

October 18, 2010

Morgan Stanley Strategy Forum

Introduction: Today we explore foreclosure moratoria, with comments from our US housing strategist, Oliver Chang. Also, our securitized credit strategist Vishy Tirupattur focuses on mortgage putbacks. And we have our banking analyst Betsy Graseck explaining what these issues mean for financials, and whether this is already in the price (along with sensitivity analysis from Greg Gore* of our investment-grade analytics group). — Greg Peters

Global Fixed Income Strategy

Trifecta of Risks

Gregory Peters (New York) (212) 761-1488

Uncertainty abounds surrounding three serious risks for US markets. Two separate issues are causing worries for financials, and arguably for the markets at large and the overall economy: foreclosure moratoria and mortgage putbacks. In addition, financials are up against “rule making” around regulatory reform, which could be more stringent than first envisioned – particularly regarding securitization.

This adds up to a financial risk trifecta, which represents a stiff headwind for quantitative easing and efforts to resuscitate the US economy. So while I am still bullish over the near term, these issues present legitimate sources of risk. At the simplest level, financials typically would be the most direct beneficiaries of any Fed efforts to boost asset prices (and this supports our constructive stance on risky assets). It is quite telling that US financials trade below book and continue to underperform the market. This suggests that the risk trifecta is making the Fed's job infinitely more difficult. It's not supposed to work that way, as financials should be a direct beneficiary of this easy-money environment and potential asset inflation.

Contributors to this Issue

Global Fixed Income Strategy

Gregory Peters (New York) +1 212 761-1488

US Housing Strategy

Oliver Chang (San Francisco) +1 415 576-2395

Structured Credit Strategy

Vishwanath Tirupattur (New York) +1 212 761-1043

US Large-Cap Banks

Betsy Graseck (New York) +1 212 761-8473

Commentary, Investment-Grade Analytics

Gregory Gore (New York) +1 212 761-1474

See appendix for Strategy Forum slide package.

** Greg Gore represents our Investment Grade Analytics group. Unless otherwise indicated, his views are his own and may differ from the views of the Morgan Stanley Research Department and from the views of others within Morgan Stanley. We make no representation that his commentary is accurate or complete.*

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US Housing Strategy

Foreclosure Moratorium – Confusion Reigns

Oliver Chang (San Francisco) +1 415 576-2395

Assessing the issues today. Processing issues such as robo-signing of affidavits and improper notarization of forms have occurred in some foreclosures, leading some servicers to implement self-imposed moratoria on foreclosures and foreclosure sales. To investigate servicing processes, 50 attorneys general have formed the Mortgage Foreclosure Multistate Group. While several state representatives have called for statewide moratoria, the White House and other federal agencies appear to be against a national moratorium.

This issue represents a macro risk to housing as uncertainty is introduced to the sales process of distressed homes, and the best case is that the already weak housing environment remains unchanged (see our scenarios below). Preliminary research suggests a benign impact on the majority of non-agency mortgage bonds as the market already employs draconian pricing assumptions.

What is the market worried about? That these practices were widespread among other servicers and states, and the moratoria could expand. Also that documentation issues could extend to title and proof of ownership issues. Finally that servicing oversight and regulation may result, as well as widespread litigation.

We believe most foreclosures, both already completed and in the pipeline, are legitimate from the standpoint that the borrower stopped making payments and a foreclosure was initiated as a result. The issue as it stands today is procedural and relatively short term. There is too much uncertainty to assign probabilities to worse outcomes; however, the risks of such outcomes should be evaluated.

Most likely scenarios: (1) Moderately positive: moratoria extend to majority of servicers, but remain limited to judicial states; issue is purely procedural; 3-month delay on affected loans. (2) Moderately negative: moratoria extend to all servicers and states, and delays extend slightly; issue is mostly procedural; escalation and investigations into servicers increase the delay to 9 months.

The cumulative liquidations over the 5-year projection period remain the same as moratoria are not likely to change eventual liquidations. In more benign scenarios, liquidation timing and magnitude changes are minor, with patterns reverting to normal in 2011. Housing would likely be minimally affected. In more serious scenarios, liquidation

timing and magnitude changes are more dramatic, requiring a longer period before returning to normal. Housing may experience short-term stability but suffer long-term detriment. In all scenarios, we believe the use of short sales will increase as they will be the only means of liquidation during periods of foreclosure moratoria.

Securitized Credit Strategy

Exploring Putbacks

Vishwanath Tirupattur (New York) (212) 761-1043

It's important to distinguish between mortgage putbacks and foreclosure moratoria, both of which have been making headlines. Oliver Chang discusses the moratoria above, while the putbacks pertain to representations and warranties made at the time the loan was originally sold to securitization pools or investors. The two issues have put a spotlight on mortgages as a whole.

First, a quick primer on putbacks. Loans are eligible to be put back to responsible parties – originators or in some cases the underwriters of securitization deals – for material breaches of representations and warranties made to the buyers of loans. Typically, breaches are discovered/identified in connection with a default or an imminent default of a mortgage loan. The reps and warranties have to do with things like the ownership of the loan, validity of the lien securing the loan, and the loan's compliance with underwriting criteria (such as residency, income, employment status, etc.).

If loans are found to be in material breach, responsible parties may be obligated to repurchase the loans by buying them back for face value or making the owner of the mortgage whole for losses. The quality and scope of representations and warranties vary across securitization pools. In some cases, originators' reps and warranties are good enough, and in some others, underwriters of deals have to augment them. This matters a great deal because some originators are no longer around. Obviously, every putback is not going to be successful – and litigation risk is high.

Potential sources of these putbacks are important because of the substantial differences between the various parties that can put back mortgage loans. GSEs, for example have been increasingly aggressive. In agency mortgage pools, once loans are delinquent for 120 days, the loans go from securitization pools to agency balance sheets and become candidates for potential putbacks. Not surprisingly, most putbacks to date have been agency putbacks. We think that while loans from non-agency pools are significantly less

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likely to be put back, in subprime and alt-A pools, if a loan is put back, we believe the potential is greater for a successful one. Other candidates for putbacks include the monolines, which have already made some progress, in that some of them have sued and gotten access to loan files.

We have made considerable leaps of faith in estimating the size of the potential putbacks, as we are in uncharted waters here. Our estimate is that the system-wide putback losses for 2005-08 vintages amount to \$105 billion in the base case, \$164 billion in the bear case, and \$87 billion in the bull case. Our comfort factor is smallest with the putback likelihood in non-agency pools and with estimates for monoline-related putback losses.

On the regulatory front, we are entering a crucial phase in the context of Dodd-Frank legislation. Rule making is under way, and it has serious implications for the future of securitization – and for the broader economy. A key aspect of rule making pertains to risk retention by securitizers. Dodd-Frank imposes 5% risk retention by default but has left precise guidelines about the details to the rule makers. In our view, there is no basis for painting all securitization asset classes with the same brush. How the rule making develops here is important to watch.

US Large-Cap Banks

This Is Not 2008

Betsy Graseck (New York) +1 212 761-8473

The market is concerned that the cost of mortgage-related representations and warranties will be as large and disruptive to the banking system and economy as the mark-to-market losses and plummeting asset prices were in 2008/09. We disagree.

Potential losses are much lower. We estimate mortgage representations and warranties will cost large and mid-cap banks \$55 billion in total, with \$17 billion already expensed and \$38 billion still to go. This is much lower than the \$416 billion in losses recognized by the banking and brokerage industry in 2008. Additionally, we expect banks will recognize remaining reps and warranties and foreclosure costs over the next 2-4 years, not next 12 months. While mortgage reps and warranties will persist and foreclosures costs will likely rise, concerns that we are heading into another 2008/09 period are inaccurate, in our view.

Reps and warranties have already been a part of the earnings run rate for the past 2-3 years and are embedded in our forward estimates. Foreclosure costs could rise but

would have a small impact on the money center banks (a 5% decrease in servicing income lowers EPS 1% for JPM, WFC and BAC). A 10% increase in housing net charge-offs lowers EPS by 2-5%.

We present bull/base/bear case estimates for mortgage reps and warranties in our full note published today (“This Is Not 2008”). Our base case total losses for the industry are \$105 billion, with a \$87–164 billion bull/bear range. For our large and mid-cap banks, we estimate \$55 billion total base case with \$49-79 billion bull/bear range. Given our estimate that \$17 billion has already been expensed, we believe our banks have another \$38 billion in expenses to go. The vast majority of this \$38 billion is already in our EPS.

Earnings this week should remind investors of credit improvements and give managements the opportunity to discuss where they stand with mortgage reps and warranties and foreclosures.

Bank of America. We estimate \$20 billion in losses from reps and warranties for BAC and believe the bank is 19% of the way through that amount. The \$16.9 billion in remaining losses are embedded in our estimates. We expect this quarter and the next to be big quarters for BAC in terms of mortgage banking revenues, with large gains on sale, which the bank can use to write off the losses. In terms of valuation, BAC stock looks attractive in terms of tangible book relative to estimate ROE in 2012.

Sensitivity analysis. Greg Gore* of our fixed income investment-grade analytics group has conducted a sensitivity analysis surrounding these issues for the banking sector (please see Appendix for his exhibits). He concludes that Bank of America and Wells Fargo are the large-cap banks with the largest exposure to mortgage-related losses relative to their earnings power, with Citigroup having the least. Similarly, Bank of America and Wells also face the largest potential decline in tangible common equity ratios. As for the potential ratings impact, Bank of America and Wells are the most vulnerable to a one-notch downgrade on this issue. Given relatively high starting ratings, he believes that any potential downgrade should not impact funding at Wells. Given relatively low starting ratings, Bank of America is more sensitive to potential downgrades: A one-notch downgrade should not have a material adverse impact, while a two-notch downgrade would be more significant, in Greg's view.

* Gregory Gore is Credit Desk Analyst for US Financial Institutions in Morgan Stanley's Investment Grade Analytics group. Unless otherwise indicated, his views are his own and may differ from the views of the Morgan Stanley Research Department and from the views of others within Morgan Stanley. We make no representation that his commentary is accurate or complete.

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Appendix – Morgan Stanley Strategy Forum

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Oliver Chang
US Housing Strategy

The Foreclosure Moratorium Issue

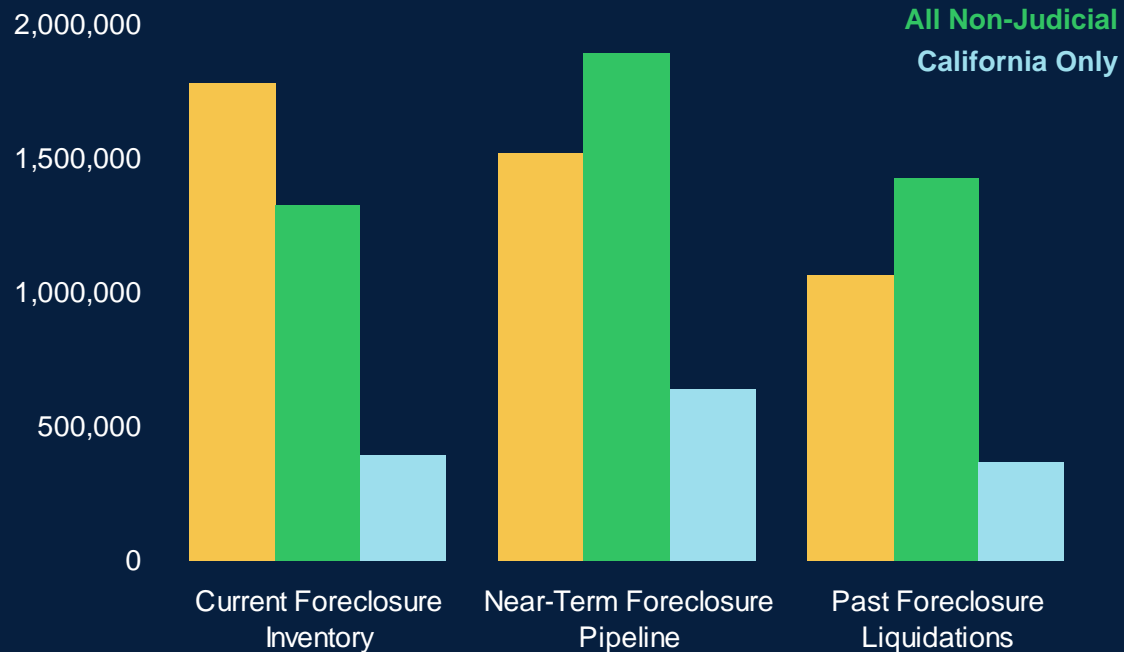
- Confusion Reigns
- The Issue Today
 - Processing issues such as robo-signing of affidavits and improper notarization of forms have occurred in some foreclosures, leading some servicers to implement self-imposed moratoria on foreclosures and foreclosure sales – mostly in judicial states – until these issues are resolved
- The Facts
 - To date, the self-imposed servicer moratorium is limited to BofA, JPM, GMAC, PNC and Litton Loan Servicing
 - For all servicers except BofA, the moratorium is limited to a subset of states – mostly to judicial-only states
 - 50 Attorneys General have formed the Mortgage Foreclosure Multistate Group to investigate servicing processes
 - Several state representatives have called for, but not implemented, statewide moratoria, including in AZ, CA, CT, OH, MA, MD and NV
 - The White House, as well as several federal agencies, are against a national moratorium, however, some have launched investigations
 - Some class action and state lawsuits have been filed
- What is the Market Worried About?
 - These practices were widespread to other servicers and states, and the moratoria could expand more broadly
 - Did these practices result in wrongful foreclosures, i.e., current borrower was foreclosed on?
 - Larger documentation issues could extend to title and proof of ownership issues
 - Servicing oversight and regulation may result
 - Litigation regarding violation of state statutes, fraud, and/or ownership may result
- What We Believe
 - The vast majority of foreclosures, both already completed and in the pipeline, are legitimate from the standpoint that the borrower stopped making payments and a foreclosure was initiated as a result
 - The issue as it stands today is procedural and relatively short term in nature
 - The risks to the housing market are macro and mainly stem from delays
 - There is too much uncertainty to assign probabilities to worse outcomes, however, the risks of such outcomes should be evaluated

Foreclosures: Past, Present and Future

- The current servicers affected represent about 37% of all serviced loans
- 2.5 million foreclosures have been completed since 2005
- 3.1 million foreclosures are currently in progress across all servicers and states
- 3.4 million seriously delinquent loans (more than 60 days past due) may be headed for foreclosure

Current Distribution of Foreclosed and 60+ Delinquent Loans (2005 – Present)

Number of Loans



Source: Morgan Stanley Research

Possible Scenarios: From Best to Worst

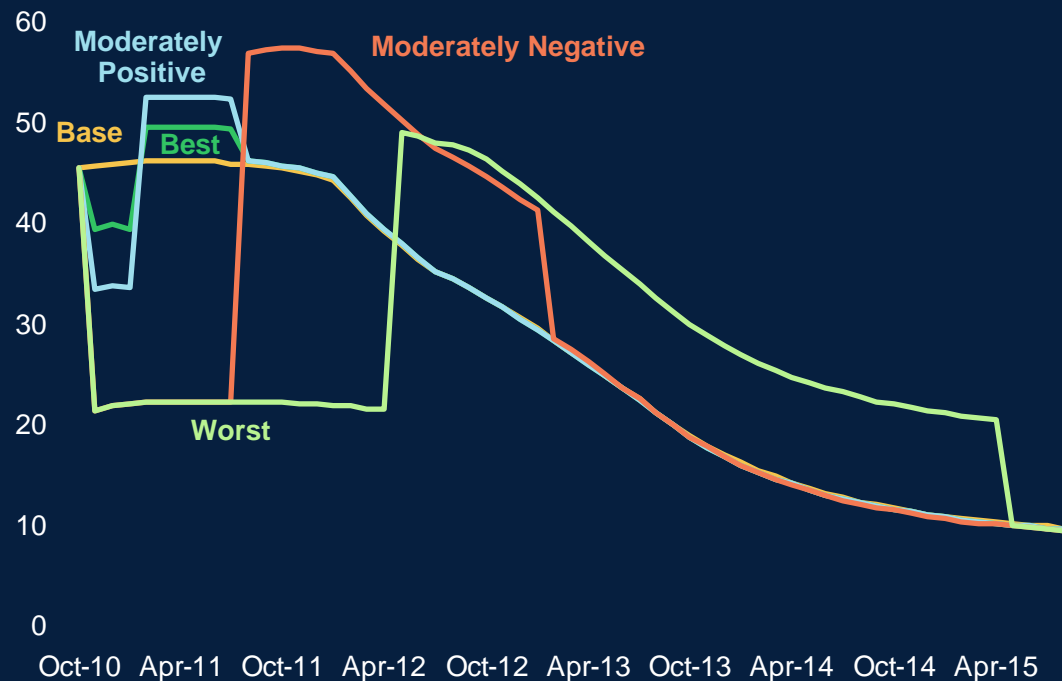
- Base Case: No foreclosure moratorium
- Best Case: Moratoria limited to current servicers and states
 - Issue is purely procedural
 - 3-month delay on affected loans
- Moderately Positive: Moratoria extends to majority of servicers, but remains limited to judicial states
 - Issue is purely procedural
 - 3-month delay on affected loans
- Moderately Negative: Moratoria extends to all servicers and states, and delays extend slightly
 - Issue is mostly procedural
 - The escalation and investigations into servicers increase the delay to 9-month
- Worst Case: Moratoria extends to all servicers and states, and delays extend significantly
 - Issue extends beyond being procedural
 - Investigations and litigation of servicers increase the delay to 18-months
- Assumptions for All Scenarios
 - Short sales are still allowed to occur
 - REO sales also stop as previously foreclosed property sales are also halted either due to seller or buyer concerns
 - The cumulative liquidations over the 5-year projection period remains the same as moratoria are not likely to change eventual liquidations

Liquidation Timing: A Macro Issue for Housing

- In more benign scenarios, liquidation timing and magnitude changes are minor, with patterns reverting to normal in 2011. Housing would likely be minimally affected
- In more serious scenarios, liquidation timing and magnitude changes are more dramatic, requiring a longer period before returning to normal. Housing may experience short term stability, but suffer long term detriment
- In all scenarios, we believe the use of short sales will increase as they will be the only means of liquidation during periods of foreclosure moratoria
- This issue represents a macro risk to housing as uncertainty is introduced to the sales process of distressed homes and the best case is that the already weak housing environment remains unchanged
- Preliminary research suggests a benign impact on the majority of non-agency mortgage bonds in any scenario, as cash flows are generally protected by already draconian market assumptions

Liquidation Projections by Scenario

Liquidated Balance – \$Bn



Source: Morgan Stanley Research

Vishwanath
Tirupattur

Securitized
Credit Strategy

What Are Mortgage Putbacks?

- Loans are eligible to be put back to responsible parties for material breaches of representations and warranties made to the buyers of loans.
- Most often, breaches are discovered/identified in connection with a default or an imminent default of a mortgage loan.
- Typical representations and warranties pertain to issues such as:
 - ownership of the loan, validity of the lien securing the loan
 - loan's compliance with underwriting criteria such as residency, income, employment status, LTV, use of proceeds and other characteristics of the borrowers and property; integrity of appraisal
 - loan's compliance with applicable state, local and federal laws
- If loans are found to be in material breach, the originators (or other responsible parties) may be obligated to repurchase the loans by buying them back for face value or making the owner of the mortgage whole for losses.
- The quality and scope of representations and warranties varies across securitization pools. Some of the originators (and other responsible parties) are no longer around.

Potential Sources of Mortgage Putbacks?

- Who can put mortgage loans back?
 - GSEs (including FHA/VA)
 - Increasingly aggressive in putbacks
 - Less complicated to put back
 - Account for the bulk of the loans put back thus far
 - Trustees of private-label RMBS (non-agency RMBS)
 - Multiple stakeholders across the capital structure with different incentives and therefore a high degree of uncertainty about the extent of putbacks
 - Type and quality of representations and warranties not uniform
 - Lower likelihood of putbacks but probability of successful putbacks potentially higher for some categories of loans (subprime and alt-A)
 - Monolines
 - Second lien and HELOCs
 - Some success in gaining access to loan files
 - Other loan investors

Potential Losses from Mortgage Putbacks

(\$Bn)	Current Balance *	Current Delinquencies	Liquidation Losses **	Putback Universe	Assumed Put Back %	Putback Success %	Loss Severity %	Potential Putback Losses
Agency Pools	2,248	356	25	381	50%	50%	45%	46
Non-Agency Pools								
– Prime	479	101	10	111	20%	50%	45%	6
– Alt- A	277	121	15	136	20%	75%	60%	13
– Sub prime	277	109	24	133	20%	75%	70%	15
Total Non-Agency	1,034	331	49	380				34
Total Agency + Non Agency	3,282	687	74	762				80
Monolines								25
Total Potential Putback Losses (Base Case)								105
Bear Case								164
Bull Case								87

* Estimated for 2005 – 08 vintages for agency mortgages and non-agency prime mortgages. Alt-A and sub prime estimates are for 2005 – 07 vintages

** Estimated liquidation losses on the above vintages to date
Source: Morgan Stanley

Regulatory Reform & Securitization

Rule making for different aspects of Dodd-Frank is underway. Rules related to Credit Risk Retention are particularly critical for the future of securitization.

- Federal banking agencies and the SEC to jointly prescribe standards that require securitizers of all asset-backed securities, **by default**, to maintain 5% of the credit risk in assets transferred, sold or conveyed through the issuance of an asset-backed security by the securitizer
- **Regulators have flexibility to impose lower-than-5% risk retention** if underwriting / diligence meets certain prescribed underwriting standards specific to the class of the securitized asset; regulators may allocate this obligation between the securitizer and originator when a securitizer purchases assets from an originator
- Carve-Outs for “Qualified Residential Mortgages” and CMBS

What to watch for?

- The performance of securitized assets has varied widely (Losses to investment grade tranches have ranged from 0% to 90%). How well the rule makers distinguish between different categories of securitized products is critical
- New standards for documentation, disclosures and on-going reporting

Greg Gore

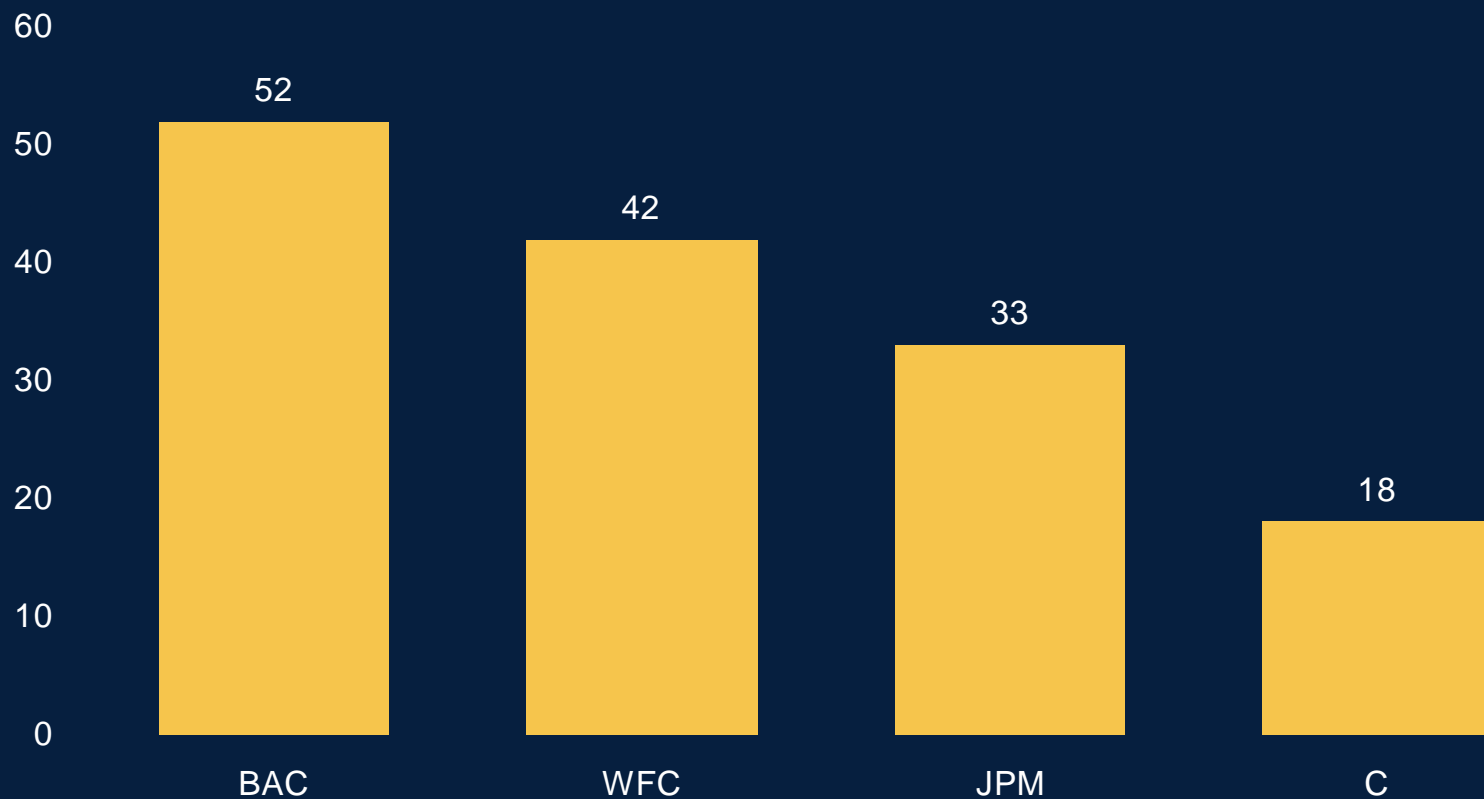
Investment
Grade Analytics

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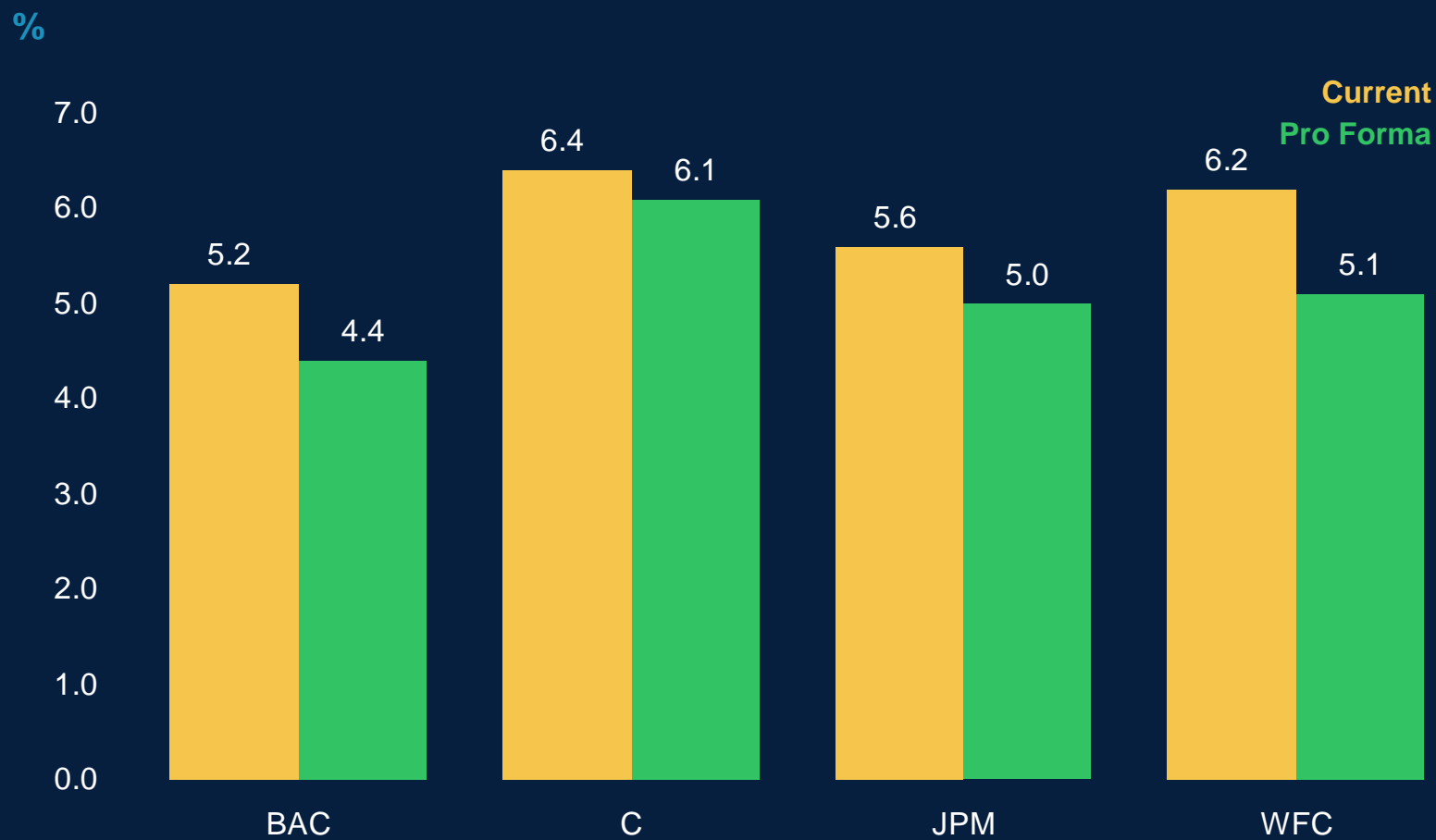
	BAC	C	JPM	WFC
Ratings				
Moody's Rating (Stand-alone)	A2 (Baa3)	A3 (Baa3)	Aa3 (A1)	A1 (Baa1)
S&P Rating (Stand-alone)	A (BBB)	A (BBB)	A+ (A+)	AA- (AA-)
Residential Mortgages				
Mortgage Production 2005 – 2008	2,214,659	541,600	1,606,454	1,611,779
Residential Real Estate Loans	427,085	178,367	259,887	370,723
Private Label MBS	28,448	23,815	31,614	21,025
Capital				
Tangible Common Equity	118,584	121,425	110,470	74,119
Tangible Assets	2,267,281	1,904,587	1,961,521	1,189,189
Ratio (%)	5.2	6.4	5.6	6.2
Earnings				
Consensus Fiscal 2011 and 2012 Earnings	35,931	28,307	39,739	33,745
Combined Earnings / Tangible Common Equity (%)	30	23	36	46

Sensitivity Analysis 1: Share of Consensus Fiscal 2011 and 2012 Earnings for Every 1% Point Loss on 2005–2008 Mortgage Production, Current Residential Real Estate Loans, and Current Private Label MBS Holdings on an After-Tax Basis

Share of Consensus FY 2011 and 2012 Earnings (%)



Sensitivity Analysis 2: Current TCE / TA Ratio and Pro Forma TCE / TA Ratio for Every 1% Point Loss on 2005–2008 Mortgage Loan Production, Current Residential Real Estate Loans, and Current Private Label MBS on an After-Tax Basis



Betsy Graseck

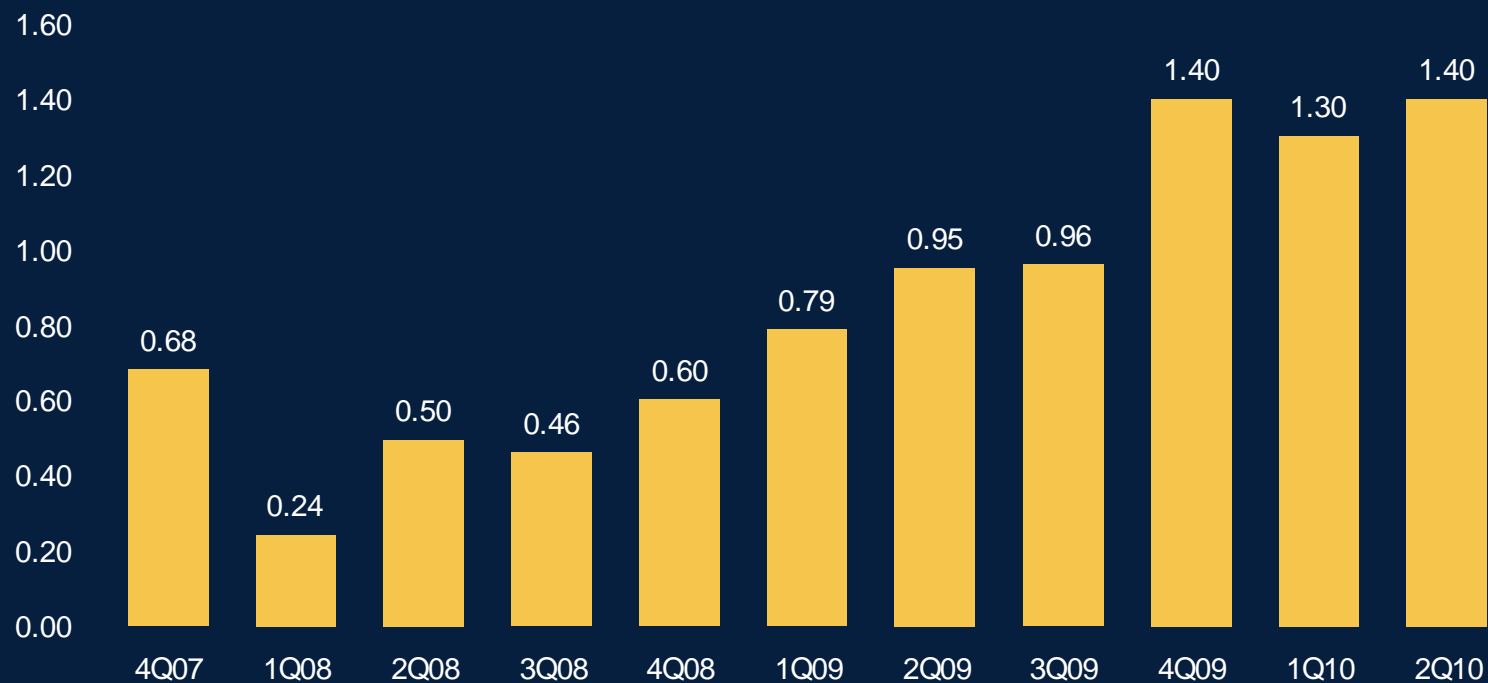
US Banks

Mortgage Putbacks Have Been Going on for Several Years

Freddie Mac Mortgage Putbacks Total \$9Bn (4Q07–2Q10)

UPB of Single Family Mortgages Repurchased by Seller/Service

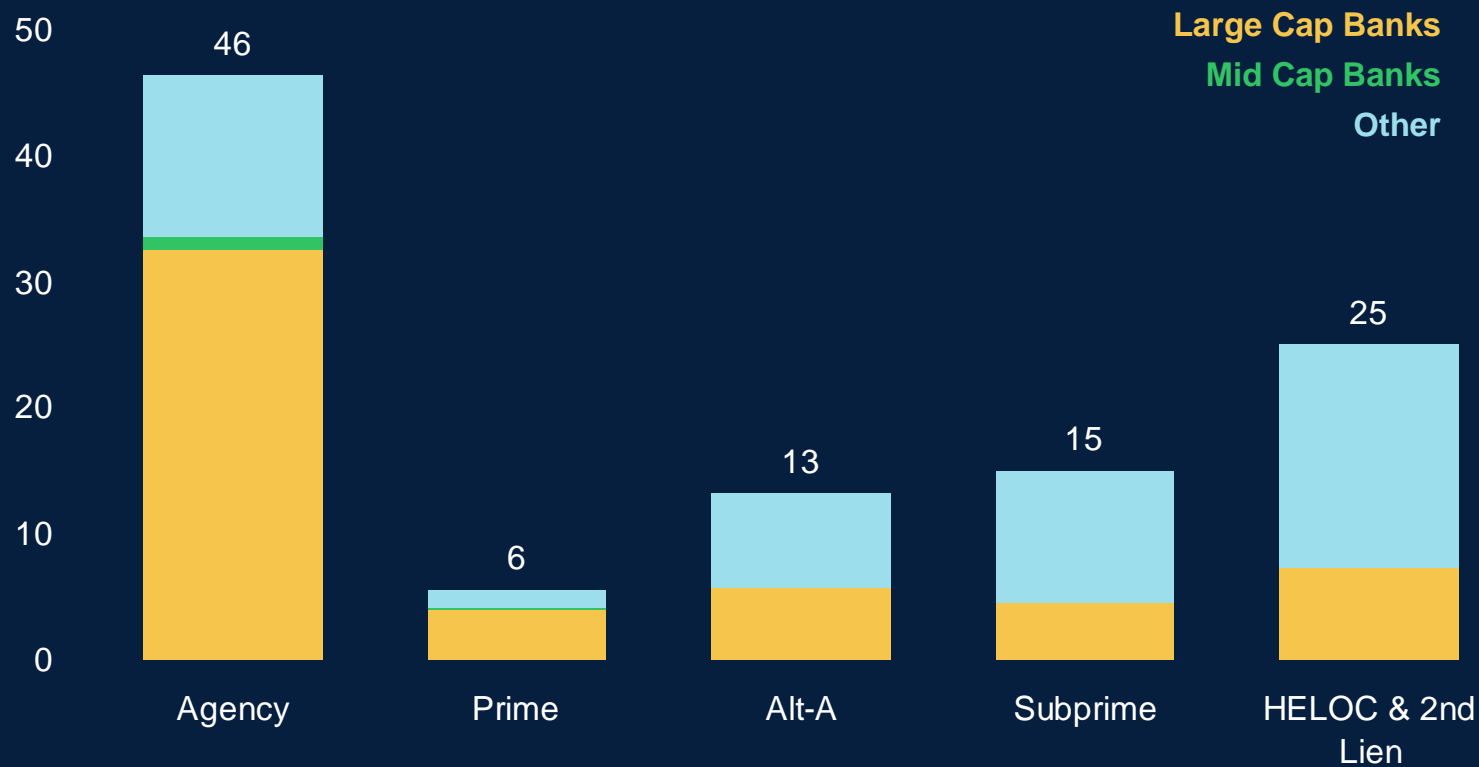
(\$Bn)



Source: Freddie Mac

We Estimate that Large/Mid Cap Banks have 52% of Total Reps and Warranties, \$54 Bn vs. \$105Bn

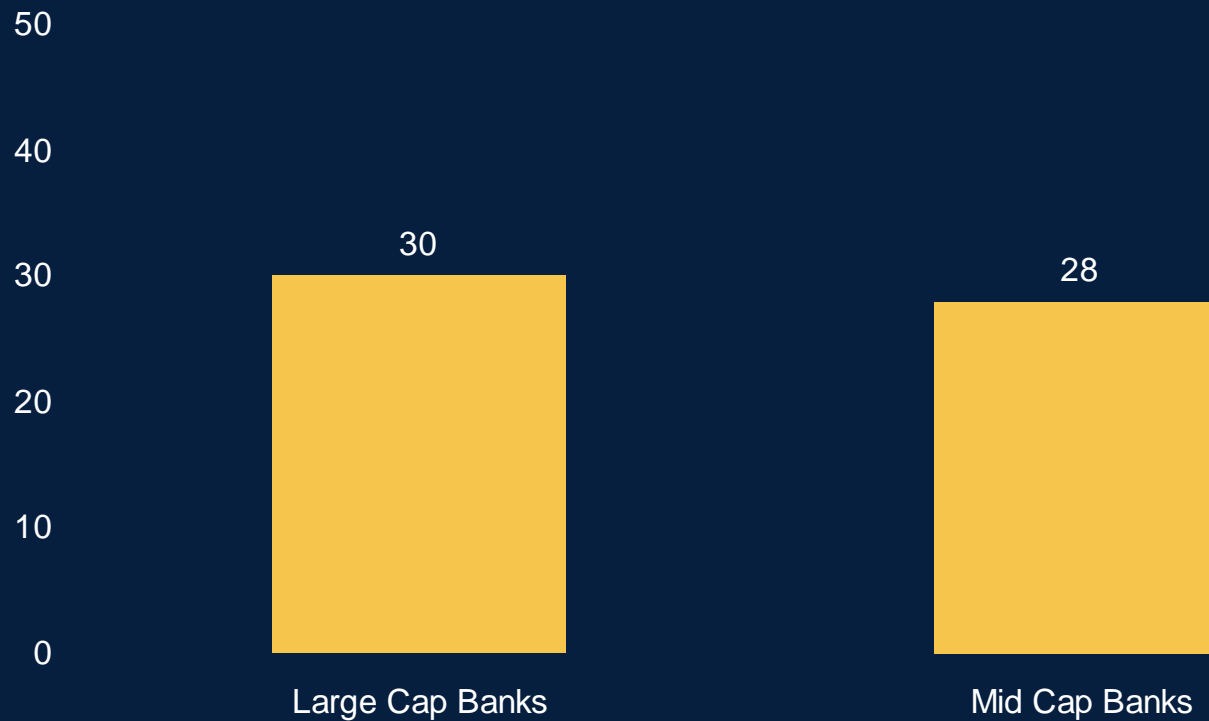
Reps/Warranties Losses (\$Bn)



Source: Morgan Stanley estimates

We Estimate that Large/Mid Cap Banks Are Roughly 30% Through Loss Recognition

% of the Way Through Reps/Warranties Losses



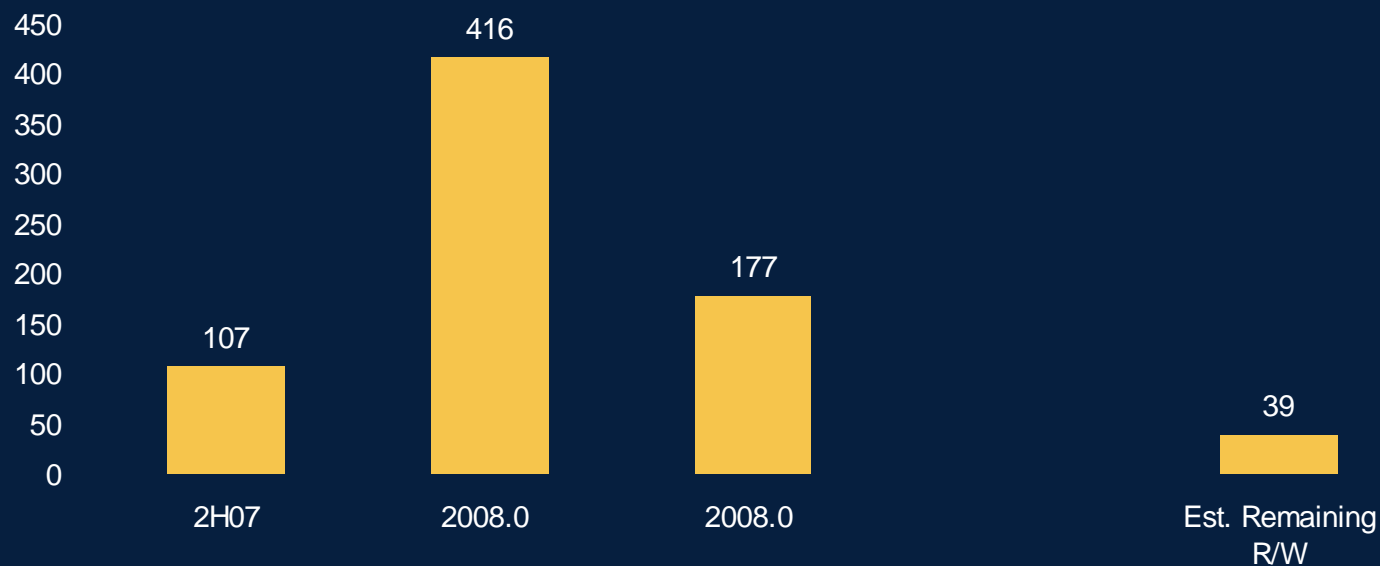
Source: Morgan Stanley estimates

This Is Not 2008

- \$38.5 Billion remaining Reps/Warranties losses to go – expect losses will be recognized over next 2–4 years
- \$38.5Bn is 9% of total 2008 losses

US Banking and Brokerage Industry Writedowns & Credit Losses Incurred (2H07–2009) vs. Est Remaining Reps/Warranties Losses

(\$Bn)



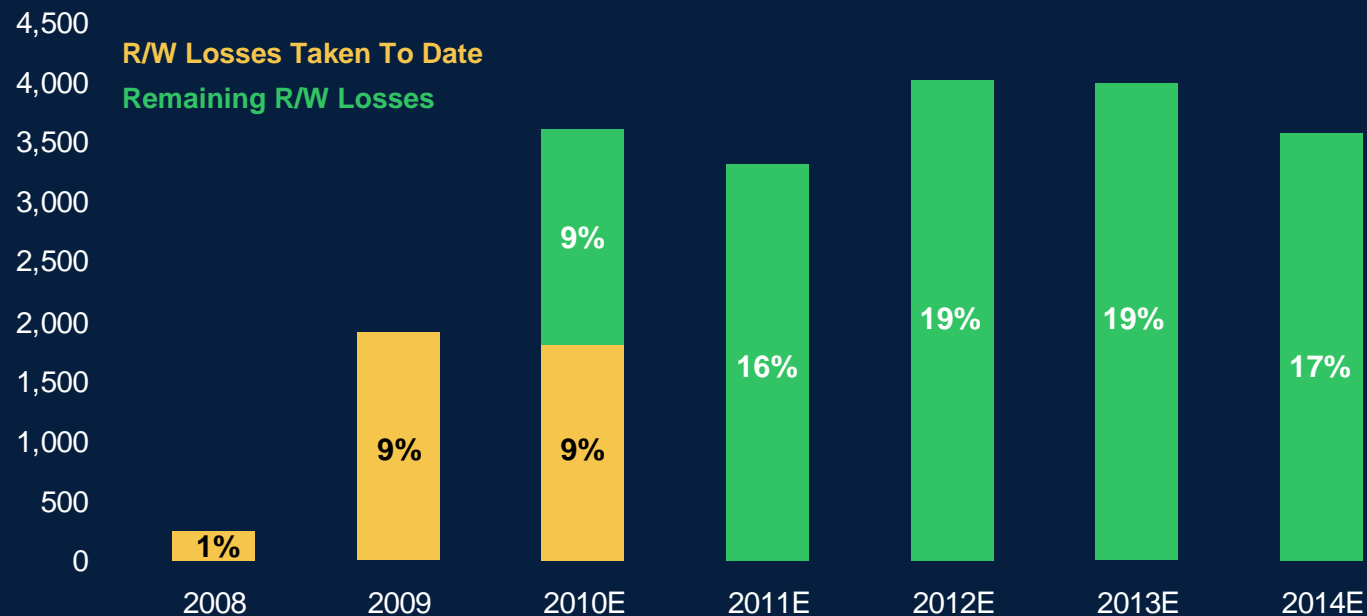
Source: Bloomberg and Morgan Stanley estimates

BAC: Estimated Reps and Warranties

- \$20Bn estimated R/W losses; 19% of the way through;
- \$16.9Bn remaining, which is embedded in our estimates

BAC Reps/Warranty Losses : 2008–2014E

(\$MM)



Source: Company disclosure and Morgan Stanley estimates

BAC: We think stock is inexpensive and Reps/Warranties are manageable

Current P/BV (x)



Source: Morgan Stanley

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Stock Rating Category	Coverage Universe		Investment Banking Clients (IBC)		
	Count	% of Total	Count	% of Total IBC	% of Rating Category
Overweight/Buy	1115	42%	394	43%	35%
Equal-weight/Hold	1146	43%	413	45%	36%
Not-Rated/Hold	14	1%	4	0%	29%
Underweight/Sell	381	14%	99	11%	26%
Total	2,656		910		

Data include common stock and ADRs currently assigned ratings. An investor's decision to buy or sell a stock should depend on individual circumstances (such as the investor's existing holdings) and other considerations. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index.

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The Americas

1585 Broadway
New York, NY 10036-8293
United States
Tel: +1 (1)212 761 4000

Europe

20 Bank Street, Canary Wharf
London E14 4AD
United Kingdom
Tel: +44 (0)20 7425 8000

Japan

4-20-3 Ebisu, Shibuya-ku
Tokyo 150-6008
Japan
Tel: +81 (0)3 5424 5000

Asia/Pacific

International Commerce Center
1 Austin Road West
Kowloon, Hong Kong
Tel: +852 2848 5200