

UTILIZING TECHNOLOGY TO IMPROVE TARP AND FINANCIAL OVERSIGHT

HEARING BEFORE THE SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS OF THE COMMITTEE ON FINANCIAL SERVICES U.S. HOUSE OF REPRESENTATIVES ONE HUNDRED ELEVENTH CONGRESS FIRST SESSION

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UTILIZING TECHNOLOGY TO IMPROVE TARP AND FINANCIAL OVERSIGHT

Thursday, September 17, 2009

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OVERSIGHT
AND INVESTIGATIONS,
COMMITTEE ON FINANCIAL SERVICES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:02 a.m., in room 2128, Rayburn House Office Building, Hon. Dennis Moore [chairman of the subcommittee] presiding.

Members present: Representatives Moore of Kansas, Lynch, Klein, Adler; Biggert, Lee, and Paulsen.

Also present: Representative Maloney.

Chairman MOORE OF KANSAS. This hearing of the Subcommittee on Oversight and Investigations of the House Financial Services Committee will come to order. Our hearing this morning is entitled, "Utilizing Technology to Improve TARP and Financial Oversight." This is our 7th O&I Subcommittee hearing of the year, and our 3rd one that will at least touch on the very important issue of TARP oversight.

I am glad to have a diverse panel with a number of witnesses coming from the private sector, and I'll simply point out that we obviously are not endorsing one firm's technology over another whether any firm is represented here today or not. But we wanted to start a discussion of what kind of technology is currently being used in the marketplace today, and how the government might use these technologies to conduct stronger oversight and ensure greater transparency.

We will begin this hearing this morning with members' opening statements, up to 10 minutes per side. We will then hear testimony from our witnesses, and after that, members will each have up to 5 minutes to question our witnesses. The Chair advises our witnesses to please keep your opening statements to 5 minutes. Given the size of our panel, we want to keep things moving so we can get to members' questions. Also, any unanswered question can always be followed-up in writing for the record, and I encourage you to do that.

I ask unanimous consent that Congresswoman Carolyn Maloney, a member of the full committee, but not this subcommittee, be allowed to participate in today's hearing. Is there any objection?

Without objection, it is so ordered.

All members' opening statements, without objection, will be made a part of the record, and I now recognize myself for up to 5 minutes

for an opening statement. This week marks the one-year anniversary of the collapse and bankruptcy of Lehman Brothers, the moment when the financial crisis really accelerated, requiring the need for Congress to respond by creating the \$700 billion TARP program to stabilize the financial sector.

I have been pleased with the progress by banks in not only paying the initial TARP investments back to the government in recent weeks and months, but also dividends and warrant repurchases that have been very profitable for taxpayers. The Treasury Department recently reported that a total of \$70.3 billion of TARP investments have been repaid through August of 2009. Total dividends and interest payments received by the government in excess of initial TARP principal repayments is \$9.36 billion. At our last subcommittee hearing in July on TARP warrant repurchases, I think it's no surprise that due to our raising public awareness on that issue, Goldman Sachs agreed to repurchase the full value of their TARP warrants at \$1.1 billion. It is clear that simply raising public awareness and increasing transparency can reap big rewards for taxpayers, especially as we continue to monitor the use of TARP funds, and we will continue to do that.

Of the \$700 billion of TARP funds authorized, \$644 billion has been planned for particular TARP programs, with \$433 billion of that money committed to specific institutions under signed contracts. As the chairman of this Oversight and Investigations Subcommittee, I fully intend to keep the pressure up until every single dollar of TARP funds has been repaid to taxpayers. Today, we will be hearing from a variety of witnesses with expertise on how technology might be used by the government to increase transparency, oversight, and accountability, especially with the unique nature of financial markets and activity. I thank our witnesses for being here, and I look forward to your testimony.

One specific proposal we will discuss in H.R. 1242, the TARP Accountability and Disclosure Act, authored by my colleague from New York and the chairwoman of the Joint Economic Committee, Congresswoman Carolyn Maloney, I am proud to be a co-sponsor of H.R. 1242, because it will utilize technology that's readily available today and will help standardize and monitor TARP data, so that not only the government, but more importantly U.S. taxpayers, can know and see for themselves how the funds are being spent.

Another idea that I know Ms. Marlow will raise is the idea of creating a national land parcel database and put into use as an early warning system that could monitor the housing market more closely and provide greater transparency. How can the government better utilize these technologies to conduct and prove financial oversight?

Finally, I want to thank my friend and the ranking member of the subcommittee, Judy Biggert, for calling for a hearing on technology. I thought it was a great idea, and I hope today is the first of many conversations on this important issue so our financial agencies can better utilize the latest cutting edge technology to improve not only TARP oversight, but coordinated oversight of all financial services activity.

I now recognize for 5 minutes the ranking member of the subcommittee and my friend and colleague from Illinois, Judy Biggert.

Mrs. BIGGERT. Chairman Moore, thank you for holding this hearing. As you just said, I requested a hearing on technology several times this year and I am pleased we are finally able to make it happen. It is my hope that we can follow-up today's discussion with a second hearing to hear the testimony of the financial regulators.

A financial oversight hearing on technology may not sound riveting to most, however, I would wager it will become more attention grabbing as American taxpayers learn about how technology could help Federal financial regulators detect waste, fraud, and abuse, as well as address risk within the financial institutions and markets.

There is no question that with record deficits and debt, we must find the best and most cost-effective way to enhance the transparency and accountability of the \$700 billion TARP program, trillions in taxpayer funds committed by the Federal Reserve, and other Federal expenditures in the financial sector. Perhaps if the Treasury used more up-to-date technology to track TARP funds, we would know clearly how TARP recipients have used the funds. However, the question remains unanswered, and there's no question that our financial regulators have antiquated IT systems that have resulted in inadequate regulatory oversight and enforcement.

A GAO report concluded that HUD's 15-year-old IT systems contribute to the Department's inability to effectively and efficiently perform mission critical operations, including those integral to our Nation's economic recovery and investment activities. For example, in June GAO, issued a report on reverse mortgages for seniors. Among several findings, it determined that certain phone only housing counselors are not providing seniors with required information. Couldn't better technology infrastructure improve the accountability in this program?

It's unacceptable for ineffective or inefficient technology to lessen the transparency and accountability of Federal programs and agencies, and constituents, the American taxpayers who give their hard-earned dollars every paycheck, are rightfully outraged when Federal agencies allow funds to be abused by organizations like ACORN. According to a staff report issued by the House Committee on Oversight and Government Reform, I quote: "Since 1994, more than \$53 million in Federal funds have been pumped into ACORN for services like housing counseling. Yet, how is this money spent?"

The report mentions that 70 ACORN employees have been convicted in 12 States for voter registration fraud. The report even credits ACORN with helping elect in my home State, Illinois, now-disgraced, former Governor Blagojevich, but I don't really don't want to get into that. So all these things are unacceptable, and the common theme, that all these funds for TARP, ACORN, and other activities are taxpayer dollars, and Americans have a right to expect that each penny will be accounted for properly.

Federal regulators need effective tools like state-of-the-art technology and experts to track and flag the misuse or illegal use of taxpayer funds. It's no secret that one of the reasons our country got into this financial mess is because there are simply too many

regulators who weren't doing their job and were not communicating effectively across agencies. Plus, I'm very skeptical that for consumers the answer is making government bigger, by creating a new Federal agency as little more than a facade of reform. And don't get me wrong. We need financial reform, and bailouts and the government practice of picking winners and losers and restoring market discipline.

We need smart, clear, and strong regulations to get our financial system back on track so that our economy can grow, businesses can create desperately needed jobs, and American families can secure credit. Technology alone is not the only answer to address the shortcomings in our financial regulatory system and Federal programs, but it certainly appears that it could be a large part of the answer.

With that, I welcome today's witnesses and I look forward to our discussion. I yield back.

Chairman MOORE OF KANSAS. Thank you very much, and I now recognize Congressman Lynch for 2 minutes. Sir?

Mr. LYNCH. Thank you, Mr. Chairman, and Ranking Member Biggert.

I really appreciate that we are having this hearing and I appreciate all the witnesses coming forward to help us with our work. This is an important hearing in that it not only addresses the oversight capabilities of Congress and this committee with respect to the TARP program, which I voted against, but I have the unhappy task of trying to track some of this money, which is not being done without great difficulty.

But also, because of the new financial regulations reform that we're considering, our responsibilities will be expanded, as will yours. And we have to figure out a way that we can provide transparency and accountability to the American taxpayer. In this one TARP program that I opposed, we put out \$700 billion in taxpayer funds to bail out the banks, and if that weren't maddening enough, we have had a very, very difficult time tracking where the money went, what it was spent for, and whether or not the program was abused or used correctly. There were no accountability measures in the bill to allow us to track.

It was done in great haste, and I understand that, but now we have a chance to reset our capabilities to oversee this type of program and all the others that are being considered. So I'm extremely interested in hearing your perspectives, because of the many talents that we have here on the panel today, and I look forward to your testimony. I yield back the balance of my time. Thank you, Mr. Chairman.

Chairman MOORE OF KANSAS. Thank you, sir. Congresswoman Maloney, you are recognized for 3 minutes.

Mrs. MALONEY. Thank you so much, Mr. Chairman and Ranking Member Biggert, for holding this hearing, and our panelists.

As you know, I have introduced H.R. 1242, the TARP Accountability and Disclosure Act, along with Peter King. It is a bipartisan bill and it is very notable that this week marks the one-year anniversary of the financial crisis. It was on September 15th that Bank of America purchased Merrill Lynch; that Lehman Brothers filed for Chapter 11; and that the government moved to bail out AIG;

and also, President Bush signed legislation establishing the \$700 billion TARP fund.

Since then, much of this fund has been distributed, and I will note that over \$70 billion has been repaid. And I join the chairman in looking forward to all of this money being paid. But, from the beginning, the public, the media, and Members of Congress have raised concerns that the lack of transparency and accountability could lead to massive waste, fraud and abuse of the TARP funds. And the complexity of the institutions receiving these funds, combined with the volume of information they report, have made it very difficult to capture a comprehensive understanding of how these funds are being used.

Using current, proven technology and readily available financial data as contemplated under my bill, it would be possible to get a complete picture of the actions of the TARP fund for recipients and contractors in real, usable time. Currently, TARP funds are collected in 25 different Federal agencies. I'll place in the record where they are. It is totally unusable. The Administration will say it's available, but it's not usable. You would have to go to 25 different agencies to put it together, and agencies will say the information is available, but it is not in a usable form. And I have raised this in several hearings and in letters to the Treasury.

Traditional audits provide reporting, but not true transparency, and I would like to put it in terms of the difference between an autopsy and a diagnosis. An audit can be thought of as a financial autopsy. It may uncover issues and problems, but too late to effectively address them. It is far more effective to diagnose issues and problems as early as possible so that they can be addressed quickly. And by using technology and information that is currently available, it is possible to oversee these funds in a timely way and allow more time for addressing potential problems.

I would like to place in the record a broad coalition of supporters, over three dozen outside groups from across the political landscape, including the Center for Democracy and Technology, and the U.S. Chamber of Commerce. Both are here today and both are supporting this bill. And the panelists today have a variety of unique perspectives, not only on transparency for TARP data, but on transparency throughout the financial services area.

I would like to thank them very much for being here and again commend the chairman and ranking member for their support. I look forward to the testimony. Thank you.

Chairman MOORE OF KANSAS. Thank you.

I am pleased today to introduce our witnesses. First, we'll hear from Mr. Ari Schwartz, vice president and chief operating officer for the Center for Democracy and Technology. Next will be Mr. Thomas Quaadman, executive director for financial reporting policy, U.S. Chamber of Commerce.

I will turn to Congressman John Adler to introduce his constituent.

Mr. ADLER. Thank you, Mr. Chairman.

And with respect to the other witnesses, welcome to all of you. I am particularly pleased to welcome Mr. Steve Horne, the senior vice president for Master Data Management for Dow Jones and Company. He has been a resident of New Jersey since age 3, simi-

lar to me, and his family enjoys spending their summers in Lovely. It is a beautiful, beautiful community in my district in Long Beach Island. Please come often, spend money. Master Data Management for Dow Jones is headquartered in South Brunswick, New Jersey, and houses 1,300 employees.

Mr. Horne, welcome to the Financial Services Subcommittee on Oversight and Investigations. I look forward to your testimony and that of your fellow witnesses on this important topic.

Mr. HORNE. Thank you, Mr. Chairman.

Chairman MOORE OF KANSAS. Thank you. And next, we will hear from Mr. Krishna, vice president, financial services and insurance. After him will be Ms. Susan Marlow, chief executive officer, Smart Data Strategies, Inc., on behalf of MAPPS. I will let Ranking Member Biggert introduce our next witness.

Mrs. BIGGERT. Thank you, Mr. Chairman.

I would like to introduce Mr. Greg Hahn, who actually is from Grand Rapids, Michigan, but he is going to be testifying on behalf of Crowe Horwath, an international accounting and technology company. The largest office is in my district in Oakbrook, Illinois.

For the past several years, Mr. Hahn has been responsible for Crowe Horwath's anti-money laundering or AML clients in the United States, helping these businesses to develop and implement and optimize their AML compliance programs, and he has helped organizations define customer relations management strategy and implement technology solutions that support that strategy. So he specializes in areas of governance, risk and compliance program development. He graduated summa cum laude from Central Michigan University with a bachelor of science degree in computer sciences.

Thank you, and welcome, Mr. Hahn.

Chairman MOORE OF KANSAS. And for our last two witnesses, we have Professor Bennet A. Zelner of Duke University, as well as Mr. Thomas Kimner, risk manager, Americas Risk Practice, SAS Institute, Inc.

Without objection, your written statements will be made a part of the record.

Mr. Schwartz, sir, you are recognized for 5 minutes to provide a brief summary of your statement.

STATEMENT OF ARI SCHWARTZ, VICE PRESIDENT AND CHIEF OPERATING OFFICER, CENTER FOR DEMOCRACY AND TECHNOLOGY

Mr. SCHWARTZ. Thank you, Chairman Moore. Mr. Chairman, Ranking Member Biggert, and members of the committee, on behalf of the Center for Democracy and Technology, I would like to thank you for holding this important hearing today and inviting us to testify.

I am here to discuss two ideas that are before this subcommittee. One is the increased oversight of TARP funds, and the second is coordination and assistance to better analyze and address property vacancy and abandonment, both using technology. Both of these ideas offer agencies the ability to create important technology tools to provide greater oversight of the use of taxpayer money.

CDT has a couple of important, but easy to implement, improvements that require the agencies to keep the best interests of tax-

payers and property owners in mind that should be of interest to the subcommittee in its oversight role. H.R. 1242, Representative Maloney's bill, would require the Treasury Department to establish a database that would provide ongoing, continuous updates on the distribution of TARP funds. This database is vitally necessary to help track the hundreds of billions of taxpayer dollars at work. To accomplish this, the bill would create a centralized information repository from private and public sources to track progress.

CDT, along with Open the Government, the Project on Government Oversight, OMB Watch, and Taxpayers for Common Sense all support the creation of the database and urge that H.R. 1242 go a step further by requiring the centralized repository of TARP information be made available to the public on the Web. Providing TARP information directly to the public online will strengthen oversight. In particular, it will provide the media, watchdog groups, researchers, and concerned citizens with the ability to analyze the data, reuse it, and present it in novel ways, uncovering positive and negative trends and anomalies.

Clearly, there is no prohibition in the bill against online access, but we ask that the text of the bill explicitly require that the non-proprietary TARP oversight resources be made available to the public on the Web to ensure that agencies keep the public interest and direct accountability in mind. Financial Stability.gov, the Web site that is now online, offers a useful start for TARP oversight. However, there are many TARP activities and related public data that are not available. H.R. 1242 should help take this important resource to the next level.

The second idea calls for the creation of a regional real property data system, tying property records to land parcels. These data systems could tie tax and foreclosure information to location data to create new ways to analyze and mitigate predatory lending practices, reverse red-lining and foreclosures. The bill also calls for improvement of these data systems in order to streamline and improve procedures around urban renewal strategy.

CDT supports the goals of this effort as well, but we urge the committee to specifically require privacy and security oversight, and improve data accuracy in the effort to create centralized data systems. Currently, counties manage their own geospatial data. As less localized data systems are created and merged, concerns over the differing standards for this data must be addressed. In particular, CDT has seen a wide range of local practices for providing detailed images of homes and tying this information to other public records.

In Ohio and Arizona, for example, we have seen cases where the specificity of this data has led concerns over homeowner safety and even identity theft in several cases. While there is nothing in this legislation to prevent the Federal and local agencies from implementing the pilots with privacy and security in mind, we suggest the relatively minor and light-handed approach of a privacy impact assessment before these pilots are able to move forward.

In summary, it's important to recognize the potential power of the information coordination and sharing that it can lend to the oversight of markets. This information should be made directly available on the Web when possible, to provide greater trans-

parency and accountability to the public. In doing so, we must also ensure the quality and the privacy of this data. I thank you for having me here, and I look forward to your questions.

[The prepared statement of Mr. Schwartz can be found on page 99 of the appendix.]

Chairman MOORE OF KANSAS. Thank you, Mr. Schwartz.

Mr. Quaadman, you are recognized, sir, for 5 minutes.

**STATEMENT OF THOMAS QUAADMAN, EXECUTIVE DIRECTOR,
CENTER FOR CAPITAL MARKETS COMPETITIVENESS, U.S.
CHAMBER OF COMMERCE**

Mr. QUAADMAN. Thank you, Mr. Chairman.

Chairman Moore, Ranking Member Biggert, and members of the subcommittee, I wish to thank you for the opportunity to speak before you on this important issue. And let me say at the outset that we are testifying today in support of H.R. 1242 and wish to thank Congresswoman Maloney and Congressman King for their leadership and foresight in introducing this bill.

In the days and weeks following the Lehman collapse, the United States and the global economy stood on the precipice of an outright collapse. The credit markets were frozen. Consumers stopped spending. Businesses started to contract and we saw the first electronic run on financial institutions. To prevent widespread collapse, the Bush Administration and Congress took unprecedented and dramatic action in passing the Emergency Economic Stabilization Act.

The centerpiece to the EESA is the Troubled Assets Relief Program, or TARP. With over \$700 billion in Federal funding, the purpose of TARP is to stabilize the financial system and help create the conditions for recovery. The United States Chamber of Commerce lobbied for the creation of the TARP program and continues to support efforts to improve the program to ensure its success. Simply put, the financial crisis had driven the United States to its worst economic predicament since the Great Depression. In order for businesses to function, and for an economic recovery to take hold, the financial services sector needed immediate shoring up and that vehicle was TARP.

TARP was intended to purchase toxic assets and take them off the balance sheets of financial institutions; however, Secretary Paulsen opted to use an alternative provision of the bill when it became apparent that the valuation of toxic assets was too difficult, and that a purchase program would take too long to have an immediate impact. Consequently, it was decided the TARP fund should be used to inject capital into struggling or systemically important financial firms.

The TARP program has had its problems, but a year later we can say that an outright collapse was avoided. The financial sector is stabilizing, and the first signs are appearing that an economic recovery has taken hold. That being said, the situation is still fragile. While the Chamber has stood by the TARP program, we have also supported efforts to improve its implementation. As with any government program, the Chamber believes that there needs to be accountability for taxpayer dollars. This is particularly true with the massive expenditure of government moneys through an expedited

process. Simply put, the American people have a right to know how, where, and when their hard-earned money is being spent.

President Obama recently announced that firms that have fully repaid their TARP funds have provided taxpayers with a return of 17 percent. This proves that TARP can be successful. However, any potential misallocation or misuse of taxpayer dollars may erode support for the TARP program, undermine confidence of firms in TARP, and possibly harm efforts to stabilize the financial sector. By building transparency into the administration of TARP, accountability will be enhanced. Taxpayers can have trust in the program and expenditure resources.

Accountability for the use of taxpayer dollars helps establish the confidence that is needed for TARP to stabilize the financial sector. Because of this need for accountability and transparency, the Chamber wrote to Congress on June 11, 2009, in support of H.R. 1242. This bipartisan bill sponsored by Representatives Maloney and King represents an important step forward in creating and enforcing accountability. Currently, information regarding TARP funds are spread across multiple agencies, using incompatible formats and it takes a daunting task for officials and taxpayers to understand how funds are being used.

The Maloney-King bill would require the use of existing technologies to create a single, publicly accessible database that can track TARP funds in near real time. This transparency will help avoid the misuse of funds and develop a level of confidence that is integral to the success of TARP. The implementation of this bill would provide a benefit that would outweigh costs.

That being said, we also believe that there are some issues that need to be addressed with this implementation. In other pieces of legislation through the Privacy Act and Gramm-Leach-Bliley, Congress has taken steps to ensure the privacy and careful disclosure of financial information of businesses and individuals alike. We think that these are important issues that need to be addressed in the implementation of this legislation. We also believe that information should be used in a contextual basis so that discussion of its context would provide a basis for a better understanding.

I understand that my time is up, Mr. Chairman, and my full remarks are in the record. Thank you.

[The prepared statement of Mr. Quaadman can be found on page 95 of the appendix.]

Chairman MOORE OF KANSAS. Thank you for noticing your time, too, and I appreciate that.

Mr. Horne, you are recognized, sir, for up to 5 minutes.

**STATEMENT OF STEPHEN C. HORNE, SENIOR VICE PRESIDENT
FOR MASTER DATA MANAGEMENT AND INTEGRATION
SERVICES, DOW JONES ENTERPRISE MEDIA GROUP**

Mr. HORNE. Thank you very much. Good morning, Chairman Moore, Ranking Member Biggert, members of the subcommittee, and Congresswoman Maloney.

My name is Steve Horne. I am vice president of Master Data Management for the Dow Jones Enterprise Media Group. I have spent over 30 years building complex databases by transforming

highly complicated data, and I think that we have all heard that this is highly complicated data, into usable information.

Dow Jones has provided transparency to the marketplace in the form of indexes, publicly and privately held corporate information and analysis for over 100 years. We are kind of in the transparency business. Thank you for inviting me to speak with you today. Since the passage of TARP, Dow Jones has been a strong advocate of the use of technology to provide transparency to the program that to date has been somewhat opaque to both this House and to the American people.

The SIGTARP and the independent Congressional Oversight Committee have both made very strong statements that further action must be taken to make TARP more transparent. Transparency is not just about casting a light and reporting to the institutions receiving TARP funds, but in his report to Congress on July 21, 2009, the SIGTARP noted that we need a systematic program designed to capture appropriate information necessary to prevent waste, fraud, and abuse of TARP funds.

We support the goals of H.R. 1242 and the actions of Congresswoman Maloney and Congressman King in terms of providing true transparency to the TARP program. Real-time data-driven reporting and analysis provides the American taxpayer comfort that their money is being used as intended under TARP, and, potentially, other future programs to be covered under the new financial reform act. Proper reporting procedures are not only missing from the TARP program, but they're missing from almost all the current programs distributing Federal funds to private institutions.

There was no clearly established mandate that such procedures in place to govern the distribution of funds from any sector of the federally-funding infrastructure are in place. Dow Jones' application as currently in use worldwide demonstrates how transparency has been delivered to the commercial sector. And I have been asked to show some examples of transparency in the commercial world. Dow Jones is well-known for its newswires, Factiva.com, and companies and executives applications that take advantage of massive data collection and maintenance efforts that we go through. And I have a set of slides out there.

If you see on slide 2, it talks a little bit about those efforts. We have also developed for these applications many capabilities to report on and provide comprehensive visualization of information. We give our customers insight into the specific areas concern.

On slide 3, that shows a little bit about our efforts, but there are many firms here that are representing different efforts for visualization and reporting, and geospatial analysis, which is very important relative to accomplishing the task at hand. So for example we have every TARP participant flagged in our database, so we know who they are. Fine. Now, we can just assemble all the information around them.

For example, our database and tools provided customers with the ability to assess risks in respect to prospective customers and partners. We maintain a database of over 600,000 individuals and entities that based upon prior history could represent a legal or reputational risk to a company doing business with such people or entity.

We provide anti-corruption applications for tracking State-owned companies and other entities around the world that could pose risks under the Foreign Corrupt Practices Act. And we also have a financial tracking system to trace funding through our sanctions alert program for Counter Terrorism Funds Tracking, and nobody would want any of this money to end up in that place. These are just a few of the types of capabilities a system developed under H.R. 1242 could have in order to better manage and track funds and understand their use.

To provide the level of transparency called for in this bill is not simple. Currently, the Treasury subscribes to many different sources of data, including our own. This data is in distinct formats that are not compared or aggregated in such a way to identify anomalies as to transform the data into usable information. According to the SIGTARP, "Treasury has declined to adopt this recommendation, calling any such reporting meaningless in light of the inherent fungibility of money."

When I testified before the Domestic Policy Subcommittee of the House Oversight and Government Reform Committee in March, I showed that even though the money may be fungible, it's also volumetric, which means that it can be tracked. This fact has been validated by many top economists.

The Master Database example shown in slide 4 shows a lot of different sources of data and we manage and maintain a good many, if not all the sources, to be integrated into a standardized single version of truth. This will require a considerable amount of effort on behalf of an integrator. The database can be refined based upon specific rules and regulatory objectives to be measured against the facts presented from various sources of information. By doing this and performing extensive analysis, you can identify anomalies or issues or problems within the data.

The analysts can identify these anomalies where the data is incomplete, and when different between different sources, etc., and can red flag places where this is a problem. And I realize that my time is just about up. I want to thank you that the rest of my information here is for the record, and I hope that the panel will take a look at some of the other information we have included to assist in their evaluation.

[The prepared statement of Mr. Horne can be found on page 38 of the appendix.]

Chairman MOORE OF KANSAS. Thank you, Mr. Horne.

I do appreciate very much the witnesses recognizing their time limitations because we do have several other witnesses to testify as well as questioning for each of the witnesses. So I appreciate the witnesses' cooperation here.

Next, we recognize Mr. Krishna. Sir, you are recognized for 5 minutes.

STATEMENT OF DILIP KRISHNA, VICE PRESIDENT, FINANCIAL SERVICES AND INSURANCE, TERADATA CORPORATION

Mr. KRISHNA. Thank you, Mr. Chairman.

Chairman Moore, Ranking Member Biggert, and members of the subcommittee, my name is Dilip Krishna, representing Teradata Corporation. Thank you for the invitation to offer testimony today

before your subcommittee. Before I begin, I would also like to thank Congresswoman Maloney for her leadership in introducing H.R. 1242.

Teradata Corporation endorses H.R. 1242 without reservation, and encourages the Congress to pass this legislation as soon as possible. Teradata is among the world's largest companies focused solely on analytics and data warehousing. Our technology provides businesses and governments with the ability to leverage detailed, level data that's enabling these entities to recognize emerging trends and take appropriate corrective action quickly.

The problem of comprehensive governmental oversight is immensely important today. The economic crisis of the last 2 years has taught us that our financial institutions are truly a national asset, the abuse of which is to the detriment of every American. To paraphrase Joel Grey and Liza Minnelli from "Cabaret," we have learned that money does indeed make the world go around. Therefore, thorough, effective oversight of the financial system is critical to our future success. At the same time, we all want efficient government; and, critically, we need to ensure that any oversight system continues to allow the financial sector to provide the same high level of innovation and leadership that has propelled the prosperity of our market-based system for well over 2 centuries.

Financial oversight depends on the ability to effectively monitor financial system risks with a high degree of frequency to detect warning signs early. Regulators must have the proper tools to accomplish their mission by quickly establishing the root cause of the warnings and addressing them promptly and appropriately. But, this alone is not enough. As we have seen in the past 2 years, focusing on known risks alone exposes us to risks that were not predicted. And any financial system therefore must also have a predictive component.

The technology exists today to combine real-time monitoring and ongoing predictive capabilities within the same system, and based on the same detail-level data. Additional tools are employed, such as statistical analysis and visualization technology, to help quickly identify outliers and interpret risks. This analytic technology can allow us to develop an effective oversight regime, keep cost constraint, and at the same time allow continued innovation and growth in the financial services.

Already, the financial sector uses data analytics technology in diverse areas ranging from marketing to fraud management. Financial services companies have, for example, employed data analytics to save tens of millions of dollars every year by rapidly distinguishing fraud attacks and acting to prevent them in real time. Large global firms routinely use such technology for financial risk management and anti-money laundering detection.

In fact, the common framework for creating processed information from multiple sources of data is currently evolving across both the financial services and technology industries. Many large technology firms from across the spectrum also utilize essentially the same approach, and their customers in every industry are responding by implementing this concept within their enterprise.

Chairman Moore and members of the subcommittee, this is very good news indeed for proponents of financial oversight, because it

results in the various parts of the data analytics process being perfected at the same time. Keeping with technology trends in general, not only are the capabilities improving at a tremendous rate, but costs are also dropping significantly. Simply put, the time has never been better for leveraging information technology to create a strong system of financial oversight. It has proven it is successful, and it can be implemented today.

Again, thank you for the opportunity to testify before you this morning. I look forward to answering your questions.

[The prepared statement of Mr. Krishna can be found on page 61 of the appendix.]

Chairman MOORE OF KANSAS. Thank you, Mr. Krishna. We appreciate your testimony. And, Ms. Marlow, you are next recognized for 5 minutes. I will remind each of the witnesses again that your written statements are received in the record. Thank you.

Ms. Marlow?

**STATEMENT OF SUSAN MARLOW, CHIEF EXECUTIVE OFFICER,
SMART DATA STRATEGIES, INC., ON BEHALF OF MAPPS**

Ms. MARLOW. Thank you. Mr. Chairman, members of the subcommittee, my name is Susan Marlow. I am the president of Smart Data Strategies, a woman-owned business specializing in land records management. And I'm here today representing MAPPS, a national association of more than 160 private geospatial firms throughout the United States.

I have the pleasure of serving as chair of the MAPPS Cadastre Task Force. A Cadastre is a parcel based register of land or land information system. Many nations around the globe have national cadastres or national property databases in large measure thanks to the generosity of the American people, as these systems have been paid for by AID, World Bank, and other taxpayer-supported institutions. However, in the United States there are 3,200 counties, and as a result when it comes to parcel data, there are 3,200-plus puzzle pieces of non-standard data that don't quite fit together. While millions of dollars are spent on the creation and maintenance of this data at the local level, the investments are not being realized at the Federal level due to lack of coordination.

We witnessed the devastating effects foreclosures have had on our Nation—not just financial, but societal impacts on neighborhoods and communities—through a rise of crime, theft, vandalism, blight, and unsafe health conditions. Therefore, it is imperative that we utilize available technologies such as parcel-based geospatial data and systems to monitor and protect something so vital to our country's well being.

The introduction of Google Earth and Microsoft Virtual Earth have shown all of us the power of geospatial information. The geospatial market is expanding into every area of business through the enhancement of visualization and analytical capabilities. The use of this decision support technology is critical to all levels of government. We have all seen the infamous John Snow map plotting the incidence and location of cholera in London in 1854, just as we have recently seen in the newspapers or on television maps showing the spread of the H1N1 swine flu.

A national parcel system would be a visualization, an analytical tool, that would allow us to see the geographic location, distribution, and most importantly, spatial relationships of foreclosed properties. It is unfortunate that today many Federal analyses and decisions are being made using the wrong level of geography. For example, under the Home Mortgage Disclosure Act, HMDA, data on mortgage transactions is collected at the census tract level, not at the individual parcel level.

The parcel layer is much more detailed. It contains information about the value, improvements, taxes, and the physical location of the property. Parcel data can provide an early warning system to track changes in the market, just as the ones we saw in the recent years with mortgage foreclosures. We urge Congress to amend HMDA to require the collection of parcel data as a first step toward that early warning system. For decades, numerous studies have recommended the use of parcel data at the national level and called for improved national coordination.

I summarized some of these in my written statement. It is astonishing to note that the National Research Council, National Academy of Sciences found in 1980 that the technology was adequate for the task, but the major obstacles to its establishment were organizational and institutional. The technology is lightyears ahead today, but the organization is still a barrier. The National Spatial Data Infrastructure, NSDI, called for by President Clinton in an Executive Order and later reaffirmed by President Bush, identified seven framework layers of geospatial data for use in managing Federal Government, including a parcel layer.

Sadly, 15 years later, little progress has been made in creating the NSDI. We urge Congress to authorize and fund this critical information infrastructure. In my statement, we provide comments and suggestions on several pieces of legislation to help with this effort. Let me conclude by saying 30 years of reports and research has called for the parcel layer, yet it remains unfunded and incomplete. The problem is not technical. It is political and institutional.

While FedEx can track the location of millions of packages per day moving around the world, the Federal Government does not track the location of land, and it is stationary. While the Federal Government has identified numerous needs for parcel data, there is only sporadic use due to failed coordination between Federal, State, and local agencies. When one looks at the agenda for this Congress from mortgages to climate change, from healthcare to a smart energy grid, they cannot be effectively implemented today because of the Federal Government's failure to properly utilize geospatial data.

Mr. Chairman, we commend you for your interest and leadership, and we stand ready to work with Congress and the Executive Branch to better serve the geospatial needs of the American people in financial services oversight and a variety of other national needs and applications. The technology exists. A robust, qualified, and competent private sector is in place, and the solutions are waiting to be implemented. What is lacking is demand-driven leadership from the Federal Government.

Thank you so much.

[The prepared statement of Ms. Marlow can be found on page 67 of the appendix.]

Chairman MOORE OF KANSAS. Thank you for your testimony, Ms. Marlow. Mr. Hahn, sir, you are recognized for 5 minutes. And again, all of your written testimony will be received in the record. Thank you, sir. Mr. Hahn?

**STATEMENT OF GREGORY B. HAHN, PRINCIPAL, CROWE
HORWATH LLP**

Mr. HAHN. Good morning. My name is Greg Hahn of Crowe Horwath LLP. Let me first thank the subcommittee for the opportunity to testify today. Crowe Horwath has developed and implemented targeted technology solutions to assist financial institutions in compliance and oversight activities related to Federal regulations. We would also like to share how some of those solutions may assist the Federal Government in its oversight practices of the financial services industry.

Crowe Horwath is a professional services firm with the core skill of bringing process, industry, and regulatory expertise blended with technology skills, which allows us to develop targeted tools that fill the gaps where large technology vendors have not focused. As a worldwide professional services firm, the 8th largest in the United States and 9th in the world, we are not focused on the development of public policy, but rather, to assist our clients in developing solutions that are compliant and operationally effective.

We have significant experience working with most State governments, have conducted special Federal projects like working for the RTC during the savings and loan bailout, and have one of the most established track records of work with commercial banks. We also have significant experience assisting clients on issues related to the Bank Secrecy Act in supporting anti-money laundering or AML regulations.

Crowe Horwath has worked with over 100 financial services companies to develop, implement, optimize, and test AML compliance programs. Our technical solutions have provided automation and repeatability to historically manual or non-existent oversight processes. When the Patriot Act was passed in 2001, provisions related to financial institution compliance and strengthening for the Bank Secrecy Act raised the bar for compliance significantly.

I would like to walk you through two examples today. In working with our clients we found that it was difficult to develop a process for identifying higher risk customers, because additional information was needed when an account was opened in order to make that evaluation. We developed a technology platform that would walk the employee opening the account through a logical flow that asks the appropriate questions of customers to maintain a competitive customer experience. In essence, each customer interaction was customized or dynamic based upon the information that was provided. As more guidance was made available, we added the ability to conduct an annual review of the customer relationship to determine if the risks presented were still in line with the institution's risk profile.

A second example of the client need was to standardize the review and documentation process for investigation potential, sus-

picious activity. We focused on two specific challenges: how to drive more efficiency into a process that was repetitive, while continuing to leverage the individual's expertise and judgment as it related to identifying suspicious activity; and how to create a robust case file that increased the quality of the final work product.

My firm developed a patent pending solution that models each institution's investigative process and focuses an analyst on collecting information that is specific to the type of customer and the types of transaction activity in question. We then collect all the information and reportable fields, which has allowed us to generate the case file summary automatically. This functionality alone has saved analysts hours in writing up case files. In recent months, we have found this application flexible enough to address additional areas of risk management, such as fraud and the identification and monitoring of changes in credit portfolio quality.

As we continue to work on emerging and changing regulatory compliance issues, we will leverage the platforms we have created to give our clients the ability to comply with today's requirements and give them the capability to adapt as the regulatory environment evolves. We believe these cutting edge technologies in the world of financial services have merit in application for the Federal environment, especially today.

I want to thank the committee for asking Crowe Horwath to appear this morning. I would be pleased to answer any of your questions.

[The prepared statement of Mr. Hahn can be found on page 32 of the appendix.]

Chairman MOORE OF KANSAS. Thank you, Mr. Hahn, for your testimony.

Professor Zelner, sir, you are recognized for up to 5 minutes.

STATEMENT OF PROFESSOR BENNET A. ZELNER, FUQUA SCHOOL OF BUSINESS, DUKE UNIVERSITY, ON BEHALF OF THE PROBITY GROUP

Mr. ZELNER. Mr. Chairman and members of the committee, first of all, thank you for holding this hearing on the use of technology to improve TARP and financial oversight. Thank you as well for giving me the opportunity to appear before you today.

I am going to outline for you technology that my colleagues and I at Probit Group have developed, a technology known as the "Probit Gradient," which we believe can help achieve the twin goals of improved financial oversight and also optimal allocation of TARP funds, both in general and as embodied in H.R. 1242.

Just by way of background, I am a professor at Duke University's Fuqua School of Business, and my colleagues at the Probit Group including a Wharton school professor as well as several executives with extensive experience in risk management. We founded the Probit Group to help business executives and policymakers develop strategies and policies for assessing and mitigating high impact risks to complex systems composed of tangible and intangible assets.

The Probit Gradient, the technology that I want to talk about today, was first developed to assess and mitigate risks to tangible asset systems, primarily infrastructure systems, ranging from stock

exchanges and computer centers to oil refineries and transportation systems. We have also developed a technology known as “PSI” to assess and mitigate risks to intangible assets, such as reputation and policy; but, it’s the “Gradient” that I’ll focus on today.

So, the hallmark of the Gradient and the main reason why we think that Gradient analysis can be so useful for improving financial system oversight and for allocating future TARP funds is its holistic systems approach, like systems of financial assets, infrastructure systems composed of physical assets are extraordinarily complex with many interdependent parts that are connected through myriad channels. As a result and as demonstrated in the financial crisis that our Nation and the world faced a year ago, a failure or breach in one part of the system can cascade throughout the entire system with potentially dire and far-reaching consequences.

The Gradient’s systems approach provides both numeric indicators of the total value at risk from a breach or a failure in one specific area in one specific asset category, for example, as well as a visual indication of specific areas of the most high impact vulnerability. With this type of analysis in-hand, it’s possible not only to quantify and visualize risk consequences, but also to identify areas of critical vulnerability before something actually goes wrong.

The Gradient has its roots in a systems engineering approach known as “Failure modes and effects analysis,” as well as “Trusted System” technology, has been promoted by the NSA since the 1960’s. My colleagues at the Probity Group adapted these approaches to the analysis and protection of infrastructure systems as I have already said. Although the Gradient’s roots lie outside of the field of finance, public discussion and analysis of the devastating financial crisis that began last September have motivated us to explore how the Gradient could be applied to a complex financial system when its overall performance depends on the valuation of myriad, interdependent, often very dissimilar assets, and the viability of the numerous enterprises that hold these assets.

In the words of a Washington Post Op Ed written by Sebastian Mallaby last March, “We have a set of overseers who evaluate financial institutions one by one, but systemic risk is created by the interactions between institutions.” So, in our opinion, the Gradient represents a low-cost, highly accurate tool, one with proven reliability that would enable regulators to take the necessary big picture perspective. Gradient analysis would also help policymakers and regulators choose the best way to allocate TARP funds by identifying assets or asset categories whose failure or breach would have the most devastating and far-reaching systemic consequences.

Additionally, the systems engineering approach embodied in the Gradient could supplement existing financial analysis tools to assess the risk consequences of various forms of financial malfeasance, such as fraud, privacy invasion, insider trading, and valuation tampering.

So, thank you again, Mr. Chairman and members of the committee, both for the opportunity to tell you why we believe that the Probity Gradient can help achieve the important goal of strengthening oversight of our complex financial system, and also for the strong oversight that your subcommittee is providing in this impor-

tant area. I am happy to take questions today, and also in the future by e-mail.

[The prepared statement of Professor Zelner can be found on page 103 of the appendix.]

Chairman MOORE OF KANSAS. Thank you, Professor Zelner.

And, finally, Mr. Kimner, you are recognized, sir, for 5 minutes.

STATEMENT OF THOMAS KIMNER, RISK MANAGER, AMERICAS RISK PRACTICE, SAS INSTITUTE, INC.

Mr. KIMNER. Chairman Moore, Ranking Member Biggert, and members of the subcommittee, I appreciate the opportunity to appear before you today.

By way of background, I have been deploying technology solutions in the financial services area for nearly 20 years in both private and public sectors. SAS itself has been providing technology to the financial and government sectors for over 30 years. While my written testimony highlighted a number of themes, I'll only touch on a few here. The first theme is the increased complexity of the financial markets.

The financial landscape is more complex today than ever. Markets have become more global and more interrelated. We have a whole new set of financial instruments that did not exist previously. These instruments are highly complex and require new modeling techniques to evaluate. Our financial institutions themselves have become much more complicated, particularly as they begin to enter new lines of business and sectors that they were not previously in.

As a result, many of these organizations are now facing new regulatory and compliance issues. Oversight of these larger, more complex entities and their portfolios of investments is virtually impossible without bracing technology.

The second theme is the existence of powerful technologies that could help both banks and regulators. Financial institutions approach risk management using varying degrees of technology that address market risk, credit risk, asset and liability management, and operational risk. For regulators, having these technologies would not only provide better insights into what is happening within a financial institution, but could help provide a comprehensive assessment to cross institutions.

To illustrate, I would like to mention two specific tools: stress testing; and performance management. This year, Treasury asked 19 of the country's largest banks to undergo stress testing and established the scenarios under which the banks should be tested. Let me offer a few observations about the process. First, to comply with the new stress test, banks developed a one-time, manual process. It took many people having many conversations over many hours to translate the requirements into a model. Second, the stress test conditions may not have gone far enough in all cases. Other scenarios and other factors involving liquidity, cost of capital, and the economy could have been considered.

Finally, individual banks had flexibility in interpreting applying the stress test. This creates a potential issue because the perception and perhaps the reality is that different banks receive different treatment. Technology can be of enormous assistance to both

banks and regulators to streamline the process, provide consistency, assess the impact of additional risk factors, and integrate the results.

A second technology area growing in importance is performance management. SAS defines performance management as the process of using technology to ensure that a project's goals are fully aligned with the resources and activities needed to achieve them. Performance management tools can help program managers and senior agency officials understand whether the right activities are being pursued with the right resources to obtain the stated objectives. Of course, technology alone cannot solve all the challenges related to effective program management. Without a clear understanding of the problem and the objectives, it is virtually impossible to assess overall effectiveness. The application of technology is no substitute for clarity.

The third theme is that risk management is both an art and a science. Risk, quite simply, is uncertainty. Risk management then is proactively taking steps to reduce the uncertainty. For financial institutions, risk management involves determining what level of risk they are willing to absorb and then managing to that risk tolerance. Sound risk management is also about building appropriate policies and controls. From a regulatory point of view, risk management should involve reviews to see whether financial institutions are adhering to their own policies, as well as their view regarding what is an appropriate amount of risk.

Given their broad market charter, regulators must have similar capabilities as banks to make independent assessments of the risks within individual banks as well as across all banks. In conclusion, SAS's catch phrase is the power to know. We believe that data and technology tools are powerful enablers. They allow decisionmakers to draw mathematically significant insights about their actions and make better-informed decisions. As markets and financial products become increasingly complicated and interrelated, regulators would benefit from deploying technology solutions to assist in understanding and monitoring what is happening. But technology by itself is not sufficient. Without the right people possessing the right skills in the right jobs, technology will not improve oversight.

I appreciate the opportunity to appear before you today and look forward to your questions.

[The prepared statement of Mr. Kimner can be found on page 51 of the appendix.]

Chairman MOORE OF KANSAS. Thank you, Mr. Kimner.

I thank all of our witnesses for their testimony. Now, I recognize myself for 5 minutes for questions, and I will start, Mr. Horne and Mr. Krishna, with you if you would, please. As I said in my opening statement, I'm a co-sponsor of Congresswoman Maloney's and Congressman King's bill H.R. 1242, to better use technology to improve TARP oversight.

With the approach that's taken in the bill, can you speak to broader applications of using technology in a similar way, especially as this committee debates financial regulatory reform. If you have any thoughts or observations, I would appreciate it very much.

Mr. Horne?

Mr. HORNE. Yes, thank you, Mr. Chairman. There's a whole series, if you think about data being sort of the ultimate extensible asset. Anything that's being done in financial reform, frankly, should reflect the results of analysis that come out of what H.R. 1242's intent was to provide insight and information in terms of the use of TARP funds.

It's a shame. I have a letter here that I sent to Assistant Secretary Kashkari on October 7, 2008, basically requesting the same thing that Congresswoman Maloney has put together in her bill; and, this was a year ago, practically, at this time. And, if you had the system in place right now, virtually all of the information that would be needed to determine the Financial Reform Acts rules, laws, concepts, based upon factual information could be gleaned from that system, rather than now having to sometimes shoot from the hip. And, I'll defer to Mr. Krishna on this, but predictive analysis off of this in terms of how to figure out what we should do could have been part of our current infrastructure to make the financial reformat the much more powerful capability; so, and I will defer to Mr. Krishna.

Chairman MOORE OF KANSAS. Thank you, Mr. Krishna. Do you have any observations, sir?

Mr. KRISHNA. Thank you, Chairman Moore.

I will speak from our extensive experience in risk management within the financial industry's space. Risk management and financial oversight is really the other side of that coin. It's really about thought, about thinking through the types of risks and the types of events that we really haven't anticipated so far, but could affect in a very adverse way what would happen to the economy. It turns out that in the financial institutions that we have worked with, a lot of the process of risk management, in fact, is about data and bringing data together.

Something like 70 to 90 percent of the time is in fact taken up in that process as opposed to thinking. What we find is that taking away the problem of managing data, of aggregating data, in fact, leads to a tremendous improvement in the capability to do risk management; and, therefore, financial oversight. The last comment I will make is that especially financial oversight in this new economy is really about the interactions between financial institutions, and that's something that requires a tremendous amount of further thinking and further imagination which have to be tested in a predictive manner; and, we believe that the database as is proposed in H.R. 1242 is going to be instrumental in providing that further level of capability.

Chairman MOORE OF KANSAS. Thank you, Mr. Krishna.

Ms. Marlow, as you know, a constituent of mine is MAPPS board member Scott Perkins. I recently toured his geospatial firm in my congressional district, Wilson and Company. The way they're able to use this technology is impressive and could have some, I think, application to financial oversight.

In your testimony, you highlighted several bills before Congress: H.R. 932, H.R. 1242, and H.R. 1520. You also recommended amending the Home Mortgage Disclosure Act so that the Federal Reserve collects home mortgage transaction data at the parcel level. Why is this change important? And, before you answer, Ms. Marlow,

since you helped draft the 2007 National Academy's report on these issues—and we have reports going back to 1980—do you believe additional studies are needed? Or, is now the time for action?

I would appreciate your comments, Ms. Marlow.

Ms. MARLOW. Well, I appreciate you recognizing that 30 years of reports have called for it. This is the one that was done in 2007—definitely time for action. We have done numerous reports and every one of the reports have come to a lot of the same conclusions: that our problems are not technological in nature, they are organizational and institutional, and we really ask for leadership at the Federal level.

We certainly believe that this could help with a geospatial component in the database that's being proposed. We certainly believe that would be an incredible enhancement and a visualization tool that would help in all areas, and, we believe that the parcel level is the right granularity for that geospatial data.

Chairman MOORE OF KANSAS. Thank you very much for your comments, and I thank all the panel members. I now recognize Ranking Member Biggert for 5 minutes.

Mrs. BIGGERT. Thank you, Mr. Chairman.

How could Federal regulators use real-time monitoring and predictive analysis and coordinate information to prevent the financial collapse in the Federal financial programs? You know, you talked about other stuff. I'll start with Mr. Hahn.

Mr. HAHN. Thank you. In terms of real-time data and the presentation of that data, I think what's most critical is understanding the levels of flexibility that you're going to need going forward as things evolve as the data changes, having the level of flexibility to present that data in different ways, collect the data in ways that in the future you're going to be able to report against that data. With the CARS, the Crowe Activity Review System that we have developed and where we focused on assisting our clients with this evolving environment.

We have repurposed what we did for anti-money laundering to deal with issues such as mortgage fraud investigations, especially where there have been quick turnarounds in terms of banks being acquired in this environment, and then we have also been focused on assisting with deposit fraud. And then we have begun the process of internally prototyping a TARP monitoring solution that our clients would use as well.

Mrs. BIGGERT. Thank you. Then, Professor Zelner, how were you able to transform a method for analyzing complex weapons and industrial systems to a method for improving the financial systems and monitoring for systemic risk?

Mr. ZELNER. Well, I guess I would make two points in response to your question. The first is that the whole purpose of these systems that were developed to analyze infrastructure facilities is to take many dissimilar parts, many dissimilar system components, if you will, assets in the case of the financial system, and somehow compare both the vulnerabilities that these different assets or system components have in the threats. So if we want to think about the financial system, for example, threats to a given asset might include natural disaster or accounting fraud.

The vulnerabilities of a specific asset might include the asset's degree of leverage or its ability to be hedged, for example. So, the whole idea, once again, is to adopt a standardized way of comparing the vulnerabilities and threats to very dissimilar assets. The other point I would make in response to your question is that I think that the Gradient, because it comes from an infrastructure and system security background very nicely complements a lot of the existing financial tools.

So financial tools, financial analysis tools, are very focused on risks and probabilities, and that's critical. You obviously can't ignore that if you want to provide effective oversight. But, one thing I think has largely been missing from the conversation is the discussion of potential impact, potential risk consequences; and, what the Gradient does, because it was originally developed to help us think about and analyze weapons systems and physical infrastructure facilities, is identify the areas of most high impact vulnerability. This is very different. The areas of most high impact vulnerability may differ from the areas that are most likely to be breached are failing some way.

Mrs. BIGGERT. Thank you. And with that, I would like to go to Ms. Marlow. In one of my former lives, I was a real estate attorney, and one of the things that was always worrisome to people was disclosure and privacy. You know, knowing if other people knew what the cost of their mortgage was and what payments they were making, and it appears here that what we're looking at is the disclosure in all this land data that everybody would have access to what their neighbors paid. A lot of it is all public record, but it's not that easy to find right now. But if it's on the Web site, there's also the question then that Mr. Schwartz addressed a little bit, and that was the security, you know, and the problems with theft or identity theft from people having access to so many things that are private to people. But then I noticed in one of your pages that you have that, you know, you could identify where there were high-cost loans that those were actually where the foreclosures were. But do we really need as much transparency as is sometimes offered?

Ms. MARLOW. Well, I appreciate the question and I certainly can understand your concern. I would like to note that the data that we're talking about aggregating is data that's available in your local assessor's office today. And we would call for authoritative data meaning data that is actually known to be correct. And so I believe that with that kind of data, you not only have the ability to have all of your personal data secure—and certainly the security should not be an issue at this particular level—but I would say that we need this kind of granularity of data so that we know where it's really happening, just so you know, like in disease control or anything else. If you know where it's happening, then you can begin to predict what it's going to do in the future, and that sort of thing, and you can monitor it.

Chairman MOORE OF KANSAS. Thank you. And Mr. Lynch, sir, you are recognized for 5 minutes.

Mr. LYNCH. Thank you, Mr. Chairman.

Again, I appreciate the testimony here this morning, and the hope of obtaining predictive analysis certainly offers great value to us. But, I must confess that I would be happy as a person on the

oversight committee. I would be happy with a system that just tells me where the money went. Another hat that I wear, I am the co-chair of the task force on terrorist financing and non-proliferation.

I work a lot with FINCEN, the Financial Crimes Enforcement Network, and one of the things that I have seen is that in the process of gathering—what we do is we establish financial intelligence units and we gather data; you know, suspicious activity reports, cash transaction reports—we get all these coming in. And I'm not so sure that our analysis is that good, because we get billions of pieces of data, millions of these reports, and the ability to sift through it all is very, very difficult.

But I do know that since we started gathering the data we have pushed a lot of the terrorist money out of the legitimate financial system, because they know we're gathering the data and we're watching. So there's this sort of prophylactic function here that's pushing the money out of the system. And we can see it happening everywhere. I spent a lot of time in Jordan. They just adopted a good system in North Africa as well. And, just as an example, we did have a situation where Mr. Khan here from Hamas was actually grabbed with about \$30 million in a couple of suitcases coming over the border into Rafa into Southern Gaza, and that's because he couldn't transfer the money for a legitimate financial system. So we know that it's causing pressure.

So I would be happy if we came up with a system that did that, that at least put people on notice that the government is watching and they were getting information in usable fashion. But Mr. Hahn and Mr. Kimner, Mr. Kimner, you hit on a great phrase there—"the power to know." And, as someone on the oversight committee on behalf of the American people, I want the power to know. And I have to tell you it has been a frustrating experience just trying to track this money in TARP, and now I'm seeing that we're going to blow out the responsibility of the Federal Government to regulate the entire financial services industry.

How do we get the power to know? How do we? You know, Congress is representing the people here, the taxpayer. How do we get the power to know? How does that translation occur between your systems and us?

Mr. KIMNER. Thank you for the opportunity to answer the question. I think a lot of what we're talking about and my colleagues may agree with this is that data is really at the heart of all of this, so collecting data. And as you mentioned, you start to swim in it so you can collect it and you have it. And then you get to the point where you don't know what you're doing with it, you just have so much to look at.

Some of what we're able to provide at SAS is pattern recognition software, so what that will do and what that helps you do is it helps you look at patterns across data over time. It helps you recognize where you have outliers, for instance, where you have anomalies to particular patterns. I'll use an example, in the written testimony about fraud, so you have a credit card. You go and when you're shopping it's a set of stores and you have gas purchases. But, all of a sudden, it's one hit on your record card for transaction for say some really expensive item. It may be a watch that you normally wouldn't buy. The predictive software that we have and the

pattern recognition software that we have allows you to see that and flag that transaction.

And what we do in real time in the credit card business is help people. So you may get a phone call during that transaction in a few minutes. The phone rings. The person at the cash register says hey, we want to verify it's you in this transaction. So that type of recognition helps you sort through the information and gives you knowledge about the patterns of information.

Mr. LYNCH. Okay. Let me just ask Mr. Hahn. Right now we're getting push-back. The system that I describe where we get these cash transaction reports and the suspicious activity reports, we have groups out there like the ACLU who are concerned about us gleaming all this data. They're saying you don't need it all and they're probably right, but we need a lot of it. How do we address the privacy concerns that folks have if we're bringing all this massive data?

Mr. HAHN. So it's difficult for me to talk specifically about policy, but I can talk about what we have done with our clients, our financial institution clients, to address this, and we have done that in two ways. One, we worked with our clients to implement a dynamic on-boarding process, so different types of customers are going to be asked different types of questions to identify whether or not they present high-risk money laundering attributes. And that information is stored within the bank systems and all the security that's associated with what's inside a bank is applied to that technology.

When suspicious activity is potentially found, we have also developed a dynamic process to go through the investigation so that it is done efficiently. It's done in a way that we're very focused on what needs to be reviewed based on the transactions and the customers, and then producing a consistent set of output so that when we are reporting into the government through the banks for suspicious activity, the information is consistent and then hopefully is easier for the government to use as they do the work that they do.

Mr. LYNCH. Thank you. Thank you, Mr. Chairman.

Chairman MOORE OF KANSAS. Thank you. Thank you, and the gentleman from New York, Mr. Lee, you are recognized, sir, for 5 minutes.

Mr. LEE. Thank you, Mr. Chairman.

I guess I would start, maybe I will direct this question to Mr. Horne. It has been roughly a year since the TARP funds were initially released; and, obviously, I think we are all in agreement. We want to ensure that we are protecting taxpayers interest as best as possible and get meaningful data.

I will take this from a different approach. In terms of the usable software data in terms of getting this implemented, in terms of a timeframe, in your estimation, how quickly could this be developed and have staff trained to have a useful system?

Mr. HORNE. Well, thank you for the question, Congressman. We have actually been going through this extensively in terms of trying to figure out how to make this come together and work. And we have been working with many different companies, frankly, because we are a data provider.

Teradata is a data warehousing and analysis companies. We have been working with people from IBM. We have talked to peo-

ple from SAS. Ms. Marlow's organization does a different thing in terms of spatial data; and, what we found is there are probably phased processes that could be used to put this thing in place in phases. To answer Congressman Lynch's question regarding, you know, I want to get the answer where the money went. I think that's the start, that's the foundation.

So doing the volumetric analysis up-front probably can be completed within 90 to 120 days to get from the point of initiation of saying let's find out where the money went to get to that point. We are probably there in that timeframe. Okay? And that means that we have to combine all these sources of data and do preliminary analytics in that information.

The next step is then being able to do what I call comparative analytics, because part of the problem is we are trying not to force the banks. Right now, the banks file 157 different types of reports.

Mr. LEE. You said how many?

Mr. HORNE. 157.

Mr. LEE. And would this require banks then to increase additional compliance, additional task forces?

Mr. HORNE. No, I'm saying the opposite, because I think we have to stop cutting down trees. And part of the problem is that a lot of these reports say the same things. You have reports called the FR Y-9C report. You have reports going to the FIFEC organization, which has FDIC data, which has bank call report data. You have all this information going in, and a lot of times it's the same thing. Show me your balance sheet. Show me your transaction. Show me your mortgage information, lending information.

Mr. LEE. I know I don't have a lot of time, so in your mind to get this thing fully implemented, give me a number. Is it 12 months, 24 months?

Mr. HORNE. I think it's full implementation. We are talking about a full 12-month cycle with ongoing whatever requirements go beyond the initial implementation of everything. I am talking about every kind of tracking.

Mr. LEE. And I'm not sure whom, anyone, can answer this question. Has there been any projections in terms of what the cost would be to develop this in terms, and then also the training aspect, which sometimes can be more expensive than the software itself?

Mr. HORNE. Well, part of the recommendation would be not necessarily to totally train, but to staff, very expert analysts to go along with this process; or, you have experience working with the data. And there were many people out there who do across these organizations as well as others to work with the government. From a cost standpoint, basically, if you look at just the standard government waste, fraud, and abuse numbers across all agencies, it is averaging somewhere in the area of 4 to 5 percent. Medicare, I think, is like 12 percent. If it is just 1 percent here, it is \$7 billion, so.

Mr. LEE. I understand, but I am just curious.

Mr. HORNE. So the whole cost is under \$100 million probably to do soup to nuts in this thing, to do everything.

Mr. LEE. I am in the wrong business. I would love to get into this.

Mr. HORNE. Well, probably under \$50 million to start it off to get the first 12 months done, and then whatever it needs to maintain over time. Your issue here is not the data. The data is not that expensive.

Mr. LEE. Let me ask you one last one. I know I am getting close on time. I'm not sure what. This is a database that will be set up, a relational database? I'm not sure what ultimately it would be, but in doing so, once it is set up and established, what's the ability to modify it is this is going to be very dynamic. We hope that this would be an investment long-term. Would this database be easily modified downstream to ensure that it is?

Mr. HORNE. The whole premise is extensibility; to be able to change it on the fly, to be able to add new information, to be able to add new capabilities, new functionality in real time. Literally, also to have user ability to do so as well so a user can go in and take data into a secure environment with using just Excel or some other type of tool and be able to run a report.

Mr. LEE. Thank you.

Mr. HORNE. With security in mind, of course.

Mr. LEE. Thank you.

Chairman MOORE OF KANSAS. Thank you. And next, the Chair recognizes the gentleman from Minnesota, Mr. Paulsen.

Mr. PAULSEN. Thank you, Mr. Chairman.

Mr. Quaadman, I wonder if I can ask, is sufficient oversight of TARP being conducted right now by the Special Inspector General for the Troubled Asset Relief Program or SIGTARP from your perspective? And how would this database itself really affect SIGTARP's oversight?

Mr. QUAADMAN. Well, I think, you know, as I said in our testimony, we think that oversight and accountability is really at the center here, because a big part of TARP or the intent of TARP is to reinstall confidence in our financial system. So the more accountability and transparency than can be built in here the better, and that's why we thought that the database that's presented in Ms. Maloney's bill goes a long way to providing more accountability.

The technology is there to do it. The information is there to do it, and we should use that so that taxpayers can have the ability to see where their money is going. So we think this is actually a supplement to what the Inspector General is doing.

Mr. PAULSEN. Supplement, okay. And I want to ask a question of Mr. Kimner, if I could.

Given the size of various financial institutions of all sorts, and the varying complexity of their operations, is it really possible to come up with a single detail test that would be applicable to all businesses or all institutions?

Mr. KIMNER. Thank you for the opportunity to answer that. I don't know that a single test is the right answer. It may be that there is a variety of tests given the complexity of the institutions and the type of risks they take on. So it may not be a one-size-fits-all stress test, for example. There may be varying degrees of complexity within the test. I think part of what we are looking for is consistency, both in the application of the test, the information that gets collected and how it's used. So that if two institutions of simi-

lar risk profile and similar size are tested, that they have the same type of test being applied as opposed to having very different tests being applied to them.

Mr. PAULSEN. Thank you, Mr. Chairman. I yield back my time.

Chairman MOORE OF KANSAS. I thank the gentleman and I next recognize for 5 minutes the gentlelady from New York, Ms. Maloney.

Mrs. MALONEY. Thank you again, Mr. Chairman, and ranking member, for holding what I think is a very critical meeting that can help business, help the financial industry, restore confidence in our financial institutions, and move the regulation and oversight into the 21st Century. I first would like to welcome Thomas Quaadman at the Chamber of Commerce and comment on his work in a prior job to provide affordable and available healthcare to the 9/11 heroes and heroines. I wanted to compliment your work, but I do have limited time, so I want to jump on several areas and ask if you could get back to me in writing.

Mr. Horne, your statement that banks have to file 157 different reports, that is staggering. What a waste of paperwork. If we had one centralized system, they wouldn't have to do this. I would like you to get to the committee all of the 157 different filings. I know about 20, but I didn't know there was 157. That is absolutely staggering.

Mr. HORNE. But there are subfilings within; in other words, 25 different things.

Mrs. MALONEY. Get us the list.

Mr. HORNE. But you have paper coming out the wazoo.

Mrs. MALONEY. Get us the list; and I think we need to provide relief to financial institutions too that are overburdened with unnecessary filings. One of the problems that many of you raised in your testimony was the privacy challenge; and, I don't want to get into that now, because that is a difficult challenge. But if you have any ideas of how to handle that, if you could get back to us, the original bill is written with Mr. King and myself, has it only to regulators, Members of Congress and government, because of the proprietary information, and I thought that the privacy concerns would absolutely kill the bill moving forward with opposition.

So that's not part of it, but it's something we could do in the future if we could figure out how to handle it. But I would like to say that when I first put the bill in it was in the midst of the financial crisis and money was being infused into the financial system at alarming speeds, and there were allegations of misuse of funds and corporate junkets, and so forth. It was undermining the public's support for this program or for stabilizing our financial institutions, which I support and think was necessary.

Now we're at a point where the funds are no longer available from the TARP fund and the deadline has passed to apply for the funds, which is very different from when I first introduced it. So I would like to ask Mr. Krishna. Do you believe this is still necessary? And why is this still necessary?

Mr. KRISHNA. Thank you, Congresswoman Maloney.

Whenever government has spent hundreds of billions of dollars of taxpayer funds, I think it is relevant to think about where those funds have gone, even if there are no more funds going out. So I

think that question is absolutely relevant, even today, to know where the funds went, how they were applied. But, beyond that, the bill that has been put forward allows us to create an asset that keeps on giving.

So some of the comments made here were relevant, and not only TARP oversight, but financial oversight going forward. And I think that is where this bill will allow us to build a system of financial oversight with analytics and the use of technology in the appropriate way that will stand the system in good stead for many years coming. So I do think the TARP is very important, but I think the technology can help us move forward very effectively as well.

Mrs. MALONEY. I think that is well stated, and very briefly, in New York City, we had several scandals. We needed a Federal bailout at one point, and what we had was a system of separate bookkeepings, separate accounts. No one knew what was going on. I think AIG showed us that government regulators had no idea of what is going on, so any tool that we can put in place that helps us better analyze is going to be very helpful.

New York City created a central database on our budget, on our contracts, on our whole economy, and we have been better managed since then, knowing when we are getting in trouble and able to prevent it—not after the fact—but before the fact. So I believe that this is a very strong and important tool. I believe it should have passed yesterday, and I am committed to working hard with Mr. Moore and others to bring it into a reality. I would like to ask, really, Mr. Horne, Mr. Krishna and others, anyone who would like to comment on what elements you would begin in capturing in the system. And if my time is expiring, I would like to invite all of the panelists to put it into a memo to the committee, because I think it is important to clarify exactly the elements that we need to capture; and, again, I want to thank the Chamber of Commerce, which speaks for business in America, for being here today. Your presence is extremely important, so do you have a quick response?

Chairman MOORE OF KANSAS. I thank the gentlelady. Her time has expired, and we would ask that the witnesses comply if you have comments to make with her request, because I think that could be very valuable for the record. If you would supply your written comments for the record, that would be appreciated. And I thank the gentlelady for her question.

Mrs. MALONEY. I thank you, and I hope you will reply with elements you feel should be part of it. I think we should have some elements in the core bill to begin with. Thank you. I yield back.

Chairman MOORE OF KANSAS. Thank you. And the gentlelady from Illinois has asked for an additional 2 minutes for one question.

Mrs. BIGGERT. Yes, thank you, Mr. Chairman. I appreciate it. I just wanted to go back to Mr. Schwartz on the land data issue, and I just wanted to clarify that when I was talking about disclosure, I really was talking about the importance of transparency. And I think Ms. Maloney's bill is a really good bill and probably doesn't have some of the problems, I think, that the land data bill—the other one that's in Congress—because I think it is really important from a consumer point of view that consumers' data is protected.

I worry about such a bill where everything is known about the transactions, and is available. You can go to Zillow or if you're an attorney you go out to the county seat, or anyone can really go out and find out all that information, but it is harder than if it is posted on somebody's Web site for everyone to see. And I just wondered with some of the problems that have occurred in that area with security and identity.

Mr. SCHWARTZ. It is an extremely important question and I thank you for asking it. I think one other distinction I would like to make with Representative Maloney's bill that Mr. Quaadman also made was that the Privacy Act clearly applies to data that is collected by the Federal Government. We have a law for when that information is collected—brought into the Federal Government—and you are searching it on individuals' names. And there is also another law, the Government Act, has a provision for privacy impact assessments to be created in that situation.

The problem with the land records issue is that information is collected by counties right now. As you start to manipulate it and use it in different ways, remember the Privacy Act was written in 1974. The guidance for it was written in 1975, and has not been updated since then. They didn't have the idea that we were going to have geo location systems, so it's not clearly covered by the Privacy Act, and that's where this problem begins.

If it were a centralized database where we were looking up individuals by their name or by their Social Security number, we would have a law in place that covered that. The problem is with geo location data, that's not necessarily covered.

CDT has been working on trying to update the Privacy Act so something like this would be covered if it were centralized. There were questions about how this database will be set up and whether it will be distributed or whether we will actually reside in an agency, which raises other questions as well. But I think that what we have seen and I think to back-up some of the issues that Ms. Marlow was talking about—

Chairman MOORE OF KANSAS. The gentlelady is recognized for one additional minute.

Mrs. BIGGERT. Thank you. Please continue.

Mr. SCHWARTZ. —that Ms. Marlow raised is that we have seen counties do protect privacy. Some counties have done a very good job in protecting privacy and looking at the security issues. And many of the companies have as well: Google Earth only goes down to a certain point; you can't look into people's backyards, for example. And so we have seen some companies do a very good job with this kind of data. Some of the counties have done a very good job. Others have not done a good job.

They have made it, so they put the land records data right next to a court data, where we have seen some identity thieves go in and try to match up the information and use it to take people's information. So what we are trying to drive to with the suggestion of including privacy impact assessments is that as this database is built, we are looking towards the best practices of what we know is out there.

Mrs. BIGGERT. Thank you so much and I appreciate that.

Mr. Moore, I really thank you for having this hearing and I hope that we can have one that has the Federal regulators. I would also like to recommend that we invite HUD representatives and other Federal agencies that granted funds to such groups as ACORN and have the ACORN representatives to testify at a hearing.

Chairman MOORE OF KANSAS. Thank you to the ranking member, and again, thanks to all of our witnesses for their testimony this morning. I believe today's hearing helps us understand what technologies are available today, and what might be possible if the Federal Government can take full advantage of these technologies to provide better oversight of TARP and other governmental programs.

I look forward to working with the ranking member and other members to make sure we are better utilizing these technologies to strengthen financial oversight. I ask unanimous consent that the written statements of the following organizations be made a part of the record: Epicurus Institute; SecondMarket; and Interthinx. Without objection, it is so ordered.

The Chair also notes that some members may have additional questions for our witnesses, which they may wish to submit in writing. Without objection, the hearing record will remain open for 30 days for members to submit written questions to these witnesses and to place their responses in the record. Again, I thank all the witnesses, and this hearing is adjourned.

[Whereupon, at 11:32 a.m., the hearing was adjourned.]

A P P E N D I X

September 17, 2009

Statement By

Mr. Greg Hahn, Principal, Crowe Horwath LLP



“Utilizing Technology to Improve TARP and Financial Oversight”

Subcommittee on Oversight & Investigations

Committee on Financial Services

U.S. House of Representatives

Thursday, September 17th, 2009

Good Morning, my name is Greg Hahn, of Crowe Horwath LLP. Let me first thank the Committee for the opportunity to testify today. Crowe Horwath has developed and implemented targeted technology solutions to assist financial institutions in compliance and oversight activities related to Federal regulations. We'd also like to share how some of those solutions may assist the federal government in its oversight practices of the financial services industry.

Let me first tell you a little about my company: Crowe Horwath LLP is a professional services firm with a core skill of bringing process, industry and regulatory expertise, blended with technology skills, which allows us to develop targeted tools that "fill the gaps" where large technology vendors have not been focused. As a worldwide professional services firm – the 8th largest in the US and 9th in the world - we are not focused on the development of public policy, but rather to assist our

clients in developing solutions that are compliant and operationally-effective. We have significant experience working with most state governments, have conducted special federal projects like working for the Resolution Trust Commission (RTC) during the Savings & Loan Bailout, and have one of the most established track records of work with commercial banks. We also have significant experience assisting clients on issues related to The Bank Secrecy Act and supporting Anti-Money Laundering (or AML) regulations.

Crowe Horwath has worked with over 100 financial services companies to develop, implement, optimize and test Anti-Money Laundering compliance programs. Our technical solutions have provided automation and repeatability to historically-manual or non-existent oversight processes.

When the PATRIOT Act was passed in 2001, provisions related to Financial Institution compliance and the strengthening of the Bank Secrecy Act raised the bar for compliance significantly. As institutions implemented more robust AML programs, three common themes emerged where these institutions invested significant effort: 1) the

identification of highest concentrations of risk for money laundering within the organization (products, geographies, and customers), 2) the ability to identify and monitor customers that appear to pose higher risk for money laundering, and 3) the identification and reporting of suspicious activity.

For example, in working with our clients, we found that it was difficult to develop a process for identifying higher risk customers, because additional information was needed when an account was opened in order to make that evaluation. We developed a technology platform that would walk the employee opening the account through a logical flow that asked the appropriate questions of customers to maintain a competitive customer experience. In essence, each customer interaction was customized, or dynamic, based upon the information that was provided. As more guidance was made available, we added the ability to conduct an annual review of the customer relationship to determine if the risks presented were still in line with the institutions risk profile.

A second example of a client need was to standardize the review and documentation process for investigating potential suspicious

activity. We focused on two specific challenges: 1) How to drive more efficiency into a process that was repetitive, while continuing to leverage the individual's expertise and judgment as it related to identifying suspicious activity, and 2) How to create a robust case file that increased the quality of the final work product.

My firm developed a patent pending solution that models each institution's investigative process and focused an analyst on collecting information that is specific to the type of customer and the types of transaction activity in question. We have collected all the information in reportable fields which allowed us to generate the case file summary automatically. This functionality alone saved analysts hours in writing up case files. In recent months, we have found this application flexible enough to address additional areas of risk management such as fraud and the identification and monitoring of changes in credit portfolio quality.

As we continue to work on emerging and changing regulatory compliance issues, we will leverage the platforms we have created to give our clients the ability to comply with today's requirements, and give them the capability to adapt as the regulatory environment evolves.

We believe these cutting edge technologies in the world of financial services have merit and application for the federal environment, especially today. I want to thank the Committee for asking Crowe Horwath to appear this morning. I would be pleased to answer any of your questions.

**Testimony of Stephen C. Horne
VP- Master Data Management and Integration Services
Dow Jones Enterprise Media Group
Business and Relationship Intelligence
before the
House Committee on Financial Services
Subcommittee on Oversight and Investigations
September 17, 2009**

Good morning, Chairman Moore, Ranking Member Biggert and Members of the Committee

My name is Steve Horne.

I am the Vice President of Master Data Management for the Dow Jones Enterprise Media Group. I have spent over 30 years building complex data bases, transforming highly complicated data into usable information.

Dow Jones has provided transparency to the marketplace in the form of indexes, publicly and privately held corporate information and analysis for over 100 years.

Thank you for inviting me to speak with you today.

Since the passage of TARP, Dow Jones has been a strong advocate of the use of technology to provide transparency to the program that to date has been somewhat opaque to both this House and to the American people.

The SIGTARP and the Independent Congressional Oversight Committee have both made very strong

statements that further action must be taken to make TARP more transparent. Transparency is not just about casting a light on the reporting by the institutions receiving TARP funds, and in his report to Congress, July 21, 2009; the SIGTARP noted the need for “a systematic program that is designed to capture the appropriate information necessary to prevent waste, fraud and abuse of TARP funds.”

We support the goals of H.R. 1242 which would provide true transparency to the TARP program. Real time, data driven reporting and analysis provides the American taxpayer comfort that their money is being used as it was intended under TARP and potentially other future programs that could be covered under the new Financial Reform Act.

Proper [reporting] procedures are not only missing from the TARP program, but they are missing from almost all of the current programs distributing federal funds to private institutions. There is no clearly established mandate that such procedures be in place to govern the distribution of funds for almost any sector of the Federal Funding infrastructure.

Dow Jones applications currently in use worldwide demonstrate how transparency has been delivered to the commercial sector.

Dow Jones is well known for its Newswires, Factiva.com and Companies and Executives applications that take advantage of its massive data collection and maintenance efforts (Slide 2). We have also developed for these

applications many capabilities to report on and provide comprehensive visualization of information to give our customers insight into their specific areas of concern. (Slide 3) In addition, every TARP participant is flagged, updated, and included in our database.

For example, Dow Jones data bases and tools provide customers with the ability to assess risks with respect to prospective customers and partners. It maintains a database of over 600,000 individuals and entities that based on prior history could represent a legal or reputational risk to a company doing business with such people or entities. Dow Jones provides anti corruption applications for tracking state owned companies and other entities that would pose risks under the Foreign Corrupt Practices Act. And we also have a financial tracking system to trace funding through our sanctions alert program for Counter Terrorism Funds Tracking.

These are just a few of the types of capabilities a system developed under HR 1242 could have in order to better manage and track funds and to understand their use.

To provide the level of transparency called for in HR 1242 is not simple. Currently the Treasury subscribes to many different sources of data, including our own. This data is in distinct formats that are not compared or aggregated in such a way to identify anomalies as to transform the data into usable information.

According to the SIGTARP, “Treasury has declined to adopt this recommendation, calling any such reporting *meaningless* in light of the inherent fungibility of money.”

When I testified before the House Government Oversight - Domestic Policy Subcommittee in March, I showed that even though money may be fungible, it is also “volume-metric” and therefore it **can** be tracked. This fact has been validated by many top economists.

The Master Database example in Slide 4 shows different disparate sources of data that could be integrated and standardized into a single version of the “truth.” The database can then be refined based upon specific rules or Meta data that allow for the regulatory objectives to be measured against the facts presented from the various sources of information. By doing this, extensive analysis can be performed to identify anomalies in the data.

The analysts can identify anomalies where the data is incomplete, the data is different between two or more sources where it is supposed to be the same, the data is wrong or the data analysis shows that there is a situation that may “red flag” an issue for a regulator to examine to determine if there is a problem.

As the SIGTARP’s July 21st report stated, even if a small percentage of entities show anomalies under TARP, that amount can have an impact potentially in the billions of taxpayer dollars in waste fraud or abuse.

In the additional charts that I have provided (Slides 5-8), you can see that there are many different data, visualizations and methodologies, to capture, collect, manage, maintain and display data. The key to obtaining transparency is in the integration of the disparate sources and the analysis of the aggregate data to provide answers to key questions. This process allows for the **transformation of data into information.**

The solution to TARP transparency is the development and use of the system as defined in HR 1242, designed to take many forms of regulatory, public and privately available data and transform it into information that can be analyzed to identify anomalies in reporting, as well as potentially undesirable transactions. The system also needs to track the interactions between individuals and institutions that may either represent potential conflicts of interest or the potential for misuse of funds.

As this hearing will demonstrate, all that has been presented in my testimony can be done today.

Thank you Mr. Chairman, Ranking Member Biggert and members of the Committee for your time and attention to our presentation.

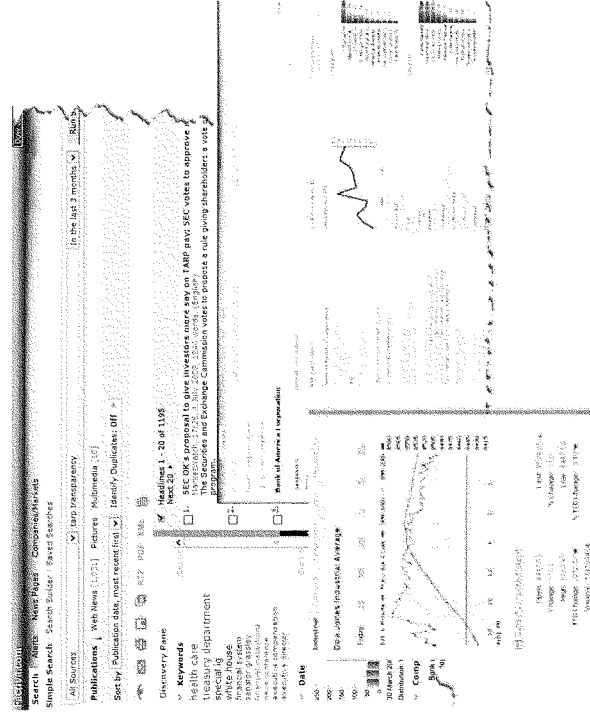


TARP Transparency

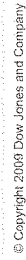
Steve Horne
VP Master Data Management and Integration Services
Dow Jones Enterprise Media Group

High-Volume Data Expertise

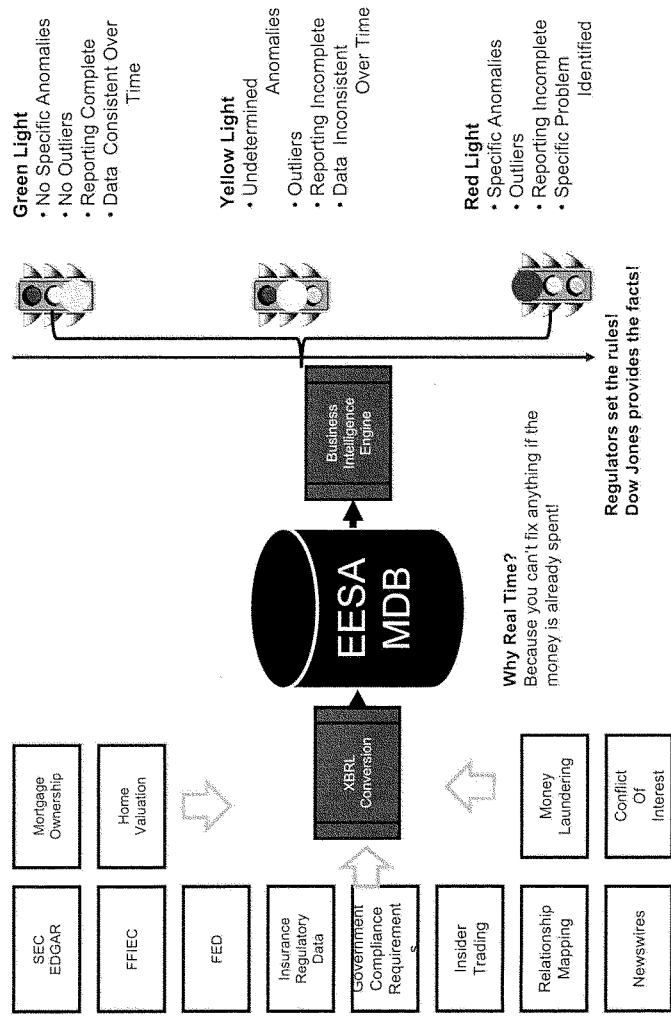
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- **45+ million records** of companies and executives maintained and updated
- **130,000+ financial and market indexes** constantly recalculated and published

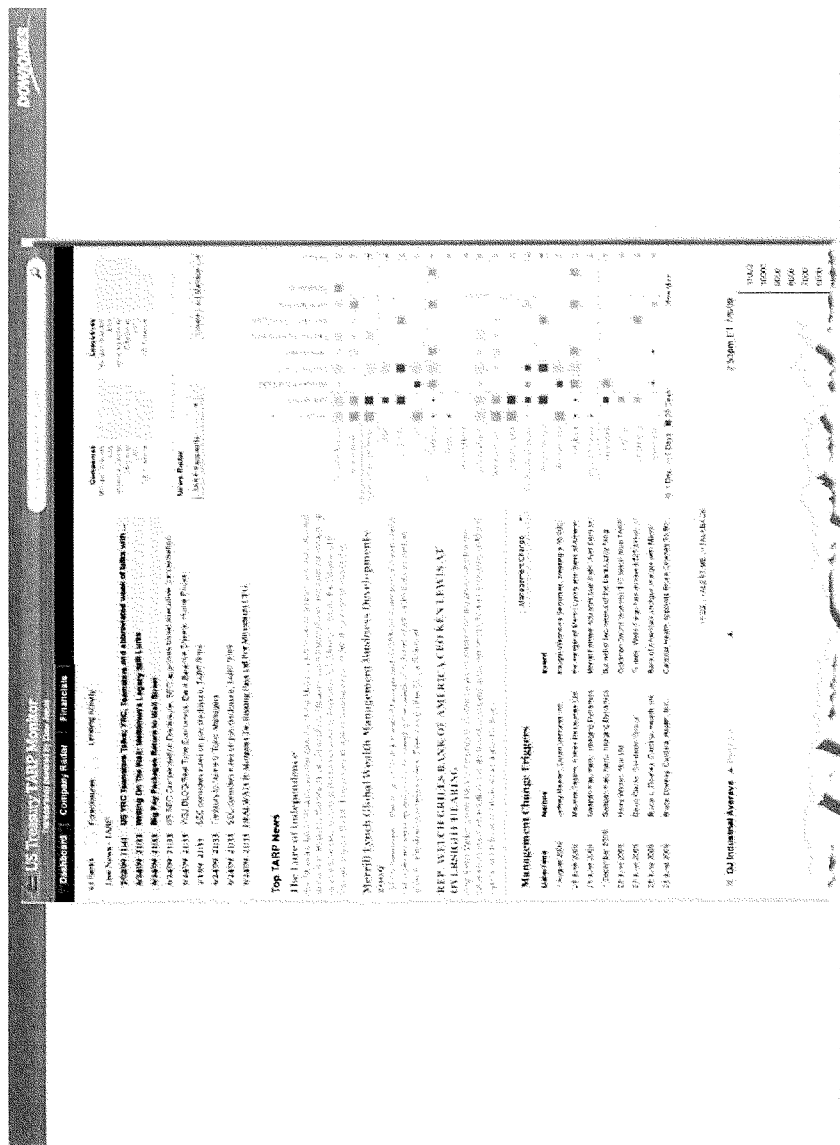


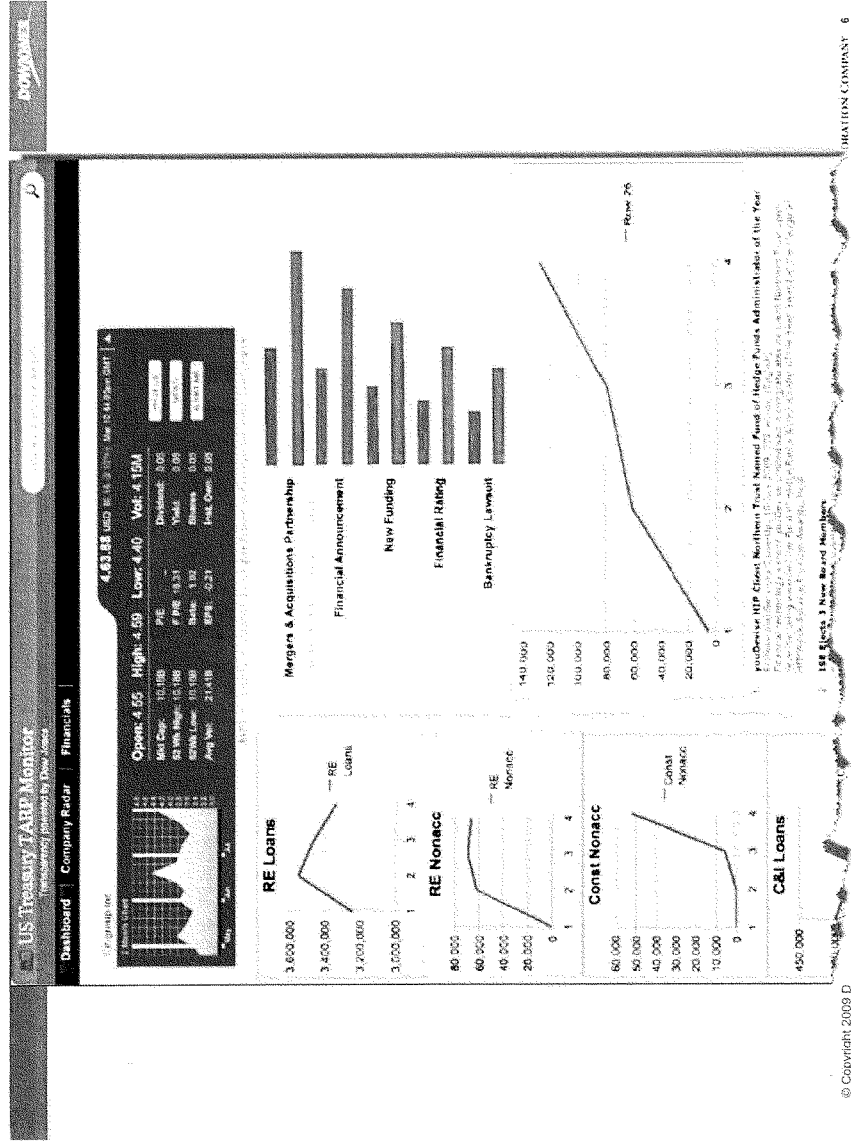
- **Analyze and visualize** large amounts of data
- **Harmonize 1,000+** diverse content formats
- **Find links and relationships** with comprehensive metadata processes
 - Part of speech tagging
 - Entity extraction
 - Rules-based coding
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Written Testimony
Thomas Kimner
Risk Manager, SAS Americas' Risk Practice
September 17, 2009
Before the House Financial Services Subcommittee on
Oversight and Investigations
Hearing on "Technology to Improve TARP and Financial Oversight"

Chairman Moore, Representative Biggert, members of the Subcommittee, I appreciate the opportunity to appear before you today to speak about how technology might improve oversight. By way of background, SAS is the largest independent software analytics provider in the world, with 11,000 employees globally. We help our customers integrate data from multiple sources and, using a variety of proven analytical techniques, help them make sense of that data. By providing sophisticated tools for analyzing information, we help our customers answer three fundamental questions: what happened, why it happened, and what might happen next. To illustrate with a more concrete example, think of that telephone call you might have recently received asking to validate a particular transaction on your credit card. Analytical software such as that offered by SAS, working behind the scenes, "flagged" that transaction, either for the bank or the credit card company, as being outside your normal spending pattern.

SAS software has been used to provide data management and analytic solutions within the federal government since SAS was founded in 1976. SAS has also been working with financial institutions for more than 30 years. Currently, more than 3,100 global financial institutions use our technology to help with activities such as fraud detection, risk management, regulatory compliance, and data integration. We are recognized by independent third parties such as Chartis, IDC, and Gartner as a leader in a number of market segments, including advanced analytics, credit risk management, and operational risk management.

Given the breadth of the hearing title, there are many issues that we could discuss, but I will focus my comments on a few basic themes:

1. The role of the federal government in the financial markets is evolving. As markets become more intertwined, complex, and hurried, regulators will need to get more sophisticated to remain current with market forces and how they approach their mission.
2. The use of powerful technological tools will become increasingly important. Technology can also play a powerful role in assessing the performance of specific programs, but more can be done by both Congress and the regulators to define objectives upfront. While sophisticated tools exist, the need to effectively gather and analyze data is part of the base foundation required for oversight.
3. Risk and risk management techniques have not been universally understood. Risk management capabilities must be improved by bringing together both the "art" and the "science" necessary to effectively manage risk. Technology can bring more "science" to risk management, but there is also a need to have sound policies, practices, judgment, and accountability in place to address the "art" of effective risk management.

Complexity and Sophistication in the Regulated Environment

It probably goes without saying, but it has been a number of years since Congress last revisited the nation's financial regulatory structure. Since Gramm-Leach-Bliley was enacted, our markets have become both more global and more interrelated. We have a whole new set of financial instruments that did not exist previously. These instruments, including a variety of derivatives, Collateral Debt Obligations, Mortgage-Backed Securities etc., are highly complex and/or are based on other highly complex instruments. Our financial institutions themselves have become much more complicated, particularly as they begin to enter lines of business and sectors that they were not in previously. For example, we now have investment banks that are bank holding companies such as JP Morgan Chase, and we have traditional bank holding companies that are now in the investment banking business, such as Bank of America with its purchase of Merrill Lynch. As a result, many of these organizations are now facing regulators and regulatory objectives and compliance issues that are new to them. In addition, it is no secret to this Committee that we are seeing growing concentrations of risk in the marketplace in fewer organizations.

In short, managing these entities and their portfolios of investments and enterprises is, in this 21st century, virtually impossible without embracing technology. While it may be axiomatic that the financial sector may need more technology, regulators will also need better access to information to effectively understand what is happening in individual financial institutions and across the marketplace.

Powerful Technologies Exist to Enhance Oversight and Risk Management

At SAS, we recommend that our financial institution customers approach risk management comprehensively, by deploying tools that address market risk, credit risk, asset and liability management, and operational risk. These technological tools enable users to:

- Value instruments in their portfolios using third-party libraries or user-defined functions;
- Perform Value at Risk and stress test analysis using standard and advanced methods;
- Assess the rating of their credit portfolios and calculate advanced credit portfolio and counterparty exposure analytics, including netting, collateral, and margining;
- Perform integrated asset and liability risk management and stress testing, taking into account other risks;
- Assess firm-wide risks using economic capital, correlated aggregations, bottom-up correlated risk drivers methodology, or a combination thereof;
- Perform fair value calculations, funds transfer pricing, risk-adjusted transfer pricing and RAROC calculations;
- Perform portfolio optimizations—risk return optimization, hedge optimization and cash flow replication optimization; and
- Perform model back-testing and scenario testing of models.

These same technologies should be used by the financial regulators. These tools provide not just better insights into what is happening within a financial organization, but could provide a comprehensive assessment of that organization. And, having access to these tools will significantly advance oversight by providing a more analytic approach. The tools provide the “science”, although they still require judgment to apply and analyze the resulting information.

Let me spend a few minutes highlighting a few critical technological tools that may prove valuable for oversight: stress testing, counterparty credit risk, and performance measurement.

Stress testing

Financial institutions have been doing stress testing for some time now. Traditionally, the stress tests have been conducted over single product lines—say, within a mortgage line, or credit card line. There has been limited “cross firm scenario” testing, or bringing some or all of the portfolios together to test more broadly. Because these products typically are managed individually, the “risk assumptions” may differ by product line. Changes in interest rates or unemployment rates affect these product lines differently, and need to be adjusted accordingly. This has been difficult to do historically because the process for stress testing has been, and largely still is, manual and highly labor intensive. Additionally, the regulators themselves have not typically prescribed scenarios for stress testing, but have instead worked individually with financial institutions on the stress test process.

The financial crisis has revealed several gaps and weaknesses in many organizational aspects of stress testing programs. Before the crisis, as mentioned, stress testing was performed mainly as an isolated exercise by the risk function within a bank and results were manually reported to regulators, often with each bank developing its own stress test criteria. Differing stress events and assumptions are frequently used in each model so outputs cannot be easily aggregated into a meaningful, combined result. Results of each model are reviewed independently, making comparison across risk types or assets impossible. Consolidated reporting and the infrastructure required to do so have also been limited, highlighting the need for improved reporting capacity or additional resources to support the current process.

This year, Treasury asked 19 of the country’s largest banks to undergo stress testing, and established the scenarios under which the banks should test. (The program was formally called the “Supervisory Capital Assessment” Program.) The purpose for the tests was to help restore confidence in the financial markets by understanding which banks were healthy and which banks might need more support. The Supervisory Capital Assessment Program involved designing a valid and meaningful stress test, sending a regulatory letter mandating that banks perform the tests, compiling results, comparing bank submissions, adjusting values, and interpreting the findings—a process that took 3-4 months.

Without commenting on the results of the tests, there are several procedural issues worth noting. First, to comply, the financial institutions had to develop a one-time, manual process. In fact, it took many people within the banks having many conversations with the regulators to clarify what was being requested, and many hours to translate that into a model. It took the banks a substantial amount of time to develop and complete the end-to-end process, which will not be easily replicated. While the banks met the deadline, the information generated cannot be easily extended (i.e., used for other purposes, such as sensitivity analysis), automated or repeated.

Second, the stress test conditions may not have gone far enough in all cases nor covered the right factors. For example, banks were asked only to test for two primary scenarios. Other scenarios and other factors involving liquidity, cost of capital, and the economy should have probably been considered as well.

Third, the results that were transmitted to the regulators most likely were transmitted back using spreadsheets. While spreadsheets can be used to derive some limited analytical information, the regulators needed to dedicate substantial internal resources to process and analyze the results.

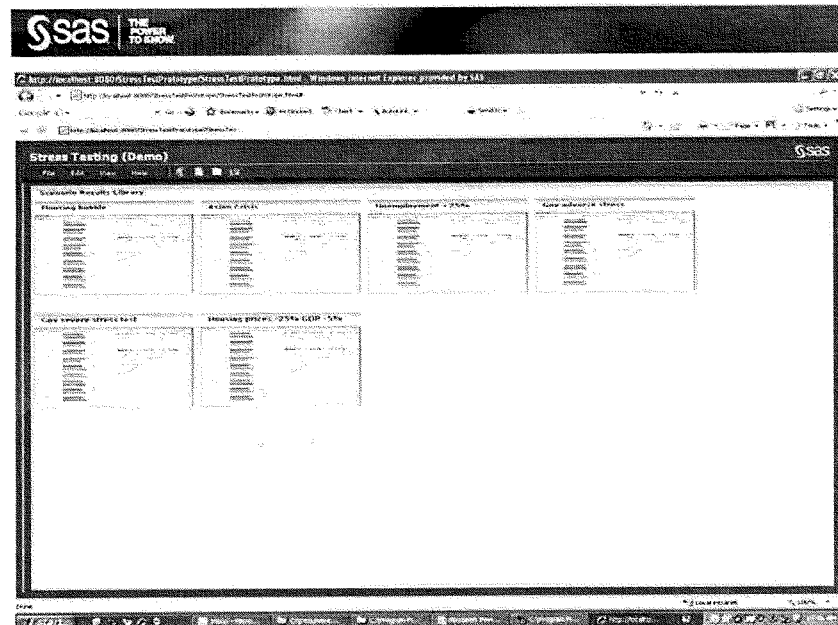
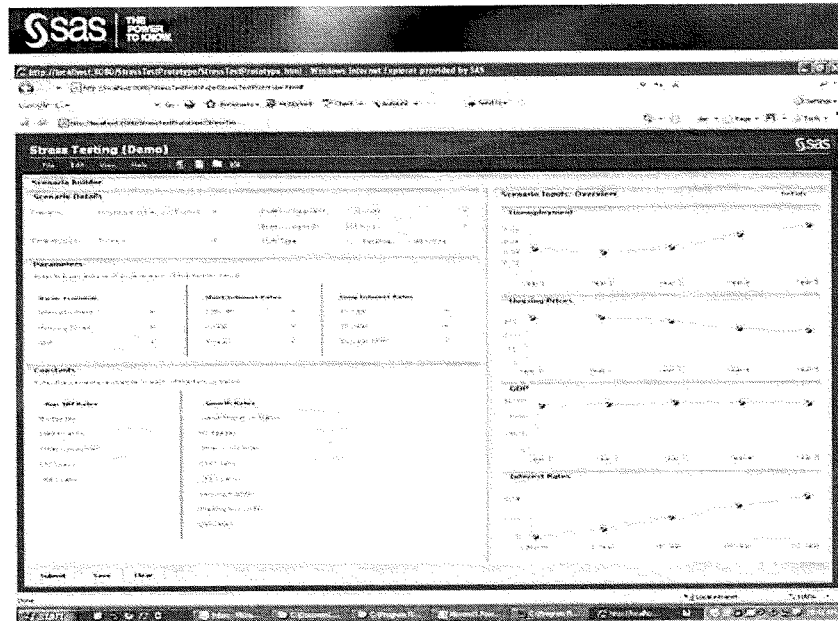
Finally, individual banks had a great deal of flexibility in interpreting and applying the stress test. There was great latitude in how instruments were treated and what types of assumptions could be made. This creates a potential issue because the perception, and perhaps the reality, is that different banks received different treatment based on varying interpretations of different results.

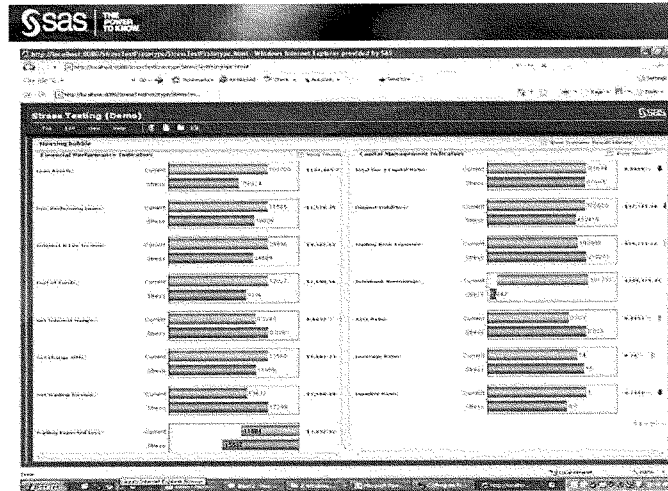
Having clear regulatory standards for stress tests and data exchange would help align asset classes and risk-measurement methodologies across the industry for use within banks, and between the banks and regulators. Setting industry standards for stress testing would help remove subjectivity from asset valuation and would provide a consistent risk calculation methodology.

To build an effective industry-standard stress capability, coverage of all assets within banks will be needed. We can look to the Bank Call Report (FFIEC 041) as an example of standardization. This formatted report is used to collect all positions in an equivalent manner for all banks. Using the report categories as a baseline of positions establishes the universe of asset classes. Consistency is critical. Building standardized risk and valuation calculations off of the individual bank position data ensures a consistent foundation for calculations. Setting industry standards for calculations will help remove subjectivity from valuation and provide guidance for functionality.

With an increased commitment to stress testing, there is also an increased need to improve flexibility and capacity for regulatory supervision around stress testing. Establishing a standard Supervisory Capital Assessment framework would reduce valuation subjectivity. Building this capacity ahead of deep investment within each of the banks would dramatically reduce the cost of compliance, and banks as well as regulators would receive the benefits afforded from best practices and from access to shared research, expertise, and learning. In fact, we expect there will be additional stress tests, and other factors considered. Unless the banks invest in additional technology to automate the process, such future requests will again be one-off exercises that could be quite debilitating to the banks, and of marginal relevance to the regulators. But, the issue is not simply to automate the process from the banks' perspective: the regulators need the same sort of analytical tools to better analyze the information they are receiving.

As mentioned previously, technology can be of enormous assistance to both the banks and the regulators in this process. Stress testing software gives financial institutions the capability to bring together millions of instruments, the ability to stress across product lines, and to adjust for different econometric and market factors as appropriate. As important, it gives the banks the ability to objectively replicate their results, and have confidence that their results are consistent and accurate. Such software has the ability to produce meaningful information such as illustrated in the following inserts:





Counterparty Credit Risk

As you know, counterparty risk is the risk that another party to a transaction will default. How well one can “hedge” against the risk, in part, depends on the transparency of the other party. Consequently, there are those who assert that one of the issues with credit default swaps was the complete lack of transparency as to who the other parties to the transaction were, and thus no meaningful assessment as to risk could be made. Any time the government lends or guarantees funding, it encounters counterparty credit risk. Investors, for example, by investing in MBS pools or complex securities, take on counterparty credit risk. To illustrate, the Pension Benefit Guarantee Corporation takes on, albeit involuntarily, counterparty credit risk when it guarantees a pension plan.

Many of these investments come with credit ratings assigned to them by credit ratings agencies. Like private investors, government “investors” have, in the past, taken these ratings at face value, without attempting to examine the assumptions underlying the ratings. For example, certain AAA rated investments may well have had loans in the investment pool with a 50 percent probability of default. However, it is most likely that an investor in such a pool looked at the AAA rating assigned, without exploring the underlying probabilities of default. If they had, they may have concluded that such an investment was something less than AAA rated.

In developing the ratings, the agencies had to analyze a set of information. The issue for many investors, whether private or governmental, is that they have not historically conducted their own analysis of that data. Technology gives investors the ability to run independent analyses to test underlying assumptions and make their own conclusions regarding the risk presented by the transaction. From a regulatory perspective, having similar technologies enables each regulatory body to not only independently validate the status of investments, but to make better decisions about the level of capital that needs to be reserved or withheld in light of the independent risk assessment. It is a fairly simple matter to encourage any governmental body that makes loans or guarantees to have

similar technology. Running the independent analyses, however, will require some type of information that ranks or rates the potential exposure of investment and counterparties.

Performance Management

One advanced capability of growing importance is performance management. For SAS, performance management is the process of using technology to ensure that a project's goals and objectives are fully aligned with the resources and activities needed to achieve those goals. In other words, it is necessary to understand the cause and effect relationships between the strategy, activities, and resources of a project. Software tools can help project managers and senior officials within an agency understand whether the right activities are being pursued with the right resources to obtain stated objectives. Conversely, technology can highlight activities that are not useful or resources not contributing to successful completion so that decision makers can modify or even terminate the project. More important, software can help managers begin to run "what if" scenarios. For example, what happens if a disaster relief agency dedicates more people to grants management? Does that, in fact, contribute to improved grants management, and at what overall cost to the organization? Or, what is the impact on the mortgage market of injecting billions of dollars into the financial sector? How can you measure that effectiveness, or understand which activities are meaningfully contributing? Performance management software provides immediate answers to these questions and provides insight into those actions and resources that have a causal and critical relationship to the overall mission. It also provides the Administrative branch with the ability to answer oversight questions, and to do so quickly and rationally.

The challenge that we see, and see increasingly with many of the "stability" initiatives that have been undertaken in the last year, is a lack of clarity or delineation as to what the programs are actually trying to accomplish. TARP has added challenges because the objectives and activities have changed over time, and have changed dramatically from what was contemplated in the original Emergency Economic Stabilization Act. Without a clear understanding of the problem, or the objectives, or even the goals, it is virtually impossible to assess whether the activities have been effective or resources used wisely; the application of technology is no substitute for clarity. Even with clear goals, Congress needs to start asking the questions: "has this project been effective?" or, "are we measuring the right things, given what our explicit objectives were?" Performance management software will give any regulator the ability to answer those questions objectively. And, it should give Congress more confidence in the answers it receives to its tough oversight questions.

The Importance of Data

Software tools and technologies, while highly useful and necessary for effective risk management and oversight, have a significant dependency on data – both its availability and its accuracy. Effective data integration and information management are critical elements to building a solid regulatory foundation that enables agencies to draw appropriate conclusions about risk. To this point, let me set out the following scenario:

Scores of people wrote to the SEC using many different mechanisms, raising questions about the potential that Bernie Madoff was not operating a legitimate trading operation. Many people, in many different offices and locations of the SEC, had bits and pieces of information and tips about the scheme, yet no one was able to put the entire scheme together until it was much too late.

I raise this scenario to make several points. The first is that the financial regulatory agencies have data. In fact, they are probably drowning in data. The issue is what to do with that data. In the SEC scenario, decision makers were not able to put all the data together to get an accurate picture of what was

occurring. Without a single and consistent view of what is occurring within an organization, no financial regulator will be able to fully understand the challenges and problems that it may be confronting. Without that complete understanding, there is no way a regulator is going to make an informed decision as to the best actions to take under the circumstances.

By using data integration technologies, an agency's internal information sharing capabilities can be improved. These technologies are equally important at improving the information sharing abilities between and among federal financial regulators. Without better means of sharing information among the regulatory community, the actual results of the regulatory structure will probably not meet expectations. Solving the technological issue of how to share data is the easy part of the question. The harder parts involve convincing regulators to overcome territorial concerns. Technology can help ease some of these issues through things such as audit trails. These audit trails can show who accessed the data, when, and how it might have been altered. However, technology cannot resolve the cultural issues that prevent or discourage information sharing among divisions or among agencies. Those cultural boundaries have to be broken by dedicated, outspoken leadership from the regulatory organizations. We are encouraged, for example, by the recent "harmonization roundtables" held by the CFTC and the SEC, but other efforts will be needed.

Data gathering and integration are thus foundational technology steps. Once the appropriate data is integrated, the agencies can then apply advanced analytical capabilities to understand what is important from that data. Advanced analytics provide insights into trends and patterns, and can be applied to provide information in seconds, not days, weeks, or even the months that it can often take some regulators to generate information. In the SEC example, analytics could have been applied to validate or debunk alleged trading patterns or to discern potential frauds.

Risk Management is both Art and Science

Risk, quite simply, is the uncertainty of an outcome. Dedicated risk management, a growing corporate practice, is proactively managing for the uncertainty. For financial institutions, risk management is determining what level of risk an institution is willing to absorb, and then managing the business (e.g., selecting which investments to make, which assets or liabilities to purchase, what procedures and policies should be put in place) according to that risk tolerance. On a macro level, risk management should involve a review as to whether individual financial institutions are adhering to their own frameworks, as well as making decisions regarding what is an acceptable amount of risk in the marketplace as a whole. For SAS, good risk management is about providing a framework and technologies to be able to manage the exposure based on risk criteria that an individual bank deems appropriate for itself. Regulators should have similar capabilities to make independent assessments of the risk exposure of that bank and all banks given their charter to protect entire market.

In many companies, a dedicated risk management function is a fairly recent development for US financial institutions. As such, there is wide divergence among institutions as to what constitutes good risk management. Historically, regulators have approached their job as applying a checklist of conditions to their regulated entities, with little real understanding of what constitutes relevant risk management—what one might call a "rubber stamp" approach. It is often perceived that if the institutions could show they had certain minimum techniques in place, they were credited with having "risk management" practices. There was little required to prove that the practices were appropriate for the activities and actual risks being undertaken or that they were even well-understood by those undertaking them. Stated another way, there was little in the way of due diligence or otherwise trying to ascertain what was behind the numbers. Similarly, there is very little consistency among organizations, or standard inputs. We submit that historically, regulatory oversight was more art than science, perhaps performed by those not always fully qualified to assess risk strategies. We are not

suggesting everyone should use SAS' models or technology, but rather, that there should be a common understanding within the industry about the kinds of actions that should be considered.

Let me set out a second scenario:

In recent years, US financial regulators relaxed U.S. capital rules. In doing so, many companies that now no longer exist (Bear Stearns, Lehman Brothers to name two), had leverage ratios of 33 to 1. In some cases, debts were 60 times the amount of assets. By contrast, Canadian banking regulators set leverage ratios at 20 to 1, with the result that Canadian banks have fared better than their US counterparts. US regulators were not able to accurately predict the effect of their policies. Had they had the right technology in place, they could have tested for various scenarios in which the 60 to 1 debt ratio would have been shown to be a distinct possibility. With that insight, regulators would have been in a position to adjust or modify policy proposals to ameliorate some of the more extreme potential consequences.

Technology, if utilized properly, could have revealed the potential consequences of changing regulatory requirements. However, part of the issue is whether proper judgment was used in making the changes. As such, while technology, or "science" can provide insights, it needs to be combined with judgment to have the best effect in risk management.

We draw several other observations from our experience. First, it is crucial that we develop a common framework for what is good risk management. By this we do not mean to prescribe the exact practices or precise "risk appetites" that financial institutions should undertake or have. Rather, we mean that given a set of risk appetites, what acceptable regulatory practices should be in place to mitigate those risks. Under this scenario, and assuming all banks had equally strong policies and procedures in place, banks engaged in less risky behavior would need less rigorous controls in place because their exposure to uncertainty from their financial investments is less. On the other hand, those "cowboys and gunslingers" that have a larger appetite for riskier transactions would need more vigilant risk controls.

Second, all entities need to do a better job analyzing the risk inherent in each and every transaction, in each portfolio, line of business, and business unit. These analyses need to be applied across the entire enterprise and not just in individual business units. This will help account for concentration risks and exposures that are crossed and/or embedded in different areas, which may extend beyond individual business unit tolerances or limits. Applying integrated technology across an organization, or even across organizations, can easily help to identify these limits and set alerts when these limits are reached or exceeded. The technology acts much like a thermostat on the nation's economic health.

We are beginning to see the regulators move away from the historical "rubber stamp" approach, to undertaking more due diligence and improving transparency. These efforts are taking the form of having regulators and auditors actually look at procedures and policies in place and asking tough questions about whether such policies and procedures are being followed and how consistently. This is a positive development, and a direction that should be encouraged.

Final Thoughts

SAS' catch phrase is "The Power to Know." We believe that data and the types of technological tools described above, if properly used, are powerful enablers. They allow decision makers to draw mathematically significant insights about their actions and, consequently, to make better, informed decisions. As decision makers, regulators—whether financial or oriented to other sectors—would equally benefit from analytical solutions such as those SAS provides. And, as our markets and financial products become increasingly complicated and interrelated, technology must be incorporated to assist in understanding and monitoring what is happening.

Technology, by itself, is not sufficient for sound risk management or proper regulatory oversight. Policies and procedures are a critical leg of this “three-legged” stool. There are many policy questions, which include:

- What policies are in place regarding the credit space?
- What policies are in place to ensure that sound underwriting practices are being followed?
- What types of concentrations in individual and geographic markets are developing?
- Are there policies and procedures in place regarding decision and commitment authority, reflecting concerns that no individual be allowed to over commit any individual financial institution (a lesson that was learned the hard way in Bearings Bank)?
- Are there appropriate audit, accountability and governance practices in place?

These are the types of questions that regulators should be asking and have begun to ask.

What might be receiving the least amount of attention is whether our regulators have sufficient resources and people in place to conduct good financial oversight. To understand the technology products, the information they produce, and to correctly interpret the results of audits or investigations requires specific skills and knowledge. Pockets of analytical expertise currently exist in the government, but these pockets are spread thin. We are concerned that our federal workforce is aging and fewer people are deciding to enter into public service. Who, then, will have the requisite knowledge and expertise to use these highly sophisticated resources or to make sense of them? In short, technology can unlock vital insights. But whether these insights are understood or acted upon depends on the acumen and expertise of those reviewing the results. Without the right people possessing the right skills in the right jobs, technology will not provide improvements in oversight.

We appreciate the opportunity appear before you today and look forward to your questions.

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**Statement of Dilip Krishna,
Of Teradata Corporation
Testimony Before the
House Financial Services
Subcommittee on Oversight & Investigations**

On

September 17, 2009

In

Rayburn House Office Building, Room 2128

At

10:00 A.M.

A Hearing entitled:

“Utilizing Technology to improve TARP and Financial Oversight”

Chairman Moore, Ranking Member Biggert, and members of the Subcommittee, my name is Dilip Krishna representing Teradata Corporation. Thank you for the invitation to offer testimony today before your Subcommittee.

Before I begin, I would like to also thank Congresswoman Maloney for her leadership in introducing H.R 1242, a bill to amend the Emergency Economic Stabilization Act of 2008 to provide for additional monitoring and accountability of the TARP. Teradata Corporation endorses H.R. 1242 without reservation or qualification and encourages the Congress to pass this legislation as expeditiously as possible.

Teradata, the company I represent, is among the world’s largest companies focused solely on data analytics and data warehousing. Our technology allows business and government to leverage detail-level data for both tactical decision making and strategic insight, to recognize emerging trends and respond quickly. As an example, many of

Teradata's customers apply data warehousing techniques to detect and respond in seconds to fraudulent activity, allowing them to save millions of dollars per year.

Our government customers include the Centers for Medicare and Medicaid Services, the U.S. Air Force, the US Transportation Command, the US Postal Service, the USDA Risk Management Agency and the States of California, Minnesota, New Jersey, Ohio, and Texas to name a few. Over 50% of the world's largest financial institutions use Teradata for strategic purposes including risk management, fraud detection and customer management. A Teradata database has been implemented in more than 900 major corporations in every business sector so that on any given business day in almost every industry throughout the world, well over a million users access a Teradata warehouse as they make decisions.

Teradata's Position – Using Technology for Financial Oversight

Given the economic crisis that we have experienced in the past two years, the problem of comprehensive governmental oversight has become immensely more urgent and important. If the experience of the last two years has taught us anything, it is that our financial institutions are a national asset – the mismanagement or abuse of which can lead to serious, long-term and detrimental effects to the well-being of every American. Through this experience, we have learned that money does indeed, make the world go around.

Thorough and effective oversight of the financial system is critical to our success. At the same time, we all want efficient government as well. And critically, we need to ensure that the system of oversight continues to allow the financial sector to provide the high level of innovation and leadership that has propelled the prosperity of our market-based system for over two centuries.

This is where information technology must take its place in the process. All around us, we see evidence that the proper use of technology can generate immensely valuable results while at the same time improving efficiency and reducing costs. Now is the time to apply technology to address this most important issue.

The good news is that a vast amount of work has already been done with technology in finance. Technology has advanced to the point where the oversight of large, complex financial enterprises is now feasible. In fact, large organizations around the globe routinely use technology for financial risk management. One of the key areas in this regard is in the management of risk data and analytics.

Use of Data and Analytics in Financial Institutions

Financial institutions have been using information technology to improve the efficiency of their operations for quite some time. Information technology makes it possible for

companies to collect, merge and analyze very large amounts of customer data in real time to better and more efficiently serve their customers, leading to competitive advantage. Technology has also made it possible for financial firms to manage their risks effectively while managing substantial growth and consolidation in their business lines. For example, banks are able to serve a significant growth in customers even as they keep a tight control on fraud through the use of advanced, real-time information technology that utilizes data related to current activity and provides insight into and comparisons with historic trends and behaviors. Other banks have developed systems that give them a view to their firm-wide risk exposure on a frequent basis.

It may well be asked why, with all these advanced systems, these financial institutions experienced such unprecedented losses during the economic crisis. The answer is simply that technology can only be useful if it is employed properly - it was not properly employed to deal with the types of toxic assets that caused these catastrophic losses.

Transparency and Financial Oversight

Transparency is the cornerstone of financial oversight. While it is not desirable for the public at large to have complete transparency into the operations of financial institutions, it is important that transparency is preserved for regulators charged with oversight responsibilities, without undermining consumer privacy. Put in the context of financial information, transparency can be understood as that quality that gives all stakeholders full confidence in the veracity of that information.

It is important to realize that trust lies at the heart of transparency. It is only in unusual circumstances, or at very high cost, that financial information can be *demonstrated* to be completely authentic. There are numerous areas where users of such information (e.g. shareholders, banking customers, regulators, etc.) simply have to believe that its preparers have performed according to expectations. While this may seem like a tall order, examples of relative transparency are all around us. Every day financial analysts and ordinary investors rely on financial reports issued by companies. An even more practical example is the implicit belief we all have that the account statements we receive from our bank accurately reflect the balance of all our transactions.

In these cases, transparency relies on at least two principles:

1. The goals of information disclosure are well understood: In the case of our bank accounts, we want to understand, in as timely a manner as possible, the accurate financial state of our accounts. In the case of financial reporting by companies, the goal is to give as full a picture of the company's performance as possible. In both cases, we understand what action (or non-action) is needed as a result of the information being timely and accurate.

2. The information assembly line is robust: Data needs to be complete and detailed while it is transformed into useful information as it moves from the transaction systems to the point of disclosure. Confidence in the reported information can only be gained when there is confidence in the robustness of the assembly line (for example, via knowledge that all changes during the process of creating the information are fully audited and controlled).

The following comments will focus on the subject of the information assembly line.

Information Needs of Financial Oversight

Financial oversight depends critically on a deep understanding of the situation at hand at all times. There are two broad aspects to be addressed – monitoring and predictive analysis.

First, there must be an efficient system for monitoring known risks. If the monitoring system does identify warnings, there must be an efficient, quick way to analyze the situation to get to the root cause of the problem. But just monitoring known risks is not enough. It is critical for an oversight mechanism to also constantly be on the lookout, via predictive analysis, for risks that are not known. A robust and efficient information assembly line is critical to both functions.

A monitoring system expects to see the same data within pre-defined periods of time such as every day, every month or every quarter. The mathematical models that are run on this data must necessarily be the same every period, so that periodic comparisons can be done. Unexpected deviations in the output of these models act as warning indicators. Once warnings are seen the system must allow the ability for rapid, flexible research into the root cause of the problem so proactive steps may be taken. Data used must be “industrial-strength” – it must be prepared to standards of high-quality and timeliness.

The parallel track of predictive risk analysis can be likened to scientific research, which requires a system with immense flexibility. Economists and regulators looking for new problems use a “test-and-learn” process. That is to say, they first have a hunch of what can go wrong. Then they use information to either confirm or invalidate their hypothesis. The information system must therefore be able to answer their questions “at the speed of thought”. Furthermore, the system must serve up this information *without having a pre-conceived notion of what they will want to know about*. The system must also be able to incorporate information from new sources on demand.

The two drivers of oversight therefore have conflicting needs – industrial-strength robustness vs. lab-environment flexibility. What is exciting about today’s information technology capabilities is that both of these needs are being satisfied by the same analytic system, to at once support a complete, robust oversight environment that is

also cost-effective. For example, some leading financial companies are using such systems to stop fraud in real-time (via monitoring) as well as enabling users (via predictive analysis) to develop newer, more effective models to stop the next-generation of fraudsters, both tasks being performed *on the same system*.

The Information Assembly Line

Information is knowledge derived from raw data. Data collected from across the financial sector for the purposes of oversight must be interpreted before it is useful. A series of steps is required to cleanse data before it can be used and interpreted. It is only after data is conformed in this manner that it can be analyzed in ways consistent with the goals of financial oversight.

The process is similar to that within a factory assembly line. The raw material is data that is collected from across the financial landscape. This includes not only information from financial firms but also relevant market and statistical data from a number of sources. Data then needs to be cleansed and otherwise modified so that data from all sources are brought into parity. This can be likened to a manufacturing process where raw material is processed to deliver finished goods – in this case the output is information. One departure from this analogy is that the “raw material” of input data is still available after processing, allowing one to isolate inputs to further confirm hypotheses.

The finished goods must be stored in a warehouse before being distributed – the Data Warehouse. The data warehouse then serves to distribute information both for monitoring and predictive analysis. Statistical analysis software, for example, is used to reduce large amounts of data to easily interpretable figures. Financial models are being developed and run periodically against data in the warehouse – the results of these models are critical to the monitoring process and, once validated, can eventually become part of the monitoring system. Finally, information must be distributed to regulatory authorities and other information consumers. This specialty is called Data Visualization. Data is aggregated and presented in ways that can bring to life trends and patterns so they are easily understood. A key issue in data distribution is that of data privacy, which has been a focus of effort for most firms in the industry.

This data assembly line just described is becoming accepted as a common way of creating processed information from multiple sources of data. Large technology firms from across the industry espouse essentially the same vision, and their customers in every industry are responding by implementing this vision in their enterprises.

Leveraging Information Technology for Financial Oversight

Chairman Moore and members of the Subcommittee, this is very good news for consumers of such technology. Having a preponderance of firms marching towards a

common vision results in various parts of this assembly line being perfected at the same time. For example, there are a number of high-performance offerings that deal with the quality of raw data. Technology for data warehousing has developed to the extent that it is not uncommon to see systems where firms are able to react in seconds to customer activity, yielding huge returns on the investment in technology. Finally, analytics and visualization technologies have also advanced significantly so that complex calculations can be completed and presented extremely rapidly for quick response. In line with what may be expected of technology advances in general, not only are the capabilities improving at a tremendous rate, but costs are also dropping precipitously. Simply put, the time has never been better for leveraging information technology to create a strong system of financial oversight – it is proven and successful and can be implemented today.

Again, thank you for the opportunity to testify this morning. I look forward to answering your questions.

Testimony of
Susan Marlow
on behalf of
MAPPS
Before the
Subcommittee on Oversight and Investigations
House Committee on Financial Services
U.S. House of Representatives

Hearing on
"Utilizing Technology to Improve TARP and Financial Oversight"
September 17, 2009

Mr. Chairman, members of the Subcommittee, it is my privilege to testify before the subcommittee on behalf of MAPPS (www.mapps.org), the national association of more than 160 private geospatial firms throughout the United States and around the globe. I have the pleasure of serving as chair of the MAPPS Cadastre Task Force and I was a member of the National Research Council/National Academy of Sciences committee on Land Parcel Databases that produced the report, *National Land Parcel Data: A Vision for the Future*. I am also the President of Smart Data Strategies, Inc. (SDS), a woman owned business in Franklin, TN, established in 1989. SDS provides software and services for parcel systems, land inventories, and asset management.

There are countless reports detailing the devastating effects foreclosures have had on our society. Foreclosures not only have a national and international financial impact, but adversely affect neighborhoods and communities through a rise in crime, theft, and vandalism, blight, and unsafe health conditions. When homes are abandoned, an Urban Institute study shows there is a negative impact on school age children's behavior and social development such as the disruption of routines, changing schools, and an increase in dropout rates.

The right to private property ownership is an important characteristic of any free and democratic society; it's why it is part of what we call "the American Dream". The current mortgage crisis leaves no doubt that land ownership and the associated rights, interests, and value of property are fundamental to our entire socioeconomic system. Therefore, it is imperative that we utilize available technologies, such as parcel-based geospatial data and systems, to monitor and protect something so vital to our country's well being.

As the owner of a small geospatial business with many government clients, I have seen the geospatial market mature, both technologically and professionally. The introduction of Google Earth and Microsoft Virtual Earth and the disasters of 9/11 and Hurricane Katrina have all had a significant impact on the rapid adoption and application of location based technologies. The geospatial market is expanding into every area of business through the enhancement of visualization and analytical capabilities. The use of this decision support technology has been identified as critical to all levels of government. While significant milestones have been accomplished by Federal agencies in the adoption of this technology, the proper tools and data are still not implemented to monitor and track our greatest assets. By comparison, many industrialized nations throughout Europe, Asia, Africa, and Latin America already have a "cadastre" or national parcel database with many of them being funded by U.S. tax dollars through the World Bank and other multilateral institutions. The US has the intellectual capital and the technology necessary to create the most accurate geospatial database in the world by coordinating efforts and funding, establishing and implementing standards, and utilizing such data to address national issues.

When faced with a crisis it is important to look back, not to point fingers or play the blame game, but to determine how we got here, ascertain if it could have been prevented or minimized, and how we could learn

from it in order to recover and prevent future crisis. A study for Washington, DC's Department of Insurance, Securities, and Banking by the Center for Responsible Lending, the Urban Institute, The National Reinvestment Coalition, Capital Area Asset Builders, and The Reinvestment Fund did just that and discovered that if you have the right tools and the right data in place you could build predictive models using very basic statistical analysis that accurately forecast where foreclosure and delinquency hotspots are likely to occur, thus providing an early warning system.

The "right data" is the most important element in that statement. Today, many analysis and decisions are being made using the wrong level of geography. The Census tract data that is being used was created by forming blocks and tracts that were logical for counting people. They were divided by cultural features such as roads, creeks and natural boundaries. There was not a need to have very accurate block boundaries since they were just a representation for the purpose of grouping information about people. If you overlay the Census blocks on an accurate parcel layer you can quickly see that the Census blocks are off by as much as 150 feet or more. This puts individual parcels in the incorrect census block for analysis purposes.

The parcel layer is much more detailed and includes the information required for an early warning system. It contains information about the value, improvements, taxes, and something that none of the current mortgage datasets, including the Home Mortgage Disclosure Act (HMDA), maintain – the physical location of the property. The parcel layer is collected at a local level primarily for tax purposes which means that each local jurisdiction has the ability to define their own data standard based on their unique needs. There are some 3200 counties in the United States and as a result, when it comes to parcel data, there are 3200 plus puzzle pieces that don't quite fit together. However, with the proper coordination, they certainly could. While millions of dollars are spent on the creation and maintenance of this data at the local level, the investments are not being realized at the Federal level due to a lack of coordination.

For decades, numerous reports, analyses, and studies have recommended the use of parcel data at the national level and called for improved national coordination. Of particular note are the following studies:

The Need for a Multipurpose Cadastre (1980) recommended a nationwide land parcel system with strong coordination from the Federal government. It is astonishing to note that the National Research Council/National Academy of Sciences found that the technology at that time (1980) was adequate for the task, but major obstacles to its establishment are "organizational and institutional".

Toward a Coordinated Spatial Data Infrastructure for the Nation (1993) helped define the National Spatial Data Infrastructure (NSDI), established by President Clinton in Executive Order Executive Order 12906 and later reaffirmed by President Bush, which established seven framework layers of geospatial data for Federal investment -- geodetic control, parcels (cadastral), orthoimagery, elevation, hydrography, administrative units, and transportation. Sadly, now fifteen years later, not only is the NSDI not complete, but there is no record of how much progress has been made on any of the framework layers. Parcels have received the least attention at the Federal level.

Curbing Predatory Home Mortgage Lending (2000) in the report of the National Task Force on Predatory Lending chaired by Secretary Cuomo and Secretary Summers, it said "FHA will customize data from its Neighborhood Watch system to develop early warning indicators of emerging foreclosure 'Hot Zones' ... help local officials better assess real estate trends and spot possible patterns of appraisal abuse ... This public information will include performance data on individual appraisers generated by the Credit Watch for Appraisers system and posted on the HUD website." This was never done.

GIS for Housing and Urban Development (2003) conducted by the National Research Council found "The development of a parcel-level layer for metropolitan areas is particularly important to HUD, to the

communities HUD serves, and to national initiatives, including the NSDI", "PD&R (HUD Office of Policy Development and Research) should take the lead within HUD in efforts to integrate grantee and other data at different levels: parcel, neighborhood, municipality, school and school district, metropolitan area, state, and national" ... "HUD should promote the development of a parcel-level data layer and other urban framework layers to create a USDI as a component of the NSDI for housing and urban development" and "HUD should promote the development of a parcel-level data layer and other urban framework layers to create a USDI as a component of the NSDI for housing and urban development. The Federal government should make available resources commensurate with this task". None of this has been done.

National Land Parcel Data: A Vision for the future (2007) conducted by the National Research Council reviewed the 1980 report as well as the current status parcel data in the United States, concluding that a national property database is necessary, feasible, and affordable, and recommending several steps for implementation.

Land Parcel Data for the Mortgage Crisis: Results of the Stakeholders Meeting (2009) concluded that there are three key recommendations that could improve the ability to track and monitor the status and progress of mortgage and property value conditions in the U.S -- (1) Add the local parcel ID to the Home Mortgage Disclosure Act (HMDA) data, (2) Develop a parcel early warning system, (3) Complete the standardization and availability of parcel data nationwide.

There is increasing discussion in international political, financial and professional forums that the failure of the United States to utilize a national parcel system resulted in the lack of an early warning system that could have prevented the worldwide financial crisis. For example, the Hon. Gary Nairn, Australian MP and a professional surveyor, said, "The financial crisis is impacting worldwide ... it could have been avoided or at least better contained if the United States had a better land administration system that was truly spatially enabled." (*Coordinates Magazine* July 2009).

We have all seen the infamous John Snow maps plotting the incidence and location of cholera in London in 1854, just as we have recently seen in the newspapers or on television maps showing the spread of the H1N1 "swine" flu. A national parcel system can be a visualization and analytical tool so we can also see the geographic location, distribution and spatial relationships of foreclosed properties. As my chairman and colleague on the NRC panel, Dr. David Cowen has said, "The Centers for Disease Control (CDC) may not be able to prevent a hepatitis or salmonella outbreak, but the incident reports are essential to limiting the spread and controlling the progress. Similarly parcel data and its associated attributes if monitored could serve a similar function for monitoring the health of the economy. Detecting 'outbreaks' of foreclosures or under water mortgages could allow for early intervention."

MAPPS Recommendations:

On the topic of developing a parcel 'early warning system', I want to highlight a bill before the Financial Services Committee. On February 10, 2009, Representative Tim Ryan (D-OH), introduced H.R. 932 to authorize the HUD Secretary to make grants and offer technical assistance to local governments and others to design and implement innovative policies, programs, and projects that address widespread property vacancy and abandonment. Section 3 of the "Community Regeneration, Sustainability, and Innovation Act of 2009" allows grants for the development of data and information systems such as comprehensive real property systems, early warning systems, and vacant property inventory and tracking systems. MAPPS commends Mr. Ryan's foresight, but urges clarification on the use of geospatial technologies to enhance the goal of the legislation.

On the topic of the Troubled Assets Relief Program (TARP), I want to highlight another bill before the Financial Services Committee. On March 2, 2009, Representative Carolyn Maloney (D-NY) introduced H.R. 1242 to amend the Emergency Economic Stabilization Act of 2008 to provide for additional monitoring and

accountability of the Troubled Assets Relief Program. Section 1 of H.R. 1242 requires the Treasury Secretary to keep an updated database for oversight and inspection purposes so as to increase accountability and additional monitoring. The Secretary is then instructed to compare data from this database with data from other sources. The database is to serve as a repository for regulatory filings, among others. MAPPS respectfully urges that a geospatial component or geospatial reference be included to the database to help graphically detail where TARP expenditures have occurred or will occur. This alteration to the bill will greatly enhance the Secretary's ability to increase the monitoring and accountability of TARP funds.

On the topic of a National Land Parcel Database highlighted in the 2007 National Academy report, I want to highlight a bill, recommended by that report, pending before the Natural Resources Committee. On March 16, 2009 Representatives Ron Kind (D-WI) and Rob Bishop (R-UT) introduced H.R. 1520, the Federal Land Asset Inventory Reform (FLAIR) Act of 2009. This legislation called for the Federal government to act on the recommendations by the Government Accountability Office and the National Research Council to create an inventory of all Federally owned properties. The current status of existing inventories of Federal properties is known to be unacceptable. They are incomplete, outdated, and inaccurate thus resulting in excess and underutilized property, deteriorating buildings, and the continuation of costly accounting and leasing errors. MAPPS respectfully urges Congress to enact H.R. 1520 and encourages members to join as bipartisan cosponsors to the bill.

Conclusion:

Mr. Chairman, nearly 30 years of reports and research have called for the parcel layer, yet it remains unfunded and incomplete. The problem is not technical, it is political and institutional. While FedEx can track the location of millions of packages per day moving around the world, the Federal government does not track the location of land, and it is stationary. While the Federal government has identified numerous needs for parcel data such as efficient emergency preparedness and response, disease tracking, agricultural management and land use, community development and zoning, energy and resource development, asset monitoring and tracking, there still is only sporadic use due to the lack of availability and accessibility of usable parcel related data as a result of failed coordination between local, state, Federal, and tribal agencies.

When one looks at the agenda for this Congress, including the Financial Services Committee, one sees an almost endless list of programs and national priorities that require geospatial data, including parcel data, that should be provided by the NSDI, but which cannot be implemented today because of the Federal government's failure. These include:

- Mortgage Crisis, Financial Reform
- Health Care Reform
- Climate Change and Cap & Trade
- Smart-Grid Energy
- Green Jobs
- Highways & Transportation
- Sustainable Development/High Performing Communities
- Emergency response & FEMA Flood Insurance and Flood Mapping Reform
- Homeland & National Security & DHS Reauthorization

Mr. Chairman, we commend you for your interest and leadership and we stand ready to work with Congress and the Executive Branch to better serve the geospatial needs of the American people in financial services oversight and a variety of other national needs and applications. The technology exists, a robust, qualified and competent private sector is in place, and the solutions are waiting to be implemented. What is lacking is demand-driven leadership from the Federal government.

Biography of Susan Marlow

Susan Marlow is Founder and Chief Executive Officer of Smart Data Strategies, Franklin, TN.



Ms. Marlow has successfully and personally managed hundreds of cadastral conversion projects in her career and has in-depth knowledge of the conversion and the software implementation process. She has been a leading advocate of the importance of the property layer as one of the NSDI foundation layers of information and involves herself in many movements to promote a unified local, state, and national property database sharing initiative. As an organization, Smart Data Strategies has touched more than fifteen percent of the nation's properties with either its conversion services or the implementation of the SDS DREAMaps™ software suite.

Ms. Marlow's professional activities include:

- Chairman, Transportation Research Board (TRB), Panel for Integrating Geospatial Technologies into the ROW Process
- Member, National Academy of Sciences Committee Land Parcel Databases: A National Vision
- Chairman, MAPPS Cadastre Task Force
- Member, MAPPS Legislative Affairs Committee
- Member of the Federal Geographic Data Committee (FGDC), Cadastral Sub-committee
- Chairman of the Board, Institute for GIS Studies (IGISS)
- Certified IAAO Instructor for "GIS for Assessors"
- URISA Instructor for "Introduction to GIS"
- Contributing Author to "IAAO/URISA GIS for Assessors"
- Chairman of the 1st Annual Integrating GIS and CAMA Conference

Member, International Association of Assessing Officials

A National Parcel Database

Monitoring, Predicting, and Protecting the American Dream

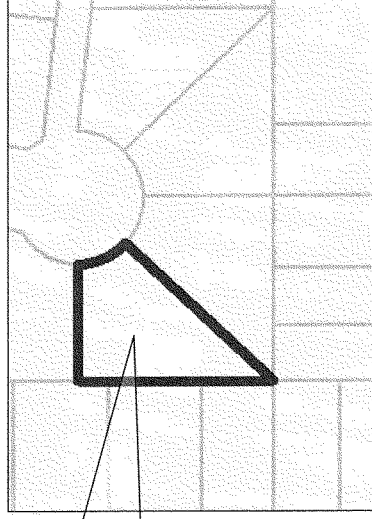
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Smart Data Strategies
Presentation for
The Federal Government

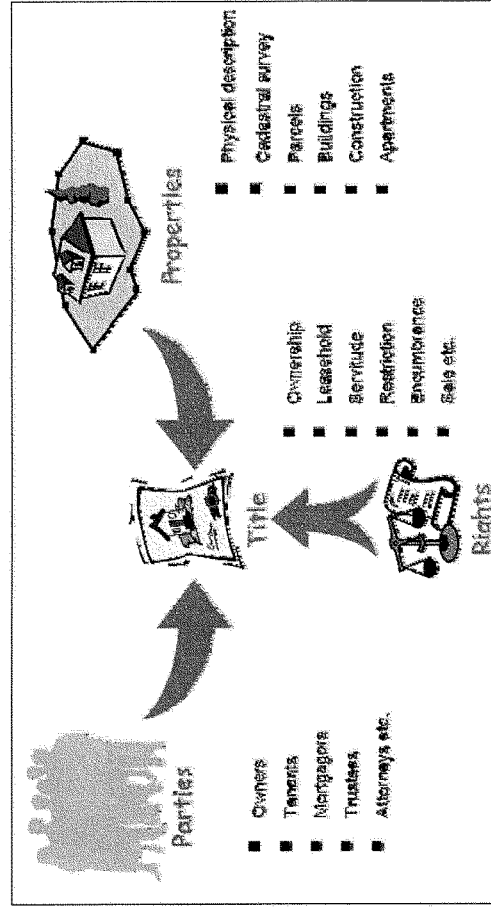
What is Parcel (Property) Data?

Parcel Data contains all of the information needed to describe the rights, interest, and value of real property. A Land Parcel Database (or Cadastre) is an inventory of parcels in a jurisdiction.

- Street address
- Owner information
- Sales price
- Appraised value
- Land value
- Improvements value
- Lot size
- Land Use
- Deeded acreage
- Property type
- Mortgage information
- Etc.



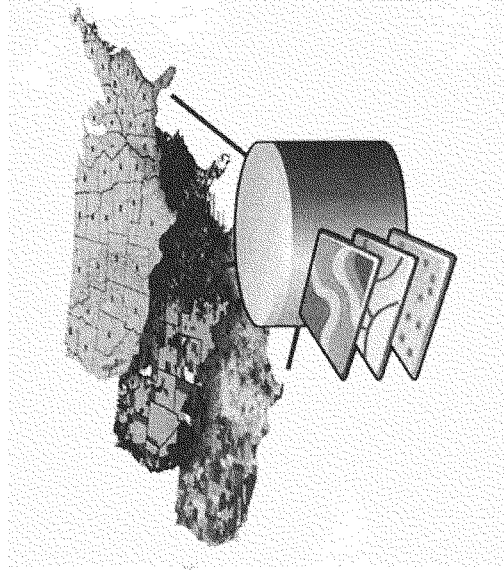
Land ownership is the foundation of the financial, legal, and real estate systems of our society



The current mortgage crisis makes this painfully obvious

The Power of The National Parcel Database

- Manage
- Monitor
- Predict
- Prevent



- **Analysis** – Set up national models and trend lines (home values compared with median income)
- **Identify** – Easily identify what areas are likely to be affected next (hot zones)
- **Act** – Predictions lead to early action which leads to prevention
- **Visualization** – Like the weather, if you monitor it, you can learn to predict it

Predict



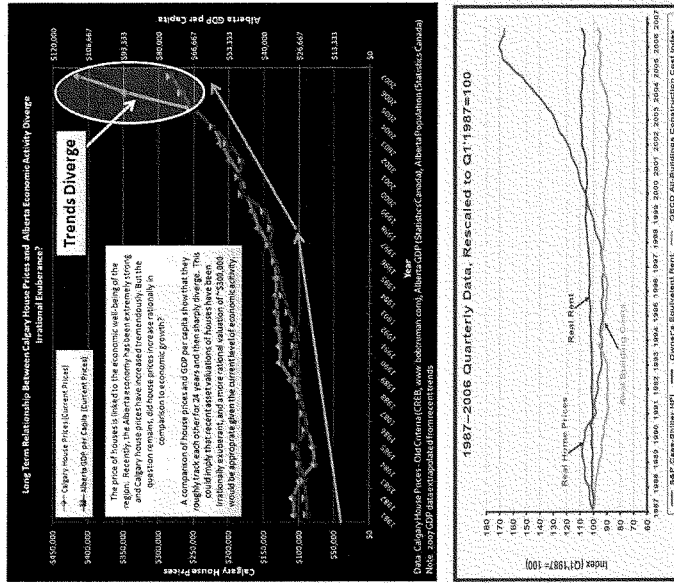
Actual changes in home values
November 2006 – August 2008 based on parcel data

Prevent

If you are tracking and monitoring specific items and events you will have an “early warning system” to respond to clusters before they become national epidemics

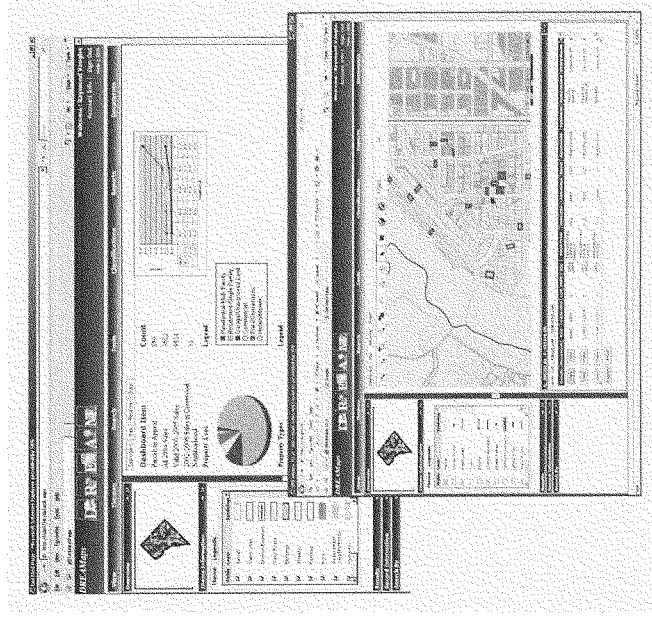
Possible Red Flags:

- Changes in National Trend Lines
- Home Values vs. GNP
- Overlays with additional datasets
- Mortgage resets, defaults, etc.



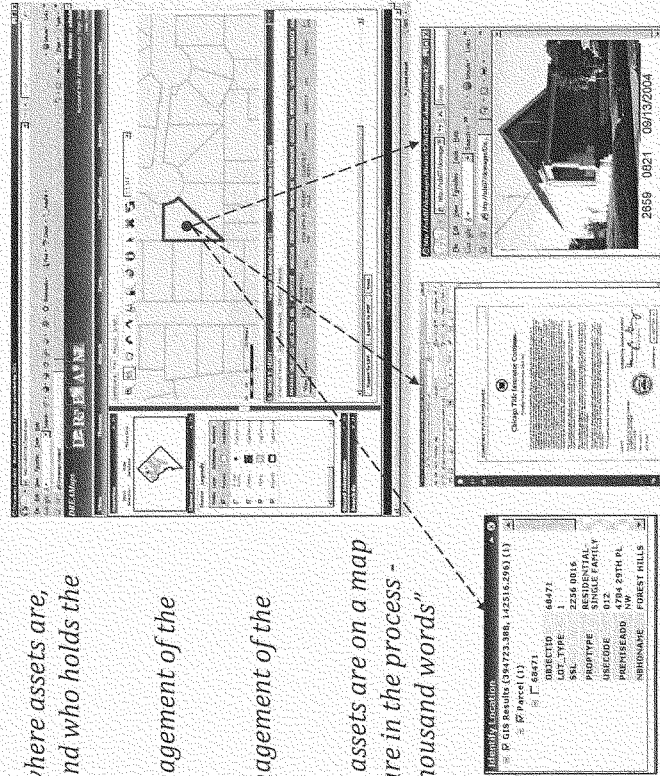
Monitor

- **Visualize** – See property data on a map in near real time
- **Analyze** – Perform statistical analysis including analyzing comps, sales ratios, and property values at a national level
- **Identify** – Utilize an “Executive Dashboard” to monitor events and identify national trend lines
- **Report** – Run user defined manual reports or set up automatic reports that are delivered to email addresses



Manage

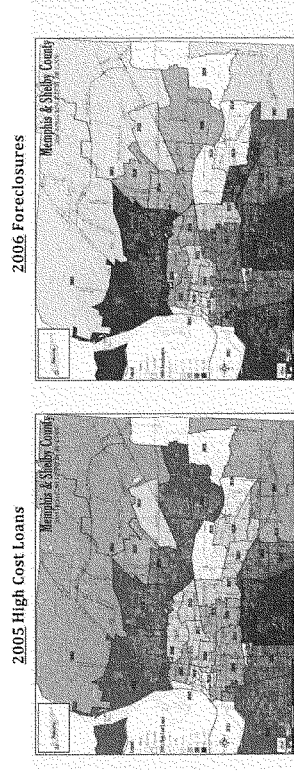
- **Inventory** – Identify where assets are, what they are worth, and who holds the mortgage
- **Acquire** – Proper management of the acquisition process
- **Dispose** – Proper management of the disposal process
- **Visualize** – See where assets are on a map as well as where they are in the process - "A picture is worth a thousand words"



What Could Have Been Done With Parcels

- Identified “Hot Zones” or clusters at the parcel level to react before a national disaster occurs
- Provided targeted prevention outreach to areas with high probability of foreclosures to help stop the cycle of poverty
- Maintain an accurate inventory of assets and their value to facilitate transparency of MBS and CDOs so losses couldn’t be buried or hidden
- Assessed Real Estate trends to identify patterns of appraisal abuse, inflated home values, reverse red-lining, etc...

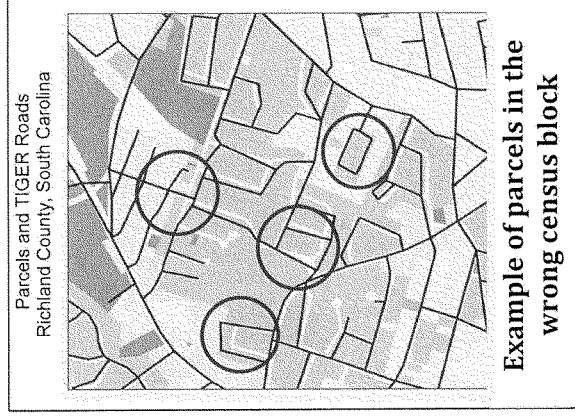
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Parcel Data Vs. Census Data

- Census data is inaccurate at the parcel level
- Census level data is updated every ten years
- Parcels change every day
- Foreclosures happen per parcel
- Parcels provide the true gauge of anything happening at a property level

Decisions and policies should be made using the proper granularity of data

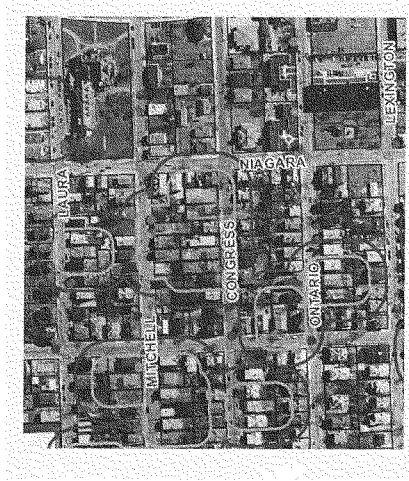


Provided by Dr. David Cowen, Former Chair of the Department of Geography, University of South Carolina, Chair of the 2007 NRC Parcel Committee

Location, Location, Location

This is happening at a parcel level NOT a census block level

- Each foreclosure reduces the value of properties within 1/8 mile by 0.9% to 1.1% (Immergluck and Smith, 2006a)
- An increase of one standard deviation in foreclosures can increase violent crime in the vicinity by 6-7% (Immergluck and Smith, 2006b)
- Each foreclosure leading to vacancy will trigger local government costs of \$5,000 to \$34,000 (Apgar and Duda, 2005)
- 50% of foreclosed properties have suffered significant property damage before becoming REO property (Geosegment Systems, 2008)



Providence Rhode Island (source-Provplan.org)

- Buffers are 50 and 100ft
- Red is violent
- Orange is property damage
- Green is other
- Blue are calls

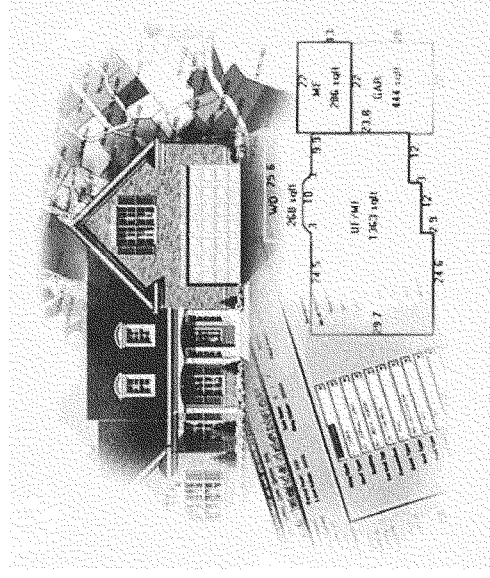
Figures from presentation given at 2008 Federal Reserve Symposium

Authoritative Source for Parcel Data

Local Taxing Jurisdictions

Local governments process real estate information on a **daily basis** from recorded documents, assessment data, and parcel maps

- Most current information
- Most accurate information
- Baseline of value
- Best indication of economic activity
- Common denominator of land
- It is the public record

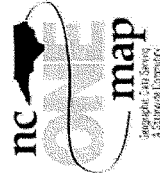
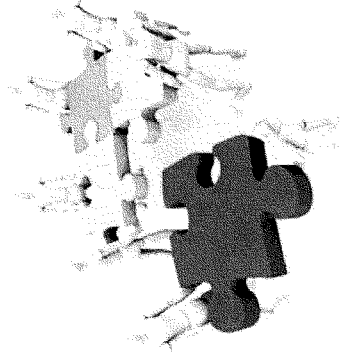


Local, State, and Federal Government

Local Governments – Appraise or value property for taxation purposes - property tax is the largest component of local governments income / revenue

State Governments – Oversight activities as a means to properly distribute funds and tax revenues

Federal Government – Sporadic use of parcel data with no coordinated efforts from state to federal government



Nearly 30 Years of Reports Have Called For It

The federal government has released report after report after report calling for action

Billions of American tax dollars have gone to foreign countries to do the same thing leaving the US behind most industrialized nations



1980 NRC Report 1994 NSDI Formed 2000 HUD Report 2003 HUD Report 2007 NRC Report

The 2000 HUD Report

In April 2000, The National Task Force on Predatory Lending (HUD-Treasury Task Force)

Chaired by Secretary Cuomo and Secretary Summers

Curbing Predatory Home Mortgage Lending

"Despite these gains, too many low- and moderate-income families have seen the dream of home ownership become a nightmare because of predatory or abusive lending practices. These practices are concentrated in the subprime mortgage market, where record numbers of Americans are refinancing their homes for consumer credit purposes. Subprime lending serves an important role, by providing loans to borrowers who do not meet the credit standards for the prime mortgage market. Some borrowers in the subprime market, however, may be particularly vulnerable to abusive lending practices."

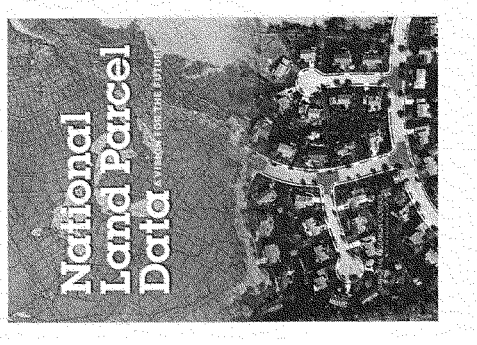
- <http://www.huduser.org/publications/hsgfin/curbing.html>

The 2000 HUD Report

5. Early Warning Indicators. (p.117)

FHA will customize data from its Neighborhood Watch system to develop early warning indicators of emerging foreclosure "Hot Zones." This data will enable local officials and HUD approved counseling organizations to better target outreach to families at risk of foreclosure. FHA will also make available summaries of the appraised values of FHA properties to help local officials better assess real estate trends and spot possible patterns of appraisal abuse. This public information will include performance data on individual appraisers generated by the Credit Watch for Appraisers system and posted on the HUD website.

What a Difference .04% Would Make



- National Property Database - \$260 Million*
- Or \$.86 per person
- Or \$260,000,000 / \$700,000,000,000
- Or .04% of the bailout budget

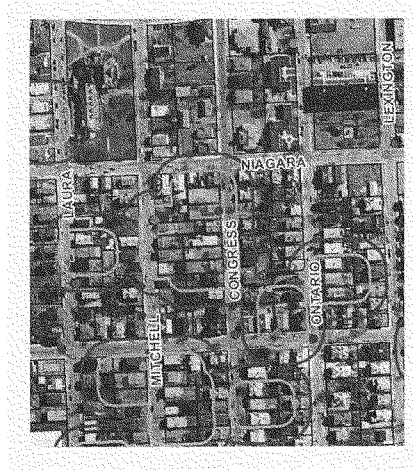
Create It Once – Use It Many Times

Department of Defense	<i>Property Management of Bases</i>
Department of Homeland Security	<i>Preparedness / Response/ Recovery</i>
Environmental Protection Agency	<i>Superfund Programs</i>
Housing and Urban Development	<i>Supports policy and decision making</i>
Small Business Administration	<i>Reduces errors in loan applications</i>
USGS	<i>Management of Federal lands</i>
FEMA	<i>Preparedness / Response/ Recovery</i>
US Forest Service	<i>Wildfire Management</i>
Farm Service Agency	<i>Common Land Units Program</i>
Census	<i>Improve TIGER files</i>
Department of Agriculture	<i>Tracking disease (i.e. Citrus blight in Florida)</i>

Transparency and Accountability of Toxic Assets

Questions that need to be answered:

- Where are they located?
- Who owns them?
- What are they worth today? (land and buildings)
- What were they worth before the crisis? (land and buildings)
- What properties are in the “risk zone”?
- Where are they in the acquisition and / or disposal process?



***“The Location of
Anything is Becoming
Everything”***

Information Instills Confidence



ACCOUNTABILITY AND TRANSPARENCY

"We cannot overstate the importance of this effort. We are asking the American people to trust their government with an unprecedented level of funding to address the economic emergency. In return, we must prove to them that their dollars are being invested in initiatives and strategies that make a difference in their communities and across the country. Following through on our commitments for accountability and openness will create a foundation upon which we can build as we continue to tackle the economic crisis and the many other challenges facing our nation."

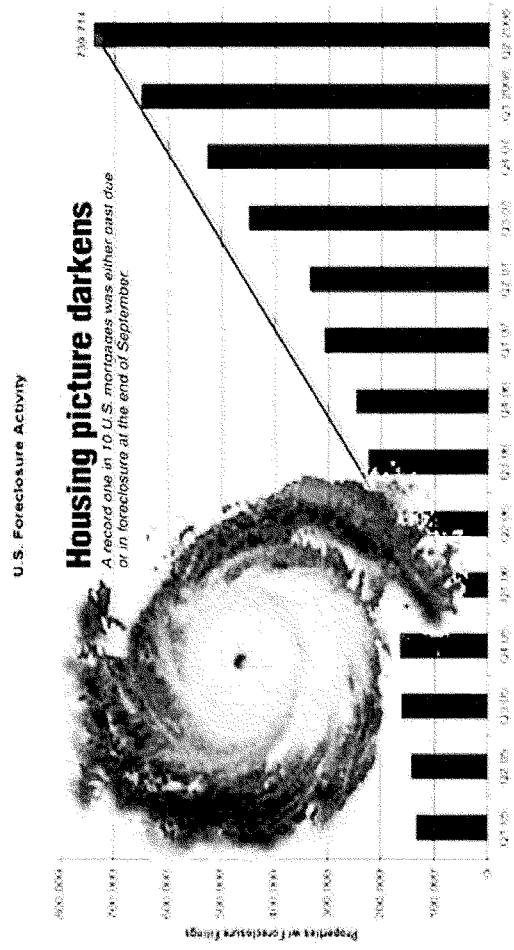
Memorandum to Head of Departments and Agencies, February 5, 2009

- **Accountability** – *Be good public stewards and demonstrate responsible management of assets*
- **Transparency** – *Good records and good procedures ensure the government is citizen-focused and service oriented*
- **Proof of success** – *Show the positive trends that are strengthening our economy as a result of preventing unnecessary foreclosures*



The Mortgage Crisis: Storm of the Century

Could it Happen Again?



The Cost of Doing Nothing \$ ____ Trillion



Statement of the U.S. Chamber of Commerce

ON: UTILIZING TECHNOLOGY TO IMPROVE TARP AND
FINANCIAL OVERSIGHT

TO: THE U.S. HOUSE OF REPRESENTATIVES SUBCOMMITTEE ON
OVERSIGHT AND INVESTIGATIONS

BY: THOMAS QUAADMAN
U.S. CHAMBER OF COMMERCE
1615 H STREET, NW
WASHINGTON, DC 20062-2000
(202) 659 6000

DATE: SEPTEMBER 17, 2009

The Chamber's mission is to advance human progress through an economic,
political and social system based on individual freedom,
incentive, initiative, opportunity and responsibility.

The U.S. Chamber of Commerce is the world's largest business federation, representing more than three million businesses and organizations of every size, sector, and region.

More than 96 percent of the Chamber's members are small businesses with 100 or fewer employees, 70 percent of which have 10 or fewer employees. Yet, virtually all of the nation's largest companies are also active members. We are particularly cognizant of the problems of smaller businesses, as well as issues facing the business community at large.

Besides representing a cross-section of the American business community in terms of number of employees, the Chamber represents a wide management spectrum by type of business and location. Each major classification of American business -- manufacturing, retailing, services, construction, wholesaling, and finance -- is represented. Also, the Chamber has substantial membership in all 50 states.

The Chamber's international reach is substantial as well. It believes that global interdependence provides an opportunity, not a threat. In addition to the U.S. Chamber of Commerce's 112 American Chambers of Commerce abroad, an increasing number of members are engaged in the export and import of both goods and services and have ongoing investment activities. The Chamber favors strengthened international competitiveness and opposes artificial U.S. and foreign barriers to international business.

Positions on national issues are developed by a cross-section of Chamber members serving on committees, subcommittees, and task forces. More than 1,000 business people participate in this process.

Testimony of Thomas Quaadman

Executive Director, Center for Capital Markets Competitiveness

U.S. Chamber of Commerce

September 17, 2009

Before the U.S. House of Representatives Subcommittee on Oversight and Investigations

Chairman Moore, Ranking Member Biggert and members of the Oversight and Investigations Subcommittee, thank you for the opportunity to speak before you today on this subject of great importance to taxpayers and our economy.

Earlier this week we marked the first anniversary of the collapse of Lehman Brothers. In the days and weeks following the Lehman collapse, the United States and the Global economy stood on the precipice of an outright collapse. The credit markets were frozen, consumers stopped spending, businesses started to contract and we saw the first electronic run on financial institutions.

To prevent a widespread collapse, the Bush Administration and Congress took unprecedented and dramatic action in passing and enacting the Emergency Economic Stabilization Act ("EESA"). The centerpiece of the EESA is the Troubled Asset Relief Program, also known as TARP. With over \$700 billion in federal funding, the purpose of TARP is to stabilize the financial system and help create the conditions for recovery.

The U.S. Chamber of Commerce lobbied for the creation of the TARP program and continues to support efforts to improve the program to ensure its success. With banks not lending, businesses lost the liquidity needed to function, while simultaneously, consumer spending, which makes up 70% of our economy, was shrinking at an historic rate. Simply put, the financial crisis had driven the United States to its worst economic predicament since the Great Depression. In order for businesses to function and for an economic recovery to take hold, the financial services sector needed immediate shoring up and that vehicle was TARP.

As originally passed, TARP was intended to purchase toxic assets and take them off of the balance sheets of financial institutions. However, Treasury Secretary Paulson opted to use an alternative provision of the EESA when it became apparent that the valuation of the toxic assets was too difficult and that a purchase program would take too long to have an immediate impact. Consequently it was decided that the TARP funds would be used to inject capital into struggling or systemically important financial institutions.

The TARP program has had its problems, but a year later we can say that an outright collapse was avoided, the financial sector is stabilizing, and the first signs are appearing that an economic recovery is taking hold.

While the Chamber has stood by the TARP program, we have also supported efforts to improve its implementation. As with any government program, the Chamber believes that there needs to be accountability for taxpayer dollars. This is particularly true with the massive expenditure of government monies through an expedited process. Simply put, the American people have the right to know where and how their hard-earned money is being spent.

President Obama recently announced firms that have fully repaid their TARP funds have provided taxpayers with a return of 17%. This proves that TARP can be successful. However, any potential misallocation or misuse of taxpayer dollars may erode support for the TARP program, undermine confidence of the firms in TARP, and possibly harm efforts to stabilize the financial sector. By building transparency into the administration of TARP, accountability will be enhanced and taxpayers can have trust in the program and the expenditure of resources. Accountability for the use of taxpayer dollars helps establish the confidence that is needed for TARP to stabilize the financial sector.

Because of the need for accountability and transparency, the Chamber wrote to Congress on June 11, 2009 in support of the H.R. 1242, the "TARP Accountability and Disclosure Act." This bi-partisan bill, sponsored by Representatives Carolyn Maloney and Peter King represents an important step forward in creating and enforcing accountability in the TARP program. The Maloney-King Bill would improve the efficiency of information delivery regarding the TARP program and the way in which federal dollars are tracked and monitored.

Currently, information regarding TARP funds that have been expended is spread across multiple federal agencies, using incompatible formats making it a daunting task for government officials or taxpayers to gain a clear understanding of how TARP funds are being used. The Maloney-King bill would require the use of existing technologies to create a single publicly accessible data base that can track TARP funds in near real time. This level of transparency will help avoid the misuse of funds and develop a level of confidence that is integral to the success of TARP.

It should be noted that Senators Mark Warner and Sherrod Brown have proposed similar legislation and that the Chamber has also written the Senate in support of the Warner-Brown bill.

The implementation of the Maloney-King bill would provide a benefit that would outweigh any costs. By instilling a higher level of transparency in TARP, efforts to facilitate confidence will be advanced. It goes without saying that the meltdown that occurred after the Lehman collapse was ultimately a crisis in confidence. By restoring confidence in our financial system, efforts to restore growth in the real economy will take hold. It is no coincidence that recent reports of a rise in consumer confidence and spending coincide with the sprouting of green shoots of recovery.

Nevertheless, in considering the implementation of legislation such as the Maloney-King bill, serious concerns need to be addressed in order for an appropriate balance to be struck amongst competing interests.

It should be noted that information must be relevant and that appropriate context be given in order to provide an understanding of the use of TARP funds. A simple information dump will create confusion and a lack of comprehension ultimately degrading transparency and causing a loss of confidence in TARP. Therefore, an appropriate discussion of the context and relevance of information is needed to facilitate its usage. Such contextual disclosures and discussion are used in corporate financial reports to assist investors in comprehending information and making informed economic decisions.

Similarly, Congress needs to investigate the privacy implications that may impact individuals or businesses that may have been loaned money by TARP recipients using TARP funds. Congress has previously passed legislation, such as the Privacy Act and Gramm-Leach-Bliley that puts in place a number of safeguards to prevent government or financial services firms from disclosing the financial information of individuals or businesses. Those safeguards should remain in place and a TARP database should have safeguards in place to protect privacy. Thought should also be given to how such a database could be used by non-TARP business competitors to create a competitive advantage.

Nevertheless, the Chamber believes that these issues can be addressed. In conclusion, we again reiterate our strong support for the Maloney-King bill and any efforts to increase transparency and accountability in the TARP program. I will be happy to take any question that you may have.

Thomas Quaadman

Executive Director for Reporting Policy and Investor Opportunity, U.S. Chamber Center for Capital Markets Competitiveness

Thomas Quaadman is the executive director for Reporting Policy and Investor Opportunity at the U.S. Chamber Center for Capital Markets Competitiveness. The Center was established in March 2007 to advocate legal and regulatory policies for the U.S. capital markets to advance the protection of investors, promote capital formation, and ensure U.S. leadership in the financial markets in the 21st century.

Quaadman develops and executes strategic policies to implement a global corporate financial reporting system, address ongoing attempts of minority shareholder abuse of the proxy system, communicate the benefits of efficient American capital markets, and promote an innovation economy and the long-term interests of all investors.

Prior to joining the Chamber, Quaadman was chief of staff to Congressman Vito John Fossella Jr. (R-NY) from 1997 to 2008. In that capacity, he helped establish the Republican Policy Committee Task Force on Capital Markets, Economic, and Information Security to develop a legislative program on economic competitiveness. Quaadman also worked on the passage of the Investors Capital Markets Fee Relief Act. This act reduced SEC transaction fees, representing a savings of billions of dollars for investors.

Quaadman graduated cum laude from New York Law School and is a graduate of the College of Staten Island. He is a member of the New York and Connecticut state bars. Quaadman and his wife, Tara, and their children, Creighton and Alexandra, reside in Alexandria, Virginia.

Statement of Ari Schwartz
Vice President Center for Democracy & Technology
before the Subcommittee on Oversight and Investigations,
U. S. House of Representatives Committee on Financial Services

Hearing on
Utilizing Technology to Improve TARP and
Financial Oversight

September 17, 2009

Chairman Moore, Ranking Member Biggert, and members of the Committee, on behalf of the Center for Democracy & Technology (CDT), thank you for the opportunity to participate in this hearing on the use of technology to improve financial oversight.

CDT is a nonprofit, public interest organization dedicated to promoting privacy, civil liberties, and democratic values on the open, innovative, and free Internet. CDT has been a leader in advocating both for stronger protections for online privacy and for greater government transparency. In particular, CDT has advocated for the use of technology to increase public access to government information and to make government more transparent, interactive, efficient and accountable.

Before the Subcommittee are two bills with laudable goals: increased oversight of TARP funds and assistance to local governments to create technical tools to address property vacancy and abandonment.

■ TARP Transparency (H.R. 1242, S. 910)

CDT supports H.R. 1242, a bill that would amend the Emergency Economic Stabilization Act to add greater transparency to the Troubled Assets Relief Program (TARP). The bill would require the Treasury Department to establish a database that would provide ongoing, continuous and close to real-time updates of the distribution of TARP funds. Information would be combined from private and public sources, including the 25 agencies distributing TARP funds, to track their progress.

Money from TARP is intended to stimulate lending and strengthen the health of the financial institutions receiving the funds, but it is currently difficult to evaluate. The H.R. 1242 database would bring together regulatory filings, internal agency models, and analytics associated with the financial assistance received, and thus would allow the TARP Special Investigator General, the Congressional Oversight Panel to conduct detailed analysis of the effectiveness of the TARP funds in stimulating prudent lending and strengthening bank capital.

Giving the oversight bodies access to this data will greatly improve oversight and increase citizen confidence in the TARP program.

CDT, as well as OpenTheGovernment.org, The Project on Government Oversight, OMBWatch, and Taxpayers for Common Sense, urge that H.R. 1242 go a step further and require the non-proprietary parts of this centralized repository of TARP information be made available to the public on the Web.¹ While FinancialStability.gov is an excellent start for TARP oversight, there are many TARP activities and related data that are not captured there, specifically those requested in this bill. The Department of the Treasury, who administers the TARP fund, has previously committed to putting more materials about TARP online, but has not done so.

Providing TARP information directly to the public online will strengthen oversight, by making it possible for the media, watchdog groups, researchers and concerned citizens the ability to analyze the data, reuse it and present it in novel ways, and uncover risky practices among TARP institutions.

We recognize that there is no prohibition in the bill against online access, but we ask that the text of the bill explicitly require that the TARP resources be made available to the public on the Web.

■ Geospatial Information for Oversight

Another bill, H.R. 932, proposes the creation of geographic information systems (GIS) containing regional land parcel data to better monitor the effects of the housing crisis and inform the actions in response. GIS are used to present, manage, and analyze data in relation to location. For instance, the CDC uses GIS to predict and track epidemics in order to more effectively treat them. H.R. 932, the Community Regeneration, Sustainability, and Innovation Act of 2009, calls for the creation of regional real property data systems, tying property records to land parcels. These data systems could tie tax and foreclosure information to GIS to create new ways to analyze and mitigate predatory lending practices,

¹ Letter re: S. 910, May 18 2009, <http://www.openthegovernment.org/otg/S910Letter3.pdf>

reverse redlining, and foreclosures. The bill also calls for improvement of these data systems in order to streamline and improve procedures around urban renewal strategies.

CDT supports the goals of this bill, but we urge the Committee to specifically require privacy and security protections and improve data accuracy in the effort to create centralized data systems. Currently, counties manage their own local geospatial data; as less localized data systems are created and merged, concerns over differing standards for this data must be addressed.

We support the idea of using information systems to build smart government and ensure the effective use of government money. In doing so, we hope that best practices for privacy and security will be employed as regional real property data systems are developed. Information about addresses and land is largely publicly available through online mapping applications. However, tying this information to financial records and property records and other data has posed a privacy and identity theft risk in some localities.

For example, from 2000-2006 Hamilton County Ohio allowed access to aerial photographs of homes for property tax purposes and also to court records with details of Social Security Numbers and other personal data. Privacy advocates warned that the photos could provide thieves with information on means to break into homes and that the personal information posted was an identity theft risk. In 2006, after cases of identity theft were directly tied to the Web site, the County finally removed the data that raised concerns.² Similarly, commercial entities such as Zillow and Google, with its Maps, Earth and Street View products, confronted similar privacy and security issues in providing publicly available data in an aggregated way online.

The key to protecting personal information when putting public records online is to put in place a set of Fair Information Practices (FIPs). First articulated in the early 1970s by the Health, Education and Welfare Department, these principles govern not just the initial collection of information, but also its use and maintenance.³ FIPs require notice to and consent from individuals when information is collected and shared about them, gives them the right to see the information that is held about them, and gives them the chance to correct information in the database. These principles remain central to ensuring privacy as new databases of information are created and made widely available and that information is used to make decisions about people and their property.

² <http://www.privacyrights.org/ar/ChronDataBreaches.htm> Court records data posted online has led to several known cases of identity theft. The rise of these cases was well documented by John Leland and Tom Zeller Jr, "Technology and Easy Credit Give Identity Thieves an Edge," *The New York Times*, May 30, 2001, p.1.

³ CDT's Guide to Online Privacy, Fair Information Practices, <http://www.cdt.org/privacy/guide/basic/fips.php>

The Privacy Act of 1974 was created to ensure the protection of personal information in the hands of the federal government, but that law and the guidance to implement it has not been comprehensively updated since it was first implemented. In order to protect personal information such as personal data tied to mapping information, this law will eventually need to be updated. CDT has been working on an effort to gather feedback on the best means to update this important law⁴, but until that revision is complete, new projects to gather and share data such as those in H.R. 932 will need to address concerns through the use of Fair Information Practices. Specifically, we recommend that the committee require publication of a privacy impact assessment that clarify how pilots will address the FIPs before implementation of the pilot can begin.

Conclusion

Information coordination and sharing can provide new and enhanced tools for federal oversight of the financial and housing markets. This information should also be made directly available on the Web to help provide greater transparency to the public. In doing so, we must ensure the quality and privacy of this data.

CENTER FOR
DEMOCRACY
TECHNOLOGY

FOR MORE INFORMATION

Please contact: Ari Schwartz, (202) 637-9800, ari@cdt.org

⁴ Information about this update to the Privacy Act of 1974 can be found at our online, collaborative drafting site eprivacyact.org. CDT has drafted updates and taken suggestions from experts and the public on the protections that should be included in an updated Privacy Act, including protections for new technologies and linked data.

Mr. Chairman and members of the Committee:

Thank you for holding this hearing on the use of technology to improve TARP and financial oversight. Thank you as well for giving me the opportunity to appear before you. I will outline for you a technology that my colleagues and I at the Probity Group have developed, known as the “Probity Gradient™,” which we believe can help achieve the twin goals of improved financial oversight and optimal allocation of future TARP funds.

By way of background, I am a professor at Duke University’s Fuqua School of Business, and my colleagues at the Probity Group include a Wharton School professor and several executives with extensive experience in risk management. We established The Probity Group to help business executives and policymakers develop strategies and policies for assessing and mitigating high-impact risks to complex systems of tangible and intangible assets.

Gradient analysis was first developed to assess and mitigate risks to tangible asset systems, primarily infrastructure facilities ranging from stock exchanges and computer centers to oil refineries and transportation systems. We have also developed a technology known as “PSI” to assess and mitigate risks to intangibles such as reputation and policy.

The hallmark of the Probity Gradient™—and the main reason we think that Gradient analysis could be so useful for improving financial system oversight and allocating future TARP funds—is its holistic *systems* approach. Like systems of financial assets, infrastructure systems composed of physical assets are extraordinarily complex, with many interdependent parts connected through myriad channels. As a result, and as demonstrated in the financial crisis that our nation and the world faced a year ago, a failure or breach in one part of the system has the potential to cascade throughout the entire system, with potentially dire and far-reaching consequences. The Gradient’s systems approach provides a way of visualizing and quantifying such possible consequences.

Although Gradient analysis relies on sophisticated computer software, the core methodology is straightforward. First, vast amounts of data on thousands of dissimilar system assets and their components—for example, geographically dispersed physical and cyber components in an electrical grid or national securities trading system—are decomposed and re-assembled into a comprehensive, highly structured “Asset Space Registry.” Next, inter-relationships among the assets are examined, and a rigorous analytic engineering approach is used to determine the system-wide “value-at-risk” of adverse events. The results are expressed as both a numeric “figure of merit,” and a Gradient, which provides a visual indication of specific areas of high-impact vulnerability. With this analysis in hand, it is possible not only to quantify and visualize risk consequences, but also to identify areas of critical vulnerability—*before something actually goes wrong*.

The Gradient has its roots in a systems engineering approach known as “Failure Modes and Effects Analysis,” which has yielded precise failure and breach consequence measures for complex weapons and industrial systems since the 1960s. It also builds on “Trusted System” technology promoted by the National Security Agency since the 1970s. My colleagues adapted these approaches to the analysis and protection of critical infrastructure, applying it to such systems as a regional stock exchange, a global application service provider, and an online cyber collaboration environment used by military executives for oversight and decision-making. The success of the approach is due largely to the ability it provides to drill down to threat, vulnerability and breach details and then aggregate up to global consequences—illuminating both individual and systemic effects.

Although the Gradient’s roots lie outside of the field of finance, public discussion and analysis of the devastating financial crisis that began last September motivated us to explore how Gradient analysis could be applied to a complex financial system—one whose overall performance depends on the valuation of myriad interdependent, dissimilar assets and the viability of the numerous enterprises that hold them. In the words of one *Washington Post* op-ed last March, “... We have a set of overseers who evaluate financial institutions one by one, but ‘systemic risk’ is created by the interactions between institutions” (Sebastian Mallaby, March 2, 2009). A GAO report released the same month (March 19) pointed to the failure of the U.S. financial regulatory system to recognize such interdependencies—and by implication, the need to take these interdependencies into account in future regulatory efforts aimed at preventing yet another major systemic disruption.

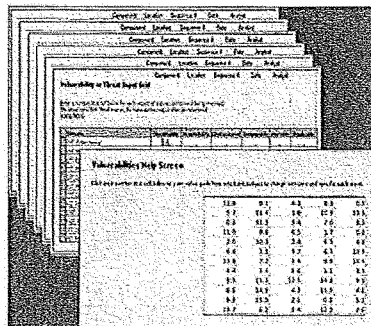
In our opinion, Gradient analysis represents a low-cost, highly accurate tool with proven reliability that would enable regulators to take exactly this type of big picture perspective. Gradient analysis would also help policymakers and regulators choose the best way to allocate TARP funds, by identifying assets whose failure or breach would have the most devastating and far-reaching systemic consequences. Additionally, the systems engineering approach embodied in the Gradient could supplement existing financial analysis tools to assess the risk consequences of various forms of financial malfeasance, such as fraud, privacy invasion, insider trading, and valuation tampering.

Thank you again, Mr. Chairman and members of the Committee, both for the opportunity to tell you why we believe that the Probity Gradient can help achieve the important goal of strengthening oversight of our complex financial system, and also for the strong oversight that your subcommittee is providing in this important area.

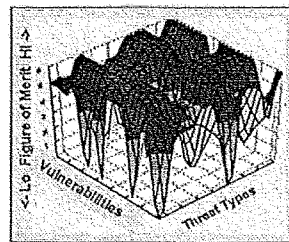
A rigorous approach to combining data into an aggregate figure-of-merit:

$$\text{Asset Value} \times 10^{-(\text{FOM})} = \text{Value-at-Risk}$$

Where FOM is the volume under the Gradient (in log scale); which represents the relative probability of breach



Visualize assets' vulnerability-threat pairs in a 3-dimensional "gradient":



- Exhibits total figure of merit
- Highlights areas of concern
- Traces changes in both

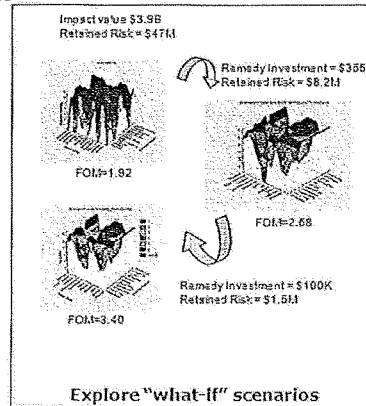
We could establish priorities; focus attention on high-impact risks

Facilitate strong oversight and responsible disclosure

1. Image and Figure-of-merit (FOM) show "what-if" results, or actual status and improvement
2. Protects sensitive information while showing due diligence to stakeholders

Adjust expenditures commensurate with exposure; optimally allocate resources among mitigation options

1. Adjust asset composition and mix
2. Hedge/transfer risk
3. Mitigate specific risks
4. Accept (and disclose)





CENTER FOR CAPITAL MARKETS
COMPETITIVENESS

TOM QUADMAN
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September 30, 2009

The Honorable Dennis Moore
Chairman
Subcommittee on Oversight and
Investigations
Washington, DC 20515

The Honorable Judy Biggert
Ranking Member
Subcommittee on Oversight and
Investigations
Washington, DC 20515

Dear Chairman Moore and Ranking Member Biggert:

Thank you again for allowing me to testify before the Subcommittee on Oversight and Investigation at the Utilizing Technology to Improve TARP and Financial Oversight. The U.S. Chamber of Commerce is the world's largest business federation, representing more than three million businesses and organizations of every size, sector and region. Allow me again to state the Chamber's support of H.R. 1242, the TARP Accountability and Disclosure Act, sponsored by Representatives Carolyn Maloney and Peter King.

During the course of the hearing, several questions were raised regarding privacy issues and the platforms to be used for implementing a data base tracking funds expended through the Troubled Assets Relief Program ("TARP"). These concerns are valid and by no means insurmountable. Financial regulators from around the world are increasingly requiring that corporate financial reports are filed in interactive electronic data formats.

Corporate financial reports are quite voluminous, and it is difficult for the most sophisticated investor to understand or find data relevant for decision-making. Through the use of interactive data systems, public companies must file their reports in electronic data form, commonly using a language known as eXtensible Business Reporting Language ("XBRL"). These systems allow investors to flag data and use interactive analytical tools to identify relevant information and study it for decision useful purposes. Among the entities that use such a system are: Australia, Belgium, China, Committee of European Banking Supervisors, Ireland, Japan, Singapore, Sweden, the United Kingdom, and the United States.

The Honorable Dennis Moore
The Honorable Judy Biggert
September 24, 2009
Page Two

Because corporations that may have tens of billions of dollars in revenues spread out over multiple nations can file complicated financial reports and protect customer privacy, we believe that this provides an important touchstone for the subcommittee to pursue in addressing some of the concerns raised at the hearing. A second hearing with some of the regulators who use electronic filing systems, as well as some of the companies that provide such a service should provide the subcommittee with the information necessary to address questions regarding platforms and privacy.

Such a hearing can help address the concerns raised at last week's hearing and allow for further consideration of H.R. 1242. The Chamber also stands ready to assist the subcommittee with this effort.

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Quaadman', with a long, sweeping horizontal line extending to the right.

Thomas Quaadman
Executive Director, Financial Reporting and
Investor Opportunity
Center for Capital Markets Competitiveness
U.S. Chamber of Commerce

cc: The Honorable Carolyn Maloney
The Honorable Peter King



THE EPICURUS INSTITUTE

September 15th, 2009

Rep. Dennis Moore, Chairman and
Rep. Judy Biggert, Ranking Member
House Financial Services Committee
Subcommittee on Oversight and Investigations
2129 Rayburn House Office Building
Washington, DC

Dear Chairman Moore and Ranking Member Biggert and Subcommittee Members,

Thank you for this opportunity to submit testimony on the matter of Utilizing Technology to Improve TARP and Financial Oversight.

Following an extensive survey of 412 Mortgage Backed Securities investors, 34 brokers and 207 bankers, The Epicurus Institute is presently developing a unique technology that provides a real-time system for regulatory compliance in lending; transparency and due diligence capabilities for MBS investors.

The LEMAC System

The technology solution we're endeavoring to establish creates a unique, encrypted ID number for every loan processed by banks that use the services of LEMAC or Loan Evaluation Mortgage Analysis Corp. a company we're helping to develop. It addresses the true root cause of the economic crisis – bad lending decisions – by ensuring that the lending process for each loan complies with Federal financial regulations.

The system would interface with the lending software and would check the input against more than 1,800 regulations, rules and requirements for lending compliance. If an underwriter attempts to process an exotic, unusual loan or a liar loan, the system, or any loan out of compliance, the LEMAC system would “flag” that loan, stopping the process until the reason for non-compliance is explained. LEMAC ‘weighs’ the volume of non-compliant parts of each loan and will ‘red-flag’ any that pose serious risk to the lender or potential future investors in real-time.

Red-flagged loans would be submitted, live, to regulators, who are given LEMAC software and use licenses free of charge (gifted to the regulatory body for use as a management tool). The regulator can then access the irregular loan BEFORE it has been closed, and determine its risk level, making such recommendations or directions as deemed appropriate, effectively keeping high risk loans from securitization.



EPICURUS, 1838 State Route 35, Wall, NJ 07719, 01.732.539.7484

www.epicurusinstitute.org



THE EPICURUS INSTITUTE

Benefits of the LEMAC System

Investors will have the ability to look up LEMAC numbers we believe should be published in every prospectus for lending backed securities of any kind. Securities brokers would be able to obtain an analysis of the risk level of each loan and publish their overall analysis, effectively telling prospective investors the percentages of low, medium, moderate or high risk loans contained within the offering.

The LEMAC system benefits the banking and securities industries by evaluating, by an independent third-party provider, the quality of lending, regulatory compliance and processing standards used by participating lenders. It provides regulators with the ability to evaluate and regulate at the lowest possible cost, with minimal staffing. It also provides investors with clearly defined analysis and individual loan review to help them make a qualified investment decision.

Technology and TARP's Original Purpose

Since TARP was intended to resolve 'troubled assets', the LEMAC system can be used in reverse, to investigate those assets, looking backwards at the lending process for each one and comparing it with an historic review of payment, isolating those still making regular payments from those deemed troubled. It is estimated that more than 30% of troubled assets are actually fully performing loans. Many banks refuse to sell all their troubled assets because they know many of those loans are worth more than the bid price for troubled assets. By identifying these loans using LEMAC, it is possible to segregate the good from the bad, making each grouping much easier to sell in the secondary markets.

If one looks at the Legacy Loan Program at FDIC, you'll see it is greatly underutilized solely because both of the prospective parties – lenders and investors are unwilling to use its resources. You can't have buyers unless there are sellers in any marketplace.

Costs and Use of LEMAC by Regulators

It is our plan to provide LEMAC software to most of the Federal financial regulators at no charge, however, it would appear that many of them operate under different rules and some could only accept such offers under Congressional authorization. We are presently seeking legislation to make it possible for all the regulators to accept the gift, which comes with no strings. Should we be successful, the LEMAC system should not cost government anything.

That said, it has become evident that lenders, investors, venture capitalists and others who would invest in technological advancements remain unwilling to make loans to small and mid-sized businesses, even with excellent histories and





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collateral. Money remains very tight in the marketplace, for all except the most proven companies. Innovators of technology for regulatory controls are unable to find funding privately. Thus, we're proposing the creation of a program for Federal loan guarantees for such developers. When a regulator, such as Treasury, approves a technology plan submitted to them, the developer should be able to obtain, possibly via the SBA, a special loan guarantee, enabling the company to obtain private funding. Such a program could generate fees at very low risk to government, and already appropriated funds could be used for this, simply by designation of some of the economic stimulus funding or returned TARP funds.

Reporting and Congressional Oversight

The LEMAC system would generate reports that could be easily provided to regulators and Congressional committees for oversight to identify the quality of lending and compliance levels by participating lenders in aggregate. It would also identify those regulations that lenders are having the most difficulty with, allowing Congress to address those, possibly outdated rules or regulations and bring such regulations up to date. While I do not propose de-regulation, some of the regulations are still rooted in controlling banking processes that have themselves been modified by technological advances and outpaced the regulations. Hence, it is critical for Congress to update such regulations as necessary with a clear understanding of market or technology-driven changes.

Security and Privacy

In regard to security and privacy, we believe the Privacy Act has many loopholes, particularly in regard to lending information. LEMAC utilizes blocking systems to prevent our system from even seeing the borrower's personal or private information. We do not publish any private information about the loan applicant or borrower in any manner. However, once loans are closed, they do become public record and readily accessible in any Hall of Records in the counties across the Nation. Such records include Social Security numbers, copies of signatures, loan numbers and other data that should be covered under the Privacy Act.

Many of those counties require a person seeking to view such records to identify themselves, or pay for copies, but it is possible to look up any loan filed under UCC in any county where the property is located, or the bank conducted the loan application. We do need systems in place to make such information private, as that data has already proven it can be published online and used against the borrower in a variety of ways – many of a negative nature.

One thing that could be done is for counties to keep one set of such records on file privately for government use only, with a redacted set viewable as public record. We do not believe public access of every detail contained in UCC filings is necessary. Since many unscrupulous companies use such filings for targeted





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marketing, solicitation and other purposes for which UCC filings are not intended, we believe Congress should act to prevent full access to private information, even in public records.

Credit Reporting

We are also concerned by the information maintained in credit reports, particularly in light of the present economic conditions. As many citizens have experienced financial difficulty, not necessarily of their own doing, their credit reports are reflecting such adverse entries for as long as a decade. When credit reports were first developed, their intent was to help in lending. Today, they're used for everything from auto insurance to medical care. Since we're unlikely to stop the use of such reports, Congress should consider putting limits on the duration some adverse entries may have when reports are sought by non-creditors.

We must remember that adverse credit reports could extend the duration of the recession for many years as those most affected by it today have great difficulty individually recovering, obtaining employment at comparable income to pre-recession levels or meeting the increases in living costs created by poor credit reports.

Protecting Bank Data Quality

We have been proposing for some time now, that certain laws be updated to make it a criminal act for any bank employee, officer or contractor to intentionally falsify or omit information from a bank's computer systems. Surprisingly, this is not illegal. However, if one considers the fact that a bank employee can theoretically falsify information in the lending process, we must also consider that such false information will filter its way into other reports, including reports submitted to regulators and potentially to investors.

We believe the integrity of the data being input must be sound, and that those responsible for false or omitted information should be held accountable and like securities underwriters who might do such a thing with public offerings, bank staff should be banned from the industry for a period of time if proven they've committed data crimes in banks.

Respectfully submitted,

/Robert Angelone/

Robert Angelone, Ph.D.
Chief Economist and Director



**Written Statement by Ann Fulmer, Vice President, Interthinx, Inc.
to The House Financial Services Subcommittee
on Oversight and Investigations
September 17, 2009**

Chairman Moore, Ranking Member Biggert and members of the Subcommittee on Oversight and Investigations, thank you for this opportunity to discuss how technology can help reduce foreclosures and assist this Committee's efforts to provide accountability, transparency and oversight for the numerous stabilization programs now in place.

Interthinx is a California-based technology company that provides risk mitigation and regulatory compliance tools to the financial services industry. Fifteen of the top 20 mortgage lenders and three of the five largest financial institutions use Interthinx solutions to assess risk, prevent mortgage fraud and avoid compliance violations.

This statement will focus on the important and often under-reported relationship between mortgage fraud and foreclosures. Mortgage fraud is one of the root causes of the current economic crisis. Fraudulently inflated property values were not widely recognized as such at the beginning of the real estate boom. As a consequence, they were recorded in tax digests, multiple listing services and commercial appraisal databases. This "evidence" of rapid appreciation was relied on by appraisers and real estate agents to support ever higher sales prices. This "evidence" was also exploited by criminal orchestrators who lured thousands of credit worthy borrowers into buying inflated "investment" properties. In cities with high concentrations of fraud --Las Vegas, Phoenix and Miami, for example -- affordability became problematic. With housing prices up and incomes stagnant, millions of borrowers across the country --usually at the instigation of unscrupulous industry professionals-- signed loan documents that grossly misrepresented their financial qualifications. As interest rates began to rise in 2005, sales volume and housing prices began to fall. When investors and over-leveraged homeowners could no longer sell their properties for what they owed, defaults skyrocketed. As the "mortgage meltdown" grew the value of RMBS became uncertain and investors began to demand the repurchase of entire pools of MBS. Under this extreme financial pressure mortgage banks began to fail, the credit markets froze, the economic crisis exploded and the recession began.

There is an extremely close correlation between fraud and foreclosures: fraudulently originated mortgage loans are eight times more likely to enter into default within the first year --and 20 times more likely to enter into the foreclosure process-- than loans without fraud. Despite tightened underwriting guidelines and the increased vigilance of financial institutions, the overall fraud risk rate is up eight percent year-over-year because fraud flourishes in unstable markets, regardless of whether housing prices are rising or falling. The markets at greatest risk today are those with the highest foreclosure rates. This reflects a shift to schemes that capitalize on desperate borrowers, short sales, bank-owned inventory, and mortgage servicers' lack of fraud detection and prevention training, protocols and tools. Lenders and servicers will face additional challenges as ARMs originated during the peak of the boom recast between now and the end of 2011. Many of these loans had initial "teaser" rates; the majority have negative amortization features. With nearly 23% of single-family homes with mortgages already "underwater" and limited opportunities for refinancing, foreclosure and fraud rates can be expected to climb for the foreseeable future.

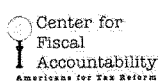
The Role of Technology in Improving Accountability, Transparency and Oversight

All of the "Making Home Affordable" programs are vulnerable to fraudulent manipulation because they lack robust fraud prevention protocols. Investigators within the financial services industry are reporting numerous incidents of artificially *deflated* values in short sales followed by a quick resale at much higher prices to straw borrowers who immediately default; of borrowers who falsely claim lower income, property values and economic hardship in the hope of obtaining a modification; of borrowers seeking to modify loans that were originated in fraud to begin with; and of borrowers who attempt to *inflate* the value of their collateral in hopes of qualifying for refinance. There are also reports of "shot gunning" (obtaining multiple loans on the same piece of property in near-simultaneous transactions), the use of social networking websites to obtain the names and contact information for use in employment verification mills, and the wholesale fabrication of supporting loan documents including W-2s, tax returns, verifications of deposit, and utility and bank account records.

These schemes share several important characteristics: they rely on modern technology to obtain critical information and create supporting documents. They exploit the gap between the time a loan is closed and the time it appears in public records and credit reports. They benefit from the financial services industry's reliance on post-closing audit sampling for quality control and post-default investigations to expose fraud. And last, but certainly not least, they exploit the "cover" provided by the industry's inability to freely share information about known and suspected bad actors.

The most cost-effective point at which to prevent fraud in loan originations and modifications is during the underwriting and approval process. Advanced computer-based analytic tools, which automatically pool real-time and historical application data from multiple lenders, check borrower-submitted data and collateral valuations against independent data sources, and quickly identify the risks associated with a transaction, provide a powerful mechanism with which to combat the criminal element and protect the taxpayers' substantial investment in foreclosure prevention and economic stabilization programs. Tools that provide flexible reporting and data mining capabilities provide enhanced transparency through the rapid identification of emerging schemes and "hot spots" as well as process and control vulnerabilities. They enhance accountability and oversight by providing performance metrics and real-time data that allow corrective measures to be taken immediately.

The federal government is now the largest investor in American mortgage debt because it purchases, insures, or guarantees more than 90 percent of all residential mortgages. It is the primary target for today's fraud schemes because, as Willie Horton once said, "That's where the money is." The universal use of automated technology during the application and modification processes, coupled with a safe harbor to allow the aggregation of protected consumer financial data for the purpose of preventing crimes, waste and abuse, would substantially mitigate these risks.



May 15, 2009

Dear Member of the United States House of Representatives,

On behalf of the millions of taxpayers represented by our respective organizations, we write to urge your support for the “TARP Accountability and Disclosure Act” (H.R. 1242), sponsored by Rep. Carolyn Maloney (D-NY) and Peter King (R-NY).

The TARP Accountability and Disclosure Act would add an important oversight component to the Troubled Asset Relief Program (TARP), the opaque nature of which is infuriating taxpayers who are forced to bear the financial burden of this package. The recent outrage over A.I.G.’s bonus payments is just another manifestation of the lack of oversight and accountability with regard to the implementation of the “Emergency Economic Stabilization Act of 2008,” and government bailouts in general. The March GAO analysis of the “Status of Efforts to Address Transparency and Accountability Issues” further underscores the importance of increased accountability in the context of this program.

The fact that relevant data is currently widely dispersed over various agencies and in various formats hinders appropriate oversight efforts. H.R. 1242 would consolidate and transform agency data, as well as other relevant information from other sources into a serialized database hosted by the Department of the Treasury and accessible to the Special Inspector General of the Troubled Assets Relief Program, the Comptroller General, and the Congressional oversight panel. A key component of this database would be the requirement to provide ongoing, continuous, and close to real-time updates to the data available. Consequently, those tasked with monitoring the implementation of the program will be provided with a useful tool to better monitor and trace transactions, and thereby spot potential problems in a timely fashion.

H.R. 1242 constitutes an important step towards greater accountability. Nonetheless, we believe that greater disclosure of who received TARP funding (from primary, over intermediary to final recipients) and relevant documentation of these transactions via a searchable online database *directly to the American taxpayer* is also necessary to provide full transparency and accountability, and we would encourage all Members of Congress to work toward that end.

On behalf of the millions of American taxpayers we represent, we urge you to lend your support to H.R. 1242 and to undertake further efforts to increase transparency and accountability in the TARP program, as well as in other government spending programs.

Sincerely,



ILLINOIS POLICY
INSTITUTE



60 Plus Association, Jim Martin, President
Alabama Policy Institute, Gary Palmer, President
American Shareholders Association, Ryan Ellis, Executive Director
Americans for Limited Government, William Wilson, President
Americans for Prosperity, Tim Phillips, President
Americans for Tax Reform, Grover Norquist, President
Caesar Rodney Institute, Barrett Kidner, Chairman and CEO
Center for Fiscal Accountability, Sandra Fabry, Executive Director
Center for Individual Freedom, Timothy H. Lee, Director of Legal Affairs
Center-Right Coalition of Florida, Rick Watson, Chairman
Coalition Opposed to Additional Spending & Taxes, Christopher P. Finney
Council for Citizens Against Government Waste, Tom Schatz, President
Grassroot Institute of Hawaii, Jamie Story, President
Illinois Alliance for Growth, Gregory Blankenship, President
Illinois Policy Institute, John Tillman, Chairman and CEO
Institute for Liberty, Andrew Langer, President
Maine Heritage Policy Center, Tarren Bragdon, Chief Executive Officer
Mississippi Center for Public Policy, Forest Thigpen, President
National Taxpayers Union, Duane Parde, President
Oklahoma Council of Public Affairs, Inc., Brandon Dutcher, Vice President for Policy
Pelican Institute for Public Policy, Kevin Kane, President
Pioneer Institute for Public Policy Research, Jim Stergots, Executive Director
Rhode Island Tea Party, William Felkner
Small Business Hawaii, Sam Slom, President
Barry M. Arons, The Arons Company, LLC
David Adams, Kentucky Progress
Jack Hoogendyk, Executive Director, Citizens' Voice for Property Owners



Barry E. Silbert
Chief Executive Officer
Tel: 212.473.2408
E-mail: bsilbert@SecondMarket.com

September 17, 2009

**Via Electronic Mail and
Federal Express**

The Honorable Dennis Moore
Chairman, Subcommittee on Oversight and Investigation
2129 Rayburn House Office Building
Washington, DC 20515

**Re: Statement of SecondMarket for Hearing to Examine Role of Technology in
Financial Services Oversight**

Dear Rep. Moore:

I am the Founder and CEO of SecondMarket, Inc. ("SecondMarket"), and I commend the Chairman and the members of this Subcommittee for holding this hearing. As an industry leader in illiquid asset transactions, and having brought asset and pricing transparency to markets that are inherently opaque, SecondMarket greatly appreciates the opportunity to share its views with the Subcommittee on these important issues.

A. Background

Founded in New York City in 2004, SecondMarket is the largest marketplace for trading illiquid assets, including auction-rate securities, bankruptcy claims, limited partnership interests in private equity and hedge funds, warrants and restricted securities in public companies, government warrants, structured products (RMBS, CMBS and CDOs), whole loans and private company stock. We have a network of more than 4,000 buyers and sellers and over \$1 billion in illiquid assets have been traded through SecondMarket's online trading platform in 2009. A key feature and unique aspect of SecondMarket is our independence. Although SecondMarket is a registered broker-dealer, we do not manage, buy, sell or issue any securities and are not affiliated with any financial institution.

The Honorable Dennis Moore
 Chairman, Subcommittee on Oversight and Investigation
 Page 2 of 4

B. Questions

As directed, here are my responses to the Subcommittee's questions:

1. *Please describe technology you are familiar with or have experience using and ways that technology might be applied to improve transparency and oversight of TARP and/or other financial services technology. How would technology benefit those tasked with providing robust oversight and supervision of financial firms and activity?*

Technology is instrumental in creating a robust and transparent marketplace in two ways: (1) it enables marketplaces to reach the critical mass needed for liquidity that is otherwise unobtainable through traditional voice-brokering; and (2) it creates an efficient storage site and distribution channel for information that is fundamentally required to bring transparency and liquidity to markets. The nature of the information can pertain to current bid/ask spreads, historical pricing and/or asset data. By having "toxic" assets traded over a robust, centralized and transparent electronic marketplace where the information is readily accessible, state and federal regulators can better oversee transactions in these traditionally opaque asset classes.

SecondMarket has successfully implemented a transparent, web-based marketplace and auction platform using an open-source infrastructure and a standards-based messaging and interconnectivity architecture. We have also developed a proprietary algorithm used to match buyers and sellers of illiquid assets, and a proprietary auction format designed specifically to address the sale of illiquid assets (our ManhattanAuction™). Using these and other technologies, SecondMarket has created a regulated, transparent, scalable and efficient secondary market to bring increased liquidity to illiquid and/or toxic assets.

2. *Please describe the various costs and benefits the Congress should contemplate when analyzing the use of technology to improve the work of government agencies or programs, especially with regard to the unique nature of monitoring financial services activity.*

Congressional support of efforts to bring pre-trade and post-trade transparency to the trading of toxic assets will provide the Securities and Exchange Commission ("SEC"), the Commodity Futures Trading Commission ("CFTC") and other federal functional regulators with the information they need to better monitor these markets. However, as Congress, the SEC and the CFTC examine how best to bring transparency to the trading of each of the asset classes within the scope of their authority, we would also encourage the Congress, the SEC and the CFTC to move cautiously in this area. Past history in this country and abroad has proven that ill timed efforts to introduce both pre-trade and post-trade transparency to an immature market have the potential to drive immature markets off shore making them much more difficult to surveil.

The Honorable Dennis Moore
 Chairman, Subcommittee on Oversight and Investigation
 Page 3 of 4

We encourage the Congress, the SEC and the CFTC to analyze each potential asset class in light of its market mechanics, relative maturity, or lack thereof, and potential risks to the public and the global financial system when considering new rules related to pre trade and post trade transparency.

3. *Please share any new ideas or applications you have regarding the government's use of technology to improve the efficiency and effectiveness of oversight of the financial marketplace. Similarly, please discuss any pending legislation that would help implement the application and utilization of technology for the purposes of enhancing transparency and oversight of TARP and other government programs.*

SecondMarket believes that going forward, it is imperative these toxic assets be traded over a technology-enabled marketplace that is transparent, centralized and independent. The electronic marketplace must be uniquely suited to understand the idiosyncrasies of toxic and illiquid assets which behave very differently from liquid, freely-traded securities. In addition, we believe that the protocols and technologies used in the marketplaces should support open and widely adopted industry standards so there is no requirement for participants or regulators to implement into costly or complex proprietary systems in order to participate in the financial marketplace.

4. *Please discuss your views on possible security or privacy concerns that could be raised with the use of technology for financial oversight. For example, while it is important to understand the dynamic nature of the housing market, is it necessary for the government or the general public to know about every single homeowner's status on their mortgage payments? What safeguards should be put in place to protect privacy as well as to prevent data breaches or the misuse of information obtained through use of technology?*

SecondMarket does not have a position on this specific query, although we recognize the Government's rightful concern regarding security and privacy issues. SecondMarket respects the privacy of our customers and follows best practices in terms of security audits, authentication and authorization policies, and user validation.

5. *Please describe additional safeguards that should be considered to guard against potential faulty underlying assumptions that various technology applications may utilize for the purposes of oversight and transparency.*

While we do not have an opinion with respect to additional safeguards that should be considered to guard against potential faulty underlying assumptions that various technology applications may utilize for the purposes of oversight and transparency, we do believe a review of existing rules, regulations and supervisory practices by the federal functional regulators is

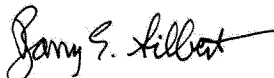
The Honorable Dennis Moore
Chairman, Subcommittee on Oversight and Investigation
Page 4 of 4

appropriate. For example, currently the SEC and other federal regulators have in place programs such as the Automation Review Program ("ARP") that are designed to monitor the use of technology by self regulatory organizations and alternative trading systems. While we support the use of such programs as a means of guarding against technology failures at the front line of surveillance, the self regulatory organizations and the exchanges, we believe these programs are out of date. We would encourage the Congress, and the SEC to reexamine programs like ARP in light of the profound changes that have occurred since they were originally put in place in the early 1990s.

C. Conclusion

We have a unique opportunity to improve oversight and market efficiency through an increased level of transparency through technology. Through increased transparency the SEC and the CFTC will be better able to monitor the trading of a variety of presently opaque markets while promoting more efficient trading and price discovery in a number of immature markets. In consideration of the technological solutions provided in our statement, it is important to note that a meaningful degree of human intervention is still necessary. These assets, from warrants to "legacy assets" to stock in private companies, are complex instruments that will need people involved in the trading process to provide education and guidance into the foreseeable future. As this Subcommittee works its way through these various public policy issues, SecondMarket would welcome the opportunity to contribute in the most constructive way possible to this important dialogue. Thank you very much for your consideration and attention.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Barry E. Silbert". The signature is fluid and cursive, with a long horizontal stroke at the end.

Barry E. Silbert
Chief Executive Officer

CHAMBER OF COMMERCE
OF THE
UNITED STATES OF AMERICA

R. BRUCE JOSTEN
EXECUTIVE VICE PRESIDENT
GOVERNMENT AFFAIRS

1615 H STREET, N.W.
WASHINGTON, D.C. 20062-2000
202/463-5310

June 11, 2009

The Honorable Carolyn Maloney
U.S. House of Representatives
Washington DC 20515

The Honorable Peter King
U.S. House of Representatives
Washington DC 20515

Dear Reps. Maloney and King:

The U.S. Chamber of Commerce, the world's largest business federation representing more than three million businesses and organizations of every size, sector, and region, supports H.R. 1242, the "TARP Accountability and Disclosure Act."

The Chamber supported the passage of the Emergency Economic Stabilization Act (EESA) and the creation of the Toxic Asset Relief Program (TARP) and has continued to support efforts to improve the program to ensure its success.

The Chamber commends you for introducing legislation that would improve the efficiency of information delivery regarding the TARP program and the way in which federal dollars are tracked and monitored. The pure size of the program and its breadth across multiple federal agencies requires a coordinated, technology-driven, and centralized database that will provide policymakers and the public with clear and timely information about how the dollars are being spent.

Access to timely data would also facilitate comprehensive analysis of the program, shining light on its strengths and successes, and identifying the areas in which changes are necessary to maximize the effectiveness of every dollar. A more efficient tracking system would not only make the program more accountable, but also may help instill confidence in TARP and its implementation.

In addition, the Chamber commends you for offering a solution that uses technology to improve the delivery of the information currently held by federal agencies, rather than placing new, duplicative, or costly disclosure requirements on recipients at a time when they are taking steps to cut costs wherever possible.

The Chamber thanks you for your efforts and looks forward to working with you to pass H.R. 1242.

Sincerely,



R. Bruce Josten

October 15, 2009

The Honorable Carolyn B. Maloney
2332 Rayburn HOB
Washington, DC 20515-3214

Dear Representative Maloney:

Pursuant to your question about privacy concerns related to H.R. 1242, which you asked at the hearing on Utilizing Technology to Improve TARP and Financial Oversight, I respectfully request that you enter these remarks in the record as my response on behalf of The Probity Group, LLC.

We support H.R. 1242's intent to create a central database of information to track the recipients, uses and efficacy of TARP expenditures. Such a database would facilitate government oversight and help to ensure the responsible disbursement of taxpayer resources. But the privacy risks must be considered up front—not addressed later in a piecemeal fashion.

We have extensive experience in the design and operation of highly reliable, secure information systems to manage complex situations. Based on our experience, as well as our broad understanding of TARP and the discussions at the hearing, we believe that traditional database solutions are insufficient to safeguard TARP information assets. The multiple connection points, channels, and participants necessary to consolidate so much vital information on a real-time basis create myriad vulnerabilities which can be inadvertently or maliciously exploited. The adverse consequences of such an occurrence could be substantial and widespread, especially when the information at risk has high sensitivity for private individuals and high value for industry participants.

Because TARP information could be abused for significant financial gain—e.g., by exploiting insider information or undermining public confidence—malicious parties would face strong incentives to exploit system vulnerabilities by breaching confidentiality, compromising data integrity, or interrupting the data collection and analysis system's operation altogether. Inadvertent errors could also have dire financial and public confidence repercussions.

Additionally, the level of system vulnerabilities would be high as a result of the interconnection of multiple, dissimilar computer and communications systems, possibly through the public Internet. Individual financial institutions' information technology (IT) infrastructures, security policies and information governance policies differ greatly both from one another and from the systems of the numerous federal entities to which they would be linked. As the Comprehensive National Cyber Security Initiative (CNCI) initiated under President Bush and continued under President Obama has shown, even where individual computer sub-systems (such as database systems) are themselves robust and reasonably secure, the broader network infrastructure in which they operate can be more easily penetrated and is under constant attack.

To protect against the potentially dire repercussions of a breach of institutional or individual privacy, the system architecture surrounding any TARP database must incorporate adequate system safeguards. A core principle for establishing these safeguards should be the system-wide costs—both direct financial costs and those resulting from a loss of public confidence—of the most adverse possible events.

In this connection, it is critical to recognize that the highest-impact risks may not be those with the greatest probability of occurring. The conclusion of a recent report published by the consultancy Deloitte is pertinent:

“Almost 50 percent of Global 1000 companies lost 20 percent or more in share price in less than a month during the past 10 years—some never recovered. Most major losses were as a result of a series of high-impact but low-likelihood events....”

- Deloitte report, “Disarming the Value Killers”

Only a consequence-driven system design can ensure that expenditure levels as well as design and operational priorities are commensurate with the total value-at-risk under TARP. As I emphasized in my testimony, there exist time-proven engineering approaches for designing “resilient” systems that have been used in complex industrial and defense applications, where extremely high levels of system reliability and integrity were essential and successfully achieved. My colleagues at The Probity Group and I urge the committee to continue on its course with H.R. 1242, but to precede the database design and implementation phase with a consequence-driven analysis using systems engineering methods, in order to mitigate the institutional and individual privacy risks so vital to the success of the government’s oversight efforts. The results of this analysis should be clearly communicated to current and future stakeholders.

The Probity Group is eager to provide additional information or support as you prepare to implement H.R. 1242. We appreciate your efforts to protect our privacy as well as our tax dollars.

Sincerely,



Dr. Bennet A. Zelner, on behalf of The Probity Group, LLC

Addendum to Statement of Greg Hahn, Principal,
Crowe Horwath LLP



"Utilizing Technology to Improve TARP and Financial Oversight"

Subcommittee on Oversight & Investigations

Committee on Financial Services

U.S. House of Representatives

Thursday, September 17th, 2009

Addendum Prepared: Tuesday, October 13th, 2009

In response to Congresswoman Maloney's question on data elements to be collected in an overall financial monitoring system, Crowe Horwath LLP would like to provide the following answer. Crowe has developed solutions related to the monitoring and reporting of TARP funds for financial institutions. Based upon a review of the various guidance and requirements issued, Crowe has developed a proof of concept application that would assist financial institutions with their periodic reporting requirements.

The types of data elements Crowe has collected for this proof of concept fall into the following broad categories:

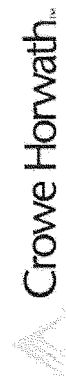
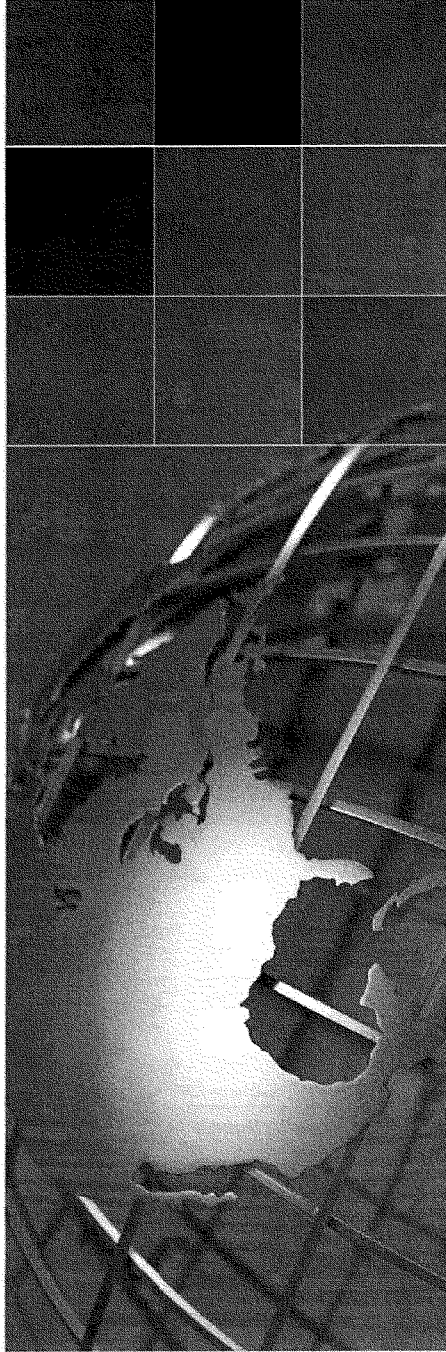
- Level of government funding;
- Securitization;
- Corporate governance;

- Use of funds;
- Restriction compliance;
- Foreclosure mitigation;
- Marketing and public relation efforts to increase lending activity;
- TARP Funds repayment;
- Balance sheet analysis;
- Loan portfolio strength and diversity; and
- Acquisitions; and
- TARP oversight.

Through leveraging the dynamic platform we discussed during our testimony, the Crowe Activity Review SystemTM (CARSTM), Crowe has developed a proof of concept that has the flexibility to gather information dynamically, which allows the application to scale to multiple types of institutions, ranging from community banks to large, complex financial institutions. This flexibility at the data collection level, allows the information to be stored and reported consistently, but

also be specific to the institution and its unique requirements. As we continue to work with our clients in developing solutions to comply with not only TARP requirements, but other regulatory compliance requirements, Crowe will focus on developing frameworks that deliver on three basic principals: consistency, scalability, and flexibility.

Crowe Horwath would like thank the Committee for the opportunity to present this Addendum. Additional information on our TARP management and reporting proof of concept is included.



Crowe Horwath[®]

TARP Management & Reporting Proof of Concept

For Banks Receiving Government Funds Under CPP

October 9, 2009

TARP Implications

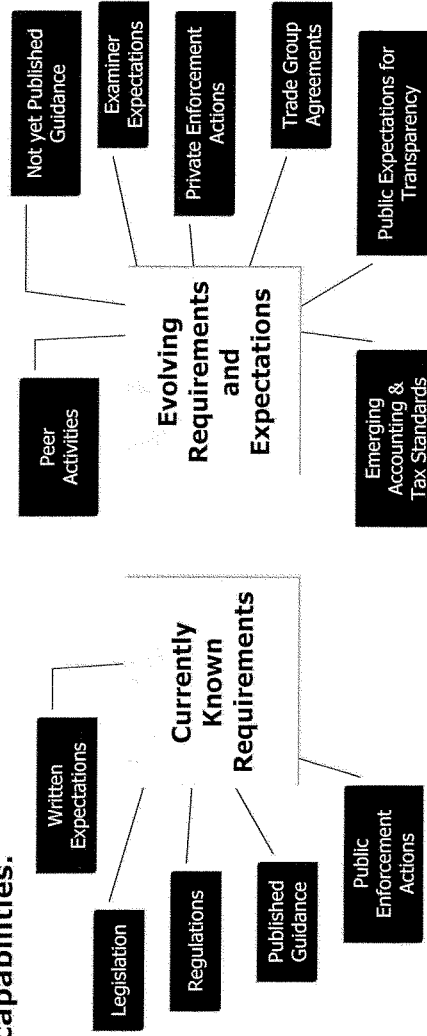
- **What does taking TARP / CPP Funds mean to a financial organization going forward?**

- Extra reporting
- Increased transparency
- Extra oversight
- On-going communication to a broad group of stake holders
- Limits on certain expenditures
- Mandated and voluntary community outreach
- Restrictions on executive compensation
- More active board oversight

In summary, more costs to remain compliant with obligations that accompany the funds accepted from the federal government.

Evolving Requirements

- The challenge for financial organizations is the evolving and changing requirements closely linked to the acceptance of TARP funds. Both known and evolving requirements must be combined and managed to formulate sounds and on-going reporting capabilities.



Crowe Horwath LLP is a member of Horwath International Association, a Swiss association (Horwath). Each member firm of Horwath is a separate and independent legal entity. Crowe Horwath LLP is not affiliated with, and does not control, Horwath International Association. Crowe Horwath LLP is not responsible for any actions or omissions of Horwath or any other Horwath member. Accountancy services in several states are rendered by Crowe Horwath & Company LLC, which is a member of Horwath. © 2008 Crowe Horwath LLP

- **The Crowe Management and Reporting Solution provides:**

- A Web based application that captures and stores all necessary information
- A comprehensive series of dynamic questions that adapt to the individual organization and drives the reporting process
- Narrative reports that are produced automatically and tailored for different audiences
- Justification backed by facts for decisions that have been made and actions that have been taken
- Complete dashboard visuals
- A configurable architecture that can be changed as requirements evolve
- Links, where appropriate to sources of data and output media

- Costs associated with doing too much or too little are minimized
- The tedious task of researching a very complex legal issue is removed
- Risks of inaccurate or incomplete reporting are reduced

- Risk reduction
- Transparency
- Accountability
- Reputation
- Flexibility
- Total cost of reporting

The Proof of Concept

- **The Crowe Reporting Solution**

- Crowe instantiates the known and emerging requirements into a tool
- Crowe maintains these requirements in the platform
- The tool gathers specific information on the institution to determine an appropriate level of data gathering
- A dynamic process takes the bank through a series of probing questions
- Integrations to legacy / core systems capture key information as appropriate
- The output is:
 - o Tailored reports for each stakeholder type:
 - ✓ Bank Management
 - ✓ Regulators, Examiners
 - ✓ Bank employees
 - ✓ Customers / Public
 - o Tailored dashboards for each stakeholder type as well

Concept Ideas

• Questions probe for information regarding:

- Underlying use of government funding
- Adherence to compliance standards
- Evidence of sound governance practices
- Any non conformance with restrictions
- Plan progress
- Acceleration or delays in plans

- Sample questions:
 - What is the banks current capitalization ratio?
 - Have preferred stock dividends been paid?
 - What would lending have been without government funding?
 - What communities are being served?
 - Have funds been used to fund acquisitions?
 - Has oversight committee met during the last reporting period?
 - Have any "unnecessary expenditures" been approved?

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Workbench

Workbench

Questions

Narrative

Narrative 2

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Documents

Starting Block

Institution Name

Address of Corporate Headquarters

City

State

Zip

Asset Size

<2B

3-5B

6-20B

21-100B

Money Center

Regional Bank

Community Bank

Investment Bank

Please Select Bank Category

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Synedop Bank and Trust is a \$20 Billion bank holding company headquartered in Pennsylvania. It is a regional bank that operates 250 banking centers under the regulatory supervision of the OCC.

On October 28, 2008 the bank entered into an agreement with the US Department of Treasury to exchange senior preferred stock (\$1000 par) for \$361 million in government capital funding under the TARP (troubled asset relief program).

It is the bank's responsibility to put these funds to work quickly, prudently, and transparently by increasing the available funds for lending and liquidity. The TARP funding is intended to be used to help the American people who are facing financial hardships and to support businesses in the communities that we serve.

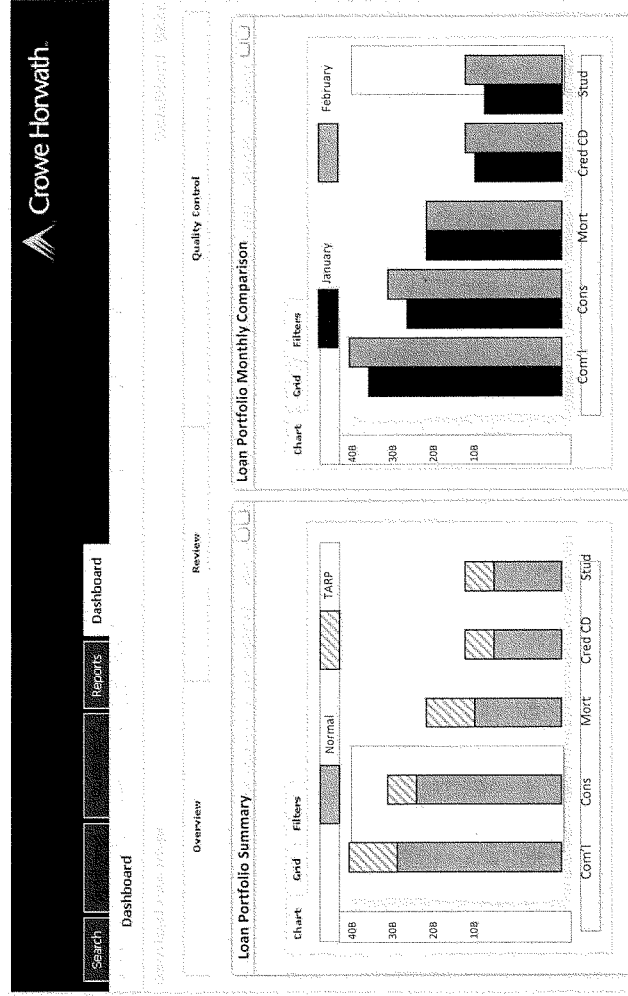
In order to assure complete transparency, an oversight committee has been formed whose membership is made up of our Vice Chairman, CFO, General Counsel, Chief Risk Officer, and other line of business heads. The duties of this committee include: approving the use of TARP funds, requiring reports from each business unit regarding the use of funds, submitting reports to the board of directors, and providing overall oversight and monitoring.

In order to assure complete transparency, an oversight committee has been formed whose membership is made up of our Vice Chairman, CFO, General Counsel, Chief Risk Officer, and other line of business heads. The duties of this committee include: approving the use of TARP funds, requiring reports from each business unit regarding the use of funds, submitting reports to the board of directors, and providing overall oversight and monitoring.

Our board of directors was responsible for: appointing committee members, establishing committee guidelines, and establishing the reporting guidelines.

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Documentation about Bank Filings

The list of bank filings, which are all derived from publically available sources, refers either to filings that are specific to banks or are general filings that any public corporation must file. The list was compiled from federal agency sites (e.g. Treasury, FFIEC, FinCEN, SEC, etc) and each entry contains a link to those sites (except for the aggregate link for a portion of SEC filings).

We are aware, through disclosures made by certain filing institutions, that some banks may file additional documents for which there is no public documentation (e.g. the FED Bank Liquidity Report). The enclosed list does not contain such filings nor do they contain any other filings for which there is no public reference. We believe that this list contains the most complete listing of required bank filings, with the caveat that there may be additional reports that are required from agencies to which we have not had access or filings that are not a matter of public record.

This list of filings is subject to continual change and has been updated as of July 1, 2009. As we move forward, we will capture new filings and maintain historical filings as requirements demand. In addition, it should be noted that not every institution files every type of filing contained on the list.

Also, insurance companies file regulatory documents with states rather than the federal government. Although we have access to these state filings, they are not part of the federal filing system and are, therefore, not part of this list.

Finally, filings that are triggered by events and transactions are filed as a specific event occurs (usually within 48 hours) and in certain cases are updated at intervals ranging from every year to every five years. The enclosed list also sets forth the frequency of filings that are not triggered by a specific event.

Any further questions please contact;

Steve Horne
Steve.horne@dowjones.com
646-942-6194

Filings Required By Banks and Financial Institutions

As of July 1, 2009

Filing Type	Period
Financial Statements	
FR 2314/FR 2314S	Quarterly
<i>Financial Statements of Foreign Subsidiaries of U.S. Banking Organizations</i>	
These reports collect selected financial information for direct or indirect foreign subsidiaries of U.S. state member banks (SMBs), Edge and agreement corporations, and bank holding companies (BHCs). The FR 2314 consists of a balance sheet and income statement; information on changes in equity capital, changes in the allowance for loan and lease losses, off-balance-sheet items, and loans; and a memoranda section. The FR 2314S collects four financial data items for smaller, less complex subsidiaries.	
FR 2644	Weekly
<i>Weekly Report of Selected Assets and Liabilities of Domestically Chartered Commercial Banks and U.S. Branches and Agencies of Foreign Banks</i>	
This report collects weekly data on the outstanding amount of selected balance sheet items, including items on loans, securities, and borrowings, from a sample of member and nonmember domestically chartered commercial banks and U.S. branches and agencies of foreign banks. Data collected on this report parallel the quarterly Consolidated Reports of Condition and Income (Call Report).	
FR 2886b	Quarterly
<i>Consolidated Report of Condition and Income for Edge and Agreement Corporations</i>	
This report collects financial data from banking Edge and agreement corporations and from nonbanking Edge and agreement corporations in the form of a balance sheet and accompanying memorandum items, supporting schedules, and income statement.	
FR Y-11/FR Y-11S	Quarterly or annually, as of close of business the last calendar day of the quarter, based on the thresholds
<i>Financial Statements of U.S. Nonbank Subsidiaries of U.S. Bank Holding Companies</i>	
These reports collect selected financial information for individual U.S. nonbank subsidiaries of domestic bank holding companies (BHCs). The FR Y-11 consists of a balance sheet and income statement; information on changes in equity capital, changes in the allowance for loan and lease losses, off-balance-sheet items, and loans; and a memoranda section. The FR Y-11S collects four financial data items for less significant subsidiaries.	
FR Y-11I	Annual

<i>Annual Financial Statements of Nonbank Subsidiaries of Bank Holding Companies</i>	
This form has been replaced by the FR Y-11S (Abbreviated Financial Statements of U.S. Nonbank Subsidiaries of U.S. Bank Holding Companies).	
FR Y-12	Quarterly and end of June and December
<i>Consolidated Bank Holding Company Report of Equity Investments in Nonfinancial Companies</i>	
This report collects information from certain domestic bank holding companies (BHCs) on their equity investments in nonfinancial companies on four schedules: Type of Investments, Type of Security, Type of Entity within the Banking Organization and Nonfinancial Investment Transactions During the Reporting Period.	
FR Y-12A	Annually
<i>Annual Report of Merchant Banking Investments Held for an Extended Period</i>	
Data from the FR Y-12A provide the Federal Reserve with information concerning merchant banking investments that are approaching the end of the holding period permissible under Regulation Y. A financial holding company (FHC) generally would have to submit a FR Y-12A if it holds shares, assets, and other ownership interests of companies engaged in nonfinancial activities under merchant banking investment authority for longer than eight years (or thirteen years in the case of an investment held through a qualifying private equity fund).	
FR Y-20	Quarterly
<i>Financial Statements for a Bank Holding Company Subsidiary Engaged in Bank-Ineligible Securities Underwriting and Dealing</i>	
This report is filed by a designated bank holding company (BHC) for its subsidiary that engages in limited securities underwriting and dealing activities. The FR Y-20 consists of a Memoranda Schedule and Statement of Income. The information is needed to monitor compliance with the Board's revenue test.	
FR Y-6	Annually
<i>Annual Report of Bank Holding Companies</i>	
This report is filed by all top-tier bank holding companies and consists of the requirement that top-tier bank holding companies not registered with the Securities and Exchange Commission (SEC) submit a copy of its an annual report to shareholders if one is created. The FR Y-6 also requires the submission of an organizational chart, an annual verification of domestic branches within the organization, and includes information on the identity, percentage ownership, and business interests of principal shareholders, directors, and executive officers.	
FR Y-7	Annually
<i>Annual Report of Foreign Banking Organizations</i>	
The FR Y-7 is an annual report of foreign banking organizations (FBOs) that have a U.S. banking presence. The report collects financial statements, organizational structure information, shares and shareholder information, and data on the eligibility to be a qualified FBO as defined in Regulation K.	
FR Y-7N/FR Y-7NS	Quarterly or Annually

<i>Financial Statements of U.S. Nonbank Subsidiaries Held by Foreign Banking Organizations</i>	
These reports collect financial information for U.S. nonbank subsidiaries held by foreign banking organizations (FBOs) other than through a U.S. bank holding company or bank. The FR Y-7N consists of a balance sheet and income statement; information on changes in equity capital, changes in the allowance for loan and lease losses, off-balance-sheet items, and loans; and a memoranda section. The FR Y-7NS collects four financial data items for smaller, less complex subsidiaries.	
<u>FR Y-7Q</u>	Quarterly or annually, as of close of business the last calendar day of the quarter or the FBO's fiscal quarter.
<i>The Capital and Asset Report for Foreign Banking Organizations</i>	
The FR Y-7Q report collects consolidated regulatory capital information from all foreign banking organizations (FBOs) either quarterly or annually. FBOs that have effectively elected to become financial holding companies (FHCs) are required to report the FR Y-7Q on a quarterly basis. All other FBOs (those that have not elected to become FHCs) are required to report the FR Y-7Q annually.	
<u>FR Y-8</u>	Quarterly
<i>The Bank Holding Company Report of Insured Depository Institutions' Section 23A Transactions with Affiliates</i>	
This report collects information on transactions between an insured depository institution and its affiliates that are subject to section 23A of the Federal Reserve Act. The FR Y-8 comprises a cover page, a declaration page, and a fourteen-item report form page.	
<u>FR Y-9C</u>	Quarterly
<i>Consolidated Financial Statements for Bank Holding Companies</i>	
This report collects basic financial data from a domestic bank holding company (BHC) on a consolidated basis in the form of a balance sheet, an income statement, and detailed supporting schedules, including a schedule of off balance-sheet items.	
<u>FR Y-9CS</u>	Quarterly
<i>Supplement to the Consolidated Financial Statements for Bank Holding Companies</i>	
The FR Y-9CS is a supplemental report that may be utilized to collect additional information deemed to be critical and needed in an expedited manner from bank holding companies. The items of information included on the supplement may change as needed. In 2008, the supplement was used as a vehicle for one-time data collection for the Loss Data Collection Exercise (LDCE) related to operational risk under the Basel II Risk-Based Capital Framework and coordinated by the Bank for International Settlements in Basel, Switzerland.	
<u>FR Y-9ES</u>	Annually
<i>Financial Statements for Employee Stock Ownership Plan Bank Holding Companies</i>	

This report collects financial information from employee stock ownership plans (ESOPs) that are also bank holding companies (BHCs) on their benefit plan activities. It consists of four schedules: Statement of Changes in Net Assets Available for Benefits, Statement of Net Assets Available for Benefits, Memoranda, and Notes to the Financial Statements.	
FR Y-9LP	Quarterly
<i>Parent Company Only Financial Statements for Large Bank Holding Companies</i>	
This report collects basic financial data from a domestic bank holding company (BHC) on a consolidated, parent-only basis in the form of a balance sheet, an income statement, and supporting schedules relating to investments, cash flow, and certain memoranda items.	
FR Y-9SP	Semi-annually
<i>Parent Company Only Financial Statements for Small Bank Holding Companies</i>	
This report collects basic financial data from small domestic holding companies on a parent-only basis in the form of a balance sheet, an income statement, and a schedule for certain memoranda items.	
Applications/structure change	
FR 2030	Event Generated
<i>Application for the Issuance of Federal Reserve Bank Stock--Organizing National Bank</i>	
The FR 2030 is an application for the issuance of Federal Reserve Bank stock and is submitted by de novo national banks. The application requires a resolution by the applying bank's board of directors authorizing the transaction, an indication of the capital and surplus of the bank, and an indication of the number of shares and dollar amount of Federal Reserve Bank stock to be purchased.	
FR 2030a	Event Generated
<i>Application for the Issuance of Federal Reserve Bank Stock--Nonmember State Bank Converting to National Bank</i>	
The FR 2030a is an application for the issuance of Federal Reserve Bank stock and is submitted by nonmember state banks converting into national banks. The application requires a resolution by the applying bank's board of directors authorizing the transaction, an indication of the capital and surplus of the bank, and an indication of the number of shares and dollar amount of Federal Reserve Bank stock to be purchased.	
FR 2056	Event Generated
<i>Application for Adjustment in Holdings of Federal Reserve Bank Stock</i>	
The FR 2056 is an application for adjustment of holdings of Federal Reserve Bank stock and must be filed each time an adjustment is made. The application requires information on the capital and surplus of the bank and the amount by which Federal Reserve Bank stock should be increased or decreased.	
FR 2060	Event Generated
<i>Survey to Obtain Information on the Relevant Market in Individual Merger Cases</i>	

Survey form FR 2060 is used in the collection of information from consumers and small businesses to determine whether they generally rely on local providers of financial services or obtain services from a broader geographic area such as a state or the entire country. The survey is conducted by telephone.	
FR 2070	Event Generated
<i>Interagency Bank Merger Act Application</i>	
This application must be filed by a state member bank before merging or consolidating with an insured depository institution, acquiring its assets (either directly or indirectly), or assuming the liability for any of its deposits (either directly or indirectly). It collects information on the basic legal and structural aspects of the proposed merger, consolidation, other combined transactions between nonaffiliated parties, or corporate reorganization between affiliated parties. It also collects information from state member banks that propose to establish a branch or branches pursuant to section 9 of the Federal Reserve Act.	
FR 2081a	Event Generated
<i>Interagency Notice of Change in Bank Control</i>	
An FR 2081 report must be filed before a transaction resulting in a change in ownership or management of a state member bank or a bank holding company. This interagency information collection consists of three forms: Notice of Change in Control (FR 2081a), Notice of Change in Director or Senior Executive Officer (FR 2081b), and Biographical and Financial Report (FR 2081c). The FR 2081a and FR 2081b provide a detailed description of a proposed change in ownership or management, respectively. The FR 2081c is used by individuals and is filed in conjunction with the other reports to provide supporting financial and employment data.	
FR 2081b	FR 2081a and FR 2081b must be filed at least sixty days and thirty days, respectively, prior to the proposed changes. The FR 2081c must be filed along with both the FR 2081a and FR 2081b, as well as with other applications
<i>Interagency Notice of Change in Director or Senior Executive Officer</i>	
An FR 2081 report must be filed before a transaction resulting in a change in ownership or management of a state member bank or a bank holding company. This interagency information collection consists of three forms: Notice of Change in Control (FR 2081a), Notice of Change in Director or Senior Executive Officer (FR 2081b), and Biographical and Financial Report (FR 2081c). The FR 2081a and FR 2081b provide a detailed description of a proposed change in ownership or management, respectively. The FR 2081c is used by individuals and is filed in conjunction with the other reports to provide supporting financial and employment data.	

<u>FR 2081c</u>	The FR 2081a and FR 2081b must be filed at least sixty days and thirty days, respectively, prior to the proposed changes. The FR 2081c must be filed along with both the FR 2081a and FR 2081b, as well as with other applications.
<i>Interagency Biographical or Financial Report</i>	
An FR 2081 report must be filed before a transaction resulting in a change in ownership or management of a state member bank or a bank holding company. This interagency information collection consists of three forms: Notice of Change in Control (FR 2081a), Notice of Change in Director or Senior Executive Officer (FR 2081b), and Biographical and Financial Report (FR 2081c). The FR 2081a and FR 2081b provide a detailed description of a proposed change in ownership or management, respectively. The FR 2081c is used by individuals and is filed in conjunction with the other reports to provide supporting financial and employment data.	
<u>FR 2083/A/B/C</u>	Event Generated
<i>Application for Membership in the Federal Reserve System</i>	
This application is a required one-time submission for institutions, other than national banks, seeking membership in the Federal Reserve System. The information provided on this application allows the Federal Reserve to evaluate the statutory criteria for admitting a new or existing bank into membership. The application collects financial and managerial information and information on competition and the convenience and needs of the community and is submitted to the appropriate Federal Reserve Bank. The FR 2083 provides general information and instructions with respect to membership. A related Application for Federal Reserve Bank Stock is submitted by state-chartered banks and mutual savings banks through the FR 2083A and FR 2083B respectively. The FR 2083C includes certifications to be provided by the applicant's organizers or directors.	
<u>FR 2086</u>	Event Generated
<i>Application for the Cancellation of Federal Reserve Bank Stock--Liquidating Member Banks</i>	
The FR 2086 is an application for the cancellation of Federal Reserve Bank stock. The FR 2086 requires a resolution by the applying bank's stockholders or board of directors.	
<u>FR 2086a</u>	Event Generated
<i>Application for the Cancellation of Federal Reserve Bank Stock-- Member Bank Converting into or Merging with a Member or Nonmember Bank</i>	
The FR 2086a is an application for the cancellation of Federal Reserve Bank stock. FR 2086a requires a resolution by the applying bank's stockholders or board of directors.	
<u>FR 2087</u>	Event Generated
<i>Applications for the Cancellation of Federal Reserve Bank Stock-- Insolvent Member Banks</i>	
The FR 2087 is an application for the cancellation of Federal Reserve Bank stock. The FR 2087 is submitted by the appointed receiver of an insolvent member bank.	

FR K-1	Event Generated
<i>International Applications and Prior Notifications under Subparts A and C of Regulation K</i>	
The FR K-1 comprises a set of applications and notifications for banking organizations to establish foreign branches or Edge or agreement corporations, to invest in other foreign organizations, or to engage in new activities. They collect financial and managerial information and information on the company to be acquired or the activities to be engaged in.	
FR K-2	Event Generated
<i>International Applications and Prior Notifications Under Subpart B of Regulation K</i>	
The FR K-2 comprises a set of applications and notifications for foreign banking organizations seeking to open a branch, agency, or commercial lending company or representative office in the United States. The applications and notifications collect information on the operations, structure, and ownership of the applicant or notificant; the proposed office; the financial condition of the applicant or notificant; home country supervision; and the anti-money-laundering laws and regulations of the applicant or notificant's home country.	
FR Y-10	30 days of reportable transaction event
<i>Report of Changes in Organizational Structure</i>	
FR Y-3	Event Generated
<i>Application for Prior Approval to Become a Bank Holding Company, or for a Bank Holding Company to Acquire an Additional Bank or Bank Holding Company</i>	
The application collects information on proposed bank holding company (BHC) formations, acquisitions, and mergers. The information includes the pro forma financial condition of the applicant and of its proposed subsidiary(ies), the competitive effects of the proposal, and the effect of the proposed action on the convenience and needs of the affected communities.	
FR Y-3F	Within 7 days of publication
<i>Application for a Foreign Organization to Acquire a U.S. Bank or Bank Holding Company</i>	
The FR Y-3F collects comprehensive and systematic data on the structure of the proposed transaction, on its likely competitive effects, on its likely effects on the convenience and needs of the public, and on the present and pro forma financial condition of the applicant and its proposed subsidiary(ies).	
FR Y-3N	Event Generated
<i>Notification for Prior Approval to Become a Bank Holding Company, or for a Bank Holding Company to Acquire an Additional Bank or Bank Holding Company</i>	
The notification collects information on proposed bank holding company (BHC) formations, acquisitions, and mergers. The FR Y-3N is filed by BHCs meeting certain qualifications described in Regulation Y and requires less information and processing time than the FR Y-3 application.	

FR Y-4	Event Generated
<i>Notification for Prior Approval to Engage Directly or Indirectly in Certain Nonbanking Activities</i>	
The notification collects information on proposed nonbanking activities by bank holding companies (BHCs). Different levels of detail are provided from BHCs depending on whether they meet certain qualifying criteria and the types of nonbanking activities in which they wish to engage. The complete notification procedure requires the most detail, including information on the activities to be conducted, the companies involved in the activities, public benefits, and financial and managerial information. Less detail is required under the expedited notification and the post-consummation procedures. The information requirements for each procedure are specified in Regulation Y.	
FFIEC	
FFIEC 001	
<i>Annual Report of Trust Assets</i>	
The Board of Governors of the Federal Reserve System discontinued the Annual Report of Trust Assets (FFIEC 001; OMB No. 7100-0031), effective with the December 31, 2001, report. The Federal Reserve had collected the FFIEC 001 report from all state member banks that had been granted trust powers and from trust company subsidiaries of bank holding companies not otherwise supervised by a federal banking agency. The purpose of the report was to provide information on the volume and character of discretionary fiduciary activities exercised by such institutions.	
As of December 31, 2001, almost all FFIEC 001 respondents report substantially similar information on Schedule RC-T, "Fiduciary and Related Services," on the quarterly bank Consolidated Reports of Condition and Income (Call Report) (FFIEC 031 and 041, OMB No. 7100-0036). The Federal Reserve has determined that the trust activities information of supervisory interest conducted by the remaining trust companies, FFIEC 001 respondents, can be monitored by other means. Therefore, the FFIEC 001 report is no longer required.	
FFIEC 002	Quarterly
<i>Report of Assets and Liabilities of U.S. Branches and Agencies of Foreign Banks</i>	
This report is mandated by the International Banking Act (IBA) of 1978. It collects balance sheet and off-balance-sheet information, including detailed supporting schedule items, from all U.S. branches and agencies of foreign banks.	
FFIEC 002s	Quarterly
<i>Report of Assets and Liabilities of Non-U.S. Branches That Are Managed or Controlled by a U.S. Branch or Agency of a Foreign (Non-U.S.) Bank</i>	
This report collects information on assets and liabilities of any non-U.S. branch that is managed or controlled by a U.S. branch or agency of a foreign bank.	
FFIEC 004	Annually

<i>Report on Indebtedness of Executive Officers and Principal Shareholders and their Related Interests to Correspondent Banks</i>	
Form FFIEC 004 collects information from "each executive officer and each principal shareholder of an insured bank who was indebted, or whose related interests were indebted, during the calendar year for which the information is being submitted to a correspondent bank of their bank." Each officer or shareholder must file information on the maximum amount of his or her indebtedness to each correspondent bank as well as separate information on the indebtedness of each of the related interests of the officer or shareholder to each correspondent bank. State member banks must furnish a list of their correspondent banks to their executive officers and principal shareholders, keep records of the information submitted by the officers and shareholders, and provide to the public upon request a list of names of officers and shareholders to whom a correspondent bank of the member bank had an extension of credit in excess of the specified minimum level.	
FFIEC 006	
<i>Annual Report of International Fiduciary Activities</i>	
The Board of Governors of the Federal Reserve System discontinued the Annual Report of International Fiduciary Activities (FFIEC 006; OMB No. 7100-0031), effective with the December 31, 2001, report. The Federal Reserve had collected the FFIEC 006 annual year-end report from foreign banking affiliates of U.S. banking organizations that engaged in foreign fiduciary activities. The purpose of the report was to collect information about the scope and volume of international fiduciary activities conducted by these institutions. Information collected was used in the supervision and examination of fiduciary activities by the federal supervisory agencies.	
As of December 31, 2001, all FFIEC 006 respondents report substantially similar information on Schedule T, "Fiduciary and Related Services," on the quarterly Report of Assets and Liabilities of U.S. Branches and Agencies of Foreign Banks (FFIEC 002, OMB No. 7100-0032). Therefore, the FFIEC 006 report is no longer required.	
FFIEC 009/FFIEC 009a	Quarterly
<i>Country Exposure Report/Country Exposure Information Report</i>	
This report collects detailed information on the distribution, by country, of claims on foreigners held by U.S. banks and bank holding companies. The FFIEC 009a is a supplement to the FFIEC 009 and provides specific information about the reporting institutions' exposures in particular countries.	
FFIEC 019	Quarterly
<i>Country Exposure Report for U.S. Branches and Agencies of Foreign Banks</i>	
This report collects information, by country, from U.S. branches and agencies of foreign banks on direct, indirect, and total adjusted claims on foreign residents. The report also collects information about the respondents' direct claims on related non-U.S. offices domiciled in countries other than the home country of the parent bank that are ultimately guaranteed in the home country. A breakdown of adjusted claims on unrelated foreign residents provides exposure information.	
FFIEC 030/FFIEC 030S	Quarterly

<i>Foreign Branch Report of Condition/Abbreviated Foreign Branch Report of Condition</i>	
These reports collect information on the structure and geographic distribution of foreign branch assets, liabilities, derivatives, and off-balance-sheet data. Derivative items include futures and forward contracts, option contracts, and the notional value of outstanding interest rate swaps. Off-balance-sheet items include commitments to purchase foreign currencies and U.S. dollar exchange and letters of credit. The FFIEC 030S collects five financial data items for smaller, less complex branches.	
FFIEC 031	Quarterly
<i>Consolidated Reports of Condition and Income for a Bank with Domestic and Foreign Offices</i>	
This report collects basic financial data from commercial banks in the form of a balance sheet, an income statement, and supporting schedules. The Report of Condition schedules provide details on assets, liabilities, and capital accounts. The Report of Income schedules provide details on income and expenses.	
FFIEC 041	Quarterly
<i>Consolidated Reports of Condition and Income for a Bank with Domestic Offices Only</i>	
This report collects basic financial data of commercial banks in the form of a balance sheet, an income statement, and supporting schedules. The Report of Condition schedules provide details on assets, liabilities, and capital accounts. The Report of Income schedules provide details on income and expenses.	
FFIEC 101	Quarterly
<i>Risk-Based Capital Reporting for Institutions Subject to the Advanced Capital Adequacy Framework</i>	
Reporting Schedules A through S collect information about the components of reporting entities' regulatory capital, risk weighted assets by type of credit risk exposure under the Advanced Internal Ratings-Based Approach, and risk weighted assets and operational losses under the Advanced Measurement Approach.	
Monetary policy	
FR 2006	Annual
<i>Annual Survey of Eligible Bankers' Acceptances</i>	

<p>The Annual Survey of Eligible Bankers' Acceptances (FR 2006; OMB No. 7100-0055) has been discontinued, effective July 31, 2001. This voluntary survey provided detailed information on eligible U.S. dollar-denominated acceptances payable in the United States. The data were reported as of September 30 by U.S. commercial banks, U.S. branches and agencies of foreign banks, and Edge and agreement corporations having significant issuance of such acceptances. The information was used to construct monetary and credit aggregates, to construct the domestic nonfinancial debt aggregate monitored by the Federal Open Market Committee, and to calculate short- and intermediate-term business credit. The usefulness of the FR 2006 report had declined, for three reasons: (1) Calculation of L, the monetary aggregate that contained bankers' acceptances, had been discontinued in December 1998; (2) the Call Report had replaced the FR 2006 as the source of data on bankers' acceptances for calculating the debt aggregate; and (3) the relatively small size of the bankers' acceptances market called into question the need for the survey. The Board staff concluded th</p>	
FR 2051a	Weekly
<p><i>Money Market Mutual Fund Assets Report</i></p>	
<p>The Investment Company Institute (ICI), the trade organization for mutual funds, collects and provides data weekly to the Federal Reserve on total net value of outstanding shares (total assets less expenses and management fees) of money market mutual funds (MMMFs).</p>	
FR 2415	Weekly
<p><i>Report of Repurchase Agreements (RPs) on U.S. Government and Federal Agency Securities with Specified Holders</i></p>	
<p>The Board of Governors of the Federal Reserve discontinued the Report of Repurchase Agreements (RPs) on U.S. Government and Federal Agency Securities with Specified Holders (FR 2415; OMB No. 7100-0074) in March 2006. In November 2005, the Federal Reserve decided to cease collecting, constructing, and publishing the M3 monetary aggregate, effective in March 2006. As a result of the Federal Reserve's decision to cease constructing the M3 monetary aggregate, data collected on the FR 2415 are no longer needed.</p>	
<p>This voluntary report collected one data item, RPs, in denominations of \$100,000 or more, in immediately available funds, on U.S. government and federal agency securities, transacted with specified holders. Depository institutions filed the FR 2415 report weekly, quarterly, or annually, depending on the volume of their RPs. The primary use of the data was to construct the RP component of the M3 monetary aggregate. The data were also used for analysis of depository institutions' funding practices.</p>	
<p>The analysis of bank liability management can be adequately handled by liabilities reported on the Weekly Report of Assets and Liabilities for Large Banks (FR 2416; OMB No. 7100-0075); Weekly Report of Selected Assets (FR 2644; OMB No. 7100-0075); and Weekly Report of Assets and Liabilities for Large U.S. Branches and Agencies of Foreign Banks (FR 2069; OMB No. 7100-0030) (bank credit reports).</p>	

FR 2900 (Branches and Agencies)	Weekly respondents submit daily data for a Tuesday-through-Monday reporting week. Quarterly respondents submit daily data for the week beginning with the third Tuesday and continuing through the following Monday in March, June, September, and December.
FR 2900 (Commercial Banks)	Weekly respondents submit daily data for a Tuesday-through-Monday reporting week. Quarterly respondents submit daily data for the week beginning with the third Tuesday and continuing through the following Monday in March, June, September, and December.
FR 2900 (Credit Unions)	Weekly respondents submit daily data for a Tuesday-through-Monday reporting week. Quarterly respondents submit daily data for the week beginning with the third Tuesday and continuing through the following Monday in March, June, September, and December.
FR 2900 (Savings and Loans)	Weekly respondents submit daily data for a Tuesday-through-Monday reporting week. Quarterly respondents submit daily data for the week beginning with the third Tuesday and continuing through the following Monday in March, June, September, and December.
<i>Report of Transaction Accounts, Other Deposits and Vault Cash</i>	
This report collects information on transaction accounts, time and savings deposits, vault cash, and other reservable obligations from depository institutions.	
FR 2910a	Annually
<i>Annual Report of Deposits and Reservable Liabilities</i>	

<p>The FR 2910a is an annual report generally filed by depository institutions that are exempt from reserve requirements under the Garn-St Germain Depository Institutions Act of 1982 and whose total deposits, measured from depository institutions' December quarterly condition reports, are greater than the exemption amount but less than the reduced reporting limit. The report contains three data items that are to be submitted for a single day, June 30: (1) total transaction accounts, savings deposits, and small time deposits; (2) reservable liabilities; and (3) net transaction accounts.</p>	
<p><u>FR 2915</u></p>	<p>Respondents file the report for the week beginning on the third Tuesday of the given month and ending the following Monday each March, June, September, and December.</p>
<p><i>The Report of Foreign (Non-U.S.) Currency Deposits</i></p>	
<p>This report collects the weekly average amount outstanding of deposits denominated in foreign (non-U.S.) currencies, held at U.S. offices of depository institutions that are included in the Report of Transaction Accounts, Other Deposits and Vault Cash (FR 2900). Deposits are reported in U.S. dollars.</p>	
<p><u>FR 2930</u></p>	<p>Annual</p>
<p><i>Allocation of Low Reserve Tranche and Reservable Liabilities Exemption for U.S. Branches and Agencies of Foreign Banks and Edge and Agreement Corporations</i></p>	
<p>This report provides information on the allocation of the low reserve tranche and the reservable liabilities exemption for depository institutions with offices in more than one state or Federal Reserve District or for those operating under operational convenience.</p>	
<p><u>FR 2950 (Commercial Banks)</u></p>	<p>Quarterly</p>
<p><u>FR 2950 (Credit Unions)</u></p>	<p>Quarterly</p>
<p><u>FR 2950 (Savings and Loans)</u></p>	<p>Quarterly</p>
<p><i>Report on Certain Eurocurrency Transactions</i></p>	
<p>The Board of Governors of the Federal Reserve System discontinued The Report of Certain Eurocurrency Transactions from all Depository Institutions Other Than U.S. Branches and Agencies of Foreign Banks (FR 2950; OMB No. 7100-0087), effective after the report week ending June 7, 2004. Quarterly reporters of the Report of Transaction Accounts, Other Deposits and Vault Cash (FR 2900; OMB No. 7100-0087) submitted their last FR 2950 for the report week ending March 22, 2004. The FR 2950 data had been used in the calculation of reserve requirements on net Eurocurrency liabilities. Although the Board reduced the reserve requirement ratio on net Eurocurrency liabilities to zero in 1991, the data were still collected just in case the ratio was raised above zero at a later date. Recognizing that these data are necessary only for annual indexation purposes and not for purposes of calculating reserve requirements or the monetary aggregates, the Federal Reserve has added "net Eurocurrency liabilities" to the FR 2900 reporting form. Certain Eurocurrency items were added to the family of bank credit reports (Weekly Report of Assets and Liabilities for Large Banks: FR 2416; OMB</p>	

<u>FR 2951</u>	Quarterly
<i>Report of Certain Eurocurrency Transactions from U.S. Branches and Agencies of Foreign Banks</i>	
The Board of Governors of the Federal Reserve System discontinued The Report of Certain Eurocurrency Transactions from U.S. Branches and Agencies of Foreign Banks (FR 2951; OMB No. 7100-0087), effective after the report week ending June 7, 2004. The FR 2951 data had been used in the calculation of reserve requirements on net Eurocurrency liabilities. Although the Board reduced the reserve requirement ratio on net Eurocurrency liabilities to zero in 1991, the data were still collected just in case the ratio was raised above zero at a later date. Recognizing that these data are necessary only for annual indexation purposes and not for purposes of calculating reserve requirements or the monetary aggregates, the Federal Reserve has added "net Eurocurrency liabilities" to the Report of Transaction Accounts, Other Deposits and Vault Cash (FR 2900; OMB No. 7100-0087) reporting form. Certain Eurocurrency items were added to the family of bank credit reports (Weekly Report of Assets and Liabilities for Large Banks: FR 2416; OMB No. 7100-0075; Weekly Report of Selected Assets: FR 2644; OMB No. 7100-0075; and Weekly Report of Assets and Liabilities for Large U	
Research	
<u>FR 2004</u>	Weekly
<i>Government Securities Dealers Reports</i>	
These reports collect information on market activity from primary dealers in U.S. government securities. This family of reports consists of the Weekly Report of Dealer Positions (FR 2004A), the Weekly Report of Cumulative Dealer Transactions (FR 2004B), the Weekly Report of Dealer Financing and Fails (FR 2004C), the Weekly Report of Specific Issues (FR 2004Si); the Daily Report of Specific Issues (FR 2004SD), and the Daily Report of Dealer Activity in Treasury Financing (FR 2004Wi). The FR 2004A collects weekly data on dealers' outright positions in Treasury and other marketable debt securities. The FR 2004B collects cumulative weekly data on the volume of transactions made by dealers in the same instruments for which positions are reported on the FR 2004A. The FR 2004C collects weekly data on the amounts of dealer financing and fails. The FR 2004Si collects weekly data on outright, financing, and fails positions in current or on-the-run issues. Under certain circumstances this information is also collected on a daily basis on the FR 2004SD for on-the-run and off-the-run securities. The FR 2004Wi collects daily data on positions in to-be-issued T	
<u>FR 2046</u>	Daily
<i>Selected Balance Sheet Items for Discount Window Borrowers</i>	
The Federal Reserve collects balance sheet data from discount window borrowers on the FR 2046 to monitor discount window borrowing. Borrowers report six data items: total securities, federal funds sold and resale agreements, total loans (gross), total assets, total deposits, and federal funds purchased and repurchase agreements.	
<u>FR 2050</u>	Weekly
<i>Weekly Report of Eurodollar Liabilities Held by Selected U.S. Addressees at Foreign Offices of U.S. Banks</i>	

The Board of Governors of the Federal Reserve discontinued the Weekly Report of Eurodollar Liabilities Held by Selected U.S. Addressees at Foreign Offices of U.S. Banks (FR 2050; OMB No. 7100-0068) in March 2006. In November 2005, the Federal Reserve decided to cease collecting, constructing, and publishing the M3 monetary aggregate, effective in March 2006. As a result of the Federal Reserve's decision to cease constructing the M3 monetary aggregate, data collected on the FR 2050 are no longer needed.	
This voluntary report collected two items of daily data once a week: (1) total non-negotiable Eurodollars and (2) negotiable term Eurodollars held in custody accounts, both payable to U.S. addressees other than depository institutions and money market mutual funds. The primary use of the data was to construct the Eurodollar component of the M3 monetary aggregate. The data were also used for analysis of depository institutions' funding practices.	
The analysis of bank liability management can be adequately handled by liabilities reported on the Weekly Report of Assets and Liabilities for Large Banks (FR 2416; OMB No. 7100-0075); Weekly Report of Selected Assets (FR 2644; OMB No. 7100-0075); and Weekly Report of Assets and Liabilities for Large U.S. Branches and Agencies of Foreign Banks (FR 2069; OMB No. 7100-0030) (bank credit reports).	
FR 2436	Semi-Annual
<i>Semiannual Report of Derivatives Activity</i>	
The FR 2436 report collects data on notional amounts and gross market values of the volumes outstanding of over-the-counter (OTC) derivatives in broad categories--foreign exchange, interest rate, equity- and commodity-linked, and credit default swaps--across a range of underlying currencies, interest rates, and equity markets.	
FR 2502q	Quarterly
<i>Quarterly Report of Assets and Liabilities of Large Foreign Offices of U.S. Banks</i>	
This report collects data on the geographic distribution of the assets and liabilities of major foreign branches and subsidiaries of U.S. commercial banks and of Edge and agreement corporations.	
FR 3036	Triennial. The Turnover data include all business days in April, and the Derivatives Outstandings positions are as of the end of June.
<i>Central Bank Survey of Foreign Exchange and Derivatives Market Activity</i>	
The FR 3036 survey consists of a Turnover section and a section on Derivatives Outstandings. The Turnover section requests information on the monthly volume of transactions (turnover) in the foreign exchange cash market, the foreign exchange derivatives market, and the interest rate derivatives markets. The Derivatives Outstandings section requests data on outstanding contracts in the derivatives markets for foreign exchange, interest rates, equities, and commodities.	
Business/consumer credit	

<u>FR 2005</u>	Monthly activity during the month
<i>Automobile Finance Terms</i>	
This report collects information on new- and used-car interest rates, maturities, loan amounts, and aggregate number and amount of loans. The actual reports are photocopies of internal company management reports.	
<u>FR 2012</u>	Monthly activity during the month
<i>Passenger Auto Contract Collection Trends</i>	
This report collects information on delinquency rates, refinancings, and repossessions on auto loans from automobile finance companies	
<u>FR 2028a/s</u>	Quarterly, as of the first full business week of February, May, August, and November.
<i>Survey of Terms of Business Lending/Prime Rate Supplement</i>	
The FR 2028A collects information on commercial and industrial (C&I) loans made by commercial banks and U.S. branches and agencies of foreign banks to domestic customers during a representative week of the quarter, including price and nonprice terms. The respondents provide information on stated rate of interest, frequency of interest compounding, loan size, maturity, collateralization, and loan risk ratings. The FR 2028S, a companion report, collects institutions' prime interest rates for the days reported. Together with the Survey of Terms of Bank Lending to Farmers (FR 2028B), these reports constitute the Survey of Terms of Lending (STBL) report series.	
<u>FR 2028b/s</u>	Quarterly, as of the first full business week of February, May, August, and November.
<i>Survey of Terms of Bank Lending to Farmers/Prime Rate Supplement</i>	
The FR 2028B collects information on farm loans made by commercial banks during a representative week. The collected data include price and nonprice terms. The respondents provide information on the stated rate of interest on the loan and the frequency with which interest is compounded, and other important loan terms, including loan size, commitment status, maturity, collateralization, the purpose of the loan and loan risk ratings. The FR 2028S, a companion report, collects institutions' prime interest rate for the days reported. Together with the Survey of Terms of Business Lending (FR 2028A), these reports constitute the Survey of Terms of Lending (STBL) report series.	
<u>FR 2248</u>	Monthly
<i>Domestic Finance Company Report of Consolidated Assets and Liabilities</i>	

This report collects monthly balance sheet data from finance and mortgage companies on major categories of consumer and business credit, short-term liabilities, and retail, wholesale, and lease financing receivables that have been sold and securitized. For quarter-end months (March, June, September, and December), additional asset and liability items are collected to provide a full balance sheet.	
FR 2572	Semiannual
<i>Report of Terms of Credit Card Plans</i>	
This report collects information on terms offered by the largest issuers of bank credit cards in the nation. The respondents submit information on the pricing and fees of available third-party credit card plans.	
FR 2835	Quarterly
<i>Quarterly Report of Interest Rates on Selected Direct Consumer Installment Loans</i>	
This report collects interest rate information on consumer installment loans for new automobiles and on loans for other consumer goods and personal expenditures.	
FR 2835a	Quarterly
<i>Quarterly Report of Credit Card Interest Rates</i>	
This report collects information on two measures of credit card interest rates. One measure is the average nominal finance rate for all accounts. The other -- average computed interest rates -- is derived from two items: total finance charges assessed to cardholders during the period and the total of balances on which the finance charges were determined. Also, the reporting form asks for total number of accounts and total balances for all accounts.	
FR 3033p/s	Every 5 Years
<i>Finance Company Questionnaire</i>	
This report is a two-stage survey of finance and mortgage companies. The first stage is a simple questionnaire (FR 3033p) that is sent to all known domestic finance and mortgage companies and that asks for information about each company's total net assets, areas of specialization, and other characteristics. From the questionnaire respondents, the Federal Reserve draws a stratified random sample of finance and mortgage companies for the second stage, the survey itself (FR 3033s). The survey requests detailed information from both sides of the respondents' balance sheets. The Board initiates data collection and analysis, and staff at the Federal Reserve Banks follow up on data quality issues, collect data from late FR 3033s, and resolve other outstanding questions.	
Securities and Exchange Commission	
SEC Filings	
o S-1: This filing is a pre-effective registration statement submitted when a company decides to go public. Commonly referred to as an "IPO" (Initial Public Offering) filing.	Event Generated
o S-1/A: This filing is a <i>pre-effective</i> amendment to an S-1 IPO filing.	Event Generated

o S-1MEE : Registration of up to an additional 20% of securities for any offering registered on an S-1.	Event Generated
o POS AM : This filing is a <i>post-effective</i> amendment to an S-Type filing.	Event Generated
o S-2 : This filing is an optional registration form that may be used by companies which have reported under the '34 Act for a minimum of three years and have timely filed all required reports during the 12 calendar months and any portion of the month immediately preceding the filing of the registration statement.	Monthly, When Required
o S-2/A : This filing is a <i>pre-effective</i> amendment to an S-2 filing.	Event Generated
o S-2MEE : Registration of up to an additional 20% of securities for any offering registered on an S-2.	Event Generated
o S-3 : This filing is the most simplified registration form and it may only be used by companies which have reported under the '34 Act for a minimum of twelve months and meet the timely filing requirements set forth under Form S-2. The filing company must also meet the stringent qualitative tests prescribed by the form.	Monthly, When Required
o S-3/A : This filing is a <i>pre-effective</i> amendment to an S-3 filing.	Monthly, When Required
o S-3MEE : Registration of up to an additional 20% of securities for any offering registered on a S-3.	Monthly, When Required
o S-3D : Registration statement of securities pursuant to dividend or interest reinvestment plans which become effective automatically upon filing.	Monthly, When Required
o S-3D/A : Amendment to a previously filed S-3D.	Monthly, When Required
o S-3DPOS : This filing is a <i>post-effective</i> amendment to an S-3D filing.	Monthly, When Required
o S-4 : This filing is for the registration of securities issued in business combination transactions.	Event Generated
o S-4/A : This filing is a <i>pre-effective</i> amendment to an S-4 filing.	Event Generated
o S-4EF : Filed when securities are issued in connection with the formation of a bank, savings and loan, or holding company.	Solitary Event Generated
o S-4EF/A : This filing is a <i>pre-effective</i> amendment to an S-4EF filing.	Solitary Event Generated
o S-4 POS : This filing is a <i>post-effective</i> amendment to an S-4EF filing.	Solitary Event Generated
o S-4MEE : Registration pursuant to Securities Act Rule 462(b) of up to an additional 20% of securities for an offering that was registered on a Form S-3.	Monthly, When Required
o S-6 : Initial registration statement for unit investment trusts.	Solitary Event Generated
o S-6/A : This filing is a <i>pre-effective</i> amendment to an S-6 filing.	Solitary Event Generated
o S-8 : This filing is required when securities are to be offered to employees pursuant to employee benefit plans.	Event Generated
o S-8/A : Amendment to a previously filed S-8.	Event Generated
o S-8 POS : This filing is a <i>post-effective</i> amendment to an S-8 filing.	Event Generated
o S-20 : Initial registration statement for standardized options.	Event Generated
o S-20/A : Amendment to a previously filed S-20.	Event Generated
o POS AM : Post-effective amendments.	Event Generated
o POS AMI : Post-effective amendments.	Event Generated
o 424A : Contains substantive changes from or additions to a prospectus previously filed with the SEC as part of the registration statement.	Event Generated
o 424B1 : A form of prospectus that discloses information previously omitted from the prospectus filed as part of a registration statement.	Event Generated
o 424B2 : A form of prospectus filed in connection with a primary offering of securities on a delayed basis which includes the public offering price, description of securities and specific method of distribution.	Event Generated
o 424B3 : A form of prospectus that reflects facts or events that constitute a substantive change from or addition to the information set forth in the last form of prospectus filed with the SEC.	Event Generated
o 424B4 : A form of prospectus that discloses information, facts or events covered in both form 424B1 and form 424B3.	Event Generated

o 424B5 : A form of prospectus that discloses information, facts or events covered in both form 424B2 and form 424B3.	Event Generated
o 425 : Filing of certain prospectuses and communications in connection with business combination transactions.	Event Generated
o DEL AM : Delaying amendment.	Event Generated
o 497 : Definitive materials filed by investment companies.	Event Generated
o 497J : Certification of no change in definitive materials.	Event Generated
o S-6 : Registration statement for unit investment trusts.	Event Generated
o S-6/A : Pre-effective amendment to a S-6.	Event Generated
o 497K1 : Profiles for certain open-end management investment companies.	Event Generated
o 487 : Pre-effective pricing amendment.	Event Generated
o 10-12B : A general registration filing of securities pursuant to section 12(b) of the Securities Exchange Act.	Event Generated
o 10-12B/A : Amendment to a previously filed 10-12B.	Event Generated
o 10-12G : A general registration filing of securities pursuant to section 12(g) of the Securities Exchange Act.	Event Generated
o 10-12G/A : Amendment to a previously filed 10-12G.	Event Generated
o 18-12G : Registration of securities filed pursuant to section 12(g) of the Securities Exchange Act.	Event Generated
o 18-12G/A : Amendment to a previously filed 18-12G.	Event Generated
o N-8B-2 : Registration statement for unit investment trusts.	Event Generated
o N-8B-2/A : Amendments to a previously filed N-8B-2.	Event Generated
o N-1 : Registration statement for open-end management investment companies.	Event Generated
o N-1/A : Amendments to a previously filed N-1.	Event Generated
o N-1A : Registration statement for Mutual Funds.	Event Generated
o N-2 : Registration statement for closed-end investment companies.	Event Generated
o N-2/A : This filing is a <i>pre-effective</i> amendment to an N-2 filing.	Event Generated
o N-3 : Registration statement for separate accounts (management investment companies).	Event Generated
o N-3/A : This filing is a <i>pre-effective</i> amendment to an N-3 filing.	Event Generated
o N-4 : Registration statement for separate accounts (unit investment trusts).	Event Generated
o N-4/A : This filing is a <i>pre-effective</i> amendment to an N-4 filing.	Event Generated
o N-14 : Registration statement for investment companies business combination.	Event Generated
o N-14/A : Pre-effective amendment to a previously filed N-14.	Event Generated
o N-14/AE : Initial statement with automatic effectiveness.	Event Generated
o N-14/AE/A : Pre-effective amendment.	Event Generated
o N-14 8C : Registration statement for closed-end investment company.	Event Generated
o N-14 8C/A : Pre-effective amendment.	Event Generated
o F-1 : Registration statement for certain foreign private issuers.	Event Generated
o F-1/A : This filing is a pre-effective amendment to an F-1 filing.	Event Generated
o F-1MEF : Registration of up to an additional 20% of securities for an offering filed on an F-1.	Event Generated
o F-2 : Registration statement for certain foreign private issuers.	Event Generated
o F-2/A : Amendment to a previously filed F-2.	Event Generated
o F-2D : Registration of securities pursuant to dividend or interest reinvestment plans (foreign).	Event Generated
o F-2DPOS : Post-effective amendments to a previously filed F-2D.	Event Generated
o F-2MEF : Registration pursuant to Securities Act Rule 462(b) of up to an additional 20% of securities for an offering that was registered on a Form F-2.	Event Generated

o F-3MEF : Registration pursuant to Securities Act Rule 462(b) of up to an additional 20% of securities for an offering that was registered on a Form F-3.	Event Generated
o F-4MEF : Registration pursuant to Securities Act Rule 462(b) of up to an additional 20% of securities for an offering that was registered on a Form F-4.	Event Generated
o F-9MEF : Registration pursuant to Securities Act Rule 462(b) of up to an additional 20% of securities for an offering that was registered on a Form F-9.	Event Generated
o F-10MEF : Registration pursuant to Securities Act Rule 462(b) of up to an additional 20% of securities for an offering that was registered on a Form F-10.	Event Generated
o F-3 : Registration statement for certain foreign private issuers offered pursuant to certain types of transactions.	Event Generated
o F-3/A : Amendment to a previously filed F-3.	Event Generated
o F-3D : Registration statement for certain foreign private issuers offered pursuant to dividend or pursuant to dividend or interest reinvestment plans.	Event Generated
o F-3DPOS : Amendment to a previously filed F-3D.	Event Generated
o F-4 : Registration statement for foreign private issuers issued in certain business transactions.	Event Generated
o F-4/A : Amendment to a previously filed F-4.	Event Generated
o F-6 : Registration of depository shares evidenced by American Depository Receipts. Filing to become effective other than immediately upon filing.	Event Generated
o F-6/A : Amendment to a previously filed F-6.	Event Generated
o F-6 POS : Post-effective amendment to a previously filed F-6.	Event Generated
o F-6EF : Registration of depository shares evidenced by American Depository Receipts. Filing to become effective immediately upon filing.	Event Generated
o F-6EF/A : Amendment to a previously filed F-6EF.	Event Generated
o 20FR12B : Registration of securities of foreign private issuers pursuant to section 12 (b) of the Securities Exchange Act.	Event Generated
o 20FR12B/A : Amendment to a previously filed 20FR12B.	Event Generated
o 20FR12G : Registration of securities of foreign private issuers pursuant to section 12 (g) of the Securities Exchange Act.	Event Generated
o 20FR12G/A : Amendment to a previously filed 20FR12G.	Event Generated
o 24F-1 : Registration of securities by certain investment companies pursuant to rule 24f-1. Notification of election.	Event Generated
o 24F-2EL : Registration of securities by certain investment companies pursuant to rule 24f-2. Declaration of election.	Event Generated
o 24F-2EL/A : Amendment to a previously filed 24F-2EL.	Event Generated
o 24F-2NT : Registration of securities by certain investment companies pursuant to rule 24f-2. Rule 24f-2 notice.	Event Generated
o 24F-2NT/A : Amendment to a previously filed 24F-2NT.	Event Generated
o POS462B : Post effective amendment to proposed Securities Act Rule 462(b) registration statement.	Event Generated
o POS462C : Post effective amendment to proposed Securities Act Rule 462(c) registration statement.	Event Generated
o 8-A12B : Registration of certain classes of securities pursuant to section 12(b) of the Securities Exchange Act.	Event Generated
o 8-A12B/A : Amendment to a previously filed 8-A12B.	Event Generated
o 8-A12G : Registration of certain classes of securities pursuant to section 12(g) of the Securities Exchange Act.	Event Generated
o 8-A12G/A : Amendment to a previously filed 8-A12G.	Event Generated
o 8-B12B : Registration of securities of certain successor issuers pursuant to section 12(b) of the Securities Exchange Act.	Event Generated
o 8-B12B/A : Amendment to a previously filed 8-B12B.	Event Generated
o 8-B12G : Registration of securities of certain successor issuers pursuant to section 12(g) of the Securities Exchange Act.	Event Generated
o 8-B12G/A : Amendment to a previously filed 8-B12G.	Event Generated

o 8A12BEF : Registration of listed debt securities pursuant to section 12(b) - filing to become effective automatically upon filing.	Event Generated
o 8A12BT : Registration of listed debt securities pursuant to section 12(b) - filing to become effective simultaneously with the effective of a concurrent Securities Act registration statement.	Event Generated
o 8A12BT/A : Amendment to a previously filed 8A12BT.	Event Generated
o 485A24E : Registration statement for separate accounts (management investment companies). Post-Effective amendment filed pursuant to Rule 485(b) with additional shares under 24e-2.	Event Generated
o 485A24F : Registration statement for separate accounts (management investment companies). Post-Effective amendment filed pursuant to Rule 485(b) with additional shares under 24f-2.	Event Generated
o 485APOS : Registration statement for separate accounts (management investment companies). Post-Effective amendment filed pursuant to Rule 485(a).	Event Generated
o 485B24E : Registration statement for separate accounts (management investment companies). Post-Effective amendment filed pursuant to Rule 485(a) with additional shares under 24e-2.	Event Generated
o 485B24F : Registration statement for separate accounts (management investment companies). Post-Effective amendment filed pursuant to Rule 485(b) with additional shares under 24f-2.	Event Generated
o 485BPOS : Registration statement for separate accounts (management investment companies). Post-Effective amendment filed pursuant to Rule 485(b).	Event Generated
Registration Withdrawal and Termination Statements:	
o RW : Request for a withdrawal of a previously filed registration statement.	Event Generated
o AW : Amendment to a previously filed RW.	Event Generated
o 15-12G : Certification of termination of registration of a class of security under Section 12(g) or notice of suspension of duty to file reports pursuant to Section 13 and 15(d) of the Securities Exchange Act. Section 12 (g) initial filing.	Solitary Event Generated
o 15-12G/A : Amendment to a previously filed 15-12G.	Solitary Event Generated
o 15-15D : Certification of termination of registration of a class of security under Section 12(g) or notice of suspension of duty to file reports pursuant to Section 13 and 15(d) of the Securities Exchange Act. Section 13 and 15 (d) initial filing.	Solitary Event Generated
o 15-15D/A : Amendment to a previously filed 15-15D.	Solitary Event Generated
o 15-12B : Certification of termination of registration of a class of security under Section 12(g) or notice of suspension of duty to file reports pursuant to Section 13 and 15(d) of the Securities Exchange Act. Section 12 (b) initial filing.	Solitary Event Generated
o 15-12B/A : Amendment to a previously filed 15-12B.	Solitary Event Generated
o 24F-2TM : Registration of securities by certain investment companies pursuant to rule 24f-2. Termination of declaration of election.	Solitary Event Generated
Proxies and Information Statements:	
o PRE 14A : A preliminary proxy statement providing official notification to designated classes of shareholders of matters to be brought to a vote at a shareholders meeting.	Annual
o PREC14A : Preliminary proxy statement containing contested solicitations.	Annual
o PREC14C : Preliminary information statement containing contested solicitations.	Annual
o PREN14A : Non-management preliminary proxy statements not involving contested solicitations.	Annual
o PREM14A : A preliminary proxy statement relating to a merger or acquisition.	Event Generated

· PREM14C: A preliminary information statement relating to a merger or acquisition.	Event Generated
· PRES14A: A preliminary proxy statement giving notice regarding a special meeting.	Event Generated
· PRES14C: A preliminary information statement relating to a special meeting.	Event Generated
· PRE 14C: A preliminary proxy statement containing all other information.	Event Generated
· PRER14A: Proxy soliciting materials. Revised preliminary material.	Annual
· PRER14C: Information statements. Revised preliminary material.	Annual
· PRE13E3: Initial statement - preliminary form.	Annual
· PRE13E3/A: Amendment to a previously filed PRE13E3.	Annual
· PRRN14A: Non-management revised preliminary proxy soliciting materials for both contested solicitations and other situations. Revised preliminary material.	Annual
· PX14A6G: Notice of exempt solicitation. Definitive material.	Annual
· DEF 14A: Provides official notification to designated classes of shareholders of matters to be brought to a vote at a shareholders meeting. This form is commonly referred to as a "Proxy".	Annual
· DEFM14A: Provides official notification to designated classes of shareholders of matters relating to a merger or acquisition.	Event Generated
· DEFM14C: A definitive information statement relating to a merger or an acquisition.	Event Generated
· DEFS14A: A definitive proxy statement giving notice regarding a special meeting.	Event Generated
· DEFS14C: A definitive information statement regarding a special meeting.	Event Generated
· DEFC14A: Definitive proxy statement in connection with contested solicitations.	Event Generated
· DEFC14C: Definitive information statement indicating contested solicitations.	Event Generated
· DEFA14A: Additional proxy soliciting materials - definitive.	Annual
· DEFN14A: Definitive proxy statement filed by non-management not in connection with contested solicitations.	Annual
· DFRN14A: Revised definitive proxy statement filed by non-management.	Annual
· DFAN14A: Additional proxy soliciting materials filed by non-management.	Annual
· DEF13E3: Schedule filed as definitive materials.	Annual
· DEF13E3/A: Amendment to a previously filed DEF 13E3.	Annual
· DEFA14C: Additional information statement materials - definitive.	Annual
· DEFR14C: Revised information statement materials - definitive.	Annual
· DEFR14A: Revised proxy soliciting materials -definitive.	Annual
Quarterly Reports:	
o 10-Q: A quarterly report which provides a continuing view of a company's financial position during the year. The filing is due 45 days after each of the first three fiscal quarters. No filing is due for the fourth quarter.	Quarterly
o 10-Q/A: Amendment to a previously filed 10-Q.	Quarterly
o 10QSB: A quarterly report which provides a continuing view of a company's financial position during the year. The 10QSB form is filed by small businesses.	Quarterly
o 10QSB/A: An amendment to a previously filed 10QSB.	Quarterly
o NT 10-Q: Notification that form type 10-Q will be submitted late.	Quarterly
o NT 10-Q/A: Amendment to a previously filed NT 10-Q.	Quarterly
o 10-QT: Quarterly transition reports filed pursuant to rule 13a-10 or 15d-10 of the Securities Exchange Act.	Quarterly
o 10-QT/A: Amendment to a previously filed 10-QT.	Quarterly
o 13F-E: Quarterly reports filed by institutional managers.	Quarterly

o 13F-E/A: Amendment to a previously filed 13F-E.	Quarterly
o 13F-HR: 13F Holdings Report Initial Filing 13F-HR.	Quarterly
o 13F-HR/A: 13F Holdings Report Initial Filing amendment.	Quarterly
o 13F-NT: 13F Notice Report Initial Filing 13F-NT.	Quarterly
o 13F-NT/A: 13F Notice Report Initial Filing amendment.	Quarterly
o 13F-HR: 13F Combination Report Initial Filing.	Quarterly
o 13F-HR/A: 13F Combination Report Initial Filing amendment.	Quarterly
Annual Reports:	
o ARS: An annual report to security holders. This is a voluntary filing on EDGAR.	Annual
o 10-K: An annual report which provides a comprehensive overview of the company for the past year. The filing is due 90 days after the close of the company's fiscal year, and contains such information as company history, organization, nature of business, equity, holdings, earnings per share, subsidiaries, and other pertinent financial information.	Annual
o 10-K/A: Amendment to a previously filed 10-K.	Annual
o 10-K405: An annual report which provides a comprehensive overview of the company for the past year. The Regulation S-K Item 405 box on the cover page is checked.	Annual
o 10-K405/A: This filing is an amendment to a previously filed 10-K405.	Annual
o NT 10-K: Notification that form 10-K will be submitted late.	Annual
o NT 10-K/A: Amendment to a previously filed NT 10-K.	Annual
o 10KSB: An annual report which provides a comprehensive overview of the company for the past year. The filing is due 90 days after the close of the company's fiscal year, and contains such information as company history, organization, nature of business, equity, holdings, earnings per share, subsidiaries, and other pertinent financial information. The 10KSB is filed by small businesses.	Annual
o 10KSB/A: Amendment to a previously filed 10KSB.	Annual
o 10-C: This filing is required of an issuer of securities quoted on the NASDAQ Interdealer Quotation System, and contains information regarding a change in the number of shares outstanding or a change in the name of the issuer.	Annual
o 10-C/A: Amendment to a previously filed 10-C.	Annual
o 10-KT: Annual transition reports filed pursuant to rule 13a-10 or 15d-10 of the Securities Exchange Act.	Annual
o 10-KT/A: Amendment to a previously filed 10-KT.	Annual
o 10KSB40: An optional form for annual and transition reports of small business issuers under Section 13 or 15 (d) of the Securities Exchange Act where the Regulation S-B Item 405 box on the cover page (relating to section 16 (a) reports) is checked.	Annual
o 10KSB40/A: Amendment to a previously filed 10KSB40.	Annual
o 10KT405: Annual transition report filed pursuant to Rule 13a-10 or 15d-10 of the Securities Exchange Act.	Annual
o 10KT405/A: Amendment to a previously filed 10KT405.	Annual
o 11-KT: Annual report of employee stock purchase, savings and similar plans. Filed pursuant to rule 13a-10 or 15d-10 of the Securities Exchange Act.	Annual
o 11-KT/A: Amendment to a previously filed 11-KT.	Annual
o 18-K: Annual report for foreign governments and political subdivisions.	Annual
o 18-K/A: Amendment to a previously filed 18-K.	Annual
o 11-K: An annual report of employee stock purchase, savings and similar plans.	Annual

o 11-K/A : Amendment to a previously filed 11-K.	Annual
o NT 11-K : Notification that form 11-K will be submitted late.	Annual
o NT 11-K/A : Amendment to a previously filed NT 11-K.	Annual
o NSAR-A : Semi-Annual report for management companies.	Annual
o NSAR-A/A : Amendments to a previously filed NSAR-A.	Annual
o NSAR-AT : Transitional semi-annual report for registered investment companies (Management).	Annual
o NSAR-AT/A : Amendments to a previously filed NSAR-AT.	Annual
o NSAR-B : Annual report for management companies.	Annual
o NSAR-B/A : Amendments to a previously filed NSAR-B.	Annual
o NSAR-BT : Transitional annual report for management companies.	Annual
o NSAR-BT/A : Amendments to a previously filed NSAR-BT.	Annual
o NSAR-U : Annual report for unit investment trusts.	Annual
o NSAR-U/A : Amendments to a previously filed NSAR-U.	Annual
o NT-NSAR : Request for an extension of time for filing form NSAR-A, NSAR-B or NSAR-U.	Annual
o NT-NSAR/A : Amendments to a previously filed NT-NSAR.	Annual
o N-30D : An annual and semi-annual report mailed to shareholders. Filed by registered investment companies.	Annual
o N-30D/A : Amendments to a previously filed N-30D.	Annual
o 20-F : Annual and transition report of foreign private issuers filed pursuant to sections 13 or 15 (d) of the Securities Exchange Act.	Annual
o 20-F/A : Amendment to a previously filed 20-F.	Annual
o ARS : Annual report to Security Holders.	Annual
Statements of Ownership:	
o SC 13D : This filing is made by person(s) reporting beneficially owned shares of common stock in a public company.	Event Generated
o SC 13D/A : An amendment to a SC 13D filing.	Event Generated
o SC 13G : A statement of beneficial ownership of common stock by certain persons.	Event Generated
o SC 13G/A : An amendment to the SC 13G filing.	Event Generated
o SC 13E1 : Statement of issuer required by Rule 13e-1 of the Securities Exchange Act.	Event Generated
o SC 13E1/A : Amendment to a previously filed SC 13E1.	Event Generated
o SC 13E3 : Going private transaction by certain issuers.	Event Generated
o SC 13E3/A : Amendment to a previously filed SC 13E3.	Event Generated
o SC 13E4 : Issuer tender offer statement.	Event Generated
o SC 13E4/A : Amendment to a previously filed SC 13E4.	Event Generated
o SC 14D1 : Tender offer statement.	Event Generated
o SC 14D1/A : Amendment to a previously filed SC 14D1.	Event Generated
o SC 14D9 : Solicitation/recommendation statements.	Event Generated
o SC 14D9/A : Amendment to a previously filed SC 14D9.	Event Generated
o SC 14F1 : Statement regarding change in majority of directors pursuant to Rule 14f-1.	Event Generated
o SC 14F1/A : Amendment to a previously filed SC 14F1.	Event Generated
o SC TO-C : Written public communication relating to an issuer or third party tender offer not by the subject company.	Event Generated
o SC TO-C/A : Amendment to a previously filed SC TO-C.	Event Generated
o SC TO-T : Tender offer schedule and amendment filed by a third party.	Event Generated

o SC TO-T/A: Amendment to a previously filed SC TO-T.	Event Generated
o SC TO-I: Tender offer schedule and amendment filed by the issuer.	Event Generated
o SC TO-I/A: Amendment to a previously filed SC TO-I.	Event Generated
Insider Trading:	
o 3: An initial filing of equity securities filed by every director, officer, or owner of more than ten percent of a class of equity securities. Contains information on the reporting person's relationship to the company and on purchases and sales of equity securities.	Solitary Event Generated
o 3/A: An amendment to a 3 filing. This form is not required to be filed with the EDGAR system.	Solitary Event Generated
o 4: Any changes to a previously filed form 3 are reported in this filing.	Solitary Event Generated
o 4/A: Amendment to a previously filed 4.	Solitary Event Generated
o 5: An annual statement of ownership of securities filed by every director, officer, or owner of more than ten percent of a class of equity securities. Contains information on the reporting person's relationship to the company and on purchases and sales of equity securities.	Annual
o 5/A: Amendment to a previously filed 5.	Annual
o 144: This form must be filed by "insiders" prior to their intended sale of restricted stock (issued stock currently unregistered with the SEC). Filing this form results in each seller receiving an automatic exemption from SEC registration requirements for this one transaction.	Event Generated
o 144/A: Amendment to a previously filed 144.	Event Generated
Filings pursuant to the Trust Indenture Act:	
o 305B2: Initial statement filed pursuant to the Trust Indenture Act.	Solitary Event Generated
o 305B2/A: Amendment to a previously filed 305B2.	Solitary Event Generated
o T-3: Application for qualification of trust indentures. Filed pursuant to the Trust Indenture Act.	Solitary Event Generated
o T-3/A: Amendment to a previously filed T-3.	Solitary Event Generated
Miscellaneous Filings:	
o 8-K: A report of <i>unscheduled</i> material events or corporate changes which could be of importance to the shareholders or to the SEC. Examples include acquisition, bankruptcy, resignation of directors, or a change in the fiscal year.	Event Generated
o 8-K/A: Amendment to a previously filed 8-K.	Event Generated
o N-14AE: Initial statement with automatic effectiveness for investment companies business combination.	Solitary Event Generated
o N-14AE/A: Pre-effective amendment to a previously filed N-14AE.	Solitary Event Generated
o N-30B-2: Periodic and interim reports mailed to shareholders. Filed by registered investment companies.	Periodic
o 2-E: Reports of sales of securities pursuant to Regulation E. Filed by investment companies.	Periodic
o 2-E/A: Amendment to a previously filed 2-E.	Periodic
o SP 15D2: Special financial report pursuant to Rule 15d-2 of the Securities Exchange Act.	Event Generated
o SP 15D2/A: Amendments to a previously filed SP 15D2.	Event Generated
o NT 15D2: Notification of late filing Special report pursuant to section 15d-2.	Event Generated
o NT 15D2/A: Amendment to a previously filed NT 15D2.	Event Generated
o 6-K: Report of foreign issuer pursuant to Rules 13a-16 and 15d-16 of the Securities Exchange Act.	Event Generated

o 6-K/A: Amendment to a previously filed 6-K.	Event Generated
o 8-K12G3: Notification of securities of successor issuers deemed to be registered pursuant to section 12(g) of the Securities Exchange Act.	Event Generated
o 8-K12G3/A: Amendment to a previously filed 8-K12G3.	Event Generated
o 8-K15D5: Notification of assumption of duty to report by successor issuer.	Event Generated
o 8-K15D5/A: Amendment to a previously filed 8-K15D5.	Event Generated
Form 13F	Rule 13f-1(a) provides that every Manager that exercises investment discretion with respect to accounts holding Section 13(f) securities having an aggregate fair market value on the last trading day of any month of any calendar year of at least \$100,000,000 shall file a Form 13F with the Commission within forty-five days after the last day of such calendar year and within forty-five days after the last day of each of the first three calendar quarters of the subsequent calendar year.
<i>Report of Institutional Investment Managers Pursuant to Section 13(f) of the Securities Exchange Act of 1934</i>	
Institutional investment managers (Managers) must file Form 13F with the Securities and Exchange Commission (the Commission) as required by Section 13(f) of the Securities Exchange Act of 1934 [15 U.S.C. 78m(f)] (Exchange Act) and rule 13f-1 [17 CFR 240.13f-1]. Rule 13f-1(a) provides that every Manager that exercises investment discretion with respect to accounts holding Section 13(f) securities, as defined in rule 13f-1(c), having an aggregate fair market value on the last trading day of any month of any calendar year of at least \$100,000,000 shall file a Form 13F with the Commission within forty-five days after the last day of such calendar year and within forty-five days after the last day of each of the first three calendar quarters of the subsequent calendar year. A Manager that is a bank, the deposits of which are insured in accordance with the Federal Deposit Insurance Act, must file with the appropriate regulatory agency.	
Form 3	As needed, within 10 days of the event
<i>Initial Statement of Beneficial Ownership in Securities</i>	
Form 3 collects the initial percentage of beneficial ownership of equity securities for (1) any director or officer of an issuer with a class of equity securities registered pursuant to Section 12 of the Securities Exchange Act of 1934 ("34 Act"); (2) any beneficial owner of greater than 10 percent of a class of equity securities registered under Section 12 of the '34 Act, as determined by voting or investment control over the securities pursuant to Rule 16a-1(a)1; and (3) any trust, trustee, beneficiary, or settler required pursuant to Rule 16a-8 of the reportable companies listed in the respondent panel.	

<u>Form 4</u>	As needed, Form 4 must be filed before the end of the second business day following the day on which a transaction resulting in a change in beneficial ownership has been executed.
<i>Statement of Changes in Beneficial Ownership</i>	
Form 4 collects the changes in beneficial ownership of equity securities for (1) any director or officer of an issuer with a class of equity securities registered pursuant to Section 12 of the Securities Exchange Act of 1934 ('34 Act); (2) any beneficial owner of greater than 10 percent of a class of equity securities registered under Section 12 of the '34 Act, as determined by voting or investment control over the securities pursuant to Rule 16a-1(a)1; and (3) any trust, trustee, beneficiary, or settler required pursuant to Rule 16a-8 of the reportable companies listed in the respondent panel.	
<u>Form 5</u>	Form 5 must be filed on or before the forty-fifth day after the end of the issuer's fiscal year.
<i>Annual Statement of Changes in Beneficial Ownership in Securities</i>	
Form 5 collects the annual statement of changes in beneficial ownership of equity securities for (1) any director or officer of an issuer with a class of equity securities registered pursuant to Section 12 of the Securities Exchange Act of 1934 ('34 Act); (2) any beneficial owner of greater than 10 percent of a class of equity securities registered under Section 12 of the '34 Act, as determined by voting or investment control over the securities pursuant to Rule 16a-1(a)1; and (3) any trust, trustee, beneficiary, or settler required pursuant to Rule 16a-8 of the reportable companies listed in the respondent panel.	
<u>FR G-1</u>	The FR G-1 must be filed within thirty days following the end of the calendar quarter during which the lender becomes subject to the registration requirements.
<i>Registration Statements for Persons Who Extend Credit Secured by Margin Stock (Other than Banks, Brokers, or Dealers)</i>	
Nonbank lenders making loans above stated thresholds that are secured by margin stock must register with the Federal Reserve using the FR G-1 registration statement, which collects information about the lender's background and volume of lending. A registered lender may apply to deregister using FR G-2 if the lender has not, during the preceding six months, had more than \$200,000 of margin credit outstanding.	
<u>FR G-2</u>	The FR G-2 is filed when the lender is no longer subject to the registration requirements.

<i>Deregistration Statements for Persons Who Extend Credit Secured by Margin Stock (Other than Banks, Brokers, or Dealers)</i>	
Nonbank lenders making loans above stated thresholds that are secured by margin stock must register with the Federal Reserve using the FR G-1 registration statement, which collects information about the lender's background and volume of lending. A registered lender may apply to deregister using FR G-2 if the lender has not, during the preceding six months, had more than \$200,000 of margin credit outstanding.	
<u>FR G-3</u>	The FR G-3 statement is for recordkeeping requirements that must be met before credit is extended. The lender must retain the records for three years after the credit is extinguished.
<i>Reg G Registration Statements</i>	
Lenders that extend credit as permitted by the Board's margin requirements are sometimes required to fill out purpose statements to document the purpose of their loans secured by margin stock. The FR T-4 purpose statement is used for extensions of credit by brokers and dealers, the FR G-3 for extensions of credit by other nonbank lenders, and the FR U-1 for extensions of credit by banks. The borrower lists the amount and purpose of the loan, and the lender lists the collateral for the loan.	
<u>FR G-4</u>	Annually
<i>Annual Report for Persons Registered Pursuant to Regulation U</i>	
All FR G-1 filers are required to file the FR G-4, an annual report on their loans secured by margin stock collateral. Lenders report the total amount of credit secured directly or indirectly by margin stock outstanding as of June 30; the amount of credit secured directly or indirectly by margin stock extended during the year; whether the loans involved are purpose or nonpurpose also; and whether the credit is used to fund employee stock option, purchase, or ownership plans. Those lenders funding stock option, purchase, and ownership plans must specify whether the credit was extended pursuant to the special provisions set forth in section 221.4 of Regulation U, which authorizes employers to extend credit to employees and ESOPs with no specified margin.	
<u>FR T-4</u>	The FR T-4 statement is for recordkeeping requirements that must be met before credit is extended. The lender must retain the records for three years after the credit is extinguished.
<i>Statement of Purpose for Extension of Credit by a Creditor</i>	
Lenders that extend credit as permitted by the Board's margin requirements are sometimes required to fill out purpose statements to document the purpose of their loans secured by margin stock. The FR T-4 purpose statement is used for extensions of credit by brokers and dealers, the FR G-3 for extensions of credit by other nonbank lenders, and the FR U-1 for extensions of credit by banks. The borrower lists the amount and purpose of the loan, and the lender lists the collateral for the loan.	

<p><u>FR TA-1</u></p>	<p>The act requires supervised institutions to register prior to performing the functions of a transfer agent. Registration becomes effective forty-five days after receipt of an acceptable FR TA-1, unless the Federal Reserve takes action to accelerate, postpone, or deny registration. Registered agents must file amendments within sixty days of the date on which the information reported in previous filings has become inaccurate, incomplete, or misleading.</p>
<p><i>Transfer Agent Registration and Amendment Form</i></p> <p>TA-1, an interagency form, is used by entities wishing to act as a transfer agent to register before performing transfer agent functions and to amend registration information as necessary. The information collected includes the company name, all business addresses, and information about the registrant's proposed activities as a transfer agent.</p>	
<p><u>FR U-1</u></p>	<p>The FR U-1 statement is for recordkeeping requirements that must be met before credit is extended. The lender must retain the records for three years after the credit is extinguished.</p>
<p><i>Statement of Purpose for an Extension of Credit Secured by Margin Stock</i></p> <p>Lenders that extend credit as permitted by the Board's margin requirements are sometimes required to fill out purpose statements to document the purpose of their loans secured by margin stock. The FR T-4 purpose statement is used for extensions of credit by brokers and dealers, the FR G-3 for extensions of credit by other nonbank lenders, and the FR U-1 for extensions of credit by banks. The borrower lists the amount and purpose of the loan, and the lender lists the collateral for the loan.</p>	
<p>Municipal and government securities</p>	
<p><u>FR G-FIN</u></p>	<p>On Occasion</p>
<p><i>Notice By Financial Institutions of Government Securities Broker or Government Securities Dealer Activities</i></p>	

<p>A financial institution that intends to engage in broker or dealer activities must notify its regulator by using the Notice by Financial Institutions of Government Securities Broker or Government Securities Dealer Activities (FR G-FIN). This notice collects the institution's identifying information and the names and titles of its managers of government securities activities; the notice requires the institution to state whether any person associated with the respondent's government securities activities has been involved in disciplinary proceedings related to securities sales. A financial institution that intends to cease engaging in broker or dealer activities must notify its regulator by using the Notice by Financial Institutions of Termination of Activities as a Government Securities Broker or Government Securities Dealer (FR G-FINW).</p>	
<u>FR G-FINW</u>	On Occasion
<p><i>Notice By Financial Institutions of Termination of Activities as a Government Securities Broker or Government Securities Dealer</i></p>	
<p>A financial institution that intends to engage in broker or dealer activities must notify its regulator by using the Notice by Financial Institutions of Government Securities Broker or Government Securities Dealer Activities (FR G-FIN). This notice collects the institution's identifying information and the names and titles of its managers of government securities activities; the notice requires the institution to state whether any person associated with the respondent's government securities activities has been involved in disciplinary proceedings related to securities sales. A financial institution that intends to cease engaging in broker or dealer activities must notify its regulator by using the Notice by Financial Institutions of Termination of Activities as a Government Securities Broker or Government Securities Dealer (FR G-FINW).</p>	
<u>FR MSD-4</u>	<p>The FR MSD-4 must be filed before a person may be associated with a municipal securities dealer.</p>
<p><i>Uniform Application for Municipal Securities Principal or Municipal Securities Representative Associated with a Bank Municipal Securities Dealer</i></p>	
<p>Financial institutions submit the interagency MSD-4 and MSD-5 forms for the employees in their municipal securities dealer departments. The FR MSD-4 is the source document for initial information submitted to each regulatory agency; it collects information, such as personal history and professional qualifications, on an employee whom the bank wishes to assume the duties of a municipal securities principal or representative. The FR MSD-5 is the source document for updating the information when an associated person's employment is terminated for any reason; it collects the date of, and reason for, termination of such an employee.</p>	
<u>FR MSD-5</u>	<p>The FR MSD-5 must be filed within thirty days after termination of its association with a principal or representative.</p>
<p><i>Uniform Termination Notice for Municipal Securities Principal or Municipal Securities Representative Associated with a Bank Municipal Securities Dealer</i></p>	

Financial institutions submit the interagency MSD-4 and MSD-5 forms for the employees in their municipal securities dealer departments. The FR MSD-4 is the source document for initial information submitted to each regulatory agency; it collects information, such as personal history and professional qualifications, on an employee whom the bank wishes to assume the duties of a municipal securities principal or representative. The FR MSD-5 is the source document for updating the information when an associated person's employment is terminated for any reason; it collects the date of, and reason for, termination of such an employee.	
<u>MSD</u>	The MSD must be filed before commencing operations as a municipal securities dealer. Amended MSD notices are due within thirty days of the date on which information on the previous notice became inaccurate.
<i>Application for Registration as a Municipal Securities Dealer or Amendment to such Application</i>	
A financial institution that intends to engage in municipal securities dealer activities must register with the Securities and Exchange Commission (SEC) and its appropriate regulatory authority (ARA) by using form MSD, "Application for Registration as a Municipal Securities Dealer." This notice collects the institution's identifying information and the names and titles of its managers of municipal securities activities; the notice requires the institution to state whether any person associated with the respondent's municipal securities activities has been involved in disciplinary proceedings related to securities sales. A financial institution that intends to cease engaging in municipal securities dealer activities must notify the SEC and its ARA by using form MSDW, "Notice of Withdrawal of Registration as a Municipal Securities Dealer."	
<u>MSDW</u>	The MSDW must be filed immediately upon cessation of municipal securities dealer activities.
<i>Notice by Financial Institutions to Cease Municipal Securities Dealer Activities</i>	
A financial institution that intends to engage in municipal securities dealer activities must register with the Securities and Exchange Commission (SEC) and its appropriate regulatory authority (ARA) by using form MSD, "Application for Registration as a Municipal Securities Dealer." This notice collects the institution's identifying information and the names and titles of its managers of municipal securities activities; the notice requires the institution to state whether any person associated with the respondent's municipal securities activities has been involved in disciplinary proceedings related to securities sales. A financial institution that intends to cease engaging in municipal securities dealer activities must notify the SEC and its ARA by using form MSDW, "Notice of Withdrawal of Registration as a Municipal Securities Dealer."	
Activities monitoring	
<u>FR 1379</u>	Event-generated; participation is voluntary.

<i>Consumer Satisfaction Questionnaire, Federal Reserve Consumer Help - Consumer Survey, and Consumer Complaint Form</i>	
The Consumer Satisfaction Questionnaire (FR 1379a) consists of six general questions in which consumers are asked about their dealings with Federal Reserve staff and the customer service provided, if they were satisfied with the handling of their complaint investigations, and whether the Federal Reserve's response was clear and received in a timely manner. The Federal Reserve Consumer Help (FRCH) - Consumer Survey (FR 1379b) consists of five questions that ask consumers to rate the performance of the service provided by the FRCH. The Consumer Complaint Form (FR 1379c) enables consumers to submit an online consumer complaint or inquiry via the FRCH web site and consists of three sections: consumer contact information, institution information, and consumer complaint description.	
<u>FR 2225</u>	Annually
<i>Annual Daylight Overdraft Capital Report for U.S. Branches and Agencies of Foreign Banks</i>	
The FR 2225 report requests information needed to identify the foreign bank respondent and its fiscal year-end and to determine its capital and assets for purposes of daylight overdraft monitoring. The capital and assets items include the following: capital for the foreign bank parent, capital used by any direct or indirect subsidiary of the respondent that has its own net debit cap, the foreign bank's worldwide capital base calculation, the bank's worldwide assets, and the exchange rate used in the calculation.	
<u>FR 2230</u>	Event Generated
<i>Suspicious Activity Report</i>	
This report must be completed by a financial institution, including a state member bank, a bank holding company and its nonbank subsidiaries, an Edge or an agreement corporation and a domestic branch or agency of a foreign bank, when it knows of or suspects criminal activity that violates a federal criminal statute involving, among other things, financial crimes, money laundering, and violations of the Bank Secrecy Act or when it identifies any suspicious financial transactions. Suspicious financial transactions include transactions that the financial institution suspects involve funds derived from illegal activities; that were conducted for the purpose of hiding or disguising funds from illegal activities; or that were designed to evade the recordkeeping or reporting requirement of the Bank Secrecy Act. Suspicious financial transactions also include transactions that the financial institution believes are suspicious for any other reason.	
<u>FR H-6</u>	Event Generated
<i>Notifications Related to Community Development and Public Welfare Investments of State Member Banks Pursuant to Section 208.22 of Regulation H</i>	

Regulation H requires state member banks (SMBs) engaging in permissible community development and public welfare investments provide notice of such investments to the Federal Reserve Bank in their District. The statutory provision authorizes SMBs to make investments designed primarily to promote the public welfare to the extent permissible under state law and subject to regulation by the Board. Regulation H permits SMBs to make certain public welfare investments without prior approval so long as the aggregate of such investments does not exceed 5 percent of the capital stock and surplus of the SMB, the bank is well capitalized and well managed, and the investment does not expose the SMB to liability beyond the amount of the investment.	
FR HMDA-LAR	Annual
<i>The Home Mortgage Disclosure Act/Loan Application Register</i>	
This report takes the form of a register of mortgage and home improvement loan applications and their disposition during a calendar year.	
Reg H2	Event Generated
<i>Recordkeeping and Disclosure Requirements Associated with Loans Secured by Real Estate Located in Flood Hazard Areas Pursuant to 208.25 Regulation H</i>	
Regulation H requires state member banks to notify a borrower and servicer (person responsible for receiving scheduled payments from a borrower or making payments of principal and interest and other payments from the amounts received from the borrower) when a loan is secured by real estate that is determined to be in a designated flood hazard area. For such loans, the state member bank must then notify the borrower and servicer whether flood insurance is available. The state member bank must also notify the Federal Emergency Management Agency (FEMA) of the identity of, and any change of, the servicer of the loan. Last, the bank must retain a copy of the Standard Flood Hazard Determination Form used to determine whether the property securing a loan is in a designated flood hazard area.	
Homeland Security	
Privacy Impact Assessment	Event Generated
US Businesses that hire foreign nationals to work inside the US fill out applications to sponsor their employee or assist their employee in completing applications.	
FinCEN US Patriot Act	
Section 311	Event Generated
This Section allows for identifying customers using correspondent accounts, including obtaining information comparable to information obtained on domestic customers and prohibiting or imposing conditions on the opening or maintaining in the U.S. of correspondent or payable-through accounts for a foreign banking institution.	
Section 312	Event Generated

This Section amends the Bank Secrecy Act by imposing due diligence & enhanced due diligence requirements on U.S. financial institutions that maintain correspondent accounts for foreign financial institutions or private banking accounts for non-U.S. persons.	
<u>Section 313</u>	Event Generated
To prevent foreign shell banks, which are generally not subject to regulation and considered to present an unreasonable risk of involvement in money laundering or terrorist financing, from having access to the U.S. financial system. Banks and broker-dealers are prohibited from having correspondent accounts for any foreign bank that does not have a physical presence in any country. Additionally, they are required to take reasonable steps to ensure their correspondent accounts are not used to indirectly provide correspondent services to such banks.	
<u>Section 314</u>	Event Generated
Section 314 helps law enforcement identify, disrupt, and prevent terrorist acts and money laundering activities by encouraging further cooperation among law enforcement, regulators, and financial institutions to share information regarding those suspected of being involved in terrorism or money laundering.	
<u>Section 314 (a)</u>	Event Generated
Section 314(a) of the USA PATRIOT Act of 2001 (P.L. 107-56)1 (67 Fed. Reg. 60,579). Section 314(a) requirements are now published in 31 CFR Part 103.100. required the Secretary of the Treasury to adopt regulations to encourage regulatory authorities and law enforcement authorities to share with financial institutions information regarding individuals, entities, and organizations engaged in or reasonably suspected, based on credible evidence, of engaging in terrorist acts or money laundering activities. FinCEN issued a proposed rule on March 5, 2002, and the final rule on September 26, 2002	
<u>Section 314 (b)</u>	Event Generated
USA PATRIOT Act Section 314(b) permits financial institutions, upon providing notice to the United States Department of the Treasury, to share information with one another in order to identify and report to the federal government activities that may involve money laundering or terrorist activity. Financial institutions wanting to do so may notify the Treasury Department by clicking on the Section 314(b) Certification link below and supplying the required information.	
<u>Section 319 (b)</u>	Event Generated

To facilitate the government's ability to seize illicit funds of individuals and entities located in foreign countries by authorizing the Attorney General or the Secretary of the Treasury to issue a summons or subpoena to any foreign bank that maintains a correspondent account in the U.S. for records related to such accounts, including records outside the U.S. relating to the deposit of funds into the foreign bank. This Section also requires U.S. banks to maintain records identifying an agent for service of legal process for its correspondent accounts.	
<u>Section 325</u>	Event Generated
Allows the Secretary of the Treasury to issue regulations governing maintenance of concentration accounts by financial institutions to ensure such accounts are not used to obscure the identity of the customer who is the direct or beneficial owner of the funds being moved through the account.	
<u>Section 326</u>	Event Generated
Prescribes regulations establishing minimum standards for financial institutions and their customers regarding the identity of a customer that shall apply with the opening of an account at the financial institution.	
<u>Section 351</u>	Event Generated
This Section expands immunity from liability for reporting suspicious activities and expands prohibition against notification to individuals of SAR filing. No officer or employee of federal, state, local, tribal, or territorial governments within the U.S., having knowledge that such report was made may disclose to any person involved in the transaction that it has been reported except as necessary to fulfill the official duties of such officer or employee.	
<u>Section 352</u>	Annual
Requires financial institutions to establish anti-money laundering programs, which at a minimum must include: the development of internal policies, procedures and controls; designation of a compliance officer; an ongoing employee training program; and an independent audit function to test programs.	
<u>Section 356</u>	Annual
Required the Secretary to consult with the Securities Exchange Commission and the Board of Governors of the Federal Reserve to publish proposed regulations in the Federal Register before January 1, 2002, requiring brokers and dealers registered with the Securities Exchange Commission to submit suspicious activity reports under the Bank Secrecy Act.	
<u>Section 359</u>	Annual

This amends the BSA definition of money transmitter to ensure that informal/underground banking systems are defined as financial institutions and are thus subject to the BSA.	
<u>Section 362</u>	Annual
Requires FinCEN to establish a highly secure network to facilitate and improve communication between FinCEN and financial institutions to enable financial institutions to file BSA reports electronically and permit FinCEN to provide financial institutions with alerts	
Totals	

Minimum Annual Number Of Filings	Filing Total Count	Domestic	Foreign	Typical
4	1	0	1	0
52	1	0	1	1
4	1	1	1	1
4	1	1	0	0
1	1	1	0	0

6	1	1	1	0
1	1	1	1	0
4	1	1	1	0
1	1	1	1	1
1	1	0	1	0
4	1	0	1	0

4	1	0	1	0
4	1	1	1	1
4	1	1	1	1
4	1	1	1	1
4	1	1	1	1
1	1	1	1	1

4	1	1	1	1
2	1	1	1	1
0	1	1	1	0
0	1	1	1	0
1	1	1	1	1
0	1	1	1	1

0	1	1	1	0
0	1	1	1	0
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0	1	1	1	0
0	1	1	1	0
0	1	1	1	0

0	1	0	1	0
0	1	0	1	0
12	1	1	1	1
0	1	1	1	1
0	1	0	1	0
0	1	1	1	1

0	1	1	1	1
1	1	1	1	1
4	1	0	1	1
4	1	0	1	1
1	1	1	1	1

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4	1	0	1	1
4	1	0	1	1
4	1	0	1	1

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[illegible]

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52	1	1	1	1
52	1	1	1	1
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1	1	1	1	1

12	1	1	1	1
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1	1	1	1	1
1	1	1	1	1

1	1	1	1	1
52	1	1	1	1
365	1	1	1	1
52	1	1	0	1

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4	1	1	0	
3	1	1	1	1

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4	1	1	1	1
4	1	1	1	1
12	1	1	0	1

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4	1	1	1	1
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1	1	1	1	0

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1	1	1	1	0
12	1	1	1	1
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12	1	1	1	1
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12	1	1	1	1
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4	1	1	1	0
4	1	1	1	0

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1	1	1	0	1

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1	1	0	1	0

1	1			
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1	1	1	1	1
1	1	1	1	0
1	1	1	1	0

1	1	1	1	0
1435	379	357	371	254

Business Requirements Document
TARP Transparency System
Analysis of Complete Deliverables
October 1, 2009



Enterprise Media Group

Business & Relationship Intelligence

EESA Transparency System

Executive Overview

Objective

To provide transparency into the use of funds distributed under the authorities granted to Treasury in the Emergency Economic Stimulus Act of 2008 ("EESA"), to achieve the purposes of the Act, "(1) to immediately provide authority and facilities that the Secretary of the Treasury can use to restore liquidity and stability to the financial system of the United States; and (2) to ensure that such authority and such facilities are used in a manner that—

- (A) Protects home values, college funds, retirement accounts, and life savings;
- (B) Preserves homeownership and promotes jobs and economic growth;
- (C) Maximizes overall returns to the taxpayers of the United States; and
- (D) Provides public accountability for the exercise of such authority.

To date, the Department of the Treasury has not provided clear and adequate information to satisfy the purposes of the Act as envisioned by Congress.

Definition of Transparency

Part of the problem with understanding transparency as it relates to government spending and funding is that there is a general "Webster's" definition of openness and clarity. Some officials, particularly those who would somehow have personal impact from such level of Transparency, believe that is enough. In most cases this is referred to as "sunshine". As in "shining a light on a subject". It is not enough because it does not provide the information to expose areas that are not compliant with either the law or with the intent of Congress that requires additional governance through the creation of law.

From a "sunshine" perspective, transparency is necessary in order to have the openness of Government activities available for anyone who has reason to ask (e.g. Taxpayers) can see the information that should be available to them. Sunshine programs which usually relate to Government Transparency and are focused on the "Government's" use of taxpayers monies, not necessarily private institutions use of taxpayers' dollars. That is why Transparency is not clearly defined because this has never had to happen to this extent previously.

The problem is that the current attempts at transparency have appeared in "good news sites" such as recovery.gov or financialstability.gov which is more about what is being done to provide services to the Taxpayer rather than what is actually happening and how that deviates from the

intent. That form of insight would provide the taxpayer with transparency rather than what they are receiving now.

The oversight for the TARP program rests with the Special Inspector General for TARP or SIGTARP. When hearings were held to review the potential candidate for the SIGTARP, Neil Barofsky it was clear that Mr. Barofsky was a litigator and had a strong grasp of the law but had no experience of oversight or deterrence of WFA. He believed that his job was to catch offenders of the law and to prosecute them. The committee reminded him of his oversight responsibilities, particularly Sen. Dodd, but it was clear that even though he was quite up to the task of traditional IG duties, Mr. Barofsky had no idea of what Transparency meant from an oversight and deterrence standpoint, nor did he see that as his responsibility¹. Again, because this role had responsibilities that went beyond the role of a traditional IG's I do not believe that the committee understood this either when approving him for the position. And therefore have not to date held him accountable for transparency as a core function of his responsibilities, although that is probably where this responsibility should lie.

The Governments' need for transparency should be based upon sunshine cast on programs that should be "open books" to the people, but in reality the need should be focused on the prevention of waste, fraud and abuse (WFA). There needs to be openness and clarity in order to prevent WFA, but that is not all. The reason for WFA is because the system can no longer be "trusted" in and of itself to police both government and private institutions. The system, in this definition, includes all aspects of governance by legislators, accountants, regulators, corporate officers and other positions of authority and responsibility to insure that the process of use of public and private, regulated funds are managed in a manner that engenders the public's trust.

This need is based upon a fundamental breakdown of trust by the American people in the systems and processes that should protect them from those individuals within institutions and Government that have allowed the system or more aptly the "eco-system" of institutions and Government to corrupt it without regulation or controls. This eco-system has been corrupted by the complexity of the instruments its drivers utilize to raise capital. This complexity has created the opaqueness of financial reporting that allows for both the institutions and Government itself to damage the trust of the people whose money has been entrusted in them both as taxpayers and as customers of the institutions. While in the end it appears that many of these institutions are only barely impacted, but arise better off then they started at the expense of those who have entrusted them with their livelihood.

¹ Confirmation Hearing of the SIGTARP, OMBWatch.org December 9, 2008

Analysis

The standard practice of the Government in the areas of financial reporting comes mostly in the form of filings and reports. These reports are aggregate for fixed time periods, such as quarterly and are generally not questioned as to their accuracy at the time of submission. Although these reports are submitted with the understanding that miss reporting is under penalty of law, the problem is that the Government's ability to determine if an institution is in violation is based upon an audit process that takes less than 5% of all filed data to process audits and cannot

identify issues with complex instruments that are now part of the financial toolbox because they do not fit into regulatory standards that the regulators are positioned to manage ².

Audits are an antiquated way of analyzing and identifying anomalies in financial information because it moves too quickly and requires action at the time of transaction in order to act as a control to the problem rather than reporting it long after the fact. That is what has coined the phrase Audits = Autopsies. Audits are a form of forensics just as autopsies are but it would be better to be able to question the living (or review an active financial transaction, in this case) rather than to attempt to find out what happened from the dead.

There are several forms of reports that Treasury collects from financial institutions;

The Monthly Lending Survey is an inadequate report to analyze banks lending activity and/or other use of Federal funds. It provides very little referential data that would allow the public to compare one bank's activities versus others. It fails to utilize the full amount of data available to the Treasury from regulatory reports such as details within FDIC Call Reports and the Federal Reserve's FR-Y-9C reports.

The Treasury has failed to report on individual banks' efforts regarding foreclosure mitigation, nor have they reported on the status of banks loan delinquencies as a measure of health of their lending portfolio.

There is no easy way to gather the available information on a single institution. To do so currently requires the integration of thousands of files over time to track *behavior* of the use of said funds. Given these challenges, performing peer group analysis, temporal analysis and other types of transparency reporting on key areas such as lending and foreclosures ranges from difficult to impossible.

² SIGTARP Initial Report to Congress, February 6, 2009

Solution

- Create an electronic database that includes all available and usable regulatory data from any relevant government source, all filing data from any agency receiving regular and structured filings, all available public records, all available relevant news filings, press releases and other forms of publically available data that are relevant to the utilizing of funds by recipients.
- Compile and publish this data to the web on an institution level basis. Utilize database and tools to allow for peer group analysis on any individual data element.
- Create database using accurate data structures and taxonomies to allow for easy cross referencing, compiling and reporting of numerous data elements.
- Incorporate relevant news and company-specific events to allow for a "qualitative" view of management and activities at the institution level. Provide for

filtering of data content to allow users to screen for most relevant events, such as management changes, material corporate events and the like.

- Database and news and events feeds should be constructed to allow for "real time" updates and data presentation.
- System and database should be designed using open standards based interface utilizing web services and standard database operations.
- System is required to provide geospatial analysis capabilities to insure that the data at the district level can be analyzed and compared.

Overview

Capabilities and Functionality: To provide transparency into the distribution of Federal Funds to private institutions to preserve the financial stability of the U.S. marketplace. Transparency as defined under this project is as follows;

1. From point of funds distribution through point of final disposition within the institution (including net loss) or recovery from institution by the Treasury.
2. Funds are to be tracked *volume metrically*. Not based upon fungible assets but as transactions that represent the majority (~90%) of the funds volume within an institution and their movement and resolution as to a specific identifiable function.
3. Managed in an electronic database that includes all available and usable regulatory data from any relevant government source, all filing data from any agency receiving regular and structured filings, all available public records, all available relevant news filings, press releases and other forms of publically available data that is relevant to the transparency of funds utilized by institutional recipients.
4. A systematic conversion of all document based filings into a structured format following the XBRL.US standards for document transformation into XBRL. Data formats for the entire database and the appropriate taxonomies should also follow US GAAP 2.0 standards and XBRL.US taxonomy guidelines as well.
5. The management of all information within 48 hours of availability of said data or filing.
6. The ability to provide transparency into institutions, employees and directors of said institutions and the securitized transactions that are performed between institutions, institutions and individuals, between individuals and other individuals and within any financial process that provides for the trade and disposition of securities transactions that result from the origination of Federal capital infusion into an original recipient of Federal funds through its final disposition.
7. The system must be useful in the identification WFA as identified in The Office of The Inspector General's Audit Policy and Oversight definitions.
8. The registration and tracking of personal assets of individuals involved in the institutions who have received Federal Funds, the regulators and members of

Congress who track Federal funds and the contractors who are recipients of Federal Funds through any of the aforementioned programs.

9. The initial programs to be included in Phase 1 of this project are the funds distributed through the Troubled Asset Relief Program (TARP). The system will provide for extensibility to any and all other Federal funds distribution programs once the initial Phase 1 of the project is completed.
10. The system must be able to provide simplified information to the American Public through the Recovery.gov website and be able to answer the key questions that the public requests from a transparency perspective as defined during the requirements portion of this project.
11. Access to the database must be provided in an open standards based interface utilizing web services and standard database operations. Tools that are proposed under this project are to follow the standards that are in place for the agencies who will be utilizing these systems as well as additional proposed tools that can assist in the provision of overall transparency to the capital markets and the marketplace in general.
12. The information regarding homeowner data must be able to be managed and displayed in a geospatial based database and follow the M.A.P.S. protocols for use cases. All data relevant to the portfolio holdings of mortgages must be able to be broken down to the tract level to insure that the information is able to be analyzed in a Geo-spatial / Geo-demographic format.
13. Phase 1 will have 120 days for delivery of a database and a 30 day testing and acceptance process from time of reward of project.

Business Requirements

Each of the aforementioned points in the project overview has detailed business requirements in order to deliver. These are those requirements;

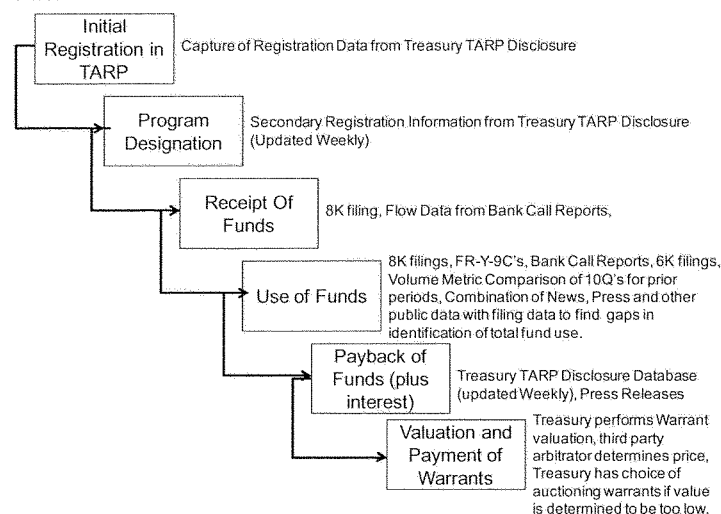
1. **From point of funds distribution through point of final disposition within the institution (including net loss) or recovery from institution by the Treasury.**

Explanation - In order to track the use of funds, the current methods of self reported data are not sufficient to capture the use of funds as it relates to WFA. Based on the SIGTARP's interpretation of the volume of funds *impacted* by the various programs under EESA, the need to understand the transactional details of the use of funds by participating institutions is absolutely necessary to understand the potential for WFA.

Functional Requirements – The requirements for this section are the basic requirements of the overall system. In order to provide for Transparency, the system needs to provide a mechanism to track the use of funds from the receipt from the government to the final disposition with the Treasury. Use of these funds during this time of "infusion" changes the degree of Transparency that should be required of an

institution in order to insure the proper use of taxpayers' funds. If an institution does not take such an infusion it still should be accountable for the use of funds it receives from the Government beyond the TARP program itself based upon the funds facility these types of institutions can gain access to through the FED window, but for the purposes of this document the focus will be on TARP funds. The following process flow demonstrates the method of capture of information from the initial infusion to the final disposition of funds (Chart 1):

Chart 1



Whereas when funds are designated to be released to a new TARP participant, the Treasury registers the participant in the TARP database. The Treasury, specifically the Office of Financial Stability (OFS) then designates what specific TARP program under which the institution belongs. 95% of all TARP participants to date have been involved in the Capital Purchase Program (CPP). Other programs that a TARP participant could be assigned include;

- **Public-Private Investment Program (PPIP)**: In March, Secretary Geithner announced a plan to use \$75 billion to \$100 billion in TARP money, combined with private investments, for the original purpose of buying up bad debt. The aim of the program is to clean up banks' balance sheets so they can more easily make loans.
- **Term Asset-Backed Securities Loan Facility (TALF)**: The Federal Reserve and Treasury created this program to lend up to \$200 billion to financial institutions that offer bundled loans for small businesses and consumers. The

hope is that the program will make it easier and cheaper for Americans to get student loans, car loans and other types of credit.

- **Temporary Liquidity Guarantee Program (TGLP):** The Federal Deposit Insurance Corp. created this program in another effort to get banks to lend money more freely again. The TGLP guarantees certain types of debt issued by financial institutions, and deposits in certain accounts, such as business' payroll accounts, in the event the bank fails or files for bankruptcy. Thousands of banks are participating in the program.
- **Capital Assistance Program (CAP):** This program also aims to ensure that financial institutions will be able to lend money. One aspect of the program evaluates banks to make sure they have enough funds to continue operating even if the economy gets worse. Another aspect gives the government the ability to provide banks with capital if they need it to keep operating and there are no private funding options available because of the poor market.
- **Targeted Investment Program (TIP):** This program, also run by the Treasury Department, allows the government to provide aid to a troubled financial institution if that company's problems could have a ripple effect on other aspects of the U.S. economy, such as creditors.
- **Homeowner Affordability and Stability Plan:** This government program (no acronym yet) is targeted at curbing the foreclosure crisis. The program aims to help millions of families restructure their mortgages to avoid foreclosure and also provides other tools to stem the pace of foreclosures. Those elements include a plan to let judges modify mortgages in bankruptcy proceedings, and a plan to provide assistance to renters who have lost their homes in foreclosure.
- **Commercial Paper Funding Facility (CPFF):** This program aims to make it easier for companies to get a kind of short-term loan, called commercial paper, which many companies routinely use to pay employees, purchase supplies and do other day-to-day financing activities. The government created the program, funded by the Federal Reserve Bank of New York, to purchase some commercial paper for a short period of time, in an effort to get the commercial paper market flowing again following the financial crisis last fall.
- **Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF):** This program provides loans so some financial institutions can buy certain types of commercial paper from money market mutual funds. The goal of the program was to make it easier for the funds to pay investors who wanted to cash out, while also helping to get the market for short-term business loans flowing more normally again.
- **Market Investor Funding Facility (MMIFF):** This program also was created in the fall of 2008 with the aim of keeping low-risk mutual Money funds operating normally in order to reassure investors that they could easily get their money out if they wished. The program provides financing for private companies to buy certain short-term, low-risk investments³.

These are all TARP programs, not Stimulus which appear in some cases to overlap.

Once the program designation is determined and the funds request is finally approved, (There is no specific published process as to who the approvers are or how an institution gets approved.⁴)

The approval is completed and the funds are provided through the TARP funding mechanism, an OFS managed “window”. And the Bank receives the funds. The only way to tell if the bank has actually received the funds is to see that they have actually placed them on their balance sheet or in a reserve account. This can usually be found in either an 8K SEC filing or from a public announcement such as a press release.

This is where the difficult part happens. Most of the TARP recipients are publically traded firms, but out of almost 650 current participants over 190 are private institutions who do not file with the SEC. 8K filings are the primary source of “seminal” transactions from the institutions which make up most of the transaction volume in terms of expenditures, debt securitization, acquisitions, and specialized off balance sheet transactions. Private institutions don’t file 8K’s so it is much more difficult to track these transactions on these institutions than on public firms.

On top of this the public banks do not have to “release” transactional data at all to Treasury, only the SEC. The Bank Call Reports must be updated in the form of “flow” data keeping them up-to-date, but they are aggregate data, not transactional. This is the same with 10Q’s and other filings that are temporal, usually quarterly. This leaves, for public institutions, 8K and 6K filings (8K for domestic transactions and 6K for non sovereign transactions that are in excess of \$1MM) as well as the publically available data from press releases, news and other sources of publically available data that can be identified as a transaction between parties and can be clearly identified as to the value and purpose of the transaction.

To solve this, volume metric analysis takes into account all seminal transactions that are filed on 8K and 6K reports for all public institutions. Since public institutions make up that vast majority of the volume of TARP funds released, to the greater extent the areas where there is the greatest potential impact in terms of WFA can be identified via volume metric analysis of these institutions. By creation of a PERT chart type of analysis of fund utilization from the receipt of funds through the final disposition the system has the capability of capturing the majority of transactional level detail on fund utilization. The balance of the information can be found in gap and con-joint function analysis between reports that are supposed to be reporting the same data for the same period. Through the determination of the gaps in the data itself or in the representation by GAAP taxonomy category of anomalies of balance sheet transactions or non conforming off balance sheet transactions that can, through this type of analysis, highlight potential for WFA.

Once both the institution and Treasury determines it is time to repay the funds, the funds are returned to the treasury plus interest. This interest valuation as well as the actual funds valuation is currently under dispute. The bank holding companies, among them American Express, Goldman Sachs, JPMorgan Chase and Morgan Stanley, plan to return a combined \$68.3 billion. That represents more than a quarter of the federal bailout money that the nation's banks have received since last October, when many feared that failures might cascade through the industry.

Issues and Examples: But the decision to allow the banks to exit TARP also ushered in a new, and potentially risky, phase of the banking crisis. Letting the lenders out now — earlier than many had envisioned, and without the industry reforms some consider necessary to prevent future crises — raises many sobering questions for policy makers, bankers and taxpayers. Without a systematic method of tracking activity and determining the key "levers" that drive adverse financial conditions and the determination of the warning signs thereof, there will not be a method of forecasting risk as it relates to institutional behavior in the marketplace. The program was aimed at purchasing assets and equity from banks to strengthen them and encourage them to expand lending during a tightening credit squeeze. But after banks return the TARP money, the administration will forfeit much of its leverage over them. With that loss goes a rare opportunity to overhaul the industry. The administration's ability to push institutions to purge themselves quickly of bad assets and do more to help hard-pressed homeowners will be diminished. Of even deeper concern is the running trouble inside the banking industry. Despite tentative signs of revival, many banks remain fragile. Four of the nation's five largest lenders, including Citigroup and Bank of America, were not allowed to return their bailout funds.

Some analysts' worry that financial institutions that repay bailout money now may turn to Washington again if the economy worsens and losses overwhelm banks. One of the most vexing problems of the credit crisis — how to rid banks of their troubled mortgage investments — remains unresolved. This was the original intent of the TARP program.

The banks are eager to escape TARP and the restrictions that come with it, particularly the limits on how much they can pay their 25 most highly compensated workers. (Even so, the Obama administration plans to propose guidelines on executive compensation for the broader industry as early as July 29, 2009.) Yet even banks that return taxpayers' money will remain dependent on other forms of government aid. Among them are enhanced deposit insurance, incentive payments to modify home mortgages and federal guarantees on bonds that banks sell to raise capital.

"They may need the government's money to get through this storm," Christopher Whalen, a managing partner at Institutional Risk Analytics, said of the banks. "If the banks have to come back and ask for more money in a few months, I don't think the response from Washington will be too kind."

Taxpayers — many of whom probably never imagined that banks would return their bailout money so soon, if ever — stand to make several billion dollars from their investment in the 10 banks. So far, the Treasury has collected about \$1.8 billion in interest payments. It also might reap as much as \$4.6 billion as the banks seek to expunge other government investments, known as warrants.

The first round of repayments will free up billions of dollars that the administration can then funnel to other troubled banks and companies without having to return to Congress for more money.

But homeowners and consumers are unlikely to benefit if banks repay their TARP funds en masse. Banks are giving back money that might otherwise be used to make loans.

The announcement on Tuesday July 21, 2009 underscored the stark dividing line across the banking industry. On one side are big banks now considered healthy enough to forgo their TARP money. On the other side are those considered too weak to go without it. Still, some of those weaker banks may be allowed to repay the money soon.

Mr. Obama, in remarks on Tuesday July 21, 2009 in the East Room of the White House, stopped short of declaring the crisis over. And the president, who has been harshly critical of multimillion-dollar bonuses for Wall Street executives, had a message for the banks that were returning the money.

"I also want to say: the return of these funds does not provide forgiveness for past excesses or permission for future misdeeds," he said.

The Treasury did not name the banks, but the institutions quickly acknowledged the decision in a barrage of press releases on the morning of July 21. Morgan Stanley was among the first out with the news. American Express, Bank of New York Mellon, the BB& T Corporation, Capital One Financial, JP Morgan Chase, Northern Trust, the State Street Corporation and U.S. Bancorp soon followed. Goldman Sachs, which had pressed hard to repay the money, waited nearly two hours before issuing its release⁵.

Based upon the acceptance process for return of TARP funds there is still a series of exceptions that are in place that do not allow for finite definition of how funds are finally disposed of back to the Treasury on an institution by institution basis. With this there is also the larger issue of the valuation of warrants.

Warrants are promises of stock to be provided at a fixed valuation determined in advance by the parties involved in the transaction.

The Congressional Oversight Panel (COP) has released its July oversight report, "TARP Repayments, Repayments, including Repurchase of Stock Warrants." The report was issued in light of the fact that many banks that received financial assistance under TARP want to exit the TARP program by repaying their financial assistance and repurchasing their warrants from the Treasury Department. The report examined whether the Treasury is valuing the warrants that accompanied TARP assistance in a way that maximizes the taxpayers' investment in the financial institutions. The report also analyzed how the Treasury is constrained by the

provisions of the contracts governing the TARP investments in the banks and recognizes that the Panel's valuations do not include the liquidity discounts and other adjustments contemplated by the Treasury. In reaching a judgment with the bank supervisors to allow a particular bank to repay its TARP assistance and in determining the price, time and manner at which it will sell the warrants it holds in that bank, the COP found that the Treasury must balance the public interests in financial stabilization and economic growth. The COP also emphasized that it is critical that the Treasury make the process—the reason for its decisions, the way it arrives at its figure, and the exit strategy from or future use of TARP—absolutely transparent.

The conclusion reached by the COP panel and represented to Congress by its chairwoman Elizabeth Warren is that not only is the process as the COP has found not transparent, but there is not a definition to compare the process to to insure it is compliant to the process.

In the report the Panel uses the most widely-accepted mathematical model, presenting a detailed technical valuation of the warrants Treasury holds. The assumptions employed in the use of any model are crucial, and the report offers a range of estimates based on high, low and best estimate assumptions for certain key variables. The Panel was aided in its valuation efforts by three renowned finance experts, Professor Robert Merton, Professor Daniel Bergstresser, and Professor Victoria Ivashina, all of the Harvard Business School. The professors reviewed both the technical valuation model and the assumptions that were built into the model; they concluded that the approaches reported here were reasonable and that they produced reliable estimates.

Eleven small banks have repurchased their warrants from Treasury for a total amount that the Panel estimates to be only 66 percent of its best estimate of their value. If the warrants had been sold for their market value, taxpayers would have recovered \$10 million more. Treasury has to date sold warrants only from smaller banks. In those sales, liquidity discounts are likely to be a major factor in a way that they are not likely to be for large publicly traded institutions. If, however, liquidity discounts or any other rationales are accepted as a reason for taking only 66 percent of market value for the full group of warrants Treasury holds, the shortfall to taxpayers could be as much as \$2.7 billion⁶.

In order to make this process not only transparent but also correct in its overall assumptions, the report data that is fed into the warrant valuation models has to pass validation checks of their own. This is; a process that is not currently in place nor are there any edit and validations on the base report data that would go into these models. The system would require an edit and validation process to insure that the data is not only structurally valid, but is accurate for the periods it is reporting on as well.

³ Subsidyscope, FDIC, Treasury Department, Federal Reserve, msnbc.com

⁴ Sunlight Foundation The unbearable opacity of TARP: Government agencies can't tell us who's in charge, April, 28, 2009

⁵ New York Times Article, 10 Largest Banks allowed to exit funding program, June 9, 2009

⁶ COP JULY OVERSIGHTREPORT* July 10, 2009, TARP Repayments, Including the Repurchase of Stock Warrants

*Submitted under Section 125(b)(1) of Title 1 of the Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343

2. **Funds are to be tracked *volume metrically*. Not based upon fungible assets but as transactions that represent the majority (~90%) of the funds volume within an institution and their movement and resolution as to a specific identifiable function.**

Explanation - Volumetric analysis is the statistical method of analyzing a data set based upon comparing individual transactions value with a measurement of the whole and determining the gap. Based upon Pareto's principal, most value based transactional systems are skewed towards a smaller number of transactions making up a higher value of the overall set... Thus the 80/20 rule. The reality is that in most cases of financial analysis the ratio is actually more concentrated with larger transactions making up a more substantial proportion of the volume therefore closing the ratio to 90%/10% or even smaller ⁷. This occurrence allows for the tracking of the significant transactions that make up the vast majority of the revenues that are moved within an institution inside of a specific period.

Functional Requirements – The functional requirements for volume metric analysis are;

- The capture and standardization of every transaction that an institution is involved with, wherever possible to attempt to aggregate transactional data to come as close as possible to the aggregate summary data that is published on a temporal basis. Most of this data exists in SEC 8K & 6K filings but there are many other sources for this data including;
 - News, press release and other public sources of data
 - Counterparty filings (filings of the counterparty of the transaction, this is particularly useful in tracking transactions of private institutions interacting with public firms.)
 - Securities transactions (where there is an issuance of a security involved in the transaction)
 - UCC Filings (where there is financing of a transaction in excess of \$10K that is secured by financing)
- The analysis of all transactions against summary level reports.
 - Gap Analysis determination
 - Validation of source data
 - Off balance sheet transactions that may not appear in the core filings of an institution (e.g. SEC Filings)

- Analysis of aggregate transaction data and the sources that it appears against other sources where there may be a significantly limited number of reported transactions
 - Mortgages
 - Debt Issuance
 - Fund Participation
- Analysis of all final standard deviations from norms established by the overall analysis of participating firms and the availability of transactional level detail, the aggregation of transactions against the summary data and the difference between peer groups in the total percentage of transaction volume as a percentage of the aggregate balances as a whole.

Issues and Examples - Volume metric analysis is usually not utilized in financial systems because of the requirements to provide complete disclosure on a balance sheet of assets matching liabilities. Because this information is not fully disclosed by the institutions and because there are legitimate reasons why the institutions would not want to disclose this information (e.g. competitive information, client's privacy etc.) only seminal transactions or those that have to be filed by law are utilized for this type of analysis. Where volume metrics are used is mostly in fluid dynamics and chemical analysis because the need to understand the "gap" between known components and unknown quantities are consistently being analyzed in these activities. The forensic nature of these analyses require volume metric functions, because the function of this Transparency system is also somewhat forensic, the need to perform volume metrics is required to answer the questions about use of funds.

Volume metrics are also driven by the analysis of *systematic decay*. Systems and methods for decomposing and decaying data over time by decomposing a type of data item into constituent units of the data item, establishing relationship factors between data items to other data items and between constituent units, creating a shelf-life criterion for the constituent units priority dimensions, calculating or updating a decomposability index for each constituent unit as a function of the priority dimensions while also applying a relationship factor and optionally incrementing for another dimension, and then decaying over time the data items by deleting all constituent units which have decomposability indices exceeding a configured threshold⁸. By decomposing aggregate data, the information derived can be volume metrically analyzed to determine the remaining volume which constitutes the gap. The gap is then categorized by the functional indices identified in the decayed variables. Statisticians familiar with data decay decomposition can use these indices to calculate volumes by category. This enables more accurate volume metric analysis.

⁷ Mechanical Trading Systems: Pairing Trader Psychology with Technical Analysis (Wiley Trading) by Richard L. Weissman

⁸ Oriana Jeannette Love, Borna Safabakhsh, System and method for data management through decomposition and decay

3. **Managed in an electronic database that includes all available and usable regulatory data from any relevant government source, all filing data from any agency receiving regular and structured filings, all available public records, all available relevant news filings, press releases and other forms of publically available data that is relevant to the transparency of funds utilized by institutional recipients.**

Explanation - The core requirement of a database that is designed to track WFA is the ability to compare data from multiple sources and use that comparison to determine gaps. Gaps, in the technical sense, are deviations from a documented "standard", deviation between what are thought to be "standards" or variance between two sources that are neither validated nor attributed as a "standard". Standards are usually thought of in this case as regulated or legally "filed" documents that are thought to have accurate and valid representations of financial actions (Whereas *valid* represents complete from both sides of a financial balance sheet or in the case of an individual transaction has an appropriate offsetting asset or liability.)

Functional Requirements – The functional requirements of the Master Database are as follows;

- A scalable system that is built in modules based upon a Systems Oriented Architecture (SOA). SOA is based on a mesh of software services. Services comprise unassociated, loosely coupled units of functionality that have no calls to each other embedded in them. Each service implements one action, such as filling out an online application for an account, viewing an online bank-statement, or placing an online trade. Instead of services embedding calls to each other in their source code they use defined protocols that describe how services pass and parse messages, using description meta-data.

The developer associates individual SOA objects by using orchestration. In the process of orchestration the developer associates software functionality (the services) in a non-hierarchical arrangement (in contrast to a class hierarchy) using a software tool that contains a complete list of all available services, their characteristics, and the means to build an application utilizing these sources.

Underlying and enabling all of this requires meta data in sufficient detail to describe not only the characteristics of these services, but also the data that drives them.. In the meantime SOA currently depends on data and services that are described metadata that should meet the following two criteria:

1. the metadata should come in a form that software systems can use to configure dynamically by discovery and incorporation of defined services, and also to maintain coherence and integrity
2. the metadata should come in a form that system designers can understand and manage with a reasonable expenditure of cost and effort

SOA's goal is to allow users to string together fairly large chunks of functionality to form ad hoc applications that are built almost entirely from existing software services. The larger the chunks, the fewer the interface points required to implement any given set of functionality; however, very large chunks of functionality may not prove sufficiently granular for easy reuse. Each interface brings with it some amount of processing overhead, so there is a performance consideration in choosing the granularity of services.

The great promise of SOA suggests that the marginal cost of creating the n-th application is low, as all of the software required already exists to satisfy the requirements of other applications. Ideally, one requires only orchestration to produce a new application.

- The system must be compliant to the Federal Desktop Core Configuration (FDCC) which is the compliance standard for all federal desktop systems. This mostly has to do with security, but analysts, in many cases require data sets that are significant samples of the larger universe. There are strict compliance standards to downloading large datasets to a federal desktop so the facility to process on the remote system and deliver results to the desktop is a functional requirement of the system.
- The system needs to be user scalable. Advanced users who require significant utility and are involved in high utilization levels down to the feeds that would provide summary report data to sites such as recovery.gov and others will be required to be able to be accessed by the users of the system.
- The ability to support both XML and SQL based data sets with, in some cases redundant data based upon its use profile.
- The system must be extensible and capable of expanding based upon user demand, data volume and additional functionality and sources of data.
- The system must be flexible. The data filed in government reports changes and may actually disappear. History must be maintained as well as tracking change data to new data structures that may replace existing structures.
- The system must support transactional update processes based upon unique identifiers as well as entity matching requirements. The feed to this system must have comprehensive data refinery functionality and allow for parsing, matching, transforming, linking, de-duplication, data precedence management and conversion into standardized formats that allow all data to be managed within the same structural framework and manage a standardized taxonomy for the entire system.

4. **A systematic conversion of all document based filings into a structured format following the XBRL.US standards for document transformation into XBRL. Data formats for the entire database and the appropriate taxonomies should also follow US GAAP 2.0 standards and XBRL.US taxonomy guidelines as well.**

Explanation - Extensible Business Reporting Language (XBRL) is a taxonomy based form of XML that bases the guidelines for its taxonomy on US Generally Accepted Accounting Practices (G.A.A.P) reporting standards and International Financial Reporting Standards) IFRS. These taxonomies are designed to align financial reporting so that the information that is not only accounted for on company financials can be in a single consistent format, but that ongoing filings of firms with the government can also follow the same taxonomy structures. XBRL is based on XML, a widely accepted standard, and has the ability to "tag" or code each element on a financial or business report with information such as description, units, currency, etc., so that it is easy to identify and understand for users of the information. All the elements are grouped together into a collection of financial and business reporting terms called "taxonomy". XBRL is extensible, meaning that the terms available for use can be customized so that companies using XBRL can create their own elements – called "extensions" – to describe a unique reporting situation. XBRL is not an accounting standard and will not change what is reported, only how it's reported. The XML tagging means that the information in a business report is computer-readable and can be more easily extracted, searched and analyzed by users of that information.

What it can do?

- **XBRL allows for the creation of interactive, intelligent data.**
Each piece of business information has detailed descriptive and contextual information wrapped around it, so that the data becomes machine-readable and can be automatically processed and analyzed.
- **XBRL allows business reporting information to be reused and repurposed.**
A financial or business report created once can be used to create many documents in different formats--HTML, ASCII text, Microsoft Word or Excel--with no loss of accuracy or integrity.
- **XBRL adds value to every step of an organization's business information reporting.**
The entire reporting chain of business information -- from data collection through internal reporting and external reporting -- will be made more efficient and accurate and will contain more useful data.
- **XBRL enhances the ability to compare information from one organization or entity to another.**
Because XBRL lays out a common set of definitions by which all organizations tag their data.

- **XBRL allows for unique reporting situations.**
Because it can be extended by a single reporting entity by adding special elements that may be needed to best represent that company.

Functional Requirements – The functional requirements of the system is to support standards that are maintains by XBRL.US as the data requirements justify and based upon maintaining data continuity over time.

Currently these taxonomies can be found for GAAP 2.0 2009 at these Industry entry points:

- Banking and Savings:
<http://taxonomies.xbrl.us/us-gaap/2009/ind/basi/us-gaap-basi-stm-dis-all-2009-01-31.xsd>
- Brokers and Dealers:
<http://taxonomies.xbrl.us/us-gaap/2009/ind/bd/us-gaap-bd-stm-dis-all-2009-01-31.xsd>
- Commercial and Industrial:
<http://taxonomies.xbrl.us/us-gaap/2009/ind/ci/us-gaap-ci-stm-dis-all-2009-01-31.xsd>
- Insurance:
<http://taxonomies.xbrl.us/us-gaap/2009/ind/ins/us-gaap-ins-stm-dis-all-2009-01-31.xsd>
- Real Estate:
<http://taxonomies.xbrl.us/us-gaap/2009/ind/re/us-gaap-re-stm-dis-all-2009-01-31.xsd>

These taxonomies are the accepted standard in the US for filing in XBRL. Examples of filings in XBRL are as follows

Interactive Data Filings on EDGAR using US GAAP Taxonomies

SUPERVALU INC 10-Q
Wednesday, July 29, 2009

SCHLUMBERGER LTD /NV/ 10-Q
Wednesday, July 29, 2009

MCGRAW-HILL COMPANIES INC 10-Q
Wednesday, July 29, 2009

MATTEL INC /DE/ 10-Q
Wednesday, July 29, 2009

DIAMOND OFFSHORE DRILLING INC 10-Q

Wednesday, July 29, 2009

HOSPIRA INC 10-Q

Wednesday, July 29, 2009

TIME WARNER INC. 10-Q

Wednesday, July 29, 2009

Sample XBRL document views

Bank of America

Income Statement, Balance Sheet, Cash Flows

Bank of Hawaii Corporation

Investment Securities Note

CB Richard Ellis Group

Accumulated Depreciation Disclosure

General Electric

Document and company information

Hartford Financial Services Group

Statement of Operations, Statement of Financial Position, Statement of Other Comprehensive Income, Statement of Cash Flows, Notes to Consolidated Financial Statements

Hartford Financial Services Group - Supplemental Schedules

Schedule 12-15 - Summary of Investments, Other than Investments in Related Parties; Schedule 12-16 - Supplementary Insurance Information, for Insurance Companies Disclosure

Lexington Realty Trust

Statement of Financial Position, Statement of Operations, Statement of Comprehensive Income, Statement of Cash Flows, Notes to Consolidated Financial Statements

Merrill Lynch

Statement of Earnings, Balance Sheet, Statement of Comprehensive Income, Statement of Cash Flows

S&T Bancorp

Statement of Financial Position, Statement of Income, Statement of Shareholders Equity and Other Comprehensive Income, Statement of Cash Flows, Notes to Consolidated Financial Statements

By filing in XBRL the ability for all entities and the transactional data they maintain can be tracked when it is filed. Since many of these transactions are filed as footnotes, XBRL allows for the building of taxonomies on footnoted data to categorize it into the appropriate category base upon the relevant filing type.

Issues and Examples – XBRL is presently the standard set for data submission only for the top 500 companies filing with the SEC, although that number will grow to 1,300 in 2010 and will continue to grow until all companies filing with the SEC are covered. The FDIC converts the filings it receives into XBRL itself via a platform based on UBMatrix, which has its own taxonomy and does not parallel the current XBRL.US recommendation of utilizing the GAAP 2.0 standard, although it is close.

In April 2009 a study of the North Carolina State University Department of Accounting College of Management evaluated the accuracy of XBRL filings for 22 companies participating in the SEC's voluntary filing program in 2006.⁷ Results of a comparison of XBRL filings to Forms 10-K revealed multiple errors in signage, amounts, labeling, and classification. The study considers that these errors are serious since XBRL data is computer-readable and users will not visually recognize the errors, especially when using XBRL analysis software. To the greater extent this has to do with the transformation software utilized not with the XBRL standard itself. A present vendor under consideration, LogixData had 100% accuracy on the samples tested; this will require further testing to insure that there are no errors. It may behoove us to utilize either the same testing methodologies as NC State or to request them to perform the tests themselves based upon a stipend to insure accuracy of the filing transformations.

⁷ http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1397658

5. The management of all information within 48 hours of availability of said data or filing.

Explanation - In order to prevent WFA the timing of the action must be swift and based on timely accurate information. Most of the reasons why the existing sources of data are not effective providers of transparency are that they are usually "temporal reports" made in a structured release format usually on a quarterly basis. The "structured release" is usually a synopsis of granular data and cannot be decomposed into its base elements; therefore it cannot identify individual transactions where there is a possibility of finding WFA.

Functional Requirements – Most of the data that the Treasury as well as most government agencies utilizes today is in the form of temporal reports that are usually filed on a quarterly basis. This is essentially because 50 years ago it was essentially impossible to capture data on any more frequent basis based upon both technology and the ability of the institutions to physically process the data. Today that is not the

case. Technology has allowed for the increase of speed of reporting and a simultaneous reduction in cost. There is no physical reason why these reports cannot approach near real-time if the congress or the Treasury deems necessary. In light of the importance of this issue and the need to provide higher levels of transparency for the overall process, it is necessary to improve one of the key variables in transparency which is timeliness. The longer it takes to report on data and turn it into usable information the less value that information has. This is the case in virtually every use case for data. Not only does data itself decay, but the actionability of data decays at a compounding rate. Actionability is the key because the ability to act is based on the knowledge that something is happening rather than something has happened. This prevents waste and abuse and can stop fraud prior to it becoming a major problem.

The requirements for this segment are as follows:

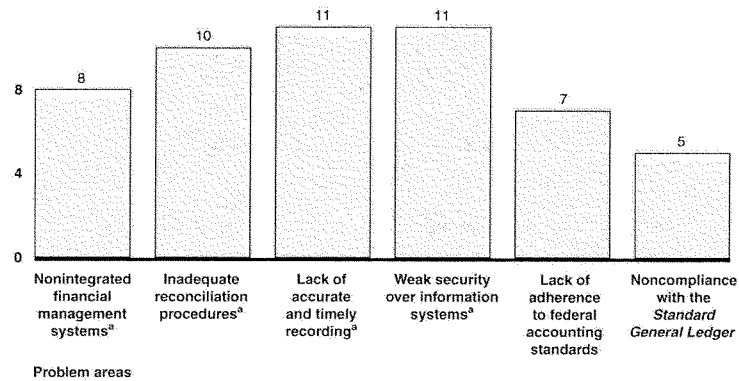
- No data should be processed for this application more than 48 hours after publication.
- If there are real time updates to data that is managed on a temporal basis, (e.g. quarterly) then it is required that those updates be processed into the system as soon as physically possible.
- Any source of data that can be processed in transactional for vs. summary form should be handled in the transactional form and the summary data should be used for validation purposes.
- Since data structures will change, a data steward is required to perform change management with Database Administration. Even though the data structures change, within a specified time period the new structure must be in place. That specified time period needs to be defined as part of service levels for this project. It is the responsibility of the Data Steward to gain access to the change requirements as soon as they are published prior to the actual change going into effect.

Issues and Examples - For fiscal year 2007, Government Accounting Office (GAO) auditors reported 13 of 24 CFO Act (The CFO Act of 1990) agencies' financial management systems were not in substantial compliance with Federal Financial Management Improvement Act of 1996 (FFMIA) requirements. For these 13 agencies, auditors reported a number of problems, as shown below, that illustrate how agency financial management systems — including processes, procedures, and controls—are not providing reliable, useful, and timely information to help manage agency programs more effectively. As discussed in prior FFMIA reports, GAO remains concerned that the criteria for assessing substantial compliance with FFMIA are not well defined or consistently implemented across agencies. In addition, the majority of participants at a Comptroller General's forum on improving federal financial management systems said there is little agreement on the definition of "substantial compliance." To address GAO's prior recommendation, OMB is in the process of revising its guidance, and GAO has reemphasized its concerns with the

need for an appropriate definition of substantial compliance that focuses on financial management systems' capabilities beyond financial statement preparation.

As seen below in Chart 2 the agencies involved mostly has compliance issues in security and accurate and timely recording, which of course is a major concern.

Chart 2
CFO Act agencies
13



Source: GAO analysis based on independent auditors' financial statement audit reports prepared by agency inspectors general and contract auditors for fiscal year 2007.

The Department of the Treasury has been singled out as having almost all of the aforementioned issues. This presents both a problem and an opportunity. The gaps between filing data in terms of accuracy and timeliness should lead to require comparative analysis that finds discrepancies between the various reports that could identify signs of WFA. As in the case of the GAO study, the analysis shows that will invariably be the case.

The Departments of Agriculture, Education, Health and Human Services, Housing and Urban Development, and Transportation were responsible for managing about 86 percent of the federal awards in fiscal year 2007. (DOD is not an Act Agency) Since the GAO mostly audits vendor award data the primary analysis is based upon vendor accounting. But a significant portion of the GAO audit was also based upon internal controls and reporting, this is where the Treasury did not fare well. The only other agency audited, that received worse results was the Securities and Exchange Commission (SEC) and this was done separately since the SEC is not an ACT agency, was the SEC.⁸

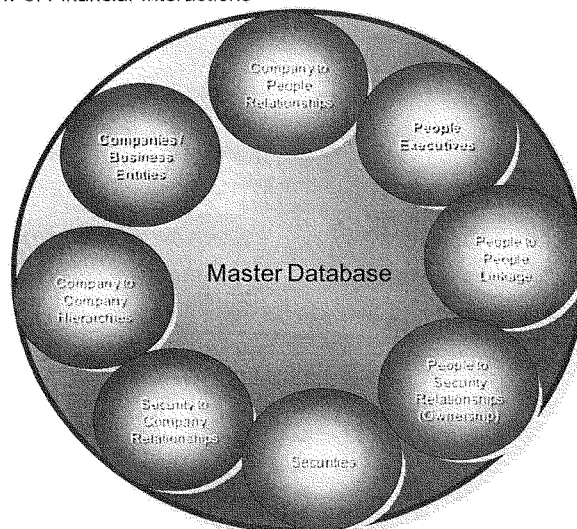
⁸ GAO-08-1018 FFMIA Fiscal Year 2007 Results

6. The ability to provide transparency into institutions, employees and directors of said institutions and the securitized transactions that are performed between institutions, institutions and individuals, between individuals and other individuals and within any financial process that provides for the trade and disposition of securities transactions that result from the origination of Federal capital infusion into an original recipient of Federal funds through its final disposition.

Explanation - The current systems of oversight and audit are mostly focused on institutions. The reporting of the financials for temporal periods is the basis of most of the financial data collection processes currently performed by the Government. The issue with this is that in order to fully understand where there is WFA, there needs to be the ability to look at the full "circle of interaction". This means that the system need to cover all aspects of financial interaction as shown in chart 3:

Chart 3

360° View of Financial Interactions



Whereas the interactions between each of the core components show a 360° view of all of the points where there are a potential for WFA.

Functional Requirements – In order to complete the connection between all forms of transactions, individuals and institutions, the master database must contain unique

identifiers to connect this information in order to insure the accurate representation of the aforementioned view. The functional requirements are as follows;

- Capture of all institution data as it relates to the demographic, firmographic and financial data for each institution in the database with at least 10 years of history (18 years of financials).
- Capture the correlation between C-level associates and the institutions they are presently involved and their historical prior relationships. (As long as possible)
- Capture biographical information about individuals stored in the database.
- Capture information about relationships between individuals in the database including present and historical
- Capture information about the financials of individuals, where possible, and be able to analyze the interrelationships between individuals to assist in the determination of conflicts of interest.
- Capture the information about the securitized holdings of individuals.
- Capture the links between the securitized holdings of individuals, the issuer of the security and the securitized entity.
- Maintain the information across all processes in a timely and complete manner.

The concept of this structure is to create a 360° degree view of institutions, individuals and securities to determine the financial interactions where there is potential for WFA.

The individuals need also to include legislators, regulators and government employees and their relationship with individuals in the private sector, where there could become a potential for conflict of interest.

Issues and Examples – Based on an article in The Huffington Post, September 22, 2008, the question of Government official's conflict of interest is still relevant today; "Now, however, confidence in Paulson is eroding, with critics questioning whether the Treasury Secretary's Wall Street connections have impacted his approach to the current crisis, both progressive and conservatives and sounding the alarm." "Some are saying that we should simply trust Mr. Paulson, because he's a smart guy who knows what he's doing," wrote Paul Krugman of the New York Times. "But that's only half true: he is a smart guy, but what, exactly, in the experience of the past year and a half -- a period during which Mr. Paulson repeatedly declared the financial crisis 'contained,' and then offered a series of unsuccessful fixes -- justifies the belief that he knows what he's doing? He's making it up as he goes along, just like the rest of us."

Then there was conservative pundit Michelle Malkin, hardly of the same ideological ilk of Krugman, who declared on Fox News: "I think that Hank Paulson's corporate...record is very important. While he was a Goldman Sachs, the company was buying up a lot of Chinese banks in particular, and at the time of his nomination,

there were very serious questions raised about the conflicts of interest involved, and where his priorities are, and who he really is looking after."

Malkin was referencing the stipulation, in Paulson's bailout plan, for the U.S. Treasury to help prop up some foreign banks. But the main thrust of her point -- that Paulson's **past mattered** -- was echoed among economists, analysts, and lawmakers throughout Monday. Some of Paulson's former associates and colleagues are the very people he now is in position to help aide with taxpayer dollars. As McClatchy News reported, "Paulson's former assistant secretary, Robert Steel, left in July to become head of Wachovia, the bank based in Charlotte, N.C., that has hundreds of millions of troubled mortgage loans on its books." (Mr. Steel also received over \$32M in signing bonus in Wachovia Preferred Stock) Moreover, as Bloomberg News **reported**: "Goldman Sachs Group Inc. and Morgan Stanley may be among the biggest beneficiaries of the \$700 billion U.S. plan to buy assets from financial companies while many banks see limited aid..."

On Monday, Oregon Democratic Rep. Peter DeFazio put a voice to this concern, warning House colleagues against being "*rolled by a Wall Street executive who is masquerading as the secretary of the Treasury.*"

There is a certain irony to a former head of a major investment firm now being tasked with reforming the very system that made him so wealthy. Goldman, while never a huge player in the mortgage bond industry, nevertheless reported pre-tax earning of more than \$6.2 billion in its trading division - which included such bonds - in 2005. Similarly, under lax federal oversight, Goldman's investment banking division had pre-tax earnings of \$413 million during that same year, according to an annual report.

Having been steeped in this environment, observers argue, Paulson is seeking to tackle the current crisis from too narrow an angle; in essence, ignoring the cause (the failing housing market) in favor of the symptom (the crisis among investment banks).

"He does have potential personal conflicts of interest - not only regarding his associates, and his next finance position, but also the fact that part of his wealth almost certainly is in a blind trust that includes large holdings in Goldman Sachs and other funds," said Robert Shapiro, president of Sonecon and the Under Secretary of Commerce in the Clinton White House. "But even if Paulson is unaffected by such issues - and he may be, I just don't know - the more important issue is whether his former and future positions create a distorting prism for the bailout design. This crisis is ultimately driven by the falling housing market, and we will not finally get past it until the housing market stabilizes, which is why almost all economists say we're probably only halfway through this crisis. Yet, instead of trying to stop mortgage foreclosures and stabilize the housing market with loans to homeowners facing foreclosure, a Treasury headed by one of this period's leading investment bankers focuses only on loans and other bailouts for institutions that borrowed huge amounts to invest recklessly in the securities and derivatives based on those mortgages." Economists have additional concerns with Paulson's approach, also related to the secretary's background. In his last report at Goldman Sachs, Paulson received a

compensation package of \$38 million. And while he was reportedly instrumental in decreasing the size of the former New York Stock Exchange head Richard Grasso's golden parachute in 2001, others see him now as too willing to protect the earnings of the big-time CEOs in the current bailout proposal.

Then there is the issue of transparency and judgment. "I would borrow directly from Ronald Reagan, trust but verify," said James Galbraith, a professor of economics at the University of Texas, when asked about Paulson. "The guy is clearly competent. He has worked with Democratic leadership in the Congress very well. If this was John Snow still in the Treasury, there would be no question you couldn't do business. On the other hand, I wouldn't want to turn my back on him... This is a guy, who thought he could weaken the SEC and even a couple of weeks ago, when he wanted advice on the risks with Fannie and Freddie, he went to Morgan Stanley." To some extent, the political world is still grappling with how much responsibility Paulson deserves for the current crisis he has now been tasked with remedying. As it stands now, the Treasury Secretary still enjoys tremendous deference within the halls of power, with everyone from the Obama campaign to Michael Bloomberg and Mitt Romney expressing, at a minimum, basic confidence in his competency for the task. His past statements, specifically, his **declaration six months ago** that "our institutions, our banks and investment banks, are strong," is chalked up as a forgivable attempt to soothe public concern. And while backlash to his initially proposal for handling the financial crisis is growing on Capitol Hill, the consensus seems to be that - with the end of the Bush administration in site - criticism and vetting of Paulson won't be overtly intense.

"If this were to the end of Bush's first term and is going to be reelected, this stuff would matter more," said Steve Hayward of the conservative American Enterprise Institute. "But he is going to be gone in three months. It is the next Treasury Secretary who will be doing the deeds and overseeing the money."

Based upon this article and the current happenings almost a year later, there is a clear need for transparent data as it relates to all relationships and actions so as to follow the Regan adage "Trust but Verify". This could not be truer today. Even now there is not a clear answer to the housing crisis, even though Mr. Paulson's and Mr. Geithner's former employer Goldman Sachs is now out of the TARP program and recording record profits. Besides financial stability, the other leading indicators of performance of EESA have yet to show any considerable positive movement.

7. The system must be useful in the identification of Waste, Fraud and Abuse (WFA) as identified in The Office of the Inspector General's Audit Policy and Oversight definitions.

Explanation – The United States Inspector General's (IG's) are responsible for enforcing a general code establishing the Counsel's of Inspectors General known as section 11 which is part of the INSPECTOR GENERAL ACT OF 1978. This act outlines the responsibilities of all IG's for all agencies of the Government in regards to their

responsibility in preventing WFA. Section 11 has broad responsibilities but in essence it is the mission of the IG's to do whatever is necessary within the scope of their authority (which within each agency includes subpoena power) for any legislator, regulator or government official in any capacity to prevent WFA. This also includes the private sector as it relates to the use of government funds as in contracting and other services provided to the government.

Functional Requirements – The functional requirements of this section are based on the ability to track and identify WFA. The only way to do this is to analyze anomalies in the data as presented in various forms and in comparison to each other.

- An example of this can be a standard quarterly balance sheet comparison of bank statements between SEC 10Q filings, Bank Call Reports, Bank Holding Company Reports and FR-Y-9C's. Although there are different representations of the financials, some significant portions of the data for the period, in this case quarterly should foot. If it doesn't this is a case of raising the red flag in questioning the validity of the data and potentially the representation by the provider.
- Another example of this is the analysis and examination of the data as it relates to the adherence to the EESA Act "black letter" intent. If banks, or other TARP participants are not following through with key areas of intent, mortgage access, credit for small businesses, foreclosure mitigation etc., then this should also raise a red flag.
- Serious offences such as those the SIGTARP are currently investigating would come to the surface more readily with the transparency system in place because the analysis would identify candidates that could then be examined prior to launching an investigation.

Two of the investigations came about through anonymous calls to the SIGTARP hotline;

Federal Felony Charges Against Gordon Grigg: On April 23, 2009, Federal felony charges were filed against Gordon B. Grigg in the U.S. District Court for the Middle District of Tennessee, charging him with four counts of mail fraud and four counts of wire fraud. The charges are based on Grigg's role in embezzling approximately \$11 million in client investment funds that he garnered through false claims, including that he had invested \$5 million in pooled client funds toward the purchase of the TARP-guaranteed debt. Grigg pleaded guilty to all charges and is scheduled for sentencing on August 6, 2009.

FTC Action Against Misleading Use of "MakingHomeAffordable.gov": On May 15, 2009, based upon an action brought by the Federal Trade Commission ("FTC"), a Federal district court issued an order to stop an

Internet-based operation that pretended to operate "MakingHomeAffordable.gov," the official website of the Federal Making Home Affordable program. According to the FTC's complaint, the defendants purchased sponsored links as advertising on the results pages of Internet search engines, and, when consumers searched for "making home affordable" or similar search terms, the defendants' ads prominently and conspicuously displayed "MakingHomeAffordable.gov." Consumers who clicked on this link were not directed to the official website, but were diverted to sites that solicit applicants for paid loan modification services. The operators of these websites either purport to offer loan modification services themselves or sold the victims' personally identifying information to others. SIGTARP is providing assistance to FTC during the investigation.

Neither one of these types of fraud identification would come from the database; they are too specific to individuals' actions although patterns could come from the data that could identify these types of activities over time.

Where the database would find and identify quickly problems with the program is in instances such as follows:

Follow-up Assessment of Use of Funds by TARP Recipients: This audit will examine use of funds by recipients receiving extraordinary assistance under the QUARTERLY REPORT TO CONGRESS, JULY 21, 2009, Systemically Significant Failing Institutions program, the Automotive Industry Financing Program, as well as insurance companies receiving assistance under CPP.

Governance Issues Where U.S. Holds Large Ownership Interests: The audit, being conducted at the request of Senator Max Baucus, will examine governance issues when the U.S. Government has obtained a large ownership interest in a particular institution, including: (i) What is the extent of Government involvement in management of companies in which it has made sizeable investments, including direction and control over such elements as governance, compensation, spending, and other corporate decision making? (ii) To what extent are effective risk management, internal controls, and monitoring in place to protect and balance the Government's interests and corporate needs? (iii) Are there performance measures in place that can be used to track progress against long-term goals and timeframes affecting the Government's ability to wind down its investments and disengage from these companies? (iv) Is there adequate transparency to support decision making and to provide full disclosure to the Congress and the public?

Status of the Government's Asset Guarantee Program with Citigroup: The audit examining the Government's Asset Guarantee Program ("AGP")

with Citigroup, based upon a request by Representative Alan Grayson, will address a series of questions about the Government's guarantee of certain Citigroup assets through the AGP such as: (i) How was the program for Citigroup developed? (ii) What are the current cash flows from the affected assets? and (iii) What are the potential for losses to Treasury, the Federal Deposit Insurance Corporation, and the Federal Reserve under the program?

Making Home Affordable Mortgage Modification Program: This audit will examine the Making Home Affordable mortgage modification program to assess the status of the program, the effectiveness of outreach efforts, capabilities of loan servicers to provide services to eligible recipients, and challenges confronting the program as it goes forward.

What is interesting and somewhat disturbing about these types of programs is that they are either dealing exclusively with the largest institutions or they are specific instances of fraud, not waste or abuse.

Waste of TARP funds would include, for example:

TARP Exit Strategy – The institutions have a responsibility to their shareholders to not waste the funds provided to them in order to change their status relative to TARP participation, by paying an excess amount to exit the program. For example the TARP rate is 4%, while Bank of America has secured 11% financing under the belief that it could be used to exit TARP. The Treasury has not allowed BOA to be released as of yet, but as it relates to its shareholders, the acquisition of funding in the billions of dollars at a multiple of the rate it receives from the Treasury just to get out of TARP should be in question. This is not only happening with major institutions such as BOA, but with smaller banks who are also trying to release themselves from government oversight under TARP. The logic behind this is that these institutions cannot afford to compete while having the onus of TARP compensation regulations hanging over them based on competitive hiring practices, but in examination of compensation it mostly affects the executive team as those who have the most to gain in exiting from the program and it seems to be all about their compensation. Since BOA would not have returned the TARP funds prior to securing the financing, that can be considered waste of funds.

Issues and Examples - Prior to the end of 2008 the Office of the Inspector General was responsible for WFA across all areas of the Government. In December of 2008 a Special Inspector General was assigned to the TARP program. Neil Barofsky was the first SIGTARP. The WFA guidelines of the IG's office versus the WFA policies of the SIGTARP's office differ widely.

The SIGTARP's general WFA statement is as follows;

"Under EESA, the Special Inspector General has the responsibility, among other things, to conduct, supervise and coordinate audits and investigations of the purchase, management and sale of assets under the Troubled Asset Relief Program ("TARP"). SIGTARP's goal is to promote economic stability by assiduously protecting the interests of those who fund the TARP programs - i.e., the American taxpayers. This is achieved by facilitating transparency in TARP programs, providing effective oversight in coordination with other relevant oversight bodies, and through robust criminal and civil enforcement against those, whether inside or outside of Government, who waste, steal or abuse TARP funds."

This statement was last updated on July 21, 2009. To date, there has been no purchase, management or sale of assets under the TARP program, although that was its original intent. What has happened is that the Government has infused capital into institutions with the purchase of preferred stock and warrants of those institutions. Policing the original program as intended would have been somewhat simple given the size and budget of the SIGTARP's office. Given what has happened to the TARP program, it is impossible to police any significant proportion of those instances of WFA that can occur within the SIGTARP's jurisdiction. So then why is this the current WFA statement by the SIGTARP?

In examining the IG's guidelines for transparency and tracking WFA, it is clear that the mission must, by law, follow the process mandate. Even though this is not the case with the SIGTARP, which in essence is illegal, it appears that the SIGTARP has moved forward without any modification to their WFA statement and is reporting on the issues of WFA in the form of their quarterly report to Congress. In the executive summary the SIGTARP states in the message regarding the Treasury and Transparency;

"Although Treasury has taken some steps towards improving transparency in TARP programs, it has repeatedly failed to adopt recommendations that SIGTARP believes are essential to providing basic transparency and fulfill Treasury's stated commitment to implement TARP "with the highest degree of accountability and transparency possible." With one new recommendation made in this report, there are at least four such un-adopted recommendations:

- Use of Funds Generally: One of SIGTARP's first recommendations was that Treasury require all TARP recipients to report on the actual use of TARP funds. Other than in a few agreements (with Citigroup, Bank of America, and AIG), Treasury has declined to adopt this recommendation, calling any such reporting "meaningless" in light of the inherent fungibility of money. SIGTARP continues to believe that banks can provide meaningful information about what

they are doing with TARP funds — in particular what activities they would not have been able to do but for the infusion of TARP funds. That belief has been supported by SIGTARP's first audit, in which nearly all banks were able to provide such information.

- Valuation of the TARP Portfolio: SIGTARP has recommended that Treasury begin reporting on the values of its TARP portfolio so that taxpayers can get regular updates on the financial performance of their TARP investments. Notwithstanding that Treasury has now retained asset managers and is receiving such valuation data on a monthly basis, Treasury has not committed to providing such information except on the statutorily required annual basis.

- Disclosure of TALF Borrowers Upon Surrender of Collateral: In TALF, the loans are non-recourse, that is, the lender (Federal Reserve Bank of New York) will have no recourse against the borrower beyond taking possession of the posted collateral (consisting of asset-backed securities ("ABS")). Under the program, should such a collateral surrender occur, TARP funds will be used to purchase the surrendered collateral. In light of this use of TARP funds, SIGTARP has recommended that Treasury and the Federal Reserve disclose the identity of any TALF borrowers that fail to repay the TALF loan and must surrender the ABS collateral.

- Regular Disclosure of PPIF Activity, Holdings, and Valuation: In the PPIF Legacy Securities Program, the taxpayer will be providing a substantial portion of the funds (contributing both equity and lending) that will be used to purchase toxic assets in the Public-Private Investment Funds ("PPIFs"). SIGTARP is recommending that all trading activity, holdings, and valuations of assets of the PPIFs be disclosed on a timely basis. Not only should this disclosure be required as a matter of basic transparency in light of the billions of taxpayer dollars at stake, but such disclosure would also serve well one of Treasury's stated reasons for the program in the first instance: the promotion of "price discovery" in the illiquid market for MBS. Treasury has indicated that it will not require such disclosure.⁹⁰

Regardless of the SIGTARP's first audit, the SIGTARP does not have the necessary information to track and oversee the TARP institutions it is supposed to track. The surveys were filled out by the institutions and were based upon self reported information. Without validation that can represent the actual action on behalf of the institution it is impossible to determine if an institution is compliant and is not committing WFA. It is also not possible to determine if government officials, regulators and legislators are not committing WFA without the level of transactional detail and volume metric analysis that is being proposed.

Despite this, the SIGTARP is moving forward on investigation and prosecution of those it has identified of violations of the EESA Act. Through June 30, 2009,

SIGTARP has 35 ongoing criminal and civil investigations. These investigations include complex issues concerning suspected accounting fraud, securities fraud, insider trading, mortgage servicer misconduct, mortgage fraud, public corruption, false statements, and tax investigations. With the limited resources and lack of comprehensive information at its disposal, it is believed that these numbers of cases could rise into the thousands if the information was available and the resources in place to deal with the action necessary to investigate and prosecute.

Separate from the SIGTARP is the Congressional Oversight Panel. This five person board has the responsibility to report to Congress the activities that they believe require action of lawmakers to insure that the EESA Act will not be adversely impacted by WFA.

The Congressional Oversight Panel July Oversight Report, "TARP Repayments, Including the Repurchase of Stock Warrants," examines several important issues raised by the repayment of TARP funds by institutions that have received TARP assistance.

Now that Treasury has decided that some banks can repay their TARP funds, it is the Panel's mandate to determine whether the taxpayer is receiving maximum benefit from TARP. Because the warrants that accompanied TARP assistance represent the only opportunity for the taxpayer to participate directly in the increase in the share prices of banks made possible by public money, the price at which the warrants are sold is critical.

Eleven banks have repurchased their warrants from the Treasury for a total amount that the Panel estimates to be only 66 percent of its best estimate of their value. However, it is important to note that Treasury is just beginning its warrant repurchase program. Banks have bought back only a fraction of one percent of all warrants issued, and the prices paid thus far may not be representative of what is to come. The report further analyzes how Treasury is constrained by the provisions of the contracts governing the TARP investments in the banks and recognizes that the Panel's valuations do not include the liquidity discounts and other adjustments contemplated by Treasury.

The Panel emphasizes that it is critical that Treasury make the process - the reason for its decisions, the way it arrives at its figure, and the exit strategy from or future use of TARP - absolutely transparent ¹⁰.

⁹ SIGTARP Quarterly Report To Congress JULY 21, 2009

¹⁰ Congressional Oversight Panel July Oversight Report July 20, 2009

G. The registration and tracking of personal assets of individuals involved in the institutions who have received Federal Funds, the regulators and members of Congress who track Federal funds and the contractors who are recipients of Federal Funds through any of the aforementioned programs.

Explanation – As mentioned previously, institutions are made up of individuals who have the ability to gain personally from the use of funds injected into the financial system by the Government. Not only that but the regulators, legislators and others who can also gain should be required to disclose information necessary to remove any question of the appropriate use of funds under these types of programs. Because the ability to personally gain from these positions is not exclusively based upon an individual's involvement but can be also be influenced by the relationships they may have with others, the need to provide information about "who knows whom" is also necessary in order to preserve the trust of the public in terms of influence and potential conflicts of interest.

Functional Requirements – The functional requirement for this is a potentially controversial one, but is a process that seems to not only be required, but favored by the Obama administration. The creation of a Asset Registration System.

An Asset Registration system has the following requirements;

- The ability to identify all individuals who may be involved in any aspect of influence over fund utilization from the TARP program. This includes corporate officers, legislators, regulators, and government employees involved in the TARP program..
- The ability to hold accountable by law those individuals to register their assets to be able to track between them potentials for conflicts of interest. (Most of this information is presently available, but not in a very usable format and does not contain any form of relationship mapping.)
- The user interface to allow for regulators, investigators and other appropriate individuals to have access to be able to identify potentials for conflicts of interest and to act appropriately.

Issues and Examples - The issue of conflict of interest (COI) and asset registration has mostly gained from experience in other countries where it has been very successful. In South Korea, for example a 80% reduction in identified corruption has been The experience of the United States highlights the complexity of COI and suggests that informal monitoring by watchdog groups may be just as important as official monitoring of compliance with regulations and statutes in ensuring adequate enforcement.

The Public Integrity Section within the Criminal Division of the US Department of Justice acknowledges that the primary challenge in enforcing statutes in cases of COI violations in the US is determining intent in accordance with the law. In the area of campaign financing, for instance, the tracking efforts of the Center for Responsive Politics (CRP) and other civil society watchdog groups suggest that the intent of campaign contributions to influence policy making is not in doubt. Knowing this it is reasonable to assume that the same issues exist in the use or rather the misuse of funds from TARP, therefore justifying Asset Registration. Practitioners

indicate that greater transparency via public disclosure requirements does make it easier to identify potential COI in the area of political campaign financing; however, they emphasize that disclosure alone does not necessarily translate into greater accountability. This is why the system requires specific analysis of both behaviors of individuals and the relationships between them as well as the analysis of asset flow and how individuals gain based upon relationships.

- H. The initial programs to be included in Phase 1 of this project are the funds distributed through the Troubled Asset Relief Program (TARP). The system will provide for extensibility to any and all other Federal funds distribution programs once the initial Phase 1 of the project is completed.**

Explanation – Although the TARP program is a five year process, the ongoing transparency of financial institutions and their interaction with the Government in their use of funds, guarantees and access to the Fed window will continue to require a high visibility to the legislative and regulatory community as well as the ability to insure that the taxpayer understand how the Government is utilizing funds that he/she is providing on an ongoing basis. Much of the same data and processes can be utilized from a TARP transparency process in being able to provide ongoing transparency to multiple programs for the Government. Therefore the system we are proposing should be modular, flexible, extensible and easily modified in order to handle change. This is also required because source data formats also change and a change management process is required on an ongoing basis anyway in order to keep up with the structural changes in source data.

Functional Requirements – The system following the system oriented architecture (SOA) model (see section J) should be able to be *orchestrated* to handle all requirements. The proposal to be documented in a Statement of Work (SOW) detailing these functional requirements into deep technical requirements will document the processes necessary to enable this functionality. Phase 1 as discussed in this document is defined in the SOW as the maximum capability that can be delivered within a rapid development window.

Issues and Examples - Additional programs designed for federal assistance of institutions and other government agencies (e.g. states and municipalities) come under the American Recovery and Reinvestment Act (ARRP) also known as the Stimulus Bill. These programs have complex transparency issues because they are based upon lump sum distributions that would then be utilized for multiple programs in every state and municipality designated for stimulus. Although transparency is definitely required for these programs, it would be an extensive effort to modify the application as it presently stands to handle this initiative.

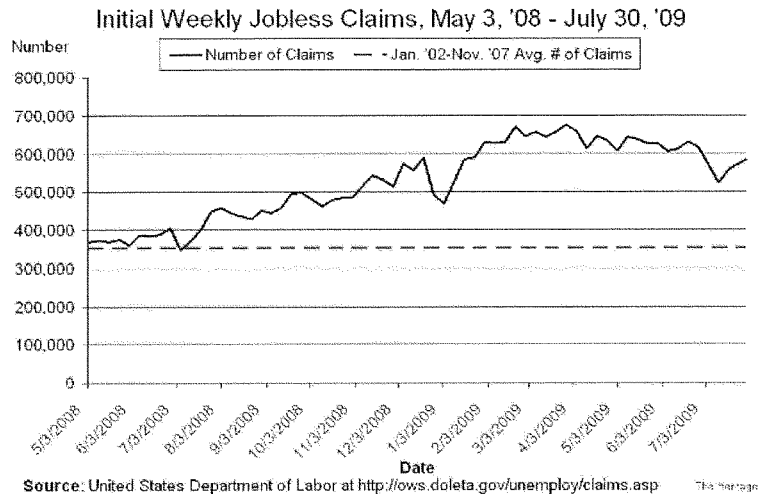
If the Finance Reform Act of 2009 is ratified, the requirements may expand considerably for transparency that would come within the capabilities of this system. In particular programs such as:

- Derivatives Tracking and Valuation
- Mortgage Tracking and Valuation
- Real Estate Tracking and Foreclosure Mitigation

This would dramatically expand the scope of the system.

- I. **The system must be able to provide simplified information to the American Public through the Recovery.gov website and be able to answer the key questions that the public requests from a transparency perspective as defined during the requirements portion of this project.**

Explanation – It is important that the concept of Recovery.gov be a transparency site not a “good news” site. The site is not taken seriously now because it appears to be only showing the wonderful job that is being done to insure the Taxpayer is getting the appropriate return on their investment in the TARP program which is not exactly what is happening as well as the issues that they end up speaking with their legislators about instead of having trust that a site such as Recovery.gov has the information they need to be “informed” not “sold to”. It would be interesting for an explanation of a chart such as the one that was actually developed by the US Department of the Labor and published by the Heritage Foundation be on a site such as recovery.gov.



This seems to be the type of information that is avoided since there is not a good explanation for unemployment while institutions are exiting TARP and making record profits.

Functional Requirements – The functional requirements of this process is to attempt to make recovery.gov a transparency site rather than a good news site. This would include the following capabilities:

- Accurate representations of all current TARP recipient profiles and financials (limited financial disclosure for private organizations, but as recipients of TARP funds, by default they have become somewhat public.)
- Accurate analyses of all specific black letter law provisions of the EESA Act;
 - Historical and present Home Values analysis
 - Historical and present College Funds analysis
 - Historical and present Retirement Accounts analysis
 - Historical and present General Savings analysis
 - Historical and present Homeownership and Foreclosure analysis
 - Historical and present Unemployment analysis
 - General Overall Economic Status and TARP Member Liquidity analysis

- ROI for each TARP participant in terms of interest paid and warrant values
- Acknowledgement by TARP participants and both Executive Branch and Legislative leadership that the information shown is accurate timely and complete.
- Clear and concise representations of the actions being taken to correct issues with the aforementioned areas of potential concern.
- Explanations regarding TARP participant withdrawal and the impact or lack thereof on the taxpayer.

Issues and Examples – There are a series of controversial issues that the taxpayer needs to be informed of if Congress is to convince its constituents that it is doing all it can to turn the TARP program into a positive for their voters. For example;

- In a deal experts said was good for taxpayers, American Express Co. **paid** the Treasury Department \$340 million for stock warrants it sold it last year in exchange for bailout funding.

The company, which has already repurchased the \$3.39 billion in preferred shares it sold the government under the Troubled Asset Relief Program, is the latest to strike a deal with Treasury over the valuation of the warrants.

How to value the warrants has been a sticky question since the program began. Because they permit the holder to buy common shares at a specified price, some have argued that the government should hold on to them until the financial sector recovers.

Under that scenario, taxpayers might make a significant profit. And selling them at the price they might make on the open market today would mean the taxpayers aren't compensated for the risk they took in accepting them in the first place.

Last month, with banks clamoring to leave TARP and escape a perceived unfriendly regulatory environment, Treasury announced the procedure by which it would price the warrants.

Under the announced terms, banks that have already redeemed the stock they sold the government submit their own valuation of the warrants.

Treasury then has 10 days to accept the bank's valuation or initiate a cooperative appraisal process in which both the bank and Treasury name independent appraisers to evaluate the claim. If the two fail to agree, a third independent appraiser is to be named and "a composite valuation" of all three will determine the final value.

In the case of American Express, it appears that an agreement was reached rather quickly. In a **statement**, the company said that the price it paid for the warrants, when added to the \$74.4 million in dividend payments in paid for its redeemed stock holding, resulted in a "annualized 26 percent return" for the government.

Experts agreed, saying that the final price was a "good deal" for taxpayers. "It seems that congressional pressure and the threat of auctions has significantly stiffened the negotiation stance of the U.S. Treasury," Linus Wilson, a finance professor with the University of Louisiana at Lafayette, **told** Bloomberg News.

- Bloomberg also **reported** last week that Goldman Sachs Group Inc. had paid \$1.1 billion for its warrants after its first offer of \$500 million was rejected. Other companies that have redeemed warrants and made a final exit from the TARP program include U.S. Bancorp, BB&T Corp., and State Street Corp.
- **Capital One Financial Corp., BB&T Corp., and U.S. Bancorp** announced that they would sell shares in order to give back the billions they received as part of the \$700 billion bailout program.

Federal regulators said last week that all three had passed the stress tests designed to see how they would fare in a deeper downturn, and did not need to raise more capital. It has been widely expected that companies that passed the test would move quickly to withdraw from the TARP program.

BB&T Corp., based in North Carolina, said it had reduced its dividend by 68 percent to conserve cash and would seek to raise \$1.5 billion through a public offering. It owes the government \$3.1 billion in bailout money plus accrued dividends.

"We firmly believe this action is in the long-term best interests of our shareholders and our company because of the risk and uncertainty associated with being a TARP participant," said Kelly King, BB&T's chief executive officer. He called the decision to cut the dividend "the worst day in my 37-year career."

Capital One announced similar plans, promising to sell 56 million shares to raise as much as \$1.5 billion. It owes \$3.5 billion plus dividends. U.S. Bancorp plans to sell enough stock to raise \$2.5 billion. That will go toward the \$6.6 billion it owes the government.

At least 12 banks have already redeemed the preferred shares they sold to

the government. Several other financial institutions, including **Texas Capital Bancshares Inc.** and **City National Corp.**, are in the process of paying back their TARP money.

On the other hand there are still significant problems with the TARP program that the taxpayers need to understand. For example according to the Heritage Foundation;

- The original TARP program could be justified as appropriate action by government to avoid a catastrophic failure of financial markets. As a cardinal principle, the federal government should not intervene to save firms from the consequences of bad business decisions, which is why the proposed congressional Detroit bailout was so unwise.
- But in rare cases a second principle comes into play: When the basic functioning of a market is breaking down, with potentially disastrous consequences for the entire economy, there can be a case for government to act to help restore a functioning market. The accelerating turmoil in the financial markets in the early fall of 2008, with the prospect of the entire credit system seizing up and a spiraling economic collapse provided an urgent case of the need to apply the second principle.
- At that time, it appeared that the critical step was for the Treasury to purchase "toxic assets" (consisting of mortgage-backed securities of uncertain value) so that credit markets could function smoothly again. TARP was created to address this necessity. While Congress explicitly limited Treasury action to assisting financial institutions to remain functional, the legislative language apparently gave the Treasury too many ways of using funds for additional purposes.
- The problem now is that the Treasury has concluded that the purchase of toxic assets is no longer practical and has embarked on a troubling pattern of potentially harmful ad hoc policymaking and mission creep. A major example of this was Treasury Secretary Henry Paulson's announcement on November 12, 2008 to suspend the original purpose of TARP and to use flexibility granted under the law to explore a wide range of alternative uses of the funds, from guaranteeing securities backed by student loans and credit card debt to using TARP to refinance problem mortgages. This step confused markets, reintroduced uncertainty into the pricing of mortgage-backed securities, and triggered a lobbying frenzy for ever-more "flexible" uses of the TARP funds.
- Now today it is unclear to both the taxpayers and even the legislators what has happened to TARP funds on both a macroeconomic and transactional level. Congress has been asking the same question for almost a year now, "What has happened to the TARP funds?" This seems foolish under the circumstances, but based upon discussions with individual Congressmen and Senators they still do not have good answers for their constituents and they

have been getting angry as demonstrated in the several outbursts by members of the House Oversight and Reform Committee at their meeting of July 21, 2009.

¹¹ Heritage Foundation, Update on TARP, A perspective on policy July 22, 2009

¹² The Obama Financial Regulatory Reform Plan: Poor Policy and Missed Opportunities, July 15, 2009 By David C. John, Web Memo #2545

J. Access to the database must be provided in an open standards based interface utilizing web services and standard database operations. Tools that are proposed under this project are to follow the standards that are in place for the agencies who will be utilizing these systems as well as additional proposed tools that can assist in the provision of overall transparency to the capital markets and the marketplace in general.

Explanation – The current government standards for systematic processes are under constant review. There appears to be a clear decision by the current administration to move forward with a series of open system and systems oriented architecture (SOA) compliant processes that are being written as we speak. These processes appear to parallel Dow Jones methodologies but further review will have to take place in order to insure this is the case. "Widget" based user interfaces fit in with the Federal Desktop Core Configuration (FDCC) which has been mandated by the Office of Management and Budget. The FDCC requires that all Federal Agencies standardize the configuration of approximately 300 settings on each of their Windows XP and Vista Computer. The reason for this standardization is to strengthen Federal IT security by reducing opportunities for hackers to access and exploit government computer systems.

Functional Requirements – The functional requirements of this section are in concert with several other sections of this document.

- The system should support both XBRL and SQL database structures for data management.
- The system needs to meet minimum standards for service level provisions as will be defined in the SOW.
- The system needs to be extensible and have the ability to support many user levels of security as well as may user levels of functionality.
- The system needs to support expanded use which may end up dictating technologies such as cloud and/ or grid computing.
- The system must meet the Schedule 70 standards for technology, The National Information Center (NIC) requirements for the use and management of Federal Reserve Data and the FDCC requirements for desktop applications.

Issues and Examples – The question about this is not one of technology but of politics and of jurisdiction. To provide transparency correctly across all of the organizations who should be involved in utilization requires several separate

jurisdictional agencies to have access to the data. Since the Treasury has indicated that they have little interest in such a system, the result of the eventual law that would enable the implementation of this type of system would have to provide for cross jurisdictional utilization but would still require a system steward. The SIGTARP's office still appears, by charter, to be the most appropriate place for this type of system, but they have claimed that they have sufficient capabilities to support their initiatives. Congress would have to designate with the direction to implement the functions of the system to the agency with the appropriate jurisdiction to appropriately "own" the system.

- K. The information regarding homeowner data must be able to be managed and displayed in a Geospatial based database and follow the M.A.P.S. protocols for use cases. All data relevant to the portfolio holdings of mortgages must be able to be broken down to the tract level to insure that the information is able to be analyzed in a Geo-spatial / Geo-demographic format.**

The need for Geospatial application of technology and the parcel identification process is a key requirement by Congress to understand the impact on multiple financial factors on the population of constituents in each area of the country. Under the [provisions of EESA, homeowners should have had the right to understand the ramification of TARP CPP funds and the impact on their ability to remain in their homes and the impact on interest rates as it relates to the funds that were provided to the lending institutions with whom held their mortgages. They did not; neither did Congress, whose constituents were protesting how institutions who held their mortgages were receiving taxpayer money but they were losing their homes. Some of who should never have been in those homes in the first place based upon income vs. mortgage volume, but many were driven from their homes through dramatically increased mortgage rates that were not contemplated when the mortgage reached the point of rate increase from ARM or other balloon type mortgages.

Congress has also stated that they wish to compare foreclosures to unemployment, mortgage rates to savings reductions and other comparative analyses to determine the impact of TARP funds on the key areas of intent relative to EESA law.

This will require CDO portfolios to be broken apart into the individual elements, lender assignments and parcel assignment to point geo-coded data to allow for this type of analysis.

- L. Phase 1 will have 120 days for delivery of a database and a 30 day testing and acceptance process from time of reward of project.**

Explanation – To maintain relevance with the continuously changing landscape of financial services institutions interacting with the Government it is important that the initial phase of the system be up and running in a reasonable period of time to create

value to the user community. The ongoing need for transparency across the areas as defined in section xx will require multiple phases to implement. It is necessary to maintain focus and momentum. While it is possible for agencies such as SIGTARP to bring many violations of the law to the surface through its investigative processes, based upon the current methodologies, if they continue to identify fraud at the present rate it should be acknowledged that they are touching the "Tip of the Iceberg" in terms of all institutions and individuals who could be involved in WFA.

Functional Requirements – The requirement to quickly implement the initial phase as to be described in the SOW is more of an issue of political rationalization and validation of the initiatives taken by Congress on behalf of their constituents rather than the immediate impact that what is feasible to implement in 120 days. This is from sign off and acceptance of final requirements. What is important is the ongoing and rapid development of the overall capabilities, which will probably be modified by the Financial Reform Act when and if it is instituted.

Issues and Examples – The Financial Reform Act of 2009 has many potential issues. What is being proposed is as follows:

For the regulation of financial firms, the proposal:

- Creates Financial Services Oversight Council, which would coordinate activities among regulators, replacing the President's Working Group.
- Ensures that any financial firm big enough to pose a risk to the financial system would be heavily regulated by the Federal Reserve, including regular stress tests.
- Says the Fed will have to "fundamentally adjust" its current supervision to more closely watch for systemic risks.
- Allows the Fed to collect reports from all U.S. financial firms that meet "certain minimum size thresholds."
- Gives the Fed oversight over parent companies and all subsidiaries, including unregulated units and those based overseas.
- Says the Treasury will re-examine capital standards for banks and bank-holding companies.
- Tells regulators to issue guidelines on executive compensation, with the goal of aligning pay with long-term shareholder value, including a re-examination of the utility of golden parachutes.
- Creates a new bank agency, the National Bank Supervisor, and kills the Office of Thrift Supervision. The new agency will look over national banks, including federal branches and agencies of foreign banks.
- Forces industrial banks, non-bank financial firms and credit-card banks to become more traditional bank holding companies subject to federal oversight.
- Kills the SEC program that supervised Wall Street investment banks.
- Requires hedge funds, private-equity funds and venture-capital funds to register with the SEC, allowing the agency to collect data from the firms.

- Subjects hedge funds to new requirements in areas such as record keeping, disclosure and reporting. The oversight would include assets under management, borrowings, off-balance sheet exposures.
- Urges the SEC to give directors of money-market mutual funds the power to suspend redemptions, and take other action to strengthen regulation of money-market mutual funds to prevent runs.
- Beefs up oversight of insurance by creating an office within the Treasury to coordinate information and policy.
- Kicks off a process by which the Treasury and the Department of Housing and Urban Development will figure out the future of mortgage giants Fannie Mae, Freddie Mac and the federal home-loan banks, which could include winding them down, returning them to the private sector or refashioning them as public utilities.

For the regulation of financial markets, the proposal:

- Brings the markets for over-the-counter derivatives and asset-backed securities into a regulatory framework, strengthens regulation of derivatives dealers and forces trades to be executed through public counterparties, such as exchanges
- Toughens the regulatory regime, including more conservative capital requirements and tougher rules on counterparty credit exposure.
- Strengthens laws designed to protect "unsophisticated parties" from trading derivatives "inappropriately."
- Gives the Fed more power over the infrastructure that governs these markets, such as payment and settlement systems.
- Harmonizes the powers and authority of the SEC and CFTC to avoid conflicting rules relating to the same products or time-wasting turf battles over who should regulate what.
- Tells the SEC and the CFTC to deliver a progress report by September.
- Requires that originators, for example, mortgage brokers, should retain some economic interest in securitized products.
- Directs regulators to "align" participants' compensation with the long-term performance of underlying loans.
- Urges the SEC to continue its efforts to improve the transparency and standardization of securitization markets and recommends the SEC have clear authority to require reporting from issuers of asset-back securities.
- Urges the SEC to strengthen its regulation of credit-rating firms, including disclosing conflicts of interest, better differentiating between structured and unstructured debt and more clearly stating the risks of financial products.
- Tells regulators to reduce their reliance on credit-rating firms.

For regulations protecting consumers and investors, the proposal:

- Creates a new agency, the Consumer Financial Protection Agency, with broad authority over consumer-oriented financial products, such as mortgages and credit cards. The new agency would work with state regulators.
- Gives the new agency power to write rules and levy fines based on a wide range of existing statutes.
- Proposes new authority for the Federal Trade Commission over the banking sector, in areas such as data security.
- Creates an outside advisory panel to keep an eye on emerging industry practices.
- Says the new agency should play “a leading role” in educating consumers about finance.
- Gives the new agency authority to ban or restrict mandatory arbitration clauses.
- Improves transparency of consumer products and services disclosures.
- Says the new regulator should have authority to define standards for simple “plain vanilla” products, such as mortgages, which would have to be offered “prominently” by companies.
- Proposes the government “do more” to promote these simple products.
- Beefs up the agency’s power to regulate unfair, deceptive or abusive practices.
- Imposes “duties of care” that will have to be followed by financial intermediaries, such as stock brokers and financial advisers.
- Regulates overdraft protection plans, treating them more like credit card cash advances.
- Promotes access to credit in line with community investment objectives.
- Strengthens SEC’s framework for investor protection by expanding the agency’s powers to beef up disclosures to investors, establish a fiduciary duty for broker-dealers who offer advice and expand protection for whistleblowers, including a fund that would pay for certain information.
- Requires non-binding shareholder votes on executive compensation packages.
- Requires certain employers to offer an “automatic IRA plan” for employee retirement, with investment choices prescribed by regulation or statute.
- Urges exploration of ways to improve participation in 401(k) retirement plans

To give the government more tools to manage crises, the proposal:

- Creates a mechanism that allows the government to take over and unwind large, failing financial institutions.
- Creates a formal process for deciding when to invoke this power, which could be initiated by the Treasury, Fed, FDIC or SEC.
- Gives authority to make the final decision to the Treasury, with the backing of other regulators.

- Gives the Treasury the authority to decide how to fix such a failing firm, whether through a conservatorship, receivership or some other method.
- Taps the FDIC to act as conservator or receiver, except in the case of broker dealers or securities firms, in which case the SEC would take over.
- Amends the Fed's emergency lending powers to require prior written approval by the Treasury Secretary.

In the international sphere, the proposal:

- Recommends international regulators strengthen their definition of regulatory capital to improve the quality, quantity, and international consistency of capital.
- Recommends that various international bodies implement the Group of 20 recommendations, including requiring banks to hold more capital in good times to protect against downturns.
- Urges that national authorities standardize oversight of credit derivatives and markets.
- Recommends national authorities improve cooperation on supervision of globally interconnected financial firms.
- Recommends regulators improve the way firms are unwound when they straddle borders.
- Recommends strengthening the Financial Stability Board.
- Urges other countries to follow the U.S. lead and: subject systemically significant companies to stricter oversight; expand regulation of hedge funds; review compensation practices; tighten rules governing credit-rating firms.¹³

Even though a portion of this may never come to pass, it becomes obvious that a transparency system is required to enable most of these initiatives to actually happen.

¹³ Financial Reform Act, Obama's Financial Reform Plan: The Condensed Version, June 11, 2009, WSJ.com

Appendices

Appendix A

Source Matrix (See Source Matrix Spreadsheet)

Appendix B

Trigger Definitions (See Trigger Definitions)

The Honorable Carolyn Maloney
United States House of Representatives
Washington, DC 20510



September 23, 2009

Dear Representative Maloney:

I am writing in response to your question on privacy issues at the Financial Services Oversight and Investigation Subcommittee Hearing on September 17, 2009.

Before I respond to your specific question, the Center for Democracy and Technology would like to once again thank you for your leadership in sponsoring H.R. 1242, a bill that CDT has publicly supported that would provide technological solutions to increase the transparency and oversight of programs like the Trouble Asset Relief Program (TARP). CDT continues to urge that H.R. 1242 go one step further and make the TARP database it would create available on the Web. We believe that this would increase transparency both for the government regulators and oversight bodies, creating the first central location for information about the funding dispersal. A Web resource containing non-proprietary and non-personal information would allow citizens, media, watchdog groups, and researchers to analyze the data, stay informed, and uncover risky practices among TARP institutions.

At the hearing, you specifically cited privacy concerns for individuals whose information would be included in the main database as a concern not to release it on the Internet. CDT believes that the information that would be included in the TARP database would be protected from release under current law and policy. In particular:

- The Privacy Act of 1974, a law that governs how government must protect the personal information it holds, enacted as federal agencies began collecting more and more information about American citizens. All agencies of the federal government are responsible under the Privacy Act for protecting and properly using the personal data they collect. The Act prohibits agencies from disclosing records to third parties or other agencies without the consent of the individual to whom the record pertains. The Privacy Act contains a right of action if personal information is released to persons not permitted to see the record under the Act. CDT has raised concerns about the current status of Privacy Act coverage in other contexts as we did in our testimony on the issue of location data and images in government housing databases. In these cases, information is held in a relational or distributed database and a name or personal identifier is rarely used as a major search keyword.¹ The TARP database would not fall into that

¹ While the fundamentals of the Privacy Act's principles of fair information practices remain relevant and current, some definitions do not reflect the realities of current technologies and information systems. These concerns are raised in a recent report from the U.S. Information Security and Privacy Advisory Board "Toward A 21st Century Framework for Federal Government Privacy Policy" <<http://csrc.nist.gov/groups/SM/A/ispab/documents/correspondence/ispab-report-may2009.pdf>>. CDT is working to write a bill that includes a set of updates of the Privacy Act that will maintain the strong basis in Fair Information Practices while updating the Act to reflect changing technology use. We had a recent online consultation on the issue

category. Personal information about corporate employees under the TARP would most certainly be protected under the law.

- The Freedom of Information Act (FOIA), passed in 1966, also includes some important privacy provisions to protect information about individuals that is held by the government. In particular, the courts have broadly interpreted exemption (b)(6) of the Act, preventing the release of personal data.
- A more recent law with major impact on the privacy of information held by the government is the E-Government Act of 2002. The Act instituted provisions to protect privacy as new, digital information collections are created for use in government. Most notably under the Act, Federal agencies are required to perform privacy impact assessments (PIAs) on all new collections of 10 or more persons. These PIAs are intended to be public documents that clarify the ways that federal agencies collect, manage and use personal information. In the case of the TARP database, a PIA would be required and would be publicly available. Even if the other protections fail, we would be aware of what would be posted before it happened and you and your colleagues could work with CDT, the Chamber and other groups that have supported public release but are concerned about privacy, to ensure that the Treasury Department followed both the law and prudent policy removing all personal identifiers before posting the data online.

The framework of privacy protections created by the Privacy Act, the Freedom of Information Act, and the E-Government Act are entirely adequate to protect the privacy of individuals whose information may be included in the H.R. 1242 database. We believe that individuals can be assured that their information will not be posted online if the TARP database is required to be made available on the Web. It is also important to note that these privacy protections are necessary whether or not the information is placed on the Internet. A FOIA requestor could get the entire database in electronic form and make it available if the government does not. The privacy laws listed above clearly prevent personal information from being included in the response to such a request.

If you are concerned that the Treasury Department will ignore the Privacy Act, FOIA and the E-Government or will be confused by a call to specifically make information public, CDT would support an additional provision that makes it clear that no personal or proprietary information should be made available in the online database and cite the existing law as a reference.

We look forward to working with you as you continue to push for transparency and privacy protections of information about TARP funding. Please feel free to contact me with any further questions.

Sincerely,
Ari Schwartz
Vice President and COO

<<http://www.egovernmentact.org>> and have drafted a bill to address these and related issues. We would be happy to brief you on this effort upon your request.