



# The Hamilton Financial Index

## *The Financial Services Industry Continues To Improve Safety And Soundness*

“Credit flows are the lifeblood of a well-functioning economy. By channeling funds from savers to borrowers, financial institutions enable businesses (and individuals) to pursue projects and activities.”<sup>i</sup>

This sentiment expressed by Pedro Amaral, a senior economic researcher at the Federal Reserve Bank of Cleveland, illustrates the importance of the financial services sector to the economy and why its safety and soundness are of paramount importance to policymakers, members of the financial services industry, and U.S. citizens.

Since the crisis, members of the financial industry and policymakers across the globe have worked together to improve the safety and soundness of the financial sector. The rulemaking, implementation, and compliance processes are still ongoing with much work still to be done. Even so, the financial services sector has already made significant changes to strengthen itself against potential risks.

**“This analysis finds that America’s financial institutions are significantly safer and stronger than even in the years prior to the crisis.”**

The Hamilton Financial Index (HFI) was constructed to monitor this progress. Combining both financial stress and industry-level capitalization, the HFI provides a snapshot of the risks in the system and how prepared financial firms are to confront these challenges.

This analysis finds that America’s financial institutions are significantly safer and stronger than even in the years prior to the crisis. At the same time, the HFI shows the weaknesses of the financial system during the crisis, thus highlighting the importance of current efforts to strengthen the system.

This report details:

- The 2012 fourth quarter reading of the HFI
- The improvements in capital and risky assets
- The role of the EU and safe assets in financial stress

### Key Findings:

In the fourth quarter of 2012:

- The HFI is 1.28, a record high.
- U.S. banks’ Tier One Common Capital increased to \$1.13 trillion.
- U.S. banks’ Tier One Common Capital ratio is 12.6 percent, a year-over-year increase of 1.3 percent.
- The ratio of Risk-Weighted Assets to Total Assets fell 1.3 percent year-over-year.
- Financial stress declined.

Matt McDonald  
Patrick Sims  
Russ Grote

Hamilton Place Strategies  
805 15th Street, NW  
Suite 700  
Washington, DC 20005  
(202) 822-1205

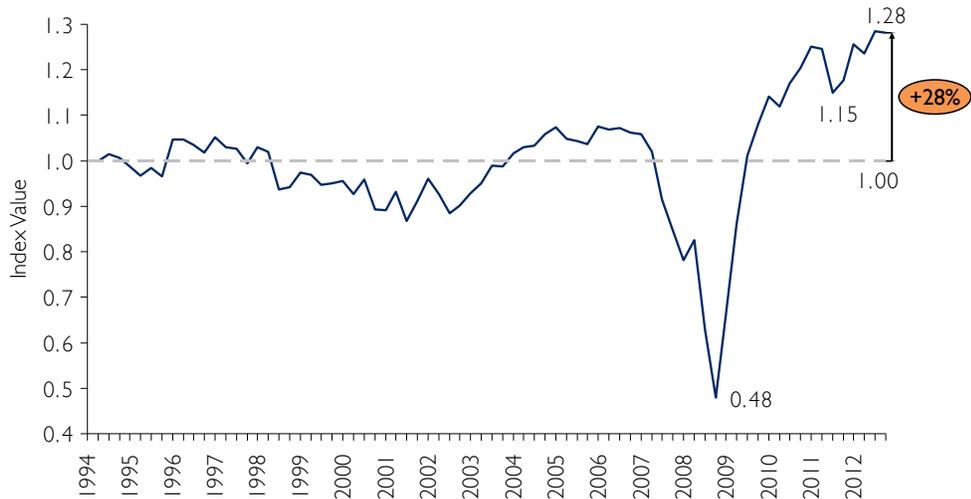
## The HFI Is 28 Percent Above Pre-Crisis Norms

The fourth quarter of 2012 reading of the HFI is 1.28, or 28 percent above pre-crisis norms (Exhibit 1). While the decline of financial stress since the crisis has improved the HFI, the bulk of the improvement has been driven by increased bank capital.

### Exhibit 1

#### The HFI Is 28% Above Historically Normal Levels In Q4'12, An All-Time High

The Hamilton Financial Index



Source: FDIC, SNL Financial, HPS Insight

Change was minimal from the last quarter, however, the year-over-year increase was strong. In the second half of 2011, the HFI fell from 1.24 to 1.15 as financial stress jumped and capital levels dipped. Since that time, financial stress has decreased and the Tier One Common Capital ratio surged to over 12.6 percent, bringing both the third and fourth quarter readings of the HFI to 1.28 in 2012. These changes represent stark improvements in the safety and soundness of the financial sector from before the crisis to today.

## Methodology

The HFI is measured by using two commonly accepted metrics:

1. **The Tier I Common Capital Ratio** for commercial banks measures financial institutions' ability to absorb unexpected losses in an adverse environment.

2. **The St. Louis Federal Reserve Financial Stress Index** captures 18 market indicators and is a well-established indicator of financial stress.

The index value is the difference between the quarterly averages of the Federal Reserve of St. Louis Financial Stress Index and the quarterly Tier I Common Capital Ratio for the banking industry. All data points are indexed to 1994 levels and 1.00 is the historical norm from 1994 to the present.

## Capital Improvements Have Driven Increases in the HFI

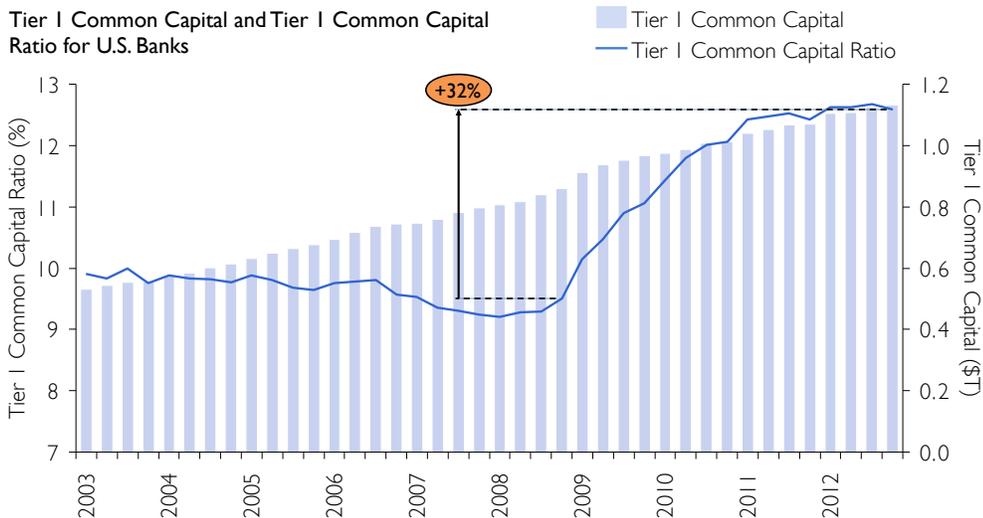
The Tier I Common Capital Ratio is calculated by taking the industry's Tier I Common Capital and placing it in proportion to the industry's Risk-Weighted Assets. The equation reads:

$$\text{Tier One Common Capital Ratio} = \frac{\text{Common Capital}}{\text{Total Risk - Weighted Assets}}$$

The U.S. commercial banking industry's capital ratio is 12.6 percent as of the fourth quarter of 2012. Year-over-year, the ratio increased 1.3 percent. Since financial stress hit its crisis-era peak, the ratio has increased 32.4 percent, placing the industry on much firmer ground and in a significantly better position to handle unexpected losses (Exhibit 2).

### Exhibit 2

#### Tier I Common Risk-based Ratio Dipped Slightly In Q4'12 But Remains Well Above Pre-crisis Levels



Source: FDIC, SNL Financial

Although capital is not the sole determinant for analyzing the health of the banking sector, it is the most relevant and transparent indicator when it comes to establishing confidence among regulators, policymakers, and investors. According to the U.S. Federal Reserve, capital "...acts as a cushion to absorb losses and helps to ensure that any such losses are borne by shareholders, not taxpayers."<sup>iii</sup>

### Capital Improvements Come On Both Sides Of The Equation

In the numerator of the equation outlined above, U.S. commercial banks increased capital to \$1.13 trillion in the fourth quarter of 2012. Capital held by banks increased 5.9 percent year-over-year, and 32.1 percent since the fourth quarter of 2008.

Meanwhile, in the denominator, risky assets amounted to \$9.5 trillion as of the fourth quarter of 2012. This represents an increase of 4.5 percent year-over-year, but a decrease of 0.2 percent since the fourth quarter of 2008.

Risky assets have increased over the past several quarters, but the industry's risky assets in proportion to its total assets fell significantly over the past several quarters. Risky assets to total assets decreased 1.3 percent year-over-year, and 14 percent since 2007 highs (Exhibit 3).

While it's true that increases in risky assets can lead to an increase in the overall risk for the industry, if increases in capital are proportional, then this risk cancels out.

#### Exhibit 3

### Commercial Banks Continued To Reduce Their Percentage Of Risky Assets In Q4'12

Risk-Weighted Assets to Total Assets for U.S. Commercial Banks



Source: FDIC, SNL Financial

Ultimately, it is these capital improvements that are driving the gains in the HFI over the past several years. As noted above, the banking industry's Tier One Common Capital ratio is currently 12.6 percent. However, if U.S. banks still had pre-crisis capital ratios of 9.3 percent, the HFI would be *below* historical norms with a reading of 0.95. This is 33 basis points below the current level, implying that without the improvements in capital, the system would be less safe than pre-crisis (Exhibit 4).

**Exhibit 4**

**Higher Capital Levels Are The Driving Force Behind The Rise In The HFI**



Source: FDIC, SNL Financial, HPS Insight  
\*Index holds Tier One Common Capital Ratio constant at 9.26 percent, the 2008Q2 reading

**U.S. Banks Lead Global Banks in Meeting Capital Standards**

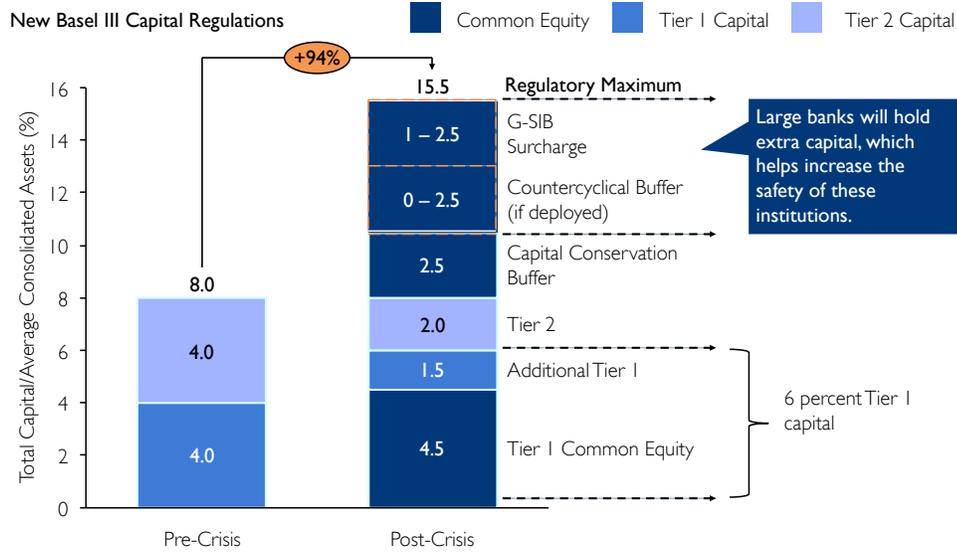
According to the Basel Committee on Banking Supervision, many large banks from around the globe are still short on capital.

Currently, regulators use Basel III capital standards to measure shortfalls for global banks. Based on December 2011 data, the BIS concluded that to reach the maximum capital ratio of seven percent prescribed by Basel III, banks collectively need to raise an additional €374 billion. The minimum ratio of 4.5 percent only requires an additional €11.9 billion.<sup>iii</sup>

In order to meet the more strict capital and liquidity standards, banks are being forced to deleverage assets and restructure their business models. In addition, the world's largest banks, known as “systemically important financial institutions,” also face capital surcharges due to issues with size and interconnectedness (Exhibit 5).

Exhibit 5

## New Regulations Ensure Increased Capital Levels Are Permanent Rather Than Temporary



Large banks are making progress on this front. From June 2011 to December 2011, the aggregate shortfall for these banks decreased by €111.5 billion, according to a BIS study. Moreover, according to a report by financial data provider SNL Financial, "...the largest U.S. banks... have not halted progress toward building clearance of the minimum hurdle for Tier I common ratios under the new [Basel III] framework."<sup>iv</sup> In fact, the data shows that most banks meet if not exceed the seven percent standard mandated by the Basel Committee.

Furthermore, in an analysis by management-consulting firm McKinsey & Co., U.S. banks are outpacing their global peers on meeting regulatory capital standards. The report calculates that U.S. banks collectively boast higher capital ratios than banks from Emerging Asia, Western Europe, and other regions. It goes on to state that although "America banks became more stable as they successfully cleaned up balance sheets...the sector still faces...a tough road ahead."<sup>v</sup>

### Financial Stress – Improvements Have Been Made, But Potential Risks Remain

Beyond capital levels, the HFI also accounts for stability in financial markets, which is essential for sustainable economic growth. Increases in financial stress represent uncertainty of the value of assets, distrust between market participants, and flights to safe, liquid assets. Further, increased stress translates to reduced credit to the

real economy, delayed hiring and investment decisions by companies, and higher costs of doing business.

Given the importance of financial stress to the U.S. economy, the HFI utilizes the St. Louis Financial Stress Index (SLFSI), which accounts for 18 various interest rates, yield spreads, and other financial indicators that capture financial stress in the markets (Exhibit 6).

## Exhibit 6

### The St. Louis Financial Stress Index Incorporates 18 Variables To Measure Stress

St. Louis Fed Financial Stress Index (SLFSI)

 Yield spread is discussed in Exhibit 7

Interest Rates	Yield Spreads	Other Measures
1. Effective federal funds rate	8. 10-year Treasury minus 3-month Treasury	14. J.P. Morgan Emerging Markets Bond Index Plus
2. 2-year Treasury rate	9.  Corporate Baa-rated bond minus 10-year Treasury	15. Chicago Board Options Exchange Market Volatility Index (VIX)
3. 10-year Treasury rate	10. Merrill Lynch High-Yield Corporate Master II Index minus 10-year Treasury	16. Merrill Lynch Bond Market Volatility Index (1-month)
4. 30-year Treasury rate	11. 3-month LIBOR-OIS spread	17. 10-year nominal Treasury yield minus 10-year Treasury Inflation Protected Security yield (breakeven inflation rate)
5. Baa-rated corporate rate	12. 3-month (TED) spread	18. Vanguard Financials Exchange-Traded Fund (equities)
6. Merrill Lynch High-Yield Corporate Master II Index	13. 3-month commercial paper minus 3-month Treasury bill	
7. Merrill Lynch Asset-Backed Master BBB-rated		

Source: Federal Reserve Bank of St. Louis

Since the crisis, financial stress fell significantly (Table 1). After spiking to 4.68 in the fourth quarter of 2008, the SLFSI was -0.32 as of the end of 2012. While occasional spikes have accompanied this decline, the overall trend of stabilizing financial markets has helped improve the economy.

Yet, financial stress remains elevated at this point in the business cycle. Compared to the years of economic

**Table 1 - St. Louis Fed Financial Stress Index**

	2008Q4	2009Q4	2010Q4	2011Q4	2012Q4
SLFSI	4.68	0.18	-0.07	0.58	-0.32
Spread	5.51	1.01	0.76	1.41	0.51
Avg. SLFSI (2004-2007) = -0.83					

expansion prior to the crisis, current stress levels are still slightly high, indicating that financial markets have not fully returned to normal. It is difficult to isolate the cause, but at least two macro forces can be attributed to its elevated state.

## Cautious Optimism in Europe

First, event-based risks such as the break-up of the European Union or sovereign default is a consistent worry within financial markets. Over the past several years, yields on sovereign debt in many European countries increased far past sustainable levels as growth stagnated. This dynamic raised the fear of default in countries such as Greece, Spain, Ireland, Italy, and Portugal. In response, U.S. banks reduced their exposure to these countries from \$242 billion in 2010 to \$181 billion in the second quarter of 2012.<sup>vi</sup>

However, over the past year, actions by the European Central Bank and other EU leaders have calmed markets. At the same time, U.S. banks' exposure to Europe and its peripheries leveled off. In the third quarter of 2012, exposure amounted to \$191 billion.

Improvements in Europe are a welcome sign, but Economist Nouriel Roubini's recent characterization that the situation is "less worse than last summer in the Eurozone," shows the need for "cautious" optimism.<sup>vii</sup> This sentiment was confirmed with the current banking crisis in Cyprus.

## Shortage of Safe Assets Is An Ongoing Drag on Financial Stability and Growth

The second macro driver of financial stress is the shortage of safe financial assets. While nothing is purely safe, safe assets are information-insensitive, as their value does not fluctuate with broader movements in the economy.<sup>viii</sup> They are essential to the functioning of financial markets as they serve as a reliable store of value, collateral in repurchase and derivative markets, key capital and liquidity buffers, and benchmarks for pricing risk. A common example is U.S. Treasuries.

Since the crisis, the supply of these assets has not kept up with increases in demand due to two major factors.<sup>ix</sup> In recent years, the number of countries with AAA rated sovereign debt fell as fiscal positions deteriorated. According to the International Monetary Fund (IMF), prior to the crisis, 68 percent of advanced countries and 25 percent of emerging economies had AAA sovereign debt ratings. In 2012, only 52 percent and 15 percent of countries, respectively, maintained AAA credit rating.<sup>x</sup>

Moreover, the amount of AAA private debt instruments is not fully recovered from the crisis. In total, Credit Suisse calculated that safe assets fell from \$22 trillion to \$12 trillion during the crisis years.<sup>xi</sup>

In tandem to supply constraints, demand for safe assets is rising for both structural and cyclical reasons. Structurally, new regulations on capital, liquidity, and increased use of central counterparties for over-the-counter derivatives are increasing demand for safe assets. Cyclically, there is still evidence of a flight to safety by investors, as financial and nonfinancial firms have looked to insulate themselves from further economic shocks. This dynamic is captured in Moody's Baa Corporate Bond

spread, one component of the SLFSI. This spread is still above its pre-2007 average, indicating an elevated risk premium in the market (Exhibit 7).

## Exhibit 7

### High Demand And Low Supply Of Safe Assets Has Led To A Higher Risk Premium

Moody's Baa Corporate Bond – 10-Year Treasury Constant Maturity Spread



Source: Federal Reserve Bank of St. Louis, The International Monetary Fund

The short supply of safe assets relative to demand poses risks to economic growth and financial stability. First, safe assets act as the medium of exchange and collateral for many financial transactions. Therefore, reduced supply in safe assets is a negative monetary policy shock that can reduce economic growth. Second, tightening supply and increasing demand will raise the price of safe assets. In their Global Financial Stability Report, the IMF states that if the price of safe assets rises quickly, “investors are likely to settle for assets that embed higher risks than desired.” Moreover, “depending on how far this process goes, [these risks] may impinge on the trust that underpins effective market functioning.”<sup>xii</sup>

The implication of the IMF’s analysis is that without a growing supply of safe assets, regulatory actions that boost demand for safe assets too quickly can create financial instability. Therefore, policies should work to encourage the creation of safe assets and regulatory policies should be designed flexibly to “avoid situations that could harm financial stability.”<sup>xiii</sup>

In sum, despite the persistence of financial concerns in Europe and a shortage in safe assets, financial markets are significantly more stable over the past several years.

## Conclusion

By utilizing two critical and commonly accepted metrics, the HFI shows both the level of financial risks in the economy and how financial institutions are working to meet those challenges. This index provides a snapshot of the safety and soundness of the financial sector. However, it should not be viewed as predictive as changes in financial markets can be quick and surprising.

**“Overall, the HFI indicates that the financial sector is safer, sounder, and more capable of handling unexpected shocks that before the crisis.”**

With a reading of 1.28 in the fourth quarter of 2012, the HFI remained at an all-time high, driven by improvements in U.S. banks' capital levels. While financial stress is still elevated, financial markets have become far more stable over the past several years and exposure to the European periphery has fallen. Overall, the HFI indicates that the financial sector is safer, sounder, and more capable of handling unexpected shocks than before the crisis.

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<sup>i</sup> Amaral, Pedro. "Credit Flows to Businesses During the Great Recession," Cleveland Federal Reserve, 2011.

<sup>ii</sup> "Press Release: Federal Reserve Board Launches 2013 Capital Planning and Stress Testing Program," Federal Reserve, November 9, 2012.

<sup>iii</sup> "Results of the Basel III Monitoring Exercise as of 31 December 2011," Basel Committee on Banking Supervision, September 2012.

<sup>iv</sup> Kejriwal, Shah and Carr, "Despite Basel III Delay, Large Banks Steam Ahead," SNL Financial, December 18, 2012.

<sup>v</sup> "The Triple Transformation: Achieving a Sustainable Business Model," McKinsey & Co., October 2012.

<sup>vi</sup> HPS Insight analysis of FFIEC Country Exposure Data from E.16 Country Exposure Lending Survey and Country Exposure Information Report

<sup>vii</sup> Orr, Leanna. "Dr. Doom in Davos: Eurozone Health 'Less Worse' Than Last Year." Asset International's Chief Investment Officer, January 25, 2013.

<sup>viii</sup> Gorton, Gary, Stegan Lewellen, Andrew Metrick, "The Safe-Asset Share," SSRN, January 17, 2012.

<sup>ix</sup> "Safe Assets" Financial System Cornerstone?" International Monetary Fund Global Financial Stability Report, April 2012.

<sup>x</sup> Ibid.

<sup>xi</sup> Wessel, David. "Fewer Ports in a Global Storm," The Wall Street Journal, December 22, 2011.

<sup>xii</sup> "Safe Assets" Financial System Cornerstone?" International Monetary Fund Global Financial Stability Report, April 2012.

<sup>xiii</sup> Ibid.

## About this Report

The Partnership for a Secure Financial Future comprises the Consumer Bankers Association, Mortgage Bankers Association, Financial Services Institute, and The Financial Services Roundtable, which combined represent more than 2,700 member companies across all organizations.

Partnership for a Secure Financial Future  
1001 Pennsylvania Avenue NW, Suite 5005  
Washington, DC 20004  
(202) 589-1927  
[www.OurFinancialFuture.com](http://www.OurFinancialFuture.com)



## About Hamilton Place Strategies

Hamilton Place Strategies is a consultancy based in Washington, DC with a focus at the intersection of business and government. HPS Insight conducts in-depth analysis on public policy issues.

Hamilton Place Strategies  
805 15<sup>th</sup> Street NW, Suite 700  
Washington, DC 20005  
(202) 822-1205  
[hamiltonplacestrategies.com](http://hamiltonplacestrategies.com)

