

Agency MBS Trends

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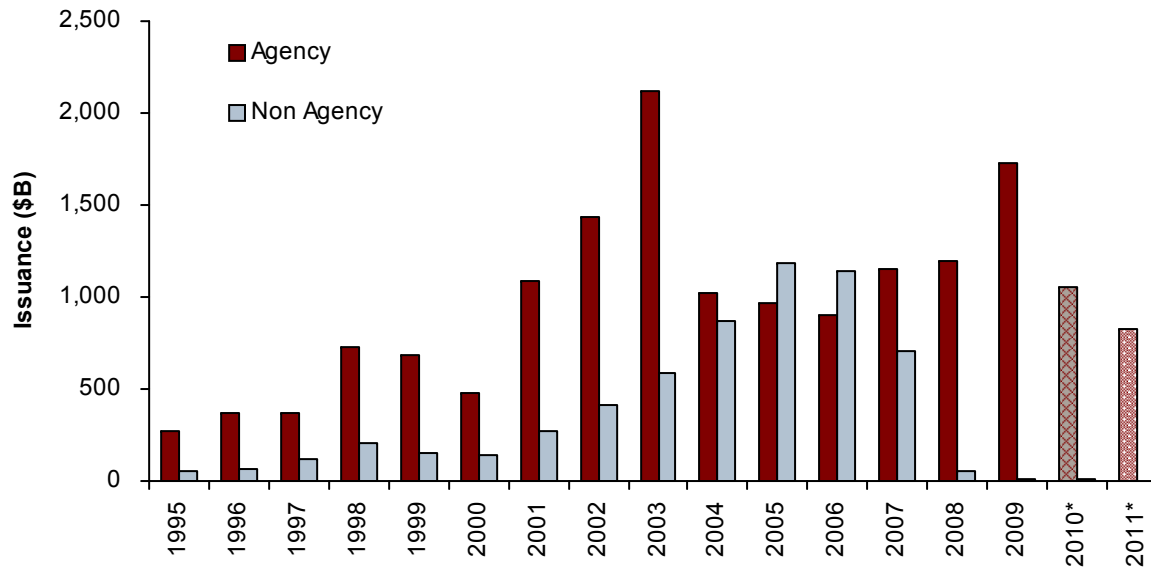
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Executive Summary

- Housing and mortgage origination – Government will remain the primary source of mortgage finance for now
- Agency MBS ownership – Government continues to dominate, but other investors stepping in
- Supply/demand outlook – More demand than supply through 2011
- Fed portfolio – Fed can completely unwind its MBS portfolio by 2016 by selling \$100B per year starting Q2:11. Market well positioned to absorb
- Prepayments/convexity outlook – Muted impact from recent rally. Roll rates to drive 2010 speeds; traditional convexity to return as the driver longer term
- TBA fails – Will continue given high Fed ownership, but a punitive fails charge is not be the best answer
- GSE reform – A back to basics approach might be the most practical solution

Origination – GSEs and FHA remain the primary source of mortgage credit following the housing crisis



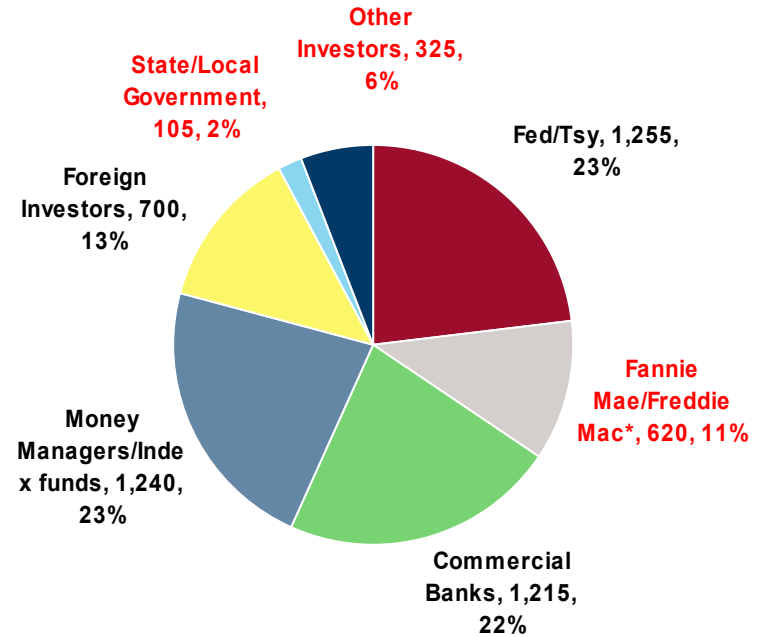
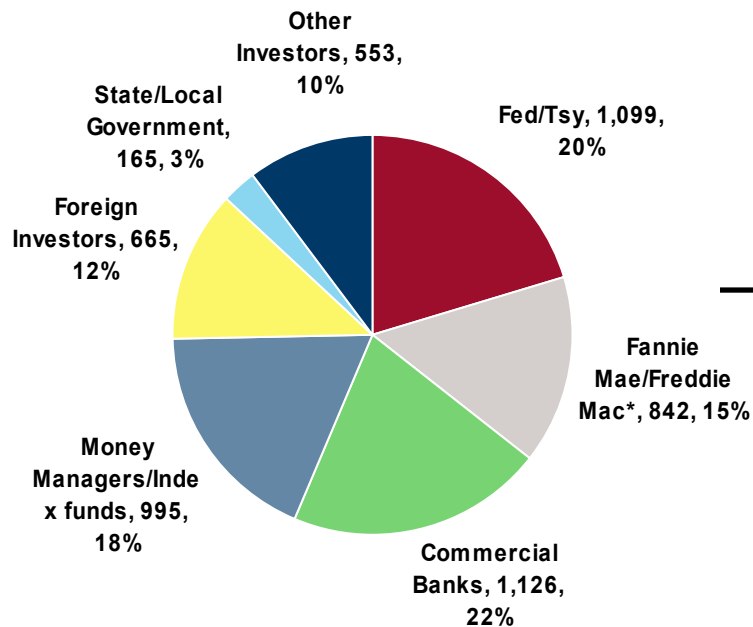
- Projected Agency MBS issuance of \$1.05T and \$840B (TBA eligible issuance of \$960B and \$780B) and 2010 and 2011, respectively
- Some trial balloon private label issuance likely, but significant volume is not expected until regulatory issues are resolved and AAA spreads tighten further

Source: Inside MBS/ABS, Credit Suisse, * Credit Suisse projections for 2010 and 2011

Ownership – Government remains a dominant holder of Agency MBS

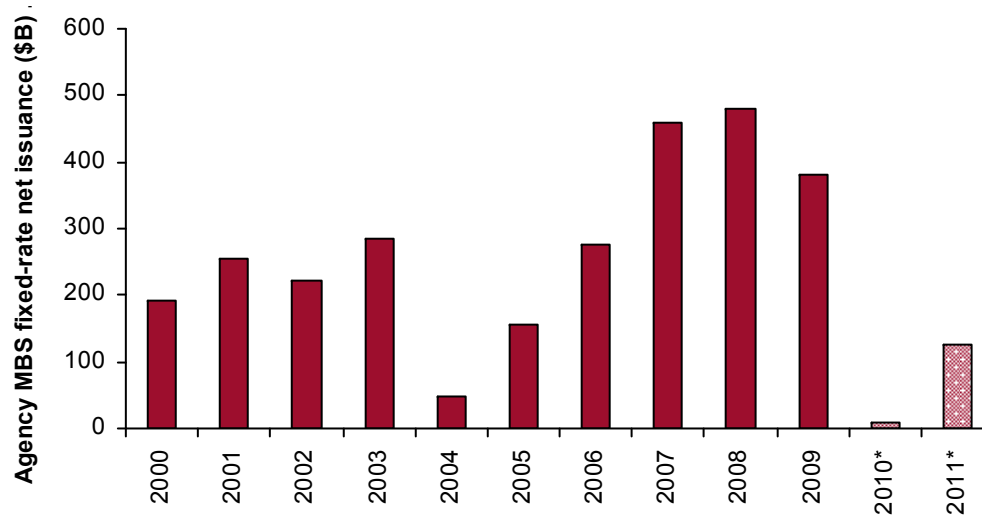
2009 end

2010 end estimates



Source: Credit Suisse, Inside MBS/ABS, Fannie Mae, Freddie Mac, Federal Reserve, US Treasury

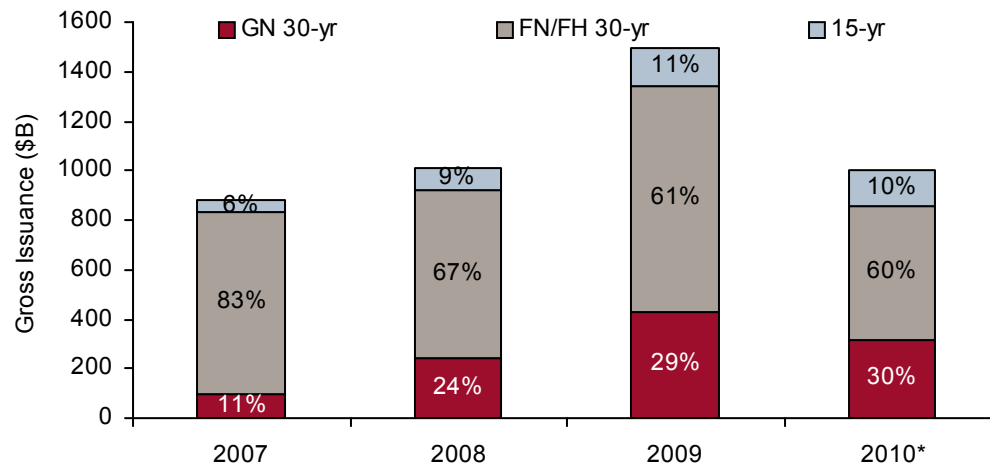
Supply/demand – Net supply for Agency MBS will be at historical lows through 2011



- Net issuance of Agency MBS is projected at zero and \$125B for 2010 and 2011, respectively

Source: Credit Suisse, Fannie Mae, Freddie Mac, Ginnie Mae

Supply/demand – GNMA share projected at roughly one-third of total Agency MBS gross issuance



Source: Credit Suisse, Fannie Mae, Freddie Mac, Ginnie Mae

Supply/demand – Agency MBS demand to outstrip supply through 2011

2010

Gross Supply (\$B)	1,030
	Gross Demand (\$B)
Fed	140
GSEs	50
Banks	242
Foreign Investors	72
Money managers	395
Slack (\$B)	132

2010

Net Supply (\$B)	0
	Net Demand (\$B)
Fed	29
GSEs	-110
Banks	90
Foreign Investors	0
Money managers	250
Slack (\$B)	-259

2011

Net Supply (\$B)	125
	Net Demand (\$B)
Fed Sales	-175
GSE Sales	-110
Banks	50
Foreign Investors	50
Money managers	25
Slack from 2010	259
Slack (\$B)	26

- Projected demand exceeds supply by \$259B in 2010
- Supply/demand will be in balance even after accounting for potential sales of around \$300B from Fed and GSEs

Source: Credit Suisse, Inside MBS/ABS, Fannie Mae, Freddie Mac, Federal Reserve, US Treasury

Fed portfolio – Fed can wind down its MBS portfolio in 5-6 years by selling \$100B-\$150B annually

	Sale amount (\$B)	2011	2012	2013	2014	2015	2016
Start balance (\$B)	100	1100	861	648	466	309	172
Cushion (bp)		593	379	277	191	117	84
Start balance (\$B)	300	1100	661	274			
Cushion (bp)		178	78	46			
Start balance (\$B)	600	1100	361				
Cushion (bp)		74	30				
Start balance (\$B)	1100	1100					
Cushion (bp)		61					

Note: Cushion is relative to level of rates at purchase, average current coupon yield during Fed purchase period 4.24%. No allowance is made for increases in volatility or spread widening. Uses CS Funds rate forecast

Assumptions:

	2010	2011	2012	2013	2014	2015	2016
Coupon (%)	4.68	4.67	4.63	4.60	4.58	4.56	4.53
Projected Fed funds rate at start of year (%)	0.25	1.00	2.00	2.00	2.00	2.00	2.00
NIM (%)	4.43	3.67	2.63	2.60	2.58	2.56	2.53
Prepays (CPR)	7.9	12.7	13.1	12.7	12.3	12.0	11.7

- Source: Credit Suisse
- Fed can successfully wind down its MBS portfolio by selling \$100B annually over the next six years
- NIM provides adequate cushion against MTM losses from a rate sell-off as long as fed funds remains at or below 2.00%
- A gradual, well telegraphed, auction-based mechanism starting Q2:11 would be a practical solution

Prepays/convexity – Prepay spikes in a sharp rate rally should be concentrated in 30-year 4.5s and 5s

TBA speed projections for FN 30-year pass-throughs

Coupon	May	June	July
5%	52	22	22
5.5%	77	32	32
6%	35	37	38
6.5%	40	42	42
7%	44	46	47

30-year Long-term speed projections

Coupon/Product	FH	FN	GN
4.5	10	10	5
5	20	20	14
5.5	27	27	25
6	30	28	33
6.5	32	34	39

30-year speed projections in a sharp rate rally

Coupon	Vintage	Mortgage Rate	
		4.50%	4.25%
4.5%	2009	27	33
5%	2009	35	41
	2008	29	34
5.5%	2008	29	32
	2007	30	32
6%	2008	29	30
	2007	30	31
6.5%	2008	32	32
	2007	33	33

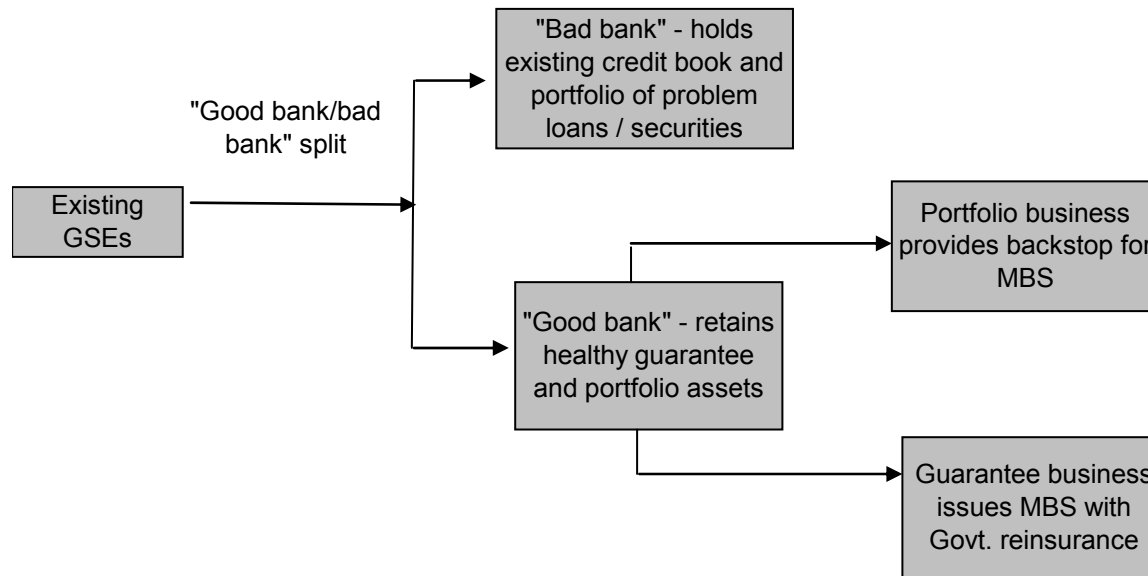
- Prepay spikes should be limited to 30-year 4.5s and 5s in a sharp rate rally
- Supply should be concentrated in 4s and 4.5s

Source: Credit Suisse

GSE reform – The Golden Rules

- Keep what works, fix what's broken
- Protect the taxpayer
- Provide affordable mortgage credit to qualified borrowers
- Support the 30-year fixed-rate mortgage
- Make implicit guarantee explicit in a cost effective way to taxpayers
- Require GSEs or successors to be overcapitalized, not only to withstand expected losses easily, but also to be able to operate even after a catastrophic loss

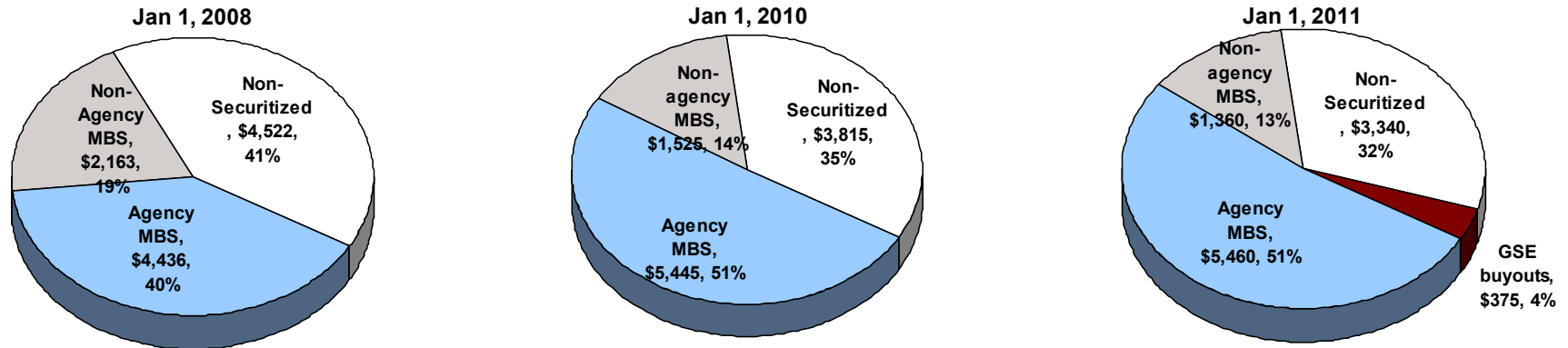
GSE reform – A “back to basics” model



Source: Credit Suisse (US Mortgage Strategy)

Appendix

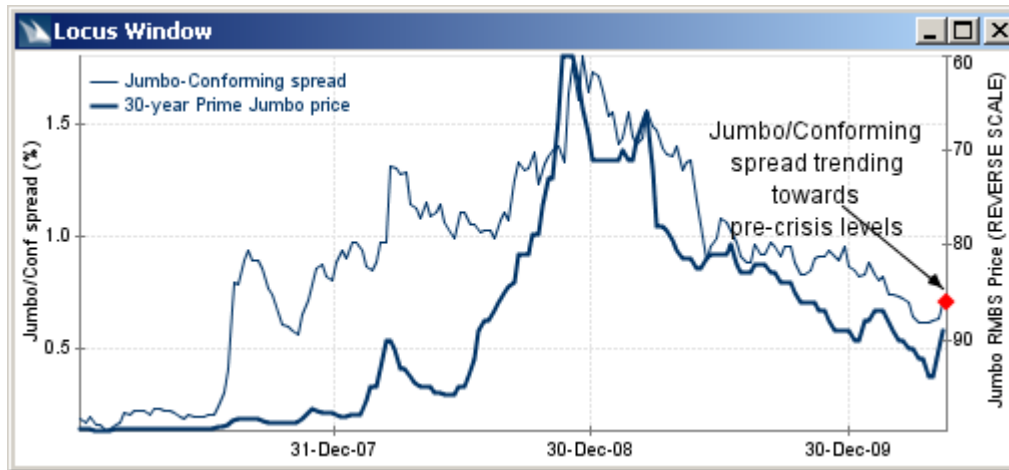
Government-backed mortgages should remain dominant for the foreseeable future



- Share of Agency mortgages increased sharply during the housing crisis
- Agency MBS and GSE buyout loans should remain above 50% of mortgage debt outstanding at the end of 2010
- Non-Agency MBS will be in run-off mode despite some trial balloon issuance in 2010
- Non-Agency MBS and non-securitized loans will likely continue to run-off in 2011. Agency MBS outstanding should increase slightly in 2011

Source: Credit Suisse, Inside MBS/ABS, Fannie Mae, Freddie Mac

Cost of credit from non-government sources remains high despite significant decline from crisis levels



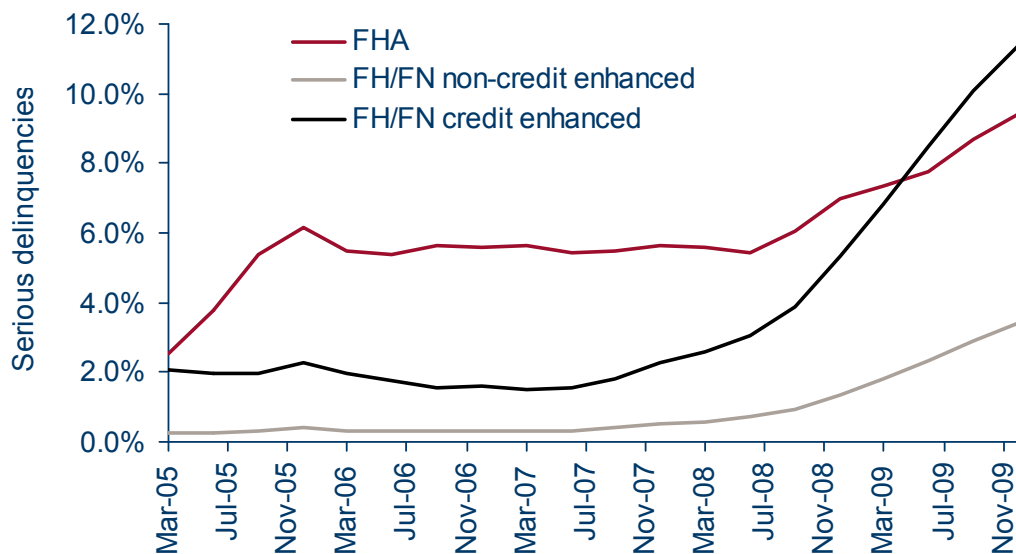
- Jumbo/conforming spread has declined to 70bp from above 175bp at the height of the crisis
- However, credit standards are much tighter today than prior vintages
- A recent trial balloon securitization backed by borrowers putting 40% down was very well received. Larger issues are likely later this year
- A full scale re-opening of securitization is not imminent, given regulatory and market hurdles

Source: Credit Suisse, HSH

Lending standards have tightened; will remain high; loose underwriting has been expensive

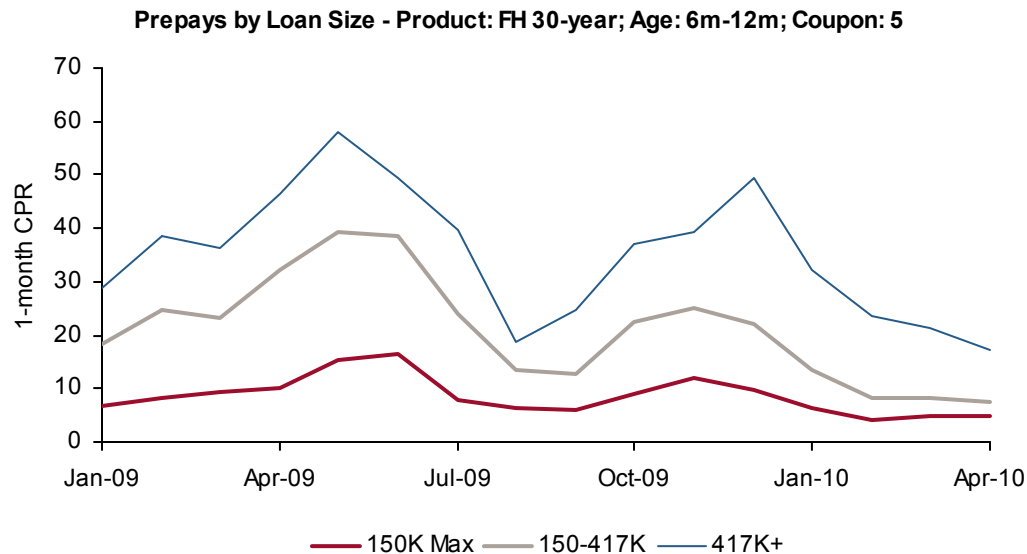
Collateral characteristics of FNMA 30-year MBS

Vintage (Origination year)	Orig balance (\$B)	Curr balance (\$B)	Orig WAC	FICO	Original LTV
2002	456	54	6.41	720	73
2003	715	250	5.72	726	70
2004	305	126	5.87	720	73
2005	333	183	5.87	722	73
2006	333	165	6.52	713	75
2007	443	253	6.45	714	77
2008	363	245	6.07	732	76
2009	505	482	4.96	761	69
2010	68	68	5.06	755	72



Source: Credit Suisse, MBA, Fannie Mae, Freddie Mac, CPRCDR

Convexity cost on high balance loans included in TBA 5s should be 5-10 ticks; cost on par coupon MBS is 1-2 ticks



- Pricing on 100% high-balance 5s is currently tighter (around 10 ticks behind TBA)

Source: Credit Suisse

With the Fed on hold, carry should remain high for the foreseeable future

30-year coupon	May/June drop	Hedge ratio to 10-year swaps	Hedged carry			
			hedged with 10-yr swaps	hedged with 5-yr swaps	hedged with 2s/5s/10s swaps	hedged with curve (2s/5s/10s) and vol
4	0-105	61%	0-040	-0-001	0-023	0-006
4.5	0-122	47%	0-071	0-040	0-05+	0-02+
5	0-133	34%	0-095	0-073	0-077	0-046
5.5	0-122	24%	0-095	0-080	0-071	0-053
6	0-09+	15%	0-077	0-067	0-057	0-046
6.5	0-092	8%	0-083	0-077	0-072	0-065

Source: Credit Suisse, pricing date: 18 May 2010

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