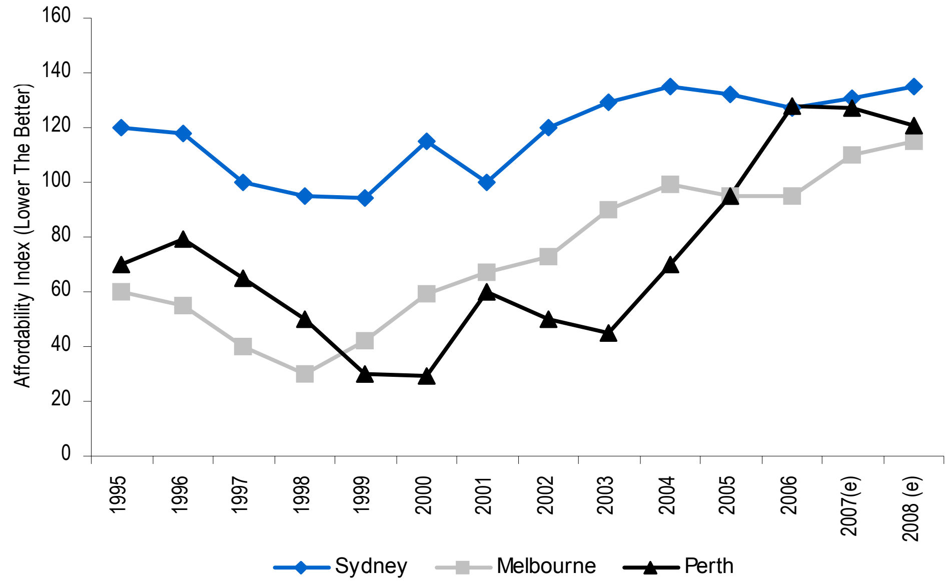
Figure 13: Mortgage Industry Profit Deciles



Source: Fujitsu.

- **The Fujitsu Consulting industry model analyses housing affordability, taking into account average salaries, house prices and interest rates** – Sydney is the least affordable city in Australia, followed by Perth & Melbourne. Perth has slipped from first place in our previous report, given that wages have moved up quicker in the West, and house price growth has slowed in some areas. Overall, all major cities are less affordable than the previous 10 years (refer Figure 14). One off superannuation contributions prior to the June 30, 2007 cut-off, have taken further pressure from the housing market and prices will continue to come under pressure, especially in the Eastern states. As noted earlier in this report, housing affordability can be seen as a function of the extent to which households are geared. The average interest-only cost on a new loan exceeded $1,600 per month for the first time ever, reaching $1,622 in August 2007, based on a standard variable mortgage rate. This is up 107% from December 2001, which was the low point of the recent interest rate cycle. Conversely, average weekly earning have only risen about 24% over the same period.

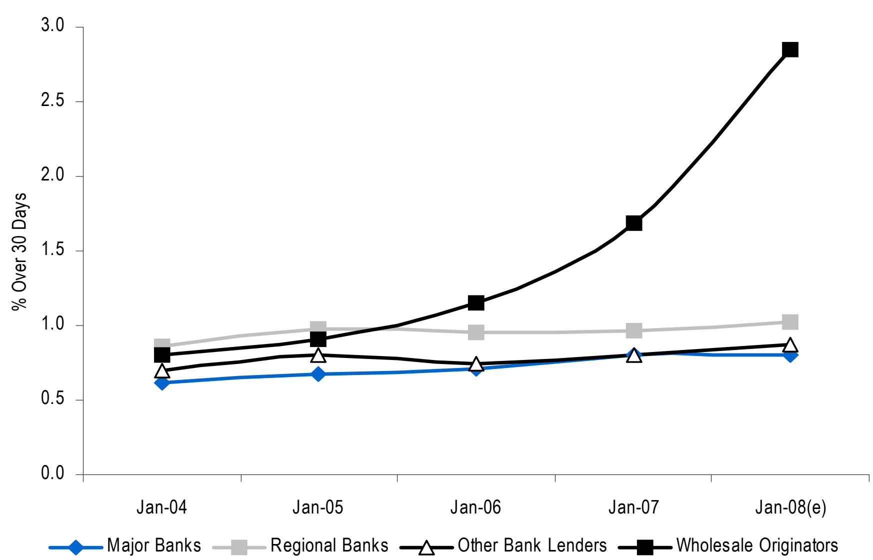
Figure 14: Relative Home Purchase Affordability



Source: Fujitsu.

- **The over 30 day delinquencies across the industry are still low by international standards** – However, Wholesale Originators are experiencing higher and growing delinquencies driven by their business mix and segment focus. With banks increasingly pushing into these higher risk segments, and adopting more aggressive lending criteria, bank delinquency rates will likely structurally rise. We highlight that the prevailing steeper yield curve disproportionately adversely impacts the funding costs for these wholesale originators to the point where the sustainability of their business models is questionable.

Figure 15: Home Loan Delinquencies

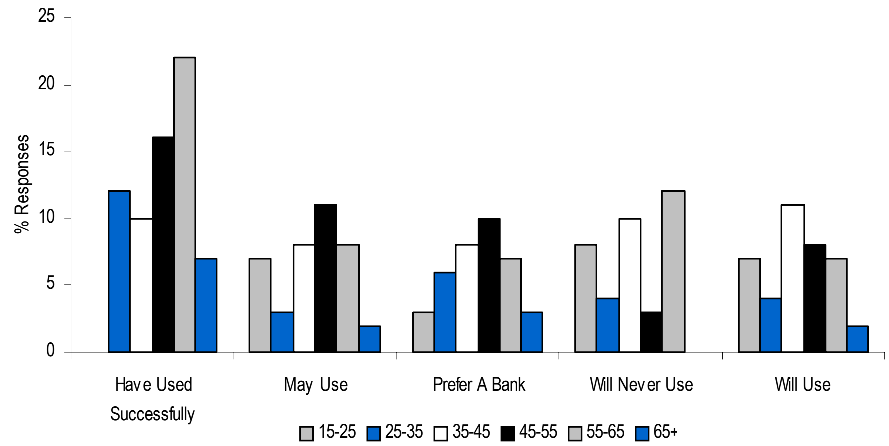


Source: Fujitsu.

Fujitsu Consulting have undertaken their most comprehensive survey to date, asking 26,000 banking customers for their views on servicing issues as part of an omnibus survey. The survey was followed up with a number of specific focus groups. The key points to emerge are:

- **Customer attitudes to brokers continue to be positive** – A significant proportion of customers have now used a broker successfully, with those who are older (45-55 and 55-65) the most likely to have used a broker (refer Figure 16) Notwithstanding the feedback that some will never use a broker, the overall analysis indicates an ongoing readiness for the bulk of customers to use brokers for key borrowing decisions.

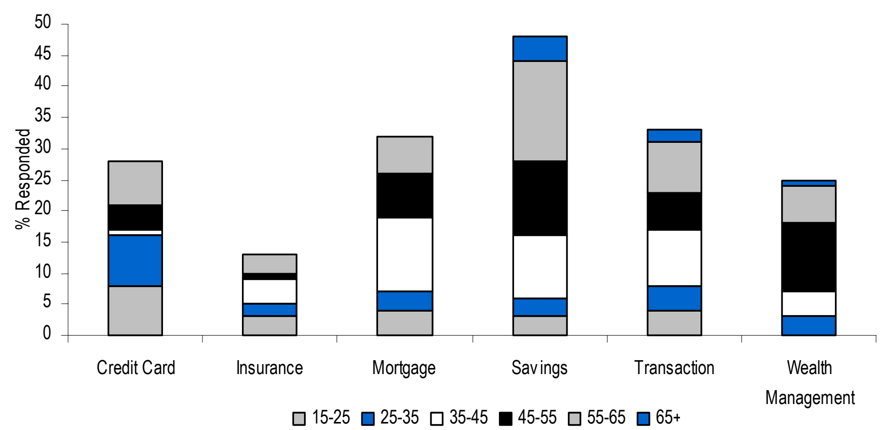
Figure 16: Customer Attitudes to Brokers



Source: Fujitsu Consulting

- **Customer needs vary by age** – As shown by the above analysis on broker usage, customer needs vary by age. This level of analysis can be extended to customers main financial services needs. Overall, savings products were the most highly represented, resonating most with the 55-65 age group, whereas 35-45 year olds had the strongest need for mortgage products.

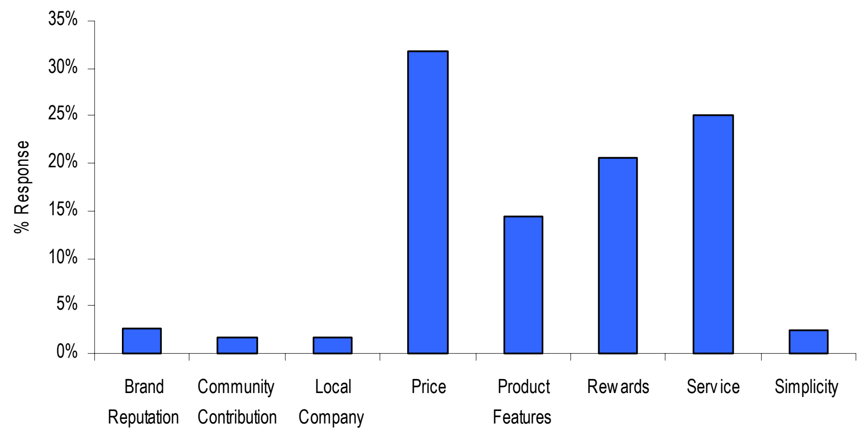
Figure 17: Customer Needs By Age



Source: Fujitsu Consulting.

- **Customers are influenced by price, service and rewards, before product features** – Players need to ensure they address the right "hot buttons". Retail customer behaviour being dictated largely by price is different to the feedback from the Micro/SME segment (refer *Australian SME Market – Volume 1 – Coming to Grips with SME Lending*) where product concerns were more prevalent. Intuitively, this makes sense, given the more complex nature of business lending and inter-related personal and business circumstances of SME's.

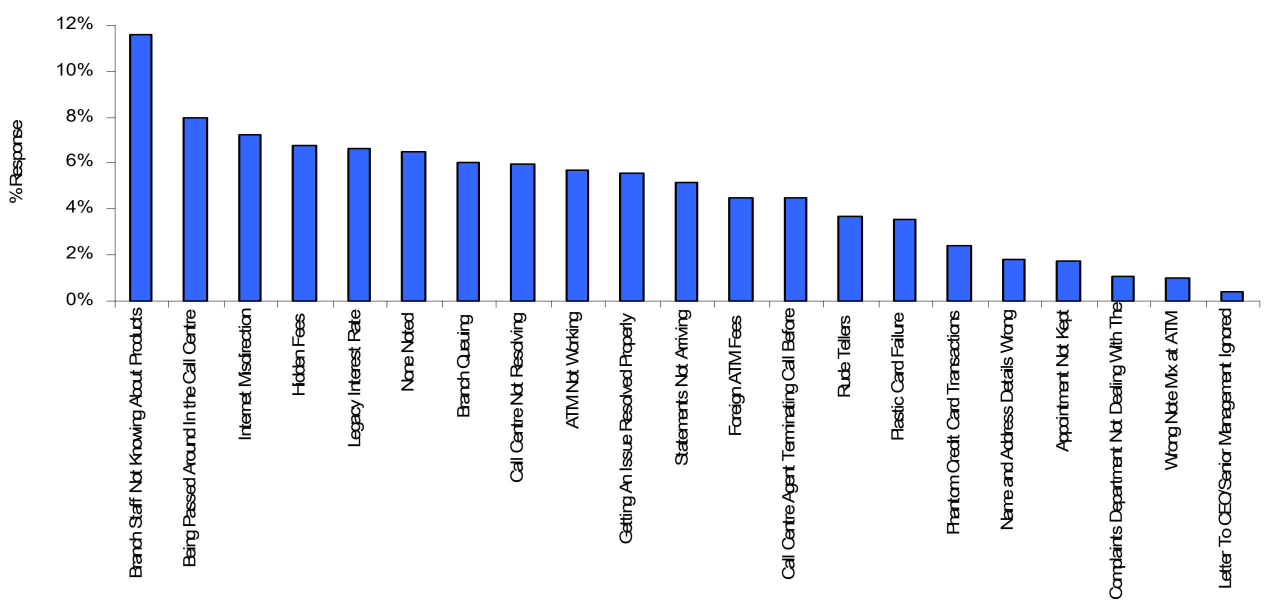
Figure 18: Customer Buying Behaviour Drivers



Source: Fujitsu Consulting.

- **Players are targeting aggressive customer acquisition, but do not focus on sufficiently servicing the basics, creating significant churn** – Poor service was by far the most significant factor in terms of Toxic Servicing, with nearly 70% of consumers identified this as their most significant issue.

Figure 19: Toxic Servicing Drivers

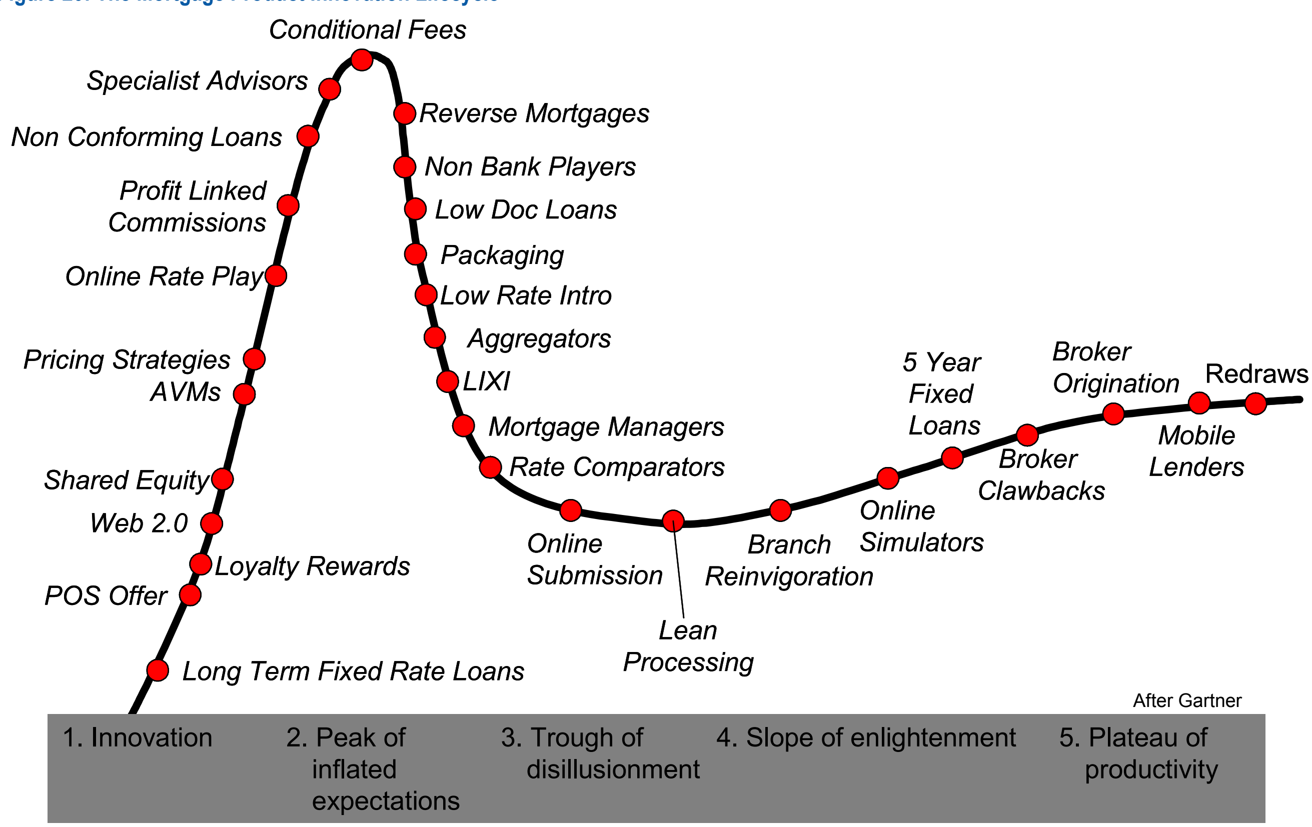


Source: Fujitsu Consulting.

In making an assessment of the product plays available to mortgage industry participants, Fujitsu Consulting have applied the Gartner Hype curve to the mortgage industry to identify the range of potential innovations available in the industry, and where they sit on the hype curve. Specifically:

- Players should be driving initiatives hard along the slope of enlightenment – including lean mortgage processing, branch reinvigoration, and broker claw-backs.
- There are a range of initiatives which are clearly falling into the trough of disillusionment – including reverse mortgages, low doc loans and low rate introductory loans
- There are ideas which should be explored in the early stages of development – including access to specialist advisors, profit linked commission for brokers, online and rate based sales.

Figure 20: The Mortgage Product Innovation Lifecycle



Source: Fujitsu Consulting.

Asia Pacific Equity Research
18 September 2007

Mortgage Stress

Mortgage Stress

In this sixth volume of the Australian Mortgage Industry we focus on levels of mortgage stress experienced by borrowers. Housing affordability has worsened (refer Figure 14) as house price appreciation has outstripped growth in disposable income. As a direct consequence, initial LVR's have increased to allow first time buyers into the market, and, accordingly, the dynamic LVR across all outstanding loan balances has risen (refer Table 6). More specifically:

- **House prices have increased by a compound annual growth rate of 8.9% over the last five years** – As noted earlier in this report (refer Figure 7), the surge in Perth house prices ahs only recently abated, while a dramatic escalation in Sydney house prices between 2001 and 2004 commenced easing 18-24 months ago, and has ultimately stabilized subsequently.
- **Disposable income has only risen by a compound annual growth rate of 2.9% over the same period** – The ABS shows that real net national disposable income per capita has oscillated between 2.0% and 4.4% since 2002.
- **Initial LVRs have increased from 46.5% to 65.6%, which has lifted the LVRs on the dynamic book from 29.7% to 48.2% over the same period** – The growth in house prices, accompanied by a (until VERY recently) noticeable appreciation in tolerable gearing levels of households and banks alike, has seen LVRs rise to meet this void.

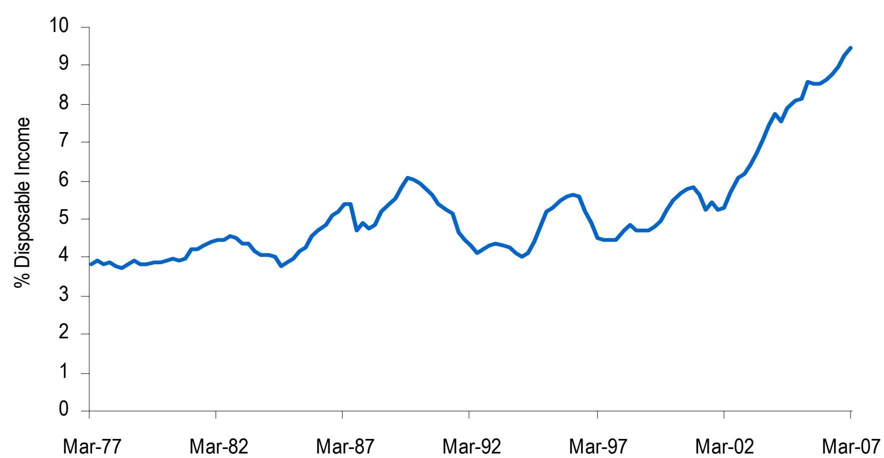
Table 6: Housing Affordability Metrics

	2002	2003	2004	2005	2006	5 Yr CAGR
National Average House Price Growth	15.4%	19.4%	2.9%	0.7%	7.0%	8.9%
National Disposal Income Per Capita Growth	2.5%	2.0%	4.4%	2.5%	3.0%	2.9%
Initial LVRs	46.5%	51.5%	57.6%	64.6%	65.6%	

Source: REIA, ABS, Fujitsu Consulting.

Clearly, these higher LVRs translate to higher debt burdens, which may be measured by interest servicing ratios. As detailed in Figure 21, total housing interest payments as a percentage of disposable income has risen sharply in recent years.

Figure 21: Ratio of Housing Interest Payments To Disposable Income



Source: RBA.

The disturbing acceleration in interest payments relative to disposable income since 2002 is mirrored by the number of mortgage repossessions in New South Wales (refer Table 7), where banks and other lenders take possession of a property when borrowers fail to make their monthly mortgage repayments. It is also worth noting that these figures do not take into account the number of people who sell their homes to avoid repossession – a statistic likely captured by the deflating house price dynamic across Sydney over the same time frame (refer Figure 7).

Table 7: Writs of Possession - New South Wales

Year	Writs of Possession
2003	1611
2004	1750
2005	2357
2006	3642
2007 (Jan- July)	2298

Source: NSW Sheriff Office.

One hypothesis supporting the growing number of mortgage repossessions is that lenders have simply increased their tolerable gearing levels and lowered their underwriting standards and valuation practices (refer *Australian Mortgage Industry - Volume 4: Property Valuation Processes Reviewed*). Anecdotally, the amount that can be borrowed for a given level of income can vary significantly. This is supported by Mortgage Choice, who show that for a couple on a combined income of A$65,000 per year, lenders are willing to lend anywhere up to A$378,999 – more than twice the lowest figure of A$182,000.

Table 8: Borrowing Capacity - Couple on Combined Income of A$65,000 p.a

Lender	Amount
1	182,000
2	263,585
3	266,855
4	272,728
5	296,652
6	298,993
7	301,977
8	304,000
9	343,129
10	378,999

Source: Mortgage Choice.

The above results bring into question the rationale behind lending decision criteria at individual lenders. Over time, we believe that lenders have altered their assessment of a borrowers capacity to repay from *"one third for the taxman, one third for the bank, and one third for yourself"* to *"borrowers will alter their consumption patterns to retain home ownership in times of hardship"*, which has seen lenders migrate towards use of the Henderson Poverty Line (HPL) benchmark. The poverty lines are based on the disposable income required to support the basic needs of a family of two adults and two dependant children, with poverty lines for other types of family derived from the benchmark using a set of equivalent scales. As detailed in Table 9, this results in expenditure of A$503.77 per week on expenses other than housing for a single earner couple with two children.

Table 9: Henderson Poverty Line - December 2006

A$ per week

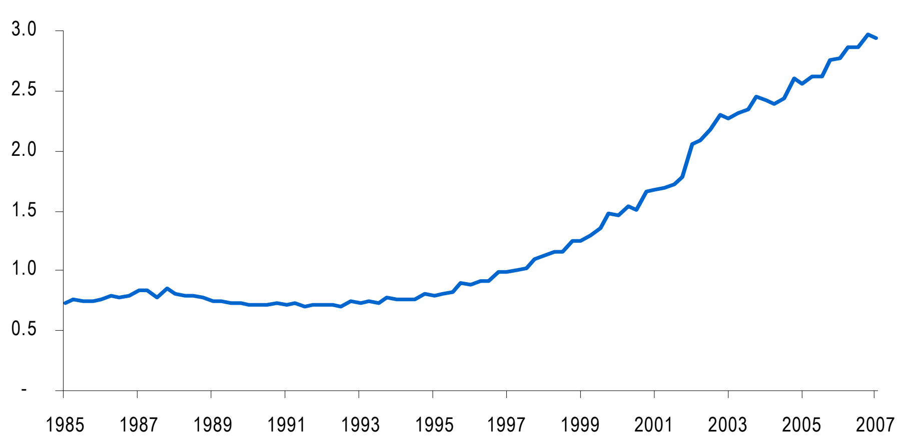
Income Unit	Other Than Housing
Single adult, no children	233.17
Single parent, one child	320.25
Single parent, two children	402.64
Single earner couple, no children	338.99
Single earner couple, one child	421.38
Single earner couple, two children	503.77
Dual earner couple, no children	404.52
Dual earner couple, one child	486.91
Dual earner couple, two children	569.30

Source: Melbourne Institute of Applied Economic and Social Research.

Contrasting the results of *"what can I borrow"* versus the results of *"what can I afford to repay"* are evident when we look at the abovementioned example of a couple on a combined income of A$65,000 p.a. Here, disposable income of approximately A$900 per week after accounting for superannuation and tax is reduced by A$504 per week in expenditure other than housing according to the HPL, leaving, theoretically, A$402 per week to service housing costs under a mortgage, or the equivalent to an A$230,000 over 30 years at the current standard variable rate of 8.32%. Herein lies the problem - referring back to Table 8, NINE OUT OF TEN lenders rated the lending capacity of this example ABOVE what a poverty standard of living would imply.

Adding further fuel to the fire is the extent to which Australian households have come to rely on credit cards, where ever loosening credit underwriting standards (eg Zero Balance Transfer Products) and ever increasing customer limits are possibly masking some degree of mortgage borrower stress (at a Standard Variable Rate of 8.32%) at a much higher credit card rate (at a low card rate ~13% to a high rate ~18% to 20%). As detailed in Figure 22 below, average credit card outstandings were equivalent to one month's disposable income in 1997, growing to 2 months disposable income in 2002. Five years on, in 2007, the rate of growth has continued, with credit card outstandings now equivalent to three month's disposable income. While the growth in credit card outstandings is alarming in its own right, it likely plays a significant role in delaying the overall transmission mechanism of "mortgage stress" to bank profitability.

Figure 22: Number of Months of Disposable Income Held on Credit Card Balances



Source: RBA, JPMorgan estimates.

Typically, as a loan loss cycle emerges, balances on credit cards escalate initially, as consumers attempt maintain a given level of consumption against a higher household interest burden. As consumer credit grows faster than disposable income, accrued interest builds and inevitably, arrears rates on unsecured personal credit head higher. While this dynamic is beginning to emerge now, the proliferation of "Zero Rate Balance Transfer" credit card products has masked this dynamic over recent years, with consumers switching credit card providers at the end of the interest free period, as opposed to reverting to the market rate. Therefore, while the rhetoric from banks is that arrears rates on housing are steady, at best, or only escalating modestly, at worst, the fact remains that emerging mortgage stress is being hidden within the growing reliance on credit cards to increasingly fund day-to-day living.

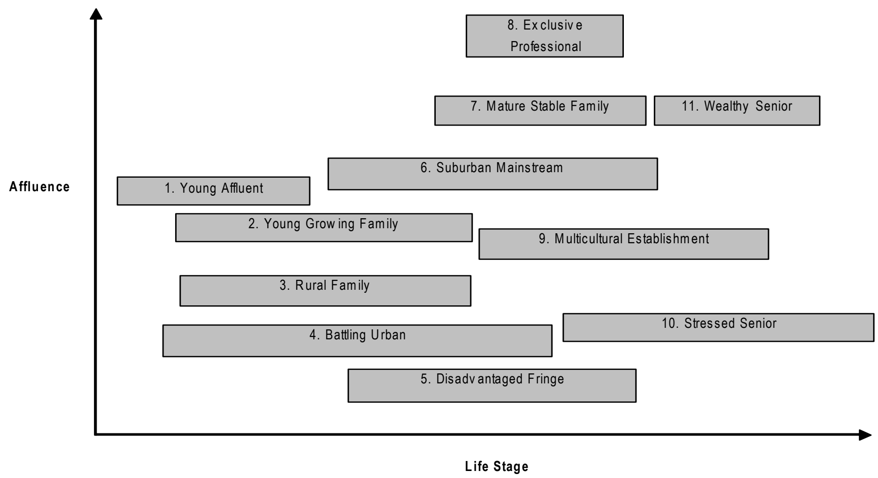
Given the set of circumstances outlined above, it is clear to see how pockets of negative equity can form and levels of households under mortgage stress can rise. However, although the interest servicing ratio for households *with mortgages* has risen sharply, the income base supporting the interest burden has widened. This more benign picture is partly because the 35.1% of households with a mortgage earn a disproportionate share of the household sector income (46%). This suggests that those households that took on debt to enter the housing market in the last decade were the households best placed to service the debt.

It is within this context that we explore the extent of mortgage stress on Australian households, which impacts the profitability of the Australian banks on several fronts:

- **Churn in existing housing credit is a key driver of system credit growth** – Based on normalised housing starts of circa 150,000pa and a typical "home renovation cycle" any growth in housing credit over and above 4% pa is entirely attributable to rising house prices and / or an increasing Loan to Valuation Ratio on new lending. Accordingly, 75% of the CY2006 housing credit growth of 13.8% was attributable to churn of existing housing. As detailed in Table 5, this experience is vastly different from 15 years ago, where only 37% of housing lending growth was driven by this dynamic in 1992.
- **The current liquidity squeeze sees banks between a rock and a hard place** – As noted earlier in this report, a recent steepening of the short end of the yield curve (refer Figure 12) has savaged the incremental spreads on domestic home loan portfolios. While the competitive environment and the opportunity to grab marketshare would likely dictate an outcome where the Australian major banks don't pass on the higher funding costs, thereby eroding profits to some degree, the alternative may be worse in the long-run. If banks were to pass higher funding costs onto households, this would inevitably heighten current levels of mortgage stress such that there will be flow-on effects in arrears rates.

With the broad macro outlay outlined above, the Fujitsu Consulting model allows a more focused analysis of mortgage stress, with segmentation based on an analysis of life stage, affluence, demographics, and psychographics.

Figure 23: Fujitsu Consulting Segments



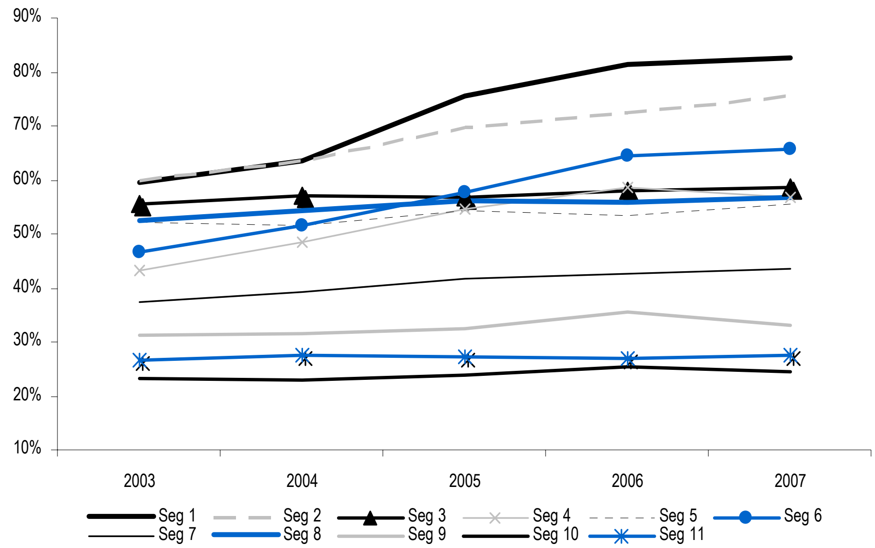
Source: Fujitsu Consulting.

Fujitsu Consulting have modelled the profile of each segment to identify differences across LVR's, gross income, and ultimately, levels of mortgage stress.

LVR's have been rising in recent years, but not all segments to the same extent. Lenders appear to have flexed their policies to allow more headroom for segments which have the need for more funding help, with Young Affluent (Segment 1) and Young Growing Families (Segment 2) having the highest ratios. Specifically:

- **New loans have a higher LVR on average** – The dynamic LVR on the total loan book ranges from 18.2% for Stressed Seniors (Segment 10) to 62.5% for Young Affluent (Segment 1), with the dynamic LVR for Young Affluent growing the most of any segment since 2003, up from 39.3% - clearly driven by higher initial LVRs. While this is not surprising, given that they have yet to experience capital growth in prices, it is worth noting that the initial LVR for Young Affluent has increased from 59.6% to 82.5% over the last four years (refer Figure 24). However, Young Affluent aren't the only segment experiencing higher LVR's, with Suburban Mainstream (Segment 6) also exhibiting an appreciable lift in initial LVR from 46.5% to 65.6% over the same period.
- **Non conforming loans have a higher LVR for both existing and new loans** – The dynamic LVR on the total non conforming loan book ranges from 25.8% for Stressed Seniors (Segment 10) to 88.4% for Young Affluent (Segment 1), with the dynamic LVR for Young Affluent again growing the most of any segment, which has clearly been driven by higher initial LVRs. While the higher LVRs for new loans is explained partly by the mix of business written, including some loans over 100% of the property value, it is worth noting that the initial LVR for Young Affluent has increased from 67.5% to 97.8% over the last four years. Again, Young Affluent aren't the only segment experiencing higher LVR's, with Suburban Mainstream (Segment 6) also exhibiting an appreciable lift in initial LVR from 50.8% to 74.9% over the same period.

Figure 24: Initial LVRs by Fujitsu Segment

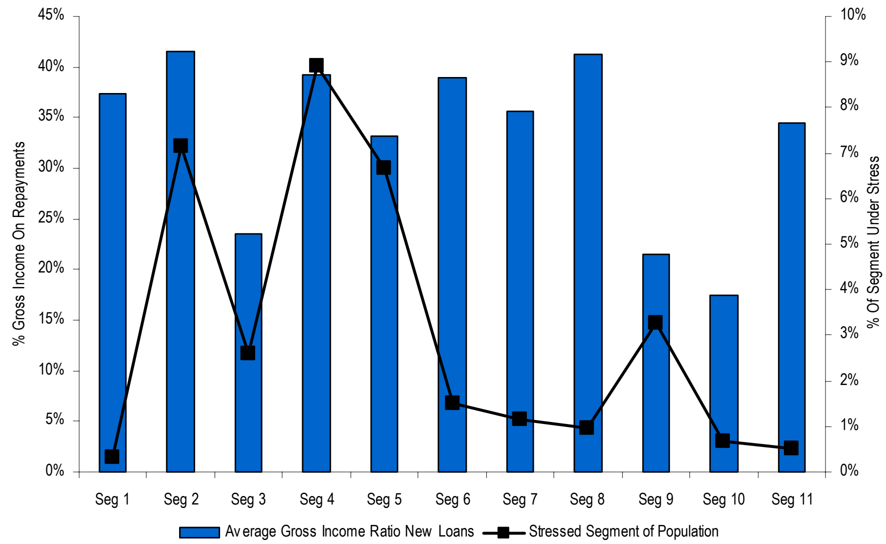


Source: Fujitsu Consulting.

To assess the robustness of this assertion, Fujitsu Consulting segment analysis highlights the distinction between those segments which spend a high proportion of their gross income on repayments, and the proportion of each segment under mortgage stress (refer Figure 25). Specifically:

- **The wide variation across segments highlights the inappropriateness of a uniformly applied single ratio** – Lenders need the sophistication to be able to cater for different segments' ability to service debt. In a number of segments, for example, Exclusive Professional (Segment 8), there was a significant element of financial gearing to take account of tax breaks, but little risk, whereas other segments are much more exposed.
- **A higher initial (and indeed dynamic) LVR for a segment is not a clear signal that mortgage stress is evident** – By way of example, Young Affluent (Segment 1) have the highest LVRs (62.5%), yet the lowest proportion of mortgage stress (0.3%) within their segment. Conversely, Battling Urban (Segment 4) have mid-range LVR's (41.0%), yet the highest proportion of mortgage stress (8.9%) within their segment.
- **Similarly, a higher proportion of gross income spent on mortgage repayments is a necessary, but not sufficient condition towards mortgage stress** – By way of example, at first glance, Battling Urban (Segment 4) has the highest proportion of its segment under stress (8.9%) and also has a significant 39% of gross income spent on mortgage repayments. Young Growing Families (Segment 2) also fit this profile, with 42% gross income spent on mortgage repayments, exhibiting the second highest proportion of its segment under stress (7.1%). However, Young Affluent (Segment 1), Suburban Mainstream (Segment 6), Mature Stable Families (Segment 7), and Exclusive Professional (Segment 8) all have over 35% of gross income spend on mortgage repayments, yet in all cases, less than 2% of each segment's respective populations are experiencing mortgage stress.

Figure 25: New Loans - Ratio of Average Gross Income to Repayments



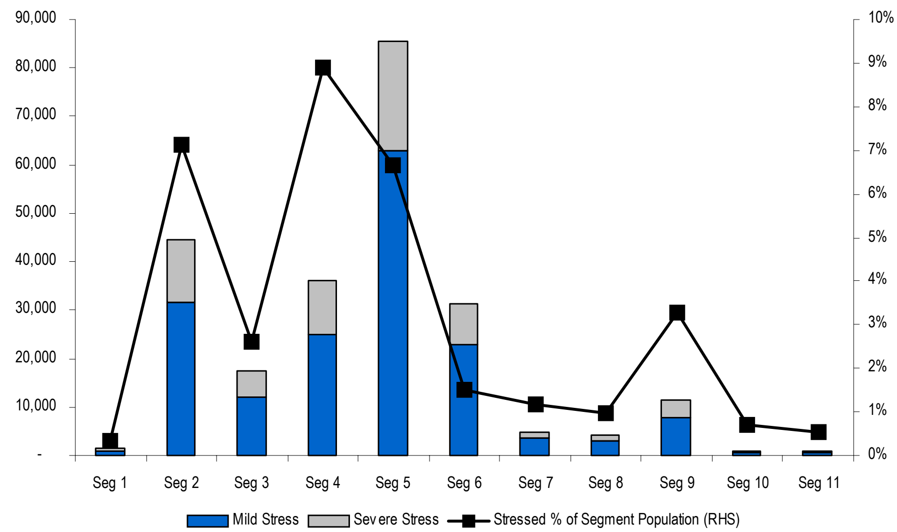
Source: Fujitsu Consulting.

While talking in percentage terms provides an interesting discussion, Fujitsu have converted the above statistics into a quantifiable number of households that are impacted. In assessing the level of stress experienced by households, Fujitsu Consulting has adopted the following definitions:

- **Mild stress** has been defined as “households have reprioritized and curtailed spending to pay the mortgage, but there is no significant risk of default, and no systemic defaults”.
- **Severe stress** has been defined as “households who are in significant risk of default, are having difficulty in making regular mortgage repayments, have defaulted, or have commenced forced sales”.

As detailed in Figure 26 below, Fujitsu Consulting estimate that 70,000 households are now experiencing severe stress across Australia, with hot spots in Sydney, Melbourne, & Perth. Whilst the traditional Battlers continue to be hit hard, a broader base of households are under mild stress. There is an important feedback loop here – because as stress gets worse, and households rush to sell, house prices in specific suburbs will fall and this can make stress worse, and create pockets of negative equity. Suburbs like Wattle Grove (NSW), Sydenham (VIC), and Port Kennedy (WA) could be badly hit.

Figure 26: Number of Households Experiencing Mortgage Stress by Fujitsu Segment



Source: Fujitsu Consulting.

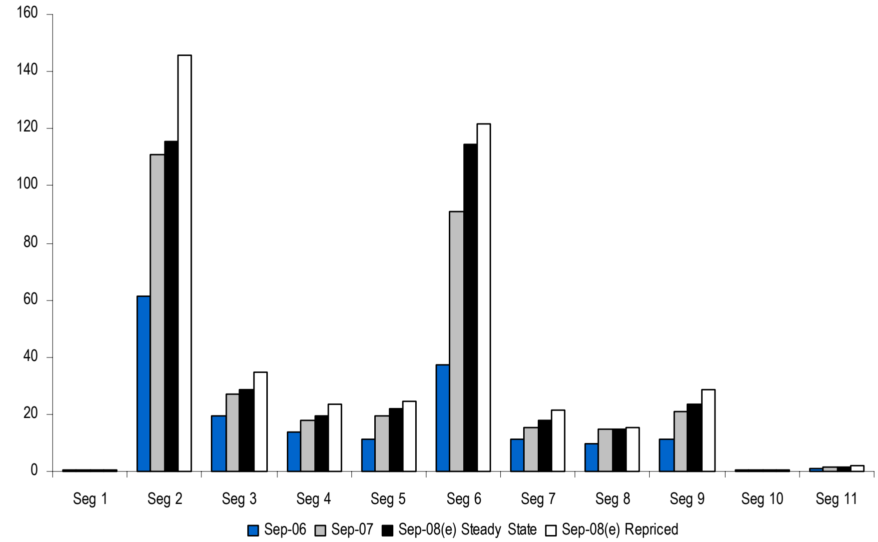
Having determined that there are factors other than the percentage of gross income spent on mortgage repayments that drive levels of mortgage stress, Fujitsu Consulting have calculated a stress index using the mortgage "Stress-O-Meter". The stress factor is calculated by:

(Propensity to Default x Number of Defaults)
+
(Forced Sales)
+
(Average Arrears Months x Affordability x Reprioritised Spending)

This creates a relative index which can be flexed to take future interest rate trends into account (refer Figure 27). We have assessed the anticipated impact of future interest rate rises under two scenarios:

1. **Steady State** – We assume a 0.25% rise in interest rates before December 2007, and a further 0.25% rise in March 2008.
2. **Repricing** – We assume prime lending will be repriced by 0.15% and the most risky lending repriced by 2.0% before the end of the year. This is driven by the recent US sub-prime issues and subsequent increased cost of wholesale funding. We adjust the lending portfolio to take account of different funding mixes by lender. This will see the number of Australian households under severe stress rise from 70,000 to 113,000. Under this scenario, Young Growing Families (Segment 2) and Suburban Mainstream (Segment 6) are the most adversely leveraged. However, as noted earlier in this report, it is by no means certain that Australian banks will pass on the increased funding costs to mortgage customers.

Figure 27: Mortgage Stress-O-Meter Projections



Source: Fujitsu Consulting.

So what does this mean for the profitability of Australian Banks? The abovementioned "contagion" holds both direct and indirect impacts:

- **Direct Negative: Correlation risk will increase regulatory capital requirements** – From January 1, 2008, the Basel II Accord's Three Pillars will apply to Australian bank regulatory capital requirements. Under Pillar 2, we expect specific requirements relating loan correlation / concentration risk. As noted above, forced house sales by segments under mortgage stress could see house prices decline, ultimately lowering the value of the housing in that suburb. As this correlation becomes more evident, banks may be forced to hold increased levels of regulatory capital to absorb the increased valuation risk on their books.

- **Direct Negative: Credit growth will slow from lower "churn" on existing housing** – As noted previously, around 75% of current housing credit growth is being originated through "churn" on existing housing, which is facilitated by rising house prices and initial LVR's. Falling house prices through forced house sales by segments under mortgage stress could suffocate credit growth, thereby reducing lending volumes for banks, and ultimately, profit growth.

- **Indirect Negative: Credit growth will slow as previously mis-priced segments of the market shrink** – System credit growth in housing has been a function of stable growth in full-doc prime lending by banks and surging alternative lending, such as low-doc by non-banks. Given that the current funding squeeze making it difficult for some non-bank lenders to fund these types of products, their status as "lender of last resort" will evaporate. With banks focused on generating risk-adjusted returns from scarce liquidity, the associated tightening of credit standards will see this segment of the market diminish, rather than banks inherit this risk.

- **Indirect Positive: Major Banks should regain marketshare** – With the overall "pie" of available credit shrinking, and the major banks maintaining their dominant position in full-doc prime lending, major banks will likely see an increase in overall marketshare.

FUJITSU
THE POSSIBILITIES ARE INFINITE

Asia Pacific Equity Research
18 September 2007

JPMorgan

Half An Hour with Jennifer Nielsen and Hamish Carlisle

Half an Hour with Jennifer Nielsen

Chief Executive Officer X Inc. Financial Services Pty Ltd.

Where Does X Inc. play in the Mortgage Industry?
We are a Mortgage Aggregator, working within the triangle of Customer, Lender and Broker. As an Aggregator we have to respect all three relationships as our customers. The three stakeholder groups drive all our business decisions.

We started three years ago, and two of the three founders came with senior sales and operational experience from Aussie Home Loans and Westpac.

We provide the usual range of services to brokers, aggregate loans, commissions etc and as a branded aggregator; we market to retail customers and seek to build a well known brand to support our brokers in their own business and local communities.

We have ISO accreditation to reinforce our view of providing high quality advice and manage the disparate broker workforce. We have just shifted into profitability this month after three years. We are now looking at potential acquisitions as well as further organic growth.

How many brokers do your have, and what are our growth plans?
We have 280 brokers today and we are growing at an average of 10 a month. We now cover all the main states and have a strong presence in most capital cities. We expect to see further growth beyond our initial target of 500.

We now have a rigorous accreditation process for new brokers, including references from lenders and 6 months proof of performance. Our brokers are 100% aligned to X Inc, although that is not a contractual requirement. We promote individual broker sites on our public website.

What distinguishes X Inc. from the other Aggregators?
The triangle philosophy. We intend to 'own' the higher end of the finance market. Our advertising specifically targets larger loans – and we need brokers who can service those kinds of customers. One in ten of our loans would be above $750,000, and one in five above $500,000. It is one thing to acquire those customers through advertising, but you need qualified brokers to service and keep them.

In our recent Broker Survey, over 60% stated that they did not receive adequate support from their Aggregators. Does this surprise you?
No, not at all, given the state of the market. In truth though, we are only interested in brokers who see value in a national retail brand. That's not everybody. Aggregators need to focus on tailoring their specific service offering to the individual, particularly through local BDM management and training. If an aggregator says they provide brand and marketing support that has to materialize into real tangible meaning for their brokers.

Has the recent credit crunch impacted you?
No, the opposite – since the last rate rise we have seen a 30-40% lift in enquiries. There are of course lots of questions from customers and brokers about the lenders you would expect. There is a disappointingly low level of understanding about what's going on with the sub-prime issue. I have to say people like Costello drawing a bow from the sub-prime fallout to irresponsible low doc lending and onto mortgage brokers and the need for regulation doesn't really promote a useful understanding of either the sub-prime issue or the advantages of finance industry regulation.

How do you see the industry playing out next 5 years?
I think the big news is that the major lenders are starting to really understand how to harness and maximise the opportunities good mortgage brokers present. We see lenders beginning to treat brokers more as a long term commercial opportunity. Aggregators are simply an outsourcing vehicle for lenders. We are seeing much more collaboration, and cooperative behaviour. For example, Macquarie has started to provide customer data to brokers and CBA are referencing brokers on customer statements. We will see more and more commission structures becoming increasingly aligned to the quality of business delivered. We will also see more comprehensive data at an individual broker level and hopefully see commissions reflecting the quality of broker business. Of course the lenders need to develop accurate measurement systems, but I think the good news is that both lenders and brokers are starting to understand how they can work together for a better quality (and cost efficient) customer.

I think the recent Challenger announcement is also great for the industry. Respected businesses with both the kind of muscle and vision Challenger has can stand eye-to-eye with the lenders and also contribute meaningful commentary to the market.

Regulation is a good thing – in planning this business, we have assumed there will be stronger compliance requirements. The finance industry needs to offer clear, consistent and transparent accountability to the retail public. . Regulation should however be a national system for ease of implementation and monitoring by aggregators and regulators. This makes sense as borrowers and securities cross state lines.

In the longer term, aggregators will move into a more customer sharing role with lenders. The major lenders must be starting to see the slowly increasing impact brokers are having on longer term relationships with their customers more than some of their bankers. All corporations have a problem with long term customer relationships when staff move as often as they do – whether through promotion, transfer or resignation. To me, the bricks and mortar lenders are stuck between a rock and a hard place. They are now competing against brokers who are able to offer long term relationships or the psychology of freedom of choice, even when that broker is no longer available.

Aggregators will move further into a customer sharing role with lenders as lenders realize they can use them to deliver more quality in the customer experience, help to reduce costs across that relationship (on line lodgement, ordering unwanted valuations, reworks, doing unnecessary pre approvals, etc). It's a short step for lenders and aggregators to work more closely in helping each other drive these costs savings and improve the customer experience through brokers.

Half an Hour with Hamish Carlisle

Managing Director QuickDirect Online Mortgages

How Long Has QuickDirect Been In Business?
We are a new start-up business. We launched our website in February 2007 but have since spent about 6 months raising capital, getting a board and management team in place, and building the technology platform. We launched into the market in the last couple of months. Our volumes are governed by our sales capacity. We have around eight experienced consultants who have end to end accountability for their customers. I do not believe we have even scratched the surface yet in terms of our volume potential - it's early days. We are seeing a couple of hundred pre-approved online applications a week at present. Our process is then to get in touch with these customers on the phone and take them through to settlement.

What is Your Customer Proposition?
Our business model is as a direct lender using the internet. We identified an opportunity because high broker commissions create a false floor in terms of loan pricing so our offer is – deal direct and save. The business model is centred on the internet. 70% or our marketing is internet focussed, everything from internet banner advertising, search engine optimisation, email marketing, affiliate marketing online PR and general online community based marketing.

One of our shareholders is First Quick Consulting, a specialist internet marketing company. One on their MD's sits on the board. They have a strong influence on the onsite marketing, covering things like landing page strategies, customer tracking and CRM data collection. Our CRM integrates marketing data with sales data which is somewhat unique. We have a highly analytical marketing and sales framework.

We also focus on the customer experience. We know people do prefer face to face, so we combined the internet with a highly personal phone based experience. Our individual customer care consultants see their customers right through from application to loan settlement.

Our products are simple but flexible and at a good price. They offer free redraw and early repayment, direct salary debiting and so fourth – features which are in line with the market. But fees off the table – we have gone for simplicity and transparency - one rate – all cards on the table. Customers know what they are getting – they cannot negotiate further discounts with us and this dramatically simplifies the process.

We have a five step process, first online approval. If it's approved, a Consultant calls the customer and sends out an introductory pack. Once the customer sends it back we can make an offer subject to valuation usually within 24 hours for non mortgage insured loan, or 48 hours for mortgage insured loans.

How Do You Stack Up With Competitors?

If you were to compare us with say One Direct (owned by ANZ), we are not bank owned which I suspect gives us more flexibility around marketing activities and incentive structures. We have the potential to attract a different calibre staff, and a highly analytic marketing model that is less agency dependant and more innovative. The flipside is that big organisations have capacity to deliver scale, we are capacity constrained.

Many players do not have online pre-approval – it's important to give customers instant gratification and our web site also allows loan tracking. Dedicated Relationship Management is important and we have invested in systems, technology and CRM to provide individual accountability. In summary we have corporate grade infrastructure that is scaleable but we are also nimble.

How Are Loans Funded?

ING provides the wholesale funding. So far we have not felt any impact from the US sub-prime issues. Our target market is core prime business so will be less impacted. The widened spread of cash to 90 days is an issue but not sure if it's a structural change or a blip. Everyone is exposed to cash 90 days but ING does not securitise so is not in a worse position than any of the major banks.

How Do You See The Future?

The online segment will grow. There are various views on the levels of growth but nearly 50% of new credit cards applications are done online – so there is a significant appetite in the market. We will be a big part of the market, a meaningful player perhaps the largest player. We have built an infrastructure which is hard to replicate quickly in a corporate setting. Traditional players will struggle with channel conflicts and separate bands. Meantime our focus is keeping our heads down!

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Appendix

Appendix

Table 10: Housing Loans (including Securitisation) Market Share

	Mar-05	Dec-05	Mar-06	Jun-06	Sep-06	Dec-06	Mar-07	Jun-07	Jul-07
ANZ	14.4%	14.2%	14.3%	14.1%	14.1%	14.1%	14.0%	14.0%	14.1%
CBA	22.3%	21.9%	21.9%	21.9%	21.7%	21.6%	21.6%	21.7%	21.7%
NAB	16.6%	16.6%	16.6%	16.5%	16.4%	16.3%	16.2%	16.1%	16.0%
WBC	15.8%	15.5%	15.5%	15.5%	15.4%	15.6%	15.6%	15.6%	15.6%
Major Banks	**69.1%**	**68.3%**	**68.2%**	**68.0%**	**67.6%**	**67.6%**	**67.5%**	**67.4%**	**67.3%**
ADB	2.4%	2.5%	2.5%	2.5%	2.5%	2.6%	2.6%	2.6%	2.6%
BOQ	1.4%	1.4%	1.4%	1.4%	1.5%	1.5%	1.6%	1.6%	1.7%
BWA	2.5%	2.7%	2.8%	2.9%	3.0%	3.1%	3.2%	3.2%	3.3%
BEN	1.1%	1.1%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%
SGB	9.1%	9.1%	9.1%	9.1%	9.0%	9.0%	9.0%	9.0%	9.0%
SUN	3.3%	3.2%	3.2%	3.2%	3.2%	3.2%	3.3%	3.2%	3.2%
Regional Banks	**19.7%**	**20.0%**	**20.0%**	**20.2%**	**20.3%**	**20.4%**	**20.6%**	**20.6%**	**20.7%**
Other	11.2%	11.7%	11.7%	11.8%	12.1%	12.0%	11.9%	11.9%	12.0%

Source: APRA.

Table 11: Housing Loans (including Securitisation) 12mth Growth Rates

	Mar-05	Dec-05	Mar-06	Jun-06	Sep-06	Dec-06	Mar-07	Jun-07	Jul-07
ANZ	17.0%	11.8%	11.7%	11.6%	11.6%	11.2%	10.2%	11.6%	11.6%
CBA	16.3%	11.6%	10.9%	11.5%	11.7%	10.9%	10.8%	11.4%	11.5%
NAB	12.2%	14.5%	13.1%	12.1%	11.0%	9.9%	9.8%	9.2%	8.6%
WBC	7.1%	9.3%	10.6%	11.6%	12.2%	12.3%	12.7%	13.7%	13.2%
Average Major Banks	**13.1%**	**11.8%**	**11.6%**	**11.7%**	**11.6%**	**11.1%**	**10.9%**	**11.5%**	**11.2%**
ADB	29.6%	21.0%	15.9%	13.1%	14.3%	14.5%	15.8%	15.9%	14.5%
BOQ	42.3%	15.2%	16.7%	19.7%	21.9%	23.7%	25.4%	27.7%	27.7%
BWA	15.0%	24.3%	28.7%	33.6%	30.0%	28.0%	26.3%	25.9%	25.1%
BEN	14.6%	6.1%	6.7%	7.2%	8.5%	8.5%	9.0%	8.1%	7.6%
SGB	14.3%	12.7%	13.0%	13.2%	12.7%	10.8%	10.6%	10.5%	10.4%
SUN	16.7%	11.4%	10.3%	10.1%	11.5%	13.6%	14.5%	14.3%	14.1%
Average Regional Banks	**22.1%**	**15.1%**	**15.2%**	**16.2%**	**16.5%**	**16.5%**	**17.0%**	**17.1%**	**16.6%**
Total	**15.5%**	**13.1%**	**12.9%**	**13.1%**	**13.1%**	**12.3%**	**12.1%**	**12.4%**	**12.2%**

Source: APRA.

Table 12: Australian Housing Loan Product Pricing

	Variable Rate Loan	Introductory Rate Loan			Fixed Rate Loan		
		Rate	Term	Type	1yr	2yr	3yr
Adelaide Bank	7.05	5.75	6	Variable	n/a	n/a	7.35
ANZ Bank	7.82	6.5	12	Variable	7.29	7.29	7.29
Aussie Home Loans	7.7	n/a	n/a	n/a	7.2	7.24	7.24
Bank of Queensland	7.82	n/a	n/a	n/a	7.29	7.29	7.29
BankWest	7.82	6.78	12	Fixed	7.18	7.18	7.18
Citibank	7.46	6.75	12	Variable	7.3	7.3	7.12
Commonwealth Bank	7.82	6.49	12	Variable	7.35	7.35	7.35
Homeloans Ltd	7.25	n/a	n/a	n/a	7.66	7.63	7.57
HomeSide Lending	7.52	6.49	12	Fixed	7.35	7.35	7.25
ING Bank	7.15	n/a	n/a	n/a	7.19	7.19	7.19
Macquarie Bank	7.3	n/a	n/a	n/a	7.35	7.45	7.55
Mortgage House	7.34	n/a	n/a	n/a	7.6	7.7	7.75
National Australia Bank	7.82	6.49	12	Variable	7.35	7.35	7.25
RAMS Home Loans	7.92	7.02	12	Variable	n/a	7.39	7.29
St. George Bank	7.82	6.49	12	Variable	7.35	7.35	7.35
Suncorp	7.82	6.49	12	Fixed	7.29	7.29	7.25
Westpac Banking Corporation	7.82	6.89	12	Fixed	7.35	7.27	7.29
Wizard Home Loans	7.47	n/a	n/a	n/a	n/a	7.35	7.35

Source: bankchoice.com.

Table 13: Australian Housing Loan Product Rates and Fees

	Variable	Basic	Fixed		Fees				
	Rate %	Rate %	Rate 5 Year %	LVR	Application	Valuation	Legals	Settlement	Total
AIMS Home Loans	7.90		8.26	95	$660	$0	$0	$0	$660
AMP Banking	7.82	7.64	7.79	95	$0	$0	$0	$0	$0
ANZ Bank	8.32	7.62	7.89	95	$500	$0	$0	$0	$500
Aussie Home Loans	8.20	7.64	7.74	100	$500	$0	$0	$100	$600
Bank of Queensland	8.32	7.74	7.74	100	$0-$595	$0	$0	$0	$0-$595
BankWest	8.32	7.65	7.99	95	$0-$700	$0	$0	$0	$0-$700
Citibank	7.61	7.49	7.79	100	$0-$399	$0	$0	$250	$250-$649
Colonial (CBA Products)	8.32	7.81	7.79	95	$600	$0	$0	$0	$600
Commonwealth Bank	8.32	7.81	7.79	95	$450-$600	$0	$0	$0	$450-$600
GE Money	7.47		7.65	100	$0	$0	$0	$0	$0
HomePath	7.46		7.54	97	$0	$0	$0	$0	$0
HomeSide Lending	8.02	7.76	7.79	95	$300-$600	$0	$0	$0	$300-$600
HSBC	8.27	7.69	7.80	97	$500	$0	$0	$150	$650
ING Bank	7.65	7.65	7.79	100	$0-$499	$0	$220	$0	$220-$719
Liberty Financial	7.54			0	$0	$275	$495	$0	$770
Macquarie Banks	7.44	7.44	7.90	100	$300	$0	$0	$350	$650
National Australia Bank	8.32	7.82	7.79	100	$600	$0	$0	$0	$600
RAMS Home Loans	8.42	7.69	7.99	100	$395	$200	$0	$250	$845
Ratebusters	7.15		7.47	100	$990-$1400	$220	$275	$0	$1485-$1895
RESI Mortgage Corporation	7.69		7.54	100	$0	$0-$220	$396	$0	$396-$616
St George Bank	8.32	7.60	7.85	95	$0-$700	$0	$0	$100	$100-$800
Suncorp	8.32	7.74	7.80	100	$600	$0	$0	$0	$600
Virgin Money	7.59		7.85	100	$0	$0	$490	$0	$490
Westpac Banking Corporation	8.32	7.74	7.79	97	$600	$0	$0	$0	$600
Wizard Home Loans	7.79	6.71	7.99	100	$100	$0	$0	$660	$760

Source: Infochoice.

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