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# *Consumer Finance Group* Accounting and Finance Considerations

*Winter 2014*

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# *Introduction*

Welcome to the Winter 2014 edition of PricewaterhouseCoopers' Consumer Finance Group Accounting and Finance Considerations, where we bring you insights into the complex accounting, finance and reporting issues that are affecting your industry.

The financial services industry and the mortgage business specifically continue to quickly evolve with upcoming implementations of significant regulatory mandates. The approval of the Basel III Capital Rule provide finance executives much to evaluate with changes to the treatment of mortgage servicing assets, securitization exposures, and equity components among others. Additionally, the Consumer Financial Protection Bureau's (CFPB) Ability-to-Repay (ATR) and Qualified Mortgage (QM) rules as well as the National Servicing Standards (NSS) may initially appear to primarily result in new operational requirements but each also has many important implications to accounting and finance executives.

As the industry retrenches from a significant refinance boom, many participants are also focused upon strategies to improve their bottom line with reduced mortgage origination volumes. Within this publication you'll find an article related to understanding and monitoring each driver of gain-on-sale. Finally, there continues to be considerable focus on subjective estimation from the accounting and regulatory community and this publication include articles related to estimation governance practices and servicing advance reserve considerations.

As with previous editions of this publication, we hope that you find the collection of issue summaries relevant and helpful, as well as timely. We are committed to keeping you informed of industry accounting and regulatory issues and we invite your questions or comments on a particular or related topic.

Regards,

*Francois Grunenwald, Bryan Heft, Fred Kelso and Steve Robertson*

# *Understanding Gain on Sale performance through market and production attribution analysis*

## *Introduction*

### *The heart of the matter*

Today, the majority of mortgages sold in the secondary market are originated under government-sponsored programs (Fannie Mae, Freddie Mac and Ginnie Mae). These loans are sold as whole loan transactions (Cash Window), bulk forward commitments or swapped into securities collateralized by mortgages.

A mortgage lender's secondary marketing and pricing departments, working with production and operations management, are responsible for hedging, pricing, selling and delivering mortgage loans to investors in accordance with their established underwriting, delivery and regulatory requirements (i.e. Agency guidelines and the CFPB Ability to Repay and Qualified Mortgage Standards). Retaining the servicing rights (mortgage servicing rights or "MSR") of the loan sold to the agencies or monetizing the MSR via sale is the end goal which also creates an additional revenue stream for the lender.

The culmination of these activities produces Gain on Sale (GOS) revenue. Maximizing GOS is considered the blend of art, science and math. Some lenders deploy a comprehensive tactical approach to GOS performance monitoring by identifying, understanding, measuring and tracking the various components of GOS. However, many mortgage lenders have not invested sufficient resources to improve GOS monitoring resulting in revenue leakage and challenges to hedge and margin strategy. Further, the rapid changes in servicing requirements have elevated the complexity of understanding detailed MSR component economics, both from a cost and revenue perspective.

## *Discussion*

### *The importance of understanding loan level mortgage economics*

#### Analysing market and product attribution

Understanding economic components during the lock process will refine strategic decision making and loan sale execution decisions. As a result, lenders will notice reductions in the costs associated with hedging as well as improved financial and managerial reporting information. Additionally, analysing market and product attribution will add transparency into loan level economic events throughout the gestation period of the loan, driving refined hedging and pricing analytics to enhance strategic decision making.

The objective of attribution analysis is development of a repeatable process that will address the following:

- Identify and analyze variances between actual and expected gain at the time of lock, funding, and sale. Using dimensional reporting, variances would be presented at a loan, attribute or aggregate level;

- Identify variances between accounting and economic results at a detailed level;

- Improve management's end-to-end understanding of profitability by including accounting and economic information for interest rate lock commitments (IRLCs), loans and hedging activity; and

- Provide expanded analytical and reporting capabilities, based on a consistent data set, to be utilized throughout the organization.

With these objectives in mind, market and product attribution and profitability reporting can be developed as a tool to identify, track and explain changes in economic and accounting value. This tool will help:

- Analyze portfolio economics at the aggregate or drill down level to identify economic performance and revenue leakage;

- Guide strategic and operational decisions by leveraging "lock-to-liquidation" historical portfolio performance;

- Measure profitability in conjunction with the effectiveness of risk management strategies; and

- Provide support and validation of risk management assumptions and pricing decisions.

There are, at times, overlooked attribution changes that reduce the lender's "Day 1" margin expectations. These changes are subtle, and are based on underlying assumptions embedded in a secondary marketing rate sheet pricing model. For example, pricing is typically based on the TBA coupon month closest to lock expiration plus a pooling lag assumption. As IRLC's get close to expiration, situations occur where the IRLC's fund past expiration date, and/or the funded loan incur delays in certifications, etc. These events, along with pooling lag assumptions embedded within the pricing model will result in the pooling month assumption to "roll" to a subsequent month, thereby incurring a "roll drop" in value. Although most of the drop will be picked up or offset by net interest margin, most independent lenders will experience negative attribution.

A common pitfall that leads to a difference between expected GOS margin (based on pricing) and actual GOS margin at settlement is base/excess servicing assumptions used in pricing models versus the amount of base/excess servicing fee in the capitalized MSR. Other examples include misaligned roll costs with extension costs, and excessive relock and renegotiation activity during volatile market movements due to unclear or unenforced rate lock policies.

## Market attribution

Market attribution refers to components related to GOS that are affected by changes to the TBA, options and/or futures markets. For example, the underlying hedge by which an IRLC is managed is subjected to value changes every day. Some of the most common attribution changes are:

- Changes in TBA, options, and/or futures price;
- Changes to the underlying servicing value;
- Changes to excess servicing multiples;
- Changes to agency G Fees, buyups and buydowns;
- Changes to duration, convexity, Vega, and DV01 values; or
- Changes to fall out assumptions and rate lock negotiations.

Understanding and capturing these changes at a loan level allow a lender to reconcile their day 1 lock GOS value to actual GOS at settlement. As market changes occur during the gestation period of an IRLC, market attribution changes are typically offset by the inverse relationship between the IRLC and its underlying hedge. Differences in Day 1 lock value and funding value occur when the two do not move in a perfect inverse manner or when a market change affects one side of the hedge (the hedge or underlying asset), as when fall out assumptions or rate lock negotiations impact the value of the IRLC but not the related derivative.

A related attribution event occurs when the best execution in the pricing model is for a particular investor (i.e. Fannie Mae), then at pooling, the best execution model indicates a different investor (i.e., Freddie Mac). A secondary marketing department may not have existing Freddie Mac derivatives to pool and must sell forward a TBA and pair off an existing Fannie Mae derivative (this action balances the overall net risk position of a hedged pipeline).

Developing a process that measures these attribution changes allow a lender to react to the changes to avoid additional attribution variances. The reality is, however, that many lenders do not track or measure these changes, which may result in an overstatement or understatement of

other attribution components. Isolating the driver of the change in value is important in holding stakeholders accountable for the cost or benefit of the changes.

### Product attribution

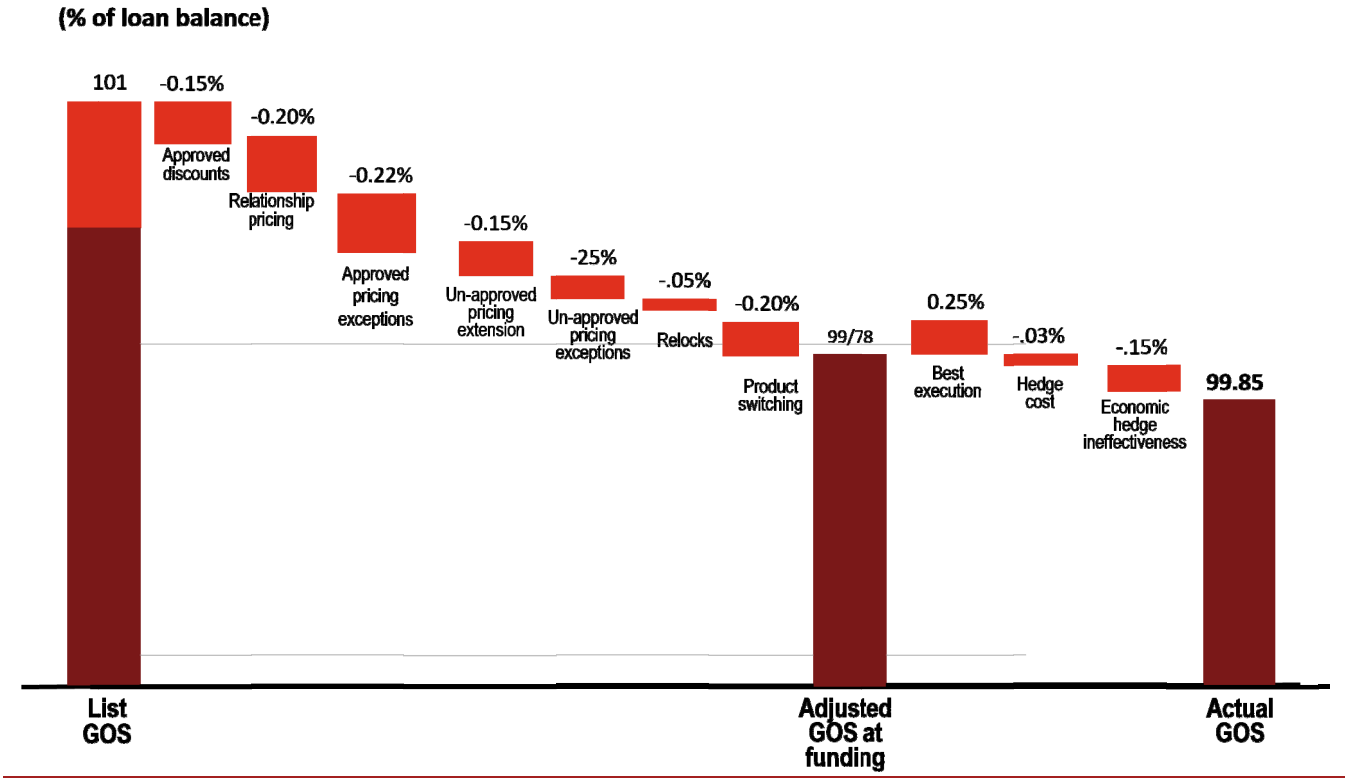
Similar to market attribution, product attribution are components related to GOS that are affected by production related changes to an IRLC or funded loan. These changes are impacted by changes to operational capacity, varying production footprints, market volatility, increased competitive compression and changes to borrower behaviour. Examples of product attribution are changes such as:

- Renegotiations;
- Extensions or re-locks;
- Program changes;
- Changes to loan amount;
- Interest rate changes;
- Cycle time;
- Target profit margins; or
- Marketing programs.

The changes above commonly occur. For example, Production may request a marketing special in the form of a reduction of 25 basis points of margin for new purchase business. Often, these specials are deployed without any break-even analysis for performance measurement purposes or a pilot program to ascertain whether such a special would result in incremental revenue. Changes to anticipated margin should be tracked and measured.

Capturing and trending these changes will provide a lender a refined method of identifying where there may be a revenue leak in the loan origination process. There are many ways in which expected loan value can be diminished throughout the loan origination process. For example, loan program changes can lead to unhedged basis risk or loan pricing exceptions can lead to reduced GOS income. In performing this type of analysis, it is expected that results may be leveraged as part of a series of "scorecards" which can be designed to communicate relative performance to internal and external customers. The waterfall diagram below illustrates one example of an analysis that could be generated, at a loan level, for aggregation to a more detailed scorecard. Identifying these events and measuring the impact of them on GOS is important to determine hedge effectiveness and hedge performance.

**Illustrative loan level analysis**




## *The future state of GOS performance*

As the competitive landscape continues to evolve in the origination business, we anticipate lenders will be compelled to adjust pricing and hedging strategies and, as a result, will discover there is a need to perform an analysis on current practices versus what is best practice for GOS attribution. More attention will be given to governance, competitive and market intelligence, analytical models, loan sale execution and management reporting. Defining the desired practice and developing a road map to achieve this desired practice from the current state is what will give lenders a competitive edge against their peers.

Large lenders that made the decision to stay in the market will find their dominance challenged by new players like the large independent lenders who just a short time ago were regional lenders. The credit unions and regional banks whose corporate charters used to limit their production footprint to their respective regions have now expanded nationally.

Lenders will also seek to re-evaluate their current hedging and margin strategy not only to address the changing profit margin environment, characterized by desire to analyse GOS economics at the loan level (market and production attribution), but also to ensure compliance with the evolving regulatory environment.

## *Conclusion*

Understanding GOS revenue drivers requires exercising a disciplined and consistent approach towards hedging, valuation and pricing activities. Developing, implementing and integrating an effective hedge and price strategy require lenders to adopt a method to capture market and production attributes so that end to end economics of the loan sale can be analysed and measured. Performance results can drive future margin and pricing decisions that result in revenue optimization.

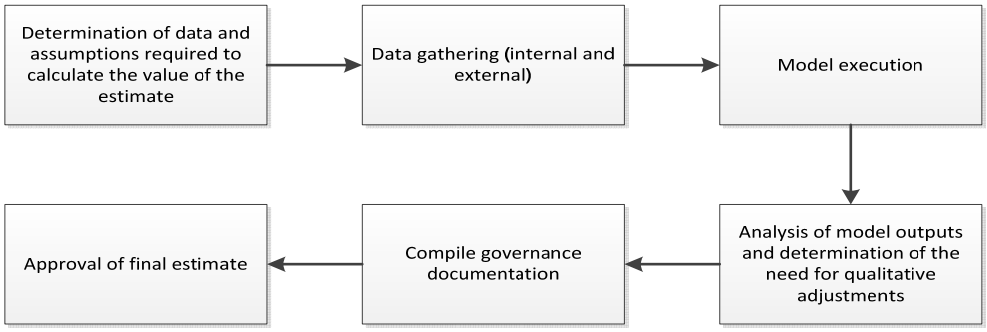
# Key considerations for accounting estimates

## Introduction

Changes in the business landscape and regulatory environment have contributed to an increasing role of accounting estimates in financial reporting for many banks. For example, the recent pick-up in M&A activity within the mortgage and consumer lending sectors has resulted in increased numbers of business combinations and strategic asset acquisitions, requiring estimates of the fair value of acquired financial and non-financial assets and liabilities resulting from these transactions. Regulatory and investor actions such as settlements related to prior mortgage origination or servicing errors have also increased reliance on estimates for contingent liabilities.

Often, the derivation of these accounting estimates requires significant management judgment, which keeps a bright spotlight on these accounting estimates from the users of the financial statements, regulators, and external auditors. It is important that an assessment has been made of the quality of the end to end governance process specific to key accounting estimates, ensuring that controls are in place and operating at the appropriate level.

An example of a typical process flow for determining the value of an accounting estimate is shown below:




As it relates to the execution of these processes for most accounting estimates, many banks and financial service companies have increased the level of sophistication of their governance process over recent years; however, certain key aspects of these processes increase the risk of material misstatement and therefore merit on-going assessment by management. This article describes some of those potential risks and management considerations for mitigating these risks.

## *Discussion*

### *Understand the specific contractual requirements*

Obtaining a complete understanding of the contractual requirements underlying a particular estimate is an important part of the process for identifying the data and assumptions required to calculate the value of a particular accounting estimate. Products and services offered by financial services companies today are often delivered under terms and conditions of complex contracts or other similar legal agreements. Comprehensive review of contracts is essential to mitigate the risk of non-performance or breach of contract, and therefore, exposure to possible loss contingencies. Consider for example contracts within the mortgage banking industry. Mortgage originators and servicers generally make certain representations and warranties at the time of selling loans to third party investors, in the case of originators, or when entering into agreements to service mortgage loans owned by others, in the case of mortgage servicers. Contracts underlying these transactions often convey rights to an investor to pursue damages or financial penalties where the originator/servicer fails to comply with representations and warranties conveyed to the investor at the outset of the contract.

Given the inherent complexity associated with many of the contracts executed in practice today, companies should consider the following leading practices when reviewing contracts:

- Ensure the company's control activities incorporate specific contract review controls for significant and/or non-standard contracts.
- Document the review of contracts, including contract terms & conditions that may expose the company to financial loss in the event of non-performance or breach.
- Identify specific control activities, including operational controls, to mitigate the risk of non-performance or breach of contract.
- Expand management reporting to include both financial and non-financial key performance indicators that possess predictive power and can identify adverse trends that could result in financial losses to the company.
- Ensure model controls address the completeness and accuracy of both financial and non-financial (unit attribute) data where models are utilized to measure losses due to breach of contract.

## *Data gathering – vendor management*

Banks and financial service companies frequently leverage third-party experts or other advisors to assist in the data gathering aspects of the accounting estimates process, whether in the development or independent challenge of accounting estimates. This is often the case when valuing assets and liabilities measured at fair value with significant unobservable inputs or when assessing the adequacy of reserves for certain contingencies.

Where vendor processes and controls support accounting estimates, effective vendor risk management is critical to the quality of the financial reporting as well as the effectiveness of the internal controls over financial reporting ("ICFR"). A robust control environment typically includes processes and controls over vendor selection, performance monitoring and the periodic evaluation of specific processes and controls resident within the vendor's operations. Where control weaknesses are identified within vendor processes relied upon by the company, these weaknesses should be considered by management in their overall evaluation of the effectiveness of the company's ICFR.

## *Model risk management and governance*

Virtually all financial institutions utilize financial models in some capacity to derive complex accounting estimates reported in the financial statements. Financial models are often essential to the estimation process whether default probability and loss severity models used in a financial institution's estimation of the allowance for loan losses, or discounted cash flow models used in the valuation of assets such mortgage servicing rights or a reporting unit in a goodwill impairment analysis.

Model risk management, including the establishment of effective governance over enterprise model risk, continues to garner significant attention from regulators and external auditors. In 2011, the Office of the Comptroller of the Currency ("OCC") and the Federal Reserve adopted OCC 2011-12 (or SR 11-7), *Supervisory Guidance on Model Risk Management*. Among other things, the interagency supervisory guidance emphasizes the importance of establishing sound model risk management policies, procedures and practices.

While many financial institutions have made enhancements to existing model risk management and governance practices subsequent to the release of OCC 2011-12, opportunities for further enhancement remain, particularly as it relates to companies' independent model validation ("IMV") function. Management should consider the following questions when assessing the quality of IMV functions internal to their organizations:

- Does appropriate governance and oversight exist over the IMV function?

- Does the IMV function possess the appropriate skill sets and knowledge to provide effective challenge to the Company's models and does the IMV function have access to independent information and tools to validate model results?

- Does the scope of the IMV function seek to address model suitability? Are limitations and weaknesses identified and assessed by the IMV function versus use of a binary "valid"/"not valid" scoring system?

- Does the IMV function scrutinize top-side or other qualitative adjustments to modelled outputs with the same rigor as model-driven outputs? Are those adjustments adequately documented and supportable?

- Is performance monitoring of models, including attribution of model differences, performed on an on-going basis? Does management have appropriate escalation protocols when performance issues are identified?

## *Analysis of model outputs and determination of the need for qualitative adjustments*

As it relates to the analysis of model outputs, one of the more challenging aspects of this process is dealing with periods of change, where historical data and performance may not be reflective of current and expected future performance due to changes in market dynamics.

We are right in the middle of one of these periods of change. For example, financial institutions are coming off of multiple years of poor performance are returning to more consistent profitability. Interest rates, which were held at historically low levels for an extended period of time, are now starting to move upward. Additionally, home prices have increased from levels observed during the financial crisis. These factors, coupled with the M&A activity referenced above, have created large shifts in current market and portfolio dynamics relative to past historical performance for many companies. As a result, there has been an increasing trend of the use of certain qualitative factors to adjust assumptions and model specifications derived from past historical performance to be more reflective of expected performance in today's market environment.

Model adjustments may be needed for a variety of reasons but are often the result of model limitations or to account for differences between company-specific data and data sourced from outside of the company. The following practices should be considered by management where model outputs require adjustment:

- Model adjustments, whether derived by quantitative or qualitative techniques, should be well-supported and documented by the company.

- Support for model adjustments should not only consist of support for the magnitude of the adjustment, but also why the period in which the qualitative adjustment was made was the appropriate period (and why prior periods did not require similar adjustment).

- Processes and controls should be designed and implemented over the process whereby model adjustments are derived and reviewed.

## *Compilation of governance documentation and approval of the final estimate*

When evaluating the reasonableness of accounting estimates, companies frequently design and rely upon review controls. Consider examples whereby the Corporate Controller reviews the results of the annual goodwill impairment tests for the company's reporting units or a company's allowance for loan losses ("ALL") committee reviews the ALL estimate for the quarter. Review controls continue to garner significant attention from external auditors. When assessing the design and operating effectiveness of review controls, companies should consider the following practices:

- Controls should be designed to ensure the completeness and accuracy of data subject to the review control.

- Internal controls should include consideration of information provided to those charged with governance. That is, controls should be designed to ensure data provided to governance committees is both complete and accurate.

- Review controls should be designed at a precision level to detect a misstatement that could warranty the attention of those charged with governance

- Where applicable, reviewers should have access to independently sourced information and/or challenger models to conduct effective reviews.

- The review process should be well documented and outline the issues escalation protocol followed by the reviewer.

- The suitability of the reviewer (that is, the reviewer's skills, knowledge and expertise) should be formally evaluated by those charged with governance of the accounting estimate.

- Decisions reached by governance committees should be well documented and include consideration of factors analyzed in reaching the decision, evidence of any conflicting information considered and the governance committee's rationale for changes in process or inputs used to derive the estimate.

## *Conclusion*

Effective oversight of accounting estimates has always been a challenge, and will continue to be so for the foreseeable future. Management should continue to scrutinize their own end to end governance processes used in developing these accounting estimates and be aware of the common pitfalls and risks observed in these processes. The management actions and consideration above will help reduce the risk of material misstatement resulting from unsupportable estimates.

# Servicing advance reserves – Reacting to a changing environment

## Introduction

The estimation of servicing advance reserves has been increasing in complexity and significance warranting attention from accounting and finance senior management. Certain large financial services institutions have recently reported adjustments to their advance reserve coverage and/or methodology of sufficient magnitude to warrant disclosure in quarterly earnings materials supporting this enhanced focus. This trend figures to continue with additional scrutiny from the insurer/investor community with the most recent public example coming in the form of the FHFA OIG Report evaluating servicer reimbursement operations[1]. Finally, elevated complexity has been driven by the nature of the low-volume, high-dollar transactions and a need to effectively develop, implement, and maintain connectivity between default operations and the accounting function which has historically been challenging for servicers.

## Discussion

### Servicing advance background

Servicing advances are payments which a residential mortgage servicer makes on behalf of a borrower and/or an investor. These advances are typically categorized into three discrete types:

- **Principal and interest (P&I) advances** – Payments made by a servicer to a third-party investor to maintain the scheduled payment of principal and interest upon borrower non-performance.

- **Escrow advances** – Payments made by a servicer primarily to a tax authority or insurance provider to maintain good standing on tax payments and homeowner insurance coverage on the property.

- **Corporate advances (also known as default advances)** – Miscellaneous payments made by a servicer predominantly related to third-party services to administer the default process such as foreclosure attorney costs and fees, court costs, and property maintenance expenses.

Servicing advances related to uninsured servicer-owned portfolio loans are typically expensed at or near incurrence date and as such the focus of this article is placed upon advances on insured loans or servicing performed for third parties. Further there has historically been limited curtailment or collection shortfall on P&I and Escrow Advances and as such the focus is further narrowed to the recovery of Corporate Advances.

[1] FHFA OIG Report "Evaluation of Fannie Mae's Servicer Reimbursement Operations for Delinquency Expenses," http://fhfaoig.gov/Content/Files/EVL-2013-012.pdf

Servicing advance reserve accounting is widely interpreted to fall under ASC 450-20, *Loss Contingencies*, as advances represent a receivable balance. As such, the reserve contingency is to be recorded when a probable loss has been incurred and that loss is reasonably estimable. Many industry participants rely on historical experience to inform their judgment of loss probability and estimation. A challenge faced by accounting and finance managers has been how to reflect a rapidly changing environment into this historical loss experience. Specifically, given the speed of change the look-back window for predictive loss rate data may reasonably be viewed as shortening significantly to only consider recent experiences.

## *Environmental factors*

There are a number of environmental factors which have impacted corporate advance balances and recovery. The section below focuses specifically on factors impacting magnitude, scrutiny, and complexity of corporate advance balances.

### Magnitude

The magnitude of corporate advance balances has been influenced by historically elevated delinquency levels of recent years (albeit now receding) and more significantly elongated foreclosure timeframes in an environment requiring additional control validations before executing foreclosure sale. These factors have both increased many institutions' overall corporate advance balances as well as both the per-loan balance and number of advances disbursed per loan. In general, this increase in volume has the opportunity to introduce strain on operational processes resulting in elevated processing errors.

### Scrutiny

The level of scrutiny on servicer reimbursements has also been increasing from the insurer/investor community. In most cases, reimbursing servicing advances increases the severity and as such the insurer/investor is incented to maximize claim curtailments. In September 2013, the FHFA OIG released a report on servicing advance reimbursement which suggested that the reviewed party "does not effectively utilize (these) data to minimize processing errors" and estimated that processing errors prompted overpayment of $89 million to servicers. These findings required a remediation plan to be established which it is reasonable to presume will result in further scrutiny during the advance reimbursement process and potentially higher curtailment rates in the future.

### Complexity

Corporate advance transactions also are among the most complex executed by Mortgage Banking organizations. These balances are typically high-volume and low-balance in nature which has historically resulted in a less robust control environment. Additionally, each transaction can be subject to varying rules to determine collectability including legislative, judicial, investor, guarantor, and/or insurer rules which may influence which transactions are recoverable as opposed to those where collection is doubtful. The determination whether to record a disbursement as recoverable (capitalized) or non-recoverable (expensed) can largely influence an organization's back-end recovery/write-off experience.

## *Estimation best practices*

Given the environmental factors affecting Corporate Advance Reserve estimation, a number of best practices have emerged among industry participants:

- **Understanding and applying insurer/investor rules** – Different insurers and investors have different advance reimbursement rules which may result in disparate collectability for the same advance transaction. For example, certain FHA insured expenses are subject to a fixed percentage reimbursement based upon servicer rating, VA transactions are subject to a "max guarantee" calculation, and the GSEs maintain separate servicing advance reimbursement guidelines. These rule variances should be taken into account when establishing recoverability expectations to enhance the precision of the reserve estimate.

- **Disaggregation by advance type** – Similar to the different insurer/investor types, the type of corporate advance transaction can also influence collectability. For example, some advance types have been widely denied claim by certain investors while others are subject to maximum number eligible for reimbursement. Transactions capitalized in a modification is an example of a transaction which may have limited collectability as certain investors only allow those advances to be claimed in the event that the modification re-defaults.

- **Loss analysis function** – Loss analysis is the primary tool by which to introduce quantitative analysis into qualitative context provided by operational leaders. The loss analysis process is typically focused upon quantifying post-claim loss rates by loan and advance type. This loss rate data often serves as a critical input into the reserve estimation process.

- **Operational linkage** – Many industry participants have focused upon developing a formal link, such as recurring governance committee meetings, between the various parties involved in the advance disbursement and recovery process. This linkage includes the invoice processing, claims, and accounting functions and focuses upon capturing emerging trends (e.g. counterparty behavior) which may not yet manifest in loss rates but is appropriate for consideration in the reserve determination.

- **Periodic recoverability reviews** – Engagement of legal counsel and the claims function to review the recoverability coding utilized to ensure accuracy. Performing these reviews on a periodic basis also ensure that any changes to recoverability are captured and recorded in a timely manner.

- **Symmetry with MSR accounting** – Potential future default servicing costs, which reasonably include servicing advance curtailments, are modeled as a component of MSR value. Clear policy alignment between the MSR asset and the servicing advance reserve is necessary to avoid either a double-count or potential period of exclusion between the two measurements.

## *Conclusion*

Financial services institutions who maintain mortgage servicing operations should be closely scrutinizing their reserve methodologies to ensure they stand up to the increased magnitude and complexity of corporate advances. Given the various types of corporate advance transactions and rules governing recoverability of those transactions the ability to successfully capture and account for the granularity of the process is crucial to establish a reliable reserve estimate. Further, the speed of change driven by the environmental factors described above challenges organizations to maintain a robust and informed reserve estimate.

# *Will regulatory capital force MSRs into the shadow banking system?*

## *Introduction*

In July 2013, the banking agencies finalized the regulatory capital rules for banking institutions implementing Basel III in the US. The minimum regulatory capital associated with mortgage servicing rights (MSR) will increase to levels that may become cost prohibitive for some regulated banking institutions. Regulatory capital increasingly forces banks to reconsider the servicing business model and may become a driver for MSR sale transactions to non-bank servicers.

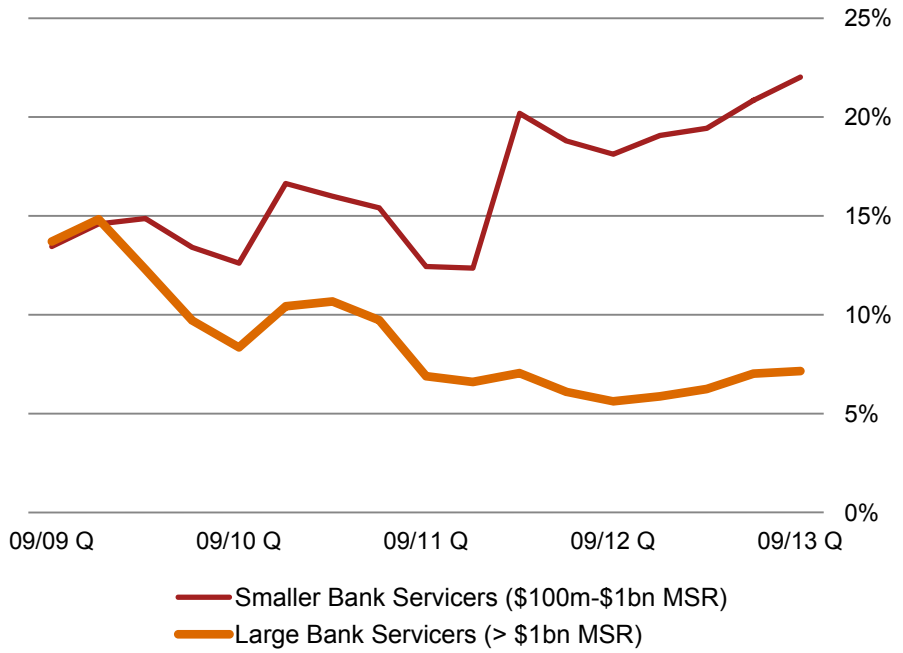
## *Discussion*

### *MSR Basel III capital consumption*

Banking institutions holding relatively significant MSRs on their books may face some challenges in meeting their regulatory capital requirements under Basel III and / or in maintaining appropriate return on equity.

While most large bank-servicers are on the road to reducing their relative level of MSRs relative to tier 1 capital, smaller institutions show the opposite trend with increasing relative MSR. Note that the chart does not portray the concentration of MSRs in the banking industry with eight large bank-servicers, defined as holding MSR in excess of $1bn, capitalizing 82% of the MSR in the banking industry (excluding non-bank servicers).

**MSR/Tier 1 capital**



The decrease in the MSR-to-tier 1 capital ratio of larger servicers is mostly explained by an increase in capital over the past four years, rather than a decrease in MSR balances. These entities were subject to additional capital scrutiny from their regulators and have been increasing their capital levels over the past four years. Although larger bank-servicers seem to be better positioned to manage the Basel III thresholds discussed below, uncertainties will remain, as further discussed below.

Smaller institutions on the other hand, experienced an increase in the MSR-to-tier 1 capital ratio mostly due to an increase in the MSR balances that could not be offset by an increase in capital. Note that the average regulatory capital ratio of these smaller banking institutions (18%) significantly exceeds the average of the larger bank-servicers (11%) and more than double the actual minimum regulatory level.

## *Incremental capital requirements for MSRs under Basel III – A brief overview*

Basel III changes the calculation of regulatory risk-based capital for MSRs in two ways. First, the new rules reduce the maximum amount of MSRs that will be allowed as assets, thus may increase the capital deductions due to MSRs.

Currently, the amount of MSRs allowed on balance sheet as risk-weighted assets for regulatory capital purposes is limited to 90% of its fair value, i.e., 10% of the MSR asset is directly deducted from tier 1 capital. Furthermore, MSRs cannot exceed 100% of tier 1 capital, in aggregate with non-mortgage servicing assets and purchased credit card relationships asset.

These two thresholds are eliminated by Basel III but replaced by different, generally more stringent thresholds that are driving the MSR market changes. The first new threshold will require the amount of MSRs on balance sheet to not exceed 10% of tier 1 common capital. The second new threshold will restrict the aggregated amount of MSRs together with certain deferred tax assets and significant investments in unconsolidated financial institutions to 15% of tier 1 common capital. Any excess amount will be directly deducted from tier 1 common equity. The deductions may be net of the associated deferred tax liabilities, and are phased in over a 5 year transition period from 2014 to 2018, as indicated in the table below.

The second key change of Basel III is the combined effect of increased risk weighting of MSRs and increased minimum risk-based capital ratios. The risk weighting of the portion of the MSR asset balance that is not subject to the deduction described above is increased from 100% today to a 250% risk weight with the change effective on January 1, 2018. In addition, the minimum total risk based capital ratio increases from 8% today to 10.5% with the fully phased-in capital conservation buffer on January 1, 2019. These effects are summarized in the following table:

| | 1/1/2014 | 1/1/2015 | 1/1/2016 | 1/1/2017 | 1/1/2018 | 1/1/2019 |
|---|---|---|---|---|---|---|
| Common equity tier 1 (CET1) + capital conservation buffer | - | 4.5% | 5.125% | 5.75% | 6.375% | 7% |
| Total risk-based capital + capital conservation buffer | 8% | 8% | 8.625% | 9.25% | 9.875% | 10.5% |
| MSR 10%/15% CET1 deduction percentage | 20%* | 40% | 60% | 80% | 100% | 100% |
| MSR risk weight (after 10%/15% CET1 deduction) | 100% | 100% | 100% | 100% | 250% | 250% |
| MSR effective capital (w/o any CET1 deduction threshold) | 17% | 8%** | 9%** | 9%** | 25% | 26% |

* Advanced approach banks only.

** Temporary reduction due to the 90% fair value cap removal.

The impact of the new rules may be summarized in the following illustrative example demonstrating impacts on an institution before and after the phase-in and under scenarios with and without capital deduction:

| Simplified illustrative example: | 2013 | | 2019 | |
|---|---|---|---|---|
| | No deduction | Capital deduction | No deduction | Capital deduction |
| MSR | $100 | $100 | $100 | $100 |
| Capital deduction example | - | $10[a] | - | $20[b] |
| MSR cap | $100 | $90 | $100 | $80 |
| MSR risk-weight | 100% | 100% | 250% | 250% |
| Risk based capital ratio | 8% | 8% | 10.5% | 10.5% |
| Effective capital – $[c] | $8 | $17.2 | $26.3 | $41 |
| Effective capital – % | 8% | 17% | 26% | 41% |

(a): MSR included in capital is limited to 90% of its fair value, assuming book value equals fair value

(b): MSR included in capital cannot exceed 10% of common equity tier 1, assumed $800 in this example

(c): MSR times risk weight times risk based capital ratio

Larger financial institutions are also subject to new regulatory capital requirements, namely stress testing. Banking institutions with assets exceeding $10bn are required to provide regulators with capital stress testing results under CCAR or DFAST. MSR income and loss projections are included in pre-provision net revenue or PPNR together with the sum of net interest income and noninterest income net of noninterest expense.

Unlike credit or other losses adversely impacting equity, the projections of MSRs under different scenarios combine future income streams with losses, including MSR book value losses. The outcome varies by institutions as the revenue and growth projections over the nine quarter horizon may offset the adverse change in MSR value due to an instantaneous shock in default including cost to service. One additional outcome of the exercise is a better appreciation for customer segmentation, as capital requirements and induced profitability of an MSR portfolio may be driven by these stress scenarios.

## *Ongoing sources of uncertainties to manage capital*

The Basel III transition period may provide banking institutions time to plan for the new rules, although that time is reduced when considering market and regulators expectations. However, uncertainty in the amount of capital required for holding MSRs will remain on a business-as-usual basis.

First and foremost, banking institutions have little control over the volatility associated with certain accounts that are included in the calculation of the capital deduction thresholds. Banking institutions may be able to plan around the tier 1 common capital 10% threshold for MSRs, however less control can be exercised over the 15% threshold. Specifically, certain deferred tax assets will have to be monitored: for example, when economic conditions worsen, the combined effect of potential losses and increased deferred tax assets associated with an increased allowance for loan losses would reduce the capital and increase the amount to be included in the calculation of the 15% deduction. Similarly, banking institutions may not control other accounts included in the calculations, adjustments or deductions of regulatory capital. For example, depending on the opt-out election, securities' unrealized gains and losses may affect the thresholds.

The second source of uncertainty is the potential volatility associated with the valuation of MSRs. MSRs are subject to changes in fair value due to interest rates, prepayment speeds and credit quality of the underlying loans, and other factors that are mainly outside the control of the holder of MSRs. A large number of banking institutions elected to account for their MSRs – all or some – at fair value with changes recognized in net income. As the MSR value increases, the risk of exceeding the regulatory tier 1 common equity threshold rises. Hedging

MSRs exacerbates the issue as losses on hedging instruments – in case of increase in MSR values – will decrease common equity. Others account for their MSRs at amortized cost. They are impacted by valuation changes too, although indirectly. These institutions will be limited in their ability to grow through future originations/refinancing or purchases of MSRs, due to the risk of exceeding the tier 1 common equity thresholds.

## *Potential responses*

Two potential actions may be executed before the rules are fully effective, absent any servicing compensation reform as previously initiated by the Federal Housing Finance Agency ("FHFA"): increase capital and/or reduce the MSR asset on balance sheet. Regardless of the decision, the economics of the MSR business for regulated banking institutions are impacted.

While the transition period of four to five years provides some flexibility to generate further capital buffers through earnings generation or stock issuance, the increase in capital may not be sufficient or even possible for some institutions and either the sale of MSRs or the run-off of the MSRs and limits on future capitalization may be the most appropriate course of actions. Furthermore, a capital increase would adversely change the economics, with a lower return on equity assuming no pricing change to the consumer or investor.

The sale of MSRs raises financial and business issues to carefully consider. Banking institutions may envision two transaction types. The bulk sale or sale of the legacy portfolio as of today or at transition date may allow for an immediate relief on the 10%-15% tier 1 common equity thresholds. However, to the extent the business model does not change, flow sale agreements may be needed in addition to support an institution's growth. The banking institutions will need to contract with accredited/approved servicers willing to buy on a flow basis. Other alternatives may be available, including a carve-out or spin-off of the servicing business or some type of related party transactions.

The accounting framework for sale transactions is based on a risk and rewards model and is relatively straightforward for outright MSR sales with no continuing involvement. However, when financial institutions wish to retain some customer relationships – for the full portfolio or targeted customer segments – or some share of the MSR return, the sub-servicing agreements or other type of continuing involvements may fail sale accounting. Most likely, the excess servicing component of the MSR may not be retained by the financial institution. This excess servicing component has been attractive to IO (interest only) investors. Some transactions may achieve off-balance sheet treatment, and regulatory capital relief, after careful evaluation of the economics and rights and obligations of the selling institution.

## *Conclusion*

To summarize, those financial institutions that hold MSR close to or in excess of the regulatory capital thresholds will benefit from performing a comprehensive assessment of their alternatives. Similarly, all regulated institutions may benefit from re-evaluating the relative profitability of their servicing business. The assessment should include risk and return considerations that start from business objectives including MSR customer segmentation and profitability projections. Some financial institutions have already established and implemented their strategy, for example reducing the MSR exposure, overall or to certain customer segments. Other transactions will be necessary for smaller institutions and on an ad-hoc basis for others.

# QM = QRM: Capital impact of securitization risk retention on mortgage lending

## Introduction

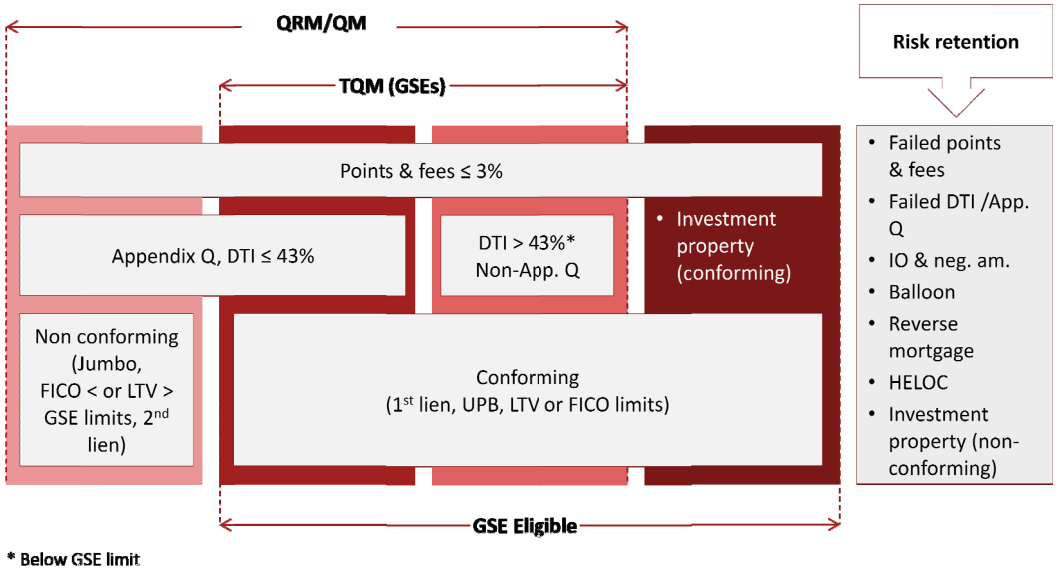
Three regulatory rules released this year provide an outline on how the mortgage lending business may be shaping up: the Qualified Mortgages (QM) rules, the revised risk-based capital requirements for regulated banks (aka Basel III), and the re-proposed rules (NPR) –not final- for securitization credit risk retention and the associated exemption for Qualified Residential Mortgages (QRM), whose proposed definition is aligned with QM loans. Absent any significant Government Sponsored Entities (GSE) reform change, the combination of these rules may actually crystalize rather than change the existing segmentation of mortgage products and market participants, as described below:

1. Ginnie Mae and GSE securitizations may maintain their competitive advantage as no risk retention will be required from originators, aggregators or sellers.

2. Jumbo loans or other non-conforming loans stretching the credit box (e.g., with lower credit score or higher loan-to-value (LTV) ratios than GSE limits) may benefit from the same securitization risk retention exemption if they meet the QM status. Market will continue to dictate actual risk retention.

3. Interest-only (IOs), balloon repayment, reverse mortgage, home equity, investment property or other non-QM loans (including jumbo and other non-conforming loans with higher DTI) may increase lenders liability concerns and funding costs. Securitization may not be a viable alternative from a pricing or capital relief perspective.

The three populations of loans and respective securitization credit risk retention requirements are summarized in an illustrative manner in the chart below:



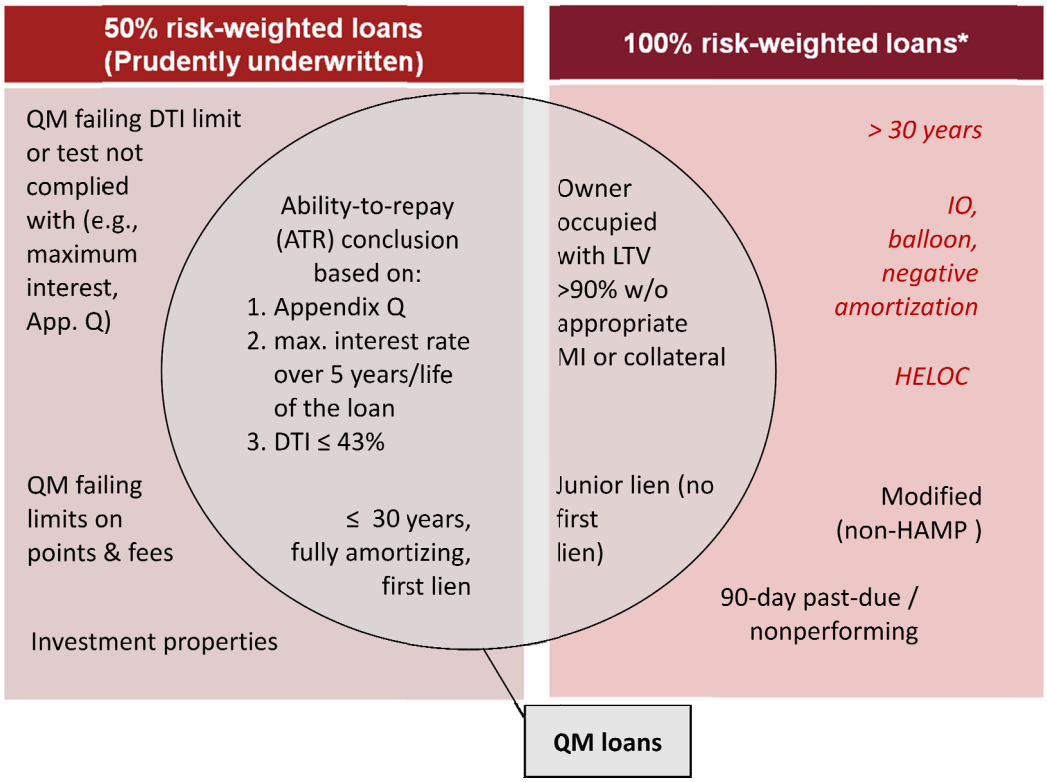
## *Discussion*

### *Securitization and regulatory capital background*

Form and amount of risk and reward retention dictate whether a securitization remains on- or off-balance sheet under GAAP and whether any regulatory capital may be released. A risk and reward retention that would be deemed 'too rich' would generally fail sale accounting and may require consolidation of the securitization vehicle, i.e., not achieving off balance sheet treatment.

Basel III and regulatory capital consumption may not be the primary drivers in the decision to securitize but have an impact on capital allocation and the economics of securitization transactions. Banks typically monitor two minimal capital requirements: the risk-based capital ratio, and the leverage ratio that tends to operate as a floor. One of the objectives of risk-based capital requirements is to make it indifferent for banks to hold an asset or a residual interest in the asset that bears the same risks. The risk-based capital ratio is calculated as the ratio of equity to risk weighted assets. Other considerations apply to larger banks following an advanced approach or when categorized as globally systemically important.

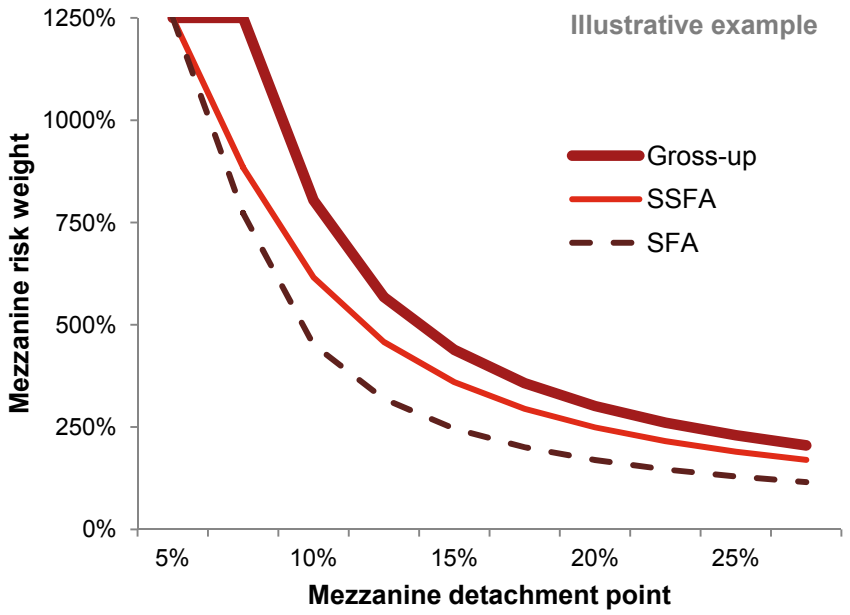
Most loans are assigned a 100% risk weight. However, first lien residential mortgage loans benefit from a preferential 50% risk weight when "prudently underwritten." Risk weights have not changed with Basel III and the regulatory capital rules do not make any reference to QM and mapping QM loans with risk-weights may prove challenging. For example, a first lien, prudently underwritten residential mortgage loan may be 50% risk weighted although not a QM, if it meets all QM criteria but fails the 3% threshold of points and fees. The following diagram illustrates in a simplified manner the mapping of loans between QM rules and risk-based capital requirement rules:




(*) The example loans indicated in italics and red font above in the 100% risk-weight category may differ by banking organization based on individual underwriting policies.

The assignment of risk weight to securities is relatively more complex since the Basel III adoption and is based on the asset quality and support structure of the securitization vehicle. In general, senior tranches of mortgage back securities will be assigned a 20% or 50% risk weight floor and junior tranches a 1,250% risk weight ceiling. The chart below illustrates the different risk weights allocated to a mezzanine tranche (y-axis) with a 4% support/attachment point associated with different detachment points (x-axis), under the three different regulatory approaches.

**Risk weight of securitization exposure**




Basel III provides banking institutions with some choice in the calculation of securitization exposures: between the gross-up approach and the Simplified Supervisory Formula Approach (SSFA), or the Supervisory Formula Approach (SFA). While simpler, the gross-up approach tends to be less sensitive to the credit quality of the assets and does not reflect the credit enhancement provided by subordinated tranches. Similarly, larger banks may opt for the SFA that tends to be more sensitive to the credit quality of the assets, although more data intensive. In other words, carefully selecting the regulatory securitization approach may reduce capital requirements.

## *Private label QM securitizations*

Similar to GSE and government-guaranteed securitizations, private label securitizations of QM loans will benefit from the exemption of credit risk retention under the NPR. Regulated banks will continue to have some flexibility in the amount and form of risk, interest and involvement they wish to retain in securitizations. Market demand, including rating agencies will continue to drive or impose some restrictions, for example with the definition of minimum first loss residual positions. The investors' appetite for such tranches may ultimately dictate what securitizers will have to retain.

A first loss, residual risk retention by the seller/securitizer creates a hurdle to achieve sale accounting and off-balance sheet treatment under GAAP. Generally, the higher the amount of risk is retained, the higher the hurdle. In addition, assuming sale accounting and off balance sheet treatment is achieved for GAAP and regulatory purposes, a private label QM securitization may not necessarily reduce the overall regulatory capital over its duration.

For example, holding a 2% first loss, residual interest may reduce the amount of capital in half at inception when comparing with the underlying loan portfolio pre-securitization, as illustrated in the table below. However, as time decays, the capital requirement of the underlying loans would tend to decrease faster through scheduled amortization or early repayments than the capital requirement of the residual interest.

| Asset on balance sheet | | Risk weight | Risk-weighted asset | Capital ratio | Capital |
|---|---|---|---|---|---|
| 2% first loss residual interest | $ 100 | 1,250% | $ 1,250 | 15% | $ 188 |
| Loan portfolio or on-balance sheet securitization | $ 5,000 | 50% | $ 2,500 | 15% | $ 375 |

For reference, junior/residual tranches that provide support to investment grade tranches (BBB rated or higher) approximated 2% in past private label securitizations post-financial crisis, while AAA tranches benefited from an approximate 8% support.

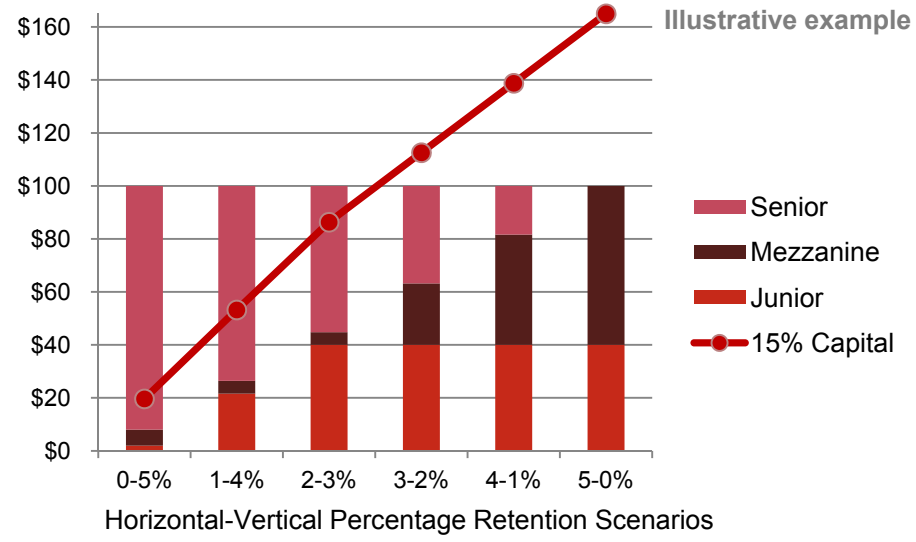
## *Private label securitization of non-QM loans?*

As discussed earlier, non-QM loans may consume more capital than QM loans, if on balance sheet. Nuances exist depending on the reasons why loans fail QM status. For example, private banks may determine that IOs to a certain high net worth population segment are prudently underwritten and may be subject to the reduced risk based capital (i.e., 50% risk weight).

Unlike QM loans where securitization risk retention is driven by the market demand, securitization of non-QM loans will be subject to minimum risk retention mandated by the regulator. The NPR establishes the quantitative threshold: an interest that represents 5% minimum of the fair value of the transaction must be retained by the securitizer. The NPR provides the option to allocate/share risk retention between originators/sellers and aggregators or securitizers.

The NPR also establishes the form of risk retention: the securitizer may retain the 5% interest in the form of first loss residual (horizontal) tranches, vertical tranches, or a combination of horizontal and vertical tranches (aka L-shape). The optimal form of credit risk retention will need to accommodate the expectations of the different stakeholders. From the perspective of the securitizer, the more vertical the retention is, the lower the capital requirements are. On the other hand, investors, rating agencies or guarantors may favour more horizontal, first loss retention. The chart below summarizes, in a simplified, illustrative manner the capital requirement of a $100 securitization retained interest under different horizontal-vertical combinations.

**Retained securitization exposure and related capital**



While this is a simplified and illustrative example, the following conclusions may be drawn:

- The NPR eligible horizontal residual interest may be capital prohibitive for securitizers, as it may require more capital after securitization, and potentially more than on a dollar-for-dollar basis. In addition, this alternative may not be available due to off-balance sheet accounting restrictions; and

- A carefully designed hybrid L-shape scenario may accommodate all stakeholders, with sufficient junior tranche retention as generally accepted by the market, a capital requirement lower after securitization, and an equal or less than dollar-for-dollar capital requirement for the retained interest. However, this alternative may not be available due to the higher liability concerns associated with non QM loans.

## *Conclusion*

Banking institutions are required to reconsider their funding strategy of non-QM loans and the associated risks and returns, and more fundamentally the underwriting, investment and business strategy around the product and customer segment. Similarly, private label securitization of QM loans by regulated banking institutions will require a comprehensive and closer look of the underlying product type, the accounting treatment and the capital consumption.

# Debt covenant compliance process

## Introduction

Many mid-sized institutions do not emphasize an important task when it comes to maintaining their debt agreements: Developing an effective debt covenant compliance process.

For our discussion, covenants, similar to representations and warranties, are promises in any formal debt agreement, where the undertaking parties promise that certain activities or representations will or will not be met. Beyond the basic contractual requirements in the agreement e.g. we agree to buy X loan for Y price, there are other elements of the agreement that are in place to ensure and monitor the nature of the ongoing relationship between the contracting parties. Covenants that relate to financial ratios or equity capital which must be maintained for a certain period of time are often most common / familiar. Beyond these basics, financial covenants can cover a wide range of items from equity ratios, to EBITDA margin, to minimum/maximum dividend payments that must be maintained.

Non-financial covenants can include specific events, such as limitations on the transfer of assets, changes in ownership of the firm or compliance with key regulatory requirements. For creditors, covenants are usually deemed as "safety nets" that allow them to reassess their loan and the contractual relationship when the borrower's risk situation has changed.

Depending on the debt contract, a covenant breach can allow the lender to convert its debt to equity, demand full repayment of the loan, initiate bankruptcy measures, adjust the level of interest payments, or institute monetary penalties stated in the contract.

A covenant compliance process ensures (i) continuous monitoring of the compliance activities and (ii) timely reporting and communication with the creditor. The absence of a well-designed covenant oversight process can lead to a breach, and consequently to default, litigation or other contractual sanctions.

## Discussion

### *Key considerations for an effective covenant compliance process*

Where debt covenant ownership resides within an organization may depend on their size, organizational structure, reporting requirements and their contractual requirements. However every organization needs to consider certain points in order to ensure the development of a healthy and effective covenant compliance process and to avoid unexpected surprises.

- **Inventory of all debt agreements:** Ensure that a current inventory of all agreements that contain financial and non-financial

covenants is tracked and owned (usually by the Legal Department). This inventory should also include an assessment of which agreements need to be subject to formal covenant compliance tracking e.g. an agreement for office supplies would not typically rise to the level where it needs to be actively monitored.

- **Covenant inventory & compliance tracker:** Apart from the agreement inventory, an inventory of all financial and non-financial covenants is necessary to help management assess the risks attached to each covenant and monitor compliance on an ongoing basis.

- **List of "red flag" covenants:** Once the covenant inventory is in place, assess the risks attached to each covenant, determine which type of covenants should be avoided in the future debt agreements, and assign ownership and reporting requirements for the surviving covenants.

- **Covenant compliance coordinator:** Assign a specific person or team the task of coordinating covenant compliance activities to facilitate the continuous communication among all parties involved in the covenant compliance process. Specifically, many financial covenants require some form of reporting to the lender. For non-financial covenants there may need to provide an attestation of compliance or to notify the lender of any known breach.

- **Agreement notification process:** Develop a notification requirement/policy for the Legal Department to support your compliance process and to facilitate the maintenance of the covenant inventory. As the gatekeeper of all agreements, Legal needs to notify the covenant compliance coordinator and covenant owners when there are new, amended, terminated agreements that may impact the covenant compliance process.

- **Covenant compliance and controls policy:** Enhance accountability and awareness on covenant compliance within the organization through policies, procedures and controls.

- **Training:** Ensure that the knowledge of covenants and relevant responsibilities is widely disseminated across the organization, especially among the owners of the covenants.

- **Shared repository:** Create an accessible repository, which holds the evidence for covenant compliance activities.

## *Key stakeholders in covenant compliance process*

Depending on the type and size of the organization, there are a number of key stakeholders that will take part in the covenant compliance process:

- **Covenant compliance coordinator:** The overall process owner responsible for the execution of periodic covenant compliance activities. This role is often maintained in treasury, financial reporting, internal audit and/or legal. A key to success is to have the role clearly defined and supported at a level in the organization that facilitates compliance with the requests arising from the owner of this role.

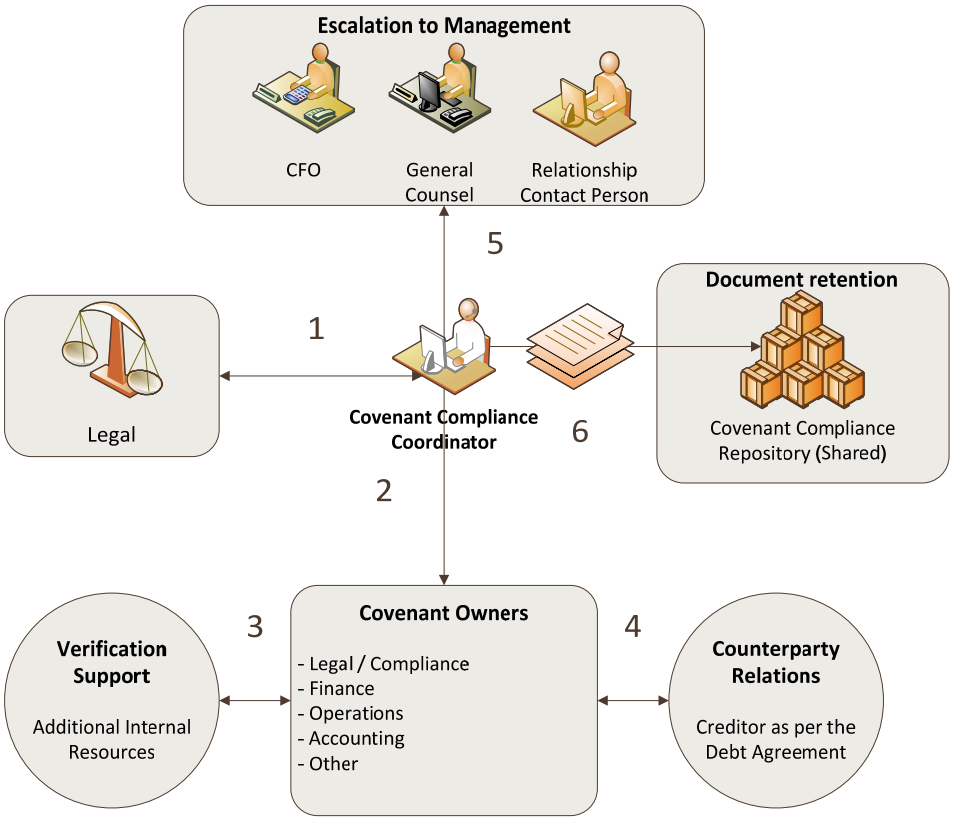
- **Legal department:** The legal function is the primary point of contact for all new and existing legal agreements. Relative to this activity, Legal is responsible for (1) notifying changes in the key agreements, (2) reviewing and verifying the covenants and interpretations listed in the covenant compliance inventory/tracker, and (3) verifying compliance with specific "legal covenants"

- **Covenant owners:** Personnel from various departments (e.g. finance, legal, operations) within the company who are responsible for verifying and signing off on periodic covenant compliance verification requests. Covenant owners may seek verification support from their staff or other internal contacts

- **CFO/ Treasurer/General Counsel:** Parties to whom the covenant compliance coordinator escalates instances of non-compliance (or no response) for follow-up action

- **Relationship contact:** Main contact owning the relationship with the counterparty in any agreement listed in the Key Agreement Inventory. When the covenant compliance coordinator escalates instances of non-compliance, this person should also be informed and be positioned to communicate with the counterparty to the contract.

## *Covenant compliance process example*




- **Step 1**. Legal to provide interim verification on new/updated/terminated covenants
- **Step 2**. Periodic communication and updates to and from covenant owners. This will include owners providing regular certifications that their covenants are in compliance
- **Step 3**. As needed, support is requested from relevant internal staff by the covenant owners
- **Step 4**. If required as per the covenant, send notification/certificate to Counterparty
- **Step 5**. In case of non-compliance, escalate to CFO, General Counsel, Relationship Contact
- **Step 6**. Save and archive verification documentation in a shared repository

## *Conclusion*

Many organizations are not aware of the high risk covenants that are currently included in their debt agreements and do not have adequate controls and monitoring/reporting structure to ensure compliance with such covenants. When things are going well, this may not result in a meaningful problem. However, surprises in this area can represent a significant threat to the organization, especially if a cross-default is triggered by an unrelated covenant breach. An effective covenant compliance process for debt agreements is essential to any organization`s compliance with its external liabilities and internal controls. Such process requires joint efforts of a large number of cross-functional business units, such as Legal Department, Treasury, Finance, Operations and the Management.

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