

A publication of PwC's Financial Services Institute (FSI)

# ***Breaking the Ice*** Using Transparency to Thaw the Securitization Market

February 2011



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# *Section 1*

Point of view

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## *Point of view*

**Securitization is an important tool for many companies and a key part of the global capital markets.**

### **Securitization structures have evolved over the past three decades.**

Early securitization transactions evolved from simple pass-through mortgage structures where cash flows were passed through on the underlying mortgages to the investors, less a fee for servicing and a fee to guarantee the timely payment of principal and interest to the investors. The Federal Home Loan Mortgage Corporation (Freddie Mac) and the Federal National Mortgage Association (Fannie Mae) were chartered by the US government to encourage liquidity in the market for securitized mortgage investments. Despite being privately funded, the status of these organizations as government-sponsored enterprises helped stabilize the mortgage-backed security (MBS) market.

Driven by increasing market acceptance, the US-structured finance industry enjoyed nearly three decades of growth. Over this period, securitization technology expanded globally and was used pre-crisis in North America, Europe, Asia, and Australia.

In the United States alone, the percentage of home mortgages that were securitized increased from 10 percent to approximately 55 percent over the past two decades.<sup>1</sup> From 2001 to 2006, the percentage of all securitizations that were subprime or alt-A loans increased from 9 percent to 40 percent.<sup>2</sup> From 2005 to 2007, US financial institutions securitized approximately 46 percent of the total mortgage credit they originated. The securitization process freed up capital to support additional underwriting activity and reduced credit costs, with the goal of benefiting both consumers and businesses.<sup>3</sup>

### **Early securitization structures appealed to investors for a number of reasons:**

1. These structures were very simple, easy to understand, and the returns were competitive.
2. Fixed income investors could diversify their portfolios with consumer credit exposure. Investor participation in the financing of consumer and corporate credit distributed credit risk beyond the traditional channels and provided fixed-income investors with an additional asset class.
3. The investors' risks were well understood and were primarily related to changes in duration arising from prepayment speeds, which are affected by changes in interest rates. Additionally, credit risk was not a concern as the federal agencies bore the credit risk on the underlying mortgages.
4. Variable rate securities evolved, providing benefits to the investor in a changing interest rate environment.
5. Customized securities were designed to meet investor demand.

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<sup>1</sup> "Restoring Confidence in the Securitization Markets," global initiative, Securities Industry and Financial Markets Association (SIFMA), 2008

<sup>2</sup> "The Rise and Fall of Subprime Mortgages," Dallas Fed, 2007.

<sup>3</sup> Restoring Confidence in the Securitization Markets," global initiative, Securities Industry and Financial Markets Association (SIFMA), 2008

## Point of view

Market conditions, legislative reform, and innovation have allowed the securitization industry to evolve from its infancy into a mainstay of the financial markets in less than three decades.

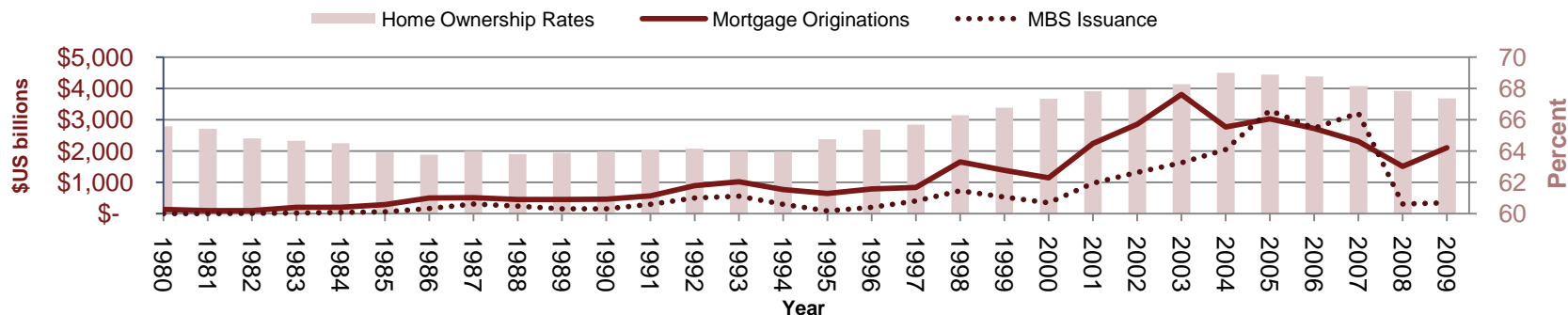
**1970s:** Private companies begin mortgage asset securitization with the creation of private mortgage pools.<sup>1</sup>

**1982:** Alternative Mortgage Transaction Parity Act of 1982 allows lenders to originate mortgages with features such as adjustable-rate, balloon payment, and negative amortization terms.<sup>2</sup>

**2002-2003 :** Mortgage denial rate reaches 14 percent for conventional home purchase loans, half the rate of 1997.<sup>7</sup>

**2003:** Federal Reserve lowers federal reserve's key interest rate to 1%, the lowest in 45 years.<sup>8</sup>

**2004:** The largest US mortgage lenders adopt automated loan approvals.  
**By 2007,** 40% of all subprime loans would result from automated underwriting.<sup>9</sup>



**1983:** The first collateralized mortgage obligation (CMO) is created. CMOs allocate the cash flows from the mortgages to investors in a variety of ways that result in changes in the investors' risk profile.<sup>3</sup>

**1986:** The Tax Reform Act of 1986 authorizes a new entity—real estate mortgage investment conduits—to hold static pools of mortgage loans. It defines REMICs as pass-through entities, so they are not taxed on their income. Instead, security holders are taxed on the income they receive.<sup>4</sup>

**July 1997:** The Taxpayer Relief Act of 1997 expands the capital-gains exclusion to \$500,000 per couple from \$125,000, encouraging home ownership.<sup>5</sup> Mortgage denial rate approach 29 percent for conventional home purchase loans.<sup>6</sup>

**1999:** Based on a GAO recommendation, Fannie Mae eases credit requirements to encourage banks to extend home mortgages to individuals whose credit may not qualify for conventional loans. Freddie Mac follows suit soon after.<sup>7</sup>

**2007:** Financial crisis begins. New Century Financial Corporation, a leading subprime mortgage lender, files for Chapter 11 Bankruptcy protection. Bear Stearns liquidates two hedge funds that invested in various types of mortgage-backed securities.<sup>10</sup>

<sup>1</sup> "Asset Securitization Comptroller's Handbook," US Comptroller of the Currency Administrator of National Banks. November 1997.

<sup>2</sup> "Subprime Markets, the Role of GSEs, and Risk-Based Pricing", US Department of Housing and Urban Development, 2002.

<sup>3</sup> MBS market matures, like first Ginnie Maes," National Mortgage News, December 20, 1999

<sup>4</sup> "The Pain Spreads," ABA Journal, January 1, 2010

<sup>5</sup> "How Government Stoked the Mania," Wall Street Journal, October 3, 2008

<sup>6</sup> Federal Financial Institutions Examination Council (FFIEC) press release, July 26, 2004

<sup>7</sup> "Fannie Mae Eases Credit to Aid Mortgage Lending", The New York Times, Sept. 30, 1999

<sup>8</sup> "Federal Reserve Lowers Key Rate To 1%, Lowest Level Since 1958", The New York Times, June 26, 2003

<sup>9</sup> "The Subprime Loan Machine: Automated Underwriting Software Helped Fuel a Mortgage Boom", The New York Times, March 23, 2007

<sup>10</sup> The Financial Crisis: A Timeline of Events and Policy Actions

## Point of view

Over time, the blueprint of the securitization industry has changed.

**As investor acceptance increased, the markets continued to grow and innovate. However, innovation, at times, came at the cost of decreased transparency and quality, and increased risk.**

### Relaxed underwriting and credit evaluation standards

Initially, the majority of mortgages that were securitized were seasoned mortgages, or mortgages that were in a current payment status post-origination.

However, the markets became very efficient, and the time from origination to securitization has decreased.

The shortened timeframe and the desire to increase origination led to a slippage in the discipline around underwriting and credit evaluation.

### Growth in private label mortgage-backed security (MBS) issuance

Historically, the MBS markets were driven by Fannie Mae, Freddie Mac, and Ginnie Mae. Over the period 2000 to 2007, their share of the market decreased, and the private MBS market grew.

Investors relied heavily on external information to make investment decisions.

In many cases, investors could not or did not independently evaluate the risk or performance of their structured products. A limited number of investors analyzed the characteristics of the collateral to help them predict transaction performance.

### New market participants with minimal oversight

Industry demand for new product origination resulted in the expansion of the traditional origination process performed by mortgage lenders and banks.

The independent broker network expanded and niche service providers and specialists entered the market. However, these brokers were often paid up front, and as such were not incentivized past the point of origination. Also, much of this new activity was subject to little or no regulation.

### More complex, leveraged securitization structures

Over time, the innovation trend led to more complex structures and increased leverage.

Lenders introduced a wide range of new mortgage products offering various payment schedules that provided borrowers with a menu of financing alternatives to match their financing needs.

Some of these products were very complex and untested in markets with significant economic stress.

### Originate-to-sell model

The originate-to-sell model created an environment where the lenders had minimal risk once the mortgages were securitized. Additionally, in acknowledgement of the inherent risk associated with subprime mortgages, lenders were sometimes encouraged to securitize a large portion of the subprime loans they originated.

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## *Point of view*

The combined effects of weakening credit assessments and a downturn in the housing market led to a dramatic decrease in new securitization transactions.

**While these changes were occurring in the market, investors, guarantors, and credit rating agencies continued to rely on historical patterns of payment default and delinquency to predict future performance, even though the fundamental credit evaluation process had changed and, in some cases, was dramatically different from historical practice.**

Pricing and structuring models built on historical data did not fully contemplate the impact of the emerging macroeconomic trends on consumer behavior. As a result, the markets did not adequately assess and price credit risk. In addition, there was a change in the underlying credit quality of the borrowers and, in some cases, dramatically different payment performance.

The market participants continued to rely on pricing models that assumed the housing market would continue to follow historical patterns of rising home values and low defaults. These models were based on the prime mortgage market, however, and did not take into account the unprecedented percentage of MBS that contained subprime mortgages and weakened underwriting practices. These models also failed to account for the loss severity and economic deterioration associated with the current market conditions.

Prior to the crisis, 80 percent to 95 percent of a typical subprime or alt-A MBS deal was assigned the highest possible AAA rating.<sup>1</sup> In early 2007, credit rating agencies changed the models they used to evaluate the subprime mortgage market. By the summer of that year, tens of billions of dollars of MBS were downgraded, many to below-investment grade.

According to Senator Carl Levin, “91% of the AAA subprime RMBS [residential mortgage-backed] securities issued in 2007, and 93 percent of those issued in 2006, have since been downgraded to junk status.”<sup>2</sup> Massive downgrades touched all risk classes, but clearly the bonds that were previously classified as least risky had the furthest to fall. The result was a devastating blow to investor confidence and banks alike, as the value of these securities fell tremendously.

The growing number of defaults and increasing levels of loss severity resulted in numerous high-profile events and a widespread loss of confidence in the capital markets. In 2008, global securitizations, including asset-backed securities (ABS), MBS, and collateralized debt obligations (CDOs), decreased 56 percent (a decrease of \$2.45 trillion) compared with 2006.<sup>3</sup>

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<sup>1</sup> "MBS Ratings and the Mortgage Credit Boom", Federal Reserve Bank of New York

<sup>2</sup> April 23, 2010. Opening statement of Senator Carl Levin (D-MI) before the US Senate Permanent Subcommittee on Investigations hearing, "Wall Street and the Financial Crisis: The Role of Credit Rating Agencies," April 23, 2010

<sup>3</sup> Restoring confidence in the securitization markets, SIFMA, 2008

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## *Point of view*

In late 2008, the federal government began making efforts to stimulate the economy.

**By introducing bailout plans and a lower borrowing rate, government agencies paved the way for economic recovery.**

In October 2008, the US federal government announced the Troubled Asset Relief Program (TARP), designed to stabilize US financial institutions and support the availability of increased credit to borrowers. The Capital Purchase Program (CPP) was a key component of the first TARP actions. The US Treasury Department established this voluntary program to stabilize financial markets by providing capital to healthy institutions, increasing the flow of credit to businesses and consumers, and supporting the US economy. Under the CPP, Treasury authorized up to \$250 billion of senior preferred shares on standardized terms as described in the program's term sheet. The program was available to qualifying US-controlled banks, savings associations, and certain bank and savings and loan holding companies engaged only in financial activities. Institutions participating in the program were required to adopt Treasury's standards for executive compensation and corporate governance for the period during which Treasury holds equity issued under this program.<sup>1</sup>

Despite the government's TARP efforts, credit markets continued to experience stress and illiquidity. As the concern began to grow that a continuation of the credit squeeze on US households and businesses would have a detrimental effect on the economy, it became clear that more government action would be necessary to increase credit availability. Shortly after TARP was launched, the Federal Reserve announced the creation of the Term Asset-Backed Securities Loan Facility (TALF). Under TALF, the Federal Reserve Bank of New York pledged up to \$200 billion in loans to holders of AAA-rated asset-backed securities which were backed by newly and recently originated consumer and small business loans.<sup>2</sup> In turn, the US Treasury Department provided \$20 billion of credit protection to the New York Federal Reserve Bank under TARP.<sup>3</sup>

In an effort to further encourage borrowing, the Federal Reserve lowered the federal funds rate to near zero percent in December 2008. In addition to lowering borrowing costs, the Federal Reserve also aimed to influence the expectations of the market in terms of interest rates and inflation. In early 2009, the Federal Open Market Committee communicated to the market that it believed that, as a result of market conditions, the federal funds rate would remain low for an extended time.

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<sup>1</sup> PwC, FS Viewpoint "Stabilizing and Reviving The Financial System: Employing guarantee structures, 'bad banks,' and other mechanisms to combat the financial crisis," June 2009

<sup>2</sup> [federalreserve.gov](http://federalreserve.gov), TALF press release, November 25, 2008

<sup>3</sup> *ibid*



## Point of view

Although securitization is expected to maintain its key role in global capital markets, the market continues to face challenges as it recovers.

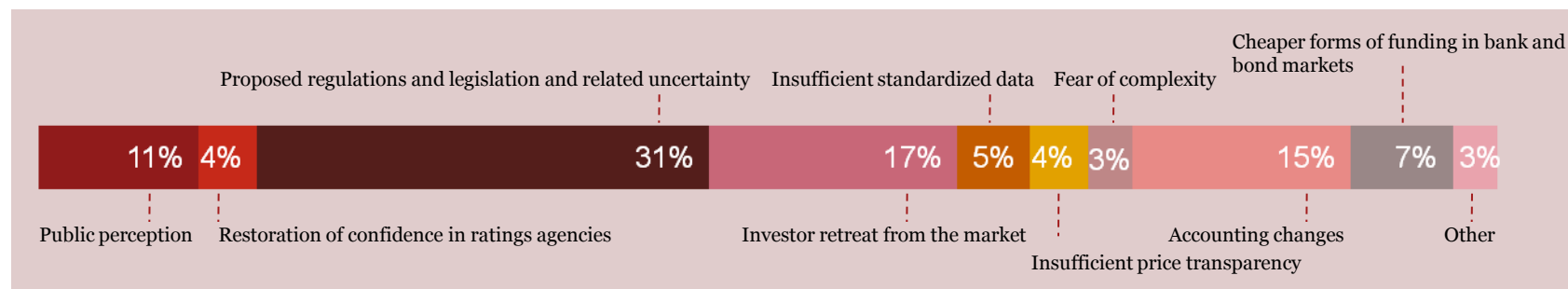
**If the securitization markets do not recover, banks or other credit providers will need to raise additional capital to support the level of on-balance sheet lending required to meet current credit demand.<sup>1</sup>**

It is evident that the MBS market fundamentally changed US mortgage markets. As noted in the International Organization of Securities Commissions' *Unregulated Financial Markets and Products Final Report*, "The absence of a well-functioning securitization market will impact consumers, banks, issuers and investors. The price of credit is likely to be higher for the consumer and the availability scarcer. Banks will no longer have a tool to reduce risk and diversify their financing sources... the current absence of an efficient and smoothly functioning securitization market has substantial implications for continued economic growth."<sup>2</sup>

One 2008 estimate indicates that, in the absence of well-functioning securitization markets, banks may fail to meet the US\$2 trillion of demand for credit origination.<sup>3</sup> Some feel the current demand for credit is even larger, which lends further doubt as to banks' ability to meet this demand.

**The securitization industry will face obstacles largely driven by market participants' concerns and regulatory and legislative uncertainty.**

A recent poll conducted by the American Securitization Forum indicates that, while uncertainty surrounding proposed regulations and legislation is considered a significant challenge for the recovery of the securitization market, the majority of respondents consider market participant-driven concerns the main obstacle. The securitization industry can take steps to address these concerns to restore investor confidence in the securitization markets.



Source: Survey: "The Challenges Ahead for Securitization," *The American Securitization Journal*, Winter 2010.

<sup>1</sup> Restoring confidence in the securitization markets, SIFMA

<sup>2</sup> "Unregulated Financial Products and Markets", IOSCO, September 2009

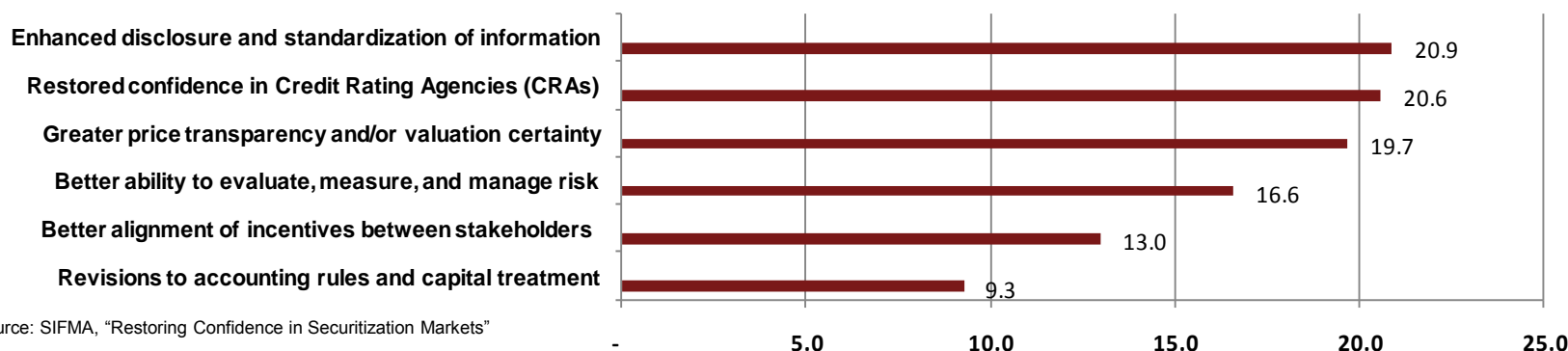
<sup>3</sup> Restoring confidence in the securitization markets, SIFMA

## Point of view

Restoring confidence in the securitization market requires a focus on several core principles.

### Opinions vary as to what is considered the key to restoring confidence in the securitization market.

A December 2008 poll of industry participants by The Global Joint Initiative to Restore Confidence in Securitization Markets (hereafter referred to as “Global Joint Initiative” or “GJI”) indicates the following areas are considered priorities to restoring confidence in the securitization markets:



Source: SIFMA, “Restoring Confidence in Securitization Markets”

### In our view, the following are six key principles to rebuilding the securitization market:

- **Rebuild investor confidence** through transparency, expanded disclosures, and enhanced quality of data and other relevant information.
- **Enhance accountability** for all market participants (borrowers, issuers, investors) through robust underwriting (including standards and disclosures), appropriate representation and warranties for compliance with the document terms, and effective governance and oversight of the process over its entire life.
- **Implement cost-effective oversight** to improve accountability in and oversight of the markets.
- **Properly align and balance the risks, rewards, and costs** of securitization among all participants.
- **Improve reporting and disclosure requirements** by ensuring the financial reporting and disclosure models meet the needs of investors, regulators, and other stakeholders.
- **Re-examine regulatory capital rules** to ensure that they strike the right balance for on- or off-balance sheet securitizations, are implemented consistently across the globe, and that they do not disincentivize the process.

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## ***Section 2***

A framework for response

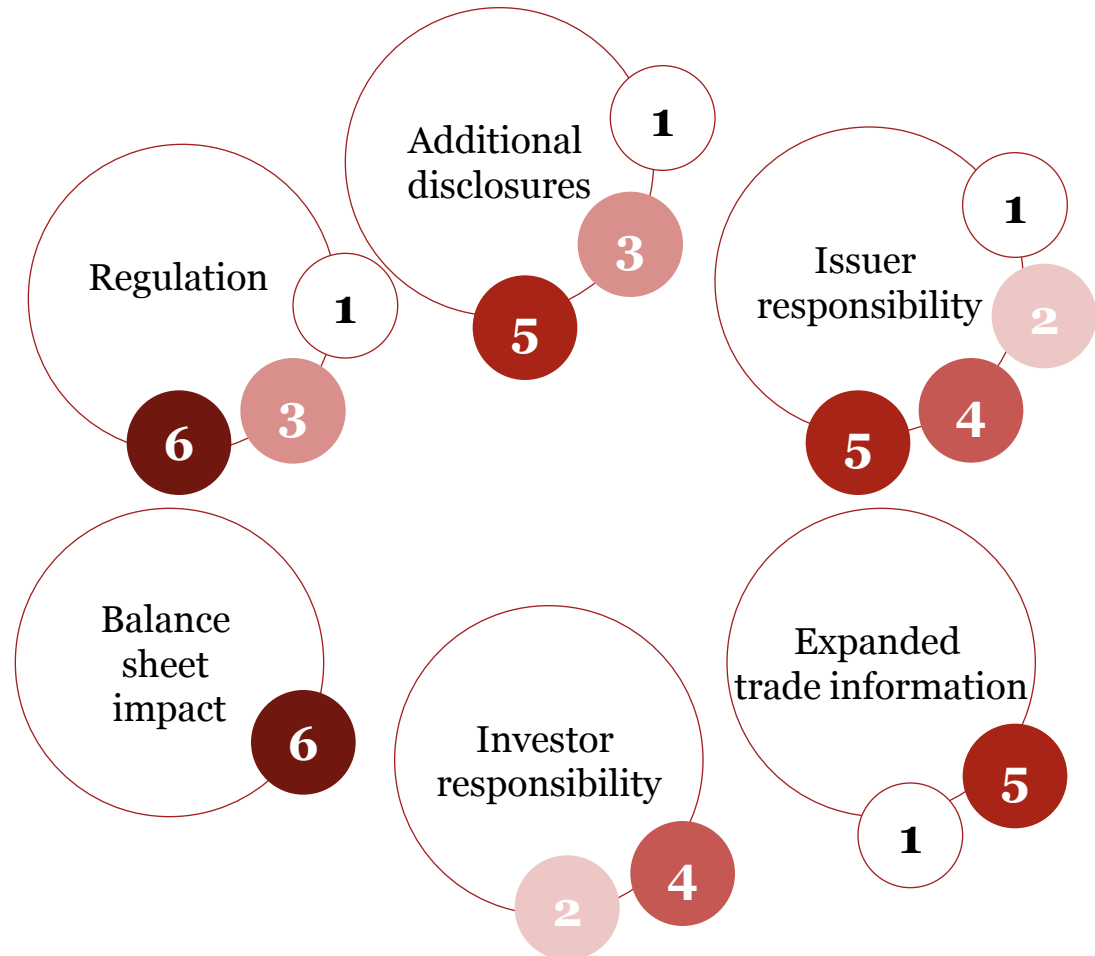
## *A framework for response*

### The roadmap for rebuilding securitization markets

#### Key principles:

- 1 Rebuild investor confidence
- 2 Enhance accountability
- 3 Implement cost-effective oversight
- 4 Properly align and balance the risks, rewards, and costs
- 5 Improve reporting and disclosure requirements
- 6 Re-examine regulatory capital rules

#### Components of a revived securitization market:



## A framework for response

### Balance sheet impact

Balance  
sheet  
impact

Regulation

Expanded  
trade  
information

Additional  
disclosure

Issuer  
responsibility

Investor  
responsibility

**Although the overall balance sheet impact of new regulation is still being determined, rule makers should be mindful not to implement rules that would deter securitization.**

In July 2010, President Obama signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act (hereafter referred to as “Dodd-Frank”). Among the stipulations of Dodd Frank is that securitizers of asset-backed securities (and, potentially, originators of the collateral securitized) collectively retain at least 5 percent of the credit risk of assets transferred or sold through the issuance of ABS. ABS backed by collateral deemed to be of low risk will have a lower retention threshold; securities backed by “qualified residential mortgages” will be completely exempt from the requirement. The retained risk requirement is intended to align the interests of the issuer with those of the investor.

The Federal banking agencies and the Securities and Exchange Commission (SEC) are required to issue interpretive rules dealing with the retention requirements within 270 days from the date of enactment of Dodd Frank. The rules become effective one year after publication for residential mortgages and two years after publication for asset-backed securities.

Both the FDIC and SEC are focusing on risk retention and disclosure, and similarly the new Dodd-Frank law uses the 5 percent standard. Securitizers and originators should have a clearer sense of what the standards will be when the rulemaking process is finished. However, the law requires six different agencies to write rules that would require lenders to retain some risk on the loans they sell. This may lead to differences across the agencies.

During an open meeting held on April 7, 2010, the SEC expressed concern that the 5 percent retention may require the sponsor to consolidate securitization trusts due to the new accounting rules ASC 860, *Accounting for Transfers of Financial Assets*, and ASC 810, *Consolidation*.

The SEC chief accountant, James L. Kroeker, responded to that concern by stating that he believes off-balance sheet treatment could still be achieved because ASC 860 and ASC 810 require a power and control test in conjunction with an economic interest test.

In many cases, the sponsor of the securitization entity is the servicer or an affiliate of the sponsor and may hold power. Transaction-specific facts and circumstances, including the powers of the servicer and the sponsor's potential to absorb losses or gains significant to the entity, will ultimately influence the accounting treatment of the trust.<sup>1</sup>

<sup>1</sup> PricewaterhouseCoopers, Capital Markets Accounting Development Advisory 2010-4

## *A framework for response*

### Balance sheet impact (continued)

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#### **The leverage rule will limit a bank's ability to leverage its equity capital.**

The leverage rule evaluates Tier 1 capital as a percentage of a banking organization's total on-balance sheet assets, net of allowances for loan and lease losses (ALLL) and certain other exposures (leverage ratio).

The assets recognized as a result of the implementation of ASC 810 will increase the denominator of the banking organization's leverage ratio. The principal objective of this measure is to place a constraint on the maximum degree to which a banking organization can leverage its equity capital base. It is intended to be used as a supplement to the risk-based capital measure.

The agencies maintained the leverage rule to complement the risk-based capital rules.<sup>1</sup>

#### **The costs of securitization should be balanced to ensure the system can be attractive to all parties.**

It is presently not clear how risk retention requirements will affect financial and regulatory accounting treatment and legal true sale opinions, which affect a securitization sponsor's regulatory capital requirements and FDIC safe harbor protections. This leaves open the question of whether a sponsor may have increased capital costs as a result of the retention requirement.

A report issued in January 2011 by the Financial Stability Oversight Council acknowledged there is limited literature to date dealing with the macroeconomic effects of retention. The report asserts that risk retention requirements, if set too low, can impose substantial macro costs (for example, by increasing the risks of instability in the financial markets); conversely, an excessive requirement could unduly limit credit availability and economic growth, thereby outweighing the deemed systemic benefits.

#### **The requirements set forth by the European Union are similar to US rules.**

Current US rules regarding balance sheet exposure are similar to those in Europe, with some key differences. The most notable difference is the European emphasis on additional accountability for the investor. While the US rules hold issuers responsible for retaining 5 percent of the risk, European rules put the responsibility on the investor. In effect, the European Capital Requirements Directive rule means that all securitization transactions that a European institution enters into must adhere to these guidelines.

<sup>1</sup> PwC, Capital Markets Accounting Development Advisory January 2010.

## A framework for response

### Balance sheet impact (continued)

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**Basel III significantly increases RWA requirements for counterparty risk through the combined effect of capitalizing CVA risk, extending the time horizon for exposure calculations on margined securities finance and over-the-counter derivatives, and increasing the asset correlation for exposures to major financial institutions.**

The need to strengthen risk coverage of the Basel framework has been one of the key lessons of the financial crisis. To this end, the Basel Committee issued in July 2009 the revised capital requirements for trading book exposures and complex securitization transactions. The new proposals focus on strengthening capital requirements for counterparty credit risk arising from derivatives, repo, and securities financing activities. The enhancements to the framework are designed to raise capital buffers backing these exposures, reduce procyclicality, and provide additional incentives to move over-the-counter derivative contracts to central counterparties and exchanges.

**In July 2009, the Basel Committee on Banking Supervision approved a final package of measures to strengthen the 1996 rules governing trading book capital.**

- Trading book rules introduce higher capital requirements to capture the credit risk of complex trading activities and include a stressed value-at-risk (SVaR) requirement, which the committee believes will help dampen the cyclicity of the minimum regulatory capital framework and promote a more forward-looking approach to provisioning.
- The committee is also strengthening the treatment for certain securitizations in Pillar 1 (minimum capital requirements) by introducing higher risk weights for resecuritization exposures to better reflect the risk inherent in these products, and requiring that banks conduct more rigorous credit analyses of externally rated securitization exposures.
- Higher capital requirements for trading, derivative, and securitization activities will be introduced at the end of 2011.

**Basel III provides the following guidelines related to securitization.**

- Capital charges calculated under the standardized method and applied to the banking book will be extended so that they apply to securitized products on a bank's trading book with the exception of correlation trading.
- Resecuritization exposures (CDOs of ABS and CDOs of RMBs) will be treated differently from securitization exposures to reflect that they are riskier. Capital requirements for resecuritization positions will be approximately double the requirements for simple positions.
- Currently, two methods are available for calculating capital requirements for a securitization position in the banking book: (1) standardized approach, under which risk weights are based on ratings from the credit rating agencies; and (2) internal ratings-based approach, under which rated securitization exposures are subject to the ratings-based approach and unrated securitizations are subject to the supervisory formula approach.

<sup>1</sup> FS Viewpoint "The New Basel III Framework: Navigating Changes in Bank Capital Management", October 2010, [www.pwc.com/fsi](http://www.pwc.com/fsi)

## *A framework for response*

### Regulation

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### **A new “safe harbor” rule is intended to improve the rating quality of securitizations involving banks.**

On September 27, 2010, the Board of Directors of the FDIC approved a final rule adding conditions for use of its securitization “safe harbor” rule, and extending the protection provided by the rule through December 31, 2010. Under this safe harbor, all securitizations or participations in process before the end of 2010 are permanently grandfathered under the existing terms.<sup>1</sup> This rule is intended to give investors and rating agencies comfort that the FDIC, as receiver or conservator for a failed bank, will not use its broad-based powers to interfere with securitizations that meet certain requirements.

Revisions to this rule were required to maintain this protection for securitizations that will remain “on balance sheet” based on applying the accounting guidance in ASC 860 and ASC 810, which became effective for reporting periods beginning on or after November 15, 2009. It is anticipated that, under these new accounting requirements, a greater number of securitization structures will be consolidated by their bank sponsors than previously was the case.

The new requirements and conditions are intended to promote higher-quality securitizations. Some of these conditions apply only to RMBS securitizations, while the remaining provisions apply regardless of asset class. Among these conditions is the requirement that a sponsoring bank retain an economic interest in a “material portion” (not less than 5 percent) of the securitized assets’ credit risk. Upon the retention rules in Dodd-Frank becoming effective, the FDIC’s retention requirements will be automatically conformed to the corresponding provisions in Dodd-Frank.

Failure to satisfy any of the conditions would result in loss of the safe harbor, which could result in negative rating agency actions on a securitization depending on the credit rating of its sponsor.

<sup>1</sup> “FDIC Board Approves Final Rule Regarding Safe Harbor protection for securitizations” “[www.fdic.gov](http://www.fdic.gov).”



## *A framework for response*

### Regulation (continued)

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#### The final safe harbor rule is organized into six categories:

- **Capital structure and financial assets**—Credit tranching would be limited to six classes. Time tranching of the senior-most tranche would not count toward the limit.
- **Disclosures**—Sponsors must prove that the loans comply with all statutory and regulatory standards and were underwritten at the fully indexed rate and with documented income. Servicers would be required to disclose any ownership interest in any other loan secured by the same property (i.e., second liens).
- **Documentation and recordkeeping**—Servicing agreements should not require the servicer to advance delinquent payments for more than three months unless a financing facility is available. The facility cannot depend on foreclosure proceeds.
- **Compensation**—Compensation paid to credit rating agencies shall be based on the performance of surveillance services and the performance of the financial assets.
- **Origination and retention**—In addition to observing the credit risk retention requirement, a bank sponsor of a residential mortgage securitization must establish a reserve fund equal to at least 5 percent of the cash proceeds otherwise due it to fund any representation and warranty repurchases (asset eligibility). Any proceeds remaining after one year can be released to the sponsor.
- **Other**—Each transaction is required to be at arm's length and a bona fide transfer.

#### Potential impacts include:

- Time-consuming and expensive changes to operating procedures
- Higher funding costs for issuers and borrowing costs for consumers
- A likely increase in the cost of issuance

## *A framework for response* **Expanded trade information**

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responsibility

### **Disclosure of transactions for MBS in a manner similar to other exchanges or regulated markets will increase transparency and liquidity.**

An expanded market should increase demand and liquidity. The SEC is also considering proposed disclosure requirements that would increase transparency including the exempt private structured finance market where some types of ABS are issued.

Currently the unregistered sale of securities relies on an SEC safe harbor (i.e., Rule 144A or Regulation D). If the requirements were adopted, the issuer would need to provide investors, upon request, at the time of the offering and on an ongoing basis, the same level of information that is required if offerings are registered with the SEC or if the issuer is required to report to the SEC under the Exchange Act. A requirement to provide "SEC-type" disclosures would place both types of ABS issuances on a level playing field.<sup>1</sup>

In addition to deal-specific information, organizations such as the Financial Industry Regulatory Authority (FINRA) should report market information, including benchmark yields, market activity, performance information, and descriptive data on asset-backed securitizations. The current FINRA website ([www.finra.org](http://www.finra.org)) contains such information for US Treasury, agency, corporate, and municipal bonds, but does not report ABS information even though total ABS issuance surpassed total corporate debt issuance in 2004.<sup>2</sup>

<sup>1</sup> PwC, Capital Markets Accounting Development Advisory April 2010

<sup>2</sup> SIFMA Research Quarterly, Volume 1111, Issue 8.

## *A framework for response* **Expanded trade information (cont.)**

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**As a result of the Credit Rating Agency Reform Act of 2006, the SEC was given increased oversight authority over credit rating agencies. The Dodd-Frank Act will enhance SEC oversight and the commission's ability to monitor these organizations.**

The SEC has begun the task of regulating nationally recognized statistical rating organizations (NRSROs) in an effort to increase transparency and limit conflicts of interest with respect to credit rating agencies. One SEC requirement mandates that NRSROs publish a description of their rating methodologies and procedures, as well as certain rating performance analytics.

Additionally, securities issuers are required to supply all NRSROs with information regarding structured credit product ratings, as opposed to limiting the information-sharing to one organization in particular. This ruling, which took effect in June 2010, is intended to facilitate unsolicited oversight and ratings across the NRSRO industry. Although the extent to which the ruling will benefit investors remains to be seen, many in the industry see it as a step toward eliminating conflicts of interest between rating agencies and sellers of securitized debt.

Finally, Dodd-Frank establishes an Office of Credit Rating Agencies under the auspices of the SEC that will heighten the commission's ability to regulate these organizations. Dodd-Frank includes provisions for enhanced disclosure of ratings methodologies and third-party due diligence, and would require agencies to consider independent information as part of their rating methods.

## *A framework for response* **Additional disclosure**

Balance  
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**Better disclosure is an important element of the process to improve investor confidence and support recovery in the private securitization markets. In addition to information provided at the time of the inception of the securitization, sponsors must provide investors with ongoing performance data at the loan level.**

Investors need better information about the asset pools that back the securities. Information must be granular, current, and provided in a manner such that investors can use the information effectively.

Standards in the FDIC safe harbor and the SEC proposed Regulation AB will require issuers (and by extension underwriters and servicers) to provide more detailed, loan-level data than previously required. The proposal represents a fundamental revision to the way in which the ABS market is regulated.

The proposed rules seek to address problems highlighted by the financial crisis and to provide investors with more data and tools to independently assess risk.

ABS rules require loan-level information on an ABS pool only at the pool level. The SEC is considering a requirement for sponsors to provide specific data disclosures for each loan in the asset pool, both at the time of securitization and on an ongoing basis.

The loan-level “asset data file” would include hundreds of standardized data points. Each data point is specified and defined by the SEC by asset type. The proposed rules require that the data be tagged in eXtensible Markup Language (XML) so that it may be processed using this technology.

The information will be filed on EDGAR on either a Form 8-K or as part of a 424B filing prior to the sale of the securities. A standard set of data maintained on an ongoing basis would facilitate analysis by investors and enable data and performance comparisons.<sup>1</sup>

<sup>1</sup> PwC, Capital Markets Accounting Development Advisory 4/2010

## *A framework for response* Additional disclosure (continued)

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### **The European Securitisation Forum (ESF) and American Securitization Forum (ASF) have been making strides toward making securitizations more transparent.**

The Global Joint Initiative, which is composed of several industry players, has made a number of strides in an effort to make data more standardized and readily available for investors.

In January 2008, the ASF established the Project on Residential Securitization Transparency and Reporting (Project RESTART), which is charged with identifying ways to improve the securitization process through more detailed transaction reporting. The ultimate goal of the project is to increase investor confidence (and thus capital commitments) in the securitization markets, so that the increased supply will lower the cost of mortgage and consumer credit.<sup>1</sup>

Project RESTART has developed the “ASF RMBS Disclosure Package,” which provides more data about underlying mortgage loans and standardizes the presentation of pool- and loan-level information,<sup>2</sup> as well as the “ASF RMBS Reporting Package.” In December 2009, the project issued a third report, entitled “Model RMBS Representations and Warranties.”

### **The same disclosure requirements may not be appropriate for all asset classes.**

We do not believe a “one-size-fits-all” approach to pool asset characteristics and performance data is appropriate for all consumer asset classes. Though asset-level disclosure may be appropriate for RMBS, loan-level data may not be appropriate for prime auto securitizations, and investors have not broadly requested it.

Issuers in prime auto securitizations typically provide rating agencies and investors with pool stratifications and “rep lines,” rather than individual loan tapes. A typical \$1 billion auto issuance may include more than 50,000 individual loan records, and providing such data may prove unwieldy for the issuer and end users.

While more detail about underwriting and origination is widely supported in the RMBS market, the application of such detail to the credit card ABS market may require issuers of credit card ABS to disclose proprietary information about origination, underwriting, and pricing models that are central to the profitability of the credit card business.

<sup>1</sup> Tom Deutsh and Katherine Seid. “A Path to Recovery for Residential Mortgage Bonds,” American Securitization Journal.

<sup>2</sup> “Restoring Confidence in the Securitization Markets,” SIFMA 2008

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#### **Issuers of MBS should strengthen and standardize the representations and warranties provided to investors.**

One of the problems with the MBS market that was highlighted during the financial crisis was the inability to efficiently enforce contractual provisions. The SEC is proposing new "shelf" eligibility criteria for MBS.

The proposal would require, as a condition for shelf-eligibility, that the CEO of the MBS issuer certify the assets have characteristics that provide a reasonable basis to support cash flows as described in the prospectus. Similar to the Sarbanes-Oxley certifications, the assertion must be given in a specified format, and may not be altered. The certification is not a guarantee of payment, but a statement of what is known at the time of offering. Signing CEOs likely will have liability to the commission under Section 17, but it is unclear if they will have the broader Section 11 liability. Many practical questions remain, including what assumptions or scenarios must be considered when making the certification.<sup>1</sup>

#### **MBS issuers should also expand their investor reporting to include the effect of the “waterfall” on investors**

The SEC is considering a requirement that the filing of a prospectus for an ABS transaction include a computer program that models the contractual "waterfall" (how cash is distributed to investors). The model will be made available to the investors on EDGAR in a downloadable form. The program must be able to incorporate the Asset Data File from the 8-K. The waterfall determines:

- How borrowers' loan payments are distributed to investors in the ABS
- How losses or lack of payment on those loans is divided among the investors
- How administrative expenses are paid to service providers (such as servicing and trustee fees)

Currently, a narrative description of the waterfall is disclosed to investors in the prospectus. The requirement for a computer program of the waterfall would permit investors to input their own assumptions and loan-level performance data so they could analyze the ABS offering. Issuers may see the requirement as a way to "brand" their securitization program.

The proposal adds a requirement that has not historically been part of the process and expands the issuer's responsibility. The requirement likely will be subject to significant debate as it adds incremental costs to the securitization process and additional responsibilities for issuers. If the proposal becomes effective, limitations on use and responsibilities of the user will need to be vetted and clarified.<sup>2</sup>

<sup>1</sup> PwC, Capital Markets Accounting Development Advisory April 2010

<sup>2</sup> Ibid.

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### Issuer responsibility (continued)

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**The development of industry-wide servicing standards and consistently evaluating servicer performance plays a key role in ensuring that improvements to the MBS market remain effective.**

It is essential to ensure that the quality of the MBS assets underlying a securitized transaction is not allowed to unduly or unnecessarily deteriorate over time. The following should facilitate investor analysis and improve evaluation of and confidence in servicer performance: (1) a common understanding of the scope of servicer's contractual duties and responsibilities, and (2) adequate benchmarks for evaluating the servicers who are responsible for collecting and maintaining the asset base.

A more detailed process will provide information to determine whether any deterioration is due to servicer deficiencies, or more exogenous and uncontrollable circumstances.<sup>1</sup> For this reason, several industry groups have recommended the development of industry-wide servicing standards and stressed the importance of periodic monitoring of servicer performance.

Contractual, reporting, and enforcement mechanisms to create an incentive system based on greater transparency around servicer performance must accompany the development of these standards. The Global Joint Initiative has recommended the development of:

- Market-standard performance metrics that cover all relevant aspects of servicer performance that can be objectively and reasonably measured.
- Servicing provisions for pooling and servicing agreements to create more standardized work rules for servicers of private-label MBS.
- More consistent expectations of mortgage borrowers in relevant countries and details on when and how loss mitigation strategies should be employed.
- Clarify and streamline procedures for removing or replacing servicers who fail to live up to the relevant performance standards.<sup>2</sup>

<sup>1</sup> Restoring Confidence in the Securitization Markets, SIFMA, 2008

<sup>2</sup> Ibid.

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### Heightened due diligence is no less important than improved disclosure and greater transparency.

“The chink in the armor of securitization has always been its reliance on sponsor-produced information,” says Ralph Daloisio of Natixis. “We need either a financially sound sponsor to vouch for the data, or an independent system to check and validate the core data elements required to model expected performance.”<sup>1</sup>

Industry leaders have recommended the establishment of industry-wide market standards of due diligence disclosure and quality assurance practices for RMBS.<sup>2</sup>

Enhanced market practices and transparency around the due diligence efforts that occur during the pre-securitization process would give investors greater comfort with regard to the characteristics of the underlying assets in a securitization. New industry-endorsed pre-securitization due diligence standards may be required under applicable regulation, as adapted for differences across jurisdictions, and establish a common basis for evaluating the accuracy and integrity of information that is presented and relied upon in evaluating the risk and performance characteristics of securities, including by the rating agencies.

The Global Joint Initiative (GJI) recommends that core standards be developed regarding the pre-securitization due diligence process, as well as disclosure of information about that process. The standards, which may vary depending on national jurisdiction, are expected to include:

- Guidelines regarding sampling size of loans subject to due diligence
- Due diligence provider attestations (for example, as to independence and sufficiency of time to review)
- Standardized loan scoring and reporting or disclosure of results
- Standards and guidance for the credit, value, and compliance components of the due diligence review process
- A standardized investor loan data set for verification during due diligence

The GJI recommends that credit rating agencies publish assessments of origination practices and relative performance of underlying collateral, measured against the industry-backed standards, by originator.

The GJI also recommends that originators publicly disclose information around their own internal quality assurance practices for all origination.<sup>3</sup>

<sup>1</sup> Neil O'Hara and Antony Currie "Securitization's \$8.7 Trillion Challenge" - American Securitization Journal, Winter/Spring 2009 issue

<sup>2</sup> Restoring Confidence in the Securitization Markets, SIFMA, 2008

<sup>3</sup> Ibid.



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**Investors should put procedures in place to continually monitor their investments in securitized products throughout the life of the investment.**

Anthony Ryan, Assistant Secretary of the US Treasury, addressed the International Swaps and Derivatives Association Regional Member Conference in September 2007. “While complexity may be a very legitimate reason a potential investor decides not to invest, it can be no excuse for an existing investor or buyer of such a security to justify a loss. Investors and their fiduciaries must understand the risks associated with a potential investment... Insufficient understanding or failure to perform independent and adequate due diligence prior to making an investment decision is simply unacceptable. That's not investing ... that's gambling.”<sup>1</sup> While much has changed in the MBS market since 2007, the underlying principles regarding investor responsibility remain substantially the same, and they will prove to be an important part of a revived securitization market.

Additionally, the Global Joint Initiative has recommended that enhanced ongoing reporting of RBMS performance should be made available to investors throughout the life of an RMBS transaction. Investors should then be able to fully monitor and reference this information to independently evaluate the ongoing performance and risk of their structured products.

<sup>1</sup> Assistant Secretary of the US Treasury Anthony W. Ryan remarks on financial evolution and innovation before the International Swaps and Derivatives Association Regional Member Conference. September 2007.

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### **The Global Joint Initiative (GJI) has made a number of recommendations to improve the accuracy of valuation of securitized products.**

According to a December 2008 survey conducted by GJI, “Current difficulty in establishing valuations undermines investors’ confidence and therefore their participation in the securitization markets. The market needs an improvement in the number of securitized products for which valuation information is widely available and an improvement in the quality and transparency of such information.”

“The GJI recommends that the industry form a Valuation Task Force (“Project Value”) to determine guidelines for the range of securities for which valuations would be contributed, and the expectations of participants and contributors. The Project Value team would seek to meet with the boards and senior management of the various data providers on the strategic importance of this expanded support.”

“The GJI recognizes that developing and implementing methodologies and protocols will be an important task that will require additional planning and discussion.”

“The purpose of Project Value would not be to anoint an official or sole provider of valuation data to the market, but rather to improve the overall infrastructure and contribution processes for independent valuations.”<sup>1</sup>

<sup>1</sup> Restoring Confidence in the Securitization Markets, SIFMA, 2008

## *A framework for response* Investor responsibility (continued)

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### **Sophisticated governance functions are essential to the safe and effective operation of the securitization market.**

Participation in the securitization and structured credit markets should be limited to investors possessing the capabilities and resources necessary to assess and monitor the risks embedded in those products.

Investment firms should have processes in place to assess risk and the creditworthiness of securitizations without sole reliance on credit rating agencies.

Financial intermediaries and investors should revisit their policies and procedures to ensure that their own capabilities, as well as those of their counterparties, are consistent with the minimum standards mandated by regulators and supplemented by industry leading practices.

Directors and senior executives of financial institutions must better understand the risks inherent to the securitization markets and the potential ramifications of ongoing changes in those markets. Industry knowledge will allow senior managers to have more informed dialogues regarding exposures and enhance their ability to assess their institutions' own capabilities.

Educational programs for directors, investors, and executives with oversight over securitized and structured credit groups should be established or enhanced.

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## *Section 3*

How PwC can help

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## *How PwC can help*

### Core competencies

**PwC provides an array of services to the financial markets, including assisting with the challenges associated with financing and the securitization market.**

To respond to these challenges, PwC will work with you to:

- Educate your organization
- Perform a gap analysis to help determine the key changes your organization will need to make
- Develop a cost-benefit analysis of securitization funding versus alternative funding opportunities in the current credit markets
- Assess and improve data reporting capabilities

**The PwC network is a world leader in governance, risk management, and compliance.**

- Comprehensive solutions that consider accounting, tax, finance, process, technology, valuation, and regulatory issues.
- A global team of professionals, based in New York, Washington, London, Sydney, and other centers throughout the world, that provides support through the entire investment and credit cycle, from origination to financial reporting.
- Experience in virtually all asset classes, including loans, debt and equity securities, derivatives, structured notes, residential and commercial mortgages, commercial loans and bonds, automobile loans and leases, trade receivables, credit cards, home equity loans, equipment loans and leases, student loans, manufactured housing loans, franchise loans, timeshare receivables, and mutual fund fees.
- Broad-based industry knowledge and expertise in the global consumer and corporate credit and capital markets.
- Cutting-edge knowledge and insight into market developments, trends, transaction structures, investor reporting, and technology.
- Global valuation expertise to assess your processes for valuing cash instruments, derivatives, and securitized products (cash and synthetic instruments, servicing rights, case reserve accounts, and retained interests).

## *How PwC can help*

### Client needs and issues

We look across our client's entire organization—focusing on strategy, structure, people, process, controls, and technology—to help them improve business processes, transform organizations, and implement technologies needed to run the business.

Client needs	Issues we help clients address
Manage risk, regulation, and financial reporting	<ul style="list-style-type: none"><li>▪ Build a risk-resilient organization</li><li>▪ Manage enterprise, investment, and project execution risk</li><li>▪ Safeguard data, keeping sensitive data out of the wrong hands</li><li>▪ Affirm governance and accountability</li><li>▪ Assess and mitigate risk in your global business operations</li><li>▪ Address accounting and financial reporting</li><li>▪ Assess third-party assurance</li><li>▪ Taxation</li></ul>
Build effective organizations	<ul style="list-style-type: none"><li>▪ Rethink strategy in terms of funding markets, geographies, channels, and clients</li><li>▪ Restructure organizational models in terms of structures, policies, and roles</li><li>▪ Establish effective strategic sourcing and procurement</li><li>▪ Realize competitive advantage through effective marketing and customer-focused solutions</li><li>▪ Transform the financial reporting and risk management processes</li></ul>
Reduce costs	<ul style="list-style-type: none"><li>▪ Drive efficiency through shared services</li><li>▪ Redesign process to enhance cost efficiency and competitive advantage</li><li>▪ Take control of costs through effective spend management and cash forecasting practices</li><li>▪ Drive sustainable cost reduction</li></ul>
Leverage talent	<ul style="list-style-type: none"><li>▪ Define and implement an effective HR process</li><li>▪ Develop talent</li></ul>
Innovate and grow profitably	<ul style="list-style-type: none"><li>▪ Reshape the IT function into a source of innovation</li><li>▪ Transform business information to drive insight and fact- and risk-based decision making</li><li>▪ Evaluate strategic opportunities—acquisition and divestitures—to position for the future</li><li>▪ Realize synergy and value</li><li>▪ Develop sustainability programs that add value</li></ul>

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## *How PwC can help*

### Our Financial Services practice

PwC is an advisor to 44 of the world's top 50 banks and 46 of the world's top 50 insurance companies, and is the leading service provider to investment managers, pension funds, and hedge funds around the world. This diverse client base provides us with unique access to develop peer insights and to understand from experience what works in specific client circumstances. In the United States alone, we are able to call upon our 800-person Financial Services Advisory practice and over 3,000 financial services professionals.

#### **Accountability and cost effectiveness**

Our comprehensive approach to serving our clients provides them with a single point of accountability, which creates an efficient and effective day-to-day working arrangement and, most importantly, best positions our clients for success. We have significant experience in helping to drive complex programs and feel strongly that we can work successfully in a cost-effective manner to meet your organization's needs and objectives.

#### **Trusted brand**

We offer a truly independent view, without prejudice or favor regarding specific vendors, solutions, or approaches. We approach each situation and develop the most appropriate solutions depending upon the client's individual circumstances.

#### **Global footprint**

PwC works with our clients in a globally integrated manner. This benefits our clients in terms of consistent service delivery and quality by taking advantages of the best ideas, resources, and solutions from around the world.

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## *How PwC can help*

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## *Section 4*

Select qualifications

## *Select qualifications*

### Review compliance and transaction closing services—Bank holding company

<b>Issues</b>	The company requested analysis of its closing services for securitization transactions.
<b>Approach</b>	<p>PwC provided support in looking at the company's various types of asset-backed financing.</p> <ul style="list-style-type: none"><li>▪ For due diligence over key data, PwC compared specified fields and attributes in records and data tapes to corresponding information in client loan files.</li><li>▪ Independently tested collateral analysis and stratification.</li><li>▪ Reviewed and tied-out quarterly delinquency information.</li><li>▪ Independently tested term sheet, prospectus supplement, private placement memorandum, and additional offering documents by financial modeling of the cash flow waterfall and recomputing of decrement tables, weighted average lives, yields, discount margins, and other analytics to offering documents and information provided by the underwriter.</li><li>▪ Independently sorted, summarized, and/or totaled the information in the loan data tape provided by the client and compared it to the tables and numbers disclosed in the offering documents.</li><li>▪ Provided agreed-upon procedures reports on term sheet, prospectus supplement, private placement memorandum, and other offering documents.</li><li>▪ Provided transaction analysis, including the impact on financial and tax reporting (sale accounting, consolidation, and accounting for all economic interests).</li><li>▪ Evaluated compliance with Regulation AB.</li></ul>
<b>Benefits</b>	The institution gained an efficient and timely deal closing procedure.

## *Select qualifications*

### Review trading desk as well as policies and procedures for whole-loan and mortgage-backed security asset classes—Large international investment bank

<b>Issues</b>	The institution required an independent assessment of the process to determine fair value for illiquid assets.
<b>Approach</b>	<p>PwC comprehensively evaluated the whole-loan and mortgage-backed security (MBS) asset classes, which included option ARM, subprime, prime, agency, alt-A, and net interest margin valuation policies and procedures. We performed the following:</p> <ul style="list-style-type: none"><li>▪ Mapped the key valuation processes and procedures across various asset categories.</li><li>▪ Benchmarked key inputs including discount rates and prepayment rates against publicly available data.</li><li>▪ Stratified the whole-loan collateral pools to evaluate the layers of overlapping risks using key metrics, including vintage, geographic concentration, delinquency level, interest-only distribution, and originator.</li><li>▪ Benchmarked changes in the loans originated by the client against industry standards.</li><li>▪ Benchmarked the key modeling inputs to industry data: prepayment rates, default rates, loss severities, and discount rates.</li><li>▪ Analyzed price dispersion across key risk attributes to identify price outliers; analyzed the underlying value drivers: vintage, structural description (PAC, TAC, Snr/Sub, OC, AFC, etc.), collateral type, rating, and originator.</li><li>▪ Reviewed historical trade information and assessed how observable spreads and pricing were incorporated into the price testing process.</li></ul>
<b>Benefits</b>	The institution received recommendations to enhance efficiency and improve processes. Through industry-wide benchmarking, the company learned how it compares to its competitors.

## *Select qualifications*

Assisted with development and implementation of securitization funding program—  
Global leader in consumer and business services

<b>Issues</b>	<p>The company required transaction advisory services to support the development and implementation of its securitization funding program, including both conduit and term transactions.</p> <p>The company had recently acquired three complementary firms in the consumer finance field and was seeking to integrate the businesses using a common platform for funding.</p>
<b>Approach</b>	<p>PwC specialists took the following steps:</p> <ul style="list-style-type: none"><li>▪ Identified market-observable data points and benchmarked the company's processes and inputs to the key data points.</li><li>▪ Coordinated all aspects of transaction development and execution.</li><li>▪ Assisted with preparation of documentation and presentations for investment banks.</li><li>▪ Developed static pool analysis for rating agency presentations, including gathering and conforming data across multiple servicing platforms.</li><li>▪ Tested data against source documentation for accuracy and completeness.</li><li>▪ Developed internal reporting tools to monitor funding triggers and asset values.</li><li>▪ Developed investor and lender reporting packages, including servicer reporting templates.</li><li>▪ Assisted in modeling retained interest and gain-on-sale calculations.</li><li>▪ Provided guidance on financial statement reporting and disclosure requirements.</li><li>▪ Periodically benchmarked processes to monitor compliance with standards of secondary market and industry.</li><li>▪ Evaluated trustee and servicer performance.</li></ul>
<b>Benefits</b>	<p>Information and data flows were consolidated following our detailed review of the organization.</p>

## *Select qualifications*

### Provided due diligence services and ongoing assistance with compliance disclosures— Large home mortgage servicer

<b>Issues</b>	The company needed support for its securitization transactions.
<b>Approach</b>	<p>PwC supported the company's closing of prime, alt-A, and subprime transactions for residential mortgage-backed securities by performing the following services:</p> <ul style="list-style-type: none"><li>▪ Data testing for due diligence by comparing specified fields and attributes in client data tapes to corresponding information in client loan files; reported exceptions to the client. We customized data fields to help identify key risks within certain asset types (for example, loan rate adjustment characteristics for adjustable rate mortgages).</li><li>▪ Review of quarterly delinquency information and reconciliation to system outputs.</li><li>▪ Independent confirmation of term sheet, prospectus supplement, private placement memorandum, and other offering documents, including recomputation and comparison of decrement tables, weighted average lives, yields, retail class tables, effective ranges, and other analytics to documents and results provided by the underwriter.</li><li>▪ Sorting, summary, and/or aggregation of information in the loan data tape provided for comparison to data and disclosures in the offering documents.</li><li>▪ Ongoing monitoring and independent review of monthly static pool computations and disclosures in accordance with Regulation AB.</li></ul>
<b>Benefits</b>	<p>Management of the institution received:</p> <ul style="list-style-type: none"><li>▪ An independent review over key data in the prospectus.</li><li>▪ Counsel and advice on disclosure.</li><li>▪ Recommendations to enhance the closing process.</li></ul>

## *Select qualifications*

### Provided operational analysis and surveillance services for the initial securitization financing of a specialty vehicle lender—Large bank

<b>Issues</b>	<p>The company required operational analysis and surveillance services for the initial securitization financing of a specialty vehicle lender that was a first-time asset-backed commercial paper issuer.</p> <p>The company needed to develop historical performance information on its \$1 billion portfolio of loans and leases. The process was complicated by incompatible servicing platforms, missing information, and management turnover.</p>
<b>Approach</b>	<p>PwC specialists performed the following:</p> <ul style="list-style-type: none"><li>▪ Reconstructed and tested five years of performance data on 5,000 assets from multiple accounting systems and spreadsheet databases.</li><li>▪ Developed a static pool model to estimate cumulative losses over the life of a proposed transaction based on historical pool performance.</li><li>▪ Provided counsel, insight, and quantitative analysis on portfolio trends and characteristics.</li><li>▪ Performed a diagnostic review of the company's management team, originations, servicing, and investor reporting capabilities.</li><li>▪ Developed rating agency presentations with industry benchmarks and financial projections.</li></ul>
<b>Benefits</b>	<p>An IT solution was developed to bridge multiple data systems. Interaction with credit rating agencies was facilitated.</p>

### *Select qualifications*

## Assisted in establishing procedures for collateralized debt obligation trustees and preparing required tax reporting—Diversified alternative investments manager

<b>Issues</b>	The company was seeking assistance to comply with tax reporting requirements.
<b>Approach</b>	<p>PwC assisted the company in its tax compliance efforts relating to collateralized debt obligations (CDOs). The team collaborated with management to establish procedures with all CDO trustees to facilitate preparation of required tax reporting in an effective manner. PwC specialists contributed to the following:</p> <ul style="list-style-type: none"><li>▪ Analyzed the collateral held by each fund's trades during the taxable year to determine the proper tax treatment of such instruments.</li><li>▪ Analyzed all events that affected the collateral, including defaults and workouts.</li><li>▪ Evaluated loan modifications and credit exposures.</li><li>▪ Identified risks and researched strategies to mitigate tax exposures.</li><li>▪ Determined appropriate methodologies for the amortization of original issue and market discounts/premiums.</li><li>▪ Researched and analyzed the potential tax elections to mitigate phantom income.</li><li>▪ Analyzed hedge agreements and hedge strategies.</li><li>▪ Prepared Passive Foreign Investment Company statements and Controlled Foreign Corporation informational tax returns.</li><li>▪ Discussed the tax implications of income derived from the CDOs with the issuer and investors.</li></ul>
<b>Benefits</b>	The institution achieved timely tax reporting and received experienced counsel on managing complex compliance matters.

## *Select qualifications*

### Provided transaction support and diagnostic review of trade receivables portfolio and servicing platform—Large bank

<b>Issues</b>	The company required transaction support for its trade receivables portfolio and servicing platform. The bank was considering a first-time issuance of asset-backed commercial issuer paper. The company was highly decentralized with separate credit and accounting functions in more than two dozen divisions that originated assets for the funding transaction.
<b>Approach</b>	<p>PwC specialists contributed in the following ways:</p> <ul style="list-style-type: none"><li>▪ Provided transaction execution support.</li><li>▪ Documented aspects of the proposed transaction, including sample reports and the required financial reporting by all participants.</li><li>▪ Comprehensively supported the company's treasury, finance, and accounting groups.</li><li>▪ Facilitated the aggregation, reconciliation, and analysis of three years of data and performance (\$250 million, 20,000 customer pool).</li><li>▪ Analyzed and tested receivables dilution, aging, bad debts, cash management, concentrations, credit process, collection procedures, eligibility requirements, and coverage requirements.</li><li>▪ Evaluated the technology platforms and investor reporting capabilities.</li><li>▪ Analyzed processes and controls over receivables origination and collections.</li></ul>
<b>Benefits</b>	<p>The company received:</p> <ul style="list-style-type: none"><li>▪ Counsel from transaction initiation through completion.</li><li>▪ Cost-effective solutions for the process to support data capture and analysis.</li><li>▪ Support for board level review of transaction.</li></ul>



## *Select qualifications*

### Assessed and enhanced price testing and valuation process—Global financial services company

<b>Issues</b>	Assisted the company with the review and risk assessment of its independent price testing process.
<b>Approach</b>	<p>PwC's team of industry and product specialists in the United States and United Kingdom coordinated the global evaluation of the price testing framework. PwC:</p> <ul style="list-style-type: none"><li>▪ Analyzed the overall price testing process.</li><li>▪ Performed an analysis of the company's method for assessing the quality of sources used for price testing.</li><li>▪ Assessed the escalation of price testing differences, the consistency of the price testing across all businesses, and the interaction between price testing and fair value leveling in accordance with GAAP requirements.</li><li>▪ Assisted in the development of an implementation plan to roll out the enhanced price testing framework and escalation of price testing differences across all businesses.</li></ul>
<b>Benefits</b>	The company conformed and enhanced its global price verification methodology and leveraged leading practices. The enhanced independent price testing framework resulted in a more formal, well-documented process that was used to increase price testing coverage and the reliability of the price verification process across all products.

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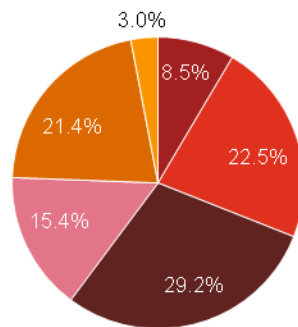
## *Section 5*

Appendix: An illustration of the shift in securitization market share

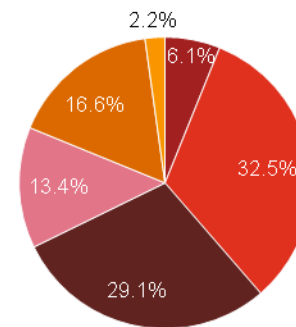
# Appendix

## US fixed-income debt issuance

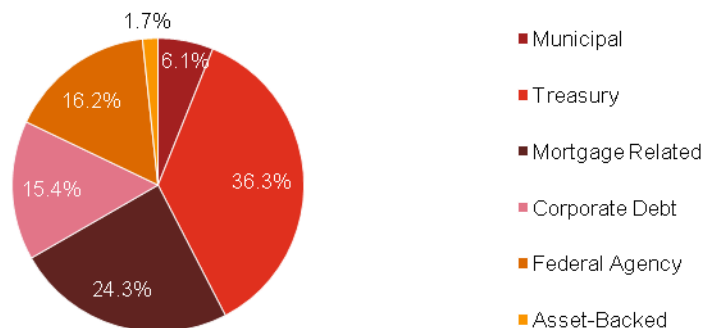
**2008 Debt Issuance**



**2009 Debt Issuance**



**3<sup>rd</sup> Qtr 2010 YTD Debt Issuance**

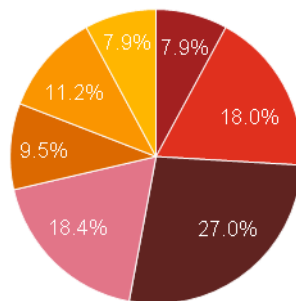


<http://www.sifma.org>, Accessed on December 13, 2010.

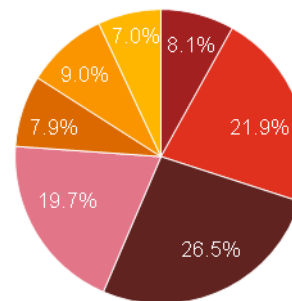
# Appendix

## US fixed-income debt outstanding

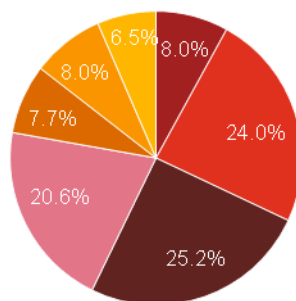
**2008 Debt Outstanding**



**2009 Debt Outstanding**



**2<sup>nd</sup> Qtr 2010 Debt Outstanding**



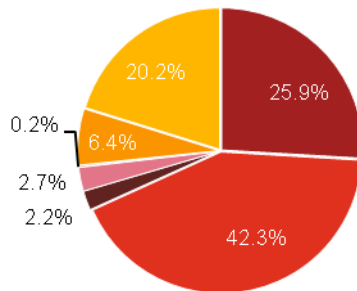
- Municipal
- Treasury
- Mortgage Related
- Corporate Debt
- Federal Agency
- Money Market
- Asset-Backed

<http://www.sifma.org>, Accessed on December 13, 2010.

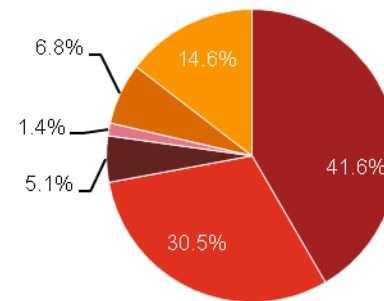
# Appendix

## US asset-backed securities issuance

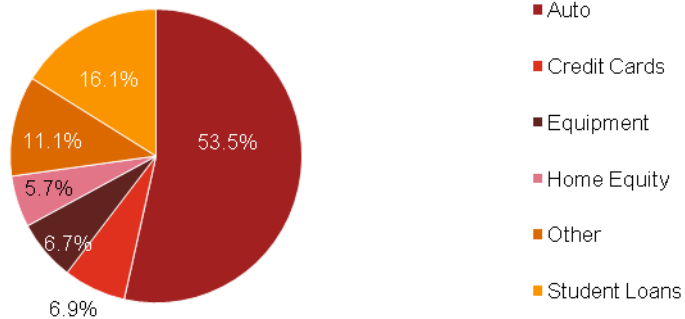
**2008 Securities Issuance**



**2009 Securities Issuance**



**3rd Qtr 2010 YTD Securities Issuance**



<http://www.sifma.org>, Accessed on December 13, 2010.

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