

Consumer Finance Update*

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Strategic and Operational Best Practices

Running a Consumer Finance Business—Dynamic Event Modeling

In previous editions of this newsletter, we have provided a top ten list of issues for the coming year. Look for just such a review in our next edition. For now, however, if we have witnessed one certainty, it is that things never turn out as expected. For this reason we are devoting this section of our newsletter to a new approach in understanding and quantifying the impacts of external and internal change in consumer financial services.

The idea is simple but its execution has proven difficult. In other industries, companies use models to understand how changes impact their strategy and growth objectives. For example, many Wall Street firms use models of the economy to better understand the impact of macroeconomic variables and interest rate scenarios on various industries and companies.

For consumer financial services companies, we refer to this approach as Dynamic Event Modeling (DEM). To achieve this, the company first develops a model that comprehensively captures all of its forecasting and business planning tools. An integrated model better provides the company with the ability to:

- More accurately reward performance by distinguishing between market driven or external factors and internal performance driven factors. For example, was the 10% increase in retail originations last quarter due more to the successful efforts of channel management and loan officers at expanding market share, or was it simply the result of an expanded mortgage market size due to lower interest rates, or was it a combination of both?
- Understand how different asset types generate value and reduce value in different rate environments. For example, how loan production offsets MSR value run off in a natural hedge scenario.
- Better enable the company to divert resources to where they are most likely needed. For example, a deterioration in credit quality could lead to reviews of default management staffing models and systems.

DEM should provide the company with the ability to better understand the impacts of various internal and external factors on bottom line business performance. Today, sophisticated consumer financial services companies should be running the following scenarios through DEM tools:

- A deterioration of 10%-20% in delinquency rates for subprime, credit card, and auto lending customers

- GNMA delinquencies increasing while mortgage rates remain below 6%, inhibiting the company from benefiting from early pool buyout rights
- The mortgage markets of 2005 and 2006 ranging from \$1.5-\$2.0 trillion
- Significant changes in underwriting criteria by the agencies
- A steep change in the volume of agency MBS held by foreign investors
- Small housing bubble bursts, e.g., Northern California
- Increases in third party origination volume at the expense of retail origination volume
- Margin compression in home equity lending
- Tightening and widening mortgage-swap or mortgage-Treasury interest rate spreads
- Change in volume mix from hybrid ARM to option ARM

We do not advocate investments in large science project style economic models. Rather, we encourage our clients to start simple, even in spreadsheet form, to build up a model that:

- Captures all asset and liability types and income and cost streams managed by the company
- Recognizes differences between financial and management reporting
- Reflects all the factors, internal and external, that management has observed (or anticipates will) impact profitability
- Provides for flexible input of a range of factors that drive profitability
- Does not oversimplify cost measurement
- Provides for robust scenario management capability
- Enables the company to export forecasted results so that rate-volume type of analysis against actuals can be performed to backtest model inputs and logic

This is an emerging area for consumer finance but we believe that the next generation of growth will be fueled by smart, flexible companies that can swiftly understand market trends and plan accordingly.

For more information on DEM, please contact Steve Davies at 206-398-3519 or at steve.t.davies@us.pwc.com.



Pricing Matters: What Counts (and What Does Not Get Counted)

In 2004 we saw small refinance surges as rate increases were broken up by periods of declining rates. However, the ongoing decline in refinance volume, and the return of the purchase money market has increased volatility in originations and has put increased strain on pricing, hedging and operational ability to manage volume.

Traditionally, mortgage bankers set prices for originating new product by reference to required gain on sale margins, servicing values and MBS prices. A basic example of how the mortgage banker establishes price and subsequently values a loan is shown at the bottom left.

Assuming a \$100,000 loan, before any adjustments the mortgage banker would apply, the loan's value would be \$101,000 when all the identified component parts have been realized. However, additional fees, origination costs, and margin requirements will be added to generate the required gain on sale for the company.

As noted to the left, this has been the traditional model. What has been happening in the marketplace recently is the convergence of three factors influencing this process:

1. Pricing pressure as volumes decline;
2. Excess servicing spread strategy.
3. Economic value; and

We consider each of these in turn below.

Pricing pressures: Volume and return targets were set for 2004 by most companies during the strategic planning cycle towards the end of 2003. These goals lead to origination targets for the company's origination channels. While some small brokers may have exited the business after the refinance boom, essentially the same number of participants is chasing a smaller pool of loan originations. The obvious result is more intense pressure to become increasingly competitive on loan pricing. In many cases, this has led to unexpectedly low returns as corporate margin expectations have been jeopardized to maintain origination volume.

As a result, companies will be successful in this environment when they:

1. Use integrated business planning models that look at value creation from loan production and servicing in alternative interest rate environments. Dynamic scenario planning models that inform the CEO and CFO of the implications to gain interest margin and servicing profits from market movements will help to ensure strategic objectives are not overridden by volume chasing.
2. Understand the underlying economics of loan production and servicing, as discussed below, and reflect this in loan pricing. Using this process, the

	% Rate	Price	Price Source
Current Coupon TBA Security	5.50	99.50	Liquid forward markets
Guarantee Fee	0.15	–	No value assigned to this pass through to an investor
Base Servicing Fees	0.25	1.25	Observable market price or internal model
Excess Servicing Fees	0.10	.25	Agency buy up/down grid or internal model
Note Rate to Borrower/ Market Price	6.00	101.00	

company will identify the segments in the market that are likely to deliver expected returns at the right price.

3. Implement governance structures that separate pricing from production functions.

Net Economic Value: Starting in the late nineties, many servicers have developed the capability to measure the actual performance of managed servicing assets. Subsequently, many of the top investors in servicing have developed systems that track actual cash flow performance at the individual cash component and loan level. This data stream is quickly becoming a powerful tool to analyze and understand why some customers are more profitable to the holder of the servicing rights than other customers. Profitability drivers have proven to be more granular than the traditional pricing factors such as loan size and geography. For example, more detailed analysis allows for an understanding of what day the customer normally remits monthly P&I payments and the day a tax or insurance payment is remitted. It is those details that often determine profitability.

Excess Servicing Spread Strategy: As shown in the table on the prior page, the excess spread is the difference between the note rate to the borrower and the sum of the individual components comprising the whole loan (e.g., coupon, base servicing fee and guarantee fee). There are three options open to the mortgage banker in pricing and delivering this interest rate strip:

1. Retain the excess servicing and value it using the company's own models and valuation tools;
2. Sell the excess to the agency using agency provided buy up multiples to value the excess servicing amount; and
3. Package and separately securitize excess receivables outside of the normal agency process.

Generally, the decision to deliver or retain excess servicing as identified above is made by Secondary Marketing as part of the loan pricing and pooling best execution processes. However, Finance, Accounting and/or a Pricing Committee are often involved to make certain that independent oversight is available to ensure corporate risk and profitability expectations are maintained.

As pricing pressures mount, decision makers must take a careful look at their excess pricing strategy. Where internal models indicate that there is more

value to be obtained through retention of excess than selling through agency buy up/down grids, companies are beginning to change the way this component is applied in the pricing methodology and approach to best execution.

At a later date, the company may decide to package and sell a pool of excess servicing and realize the economic value created. However, these programs can be costly to administer, require a build up to a reasonably sized pool, and can stretch investor accounting and operational systems.

The key question for the company is to confirm the relative value of the excess servicing. Given that the value is a function of market rates and prepayment expectations, companies are using their economic value measurement tools to understand which customers are likely to generate higher excess servicing returns to the company. This then creates arbitrage opportunities as the company can retain the more profitable excess and sell the less profitable excess into the market.

One of the challenges lenders are facing with the new excess strategies is that some purchasers of servicing consider excess cash flows to be subject to higher volatility, with many realizing that excess cash flow performance is correlated with prepayment speeds. In addition, these servicers assume loans with higher amounts of excess may have higher note rates, which would result in higher prepayment speeds. However, the new excess strategies are being developed for current note rate loans (e.g., lower coupon delivery).

Consequently, we may expect to see an increase in the overall weighted average service fees of MSR portfolios as more excess is retained rather than sold on origination.

Those companies without the ability to measure and understand economic value are left without the arbitrage opportunity. Of longer term significance, these economic measurement capabilities are beginning to drive the way companies set prices for different customers, moving beyond the traditional and aggregated expected gain/security price model. In the same way that other industries price at the customer level, we can anticipate movement away from simple channel and product level pricing.

For more information on planning tools, pricing methodologies, best execution best practices or the benefits of NEV analysis, please contact Steve Davies at 206-398-3519 or at steve.t.davies@us.pwc.com.

¿Usted Habla Español? The Top Five Considerations of an Hispanic Markets Strategy

The 2003 Census revealed that there are now 39.9 million Hispanics living in the United States, accounting for 13.7% of the population. According to the Selig Center for Economic Growth, Hispanics currently have an estimated buying power of \$686 billion (with more than 65% concentrated in CA, TX, FL, NY, and IL) that will keep growing at an annual compounded rate of 8.2% at least until 2010. In addition, while less than half of the country's Hispanics own their homes, Hispanic homeownership is expected to represent 40% of new homeowners by 2020.¹ In consideration of this growing market, this article identifies five areas that executives should consider as they begin to refine their strategies.

End to End Hispanic Customer Service

Today, most financial institutions offer brochures in Spanish, together with Spanish-only websites and toll-free numbers. However, just limiting a company's effort to translating 100% of the information about products and services is not enough.

Hispanic customers are increasingly demanding "Hispanic-style" customer service at every stage of the customer relationship, from origination to loan closing and servicing. Some banks are already addressing this demand in very creative ways including playrooms for children and free local phone service in the branches located in neighborhoods with a large concentration of Hispanic customers. It is important for companies to understand the Hispanic culture and implement an integrated execution to their strategy at all levels of the organization. To be successful, Hispanic customers should see company employees as trusted advisors to whom they can talk about their mortgage, their personal finances and even their families.²

There Is No Single Hispanic Market

Hispanics have very different product and service preferences based on their income level, education and number of years that their families have been in the U.S. While many may perceive the Hispanic population to be mainly lower income, 14.5% can be considered affluent with incomes over \$75,000.²

Following a single strategy that tries to address the needs of the Hispanic market as a whole may not be the right approach. Before implementing a strategy, the company should first identify those segments of the Hispanic market that can be more profitable and that fit the bank's overall strategy. These segments can range from low income Hispanics who can only access subprime mortgages to high-income Hispanics interested in more sophisticated mortgages and home equity loans.

Education Is Key!

Every Hispanic market strategy needs to include an educational component as many Hispanic borrowers apply lending criteria from their former experiences within their family or in the country from which they or their ancestors have come. For example, it is possible that a borrower could qualify for a "prime" mortgage

¹ Source: Harvard Joint Center for Housing Studies.

² US Retail Banking and the Hispanic Market Growth Engine. CMGP Hispano White Paper.

but may believe that there is a 15%-20% down payment requirement or that they need to be in the same job for at least five years. As a result, there are often many misconceptions among Hispanics regarding mortgages or credit approval processes in general.

According to the National Council of La Raza, Hispanic immigrants tend to be more risk averse and conservative with investments than the average American, which explains in part why they avoid debt and are less likely to have a credit history. There is consensus that financial education is useful and necessary to the extent that individuals have financial decisions to make and are presented with choices.³

Some mortgage banks have developed alliances with Hispanic organizations to create websites that educate Hispanic consumers on how to buy a home step-by-step or how to improve their prospect for homeownership. GSEs have also developed educational programs specifically targeted to Hispanics. One example is CreditSmart, a bilingual consumer education curriculum that introduces participants to the importance of credit in U.S. society and teaches them about money management skills.

Thinking Beyond Traditional Credit Evaluation

Entering the Hispanic market requires loan approval flexibility. For many banks, the mortgage loan approval process has become very rigid and is strictly dependent on the applicant's credit score and job history. Many times, banks are required to follow standard guidelines in order to sell or securitize loans. Often Hispanics do not have a good credit score either due to their preference for cash transactions or their relatively short credit history. As a result, there are many strategies by which banks can proactively help Hispanic customers to enhance their loan eligibility:

- Ask customers for letters that demonstrate they have been paying their bills and rent on time for months and send this information to the credit reporting agencies
- Encourage customers to apply for a secure credit card and start paying for some expenses (such as utility bills) using the card. This will add more information to the credit history and translate into a higher credit score
- Help customers obtain their Individual Tax Identification Number (ITIN) if they are not eligible for Social Security and make sure that they have all their income, asset and tax information in order

Today's Investments Are Tomorrow's Profits

Any executive in the process of implementing an Hispanic market strategy should be aware that big profits might not arrive in the short term. Entering or increasing participation in the Hispanic market represents an investment and a change of behavior across the organization to effectively target this important and growing segment of the consumer market. Early entrants who execute successful strategies will develop a brand presence in the Hispanic community that will reinforce their competitive advantage.⁴ Those banks with a broad range of products and services can start serving segments of the Hispanic market with simple products such as credit cards and savings accounts and be the first bank of choice once their customers' income increases and they start requiring mortgages and home equity loans. The growth of the Hispanic market's income and buying power is evident and the potential is enormous.

For more information on marketing strategies, please contact Roberto Hernandez at 213-356-6679 or at roberto.g.hernandez@us.pwc.com

³ Financial Education in Latino Communities: An Analysis of Programs, Products and Results/Effects.

⁴ US Retail Banking and the Hispanic Market Growth Engine. CMGP Hispano White Paper.

Option ARMs - Launching into New Territory

Lenders who offer monthly adjusting option ARMs have been under increasing competitive pressure as they vie for the optimal pricing position. Some lenders are now offering introductory rates as low as 1% for the 1-month option ARM. In this article we explore the features of this popular product.

The introductory rate determines the borrower's minimum payment required for the first twelve months of the loan; however, the low interest rate is usually available for a short period of time (e.g., one month). Each month the borrower also has the option to make the minimum payment, the interest only payment or a fully-amortizing option. Choosing the minimum payment option may result in deferred interest, if the interest only payment (monthly interest rate based on the current index + margin) is greater than the minimum payment.

The MTA index (a 12-month moving average of the monthly 1-year CMT), against which many of these loans are based, has continued to drop, causing the interest only payment to fall below the minimum monthly payment. As a result, lenders have been dropping the introductory rates over the past couple of years based on increasing competitive pressure and to ensure the borrower will have an interest only payment option.

With many of these loans based on the MTA index and the CMT index continuing to increase from the 50-year low set in June 2003, are these low introductory rates still necessary?

Over the past six months the underlying 1-year CMT has been increasing an average of 13 bps a month and as of January '05 the 1-year CMT is over 80 bps higher than the current MTA index. This will cause the MTA to rise over the coming months as the lower CMT values making up the index continue to drop off. In addition, many economists are expecting interest rates to continue to rise, as the economy strengthens, causing further increases to the MTA. With the minimum monthly payment based on a very low introductory rate, and the monthly interest rate charged increasing, the potential for a significant increase in the amount of deferred interest could become a reality.

With interest rates increasing and interest only payments now available even with a 100 bps increase to the current introductory rates, lenders may need to perform in-depth analysis on deferred interest potential based various introductory rates and interest rate scenarios.

For more information on option ARMs, please contact Amy Szeliga at 206-398-3103 or at amy.szeliga@us.pwc.com.

Are eMortgages Worth the Investment?

Each year the industry gains momentum in trying to effectively implement electronic mortgages, or eMortgages. Currently, there are many definitions of what constitutes an eMortgage and the industry is seeing more use of consistent terms. Although some companies include the simple collection of referrals or the imaging and electronic packaging of documents as an eMortgage, for purposes of this article, an eMortgage refers to all data and actions for a mortgage being processed electronically, particularly loan closing where digital signatures would be included. It is apparent consumers have accepted buying goods over the internet. Combined with the consumer legislation momentum, specifically UETA and ESIGN, which allow digital signatures to be as binding as “wet” signatures, the industry is positioned to go digital.

The bottom line is “yes,” eMortgages are worth the investment because they can help reduce operational costs, cycle times, and errors, while increasing accuracy and transparency. Because eMortgages are built on a core technology (XML, touched on later) and separated into logical mortgage areas, it is possible to devise an approach that can have an immediate impact on a mortgage company business. For example, a mortgage company could pilot the automation of lien releases to reduce the cycle time from a few weeks to a few days or even less. Additionally, with the renewed focus on controls via Sarbanes-Oxley, there would be a reduction in process control points because various staff members would no longer need to track communications with the county recording offices.

Many attempts have been made in the past to automate various aspects of the loan origination process, helping to forge experience and learning. Today, the largest strides are being made by industry specific consortiums and by a collaborative effort between regulators and these consortiums. Many industry veterans have seen standards come and go. Many of these standards were built on technology where changes (e.g., new versions, enhancements, customizations, etc.) were difficult, excessively intrusive to the business, and cost prohibitive to make due to the underlying data interfaces (e.g., delimited, fixed length, X12, etc.). However, with eMortgage standards, XML is the core interface technology that addresses many of the previous shortcomings.

Components of the eMortgage Standard

There are nine key components that make up an eMortgage:

1. Legal Infrastructure
2. Communication
3. Data transactions
4. eMessaging
5. eDocuments
6. eSignatures and security
7. ePackaging
8. eRecording
9. eNote registry

Three of the components are more horizontal in nature and focus on legal infrastructure (e.g., UETA and ESIGN), communication (email, internet, private networks, encryption, etc.), and data transactions

(XML). It is important to understand that XML is the core technology foundation on which all the remaining components are built. The remaining components focus on various aspects of a loan process and are broken down into eMessaging (how requests and responses are handled, e.g., title request), eDocuments (encapsulation of mortgage data into templates that can then be presented to many audiences including versioning), eSignatures (electronic or digital signatures, encryption, and tamper evident seals), ePackaging (paper document shipping package), eRecording (management property records data at the county level), and eNote Registry (centralized identification of the authoritative copy).

Currently, many of these components are works in progress and will continue to evolve. The common bond among these organizations is XML, eXtensible Markup Language. XML is a standard established by the W3C (World Wide Web Consortium) to allow definition of much more robust file formats. For example, common file formats used extensively over the last few decades (e.g., fixed length, comma separated, X.25, EDI, etc.) have the limitation that they are not extensible without affecting systems that utilize the files. XML overcomes many of these challenges as it has very few limitations on the terminology used to define the attributes within an XML file. A simple way to view the limitation is that XML supports the Webster dictionary while the industry still needs to coordinate a standard group of key terms and definitions to become more focused like the Barron's business dictionaries.

The Benefits of Developing and Utilizing Standards

Introduced in the 1970s, the bar code was developed to increase efficiency among retailers. Before bar codes, retailers had to have an employee tag each item with a price and if there was a price change, the items had to be retagged. With bar codes, the retail shops only had to change a sign over merchandise or on the shelf to let the customer know of the price changed. Additionally, when the customer was at the register the bar coded item could be scanned, which dramatically reduced errors related to keying in the price. As technology advanced, this same technology was then leveraged in monitoring and managing inventory levels. These changes did not occur

overnight and it was not an all or nothing situation related to the implementation of bar codes. This is also the case with eMortgages—it is possible to start small and build up the use of XML based eMortgage initiatives within the organization without affecting the current day-to-day business.

Today it is hard to imagine what it would be like if the stockers at Wal-Mart had to label each item with a price and the cashiers had to hand key each price. Most likely, without the investment in bar codes retailers might not be able to keep prices low and achieve the economies of scale now seen in the retail industry. The eMortgage standards are positioned to have the same type of impact related to the processing of mortgages and other financial vehicles. By having the data in a format where computers can do more of the repetitive work (sometimes referred to as lights-out processing) resources will be freed up for doing more important analysis. Volume and time savings play a large part in determining if an eMortgage implementation will be useful or not. Remember, Wal-Mart's competitive advantage and corporate goal was to always provide the lowest price. They effectively used technology to get there. Therefore, the key challenge in developing an eMortgage strategy is to determine how eMortgages can increase competitive advantage and to identify where to apply these standards and maximize returns.

The eMortgage standards are being addressed by various consortiums that include SPeRS, MERS, eNote Registry, MISMO, REFSMO, SISAC, and PRIA. While each consortium has a varying focus, the core value these standard committees deliver is to provide a forum for solving industry level issues, which, in turn, allows for focus on implementing technology that will improve efficiencies, reduce costs, and increase revenues within an organization.

While eMortgage standards continue to evolve, they will soon become a staple of the mortgage industry. A loan originator, servicer, insurance company or taxing authority will certainly be required to adhere to these standards as they become industry practice. A service provider will most likely be expected to provide data in MISMO's standard format. In fact, early adoption of these standards may also prove to be a competitive advantage in differentiating one organization from its peers.



How to Get There

Adoption of these standards will likely drive significant change in business processes across all consumer finance organizations, but this change provides opportunity along with responsibility. The opportunity is to review the entire operation with a fresh and critical eye by challenging people to identify process steps that add limited value. Once those steps are identified, the challenge is to make the changes required to maximize efficiency of people and the organization.

Because eMortgages touch almost all areas of the business it is important to identify where they can impact a company's current "vision" state. In completing this exercise, consider the following:

1. Identify areas in the current demand plan where eMortgages can be used;
2. Determine steps/phases to incorporate eMortgage based technology into the demand plan;
3. Prioritize the steps/phases; and
4. Focus on the areas that derive immediate benefits in a short period of time.

The key is that when crafting the revised vision and prioritizing the implementation phases, it is imperative to work closely with and obtain buy in from the affected business units. Upon implementation, initial benefits should come from quick wins that will allow project teams to become familiar with the necessary components and refine implementation strategies.

Becoming an active participant in the eMortgage revolution should pay significant dividends in the future. As technology advances and the industry continues to become more standardized around eMortgages, now is the time to align corporate objectives with an eMortgage strategy in order to become a leader in developing this important industry changing initiative.

For more information about the various mortgage related organizations creating and maintaining XML based standards, building an eMortgage strategy and achieving benefits of eMortgages, please contact Chris Provato at 602-364-8172 or at christopher.j.provato@us.pwc.com, or Beji Varghese at 678-522-6658 or at beji.m.varghese@us.pwc.com.

Risk Management

The Importance of Repurchase Risk Management

Record refinance volume through 2003 placed significant strains on many companies' production processes, including quality control. While some companies worked to push loans through an arduous yet controlled process, other companies managed production by modifying processes to increase efficiency while potentially weakening operational controls. These companies may be at risk of experiencing greater levels of repurchase activity than originally forecasted. As a result, many companies are now asking what they should be doing to manage this risk. To help address these challenges, we consider some of the key risk areas that affect repurchases, as well as some best practice controls to mitigate those risks.

Reducing Repurchase Levels

Companies have the ability to significantly reduce repurchase levels through strong front-end controls and proper risk management around the loan origination and acquisition processes.

Those companies that acquire a significant amount of their production from third party originators (TPOs) and have invested in performing rigorous initial due diligence of correspondent and broker credentials at application will enjoy an advantage over those that have not. In addition to the initial due diligence, meaningful broker and correspondent scorecards should be in place, in order to allow for tight monitoring and performance reporting. Many companies have established a TPO committee to review scorecard results and ensure that originators achieve pre-defined performance and quality standards. As a primary scorecard metric, this committee should review repurchase rates of TPOs and have the ability to take action against non-performing TPOs through holdbacks of SRPs, program suspensions or other disciplinary actions in instances where large populations of loans have been repurchased.

For all loans, whether purchased or originated internally, it is important to have good controls over the loan origination process. To reduce common errors in the process while increasing accountability related to loan level deficiencies, companies must ensure that origination processes have been standardized, underwriting is centrally monitored, product and credit guidelines have been established, key fields are locked, hard edits exist on required fields, and appropriate security access levels exist within the system. These processes should extend beyond the origination systems and include systems designed to store images of critical loan documents for future use.

Strong controls will serve to reduce the frequency of errors leading to repurchases. However, there will be instances when loans pass front end controls and still generate repurchase requests. In these instances, a root cause analysis should be performed on the loans and the results should be analyzed to identify any

potential front-end gaps. For instance, if a loan with a FICO score of 400 was included in a FNMA pool, the company could work with the department where the error was made to assess the design of the controls in place to prevent such a loan from being originated, pooled and sold. The underlying message is to promote continuous identification and evaluation of control gaps in order to build quality into the front-end process and avoid problems on the back end.

Repurchase Best Practices

The challenge for many consumer finance companies now is to understand and effectively manage those loans that do require repurchase. Here are some of the best practices that management should consider:

Approval

One of the most important aspects of repurchase risk management has to do with the approval of repurchases. Best practices related to approvals include:

- Clearly established approval levels for all repurchases and indemnifications
- Established procedures to maximize appeal requests and appeal success rates
- Approval process with system edits in place to prevent staff from approving an amount greater than their specified threshold
- Monthly monitoring by a credit risk management or a repurchase committee of repurchase volumes. This committee should also review exposure modeling assumptions, repurchase and investor policies, and collection activities with sellers

Centralized Database

As companies are forced to repurchase loans, managing and reviewing all of the data can be both time-consuming and risky. A centralized repurchase database can alleviate many of these problems by:

- Reducing reliance on Excel and Access databases, thereby reducing the risk of manual entry errors
- Having the ability to interface directly to other systems (i.e., servicing, accounting), allowing companies the ability to produce exception reporting where salability, recourse, etc., codes do not match
- Preventing instances such as loans being worked in recourse administration, the default areas or investor accounting simultaneously. Instead of having recourse, loans may already have had

REO sales completed, forcing the company into a make-whole position that often results in a significantly greater loss amount

- Improving forecasting capabilities by leveraging repurchase cycle time estimates based on historical repurchase pipeline activity
- Tracking investor repurchase demand requests and correspondence with brokers and mortgage insurance companies to ensure that requests are processed on time

Recourse

A significant amount of repurchase losses incurred by companies are a result of their inability to identify and track loans that have recourse on them (e.g., depending on purchase and sale agreements, recourse can be taken against previous servicers, brokers, correspondents and mortgage insurance companies). Some best practices in this area include:

- Having the ability to track loans with recourse within the servicing system
- Monitoring the accuracy and completeness of recourse flags within the servicing system
- Having due diligence procedures to ensure proper coding is strictly enforced for both loans purchased through an acquisition, as well as retail originated loans

Management Reporting

A key to running any successful unit of a consumer finance company is strong management reporting and the repurchase area is no exception. Key metrics should include:

- Collection rates
- Aging analysis (files, advances)
- Percent of successful appeals
- Overall loss amounts
- Delinquency analysis of indemnification and feedback loans
- Repurchase and make-whole losses by year of origination and reason for repurchase
- Average cycle times by loan status
- Appeal success rates
- Correlation analysis between file audit requests and repurchase demand issuance
- Inventory reporting of repurchase demands by status (demand received, review in process, appealed, awaiting repurchase, etc.)
- Repurchase cause (e.g., fraud, documentation, credit, income, regulatory compliance, etc.)
- Repurchase source (e.g., channel, branch, etc.)

Repurchase Reserves

Companies need to have proper procedures in place to set up the appropriate liability for repurchases. These procedures should be documented and reviewed on a regular basis. Some best practices to consider when modeling repurchases include:

- Assumptions for loss frequency rates reflecting recent historical experience
- Management assumptions for loss amounts that are independently reviewed on a regular basis
- Analysis by channel, origination vintage and product
- Ongoing validation of the model used to assess repurchase loss exposure
- Consideration of loan quality (as defined by QC or other independent loan quality assessments), pending repurchases, make-wholes, indemnifications and feedback loans
- Tracking of controllable vs. uncontrollable losses by loss driver

Looking Ahead

The current economic environment of lower refinance volumes and stable portfolios provides servicers the opportunity to further consider the importance of managing repurchase risk. Companies that take proactive action to build a rigorous process around repurchases and hold management accountable for the impact associated with repurchasing loans (e.g., performance and compensation impacts for production, servicing and risk management) understand this. On the other hand, companies that do not identify specific processes or try to band-aid existing processes should reconsider their approach. In the end, those managers taking a more proactive approach to managing the repurchase process will help improve profitability, while those who are reactive in their approach will see unmanaged repurchase risk impact profitability.

For more information on best practices in managing repurchase volume and mitigating financial exposures, please contact Martin Touhey at 206-790-8751 or at martin.e.touhey@us.pwc.com or Matt Cosman at 617-285-7447 or at matthew.j.cosman@us.pwc.com.

To participate in PwC's annual Survey of Loan Repurchase Practices, please contact Peter Pollini at 207-450-9036 or at peter.c.pollini@us.pwc.com.



Considerations for Managing Foreclosure Losses

Government loan foreclosure losses represent a significant but manageable cost element in the mortgage industry. Many commentators note a probable increase in default related activities and raise concerns over the industry's ability to respond quickly to such a change. Of note, recent trends indicate increased uncertainty in the industry's ability to track and forecast losses associated with government loan foreclosure activities. Much of the uncertainty in this process can be traced back directly to operational and reporting activities related to the loss mitigation and servicing practices of government loans. To add to the uncertainty, the burden of non-servicing related activities, such as determining the appropriate government loan loss reserve, is often placed on untrained servicing personnel.

Editor's note: PwC will shortly be launching our 2005 Survey of Industry Practices in Default Operations and Foreclosures. For details on participation, please contact John Adams at 240-449-4071 or at john.m.adams@us.pwc.com.

Throughout the late 1990s', trends in consolidation and bulk servicing purchases led to servicing platform challenges including multiple foreclosure tracking step codes and disparate loan status metrics. As a result, many mortgage companies experienced unexpected government loan losses and foreclosure related expenses that were attributed to reporting inconsistencies. In today's environment, the servicing lag of the recent refinance boom may soon cause staffing and work-load challenges for those charged with tracking foreclosure losses. By conducting an independent review of the policies, procedures and controls currently in place to manage the foreclosure process in addition to analyzing the metrics used to project expected losses, companies can decrease their risk of unexpected controllable losses and inaccurate reserve estimates.

Critical steps include:

- Determining responsibility for key foreclosure processing and reserving tasks (e.g., segregating servicing and loss mitigation functions from corporate accounting functions)
- Reviewing and consolidating duplicate foreclosure steps and updating loan-level loss assumptions
- Reviewing loss history for purposes of identifying loss trends, projecting out-of-pocket losses and to validate interest curtailment projections
- Identifying backlogs of loans in key processing categories and identifying commonly missed steps and/or steps that result in immediate financial loss (i.e., unrecoverable advances)
- Reviewing or implementing exception reports to identify illogical key dates (e.g., loans with foreclosure sale dates prior to the last paid installment date or loans with foreclosure sale date but no first legal action date)
- Establishing procedures to reconcile expected vs. actual foreclosure related losses on a monthly basis

Getting this process started can be difficult. However, understanding common industry practices around accurate foreclosure tracking and loan loss reserve accounting may improve foreclosure loss forecasts, increase operational efficiency and dramatically impact the dollar losses incurred by the company.

For more information on developing your foreclosure related exposure metrics or on effective risk management practices associated with managing the foreclosure process, please contact Michael Hollerich at 847-721-4890 or at michael.hollerich@pwc.com or John Adams at 240-447-4071 or at john.m.adams@us.pwc.com.

Value Driver Management and Reporting

Managing risk on a mortgage pipeline and warehouse portfolio is a complex business. Accurately measuring those portfolios and identifying the appropriate hedge coverage required to mitigate risk is not straightforward.

In managing risk in the pipeline and warehouse portfolios, the secondary marketing pipeline hedger is reliant on virtually all areas of the business to update and supply the information that is used to make decisions on coverage. While there are some factors that can be controlled by secondary marketing, there are others that cannot. For instance, in choosing the appropriate hedge or delivery instrument to cover a loan or pool of loans, the risk manager uses assumptions for anticipated cycle times required to process collateral and deliver a loan to the secondary market. If these assumptions, which are often based on historical time series analysis, are not accurate due to current or uncommunicated expectations surrounding future bottlenecks in the post closing delivery process, unanticipated pair off fees, roll fees and/or costly additional coverage may all be experienced. Similarly, if fallout assumptions do not accurately reflect actual performance, significant and unanticipated losses, or gains, may be realized. As a result, assumption modeling and data management control practices used to develop and maintain an effective risk management strategy are imperative. Accordingly, knowing how to measure, monitor and communicate the results of operational and trading decisions to management is equally important in shaping a more profitable and effective origination process.

Assumption Management

In light of past MBS market volatility, assumption generation, monitoring and maintenance processes have become increasingly scrutinized. While the historical generation of assumptions used in the risk management system may have been generated and updated on an as needed basis, recent practices find secondary managers more willing to improve processes surrounding the development and validation of assumptions used in making risk management decisions. While part of this re-focus on system assumptions and functionality may be due to the resulting and unanticipated financial volatility experienced by many mortgage bankers in the past, additional focus has resulted from the secondary marketing manager's need to be as precise as possible to ensuring profitability expectations are met in a post refinance, competitive purchase market with compressed margins.

As a result, companies are employing varying strategies to ensure decisions are being made on the most accurate information possible including:

- Documenting processes identifying how each assumption is developed, the source of the information, individual(s) responsible for generating the assumption and how often the assumption is analyzed;
- Performing model vs. actual analysis to ensure the accuracy of assumptions;
- Streamlining the reporting process to improve the accuracy and consistency of reporting results; and
- Leveraging more efficient systems and reporting capabilities to understand P&L movement and channel/source profitability at a loan level.

Performing this type of analysis should lead to improved risk management decisions, a better understanding of where P&L leakage is occurring and improved profitability through correcting the root cause of assumption errors. This type of reporting and improved information should also:

- Improve financial reporting results by enhancing the accuracy of forecasted gain on sale as secondary marketing source data is more reliable when used for mark to market purposes; and
- Improve hedging results by reducing hedge costs traditionally considered a cost of doing business.

Model and Data Management

While increased attention is being placed on the accuracy and application of risk management assumptions, the obvious should not be overlooked. Many companies get so consumed in their day-to-day processes or vision of the future that they forget about ensuring that accurate controls are in place to maintain acceptable levels of data integrity. To combat these model and data management concerns, companies can take several fundamental steps to ensure basic system functions are being performed as expected:

- Segregating duties
- Establishing change management processes
- Monitoring system access
- Identifying who is responsible for managing data (e.g., reconciliations to source systems, general ledger accounts, etc.)
- Periodically testing data and results to assess system functionality
- Reviewing the OCC's Bulletin 2000-16 on risk modeling and model validation (while not all companies are regulated by the OCC, this guidance is emerging as a standard basis of model validation strategies)

Understanding Results of the Hedging Strategy

To this stage, the focus is on assurance that the system is functioning accurately. However, to be a true guardian of corporate profitability, a secondary marketing manager needs to leverage all the information that is available to manage risk and price their pipeline.

While traditional approaches to secondary marketing reporting have focused on current position, delivery dates and pooling best execution, there is a trend in the industry to mine this information already validated and tracked by secondary marketing for more granular analysis.

Given the emphasis many mortgage bankers have placed on achieving hedge effectiveness under SFAS 133, many companies have developed complex, repeatable and consistent methodologies for allocating hedge performance. These processes, which are often designed to track and allocate hedge gains and losses at the loan level, have provided companies with the missing link to understanding loan, source and channel level profitability in the origination cycle. As a result, companies are now using this information to better understand their pipelines, identify who their most profitable customers are and identify when they are being adversely selected. Leveraging this information, companies can then adjust their pricing accordingly to increase margins or pass through in the form of lower rates and improve their competitive posture in the industry.

As a natural progression to identifying the positive and negative effects that changes to the pipeline have on profitability, companies are also leveraging advanced reporting capabilities to track changes in value on a daily basis at not only the loan level, but at the individual variable level affecting a loans value. The following example provides an illustration of how changes in market price and execution decisions could be allocated using this type of reporting:

Beginning of period	Value A
Note rate	5.250%
Coupon	4.500%
Guarantee fee	0.170
Servicing	0.250
Excess servicing/BUBD	0.330
BUBD multiple	5.175
Value of BU	1.708
Market value (BOP)	95.063
Total value (BOP)	96.770
	(A)

End of period	Value A	Value B
Note rate	5.250%	5.250%
Coupon	4.500%	4.000%
Guarantee fee	0.170	0.170
Servicing	0.250	0.250
Excess servicing/BUBD	0.330	(0.170)
BUBD multiple	5.175	7.132
Value of BU	1.708	(1.212)
Market value (EOP)	95.156	98.469
Total value (EOP)	96.864	97.257
	(B)	(C)

Full change in value for period:

$$0.486 = C - A$$

Change in value due to market movement:

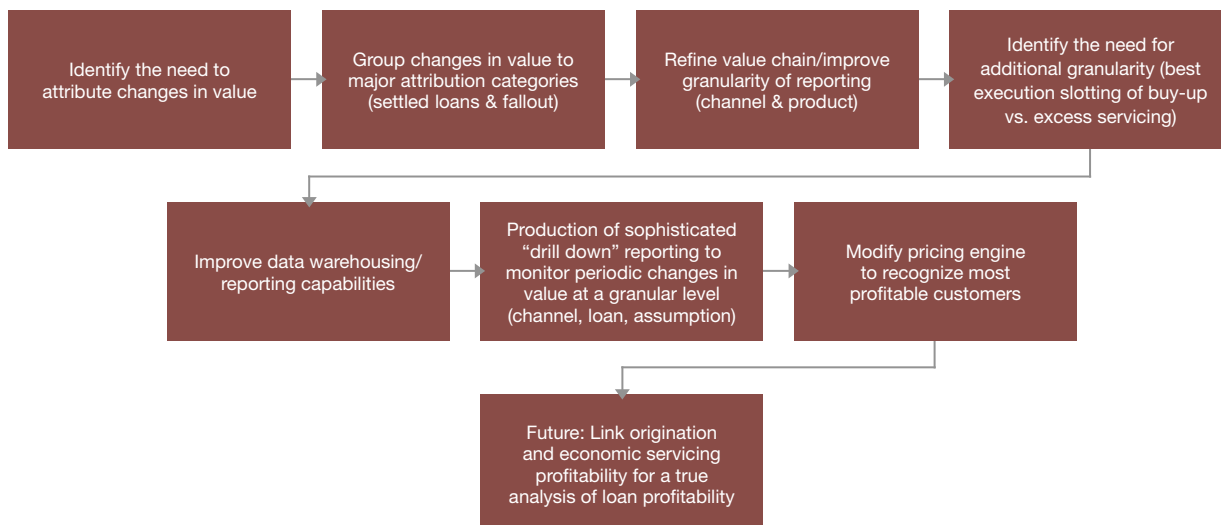
$$0.094 = B - A$$

Change in value due to re-slotting:

$$0.392 = (C - A) - (B - A)$$

While this is a fairly straight forward example, loan and assumption level P&L attribution reporting is a complicated process requiring significant technological resources. However, if well planned, P&L attribution reporting can change a company's focus of what is, and is not profitable.

The diagram below identifies what is becoming a standard approach to developing and improving this type of attribution reporting:



As can be seen in the diagram above, the future of driving a successful and profitable mortgage origination platform is tying the profitability characteristics of the loan and servicing asset and developing a pricing model that rewards customers accordingly. This methodology represents a significant step forward in helping executive management understand secondary marketing performance and explain margin movement to investors.

How to Get There

Bad assumptions and bad data will eventually result in bad decisions. First, regularly validate models and their corresponding assumptions. An inventory of the reports that are and are not used should also be taken. It is likely that several reports that are not used regularly or could be modified or combined with other reports using more advance reporting tools. Reducing the number of reports used to manage the business not only improves the complexity of the process, but it reduces the validation requirements identified above.

Second, once information has been deemed accurate and well controlled, consider how the information can be leveraged not only in secondary marketing but also by the rest of the company. The information being mined in secondary marketing will also be

valuable to many other business units in the mortgage bank. If implemented correctly, the P&L attribution reporting identified above can accomplish many of these goals if leveraged to the point of providing end-to-end profitability at a channel, source, loan, individual assumption or business process level. In this way, secondary marketing can revolutionize the way mortgage companies are managed, price their products and maintain their relationships with their customers (both internal and external). This type of coordinated effort not only benefits the company by spreading standardized profitability information throughout the organization, but it also helps secondary marketing managers by providing a tool that will lead to better information for making risk management decisions.

Secondary marketing is, and will continue to be a complex area. However, by leveraging the data already relied upon to make risk management decisions, secondary marketing can help the rest of the mortgage bank become less complex, more profitable and increasingly transparent.

For more information on secondary marketing, pipeline/warehouse risk management practices or P&L attribution strategies, please contact Peter Pollini at 207-450-9036 or at peter.c.pollini@us.pwc.com.



Five Ways for Finance Managers to Drive Better Project Management

In today's consumer finance industry, system complexity coupled with regulatory and analyst scrutiny have caused increased challenges to management when making operational and technological changes. In addition, ensuring that internal controls are adequate and that required information is available to customers as well as internal and external stakeholders, finance and accounting managers can bear the ultimate burden of meeting financial and business expectations. In many cases, finance is at the forefront to protect businesses from increased reputational, regulatory and financial risks.

In a rapidly changing environment where the processes and systems used by banks, mortgage companies and financial services providers require more changes, more frequently, finance and accounting managers have become more involved and are often being held accountable for the success of initiatives and projects.

Through proper documentation and planning, management can keep internal and external stakeholders (e.g., shareholders, SEC) adequately informed about critical initiatives and influence the success of those initiatives by answering the five questions below.

1. Is there a definition of the outcome to ensure all stakeholders' needs are specifically met, including a quantified risk/return definition?

Many projects begin because someone interprets a law, regulation, or rule (hereafter, law, such as Sarbanes-Oxley Section 404 or FDICIA) as requiring specific changes in how a company does business. To help ensure success, document expected outcomes of how current processes will differ and how new or modified processes will specifically meet objectives. To ensure that the proposed change will meet the requirements of the new law, guideline or process, project documentation can be reviewed with regulators, counsel, and others knowledgeable in regulatory requirements or reviewed with industry subject matter professionals for an assessment of industry best practices.

Deliverable: Project scoping documents with risks, returns (financial and others), output examples and expected changes; so lawyers, chief compliance officers and chief ethics officers can understand what they will get.

2. Are finance managers involved in major tasks throughout the change in process?

Systems and processes throughout consumer finance companies impact financial statements. Thoughtful, knowledgeable finance managers, as part-time project team participants, provide different insights and information for the project team. A chief accounting officer will know how changes might impact the balance sheet or presentation of the income statement. Reviewing the uses of data to publish financial statements and similar documents is unique to each manager. For example, the changes in loan servicing are assessed and important knowledge learned can

be used to alert the controller, chief financial officer or others when help is needed.

Deliverable: Weekly meetings with key stakeholders to monitor and assess the initiative's progress against project proposed milestones, asking relevant questions and challenging general statements for detailed explanations.

3. Do project incentives drive desired behaviors, especially if the project is off plan?

Projects predicated on meeting specific dates often have individual financial incentives to motivate people and reward them for meeting the targeted date. Finance leadership needs to examine incentives closely as to behaviors incented when problems occur. Projects adapt to three factors: (1) time of completion, (2) resources used, and (3) project quality (scope). For example, servicing quality may be reduced unacceptably to meet goals and maximize the incentives. Finance leaders examining objective and subjective measures clarifies what happens when outside factors cause the project team to not meet its objectives.

Deliverable: Scenario plans for project outcomes with related incentives, such as origination systems encountering technology delays to securing data or improving firewalls, then assessing the impact of bonus distributions.

4. Are changes communicated to internal and external stakeholders?

Disclosure of information about changing systems and processes to internal and external parties can mitigate financial risks, but also may create new risks. Communication must be timely, accurate and appropriate for the audience. Customers who experience changes, such as in servicing or delivery of mortgage statements, react negatively. Communications plan reviews at project initiation, assessing mass communications to each audience and independent readings of external letters can help manage risks.

Deliverable: Assessment of project communications plans, individual communications and ensuring all audiences are addressed controls financial risks.

5. Does the documented project plan, even on regulated changes, establish timing, scope and resource commitments prior to the start of the initiative?

Projects defined as “regulatory” or “compliance” efforts may provide open access to making unrelated changes in processes and systems. Changes in regulations still require primary stakeholders to establish a specific project scope. Legal or compliance resources provide insights to allow financial managers to ensure resources, timing and outputs pass rigorous analytics and require key stakeholder approval.

Deliverable: Detailed project plan and cost-benefit analysis approved by key stakeholders prior to project commencement.

Combining servicing platforms, simplifying origination systems and making other changes to key processing systems are examples of the types of projects in which finance managers are involved today. By applying these five key points, they can help improve success while reducing implementation risk and provide effective ways to create an infrastructure to rapidly adapt to the changing business landscape.

For more information on measuring process and system project success, please contact Edward Bambauer at 617-699-5079 or at edward.e.bambauer@us.pwc.com.

Accounting & Financial Reporting

Time to Improve Accounting for Mortgage Servicing Rights

In today's world of high-profile accounting restatements resulting from cooking the books and other corporate frauds, the investing public and other interested stakeholders have increased their focus on the accuracy and transparency of financial reporting.

Financial reporting is full of complex requirements accumulated over many years in response to many perceived abuses and has been propagated by the Financial Accounting Standards Board (FASB), the Securities and Exchange Commission (SEC), and other regulatory bodies. Many aspects of financial reporting require judgment on behalf of management, and as a result, a key element of improved financial reporting involves ensuring that stakeholders have an appreciation of how, why, when, and where judgments are made. We believe that transparency is one of the keys to preserving the ability of stakeholders to understand the full context of the financial results. In response to this realization, the SEC recently published a rule that requires public companies to disclose information about critical accounting estimates. While the rule has promulgated improved disclosure around critical accounting estimates, it has not solved the transparency issue. The mortgage banking industry is an industry that has very complex risks and issues that are not well understood by all of its stakeholders. One of the most misunderstood items in the financial statements of a mortgage banking enterprise is the accounting and reporting for mortgage servicing rights (MSRs), which is not surprising given the multitude of risks associated with owning MSRs. In this article, we discuss some of those risks and propose what we believe are best practices around financial reporting. This article covers the following:

- An overview of MSRs;
- Valuation of MSRs;
- Accounting considerations;
- Current disclosure requirements; and
- Recommendations for improving transparency and disclosures.

Overview of MSRs

An MSR is a contractual right to service mortgage loans for others. When a mortgage banking enterprise purchases or originates mortgage loans, the right to service those loans often accompanies the loans themselves. Accountants define an MSR in FASB Statement (FAS) No. 140, Accounting for Transfers and Servicing of Financial Assets and Extinguishments of

Liabilities (FAS 140), as a contract to service financial assets under which the estimated future revenues from contractually specified servicing fees, late charges, and other ancillary revenues are expected to more than adequately compensate the servicer for performing the servicing.

The definition of an MSR asset appears simple enough; however, the accounting is very complicated. FAS 140 requires that MSR assets be initially recorded at an “allocated fair value” amount. This is calculated by taking the previous carrying amount of the portfolio of mortgage loans that were sold and allocating that amount between the portion that is sold and the portion retained (i.e., the MSR asset) with the allocation based on each of the components’ relative fair values at the date of sale. Subsequent to initial capitalization, FAS 140 requires that servicing assets be: (1) amortized in proportion to and over the period of estimated net servicing income; and (2) periodically assessed for impairment based on their estimated fair values. FAS No. 133, Accounting for Derivative Instruments and Hedging Activities, as amended by FAS Nos. 138 and 149 (FAS 133), adds further complexities to the MSR accounting model by introducing complex hedge accounting rules.

GAAP Guidance for Valuation of MSRs

One common thread running through the accounting rules is the requirement for management to make fair value estimates of MSRs. Determining fair value, however, is a subjective process and requires significant judgment. FAS 140 defines fair value as “the amount at which that asset... could be bought... or sold... in a current transaction between willing parties, that is, other than in a forced or liquidation sale.” Paragraphs 68, 69, and 70 of FAS 140 define the hierarchy for establishing this presumed price at which the asset could be exchanged, as follows:

- Quoted market prices: “Quoted market prices in active markets are the best evidence of fair value and shall be used as the basis for the measurement, if available [paragraph 68].”
- Comparisons to similar trades: “If quoted market prices are not available, the estimate of fair value shall be based on the best information available in the circumstances. The estimate of fair value shall consider prices for similar assets and liabilities and the results of valuation techniques to the extent available in the circumstances [paragraph 69].”

- Specific asset: “Estimates of expected future cash flows, if used to estimate fair value, shall be based on reasonable and supportable assumptions and projections. All available evidence shall be considered in developing estimates of expected future cash flows [paragraph 70].”

As the MSR market has historically never been liquid enough to provide participants with quoted market prices for generic bulk portfolios, companies have typically relied on valuation models calibrated to the extent possible to independently verifiable information. The mortgage banking industry customarily estimates the fair value of MSRs using internal discounted cash flow (DCF) models. Under this approach, cash flows are forecast over the expected life of the MSR asset and a present value calculation is performed to arrive at the fair value estimate. In practice, these DCF valuation models include a number of generic portfolio assumptions that approximate those used by market participants.

The DCF method requires a consistent approach for determining each valuation assumption (e.g., prepayment speeds, discount rates, cost to service, late fees, float days). With the exception of prepayment speeds and discount rates, valuation assumptions generally do not change significantly from period to period. Those inputs should be analyzed on a regular basis, however, to determine reasonableness by comparison to:

1. Market-based assumptions used by other MSR investors;
2. Assumptions used by servicing brokers (derived by reverse engineering of market trades of similar MSR assets);
3. Information about how the company executes trades in the marketplace, including assignment of trade deals, correspondent service release premiums paid, agency buy-up/buy-down multiples, and intercoupon mortgage spreads; or
4. Survey information and other market sources.

Prepayment speeds and interest rates affect all assumptions in the valuation, since all of the cash flows are affected by changes in the outstanding principal balances of the underlying loans. Therefore, prepayment model assumptions are incorporated within the valuation approach for the purposes of forecasting the number and unpaid principal balance of loans expected to prepay. Similarly, discount rate assumptions should be based on the level yield required by market participants to compensate them

for the risks associated with owning MSR. The overall result should be that assumptions are based on what a market participant would use in determining what it believes to be fair value, that is, what a market participant would pay for the MSR in a current transaction other than in a forced liquidation.

Price Discovery for Valuation of MSRs

Since a DCF model is being used to estimate fair value outputs from the model, it should be periodically compared to relevant information from the marketplace to validate (or not) the model's output. Such information might include trades in the marketplace, third-party appraisals, fair values of similar instruments, or surveys. Another process companies can perform to validate their assumptions is to compare their actual prepayment and cash flow experience to their own modeled results, as well as to experience in the industry. This back testing helps validate the model and allows management to regularly recalibrate it. Each of these alternate processes and sources of information provides differing degrees of fair value evidence. However, since there is no single agreed-upon set of assumptions or processes for valuing MSR assets, and each mortgage company's portfolio of MSR assets and related fair value processes and estimates is different, valuation methodologies may and do differ widely. This makes it difficult to perform meaningful "apples-to-apples" comparisons, thereby making meaningful peer comparisons and analyses of survey results easier said than done. This has led to market participants having problems discerning from publicly available information what the loan level characteristics of peer MSR portfolios are, how those companies arrived at their fair value estimates, and what valuation assumptions were used. This limits the effectiveness

of using peer comparisons for fair value benchmarking purposes. It also creates another, perhaps larger problem. The lack of uniform information available across peers and the lack of transparency around valuation methods and price discovery may lead many stakeholders who are performing comparisons across peers to potentially draw false conclusions.

Accounting Considerations

In addition to the complexities associated with valuing MSRs, the accounting for MSRs is similarly complicated. The combination of FAS 133 and FAS140 requires companies to: (1) apply fair value accounting to the extent of hedge effectiveness; (2) amortize the asset; and (3) apply a lower-of-cost-or-market (LOCOM) impairment test. Differences among peers as to how to apply these accounting conventions and whether or not to apply hedge accounting under FAS 133 create dissimilar financial results across peers. These differences not only hinder the ability of stakeholders to perform comparative analyses of financial results across peers but also, at a more basic level, interfere with stakeholders' ability to fully understand the drivers of the financial results. Perhaps the clearest example of the dissimilarity in financial results across peers is one that is widely prevalent in the industry today—whether or not a company applies hedge accounting to its MSRs.

The example in Exhibit 1 illustrates this. For the purpose of this example, assume that two companies have the same investment in MSRs and that one applies hedge accounting (in accordance with FAS 133) while the other does not. Also assume that the company applying hedge accounting is fully hedged, fully effective, and has valuation allowance in all FAS 140 risk strata.



EXHIBIT 1

Comparison of Accounting for the Same Investment in MSRs (With and without hedge accounting)

With Valuation Allowance	Without Hedge Accounting	With Hedge Accounting
Beginning MSR gross book value	\$3,375	\$3,375
Amortization expense	104	104
FAS 133 gain (book-value adjustment)	0	(151)
Ending MSR gross book value	\$3,271	\$3,422
Ending MSR fair value	\$2,040	\$2,040
Required ending MSR valuation allowance	(\$1,231)	(\$1,382)
Beginning MSR valuation allowance	(\$1,398)	(\$1,398)
Impairment expense/(recovery)	(\$167)	(\$16)
Balance Sheet		
Ending MSR gross book value	\$3,271	\$3,422
Ending MSR valuation allowance	(1,231)	(1,382)
Ending MSR net book value	\$2,040	\$2,040
Income Statement		
Amortization expense	\$104	\$104
FAS 133 gain	0	(151)
Impairment expense/(recovery)	(167)	(16)
Net (income)/loss	(\$63)	(\$63)

Exhibit 1 shows how their balance sheets and income statements would appear for financial reporting purposes. The example in Exhibit 1 demonstrates that the net balance sheet and income statement are identical regardless of whether or not FAS 133 hedge accounting is applied. This is because: (1) the LOCOM test is performed after FAS 133 hedge accounting; and (2) the company without hedge accounting wrote up the book value of its MSR asset by recovering the valuation allowance.

This example also illustrates the interplay between amortization expense, FAS 133 adjustments, and impairment expense in the income statement when a valuation allowance exists. The fact that the sum of these income statement line items nets to the same result (all else equal) is not well understood by stakeholders in the industry. Rather, stakeholders often penalize the company without hedge accounting for the impairment-related activity, although the net result in the income statement is the same. The fact that the company may not be fully hedged, fully effective, and may not have valuation allowance in all FAS 140 risk strata further clouds this issue. In addition, differences

in impairment practices may drive differences in financial results across companies.

The recent number of record loan payoffs has given rise to companies exploring the need for permanent impairment. Industry practice continues to evolve in this area, but the net result is that some companies have recently reclassified portions of their temporary valuation allowance as permanent. While there is no immediate income statement impact of this reclassification, the reduction in valuation allowance will generally reduce subsequent increases in the book value of the asset, creating further disparities between companies that do and do not apply FAS 133 hedge accounting, as noted previously. The inability to use existing valuation allowances to write up the basis of the MSR asset does create differences among peers that apply hedge accounting vs. those that do not.

To illustrate this, let's look at the example from Exhibit 1 and assume that there was no valuation allowance available to recover (e.g., after a \$1,398 reclassification from temporary to permanent impairment). The results would be as shown in Exhibit 2.

EXHIBIT 2

Comparison of Accounting for the Same Investment in MSRs,
Without a Valuation Allowance Available
(With and without hedge accounting)

With Valuation Allowance – Permanent Impairment	Without Hedge Accounting	With Hedge Accounting
Beginning MSR gross book value	\$1,977	\$1,977
Amortization expense	61	61
FAS 133 gain (book-value adjustment)	0	(151)
Ending MSR gross book value	\$1,916	\$2,067
Ending MSR fair value	\$2,040	\$2,040
Required ending MSR valuation allowance	0	(\$27)
Beginning MSR valuation allowance	0	0
Impairment expense/(recovery)	0	\$27
Balance Sheet		
Ending MSR gross book value	\$1,916	\$2,067
Ending MSR valuation allowance	0	(27)
Ending MSR net book value	\$1,916	\$2,040
Income Statement		
Amortization expense	\$61	\$61
FAS 133 gain	0	(151)
Impairment expense/(recovery)	0	27
Net (income)/loss	(\$61)	(\$63)

In this example, the company with hedge accounting achieved the same \$63 in net income, but the company without hedge accounting realized a \$61 net loss due to the inability to write up the net book basis of its MSR asset by recovering the valuation allowance. Furthermore, the reclassification of temporary impairment to permanent results in a reduction of amortization expense in periods subsequent to the reclassification, thereby further limiting direct comparisons of peers that have taken permanent impairment against those that have not. Similarly, readers of financial reports should expect differences in results among peers that apply FAS 133 hedge accounting, as the guidance does not require a single, uniform application of the standard. Differences in: (1) how similar assets are determined; (2) the designated risk being hedged (e.g., changes in fair value attributable to changes in the benchmark rate vs. full fair value); and (3) the frequency and methods employed for measuring hedge effectiveness may create additional differences in accounting results.

Current Disclosure Requirements

FAS140 requires general disclosures around the amounts of MSRs recognized and amortized, the fair value of recognized MSRs, the risk characteristics considered in impairment testing, a roll forward of the MSR book basis and valuation allowance, and the effect on fair value of adverse changes in key assumptions. FAS 133 requires general disclosures of fair value hedge accounting used by many MSR investors including:

1. The overall hedge strategy;
2. The net ineffectiveness recognized in the income statement (e.g., the difference between the asset and hedge fair value changes during the period);
3. The amount of derivative gain/loss excluded from the assessment of effectiveness; and
4. The location of these hedge results in the income statement.

Recommendations for Improving Transparency and Disclosure

MSRs are complex and difficult to value. The related accounting is hard to explain, since there are numerous moving parts, each with potentially different timing and accounting. These complexities make it hard for stakeholders to fully understand the information provided. Minimum disclosures required today, while attempting to focus on key risks, fall short of properly explaining the mechanics of MSRs. For example, many MSR holders operate on the basis that the MSR investment benefits from the natural business hedge that may exist in certain origination businesses. This basis acknowledges that certain aspects of the production and servicing income statements perform conversely across the interest rate cycle. Generally speaking, a large production franchise will provide origination volumes and thereby production gains to offset a decline in MSRs' value in a low or declining interest rate environment. Some holders of MSRs have provided commentary to analysts on how they apply some of this to managing their business risks; however, many stakeholders do not understand the information or context provided. While the practice makes intuitive sense, for some it has proved difficult to provide actual performance measurements and transparency to demonstrate the effectiveness of its application. As a result, some investors have requested more clarity around the quantitative performance of the strategy.

If the natural hedge is an important part of a company's risk management approach, companies should have formal strategies in place that would include quantitative analyses of production and servicing income (by channel, product, and reporting period) in a variety of economic scenarios, and they should have processes to accumulate and disclose this information. Currently, we have observed diversity in practice related to how well mortgage companies disclose the use of such strategies to manage their businesses. Nevertheless, clear disclosures related to key issues, such as how this asset is managed and how it fits into the business, along with a robust discussion of valuation that is consistently applied throughout the industry would improve both transparency and financial reporting in this area.

Therefore, we believe that financial reporting will be improved if, in addition to current disclosure requirements, transparent and ample information is provided to users of the financial statements that clarifies:

1. The types of MSR risks an entity is exposed to;
2. The how, why, when, and where of judgments that are made by the entity in managing those risks;
3. Clear, precise, granular, and transparent disclosure of assumptions related to how the entity values its MSRs; and
4. Granular transparent disclosures on the methods used to hedge MSRs (if the company is applying hedge accounting) along with the economic results of the hedge.

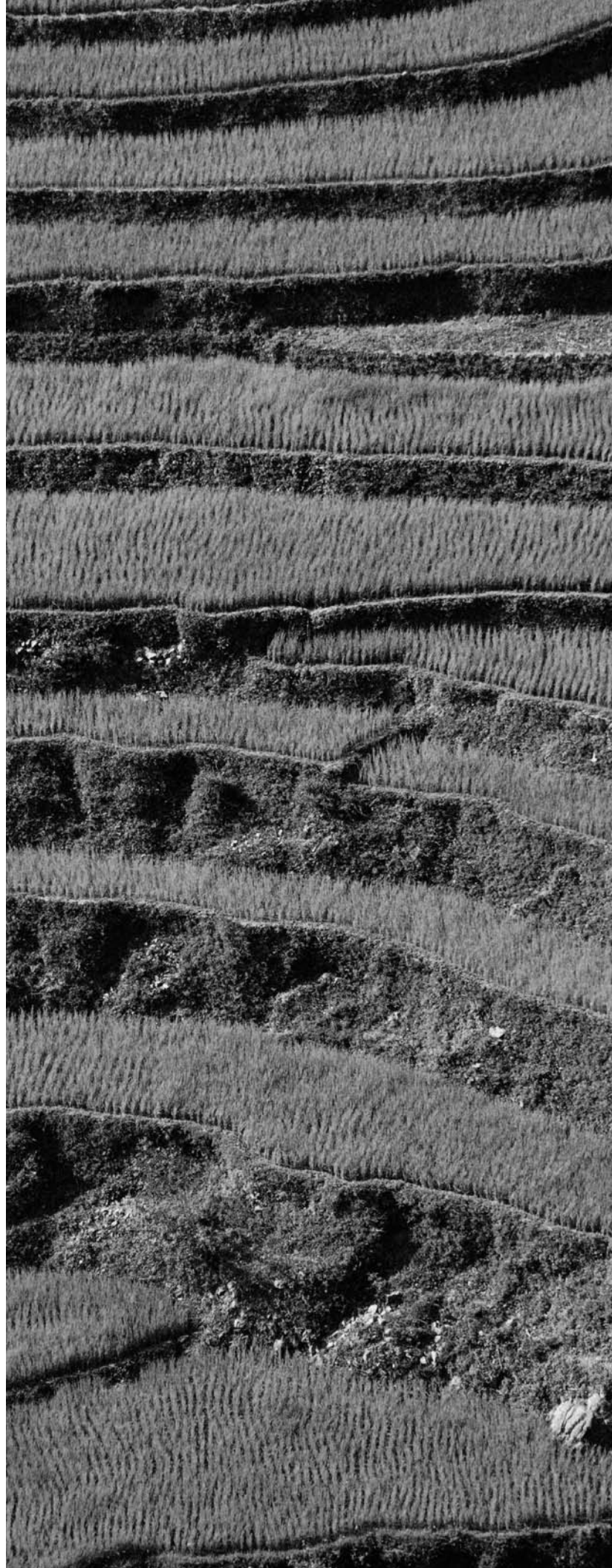
We also propose another solution that would mitigate the accounting and transparency issues and risks related to MSRs and that would simplify the accounting rules related to them. We believe that the existing accounting rules for MSRs under FAS 140 and FAS 133 should be replaced with a fair value approach. We believe that this approach would mitigate the concerns related to differences in amortization, impairment, and the application of hedge accounting across peers. Fair value accounting for MSR assets would reduce the complexity and difficulty of applying the existing accounting guidance and increase transparency in financial reporting. To complement a fair value approach, we believe more rigorous disclosures for the fair value process should also be established.

In the interim, companies need to continue to improve the quality and transparency of their financial reporting around MSRs, including disclosures around critical accounting estimates. Also, companies should consider disclosing additional information about the performance of their MSR asset to help stakeholders evaluate relative performance of the holders of the MSR asset. Such disclosures could include actual prepayment experience by product and compared to model and third-party information, actual cash flow experience, and other important data. Finally, regulators and shareholders are looking to financial institutions' boards of directors to ensure that their financial reporting is not only transparent, but also accurate. Best practice is for boards of directors to have frequent, candid discussions about valuation methodologies, valuation levels, and recoverability of the asset with company management, external auditors, and others. We recommend that boards of directors reassess the adequacy of their existing diligence procedures around reporting and disclosure, including critical accounting estimates, to ensure transparency in financial reporting of MSRs.

FASB MSR Fair Value Project Update

Note: Since the writing of this article, the FASB has added a limited-scope project to its agenda to determine if servicing rights should be accounted for at fair value. PricewaterhouseCoopers met with the Board on March 10, 2004, to discuss challenges facing the mortgage industry caused by the complexity of the current accounting model for MSRs. In subsequent meetings, the Board concluded that stating servicing rights at fair value would reduce concerns about the lack of transparency and consistency in financial reporting around hedging, impairment and amortization. However, the Board realized that such a requirement may be arduous for some companies that do not risk manage MSRs using financial derivatives. As a result, the tentative conclusions of the servicing rights project allow for a one-time election to apply fair value or the current LOCOM model to each class of servicing rights. For those companies that elect the fair value option, it should be applied at inception of the contract with subsequent changes in fair value recognized through current period earnings. The Board has also tentatively approved increased disclosure requirements related to servicing rights that are expected to make the economics and the accounting around these instruments more transparent to readers of the financial statements. The tentative conclusions arising from the servicing rights project are expected to be combined with the conclusions from other FAS 140 related projects in an Exposure Draft amendment of that Standard during 2005. So stay tuned.

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Auto Finance: Maximizing Leasing Profits and Minimizing Accounting Risk

Auto loans and auto backed securitization paper has experienced strong demand over the last few years as investors hungry for yield as well as improving credit performance have combined to bid down credit spreads. Auto captive finance companies, banks and other consumer lenders have generally experienced strong results given solid margins and reduced credit losses. Prior to recent Federal Reserve interest rate tightening, margins have benefited from lower funding costs and less ultimate consumer interest rate elasticity. Origination volume has also held up despite a general slowing of the economy. Since 9/11 there has not been an appreciable fall off in vehicle production as cash rebates and zero percent (or very low APR financing) has served to buoy vehicle production and sales. The impact of the zero percent financing on captive finance margins has been offset by transfer payments from their respective motor company divisions.

Over the last three years there has been a marked decrease in leasing activity. Captives, banks and other consumer lenders have shied away from new lease originations given the large exposure to falling residual values in the late 90's and early 00's. In addition, the low APR financing coupled with rising lease rates has significantly limited consumer demand for this type of product. However, with interest rates increasing, all this is changing and leasing is coming back into vogue with volumes expected to continue to increase over '05 and into '06.

Leasing is getting more popular for several reasons: 1) auction values for used vehicles have generally increased; 2) lessors believe that they are better able to manage their residual exposures; 3) lease securitizations transactions are gaining more acceptance thereby allowing lenders to increase the weighting of this product without significantly increasing borrowing costs; and 4) as interest rates rise consumer demand increases given more inherent flexibility in this product to fit the monthly payment into the consumers' budget. However, the increase in leasing activity significantly increases the inherent risk in one's portfolio, as unlike traditional lending, the risk of decline in a vehicle's resale value is borne by the lessor and not the consumer.

Understanding the inherent business risks, as well as the accounting implications, is the key to managing a successful lease portfolio. The standard deviation between the variability in residual losses is much greater than the corresponding amount for credit losses. Thus auto financiers may be susceptible to the initial setting of overly optimistic contractual lease-end values (LEVs). These contractual LEVs are established at the inception of the lease and are partially driven by incentive based pricing resulting from the manufacturer's desire to sell more cars. Therefore, they may not necessarily portray the vehicle's true residual value. Correspondingly, as the majority of leases are accounted for as operating leases, lessors may need to recognize additional depreciation expense during the lease term to write down vehicles to their best estimate of ultimate residual values.

Properly accounting for lease investments—including operating versus direct finance lease designation, determining residuals value estimates, and recording depreciation expense—especially in the wake of Sarbanes-Oxley, can be complicated and burdensome for lessors. It is an integrated facet of auto leasing

however, as GAAP will dictate the timing and measurement of residual profits and losses. Lessors therefore need to carefully consider the following accounting concerns as they ramp up their leasing business.

Operating vs. Direct Finance Lease Designation

With drastic improvements in vehicle quality and reliability over the past 10 years, the useful lives of automobiles continue to grow. This has provided great flexibility to lessors as operating lease contracts are now being written with up to five-year terms that do not exceed the 75% useful life threshold set by SFAS 13 for capital lease financing treatment. This flexibility allows lessors to offer operating leases that meet the needs of more consumers. Lessors need to consider the inherent risk with lease terms of such duration as residual values can potentially decline rapidly during an extended term while the lessee's obligation remains constant.

In addition, lessors need to consider the 90% value test specified by SFAS 13 for longer term leases. Non-luxury brand vehicles, for instance, may start exceeding this threshold and thus trigger direct finance lease designation. Careful consideration should also be given to determining the interest rate implicit in the lease—specifically, it should be based on the best estimate of the value of the residual at the end of the lease term, which may or may not be the contractual LEV.

Residual Values versus Contractual Lease End Values

Lease offers are generally thought to be a function of a best estimate of a vehicle's value at the end of its lease term. However, as mentioned above, over the past few years monthly payments have really been set as a function of marketing and sales incentives.

Not only is this the case for captives, but also bank and consumer finance companies, which have executed marketing agreements with various manufacturers or dealers. Automakers have aggressively been "buying-up" residual values through the use of customer incentives designed to lower lease payments and boost sales. The result has been distorted contractual LEV calculations that do not always depict the fair value of a vehicle at the end of its lease term. Combine

that with unanticipated future declines in auction values, and lessors are forced to recognize additional depreciation expense by depreciating the leased assets to their revised estimate of residual values. In addition, the decline may be severe enough to trigger a SFAS 144 impairment.

Alternatively, as quality and demand improve for certain vehicle lines, residual values may actually outperform a lessor's forecast. This can lead to a reduction of initial depreciation rates or even unrealized gain positions since residual values cannot be written up, only down. A pessimistic forecast of LEV's that results in recognizing accumulated depreciation in excess of the revised estimate of residual values would result in gains at auction as the basis in the asset will be below its ultimate realized value. However, excess gains on auction would generally not be expected as depreciation rates should be slowed as residual values firm.

Return Rates

In addition to estimating the residual value, the lessor must also assess whether or not the lessee (or dealer under certain arrangements) will purchase the vehicle at the end of the lease term. The purchase option presents consumers with a considerable advantage in having the right to purchase a vehicle at a price potentially lower than the going market rate. The intrinsic value of this purchase option increases when the vehicle has significantly less miles and lower overall wear and tear than originally forecast into the LEV. If the vehicle is returned, however, it presents the lessor with an opportunity to sell it for more than its book value. Return rates must therefore be factored into ultimate pricing decisions; although related gains and losses can be difficult to anticipate as the lessee may choose to keep the vehicle for non-monetary factors like reliability and convenience.

How return rates interact with residual values is not specifically addressed within the 400 plus pages of GAAP on leases. However, if companies account for their operating leases on a lease by lease basis it is hard to conceptually consider return rates into the estimate of residual values. If leases are accounted for on a group or composite type basis, a conceptual argument can be made for considering return rates into the best estimate of residual values. Regardless of the method selected, return rates are clearly a key factor in the ultimate profitability of the portfolio.

Forecasting of Residual Values

Lessors also face a choice of whether they use an internal residual forecasting model or an external source, such as Automotive Lease Guide (ALG), to both initially price their lease contracts with customers as well as account for residual values going forward. If one source is used initially but then changes for subsequent accounting, careful consideration should be given to any differences due to methodology. Regardless, entities should periodically back-test amounts used (as well as potential alternatives) to ensure that they are properly evaluating their key economic and accounting estimates.

Total reliance on external sources, while more objective, is not always the best alternative as internal models may incorporate more recent data/assumptions and have access to information that is not available externally. In determining residual values, consideration should also be given to manufacturer incentive programs that can drive down auction values while in place but may allow for subsequent recovery when those incentives are removed.

Irrespective of the method chosen to forecast residual values, lessors must also forecast return rates. If static assumptions are used, back-testing should be undertaken to consider the reliability of this estimate. The question for companies to consider is how granular to make the estimate of return rates—does it vary by brand/model/vehicle line or period originated?

Developing best estimates of residual values and return rates needs to be undertaken within the Sarbanes-Oxley compliance framework. Therefore, maintaining internal econometric models and setting assumptions must be executed under a robust and transparent governance framework. Model validation and spreadsheet controls are critical components of this framework.

Evaluation and Tracking of Residuals

Most “off-the-shelf” leasing systems are primarily focused on billing customers the required monthly rental payments—thus they are most concerned with the contractual LEV. In fact, most do not have the capability to track a separate estimated residual value. Therefore, as residual values start to diverge companies may be forced to track additional required depreciation via on-top/bolt-on solutions. Often these solutions

take the form of spreadsheets—which have significant Sarbanes-Oxley risk. Failure to track additional accumulated depreciation at the same level at which residuals are forecast also raises questions around consistency. It would be inappropriate to consider this additional accumulated depreciation as a “reserve” that is a fungible item (which can be reallocated among non-related items), as accumulated depreciation is a basis adjustment in an asset or composite group of assets. Given these inherent risks, companies should carefully consider whether an investment in a more robust lease accounting system is cost beneficial.

Loss Mitigation Procedures

The sooner lessors can identify forecasted declines in residual valuations, the more effective they can be at mitigating losses through remarketing and other strategies used to improve auction values. Stressing vehicle image, quality and performance, and improving overall customer satisfaction can help boost market demand and restore value in depressed vehicle lines. Lessors may also enlist the aid of third party residual insurers, which have grown in popularity as automakers have priced more vehicles with residual values in mind. These insurers can also be instrumental in moving leasing companies out of operating lease accounting and into direct finance accounting.

We are not aware of capital market solutions to mitigate residual risk at this point. However, as markets evolve other alternative solutions may emerge.

Conclusion

As automakers shift their focus back to leasing in response to higher interest rates, vehicle quality and resale value will take on greater importance. Lessors must now become more diligent in their pricing of leases, which means doing a better job of predicting and managing residual values. Attractive yields can be earned from proper residual management aided by an effective accounting infrastructure. Hopefully, the lessons of the past and the new control mindset of Sarbanes-Oxley will serve to prevent some of the periods of large losses that have traditionally impacted this financing source.

For more information on auto leasing considerations, please contact Christopher Abate at 415-498-7693 or at christopher.abate@us.pwc.com, or Paul Noring at 704-344-7585 or at paul.noring@us.pwc.com.

Keeping the 404 Momentum

Many accelerated filers from a Sarbanes-Oxley 404 perspective scrambled to meet year-end deadlines and received a passing grade. While some companies have reported material weaknesses, it is still difficult to gauge how the marketplace will react overall to the first financial reporting season under 404 currently underway.

Companies that have been forced to comply in 2004, as well as those addressing Sarbanes-Oxley 404 in 2005, should not lose sight of the momentum that can be gained from going through compliance with the provisions of Sarbanes-Oxley 404.

Sarbanes-Oxley 404 is obviously not a one-time event; all companies recently completing their first year of addressing compliance with Sarbanes-Oxley 404 should not lose the intensity and focus that it took to implement this section of the Sarbanes-Oxley legislation for this calendar year. Lessons that many companies learned from this year include the following:

- The process is much broader than originally thought and required more senior management leadership from the company. In many cases, senior management leadership was needed as this is the group that generally understands the interaction of all the various components of a company, e.g., Legal, IT, HR, Tax and Internal Audit. Understanding this interaction is critical to maintaining a successful 404 program.
- There are ongoing testing requirements and documentation needs associated with compliance. This requires the creation of detailed reporting within an organization that can summarize key statistical information for management as to a company's progress.
- Management will need to continually assess and challenge the scope of its 404 efforts as business activities of a company continually evolve due to changes in management, merger and acquisition activity as well as major system conversions.

Post Sarbanes-Oxley 404 implementation will require significant ongoing oversight, governance and maintenance to be successful beyond the first year. In addition, management will need to:

- Ensure that the processes and activities identified during the initial 404 review are reviewed and tested on a regular basis going forward as well as any new processes and activities that are deemed to impact 404 compliance. One area where a company can address this is through its ongoing risk and controls assessment process.
- Keep in mind that for any identified significant deficiencies or material weaknesses, action plans and related test plans (once action plans are completed to remediate a control) will need to be developed. An important reminder here is that,

in general, if a company has not remediated an identified significant deficiency by the next 404 cycle, there is a strong likelihood that this will become a material weakness.

The momentum gained from initial compliance efforts should not be squandered as there are benefits to be realized from the 404 process. While companies have devoted substantial resources to this effort, these investments should result in significant rewards for those companies that have leveraged the 404 process to strengthen their overall control environment.

For more information on the Sarbanes-Oxley Act or how to leverage Sarbanes-Oxley related procedures to improve your system of internal controls, please contact Thomas Kelly at 312-298-4241 or at thomas.j.kelly@us.pwc.com.



End User Computing: The Achilles Heel of Sarbanes-Oxley

For many years spreadsheets have been an integral and increasingly complex part of modeling and analyzing risk, exposure and financial results. While companies have traditionally relied on limited tools to perform these types of processes (e.g., Excel spreadsheets), it is expected that the number of tools available directly to the business community will likely grow due to increased competition and advances in technology. Given their broad and mainstream use, if the adequacy of controls related to end user computer applications (ECAs) is determined to be insufficient and/or could lead to a material misstatement, then the public must be informed via the financial reporting process. However, due to the nature and common uses of ECAs it is unlikely that general technology controls are in place that comply with established system control requirements.

In late July 2004 PricewaterhouseCoopers published a white paper entitled, "The Use of Spreadsheets: Considerations for Section 404 of the Sarbanes-Oxley Act," which identified a general approach to mitigating risks related to using spreadsheets. The whitepaper also outlined practical considerations for establishing effective controls to mitigate the risk inherent in the application of ECAs.


In the white paper, PwC identifies the first step in establishing controls around spreadsheets and other ECAs: the development of a corporate policy outlining expected controls. Contributors to the policy should include leaders within IT, internal audit, accounting, and key members of management within the business units. The policy should also address roles and responsibilities concerning the implementation and maintenance of the end user computing solution. In addition, the policy should address the "handling" of corporate data based on the sensitivity of information while establishing a registry where end user applications can be logged and monitored by management. This policy will help with managing risk associated with ECAs as well as longer term system planning designed to replace the ECA with a more stable and controlled system solution.

The ECA policy should establish:

- Clear guidelines regarding the levels of controls;
- Management responsibility for compliance with the policy; and
- An independent review process (e.g., internal audit, risk management, quality control) designed to ensure that the policy is being enforced.

It should be stressed that data within almost any organization, especially within the consumer finance industry, is a critical asset that needs to be protected and managed appropriately. In many cases there are neither established procedures nor sufficient controls regarding the treatment and handling of corporate data once it is outside a formal IT data center. Corporate expectations related to the access, treatment and processing of this type of information must be established and supported by executive management. A strong policy and the following steps can help establish enhanced controls and improve discipline related to managing these important tools:

1. Creating an inventory of spreadsheets, databases, and third party tools maintained by the business community;
2. Evaluating the complexity of the end user application;

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3. Determining the necessary level of controls for “key” end user applications;
 4. Evaluating existing “as is” controls for each “key” end user application; and
 5. Developing an action plan to remediate control deficiencies.

When inventorying end user applications, include information such as application name, brief description, business unit owner, primary developer, and use of spreadsheet (operational, analytical, or financial and, if financial, then amounts calculated, and complexity).

In addition to these steps, companies should consider including additional requirements specific to their organization. An example can be establishing a robust testing process for changes to spreadsheet models. The process may include establishing a baseline, changing inputs, running the model, and validating that only affected cells have changed values. The OCC’s bulletin 2000-16 outlines several additional considerations to managing model risk. While not all companies are regulated by the OCC, the bulletin offers practical guidance on managing model risk that can be applied at all companies and ECAs.

Addressing this issue head on will yield many benefits external to compliance with Sarbanes-Oxley and OCC Bulletin 2000-16. From an IT perspective there will be an increased awareness of what the complete system is and not just the “back office” components. In other words, if the business must build additional spreadsheets, databases, and/or use third party tools to meet their needs, then is the system really complete? By IT having complete visibility into the missing links, they will be able to better plan for and build more robust systems in the future. From a business perspective there will be an increased understanding of the necessary discipline involved in creating formalized IT systems. With this understanding, the business can then utilize many parts of the existing IT infrastructure to increase the controls over significant end user applications. Additionally, the risk officer will have a much clearer picture of where the significant risks are concerning the information systems control environment.

For more information on establishing controls around end user computer applications or for a copy of PwC’s whitepaper, please contact Will Thompson at 607-329-8770 or at william.t.thompson@us.pwc.com, or Beji Varghese at 678-522-6658 or at beji.m.varghese@us.pwc.com

Regulatory

Regulators Reinforce the Need to Develop New Products Within a Formal Risk Management Framework

Consumer finance companies face challenges in growing their traditional lines of business. This has resulted in increased acquisitions and consolidation in the industry as companies strive for diversification, economies of scale and improved profit margins. The alternative is innovation: the development and delivery of new products or services to customers.

The development of new products or services is a function of both external and internal drivers. External drivers include changes in economic conditions, technology or competition, or the identification of a defined market need for a product or service. Internal drivers include the need to improve profits as well as to increase market share and customer loyalty.

For purposes of this article, new products or services are defined as traditional and non-traditional products and services, as well as modifications to existing products and services. Modifications include changes in the terms or nature of an existing product or service that significantly alter the underlying risk characteristics of the product or service (e.g., significant changes in underwriting standards, geographic or industry focus).

Recent Regulatory Guidance on New Products

For several years, federal bank regulators have been evaluating banks' new product approval processes as part of onsite examinations. However, after the recent, highly publicized failures in the financial markets related to Enron, which involved complex structured transactions, as well as the consumer complaints related to products such as payday and title lending, the Office of the Comptroller of the Currency (OCC) has focused even more intently on banks' procedures for authorizing new products.¹ This resulted in targeted risk management examinations focusing on new product processes that brought about the issuance in May 2004 of formal supervisory guidance.² A unique aspect of the guidance is it requires banks to discuss their new product development plans in advance with their OCC examiner-in-charge or supervisory office if the new activity constitutes a significant deviation from the bank's existing business plan. While this guidance is specific to OCC regulated banks, its principles should be considered, and can be applied, to all companies.

¹ OCC News Release 2002-92, Statement of Douglas Roeder, Senior Deputy Comptroller OCC, before the Permanent Subcommittee on Investigations of the Committee on Governmental Affairs of the United States Senate, dated December 11, 2002.

² OCC Bulletin 2004-20, Risk Management of New, Expanded, or Modified Bank Products and Services, dated May 10, 2004.

Risks Involved in a New Product Launch

There are a number of interconnected risks involved in a new product launch. Accordingly, it is essential for banks to identify those risks and modify or structure the product in such a way as to mitigate the risks in the best possible manner. The primary risks that arise in the development and introduction of new products or services include:

- Strategic risk: The risk to earnings or capital arising from adverse business decisions or improper implementation of those decisions.
- Reputation risk: The risk to earnings or capital arising from negative public opinion.
- Credit risk: The risk to earnings or capital arising from an obligor's failure to meet the terms of any contract with the bank or otherwise fail to perform as agreed.
- Transaction risk: The risk to earnings or capital arising from problems with service or product delivery.
- Compliance risk: The risk to earnings or capital arising from violations of laws, rules, or regulations, or from nonconformance with internal policies and procedures or ethical standards.
- Other potential risks: Increased liquidity, interest rate, price or foreign currency translation risk.

Key Components of the Risk Management Process

Regulators recommend that banks take a proactive approach and involve all relevant bank departments in the process up front, such as risk management, compliance, audit, IT, finance and operations. This is critical because the involvement of these departments helps ensure that risks are fully understood and risk management strategies are fully vetted.

The OCC guidance highlights the process that banks should follow in order to minimize the impact of the risks outlined above. Regulators expect that all of the steps are performed prior to launch. However, the formality of the bank's risk management process should reflect the size of the bank and the complexity of the product or service offered. The key components are discussed below.

Due Diligence

Management and the board should conduct adequate due diligence to ensure they have a realistic

understanding of the risks and rewards of the product or service being considered, as well as a clear understanding of the rationale for offering the product or service. The due diligence process should include:

- Assessing how the risks associated with the new product or service fits with the bank's current business strategy and risk profile;
- Consulting with relevant functional areas, such as credit, compliance, accounting, audit, risk management, legal, operations, information technology, and marketing, as well as the Treasury/Asset Liability Committee (ALCO), to determine risks, concerns, and necessary controls;
- Determining requirements for complying with laws, regulations and regulatory guidance;
- Determining the expertise needed to effectively manage the product or service, including the possible need to acquire additional expertise;
- Researching the background, experience, and reliability of relevant third parties that will be part of the product/service delivery;
- Developing a business and financial plan for the product or service that assesses the bank's competitive position and establishes objectives and strategies for how the product or service will be brought to market; and,
- Developing viable alternatives, including an exit strategy in the event the product or service fails to perform as expected.

Although the Board may delegate the performance of managerial duties to others, it has the ultimate responsibility for ensuring that the bank is run in a safe and sound manner. In fulfilling its responsibilities, the Board must ensure that a new, expanded, or modified bank product or service is consistent with the bank's strategic goals.

Risk Management Controls and Processes

Once the bank decides to introduce the new/expanded/modified product or service and develops a business plan, the Board and management should develop and implement adequate risk management processes and internal controls to effectively control the risks of the activity. This should include:

- Expanding and amending bank policies and procedures, as appropriate, to ensure that they adequately address the product or service. Policies and procedures should establish accountability and provide for exception monitoring.

- Developing and implementing the information and reporting systems (MIS) necessary to monitor adherence to established objectives and to properly supervise the product or service. MIS reports should contain key indicators to allow the Board and management to effectively identify, measure, monitor, and control risk.
- Incorporating the product or service into the bank's audit and compliance processes to ensure adherence with bank policies and procedures and customer safeguards.

Performance Monitoring

Management and the Board should have appropriate performance and monitoring systems in place to allow them to assess whether the product or service is meeting operational and strategic expectations. Such systems should:

- Include limits on the size of acceptable risk exposure that management and the board are willing to assume (across measurable risk categories such as credit, operations, and ALM);
- Identify specific objectives and performance criteria to evaluate success of the product or service and the timeframe for achieving success. The performance criteria should include quantitative benchmarks that will serve as a means to evaluate success of the product or service;
- Reflect a process that periodically compares actual results with projections and qualitative benchmarks, to detect and address adverse trends or concerns in a timely manner; and

- Trigger changes in the business plan, when appropriate, based on the performance of the product or service. Such changes may include exiting the activity should actual results fail to achieve projections.

Risk Management of Third Parties

Unique risks are involved when a bank launches new, expanded, or modified products and services with the assistance of third-party vendors. Inferior performance or service on the part of a vendor may result in unexpected risks, including legal costs or lost business. The bank's Board and management must ensure that it understands the risks associated with the activity and conducts adequate due diligence of the vendor, including assessing the proposed vendor's reputation, products and financial condition. Management must also implement an ongoing oversight program over the vendor's activities and develop a contingency plan in the event the vendor cannot perform as expected. Management should not overly rely on the vendor's assertions, representations or warranties, but should do its own analysis to ensure the vendor and its products are a good fit for the bank.

The OCC has issued a separate guidance³ in order to provide additional advice to national banks on managing the risks associated with third-party vendors.

³ OCC Bulletin 2001-47, Third Party Relationships: Risk Management Principles, dated November 1, 2001.



Illustration of the Process

The best way to demonstrate the value of an effective new product risk management process is through the description of a successful new product launch by a large division of a bank. In this case, the concept for the product was generated by market demand that was confirmed through the survey of a wide number of clients. The survey was followed by the development of a new product proposal containing a preliminary business and financial plan with projections of market size, competition, estimated revenues and expenses. This exercise demonstrated the need for the product in the marketplace and that the product would be profitable for the bank. However, in order to get approval for the launch, the division needed to ensure that all the risks associated with the product were understood and the product was structured in a way as to minimize those risks.

Due Diligence

As part of the proposal, the sponsoring division assessed the risks inherent in the product and structured the proposed product in a way as to minimize these risks. The division worked closely with the risk management department from the beginning, as well as other departments such as operations, IT, compliance, finance and audit in order to identify risks and estimate the feasibility of the product. The product parameters and its terms and conditions were fine tuned based on their inputs. This was essentially a cross functional effort, however, the business unit/division retained the ultimate responsibility for the process.

Risk Management Controls and Processes

The proposal grew as the terms and conditions of the product were refined and risk management controls determined. It also specified the systems changes, accounting procedures, and credit/risk limits that would be required. It also specified the MIS that would be generated (content and frequency). Once the proposal was completed, the sponsoring business unit head approved the proposal and circulated the proposal for formal sign-offs from the risk management, operations, IT and compliance departments. The product proposal was then presented to the bank's new product committee that was specifically constituted to review and approve new products. This committee was chaired by the head of risk management and contained senior management representation from business and infrastructure units. The sponsoring business unit presented the proposal, explained the business prospects and related risks, described the

risk management processes and controls designed to mitigate the risks, and the methods of monitoring and judging the performance of the product. The committee approved the product on a "pilot" basis subject to an internal audit and interim performance assessment.

Performance Monitoring

Regular monitoring of the product was performed during the pilot period by management and risk management. As the end of the pilot period approached, internal audit performed a special review of the product's launch and performance, and reported its results to the new product committee, which then evaluated any risk and control issues as well as compared the products results to the original business plan projections.

The launch of the new product was successful, and eventually it was launched nationally by the bank. The keys to its success were:

- Strong sponsorship/accountability for ownership by the business unit;
- Thorough market due diligence;
- The early involvement of risk and operations functions in the development effort; and,
- Defined performance metrics that were well understood and monitored.

Conclusion

There is a common belief that "process" restrains innovation. However this perception can be overcome if the process is well-managed and aligned to the strategy of the company. If a risk management process is implemented properly, the benefits from taking the time to identify and mitigate risk far outweigh the downside of significant financial and/or reputation risk caused by the introduction of a poorly conceived product or service. This is particularly relevant for the banking and consumer finance industry where reputation and compliance risks are substantial. The OCC guidance⁴ and the concepts discussed in this article can assist companies in designing a process that meets their needs—and if handled properly—could even increase the number of innovations.

For more information, please contact David Albright at 202-414-4304 or at david.albright@us.pwc.com.

⁴ This is broad guidance on the process of risk management for new product/service innovation. For specific products/ services (e.g., delivery of services over the internet), other relevant regulatory guidelines should also be consulted.

The SEC Issues New ABS Rules

On December 15th 2004, the Securities and Exchange Commission (SEC) unanimously approved the release of its final rules comprehensively addressing the registration, disclosure and reporting requirements for asset backed securities (ABS). The release is nearly 500 pages in length and was developed through multiple revisions in response to the over 50 comment letters received by the SEC. Compliance with this new set of rules is required for offerings after December 31, 2004.

The majority of the new rules are found in Regulation AB, which is itemized from Item 1100 to Item 1123. These 24 items detail specifically what is required by the SEC, some of which is an expansion or enhancement of current expectations.

In principal, the following key changes will arise in meeting this new rule:

- Periodic filing under form 8-K will be superseded by a new form 10-D, which contains additional reporting requirements including new distribution and pool performance information.
- Annual 10-K filings must be accompanied by a certification based on the 302 certification required under Sarbanes-Oxley.
- A statement of assessment compliance with applicable servicing criteria must be filed. In addition, this assessment must be supported by an attestation report by the issuer's independent auditor.

Regulation AB denotes a significant change in regulatory treatment of securitizations for specifically defined ABS and all parties involved. Aside from Regulation AB, there are additional new rules and amendments that will have an affect on how the marketplace conducts business. These changes range from new forms required by the SEC to posting static pool information on websites while referencing these websites in a prospectus.

Further, Regulation AB will impact issuers in departments other than Treasury; Legal, Servicing, and Information Technology are just a few of the departments that are expected to be impacted as companies begin to assess the scope and resources needed to comply.

Compliance with these new rules and amendments should be of paramount importance for all parties involved in the ABS issuance and securitization process in order to meet the tight implementation deadlines and regulatory compliance.

If you would like more information on new SEC rules including Regulation AB or the other SEC requirements, please contact Juan Romera 646-334-0054 or at juan.romera@us.pwc.com or Steve Davies at 206-398-3519 or at steve.t.davies@us.pwc.com.

Basel II: Implications for Consumer Finance Companies

Recognizing the increased complexities that surround banking and financial institutions, the Basel Committee on Banking Supervisors has released a new framework that updates the measuring of capital requirements first established in the 1988 Basel accord. Basel II is set to be implemented by 2008 and contains three distinct pillars:

- 1. Pillar 1 spans credit, market and operational risk. It provides for new minimum capital requirements that more accurately reflect the risk profile of each bank. Banks will now calculate capital utilizing a more granular methodology as opposed to basing it on standardized allocation methods.*
- 2. Pillar 2 ascribes corporate governance standards and includes a detailed explanation of new supervisory procedures. These procedures have been enhanced to ensure that processes and controls are in place for institutions to accurately calculate their capital and measure their risk.*
- 3. Pillar 3 focuses on the effective use of disclosure and outlines additional information that will need to be released to the public.*

Although implementation in the United States is still a few years away and is only mandated for the largest US financial institutions, it is expected that a number of Tier 2 organizations will choose to opt in. However, banks that are not required to comply with Basel II, and have not chosen to opt in, should still be aware of the standard and consider leveraging its concepts to improve certain areas of their organizations. The following are some key issues for banks to consider with regard to Basel II:

- **Staying Ahead of the Game**

Banks that stay out in front of and understand the various issues surrounding the Basel initiative will be able to better react to the new requirements. As an example, in order to calculate loss information related to credit risk the bank may be required to historically reconstruct various data elements. In order to complete this exercise, significant manual reconstruction of data may need to occur that will require both time and resources. Therefore, because some of the details of the standard have not been finalized, it will also be important for the bank to be measured and flexible in its approach as changes may occur in the future based on feedback received from banks, regulators and other interested parties.

- **Risk Management**

Basel II should help foster a greater understanding of risk across each bank's portfolio. This is an opportunity to create additional expertise in areas that are specific to monitoring overall risk as well as risk related to Basel II. Currently, Basel II focuses on risk as opposed to return. However, leveraging the investment made to comply with the Basel II requirements may also improve corporate performance—something that will come with a greater understanding of the bank's risk. In addition, the existence of strong oversight committees and management will help facilitate supervisory review and proper disclosure.

- **Compliance**

Which companies are affected by Basel II? Not all banks will be held to Basel II standards and banks should have already determined whether they are required to meet Basel requirements. Only banks with total assets of at least \$250 billion or total on-balance-sheet foreign exposure of at least \$10 billion are required to comply. In addition, the 1988 Accord applied only to internationally active banks. Under the new Accord, the scope of application has been broadened to also encompass

bank holding companies that are parents of internationally active “banking groups.” Banks may also choose to opt in to the advanced approach and therefore they will be required to meet the terms of Basel standards. These Tier 2 banks should perform their due diligence in order to weigh the benefits and costs of choosing to opt in.

- **Bifurcation of Capital Requirements**

While all banks will not be operating under Basel II’s requirements, there will be separate minimum capital standards being observed by companies within the United States. This could therefore lead to cost disparities as well as significant financial impacts for companies on both sides of the fence. It also will have an effect on the bank’s customers and products, creating an economic impact that is difficult to predict.

- **Working with Various Constituents**

Basel II will cut across multiple portfolios within the bank, necessitating significant project management initiatives in order to work with stakeholders among the different portfolios. In addition, it is likely that due to the scope of Basel II, simultaneous programs will be occurring, requiring strong communication to eliminate duplication of efforts.

- **Process Improvement**

Work done upfront to identify all significant risks related to Basel II should lead to stronger controls and a better understanding of the bank’s processes. This can translate into redesign efforts that will ensure more efficient processes.

- **Documentation**

It will be the responsibility of the bank to ensure that adequate documentation is prepared and stored to ensure supervisory review standards are exceeded. In addition, this will be a good opportunity to ensure that all policies and procedures related to processes affected by Base II are up-to-date and will pass regulatory and audit standards.

- **Performance Benchmarks**

It will be important to establish performance benchmarks to measure all areas of the company to ensure Basel II compliance. For instance, banks may wish to include performance incentives for collectors who are able to track all recoveries on loans that are charged off. Increased recoveries would reduce the banks loss given default ratios.

- **Build vs. Buy**

Does it make sense for a company to purchase a system or build databases in-house to store the additional information that will need to be captured to comply with Basel II? In addition to this important decision, companies should begin to think about data validation and maintenance and how proper controls and processes can be created to ensure the integrity of the data.

- **Reporting**

Basel II is an opportunity for banks and financial institutions to redesign and enhance reporting for better analysis. Companies that take the time upfront to review and construct reports should see improved reporting around delinquencies, market, operational, and credit risk management.

From many perspectives, the intent of Basel II is to codify and disseminate current industry leading practices while allowing sophisticated financial services organizations to benefit from their risk management investments (in terms of reduced capital requirements). For those organizations not required to comply with the full accord, there are still important concepts raised in Basel II that could provide a road map to pursue targeted risk management enhancements.

For more information regarding Basel II implementation and compliance considerations, please contact Matt Cosman at 617-285-7447 or at matthew.j.cosman@us.pwc.com.

Patriot Act Implementation Update

The USA Patriot act was signed into law by President Bush in October 2001 to deter terrorist acts in the United States and around the world. In expanding law enforcement investigatory capabilities, the Act covers areas from enhanced surveillance and border control to increased information sharing designed to identify and monitor suspected terrorist acts (e.g., money laundering). The following serves as an update to the article published in the winter 2004 edition of PricewaterhouseCoopers' Consumer Finance Update newsletter:

- The Financial Crimes Enforcement Network (FinCEN) amended the definition of “financial institution” used in the Bank Secrecy Act (BSA). The definition was updated to include futures commission merchants and brokers in commodities. These two entities will now be required to comply with FinCEN’s recordkeeping and reporting requirements and also report all suspicious transactions.
- FinCEN is still deciding if real estate professionals should be included under the definition of a “financial institution,” which includes “persons involved in real estate closings and settlements.”
- Fannie Mae and Freddie Mac have revised the Uniform Residential Loan Application to allow lenders to collect information required by the Home Mortgage Disclosure Act (HDMA) and the Patriot Act. Changes specific to the Patriot Act are:
 - Section III, Borrower Information—Age was changed to date of birth.
 - Section III—One of the spaces used for previous addresses was changed to mailing address (if different from the present address).
- These changes went into effect on January 1, 2004. All applications taken on or after this date must use the revised form.
- Fannie Mae has also updated their electronic Fannie Mae loan data file (1003) to version 3.2. Use of version 3.2 is not required at this point. However, support of version 3.0 will be discontinued by no later than the fourth quarter of 2004.
- Patriot Act implementation results:
 - FinCEN now has a network of over 29,000 financial institutions to work with to locate accounts and transactions of people who may be involved in terrorism or money laundering.
 - Law enforcement has submitted 1,256 subjects who were reasonably suspected, based on credible evidence, of participating in terrorist activities or money laundering. Through the 314(a) system (Section 314(a) of the USA Patriot Act requires financial institutions to search account and transaction records and report matches on request), hundreds of suspect accounts have been found, 407 grand jury subpoenas, 11 search warrants, 21 administrative subpoenas or summons have been issued, and three people have been indicted.

For more information about the Patriot Act, please contact Beji Varghese at 678-522-6658 or at beji.m.varghese@us.pwc.com, or Yondy Kang at 973-964-4056 or at yondy.kang@us.pwc.com.

Consumer Finance Group Contacts

Co-chairs



Steve Davies
Seattle, WA
206-398-3519
steve.t.davies@us.pwc.com



Mike Seelig
Minneapolis, MN
612-596-6401
mike.seelig@us.pwc.com

Mike English
New York, NY
646-471-7357
michael.english@us.pwc.com

Alan Lee
McLean, VA
703-714-3814
alan.l.lee@us.pwc.com

Maryann Murphy
McLean, VA
703-714-3808
maryann.murphy@us.pwc.com

Consumer Finance Update Contributors

Christopher Abate
David Albright
Edward Bambauer
Matthew Cosman
Steve Davies
Charles Grauer
Roberto Hernandez
Michael Hollerich
Yondy Kang
Thomas Kelly
Paul Noring
Peter Pollini
Juan Romera
Amy Szeliga
Martin Touhey
Beji Varghese
P. Woodbridge Wallace
Brett Williams

We look forward to this continuing communication with you. If you or someone you know would like to be added to our mailing list, please contact Andrea Connor via e-mail at andrea.connor@us.pwc.com or at 617-530-7395.

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