

Current Conditions in the US Residential Mortgage Market

November 2008

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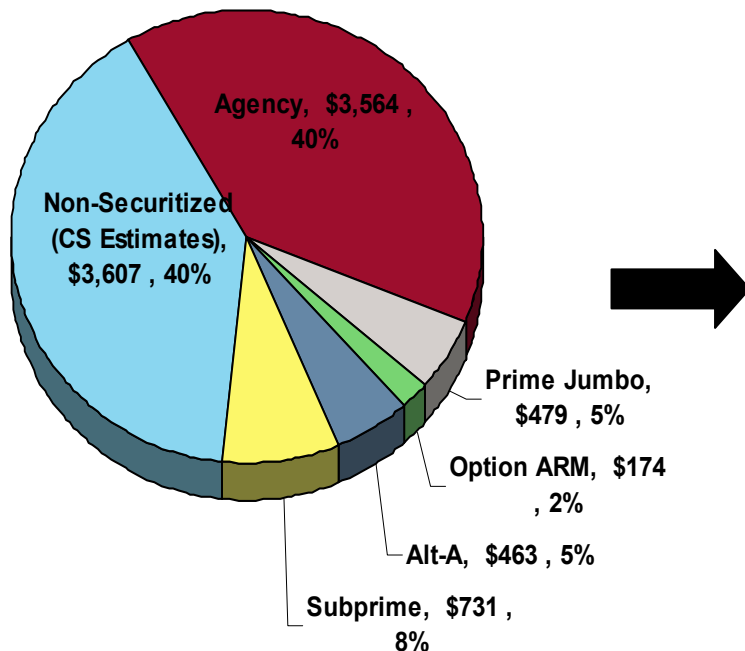
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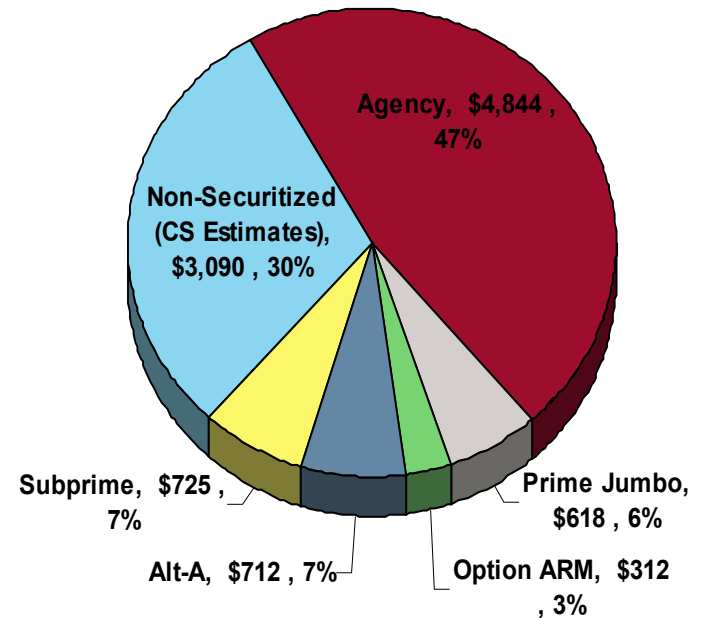
Fundamentals

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Mortgage Market Breakdown – First Liens



**Total mortgage market
outstanding in 2005: \$9.0T**

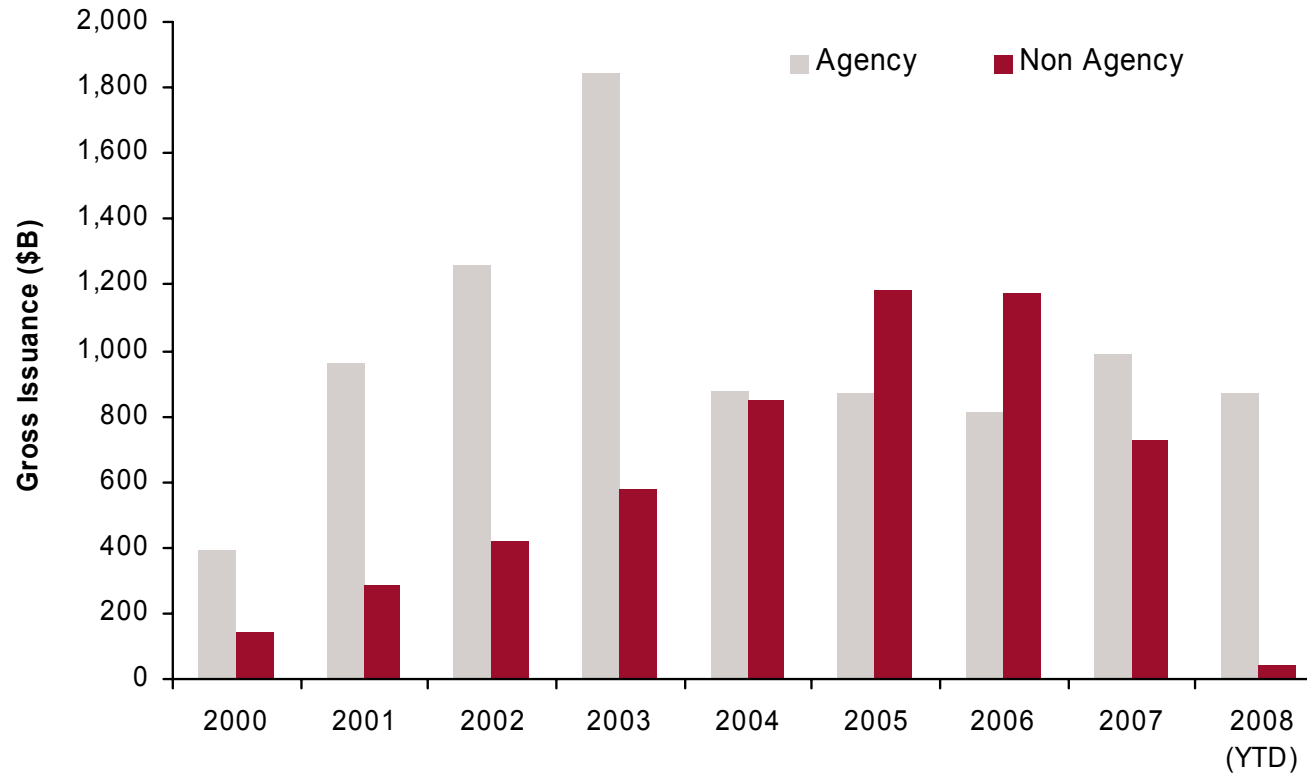


**Total mortgage market
outstanding now : \$10.3T**

Source: Credit Suisse, Fannie Mae, Freddie Mac, Ginnie Mae, Intex and LoanPerformance;

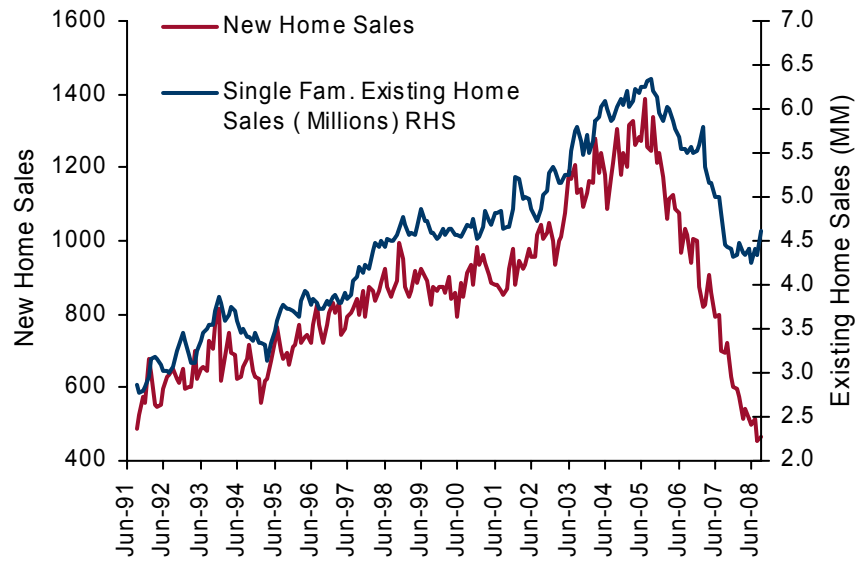
As of September 2008

US Mortgage Securitization Market



Source: Credit Suisse, Intex and LoanPerformance

Existing home sales have come off 27% from the peak; new home sales have come off 67% from its peak

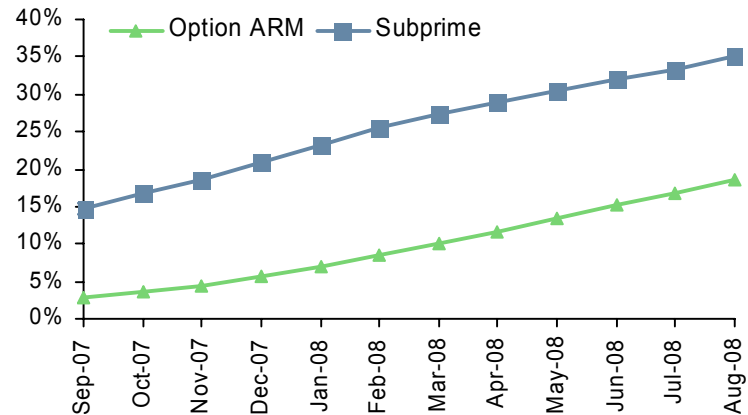
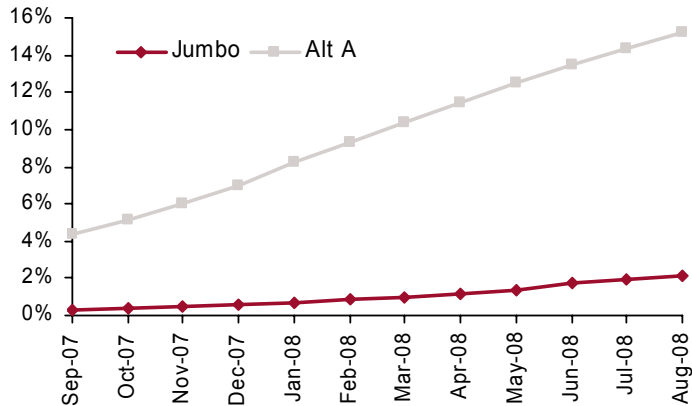


- Currently, about 40% of existing home sales are made up of forced sales
- New home sales inched up in the latest month on account of builder incentives and lower prices

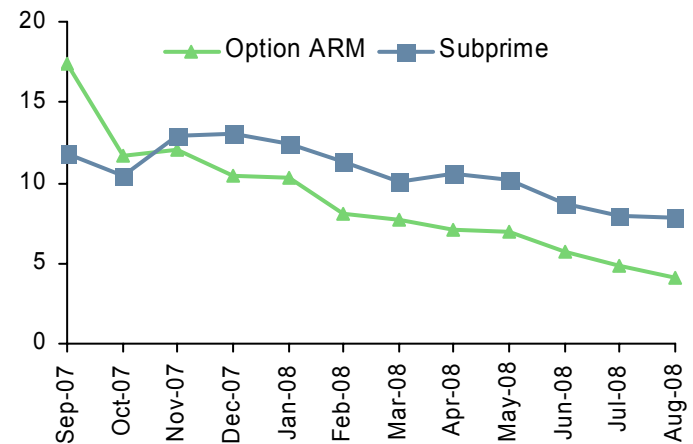
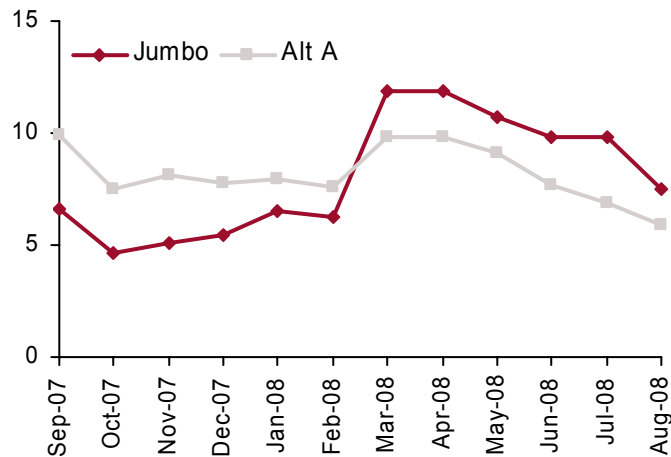
Source: Credit Suisse (US Mortgage Strategy), Economy.com

Mortgage Performance Update

60+ DLQ – 06 and later vintages



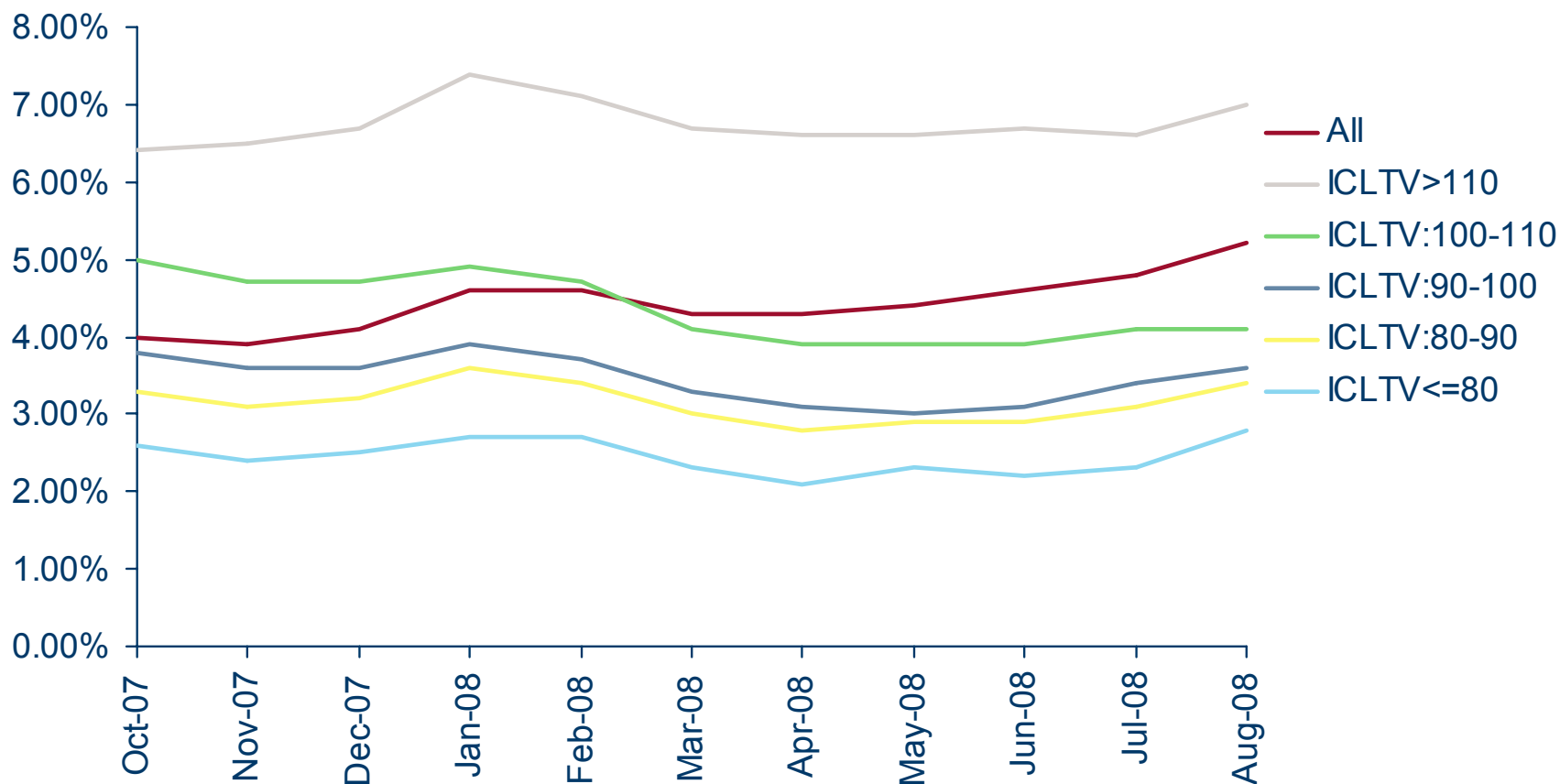
VCPR – 06 and later vintages



Source: Credit Suisse, Intex and LoanPerformance

New Delinquencies Are Driven by Loss of Equity

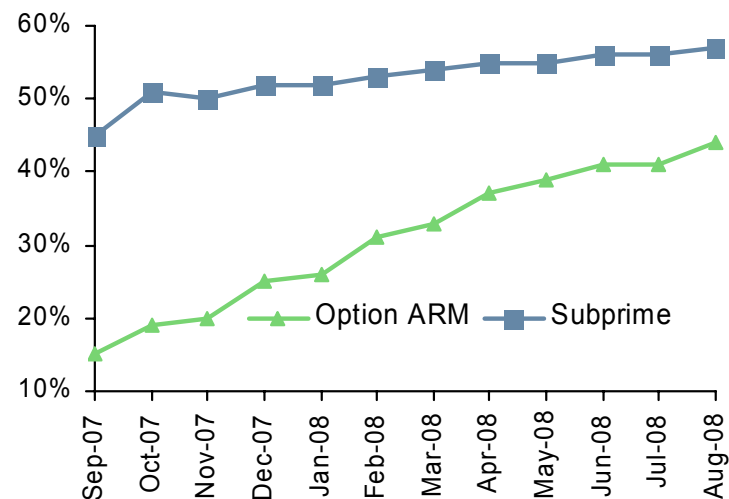
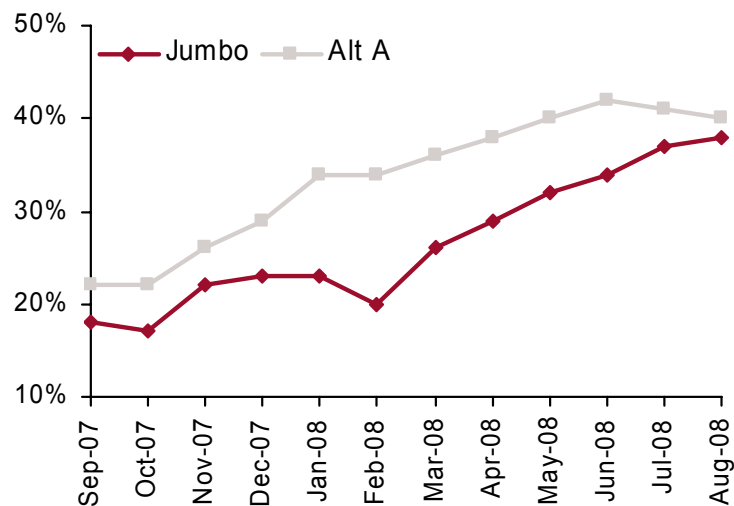
Current to 30 day DQ by current CLTV



Source: Credit Suisse, Intex and LoanPerformance;

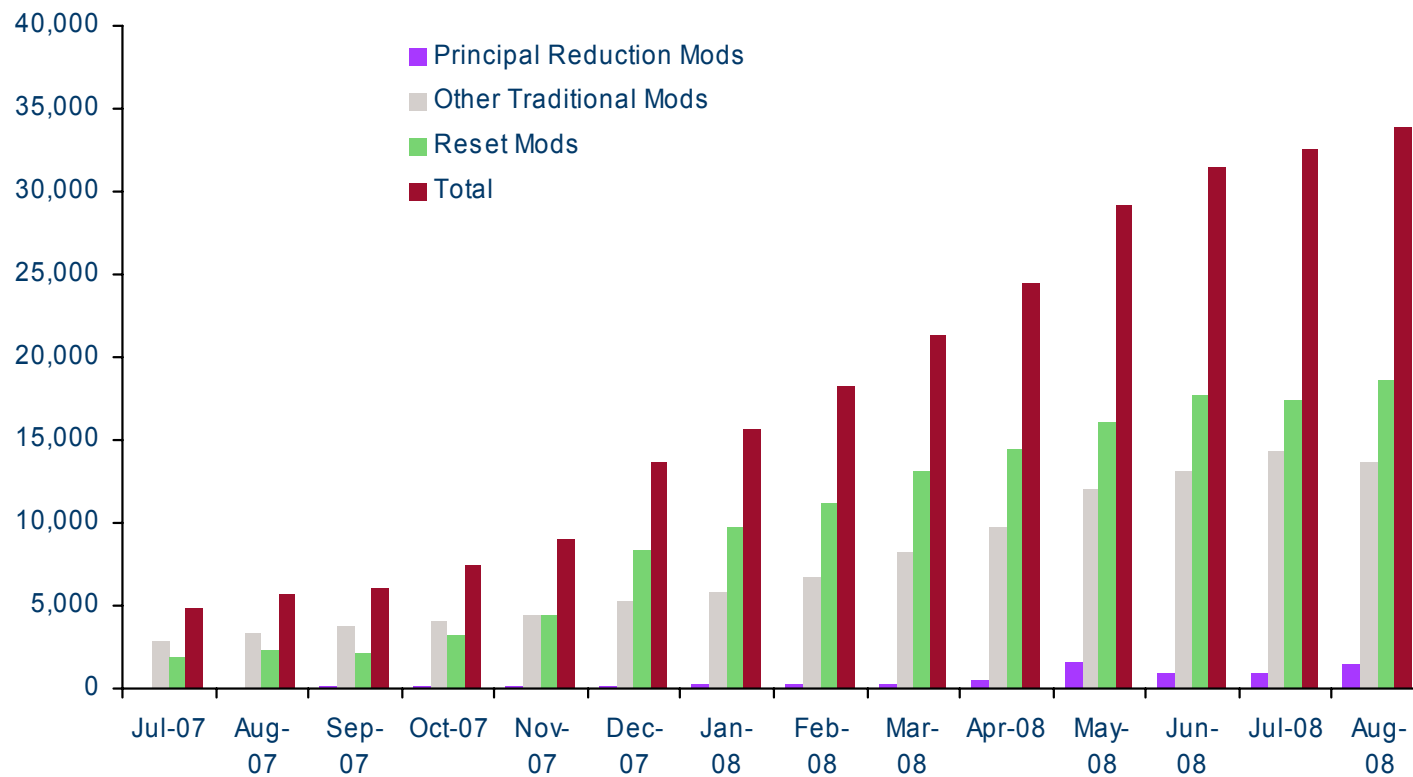
Subprime ARMS – 2006 and later vintages

Severities Steadily on the Rise



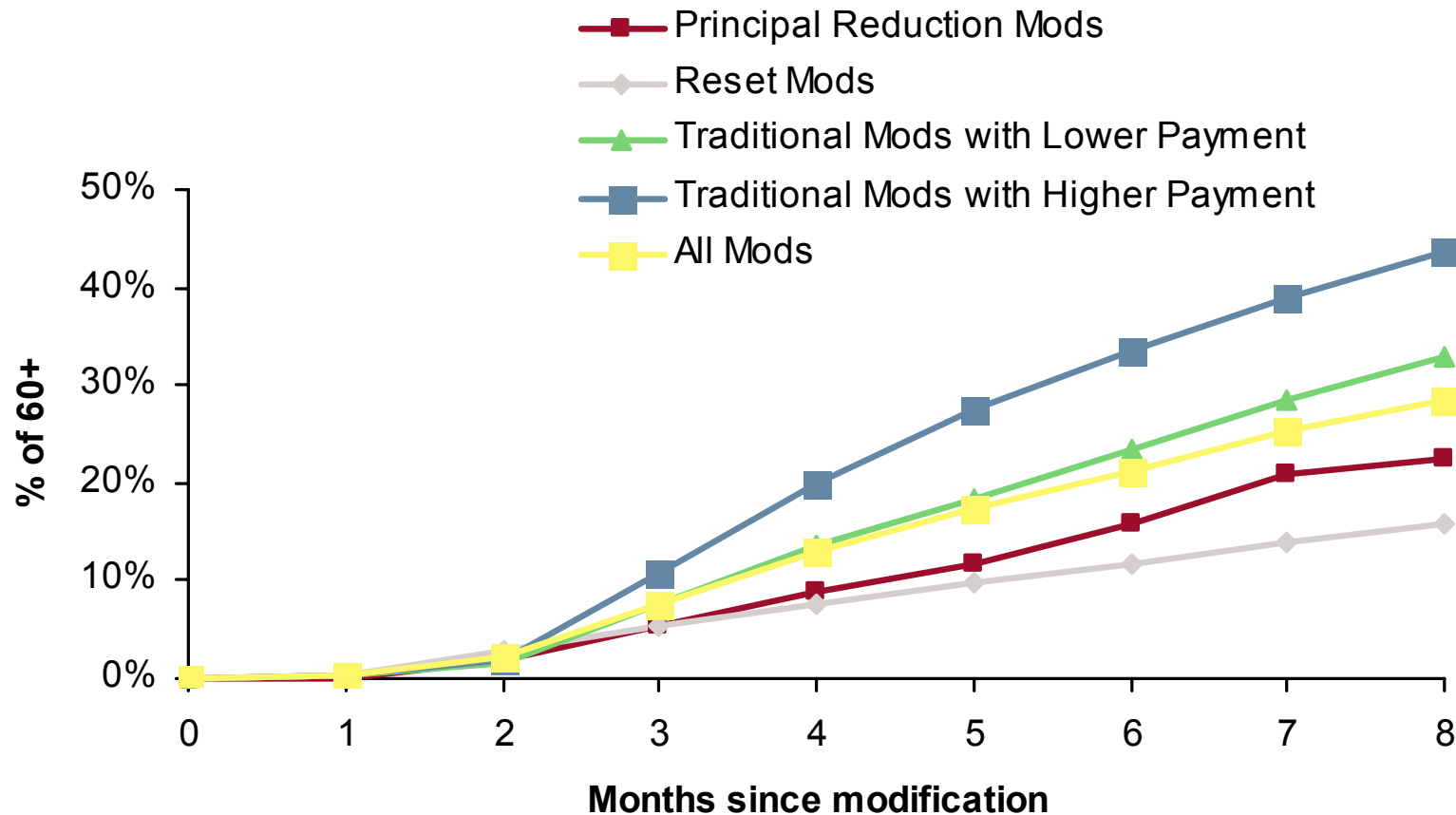
Source: Credit Suisse, LoanPerformance

Modification Volume Has Increased Substantially



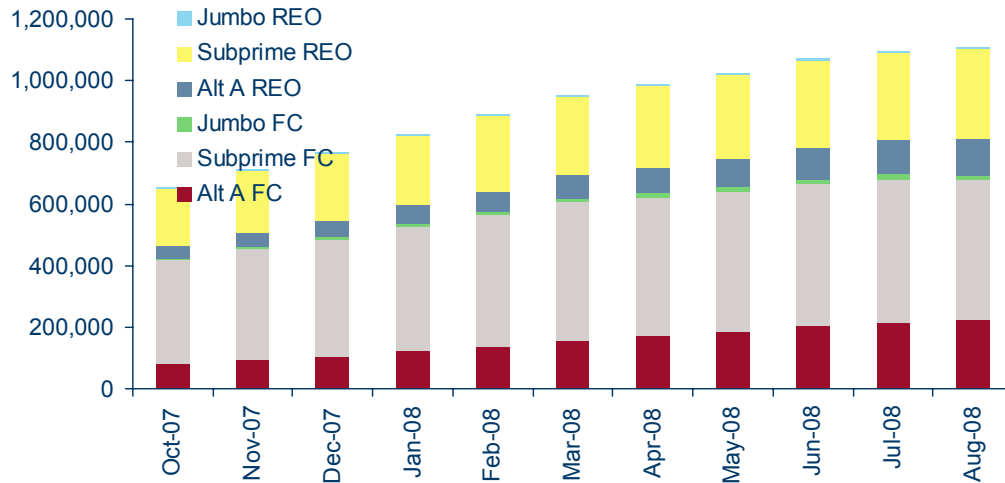
Source: Credit Suisse, LoanPerformance, Intex

Post-Mod Performance: Are Mods Effective?



Source: Credit Suisse, LoanPerformance, Intex

Distressed Inventory Begins to Plateau, Forced Sales a Growing Percentage of Total Home Sales

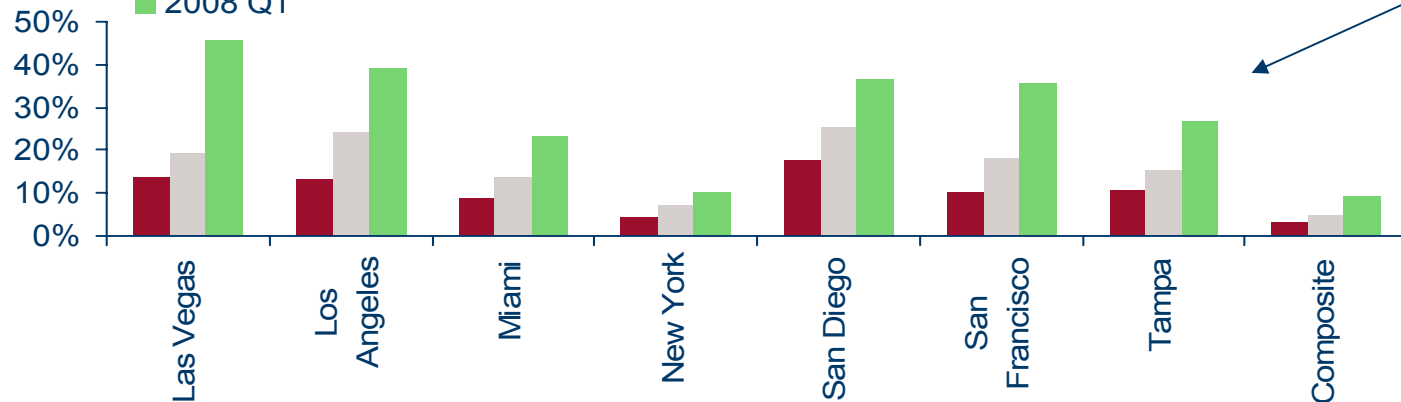


FCL/REO Inventory growing at a much slower rate

2007 Q3
2007 Q4
2008 Q1

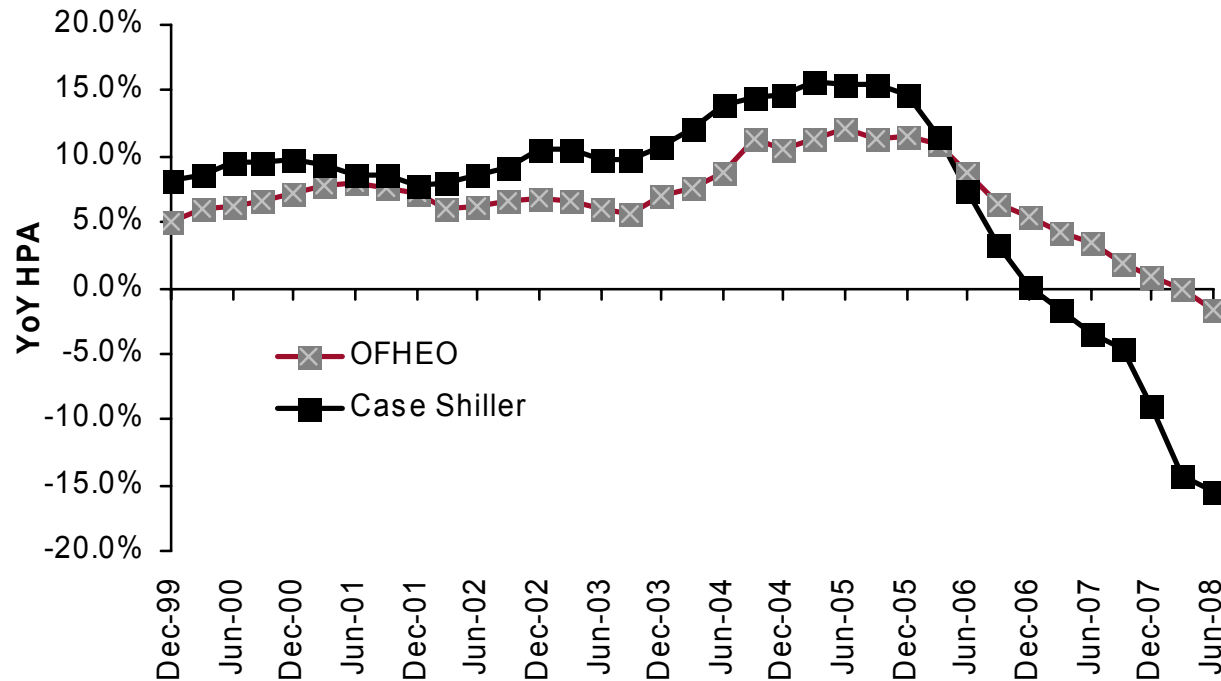
% Forced Sales in Total Home Sales

Larger portions of total sales are forced sales



Source: Credit Suisse, LoanPerformance

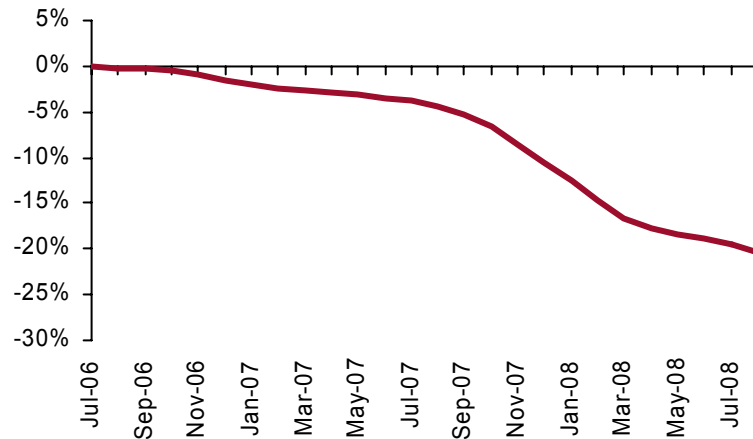
Home prices have sharply depreciated across US



Source: Credit Suisse

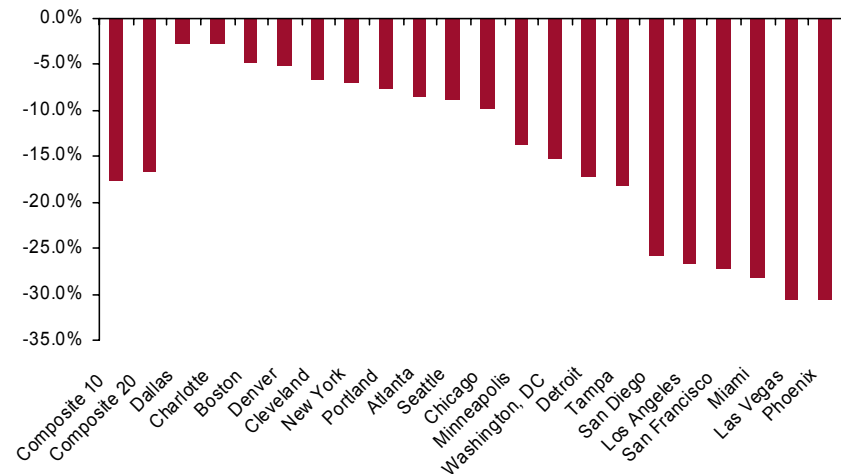
Home Prices Continue Free Fall

20-City Case-Shiller composite Cum HPA decline



Cum HPA declines more than 20% as of August

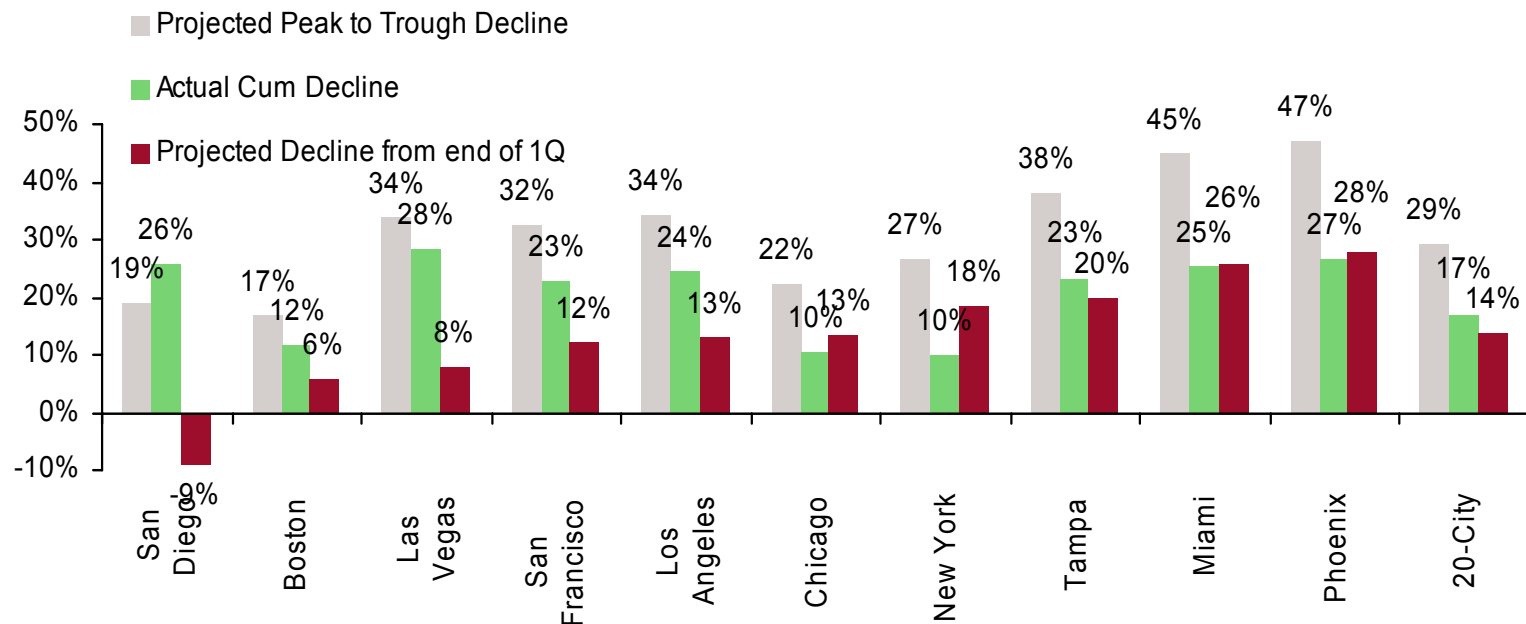
YoY declines in major cities in Case Shiller



Source: Case-Shiller, Credit Suisse, the BLOOMBERG PROFESSIONAL™ service

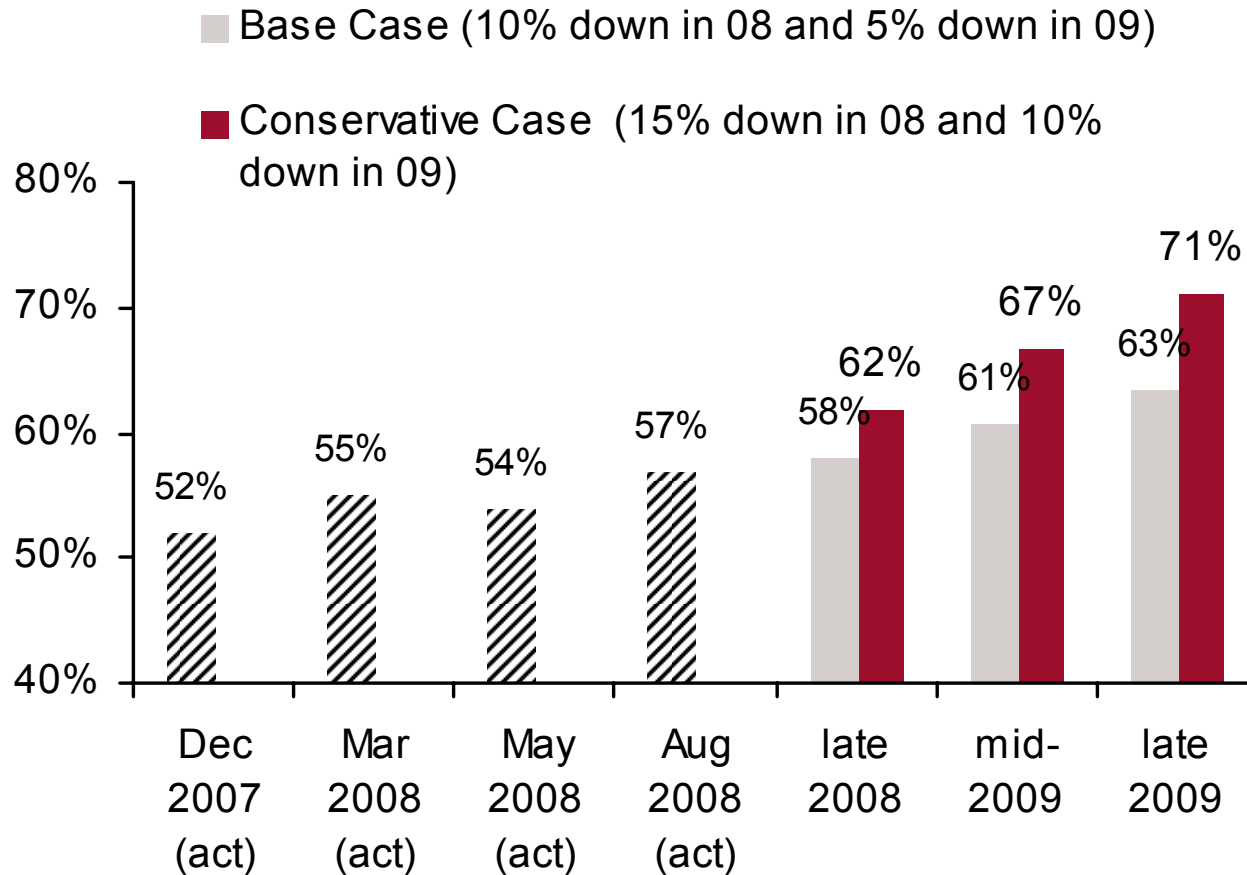
Home Prices Will Likely Continue to Decline

- Assuming housing affordability will return to Q1 2004 levels, national home prices are required to decline an additional 14%
- High mortgage rates make homes less affordable, putting additional pressure on home prices. A 1% change in rates corresponds to a 5%-10% change in forecast price declines



Source: Credit Suisse, Case-Shiller, NAR, HUD, the BLOOMBERG PROFESSIONAL™ service

As Home Prices Decline, Loss Severities Will Continue to Increase

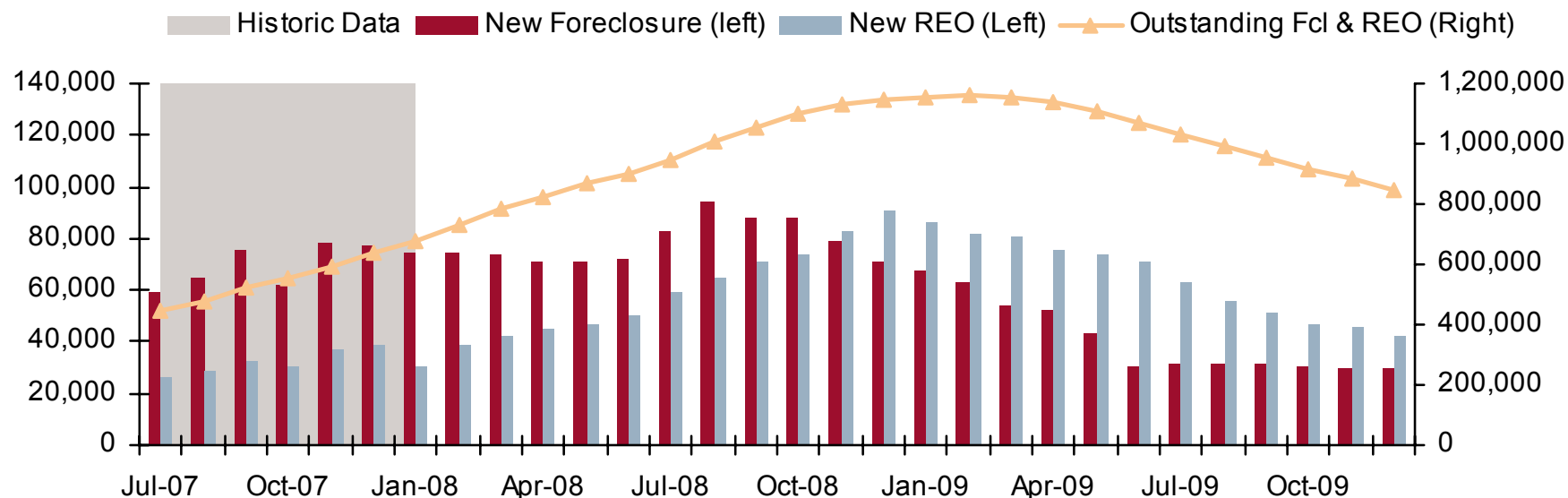


Source: Credit Suisse, LoanPerformance

Outstanding Foreclosures Expected to Peak in 2009

Cumulative foreclosures of 6.5 million

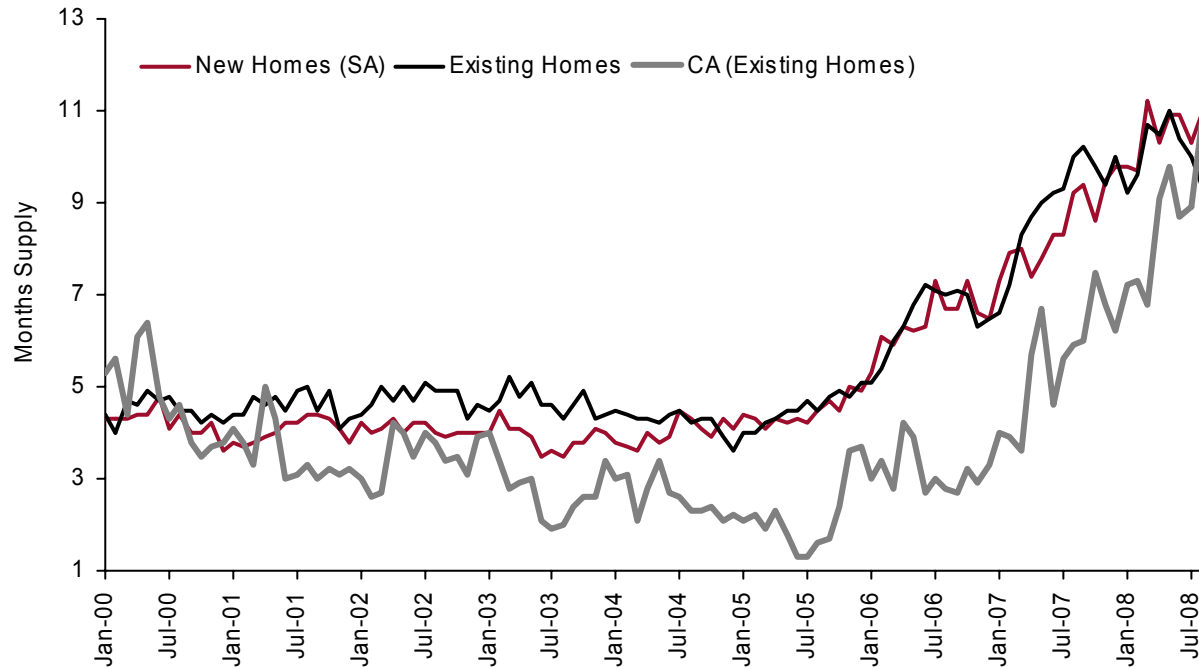
Subprime Foreclosure/REO data and forecasts



Units in Million	Subprime	Other Mortgages	Total
# of households having mortgages	5.0	45.0	50.0
# of loans in Foreclosure and REO as of Jan 2008	0.7	0.6	1.2
# of new foreclosures by end of December 2012	2.0	3.4	5.3
# of total foreclosure (including inventory)	2.7	4.0	6.5
% of loans in Foreclosure	53.6%	8.7%	13.1%

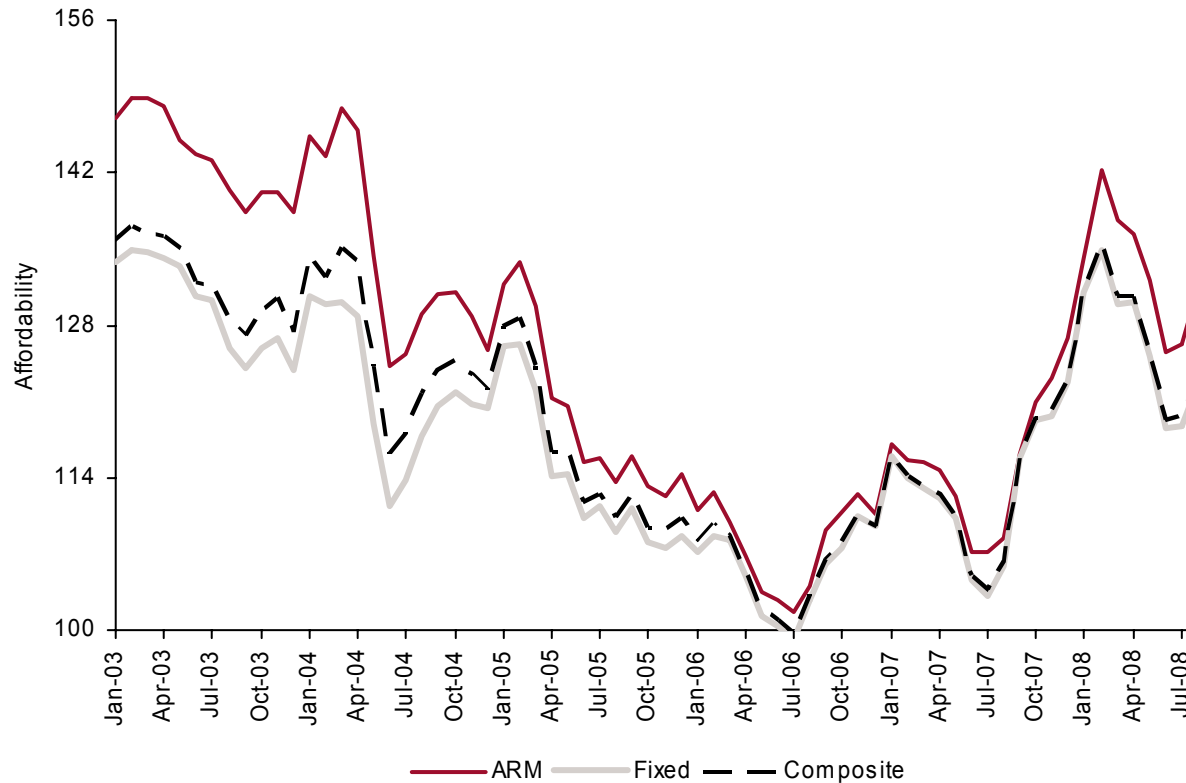
Source: Credit Suisse, LoanPerformance

New and existing homes supply continues to increase



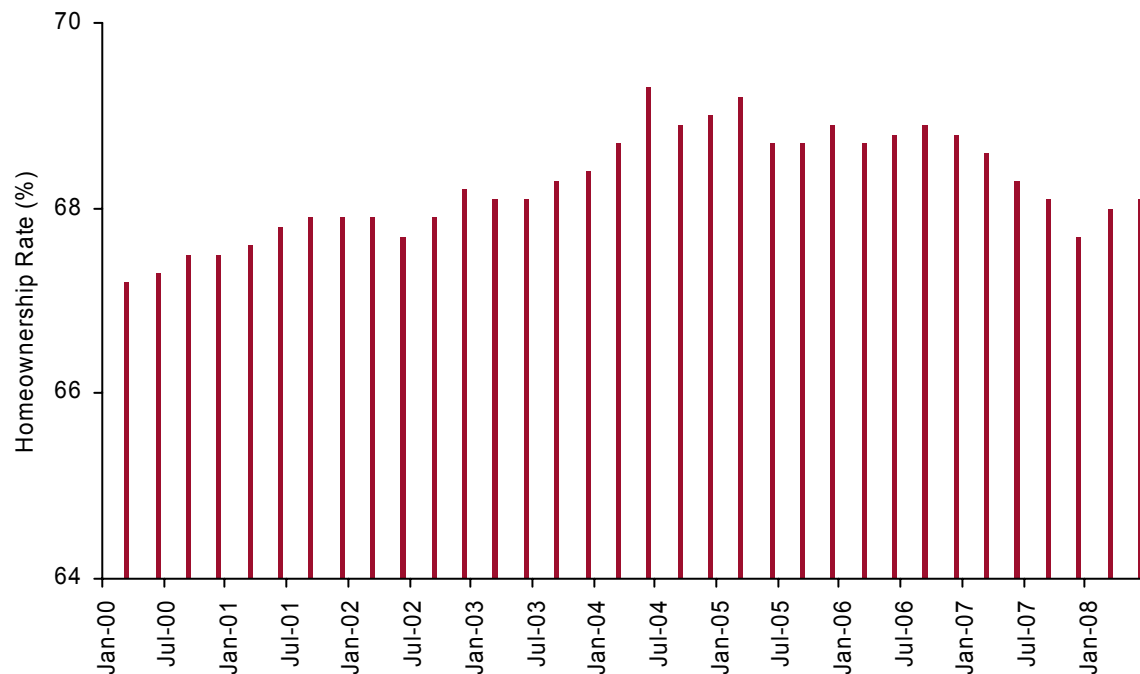
Source: Credit Suisse (US Mortgage Strategy), Bloomberg

Affordability has increased from record lows on the heels of tumbling home prices



Source: Credit Suisse (US Mortgage Strategy), Bloomberg

Home ownership rate has come off 2004 peaks

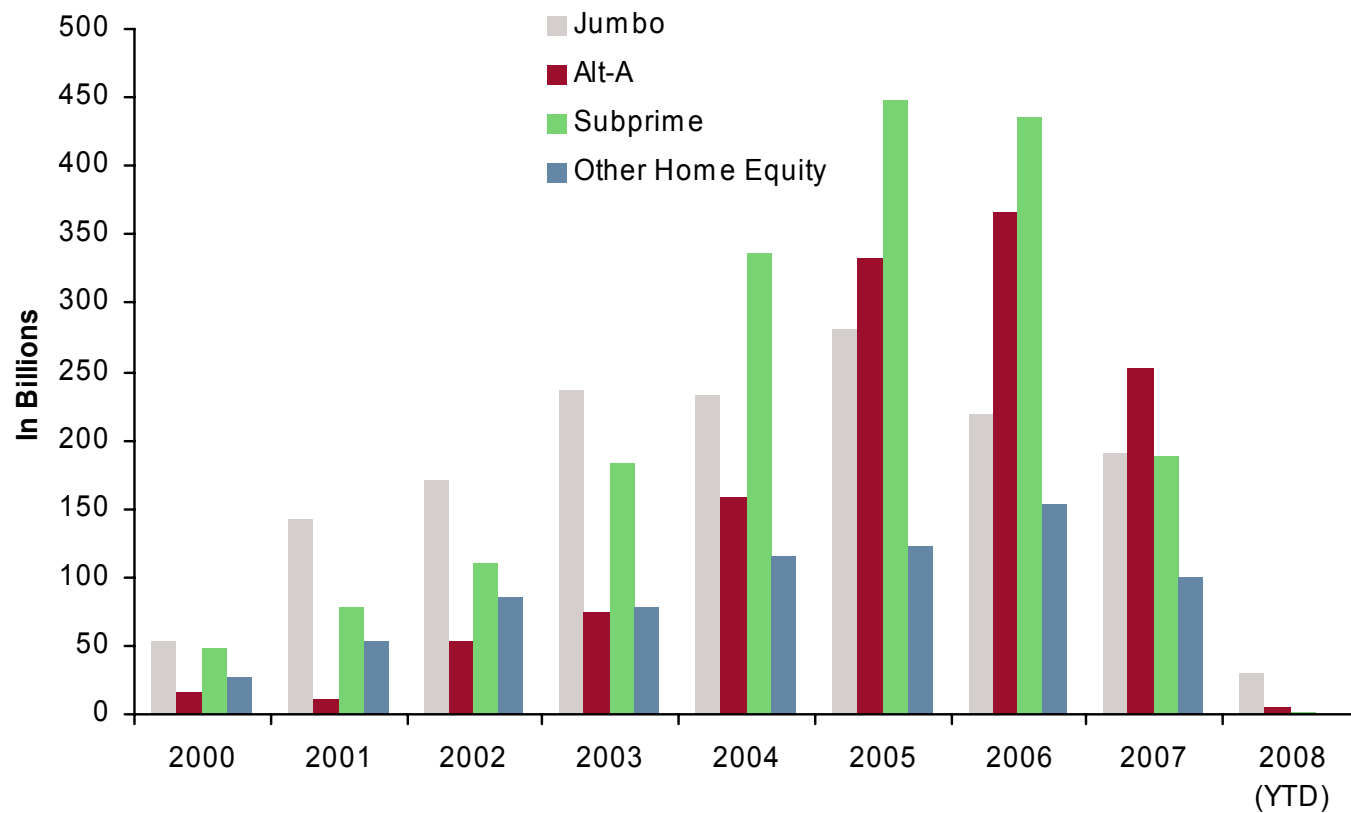


Source: Credit Suisse (US Mortgage Strategy), Bloomberg



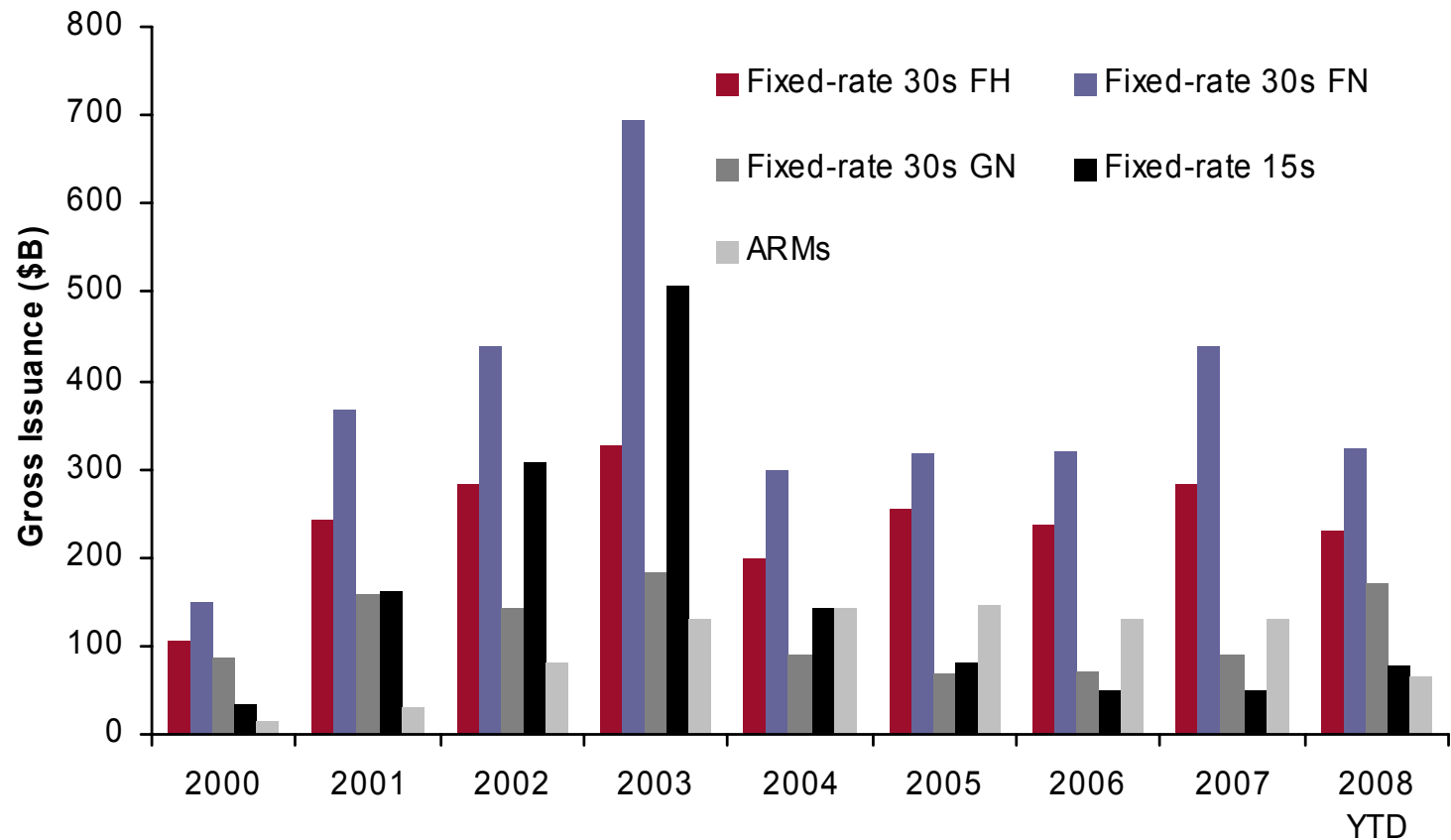
Technicals

Gross issuance of non-Agency MBS



Source: Credit Suisse, IFR, Intex and Bloomberg

Gross Issuance of Agency MBS



Source: Credit Suisse (US Mortgage Strategy)

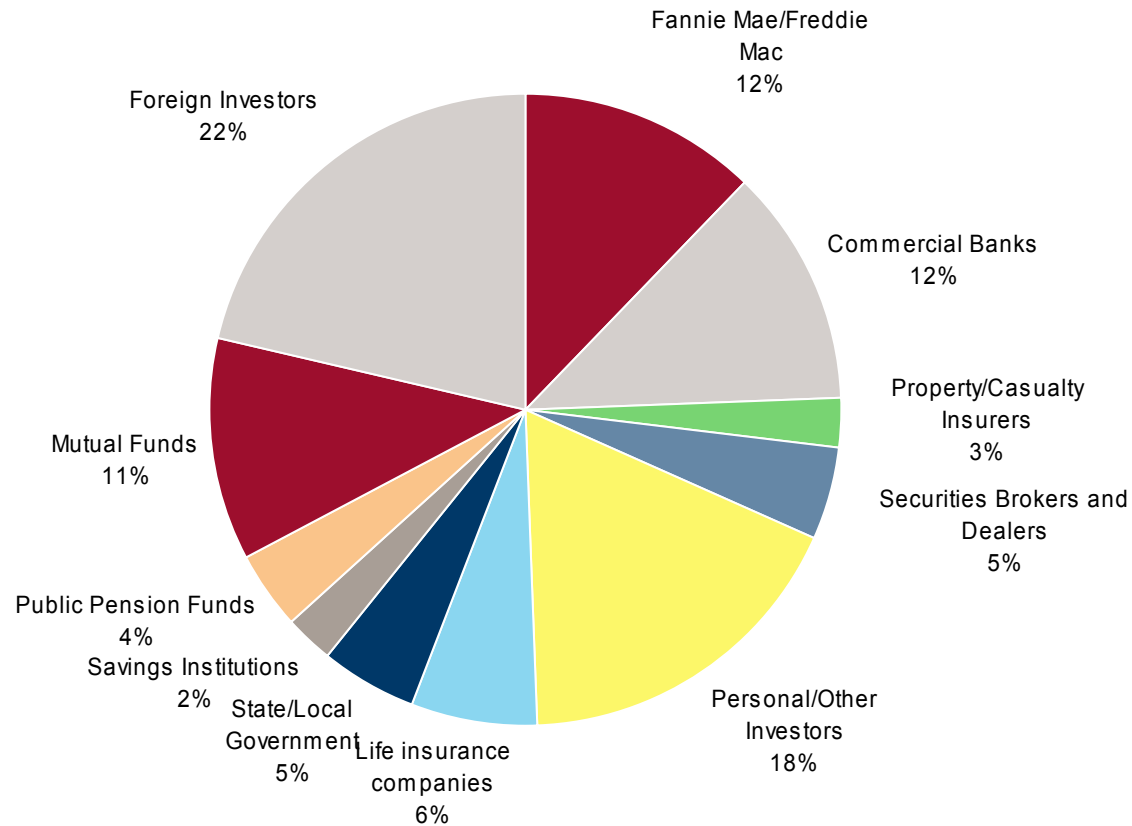
GNMA share of Agency fixed-rate issuance has been increasing

- Refinancing from subprime and Alt-A into FHA and higher volume of first time home buyer have primarily accounted for the increase
- It is a combination of ramping up of FHA lending activity at originators in 2008 and collapse of the subprime market

	Gross GN 30 -yr Issuance		Gross FN/FH 30-yr Issuance		Gross 15-yr Issuance		Gross Issuance
	(\$B)	Share (%)	(\$B)	Share (%)	(\$B)	Share (%)	(\$B)
Jan-07	5	8%	55	85%	5	7%	65
Feb-07	6	9%	53	85%	4	6%	63
Mar-07	6	9%	54	85%	4	6%	63
Apr-07	7	9%	62	85%	4	6%	73
May-07	7	10%	62	84%	5	6%	74
Jun-07	8	11%	62	84%	4	5%	73
Jul-07	9	12%	62	82%	5	6%	75
Aug-07	8	10%	66	85%	4	5%	78
Sep-07	9	13%	59	82%	3	5%	71
Oct-07	10	12%	67	83%	4	5%	81
Nov-07	11	12%	72	81%	6	6%	88
Dec-07	11	14%	63	80%	5	6%	79
2007	96	11%	736	83%	51	6%	883
Jan-08	11	14%	63	80%	4	6%	79
Feb-08	11	10%	90	82%	8	7%	109
Mar-08	15	16%	66	71%	12	13%	93
Apr-08	18	18%	70	69%	13	13%	101
May-08	20	18%	76	69%	14	13%	111
Jun-08	25	25%	66	66%	10	10%	100
Jul-08	23	32%	43	60%	6	8%	72
Aug-08	25	37%	38	56%	5	7%	68
Sep-08	24	33%	44	60%	5	7%	73
YTD 2008	172	21%	556	69%	77	10%	805

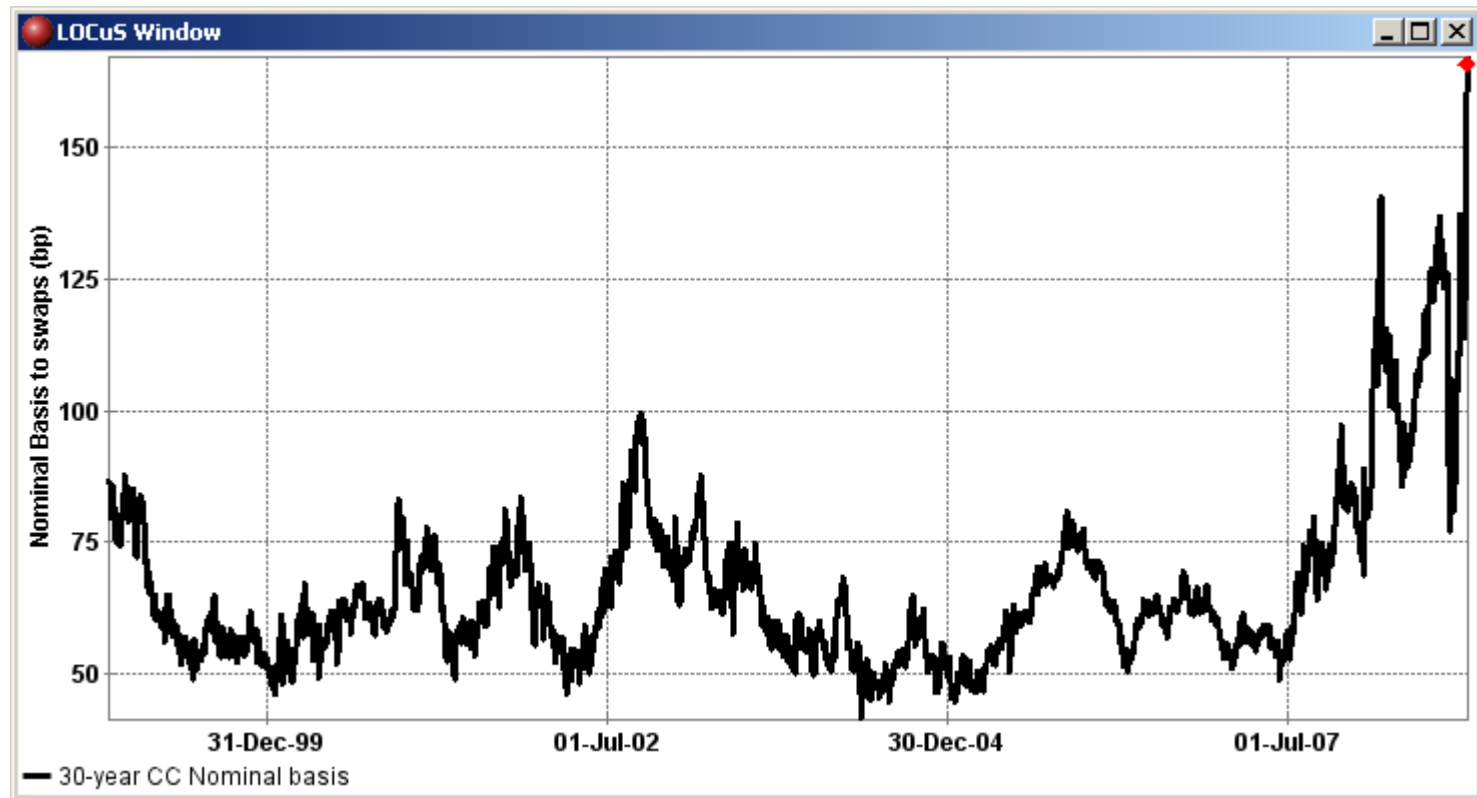
Source: Credit Suisse (US Mortgage Strategy)

Distribution of Agency MBS holdings as of year end 2007



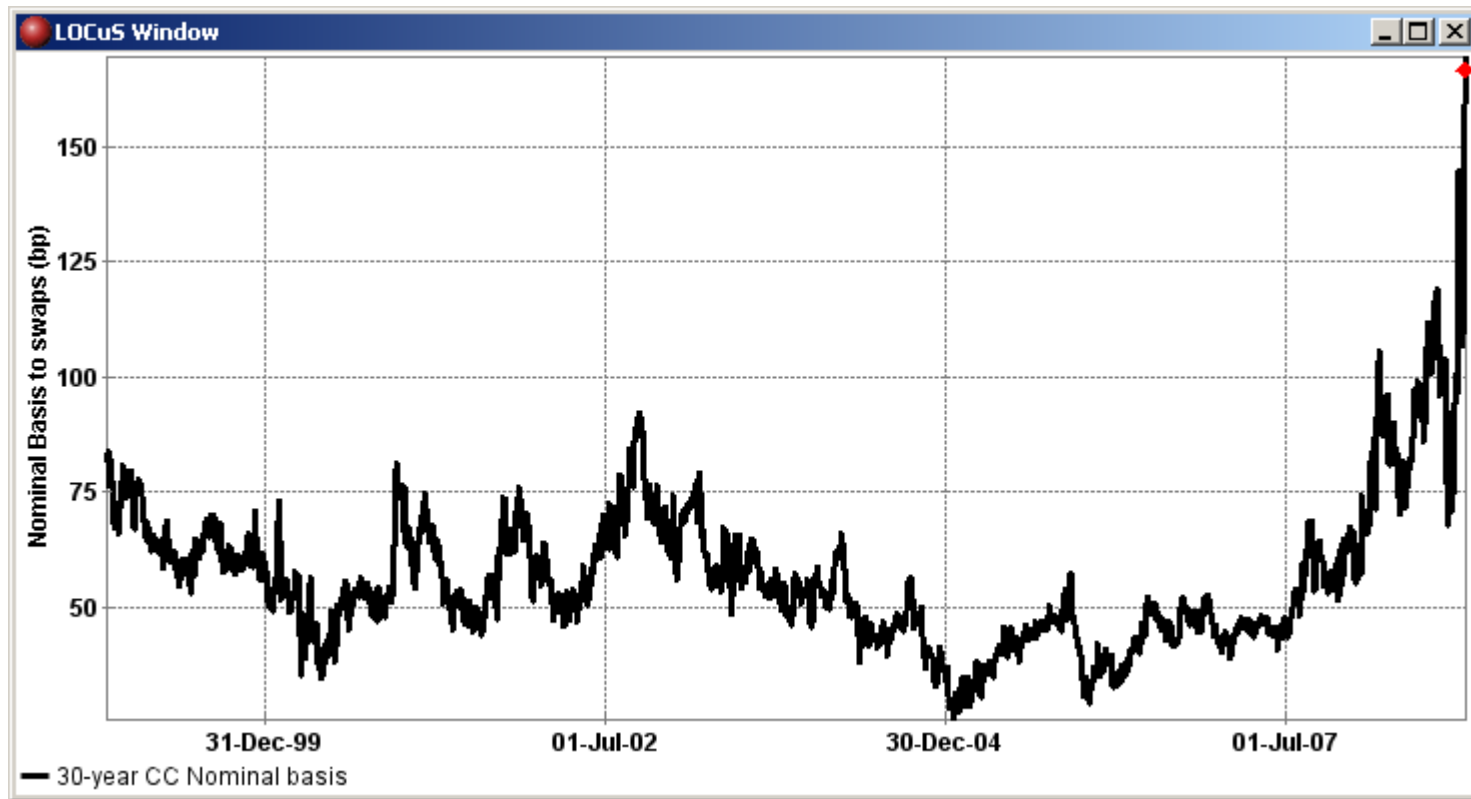
Source: Inside MBS/ABS, Credit Suisse

FNMA nominal basis is at record wides



Source: Credit Suisse (US Mortgage Strategy), Pricing date: October 29, 2008

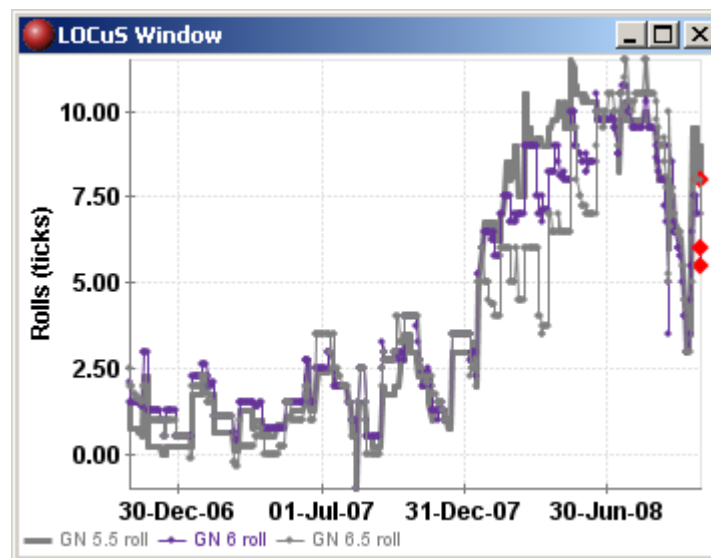
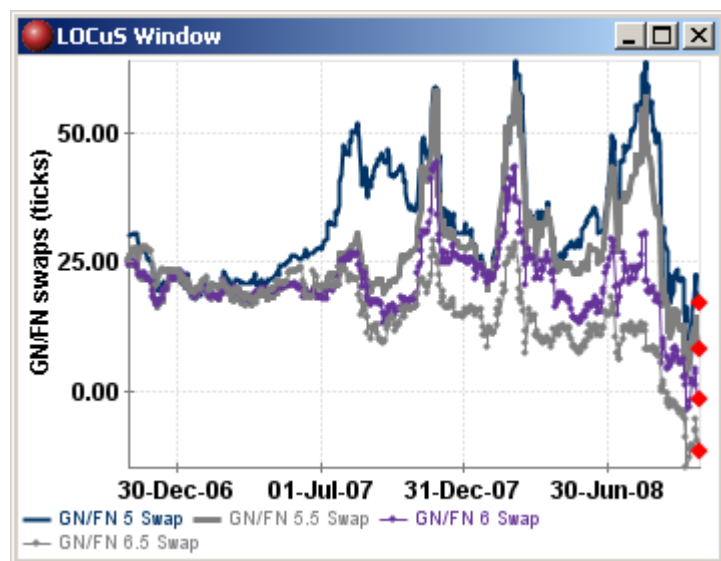
GNMA nominal basis has also widened to record levels



Source: Credit Suisse (US Mortgage Strategy), Pricing date: October 29, 2008

GN/FN swap valuations collapsed post conservatorship

- Pre conservatorship, increase in GN supply did not impact the GN/FN swaps since demand for explicit government guaranteed MBS spiked
- Post conservatorship, the GN/FN swaps have collapsed and are now trading close to fundamentals; supply is a marginal negative although not the driving factor
- GN/FN swaps could spike again unless the explicit/effective guarantee issue is resolved
- GN rolls are trading at attractive levels



Source: Credit Suisse (US Mortgage Strategy), Pricing date: October 27, 2008

Dollar roll implied COF spread to OIS is at record high at 326bp



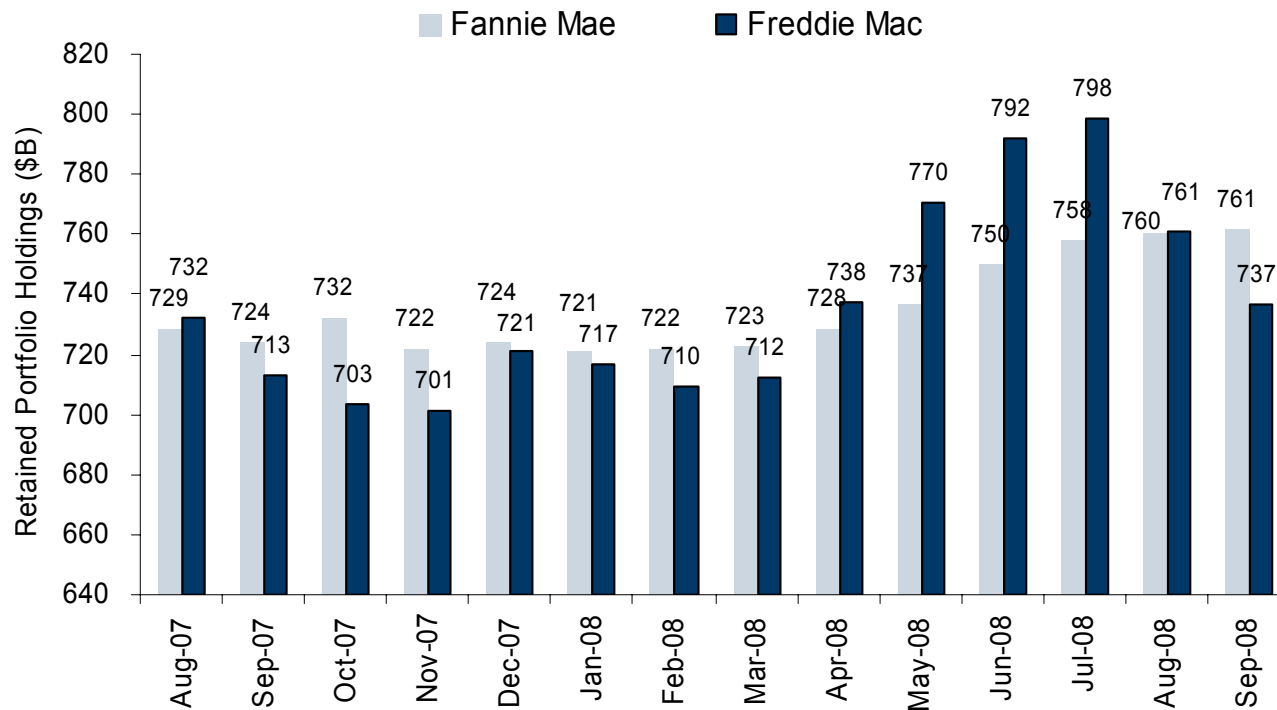
Source: Credit Suisse (US Mortgage Strategy), Pricing date: October 28, 2008

FNMA and FHLMC

Pre conservatorship, Fannie Mae and Freddie Mac took various capital conservation measures

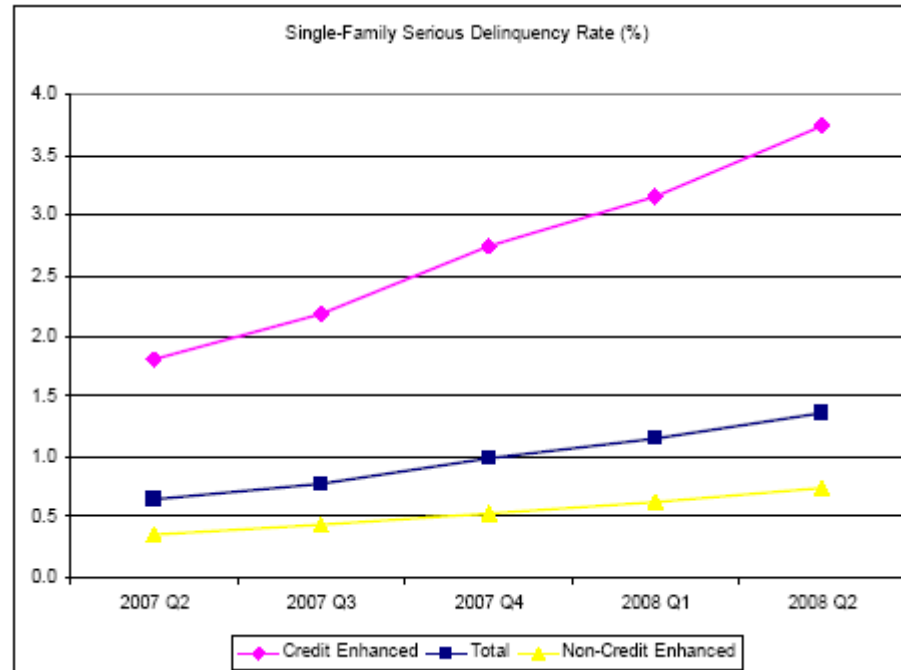
- Freddie Mac doubled its payment to servicers for any disposition method other than foreclosure, i.e. pre-foreclosure sales, loan modification or repayment plans
- They started reimbursing servicers for the cost of door-to-door outreach programs
- Fannie Mae also announced similar increases
- Fannie Mae, as part of its Home Saver Plan, provided \$127MM to delinquent borrowers to help them get current on their loans
- Freddie Mac extended foreclosure timelines by 10 months in states with relatively fast foreclosure process, in addition to the existing 120 day delinquency requirement to begin any foreclosure activity on the property
- Both GSEs increased the 'adverse market fee' to 50bp from 25bp
- Essentially, they were aimed at lengthening foreclosure timelines but carried the risk of back loading credit losses

Retained portfolio activity at both GSEs over last year



Source: Freddie Mac, Fannie Mae, Credit Suisse

Pre-conservatorship performance of Fannie Mae's single family guaranty book



Source: Fannie Mae;

As of June 30, 2008, 21% of Fannie Mae's single-family guaranty book of business was credit enhanced

Fannie Mae and Freddie Mac conservatorship

- On September 7 2008, Treasury took Fannie Mae and Freddie Mac into conservatorship
- The government will purchase Senior Preferred Shares over time as capital is needed to keep the firms' net worth positive
- Under the conservatorship, the conservator has the sole voting stake. The GSEs cannot increase their debt beyond 110% of their June 30, 2008 level unless they receive approval by the Treasury department
- Modest retained portfolio growth (to a max of \$850 billion for each GSE by year-end 2009) will be permitted. This represents room for total retained portfolio growth of about \$150B (combined) over the next 15 months
- The focus will be on expanding guarantee-fee business, and the retained portfolio operations will eventually be reduced by 10% per year after 2009 until each portfolio is no more than \$250B

Follow up policy actions and implications

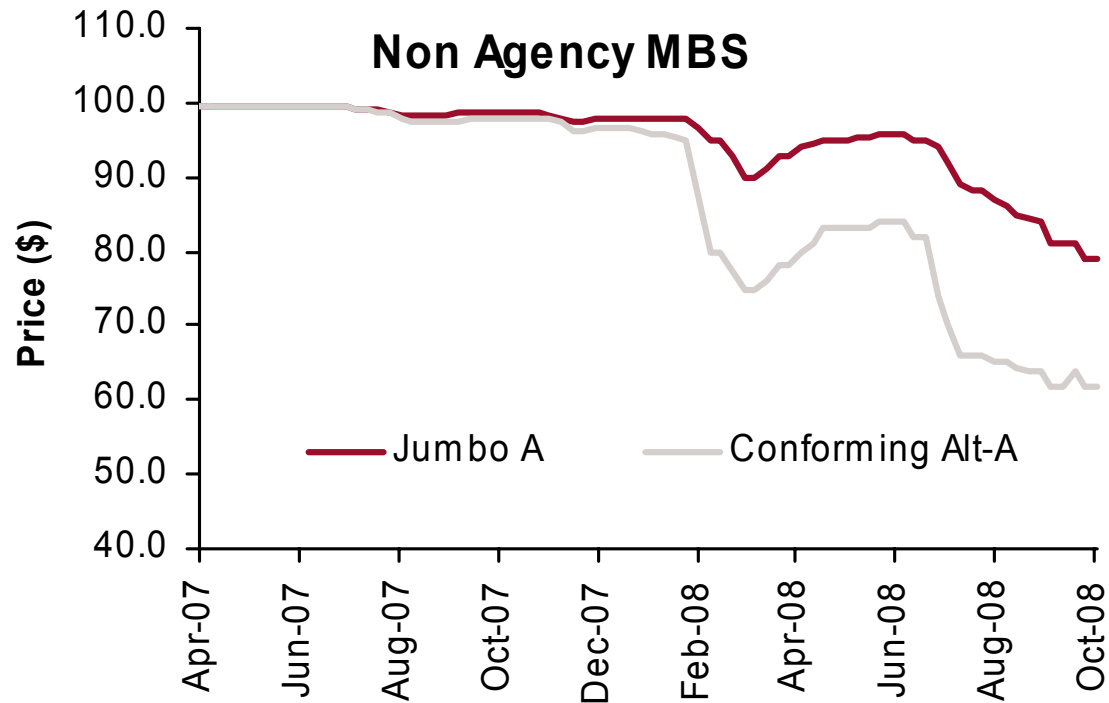
- The Treasury has set up a program (estimated at \$50B) to purchase MBS for its own portfolio with the goal of lowering mortgage spreads and mortgage rates. Barclays Global and State Street Global are the asset managers. Treasury reported an estimated \$5.1B purchase in September.
- A GSECF (GSE Credit Facility) is established that allows the GSEs to borrow from the Treasury against MBS collateral. The FHLB will also be able to borrow from the facility against pledged FHLB advances. The New York Fed will intermediate any GSECF lending, but the funds will come from the Treasury's account. Loans from the GSECF will carry an interest rate based on the daily LIBOR fix for similar term plus 50 bps (loan maturities are expected to be between one week and one month, if the facility is used)
- FNMA eliminated the 25bp adverse market fee scheduled to take effect in November 2008. This is likely to be the first in a series of fee reductions. We expect a reversal of similar fees and other loan level pricing adjustments instituted in March 2008
- FHFA may also expand the credit box, potentially Expanding eligibility to 95+ LTV
- Higher prepaids, resulting from expansion of credit box and lower adverse market fee, are likely to be capped at February 2008 levels due to weaker housing market conditions today

Non-Conforming residential market

Prospect for Private-Label RMBS Issuance in the U.S.

- Issuance has come to a complete halt in 2008. Small amount of issuance restricted to re-securitizations (re-REMIC)
- There is no bid for subordinate bonds
- AAA spreads to agency MBS at record wide levels
- Investors likely to require issuers to retain first loss position to reduce moral hazard
- Rating agency credit enhancement levels remain a moving target. Difficult to estimate required credit enhancement and cost of funds
- Nevertheless: improved underwriting standards, lower home prices and increased credit enhancement may make subordinate MBS solid long-term investments
- Legal clarification of loan modification process

Risk reduction, competition from distressed assets weigh on Prime and Alt-A MBS prices



Source: Credit Suisse (US Mortgage Strategy), Pricing date: October 17, 2008

Conforming/Jumbo mortgage rate spread is at a record wide (137 bps)



Source: Credit Suisse (US Mortgage Strategy), Pricing date: October 17, 2008

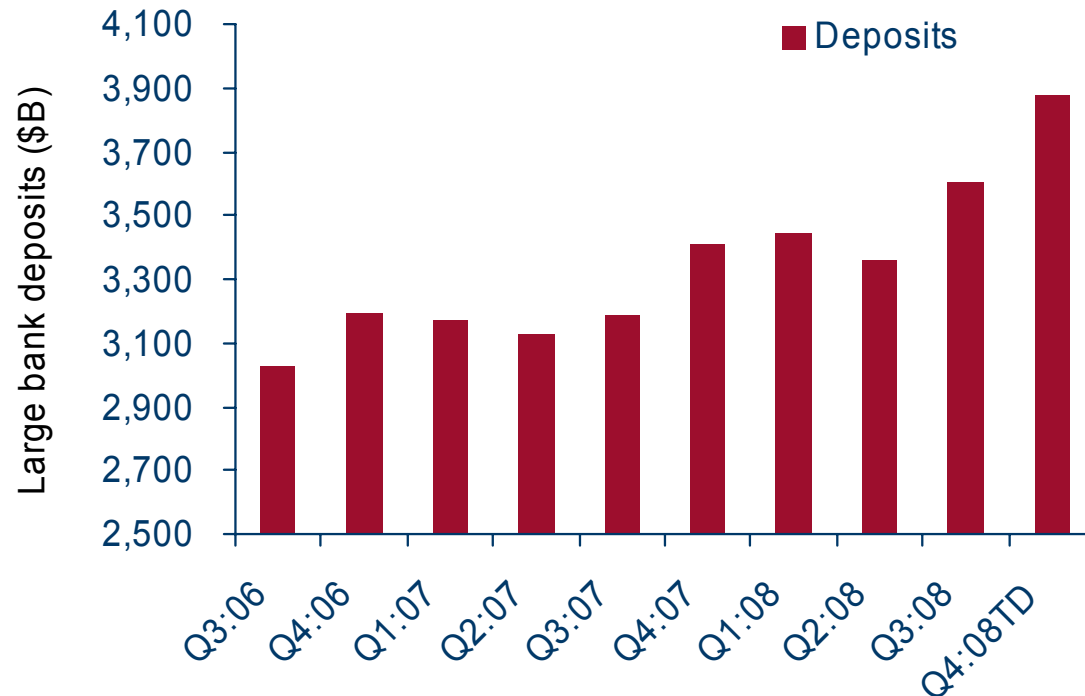
Bank Funding of Mortgage Origination

US Bank Funding Sources

- Equity
- Deposits
- FHLB Advances
- Unsecured debt
- RMBS
- Covered Bonds

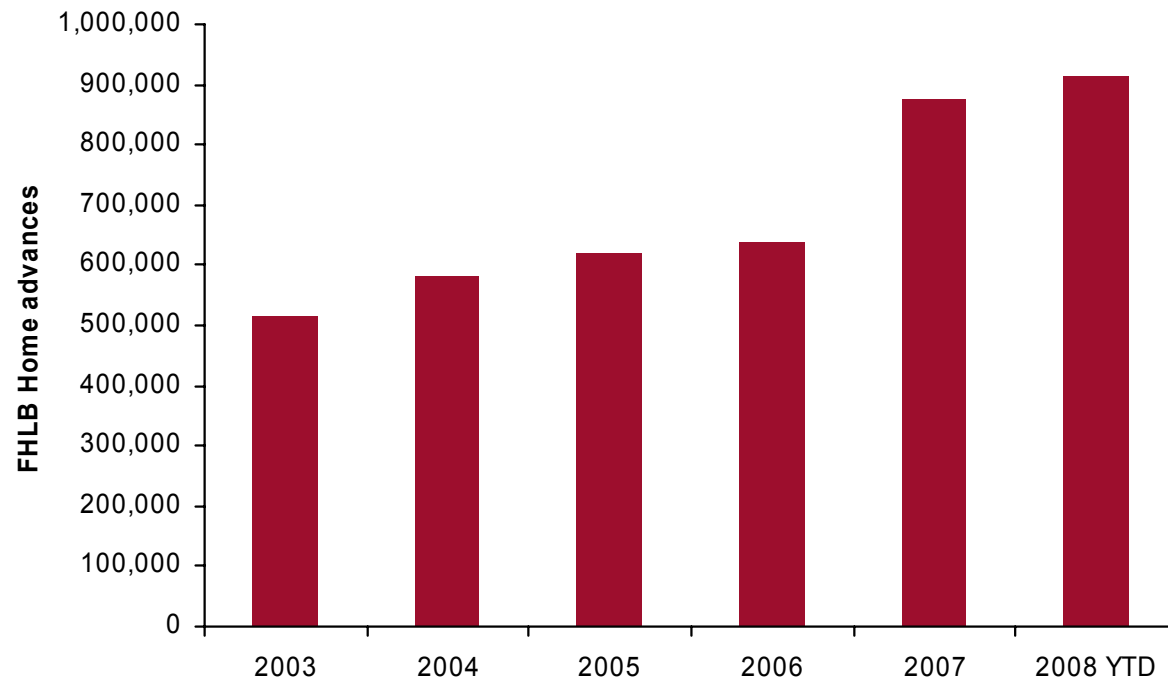
Deposits at large banks

- Deposits surged \$212.8B in first two weeks in October due to WAMU's takeover by JP Morgan



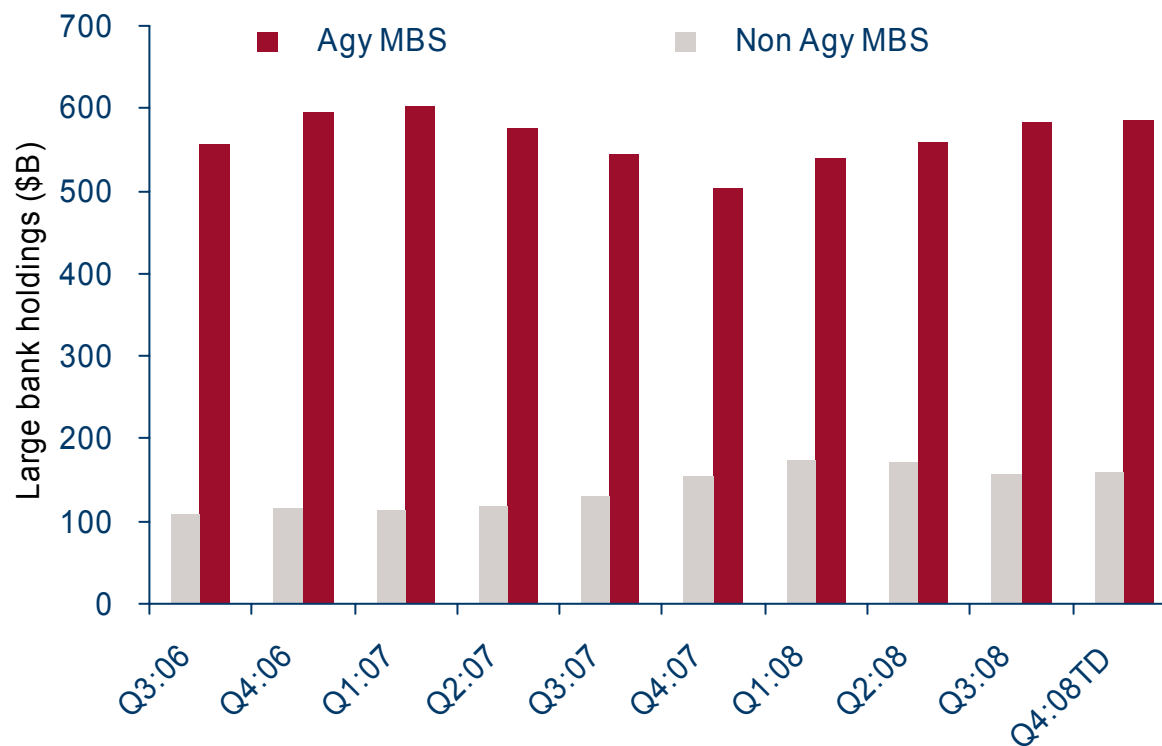
Source: Credit Suisse (US Mortgage Strategy)

FHLB Home loan advances have risen sharply since end of 2006



Source: Freddie Mac, Fannie Mae, Credit Suisse

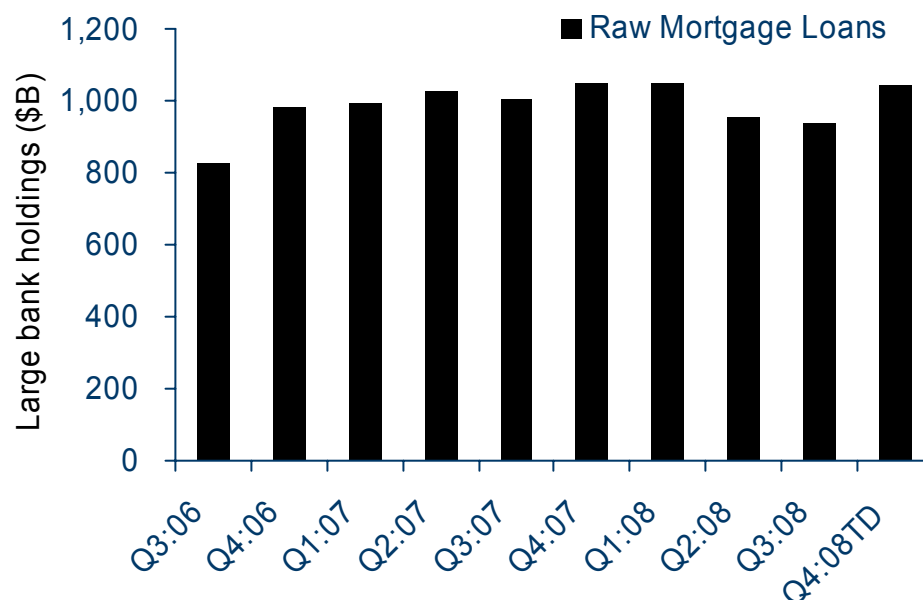
MBS Holdings at large banks



Source: Credit Suisse (US Mortgage Strategy)

Mortgage loan holdings at large banks

- Mortgage loan holdings surged \$103.7B in first two weeks in October due to WAMU's takeover by JP Morgan



Source: Credit Suisse (US Mortgage Strategy)

US Covered Bond Market Update

- Issued only in 2006 and 2007. Approximately \$18 billion
- Two issuers to date: Washington Mutual and Bank of America
- JPMorgan Chase made emergency acquisition of Washington Mutual
- WM CB recently upgraded to AA- from BBB+ (Fitch), Aaa from Baa1 (Moody's).
- Official support from Treasury (Best Practices document) and FDIC (Policy Statement)
- FDIC policy reduces automatic stay to 10 days, defines eligible assets and limits CBs to 4% of issuer's liabilities
- CB legislation introduced to House of Representatives in July (H.R. 6659)
- CB pricing currently not competitive compared with equity capital from US Treasury and FDIC insured senior bank debt
- A needed alternative to fund long-term fixed-rate Jumbo mortgages
- Bank of America, Citigroup, JPMorgan Chase and Wells Fargo pledge to issue covered bonds

Treasury/FDIC actions

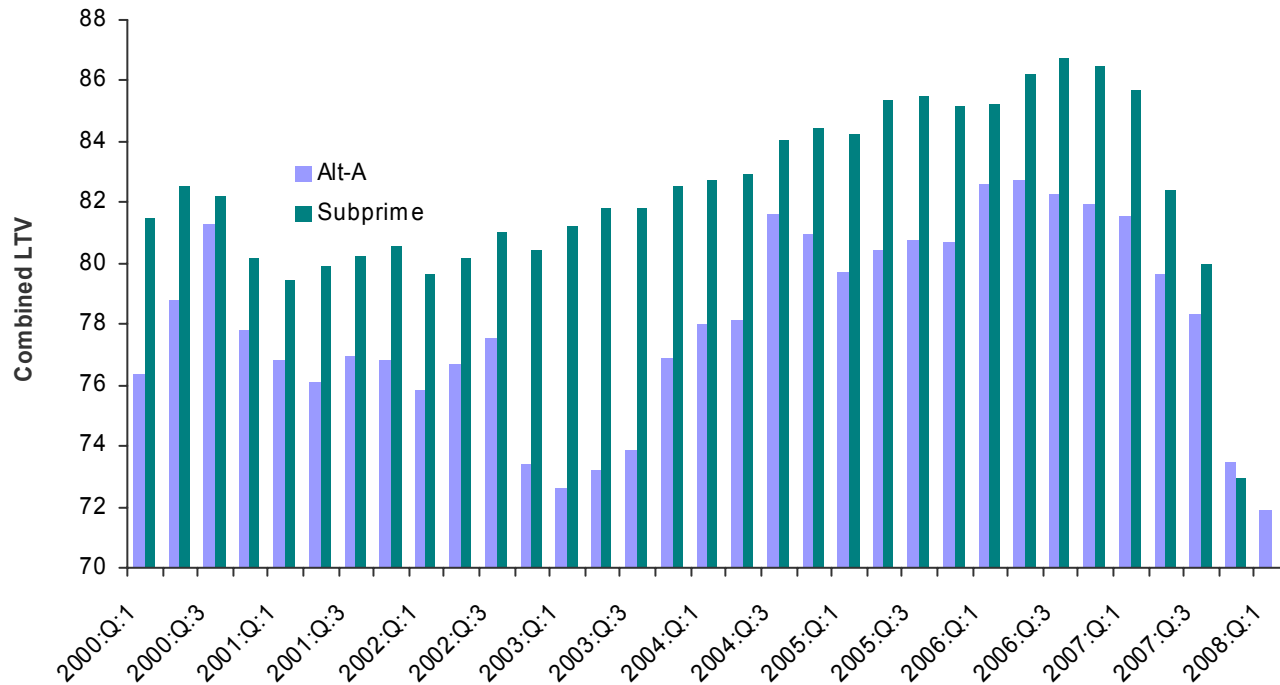
- Treasury has injected \$125B in TARP funds into nine leading financial firms with \$125B available for other US financial institutions.
- 19 smaller banks have accepted \$35B of cash injection by the Treasury. These institutions include Capital One, KeyCorp and SunTrust among others.
- Estimated debt maturing during eligible period (10/24/08 to 6/30/09) is \$1.4T. FDIC guarantee applies to issuance of up to 125% of this debt, an increase of \$350B.
- These steps turn banks into viable buyers of Agency MBS with a capacity to purchase approximately \$1.2T by deploying 10% of this new capital and targeting a 10% tier 1 capital ratio.
- Key question is whether banks will lever up to buy securities or prefer to hoard cash, use it for mergers and/or de-leverage. Other questions include how much debt would banks be willing to issue and where this debt will fund.

Changing Paradigm for US Mortgage Finance

Primary Causes of Credit Crisis

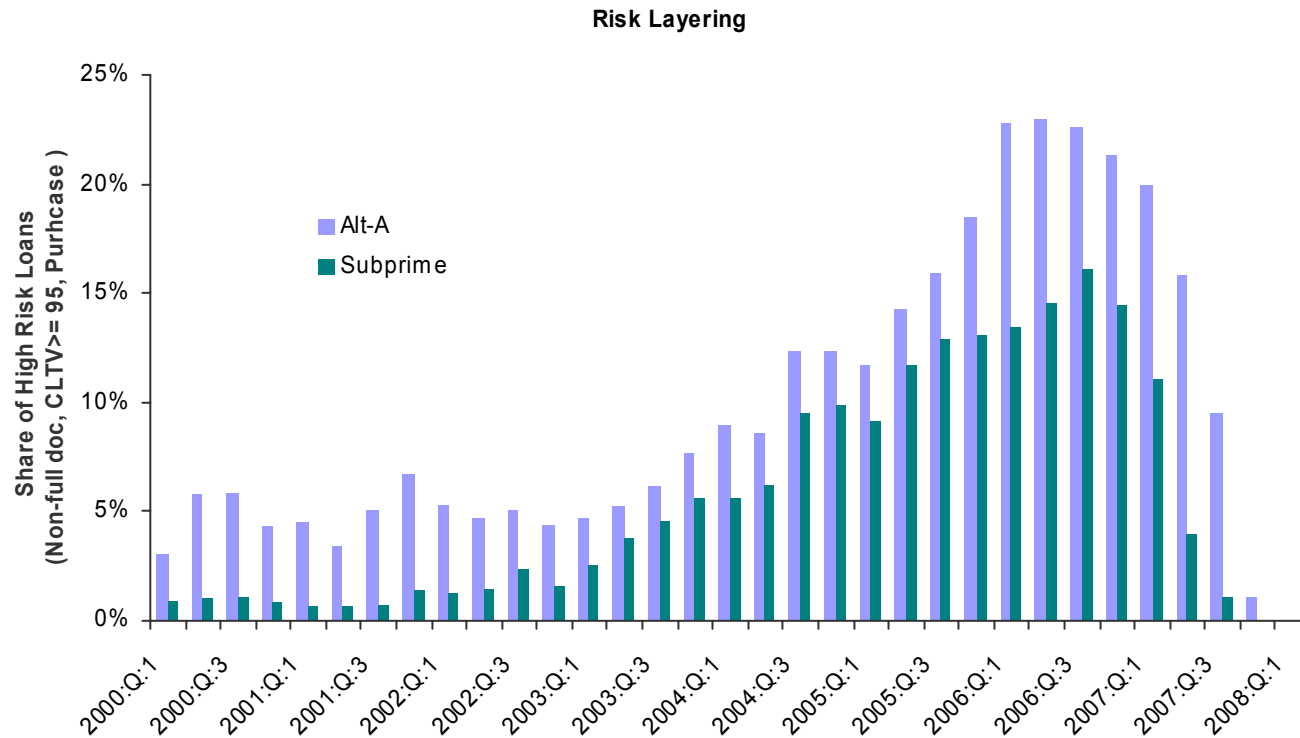
- High leverage: Increasing LTV; use of “affordability” mortgages such as IO and Option ARM
- Poor underwriting standards: Reduced documentation, layered risks, fraud
- Thinly capitalized originators: Little incentive to underwrite properly
- Structured Products: Flawed notion of diversity in ABS CDO
- Excessive marginal demand: SIVs, ABS CDOs, Credit Hedge Funds

Excessive leverage as reflected in LTV trends in Alt-A and Subprime



Source: Credit Suisse

Poor credit standards

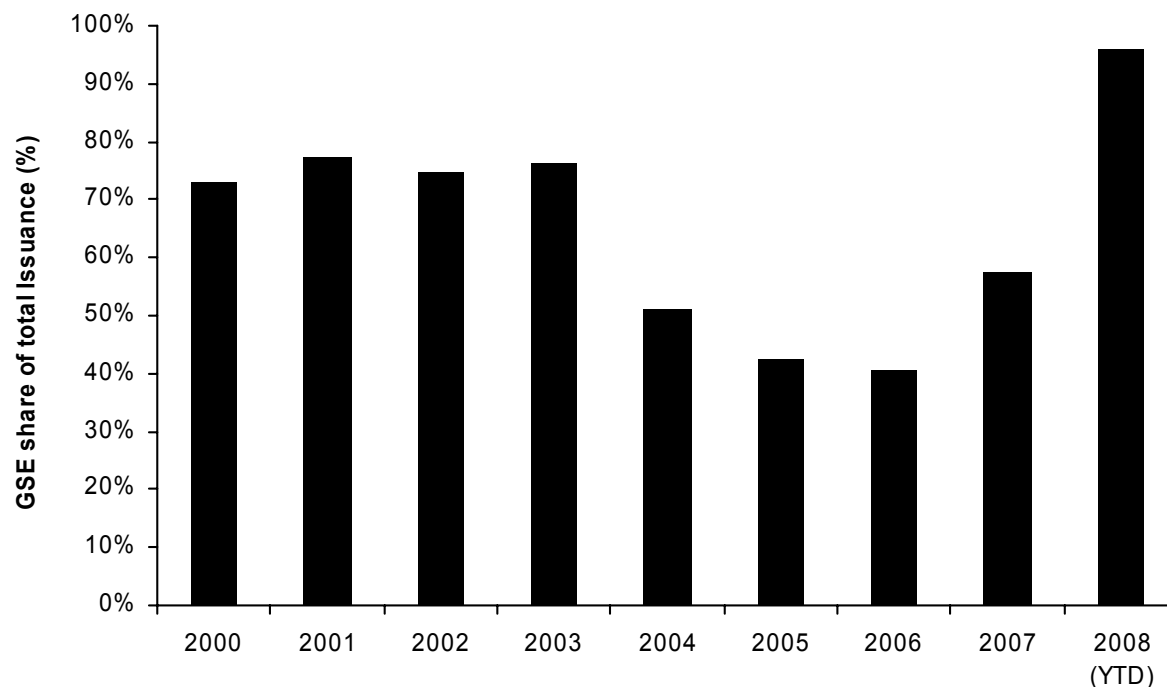


Source: Credit Suisse

Future landscape of origination and securitization

- The end of the originate-to-distribute model, a casualty of moral hazard
- The elimination of warehouse lending
- Concentration of lenders. Large bank consolidation as well as disappearance of thousands of small mortgage lenders
- Increased portfolio lending, particularly for non-conforming products
- Housing Agencies dominate the securitization market
- Private-label market will likely require third party due diligence and increased transparency of underwriting standards and processes
- Simpler Structures. Complexity made accurate analysis difficult. This will occur at the loan product level as well as securitization level

Future landscape of origination and securitization



Source: Credit Suisse, IFR, Intex, Bloomberg

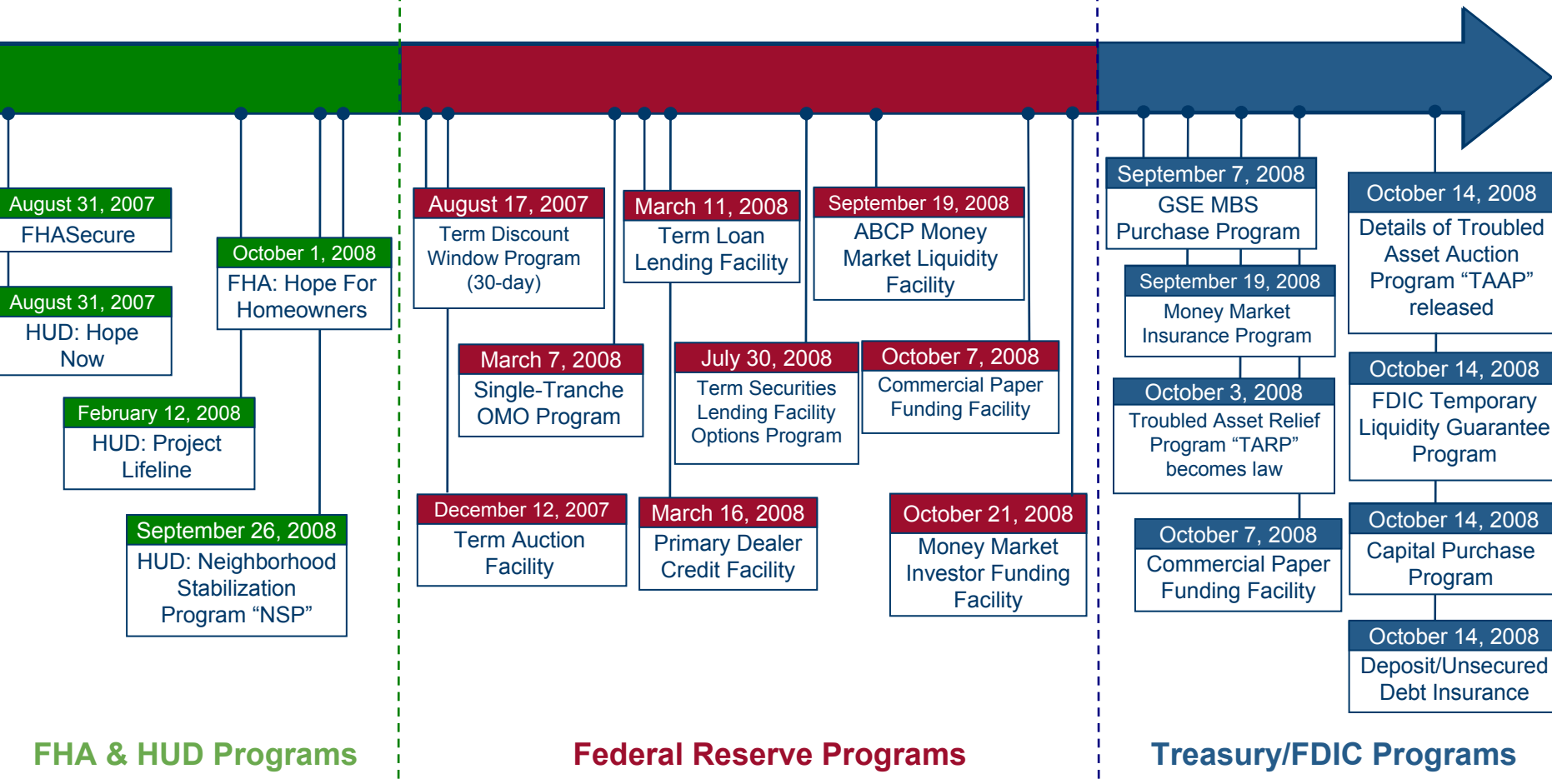
Appendix

Evolution of the U.S. Government Programs to Date

Borrower Refinancing Programs

Bank/Dealer Lending Programs

Securities/Loans Purchase Programs



Overview of U.S. Government Programs to Date

Over the past year, the Federal Housing Administration (FHA), the U.S. Department of Housing and Urban Development (HUD), the Federal Reserve and the U.S. Treasury Department have all responded to the credit crisis by establishing a variety of market-stabilization programs which combine with their more traditional tools to assist financial institutions in navigating the increasingly difficult environment

- At the beginning of the credit crisis in August 2007, the U.S. government's primary focus on alleviating financial stress in the mortgage market centered on establishing alternative loan **refinancing programs for individual borrowers**
- As the crisis escalated, the U.S. government's focus evolved into establishing **lending programs for banks and broker dealers** to inject liquidity into the market
- When these efforts failed to solve the credit crisis, the U.S. government turned to more aggressive actions such as the outright **purchase of mortgage securities and mortgage loans**

Program	Administrator	Targeted Parties	Purpose	Mechanism	Dates	Size	Term	Collateral
Refinancing Programs								
FHASecure	Federal Housing Administration (FHA)	Homeowners with non-FHA mortgage loans, current or delinquent, regardless of reset status	To provide homeowners with an option to refinance into a FHA- insured mortgage	FHA implements a risk-based premium that matches the borrower's credit profile with the insurance premium they pay	Announced on August 31, 2007	Subject to confirming loan limit	Applications must be received on/or before December 31, 2008	Any type of non-FHA mortgage loan
Hope Now	Industry Alliance	Homeowners in distress who are delinquent	To help homeowners stay in their homes	Cooperative effort between U.S. government, counselors, investors and lenders to offer free counseling concerning foreclosure	Announced on August 31, 2007	Counseling only	Ongoing	All mortgage loans
Project Lifeline	HUD & Treasury	Borrowers who are 90+ days delinquent	To delay foreclosure process for 30 days	BOA, CITI, JPMorgan, WAMU, Wells Fargo to work out new terms of loan	Announced on February 12, 2008	N/A	30 days	Any seriously delinquent loan (90+ days) headed toward foreclosure
Neighborhood Stabilization Program (NSP)	U.S. Department of Housing and Urban Development (HUD)	All states may be considered, but allocation of grants will be targeted to areas based on number/percent of foreclosures, subprime mortgages and mortgage defaults and delinquencies	To provide emergency assistance to state and local governments to acquire and develop foreclosed properties	Financing provided through HUD's Community Development Block Grant and is used to purchase and redevelop foreclosed properties	Announced on September 26, 2008. Grantee proposals must be submitted by November 15, 2008	\$3.92 billion	Grants must be obligated for specific activities within 18 months	Foreclosed properties
Hope for Homeowners	Federal Housing Administration (FHA)	Homeowners who have difficulty making their payments (mortgage DTI higher than 31%)	To allow borrowers to refinance into a lower balance fixed rate mortgage	Reduce principal to new 90% LTV (or higher if approved by H4H board), appreciation shared by borrower and FHA	Created by the Housing and Recovery Act on July 30, 2008, in effect on October 1, 2008	Up to \$300 billion (max loan size of \$825,000)	From October 1, 2008 to September 30, 2011	Primary residence only

Overview of U.S. Government Programs to Date (cont'd)

Program	Administrator	Targeted Institutions	Purpose	Mechanism	Dates	Size	Funding Term	Collateral
Fed Programs								
Discount Window	Federal Reserve	Depository institutions that maintain reservable transaction accounts or nonpersonal time deposits at the Fed	To alleviate liquidity strains in depository institutions and the banking system as a whole and to ensure the basic stability of the payment system during times of systemic stress	Fed loans directly to eligible institutions against eligible collateral	Established in 1913 and updated to current form on January 9, 2003. Temporarily altered on March 17, 2008 (term extension)	No specific size limitations or thresholds exist. Subject to Fed judgment	On March 17, 2008, temporarily changed to allow primary credit loans for terms of up to 90 days	U.S. Government & agency securities, foreign sovereign debt obligations, municipal and corporate debt obligations, ABS and CMBIS debt, commercial paper, bank-issued assets and customer obligations
Term Auction Facility (TAF)	Federal Reserve	Depository institutions, or branches or agencies of foreign banks, eligible for primary credit at the Fed	To inject term funds to a broader range of counterparties and against a broader range of collateral than open market operations	Institutions bid for Fed advances via bi-weekly auction	Announced on December 12, 2007. No expiration specified	Total size of \$900bn by year-end. No specified limit per institution but subject to institution's ability to post collateral	28-day or 84-day term	Same as discount window
Term Securities Lending Facility (TSLF)	Federal Reserve	Primary dealers of the New York Fed	To promote liquidity in Treasury and other collateral markets	Treasury general collateral is lent to primary dealers via auction in exchange for program eligible collateral. Auctions held weekly or bi-weekly depending on collateral type	Announced on March 11, 2008 and expires January 30, 2009 (or longer if conditions warrant)	Total size of \$200bn initially. Dealers can borrow no more than 20 percent of the par value offered at auction	28 days	All collateral eligible for pledge in tri-party repurchase agreements arranged by the Fed's Open Market Trading Desk, plus investment grade corporates, municipals, MBS, and ABS
ABCP MMMF Liquidity Facility (AMLF)	Federal Reserve	All U.S. depository institutions, bank holding companies (parent companies or U.S. broker-dealer affiliates), or U.S. branches and agencies of foreign banks	To restore liquidity to the ABCP markets and thereby help money market funds to meet redemptions	Fed lends directly to financial institutions to finance the purchase of eligible ABCP from subsidiary money market mutual funds	Announced on September 19, 2008. No new credit extensions will be made after January 30, 2009 (unless extended)	Total size not specified. Each advance shall be in a principal amount equal to the amortized cost of the ABCP pledged to secure the advance	Maturity date of an advance will equal the maturity date of the eligible ABCP pledged to secure the advance	First tier, USD-denominated ABCP from a U.S. issuer
Commercial Paper Funding Facility (CPFF)	Federal Reserve	A-1/P-1/F-1 rated U.S. commercial paper issuers (includes U.S. issuers with a foreign parent)	To support the liquidity needs of U.S. corporations through the direct purchase of commercial paper issuance	Fed lends to SPV at target fed funds rate. Borrowers issue 3-month USD-denominated CP to SPV and receive cash	Announced on October 7, 2008 and expires on April 30, 2009 (may be extended if conditions warrant)	Total size not specified. Borrowers may issue an amount up to their average CP outstanding in August 2008, less the current amount of CP held by outside investors	3-month	ABCP purchases are secured by the underlying assets. Unsecured CP must be secured by a fee paid or collateral posted to the Fed by the issuer
Primary Dealer Credit Facility (PDCF)	Federal Reserve	Primary dealers of the New York Fed	To provide overnight funding to primary dealers	Fed provides overnight funds against any tri-party eligible collateral	Announced on March 16, 2008 and expires January 30, 2009 (or longer if conditions warrant)	Total size not specified. Loans will be limited to the amount of margin-adjusted eligible collateral pledged by the dealer	Overnight	All collateral eligible for pledge in tri-party funding arrangements through the major clearing banks as of September 12, 2008
Regular Open Market Operations (OMOs)	Federal Reserve	Primary dealers of the New York Fed	To implement monetary policy - keep effective funds rate near the target rate	Fed lends to primary dealers through a repo auction process, adjusting the level of reserves in the banking system			Typically overnight -14 days	U.S. Treasuries, Agencies, Agency MBS
Single-Tranche OMO Program	Federal Reserve	Primary dealers of the New York Fed	To provide 28-day funding for Agency MBS in the current environment	Fed lends to primary dealers through a repo auction like the regular OMO	Announced on March 7, 2008	\$20bn per weekly auction	28 days	Typically Agency MBS but can be U.S. Treasuries, Agencies, Agency MBS
TSLF Options Program (TOP)	Federal Reserve	Primary dealers of the New York Fed	To promote liquidity in Treasury & other collateral markets during heightened collateral market pressures (Qtr ends)	Options on short-term fixed rate at a future date is lent to primary dealers via auction in exchange for program eligible collateral. No regular auctions	Announced on July 30, 2008 and expires January 30, 2009 (or longer if conditions warrant)	Last auctions have been for \$25bn each	Typically 2 weeks or less	Same as TSLF
Money Market Investor Funding Facility (MMIFF)	Federal Reserve	Money Market Mutual Funds	To allow money funds to meet redemptions without being forced to "break the buck" by selling assets at a loss	Each PSPV buys assets from Money Funds for 10 fin. issuers. The purchase is funded by ABCP and 90% loan from FRBNY.	Announced on October 21, 2008 and expires on April 30, 2009 unless extended	Up to \$600bn based on current indication	Until maturity of purchased asset	PSPV eligible assets: USD CD, CP, and bank notes of financial institutions with at least A1/P1/F1 rated short term debt and not more than 90d maturity

Overview of U.S. Government Programs to Date (cont'd)

Program	Administrator	Targeted Institutions	Purpose	Mechanism	Dates	Size	Funding Term	Collateral
Non-Fed Programs								
GSE Mortgage Backed Securities Purchase Program	Treasury Department	GSE mortgage-backed securities holders	To help improve the availability of mortgage credit to American home buyers and mitigate pressures on mortgage rates	Treasury purchases GSE MBS in the open market	Announced on September 7, 2008 and expires on December 31, 2009	Total size is subject to the discretion of the Treasury Secretary based on developments in the capital markets and housing markets	Purchased securities will be held to maturity by the Treasury	GSE (Fannie & Freddie) MBS
Troubled Asset Relief Program (TARP) – Troubled Asset Auction Program (TAAP)	Treasury Department	Financial institutions incorporated and regulated in the U.S. with significant operations in the U.S.	To restore liquidity and overall market functioning and improve the balance sheets of financial institutions through the purchase of troubled assets	Treasury given broad authority to purchase assets from eligible institutions, including but not limited to mortgage and mortgage-related assets. Price mechanism to be determined	Signed into law on October 3, 2008. Initial authority expires on December 31, 2009 but may be extended to a maximum of 2 years from the date of implementation	Total of \$700bn of which presumably, \$100bn available as initial earmarked \$250bn has been used for the Capital Purchase Program in TARP below Final \$350bn available at Presidential request, subject to disapproval of Congress	Purchased securities will be held and actively managed by the Treasury and appointed managers	Residential & commercial mortgage loans and securities
TARP – Capital Purchase Program	Treasury Department	Financial institutions incorporated and regulated in the U.S. with significant operations in the U.S.	To shore up capital of U.S. banks to regain market confidence, discourage asset sales and encourage retail and interbank lending (liquidity)	Treasury to purchase \$250bn of senior preferred shares on standardized terms – 5% dividend first 5 years, 9% thereafter; non-cumulative, perpetual, non-call 3yr unless funded by qualified equity offering. Treasury also gets warrants	Announced on October 14, 2008. Part of TARP, with same terms	\$250bn of senior preferred shares to be purchased. \$125bn allocated to nine large banks and \$125bn to be allocated to smaller institutions	Preferred shares – per PNC3 Warrants term – 10 years	Equity stake in institutions through preferred shares and warrants
Money Market Insurance Program	Treasury Department	Money Market Funds	To avoid a "run" on money market funds and effectively avoid significant moves from non-Treasury to Treasury only funds	Guarantees share price of any publicly offered eligible money market mutual fund for amounts held in participating funds as of September 19, 2008 (close), if funds apply & pay quarterly fees	Announced on September 19, 2008. Must have participated as of October 10, 2009. 3 month program w/ possibility of renewals until September 18, 2009	The assets of the Exchange Stabilization Fund (\$50bn) will guarantee the payments		
EESA temporary increase in Deposit Insurance	FDIC	Members banks of FDIC	To help restore customer confidence in banking system and markets	FDIC raises the basic limit on federal deposit to \$250K per depositor from \$100K	Approved on October 3, 2008 and expires on December 31, 2009	Increases deposit insurance to \$250K temporarily		
Temporary Liquidity Guarantee Program	FDIC	FDIC-insured depository institutions, U.S. fin. holding companies, eligible U.S. savings and loan holding companies	To set LIBOR down and ease non-deposit and restore customer confidence in banking system	FDIC guarantees new issues of senior unsecured debt and insures transaction accounts if an institution chooses to participate & pays the dues after initial 30 days of free automatic participation	Announced on Oct 14, 2008. New debt issued on/before June 30, 2009 will be up to June 30, 2012 December 31, 2009 . Transaction accounts up to December 31, 2009 December 31, 2009	Upper limit on debt guaranteed - 125% of existing debt coming due between September 30, 2008 and June 30, 2009. No limit on maximum insured for deposit accounts		

Source for slides 5-8: Credit Suisse, Federal Reserve, U.S. Treasury, FDIC

Troubled Asset Auction Program (part of TARP)

- “Toxic” assets will be purchased via auctions and reverse auctions
- Size up to \$450bn, given certain circumstances – \$100bn available immediately
- Exact procedures have not yet been finalized as of October 14
- Bank of New York Mellon will implement auctions and be custodian/administrator
- Executive compensation has certain limits including “(1) the financial institution may not deduct for tax purposes executive compensation in excess of \$500,000 for each senior executive, (2) the financial institution may not deduct certain golden parachute payments to its senior executives and (3) a 20%-percent excise tax will be imposed on the senior executive for these golden parachute payments. Treasury is releasing I.R.S. Notice 2008-94 regarding these new tax rules.”
- Implications: Goal to reduce balance sheet of banks to reduce future writedowns, the risk of systemic failure, and to increase the capital available for lending (wholesale and retail)

Source: Credit Suisse, U.S. Treasury

Capital Purchase Program (part of TARP)

- Treasury to purchase up to \$250bn of senior preferred shares on standardized terms
 - 5% dividend for first five years, 9% dividend thereafter
 - Non-cumulative, perpetual, Non-call three-year unless with proceeds from a qualified equity offering
 - Executive compensation limitations include “(1) ensuring that incentive compensation for senior executives does not encourage unnecessary and excessive risks that threaten the value of the financial institution; (2) required clawback of any bonus or incentive compensation paid to a senior executive based on statements of earnings, gains, or other criteria that are later proven to be materially inaccurate; (3) prohibition on the financial institution from making any golden parachute payment to a senior executive based on the Internal Revenue Code provision; and (4) agreement not to deduct for tax purposes executive compensation in excess of \$500,000 for each senior executive.”
- \$125B allocated to nine large banks (Citigroup, JP Morgan, Bank of America, Wells Fargo, Merrill Lynch, Goldman Sachs, Morgan Stanley, Bank of New York Mellon, and State Street)
- 19 smaller institutions (including CapOne and KeyCorp) have accepted cash injection of \$35B.
- Treasury will receive ten-year term warrants to purchase common stock equal to 15% of the senior preferred amount with an at the market strike
- TSY agrees not to vote shares if exercised
- Implications: Intended to sure up capital of U.S. banks to regain market confidence, discourage asset sales and encourage both retail and interbank lending

Source: Credit Suisse, U.S. Treasury

Disclosure Appendix

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Underperform	16%	(of which 91% are banking clients)
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