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The 2008 Financial Crisis: View from the Frontlines

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The 2008 Financial Crisis: View from the Frontlines

Students of economics and finance have been studying the Great Depression for nearly 80 years. We fervently hope that future generations will study the current financial crisis as thoroughly for the next 80 years, for we believe it contains many important lessons for current and future generations of financial managers. While the jury remains out as to whether this will actually be Great Depression II, at least this will likely go down in history as one of the most serious systemic failures of the U.S. financial system since the establishment of the Federal Reserve System.

As we start the New Year and prepare for an orderly change of power in Washington, investors will be watching and hoping for positive economic signs. The economic news in December was not comforting; the bailout of Detroit appears to be a story that won't end anytime soon. While the big three automakers have been given a reprieve for the first quarter of 2009, does anyone expect much to improve in just three months' time?

Other breaking news in December included the Bernie Madoff scandal. This story reinforces the belief that our regulatory system was simply not working the way it was intended. It was reported in the press that money manager Harry Markopolos, as well as others, had repeatedly told the U.S. SEC that Madoff was running a Ponzi scheme. Yet, the SEC didn't act. Just how dysfunctional have the U.S. regulatory agencies become and can we honestly expect better performance from them in the future?

How did we get ourselves into this mess and how will history view the events that led to the Financial Crisis of 2008? The financial meltdown we are experiencing is the product of a confluence of three factors that evolved during the past 15 years:

- 1) A consumer-centric economy,
- 2) A widespread acceptance of asset-backed securitization as a risk mitigant, and a
- 3) Low interest rate environment.

By understanding the implications of these factors, we believe one can more easily comprehend the scale and depth of the crisis and why this time was *not* different.

Consumer-Centric Economy

During the last recessionary period in the U.S. economy (2000-2001), business spending (particularly in telecom and IT) fell dramatically, but consumer spending remained relatively healthy. History tells us that the primary reason for this bifurcation was the availability of credit and home equity to consumers. Though the ability to refinance mortgages had always been around, it became much more popular this decade as a tool for leveraging one's ability to acquire goods and services (making it far easier to keep up with the Joneses) and as a tool for managing credit (debt consolidation loans).

Although income growth was down and unemployment up marginally during the last recession, the consumer soldiered on, tapping more and more of his home equity and credit line capacities. This domestic spending in turn fueled the rapid development in emerging economies, such as China, Southeast Asia, and India, as consumer products

companies increasingly sought to take advantage of cheaper production costs and the strong dollar to produce goods overseas. Also a result of the strong dollar, China increased its holdings of U.S. Treasuries, helping to drive interest costs lower in the United States.

Asset-Backed Securitization

Simply put, asset-backed securitization (hereafter “ABS”) is a means of transferring risk from one party to another. It begins when a natural acquirer or producer of financial assets assembles a pool of those assets on its balance sheet, tying up its available equity capital. In order to be able to underwrite more assets and grow its market share, the company has the option to either raise more equity capital to increase on-balance sheet asset capacity or sell existing loans to the securitization market. It can then replace those assets with new ones.

As we entered the 21st century, the securitization model was widely applied to agency-backed home mortgages, auto loans, student loans, credit card receivables, and commercial real estate loans. However, after the year 2000, the model was increasingly applied to other types of loans, including non-agency-backed mortgage loans (subprime and Alt-A), corporate bonds and loans, and even for the “re-securitization” of existing securitizations. A key catalyst to the growth in ABS was the emergence of credit default swaps (CDS) to manage credit risk. CDS allow holders of fixed income securities to “hedge” their underlying credit risk in the open market by buying a put option exercisable in the event of an issuer default. Since 1997, the CDS market has become an integral part of the managing *and creation* of ABS products. By 2007, it was possible synthetically to create a portfolio of assets by selling CDS on a basket of credits, without actually acquiring any real assets. This dramatically reduced the cost of acquiring and managing the asset pool for the originator. So, from an investor standpoint, your securities were not even backed by real assets any longer, but by derivatives. But it didn’t matter, because...

...Interest Rates Were Low

The Greenspan Era produced perfect conditions for leverage—low borrowing rates, a steep yield curve and an economy in recovery. This made the “carry-trade,” otherwise known as “borrowing short and lending long,” a highly profitable trade for investment banks and hedge funds. In fact, the attractiveness of the carry trade contributed to the birth of thousands of hedge funds—all seeking to justify their “2-and-20” fee structure (which translates to management fees of 2 percent of assets, plus 20 percent of any investment returns earned above the benchmark). As hedge fund ranks grew and interest rates continued to fall, risk-free yields became ever tighter. Moreover, as the economy recovered, confidence in the credit quality of assets grew, so the risk spread above the benchmark also declined. This allowed hedge funds and investment banks to leverage their carry-trade positions by many times over to produce the level of returns they needed to hit their performance targets.

The carry trade was also important for—you guessed it!—ABS and structured products. Those behind the securitization process could borrow in the short-term at very low rates to acquire assets for securitization. The underwriters would then derive profits from any spread they were able to achieve by “flipping” those assets as structured notes to third-party investors. The glue keeping all this together was the universal expectation that default risk on assets would remain low, so investors demanded less premium to take on that risk, creating a profitable spread for the underwriters.

As we entered 2005, all the pieces of the bubble were firmly in place: a profitable yield curve environment, a fully-developed securitization market, and strong demand for consumer goods—particularly houses. Housing prices had begun rising in 1998 following a slowdown and really began to pick up speed in 2003-2004. Anyone watching the mortgage securitization market could see that the percentage of loans that were not sold through Fannie Mae or Freddie Mac (i.e., “nonconforming”) began rising rapidly after 2004. This meant that there was an increasing amount of loans that didn’t qualify for agency backing; this applied to loans where the loan-to-value ratios were too high, the borrower ability to service the debt was too low or the borrower was not willing to provide full documentation attesting to income and liquid assets. Nonconforming assets included both subprime and Alt-A loans.

Fueling this growth was the securitization machine. The immense demand for structured product created a shortage of conforming mortgage paper. This forced the financial engineers to seek out other types of collateral to package and sell, which encouraged mortgage originators to think more creatively about underwriting. Since nonconforming loans are inherently riskier because the underwriting rules of thumb are looser, securitizations bearing these assets were sold at higher yields than comparable securitizations backed by the agencies, which was manna from heaven for yield-hungry investors. The widespread belief by the market was that even if the housing market suffered some higher defaults in isolated geographic pockets, overall the performance of a highly diversified pool of these loans would continue to be sufficient to cover cash flow needs through the structure. In other words, no one believed the United States would suffer a nationwide housing price decline. What no one realized was that by securitizing mortgage originations through a relatively small coterie of large financial institutions, the market was effectively linking local and regional mortgage origination with international distribution. We believe this was a contributing factor in increasing the correlation of markets to one another and magnifying the impact of defaults on lending appetites.

The Rise of CDOs

Leading up to the crisis, a new form of ABS had begun to emerge: collateralized debt obligations (CDOs). Unlike traditional securitizations, which largely passed through mortgage or consumer loan cash flows to investors with limited re-structuring of cash flow priority, CDOs could be collateralized by just about any type of financial asset, particularly corporate bonds and loans, and increasingly contained a higher degree of structure. As it turned out, CDOs also depended a great deal on leverage.

CDOs were marketed to institutional investors as a means of gaining a higher yield than was available on straight investment grade bonds through exposure to high-yield assets, which the institution was not allowed to own outright. The CDOs were structured to offer investment-grade-rated participation certificates to the investor, which it was allowed to own, even though the notes were partially backed by high-yield collateral. The CDOs also contained more “tranches” of debt to broaden the appeal to a wider range of investors (which increasingly included hedge funds). Each tranche contained a unique set of risks and rewards and ran the gamut from “super-senior AAA” through BBB-, and high yield all the way to equity. It was not unusual for most CDOs to be split up into seven or more types of securities, each designed to appeal to different investors. As more CDOs were issued by a larger base of originators, profit margins began to decline, so more and more structuring (and leverage of the underlying assets) was required to achieve desired returns on capital.

CDOs Began to Mutate

In time, issuance volumes in the CDO market expanded rapidly. By 2007, just about any tradable financial assets or derivatives of assets were being repackaged as CDOs. These included subprime mortgage loans. Then, the market took the reach for yield a step further: If you could diversify the risk of the original assets through the CDO structure, why not *further* reduce risk by re-securitizing a portfolio of CDO tranches into another CDO? This became known as the “CDO-squared.”

As an illustration, let’s say you own a pool of \$100 million of subprime mortgage assets. To create a CDO, you split it into four parts: (1) a \$30 million AAA-rated tranche, (2) a \$50 million BBB-rated tranche, (3) a \$10 million BB-rated tranche and 4) a \$10 million equity tranche. As cash flow on the assets is received, it is distributed to the AAA investors first, followed by BBB and then whatever is left over is paid to the BB and equity tranches. If a loan in the pool defaults, fewer payments will flow into the structure. This cash flow deficiency (i.e., the “first loss”) will be borne first by the equity tranche, followed by the BB-rated tranche. Collectively, these junior tranches are designed to absorb the first 20 percent of loan defaults in our example, assuming a zero recovery value on the defaults. In reality, if you assume a recovery value greater than zero, the loss frequency can be even higher.

Enterprising minds reasoned that there was a very low likelihood that the BBB-level tranche would ever be impaired by default (based on available historical default data) because there was sufficient protection available in the subordinated tranches of the deal. Therefore, it should make good collateral against which to create CDO-squareds. The only problem was that the amount of subordinated debt (i.e., the size of first loss protection) issued below the investment grade level declined over time as profits on deal structures became tighter. By issuing a greater proportion of investment grade-rated notes vs. non-investment grade, the CDO originator’s cost of funds was lower—as long as the market’s risk aversion was also going down.

Keeping with our original illustration, what if the default rate frequency climbed above 20 percent? At 25 percent (0 percent loss recovery), the underlying BBB-rated tranche of the original CDO would absorb the additional 5 percent of the losses (\$5 million). Assuming you've created a CDO-squared using the BBB-rated tranche of the original CDO as collateral, absorbing the extra \$5 million of loss would result in a 10 percent loss to the CDO-squared securities (\$5 million divided by \$50 million). In reality, the loss cushions provided by equity and non-investment grade tranches on most deals were much less than 20 percent and subprime loss frequencies in many cases quickly climbed higher than 20 percent, so it's not difficult to see how small losses in CDOs could create much larger losses on CDOs structured downstream.

Investors were not completely unaware of what was going on. So, to improve their ability to market these deals, originators began increasingly to use credit insurance as a back-up to garner the coveted AAA-rating on the most senior tranches of the deal and to reduce the proportion of equity capital (which was typically retained by the underwriter) required to get the AAA-rating. So bond insurers like MBIA, Ambac, and FGIC all jumped into the CDO insurance market, attracted by the juicy fees offered by this business compared to their traditional municipal insurance business. Even diversified insurers, such as AIG, jumped into the mix, attracted by the growth and profitability of structured products.

By writing credit insurance on the CDO securities, the insurers were effectively writing out-of-the-money puts on the value of the CDO securities. They were betting that defaults would remain relatively low—*on average*—and that asset values would not fall below the threshold at which the insurance was underwritten. However, they were not directly insuring the assets, but instead insuring the CDOs' ability to service their debt. It is also important to understand that because the insurance contracts were in the form of credit default swaps, the accounting worked much differently than it did for traditional bond insurance. Swap accounting allowed the insurance companies to recognize the insurance premiums immediately and avoid any mark-to-market accounting associated with the underlying assets. However, in exchange for this, they were required to mark-to-market based on the credit rating of the swap's counterparty. So if AIG was insuring a CDO sponsored by Lehman Brothers, AIG would be required to mark-to-market its "put" option if Lehman's rating declined (hard to imagine, back then), but *not* if the values of the underlying *assets* deteriorated. In this way, the CDO was "renting" Lehman's credit rating and balance sheet.

Beware the "Repo Man"

One more point of introduction before we go through the timeline spanning late 2007 through to the present: There was a crucial reliance on repurchase agreement facilities (known as "repo lines") by hedge funds and investment banks to fund their trading positions. Repurchase agreements are a widely available form of short-term financing for financial institutions, pension funds, and even corporations. In a typical repo transaction, an institution will temporarily transfer a pool of securities to the liquidity provider in exchange for a short-term loan on the value of those securities—not much different than

an individual investor using a margin account to buy securities, or even taking jewelry to a pawn shop to borrow against its value. As the need for ever-greater sources of financing continued to grow, repos became the most popular means of funding for hedge funds, CDO originators and other denizens of the “new financial age.” As we’ve shown, it was all facilitated by ultra-low short-term interest rates. The most important thing to keep in mind about repo transactions is that a fund’s ability to borrow is directly linked to the market’s confidence in the underlying asset values. If valuation perception declines, this rapidly leads to margin calls against outstanding loans.

The House of Cards Collapses

Around December 2006, right about the same time that Goldman Sachs, Merrill Lynch, Lehman Brothers and Bear Stearns announced or were soon to announce acquisitions of subprime mortgage origination companies, the market began to get very nervous about the heated condition of housing prices. This anxiety was exacerbated by the December bankruptcy of Ownit Mortgage Solutions, a Texas-based subprime mortgage originator. Some hedge funds had already begun to assemble short positions in a group of credit default swap indices known as “ABX.” The ABX represented the cost of insuring different tranches of subprime CDO assets, delineated by credit rating. ABX was available for trading in the over-the-counter market and spreads on the index had been widening for several months. ABX was originally designed as a hedging tool for investment banks and CDO originators to hedge exposure to underlying assets. However, most of the trading was done on a speculative (i.e., “naked”) basis, where the buyers of protection didn’t necessarily own any exposure in the underlying securities. Trading naked CDS became very popular because it is highly capital efficient and did not generally require any upfront cash. As the amount of protection-buying via the ABX increased, so did the index spread (which reflects the cost of the insurance).

So as widening in ABX spreads began to accelerate in the 1Q07, hedge funds also began shorting stocks and buying credit default protection on the U.S. homebuilders. At the same time, the volume of subprime securitizations hit its peak, with CDO pipelines at their highest levels. This meant that a lot of subprime assets were being “warehoused” by investment banks and funded via repo credit lines until they could be packaged as CDOs and sold.

Then the default rate on subprime loans began increasing rapidly. In March 2007, mortgage giant New Century Financial, which had a market cap as high as \$1.75 billion in January, lost its ability to write new mortgage loans due to a spike in “early payment defaults.” Under the terms of agreements with the firms that bought its mortgage paper, it was forced to buy back loans if defaults occurred within a few months after origination. In many cases, New Century’s mortgages were in default before even a single payment was received. Of course, the company was not at all adequately capitalized to be able to absorb the repurchases, and the company began to receive margin calls from its lenders. In early April 2007, New Century was forced to file for bankruptcy. This news caused spreads on the ABX indices to widen to their highest levels since the index series was created in January 2006.

By early summer 2007, the shorting pressure on ABX had actually begun to ease, offering a respite for all housing-related securities. Then in late June, fear rose again on speculation that two of Bear Stearns' hedge funds were set to report very large losses from subprime investments. This prompted short sellers to pile back into short positions against the ABX and to begin setting shorts on Bear Stearns' default protection as well.

By August, fear had spread from homebuilders and mortgage originators to the major financial institutions, particularly Bear Stearns, Merrill Lynch, and Lehman Brothers—all major players in subprime origination and securitization. The institutions defended their business models and stated that liquidity and capital conditions remained solid. At the same time, widening credit spreads in ABX and other securitization markets began to spread into corporate credit and syndicated loans.

While the market for CDOs had been developing, a sibling market for syndicated corporate term loans, known as collateralized loan obligations (CLOs) was also growing. This market was fueled by the wholesale refinancing of corporate debt in a wave of leveraged buyouts in 2005-2007. As of 3Q07, financial lenders owned a pipeline of undrawn leveraged loan commitments that totaled about \$450 billion to corporate borrowers for LBO deals that had yet to be closed. If those deals closed on schedule, the lenders would be forced to honor their commitments to fund those loans. Without the CLO market to off-load the risk to investors, the banks would be left holding the highly-leveraged loan paper at a growing discount to par due to the deteriorating credit environment. One should also not forget that as the market for loans became ever more heated, the terms and conditions (and pricing) of those loans had shifted ever farther to the borrower's advantage relative to the lender's advantage. As a result, CCC-rated loans (one level away from default) were commanding rates of LIBOR+300 basis points with minimal financial covenants. Again, however, the market believed that default correlations would remain low, so risk should be reduced through diversification through the CLO structure. Private equity concerns took full advantage of this naïveté. So by late 2007, lenders worked feverishly to reduce these commitments, including walking away from highly-levered and high-profile deals to avoid taking on the risk.

Meanwhile, the usually sedate commercial paper market was also getting buffeted by losses from structured investment vehicles (SIVs). This product, first marketed by Citigroup in 1988, was marketed to institutions as a higher-yielding substitute for commercial paper. The newest generation of SIVs was backed by asset pools that included subprime mortgages and student loans funded in part by commercial paper and other short-term debt (the carry-trade). In late 2007, the rating agencies began to downgrade the ratings of the subprime collateral in the SIVs as defaults rose and market values declined, which forced the SIVs to unwind positions and de-lever to comply with collateral covenants in the investor agreements. The differentiating characteristic of SIVs was the stand-by credit lines committed by a financial sponsor to fund the assets in the event that the commercial paper market became too expensive, which it did. So, in addition to subprime whole-loans, CDOs and CLOs, the market also became very concerned over investment banks' standby commitments to SIVs. Citigroup was believed to have the largest exposure to outstanding SIV assets (more than \$100 billion, as we

later learned). Bear Stearns was also a significant player in this product. Meanwhile, defaults on subprime loans continued to ramp higher and ratings continued to decline, further destabilizing the structured products markets. Note the irony here: It was ratings that allowed the re-packaging of the assets in the first place and now, as ratings were taken down in response to increased loan defaults, ratings were a prime catalyst in destroying asset value and triggering massive unwinding of the structured products.

The same destructive forces were also at work in yet *another* type of structured product: auction rate securities (ARSs). ARSs were issued as long-dated structured notes on which coupon rates would be set via a periodic auction process. The auction process was also supposed to provide holders a means of liquidating the notes after short holding periods, with the intention of providing a higher-yielding alternative to Treasury bills. As investors learned too late, their value was fatefully tied to the strength of the originating financial institution and, more importantly, on ongoing demand for securitized assets. ARS assets were typically a blend of student loans or municipal debt, but also could include corporate debt or mortgages. Unfortunately, demand in the ARS market dried up right along with other structured products. As a result, when auction dates came up on the ARSs, no one was there to bid for them. Liquidity in the paper evaporated and securities marketed as money-market-type instruments were suddenly valued as 30-year securities—but still bearing coupons that were woefully insufficient to compensate investors for the loss of present value and liquidity on these so-called “cash” securities. T-bills they certainly were not.

In early 2008, as collateral losses mounted across many security sectors, the bond insurers came under increasing market pressure. Were they capitalized well enough to honor the billions of insurance commitments they extended? Each wave of ratings downgrades in the subprime CDO market resulted in more widening of credit protection of the bond insurers. This spread widening then fed back to the investment banks that held very large exposure to the bond insurers through our familiar friend, the credit default swap. Understand that if you bought protection via a CDS contract on CDOs you issued, then you were effectively *long* the credit of the underlying insurance provider, so if its default risk were rising, then the collectability of your “insurance policy” should be declining. In late 1Q08, rating agencies also began to pick away at the corporate ratings of the major investment banks in response to massive asset write-downs taken in late 2007, forcing the banks to put up more collateral to their trading counterparties. Of course, credit spreads for all of the major investment banks began to rise rapidly, reflecting increasing uncertainty about their stability.

In the midst of the market stampede, Bear Stearns began to slip ever closer to oblivion as an increasing number of trading counterparties walked away over concern that it was terminally under-capitalized. On March 17, Bear Stearns announced it was selling itself to J.P. Morgan for \$2 a share (it had closed the previous night at above \$20). At the same time, the Fed announced that investment banks would be eligible to borrow funds at the discount window to alleviate concerns over access to short-term funding. We later learned that Bear Stearns’ liquidity declined from roughly \$18 billion to less than \$2 billion in three days prior to the deal announcement.

The impact on the bond insurers was catastrophic and they began to report massive mark-to-market losses on their credit default exposure with the investment banks. Recall that this was because accounting rules required the insurers to record mark-to-market losses as their CDS counterparty's rating declined. As a result, the rating agencies began to downgrade the bond insurers' credit ratings as well, forcing more write-downs to go through the investment banks, which put more pressure on *their* ratings. It had become a vicious cycle. Throughout the spring of 2008, the primary fear in the market was that the bond insurers and possibly another investment bank could fail.

Throughout the uneasy summer, the pattern of short-selling spread to the regional banks as small, under-capitalized, and over-exposed banks began to fail. In July, the "shorts" were revitalized by the failure of IndyMac Bank, one of the largest players in subprime mortgages. The market also became extremely concerned over the financial well-being of the government-sponsored mortgage giants Fannie Mae and Freddie Mac. Unfortunately, these fears created a self-fulfilling prophesy.

In September, the U.S. Treasury seized control of both Fannie Mae and Freddie Mac, which were put into conservatorship and all dividends on common and preferred stock suspended. A week later, Lehman Brothers declared bankruptcy after failing to secure a capital injection, a hastily arranged marriage was announced between Merrill Lynch and Bank of America (which had also acquired troubled subprime lender Countrywide Financial in early 2008), and the U.S. Treasury also agreed to an \$80 billion bridge loan to AIG. If this were not enough, another week later saw the FDIC seize Washington Mutual and arrange a sale of the thrift to J.P. Morgan for a steep discount to book value. Finally, in late September, the FDIC helped to broker a buyout of Wachovia by Citigroup (which ultimately lost to a higher bid by Wells Fargo), capping of one of the bloodiest months in history for financial institutions.

What's Next?

Since September, the economy appears to have slipped deeper into recession and the U.S. government via the U.S. Treasury and the Federal Reserve has injected well over \$2 trillion to help shore up the failed financial system. Yet, home prices remain on the decline, and consumers have been left with limited credit availability and significant uncertainty regarding their employment. While losses on subprime mortgages appear to have stabilized—for now, the loss rates on other types of loans, including prime loans continue to increase. This has kept the fear of further asset write-downs high for financial institutions and has kept investors and home buyers on the sidelines waiting for the other shoe to drop. Despite a massive amount of reserve charges taken already, the market remains very wary of the need for ongoing reserves for many banks and financial institutions. However, the good news is that Tier 1 capital levels have become healthier, thanks to aggressive Fed intervention.

Moreover, the aversion to credit-backed assets has spread to credit cards, student loans, and auto loans, particularly as unemployment has been moving higher. If unemployment

rises to where many in the market believe it could go (above 10 percent), then we could see a second large wave of consumer defaults.

Meanwhile, many hedge funds remain paralyzed by the combined impact of performance driven redemptions and the pressing need to de-lever their portfolios in order to secure adequate funding. This has continued to weigh on all securities markets, though particularly on leveraged loans and convertible bonds. Furthermore, the severe market declines have contributed to the failure or dissolution of many hedge fund customers that investment banks depended on to generate revenue.

Ironically, Treasury yields have declined to historic lows since the crisis began—isn't that what got us into this in the first place? We attribute the low rates to a flight to quality fueled by the disinflationary effects of de-leveraging. However, given the massive liquidity injections the Fed has pumped into the system, we believe Treasury borrowing costs eventually will need to rise massively. We believe the fact that they are still declining directly reflects the dearth of available credit in the market to fund even high-value investment projects. In the meantime, the value of the U.S. dollar has come under renewed pressure, as the world adjusts to much lower growth expectations for the U.S. economy.

In this article, we have attempted to highlight the myriad facets of the financial crisis. We believe the common denominator in all of the systemic failures was the belief that risk can be hedged away, and even reduced, by structuring it or hedging it. However, just as the concept of mass-energy equivalence ($E=mc^2$) reminds us that matter cannot be destroyed, so, too, it is with risk. No matter how small you apportion risk or how widely you disperse it, it remains intact. Paradoxically, if risk is dispersed widely enough, it actually becomes more difficult to measure as long as market correlations are low. It is when correlations rise, as they always seem to do at inflection points, that true exposure to risk becomes obvious.

We also believe the events once again revealed a classic *under*-reliance on “knowing your customer”—the same hubris that brought down venerable financial institutions in the past. Perhaps many of the loan defaults could have been mitigated by better loan underwriting and less emphasis on quantity over quality. In turn, the widespread dependence on “originating-to-sell” effectively centralized the lending process by funneling a large proportion of loan volume through a relatively small group of institutions. As it failed, it caused financial institutions, even in as disparate a geographic region as Iceland, to seize up and fail. The lingering lack of faith in any form of credit extension can be clearly seen by looking at the elevated levels in the TED spread and the LIBOR rates, which measure the lack of willingness of banks to lend to one another. Looking ahead, we believe that recovery is certain—but is likely to unfold very slowly. Perhaps this time we will finally remember the painful lessons we have currently been forced to re-learn.