

Swiss Finance Institute Practitioner Roundups

Special Issue Financial Stability

Editorial



Ten years after the global financial crisis, the preservation of financial stability is a top concern for policy makers, financial institutions, and societies. SFI researchers have made important contributions to our understanding of the crisis, and to our thinking about how to handle future risks. This special issue of SFI Practitioner Roundups brings their findings to a wide audience.

The world has changed immensely since 2008, but perhaps the most striking transformation has been a breakdown of trust in institutions: the legitimacy of policy-makers, financial institutions, and academic economists has been challenged as never before.

While debate is healthy, the widespread breakdown in trust has given an opening to the proponents of easy solutions based on faith rather than reasoned analysis. By contrast, and consistent with SFI's mission to grow knowledge capital, the deep and careful work performed by SFI researchers provides decision-makers with tools to tackle old and new risks to financial stability.

We wish you an enjoyable read.

Prof. François DegeorgeManaging Director





Prof. Francesco Franzoni

Francesco Franzoni, Professor of Finance at the Università della Svizzera italiana (USI), holds an SFI Senior Chair and directs the Institute of Finance at USI. He earned his PhD in Economics at MIT. His research concentrates on institutional investors, such as hedge funds and exchange-traded funds (ETFs), and their effects on asset prices.



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Financial Crisis Propagation

Research shows that banks have taken measures to avoid the effects of economic cycles of credit risk. What do we know about the role and behavior of other financial institutions, such as funds, in regard to asset prices during the financial crisis?

Data reveals that US hedge funds significantly reduced their equity holdings during the financial meltdown. In the second half of 2007, hedge funds sold more than 12 percent of their equity, while in the second half of 2008 they sold a further 29 percent. Redemptions alone accounted for roughly 50 percent of the decline in hedge funds' equity holdings during these two periods, while leverage and margin call related issues accounted for a further 30 percent. Although hedge funds have provisions in place to limit redemptions, data shows that redemptions were in fact a magnifying factor in causing hedge fund investors' withdrawals. Most likely, investors feared that the funds would constrain their ability to pull out their money, leading them to react at the first sign of deteriorating performance. Interestingly, hedge funds rushed to sell both the highly volatile and the most liquid securities in their portfolios, suggesting that they were both financially constrained and trying to limit price impacts.

How did mutual funds react in comparison to hedge funds?

Hedge funds and mutual funds are two distinct types of fund. Hedge funds, on the one hand, cater to a sophisticated clientele, such as accredited individuals or institutional investors, and engage in sophisticated trading strategies: They use leverage, seek arbitrage, and take short positions. Yet despite this degree of freedom, they rely on outside financing and are thus exposed to liquidity constraints. A decline in market values can trigger a hedge fund's liquidation if its margin requirements are not met. Mutual funds, on the other hand, do not use leverage, have no restrictions on investors' liquidity, and generally cater to a less sophisticated clientele such as retail investors. Hedge fund investors, on average, react faster to negative performance than do mutual fund investors. Additionally, a hedge fund's constraints on leverage can lead to a margin call in case of large losses, leaving the fund unable to provide liquidity in times of market stress.

These marked differences between the two types of funds were reflected in the way they reacted to the 2007-09 crisis. Mutual funds traded much less actively than did hedge funds. As well as being less sophisticated than hedge funds, mutual funds are committed to tracking a benchmark, such as the Dow Jones stock index, even when that benchmark falls. Mutual funds therefore did not have the same discretion as hedge funds to revise their asset allocation during the crisis, but were obliged to remain invested in price dropping equity.

The 2007–09 crisis initially hit the financial sector and therefore financial stocks. How did the initial hit propagate to the full stock market?

In June 2007, financial sector stocks accounted for 22 percent of the US stock market's value, with the balance being nonfinancial sector stocks. Between June 2007 and February 2009, US financial stocks lost close to 75 percent of their value, while nonfinancial stocks lost close to 50 percent. Was this price drop in nonfinancial stocks justified by fundamentals, or was it a contagion effect spreading from financial to nonfinancial stocks? The subprime crisis started in the US with the impact on bank stocks, and we could rightly have imagined it would end there. Yet because of joint equity fund ownership, the crisis propagated to nonfinancial stocks in the US and ultimately to other countries. Distressed equity funds with large financial stock losses faced large investor redemptions and so had to engage in asset fire sales of their stocks, both financial and nonfinancial. Research shows that at least 20 percent of the overall decline in US stock value can be attributed to price contagion via common fund ownership. Outside the US, the same research methodology reveals a stock underperformance of 26 percent in developed countries and 18 percent in emerging countries. Results show that the propagation of financial instability during the crisis did not require leverage of financial intermediaries; thus, in terms of policy recommendations, leverage regulation alone is not sufficient to contain a crisis.



Could other financial asset classes have the same impact as financial stocks did 10 years ago?

New threats to financial stability are indeed coming from new asset classes, whose behavior in stressful times is not entirely known. For example, ETFs provide ample liquidity to their investors. However, they may contain highly illiquid assets in their portfolios, such as emerging market stocks or corporate bonds. It is not clear how ETFs will react to selling pressure in a crisis. Certainly, they will not be able to provide the same liquidity to their investors. Possibly, liquidations by ETFs will put downward pressure on their illiquid constituents.

What further conditions are required to prevent financial instability and temporary mispricing in the case of a crisis similar to that of 2007–09?

In the case of mutual funds, regulators are exploring ways to limit investors' ability to redeem at net asset value (NAV), which assumes perfect liquidity of the underlying stocks. Swing pricing, which adjusts the NAV to pass on some trading costs to investors, is already in place in the UK and Luxembourg, for example, and will soon be implemented in the US. Such measures, if well-conceived, could lessen the incentive to redeem investments in times of crisis. As a result, fire sales would be less likely.







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Regulation

Since the 2007-09 financial crisis, regulators around the world have conducted macroprudential stress tests to assess the resilience of the financial system. Such tests are designed to improve regulation and to keep the financial sector's distress from spreading to the real economy. On what basis do regulators conduct these tests? Have some tests proved to be more successful than others?

The hypothetical stress scenarios of US and European regulators are different and change annually. Their scenarios are specifically designed to surprise the financial institutions they regulate, thus precluding them from distorting their investment decisions in anticipation of a certain kind of test. In the US, the Federal Reserve System (the Fed) is responsible for conducting these macroprudential stress tests. The first was launched in 2009 and led to a recapitalization of the US financial system by forcing 10 banks to raise a combined total of USD 75 billion in capital buffer. The Dodd–Frank Act, passed in 2010, required all US banks with assets of more than USD 50 billion to develop and submit capital plans to the Fed on an annual basis, as well as to pass regulatory thresholds on four ratios each quarter: tier 1 capital ratio, total risk-based capital ratio, common equity capital ratio, and tier 1 leverage ratio. If a bank fails a test, the Fed can object to the bank's capital distribution plan, such as its common stock dividends and repurchases. The Dodd–Frank Act also gives the Fed the authority to force banks to improve on detected deficiencies.

In the EU, the Committee of European Banking Supervisors (CEBS) began conducting stress tests in 2009. In 2011, CEBS became the European Banking Authority (EBA). The EBA's first stress test, conducted that year, focused on the core tier 1 capital ratio, with the goal of restoring market confidence during the European sovereign debt crisis. The remedy for banks that failed the test was unclear from the start, however. Without appropriate recapitalization plans, the regulators could not afford to fail banks and thus trigger a potential adverse reaction from the financial markets. This lack of severity considerably undermined the overall credibility of the EBA stress tests.

What is the major downside of the stress tests designed by regulators?

Both the Fed and the EBA stress tests are built on multiple-dimension scenarios. The Fed stress test scenarios are defined by 25 macroeconomic and financial factors; the EBA ones by more than 70 factors. The issue here is to be able to create an economically realistic surprise effect, based on unexpected shocks, on an annual basis. From an operational perspective such stress tests require extended bank supervisory data. Obtaining such data is by no means trivial, as it includes sensitive information and is expensive to collect, analyze, and maintain.

The outcome of a stress test is a measure of the capitalization of the bank under the stress scenario. While the US regulator assesses the capitalization of the bank using four capital ratios, the European regulator used to only look at one: the core tier 1 capital ratio. This ratio imposes a capital requirement on the risk-weighted assets of the bank. With large European banks using their own models to derive risk weights under the internal risk-based approach of the 2004 Basel II Accord, determining the appropriate level of equity financing for each exposure was largely left to the discretion of the banks and the national regulators. This problem was amplified by the type of stress tests conducted in Europe, since banks also derived their own risk weights under the stress scenario. Banks' incentives to invest in asset classes with the most underestimated risk weights increased, since risky sovereign exposure comes with zero capital requirements.

Financial diversity is the cornerstone of portfolio management; from an academic's perspective, how does regulation affect the optimal bank?

By imposing additional constraints, the regulator restricts the set of assets that are still profitable for a regulated bank to invest in. Even if banks seek to remain diversified, their portfolios become more and more similar, and the financial sector as a whole becomes less and less diversified. In this context, no bank can acquire a distressed bank, and the government is forced to step in.



If it was up to academics to conduct the stress tests, how would they differ from those designed by the current regulators?

A team of researchers at New York University developed an alternative metric to quantify the systemic risk of financial institutions: the "V-Lab" stress test. An important innovation in this test is that systemic risk comes not from the unconditional failure of a bank, but from the bank's failure when the financial system is undercapitalized. The V-Lab stress test is simple, being built upon a one-factor scenario: a 40 percent drop in equity prices over a six-month period. The test is also inexpensive, as the data required are based on publicly available information, such as historical market prices, market capitalization, and leverage. The downsides of this noninvasive methodology are that non-publicly traded financial institutions cannot be covered and that the specific weaknesses of financial institutions are not revealed.

How does the "V-Lab" stress test perform compared to the stress tests designed by regulators?

The US and European regulators use the regulatory capital ratio—the ratio of equity capital to risk-weighted assets—to assess a bank's capital adequacy; the stress scenario is projected using accounting data to simulate asset losses. The values of the post-scenario capital ratios are then used to determine which banks fail and what supervisory actions should be taken. By contrast, the V-Lab stress scenario is projected on the bank's market value. Substantial differences are found between the regulatory tests and the V-Lab test. First, the capitalization required in the V-Lab test is always larger than that required in the regulatory tests. Since the script of the test scenario defines the required capitalization amount, this discrepancy is not in itself a problem; the concern lies in the fact that the ranking of undercapitalized banks is not the same. Bank vulnerability is not perceived the same way by regulators and the financial market: The average regulatory risk weight of the regulators' stress tests does not correlate with the market measure of asset risk implied by the V-Lab stress test. Data show, for example, that the 2011 European stress test results had no link with

the actual risk banks represented to the financial market a few months after the test. Research shows that the regulators' stress tests would be more effective if their capital requirements were measured differently. A capital requirement based on risk-weighted assets is not sufficient, as it does not reflect the "risk that risk will change." Regulators should therefore complement their assessment of bank and system risks by using leverage-based and market-based measures of risk.

How can we reconcile the difference between the insights gained from the US and European regulatory tests and those from the "V-Lab" stress test? Is it possible to envision an appropriate and simple-to-implement metric to ensure long-term financial stability?

Bank capital regulation and stress tests are both subject to Lucas's critique: That it is naïve to rely solely on historical data to predict the outcome of policy changes. Evaluating banks on a single accounting measure will always lead to a regulatory arbitrage problem. The regulator, by adding more constraints and capital requirement rules, plays a subtle catch-up game with the banks, hoping to reduce their opportunity to circumvent the regulations by finding loopholes. Monitoring additional risk measures and data not used in regulatory capital requirement definitions can help reveal the banks' deficiencies.





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Buffers

Regulators generally take a time-static approach. Would it not be more appropriate to require financial institutions to conduct dynamic provisioning, that is, to create capital buffers during good periods and to use them during bad ones?

Basel III, the 2017 international bank regulatory framework, does introduce such pro-cyclical capital requirements, providing for buffers within a 0 to 2.5 percent range. Capital buffers that increase during booms and decrease during crashes not only help protect against negative externalities during credit crashes, they also cool credit-led booms, as additional credit comes with a higher cost. Such provisions are forward-looking: Before any credit loss is recognized on a particular loan, a buffer is built up from profits generated during expansion periods that can cover the losses realized during contraction periods.

Was dynamic provisioning implemented prior to Basel III?

Such policies were introduced in Spain in 2000 to cover general credit-related activities before the economic crisis and they have been revised four times: In 2005, the provisions were increased, in 2008 and 2009 they were decreased, and in 2012 they were increased twice. In Switzerland, a countercyclical capital buffer was put in place in 2012, with a specific focus on real estate-related funding.

Did the Spanish banks react as expected in both good and bad times?

The years 1998 to 2013—representing a full credit cycle with an unexpected crisis shock in the middle—provide an ideal empirical setting with which to assess the effects of dynamic capital buffering in Spain. Empirical results covering 80 percent of Spanish bank loans during that period show that dynamic provisioning helped mitigate credit supply cycles, whether expanding or receding. It also had strong effects on firm-level credit, employment, and firm survival during times of crisis. Banks that had to provision more in good times cut their committed credit to firms more after the shock—but not before—than did other, less affected banks. In good times, pro-cyclical bank capital regulation did contract the credit supply, but firms suffered no long-term effects: Three quarters after the introduction of the new regulation there was no impact on firms' total assets, employment, or survival, as firms had easily

substituted credit from less affected banks. In bad times, banks with higher pre-crisis dynamic provision funds increased their supply of committed credit to the same firms over the whole crisis period.

Are there any downsides to countercyclical bank capital buffers?

After banks were required to increase their countercyclical capital buffers, those with higher requirements tended to funnel credit toward firms that initially paid higher interest and were highly leveraged. These firms ultimately showed a higher default rate. The explanation may be that higher capital requirements unintentionally increased the banks' risk taking behaviors and their search for yield. Further results show that this negative impact is stronger for smaller banks, which struggle more to absorb the shock. Despite this weakness, research suggests that the macroprudential policy, countercyclical bank capital buffers, and credit supply mechanisms work by saving capital in crisis times, when profits and shareholder funds are scarce and costly.

What is the situation in Switzerland with respect to countercyclical capital buffering?

In July 2012, the Confederation voted to allow for the creation of targeted countercyclical capital buffers, with a maximum upper bound of 2.5 percent, to ensure that banks could resist excessive credit growth. In February 2013, the Confederation approved the Swiss National Bank's request to implement a 1 percent increase in bank equity for the financing of residential real estate in Switzerland. In June 2014, this countercyclical capital buffer rate was increased from 1 to 2 percent. Overall, the buffer seem to have cooled residential lending, yet some spillovers into corporate real estate lending may have taken place.

Countercyclical provisioning shows overall positive effects through financial and economic cycles. How could this policy be further improved? Should the banks' buffers in good times be larger, or is this not necessary?

On the basis of the Spanish experience, one could argue that a more aggressive buffer setting would have ensured further deflation of the credit boom that took place.



How involved should policy makers, regulators, and central banks be with the implementation of countercyclical provisions?

Politically, setting the countercyclical capital buffer rate—especially if it is an aggressive one—is difficult. Further institutional developments are needed to shield the level setters from immediate political pressure. Establishing a macroprudential policy setting institution that is distinct from, but has close ties to, both micro-supervisors and the central bank may be a good option.







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Central Banks

There is general consensus that central banks have become key players in the financial market during the past decade and may pose a threat to the market itself. How do we explain this situation?

All the major central banks intervened massively during the financial crisis to help avoid a full collapse of the world economy. In the case of the Eurosystem, as a "nation" made of nations, it had not only to face financial and economic issues, but also multiple sovereignty ones. In October 2008, the European Central Bank (ECB) changed its monetary operations. Rather than auctioning limited quantities of liquidity, it began running fixed-rate tenders at the policy rate with full allotment. Full allotment meant that central bank money was not rationed in refinancing operations. Instead, banks received all that they asked for, so long as sufficient collateral was pledged to cover the refinancing. This action, however, was not enough to placate the markets or to allay stability concerns. In July 2012, the President of the ECB, Mario Draghi, declared that the ECB would do whatever it took to preserve the euro. The Outright Monetary Transaction (OMT) program was subsequently launched in September 2012, allowing for unlimited purchases of sovereign bonds of countries under a European Financial Stability Facility or European Stability Mechanism program. So far, the OMT has not been used. As the promise of the OMT was seemingly not sufficient, in September 2014 the ECB announced an asset-backed security and covered bond purchase program; this program would add around EUR 1 trillion to the balance sheet of the Eurosystem. The program was expanded in January 2015 to include government bonds. As a result of these policies, by the end of July 2018, the excess quantity of liquidity in the Eurosystem stood at around FUR 186 trillion

What risk do central banks pose to the economy today?

The balance sheets of virtually all the central banks have reached unprecedented levels. The increased risk associated with this balance sheet expansion is a consequence of the functioning of the collateral frameworks that the banks themselves have designed and of the unconventional monetary policies they have pursued. Because the banks' collateral framework is biased toward risky and illiquid assets, such assets are being produced by the economy at too high a rate. More generally, the collateral policy in the euro area

impairs market discipline. This makes the financial system more fragile, potentially leading to further central bank interventions and expansion. It is uncertain how markets will react when the quantitative easing pressure from the Eurosystem ends, as is scheduled for January 2019.

What can be done to return to a situation where the central banks are pillars of stability and not introducers of risk?

In general, the central banks' policies should be less accommodative; they should instead encourage discipline and provide a larger scope for the play of market forces. However, in the euro area, member state sovereignty may make this difficult.







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Corporate Governance

Were bankers' poor incentives, prior to the crisis, one of the fundamental causes of the crisis itself?

One of the prominent arguments explaining the collapse of the stock market in 2007 was that bank executives had poor incentives—incentives that were not properly aligned with the long-term performance goals of their institution. Yet empirical research into this key corporate governance issue shows that this has not been the case. First, data covering US banks provide no evidence that banks in which the CEO's interests were better aligned with those of the shareholders had higher stock returns during the crisis. Some evidence in fact reveals that these particular banks had lower stock returns and poorer returns on equity. Second, although popular belief tends to blame stock options for leading to excessive risk taking, research results provide no support to suggest that a greater sensitivity of bank CEO pay to stock

volatility led to poorer stock returns during the crisis. Finally, no evidence is found that bank returns were lower when CEOs had higher cash bonuses.

What are the main factors that explain these findings?

The explanation that stems from this analysis is that CEOs focused on the interests of their shareholders in the buildup to the crisis and made decisions they believed the stock market would welcome. Their actions turned out to be costly to their banks, and to themselves, when the financial market stalled. These poor financial results were not expected by the CEOs, as the data finds no evidence that CEOs reduced their shares, or hedged their holdings, in anticipation of poor financial outcomes. Bank CEOs themselves consequently suffered extremely large wealth losses in the 2007–09 financial crisis.



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Conclusion

While the financial industry is now back on its feet and its perspectives look good, it is naïve to think that the financial sector is immune to problems. The question is not one of knowing if there will be another financial crisis, but of knowing when and where it will occur. This question has generated a considerable amount of

academic research at SFI on topics such as sovereign debt sustainability, the fintech revolution, and monetary reforms. The SFI faculty is currently providing insights that may be central to alleviating the next financial crisis.





Dr. Stephanino Isele

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An Interview

with Dr. Stephanino Isele, Member of the Executive Board of Zürcher Kantonalbank and Member of the SFI Foundation Board

How is financial stability monitored in Switzerland at both the individual and the national level?

As part of its statutory mandate, the Swiss National Bank (SNB) generates an annual Financial Stability Report that reflects its assessment of the Swiss banking sector's stability. The SNB also oversees financial market infrastructures which are important for the stability of the Swiss financial system. In addition, the SNB is responsible for designating systemically important banks and—after consultation with FINMA—for proposing a countercyclical capital buffer to the Federal Council.

Supervision of the Swiss banking and insurance sector is the responsibility of the Swiss Financial Market Supervisory Authority (FINMA). Specifically, FINMA is responsible for the enforcement of individual financial market legislation, such as the Banking Act.

What has changed over the past decade and what needs to be done?

Today, the banking system holds considerably more capital than ten years ago. Capital is a key pillar of crisis prevention as is sufficient liquidity. Moreover, major internationally coordinated efforts have also been made regarding the too big to fail (TBTF) problem in order to allow a systemically important bank to disappear from the market in an orderly way in the event of a crisis. These include the accumulation of loss-absorbing funds as well as requirements in terms of the recovery and resolution planning of the banks concerned. However, this process is not yet completed.

Regulators reacted to the financial crisis with an enormous density and detail of new standards and other measures. However, this should not obscure the fact that such a dense monitoring network cannot prevent a next crisis. It is impossible to recognize and control all potential developments. Such a system also restricts economically desirable positive developments in the financial system. What is required is the courage to focus on the essentials.

One the one hand, macroprudential stress tests carry strong consequences for the banks who fail them, whilst on the other hand, they seem to be somewhat adrift from what is financially optimal for a bank (i.e., portfolio diversification). How do banks manage these two largely different constraints?

Macroprudential stress tests by nature inadequately reflect diversification effects. These tests serve to highlight weaknesses in the business model and risk allocation. On the other hand, diversification of revenue streams is among the top strategic priorities for many financial institutions. They will not be discouraged from doing what is the right thing from a business perspective simply because the diversification effect does not manifest to the desired extent in the regulatory stress test.

The Basel III regulatory framework includes several measures on capital buffers. How do Swiss banks manage their capital buffers and countercyclical provisioning?

Switzerland was one of the pioneers of the implementation of increased capital requirements. Swiss banks are very well capitalized by international comparison. The additional requirements from the countercyclical buffer activated by the Federal Council in 2013 at the proposal of the SNB, which currently amounts to two percent of risk-weighted positions from residential property financing, are manageable for banks. Whether the countercyclical buffer actually has a dampening effect on credit supply must be assessed based on the overall context. In the current low-interest-rate environment with insufficient investment opportunities, it is precisely non-regulated or differently regulated players who are entering the mortgage market and affecting the credit supply.



Central banks, such as the ECB, SNB, and Fed, have become major financial players. Has the way commercial banks react to central bank announcements changed over the past ten years?

Until the financial crisis, market participants mainly focused on the prime rate. Market participants often saw this rate raised or lowered "unexpectedly", and it mainly affected short-term interest rates and the FX business. Over the course of the financial crisis, market participants became better prepared for interest rate changes due to improved communication by central banks. The introduction of quantitative easing (QE) led market participants to focus more on announcements regarding the scope and duration of such major purchasing programs. Today, QE announcements are more surprising than interest rate changes, have an impact on the entire yield curve, and also strongly affect other asset classes such as equity markets.

Market participants (and thus also commercial banks) therefore carefully analyze announcements on QE programs and try to anticipate their effects in order to draw conclusions regarding liquidity and price movements.

Professor Hau finds that distress in a section of the equity market can propagate to other sections of the market because of fire sales and common stock ownership. Are banks frequently exposed to such risks?

Only the asset management in a bank can potentially be exposed to such risks

How can banks protect their investments from such fire-sale risk transmission?

To mitigate the risk of fire sales a proactive liquidity risk management framework is crucial. We calculate a liquidity mismatch index (LMI) for each mutual fund on a daily basis. The LMI incorporates market variables (such as the TED spread) as well as asset and funding liquidity under normal and stressed conditions. Gating, swing pricing, redemption fee, and redemption periods are measures for increasing the funding liquidity of a fund. Cash buffer, investment in

ETFs or financial futures, withdrawal from securities lending, and credit lines with the custodian bank are all potential measures for increasing the asset liquidity of a fund. Finally, redemption suspension and liquidation of the whole fund are further but drastic measures for avoiding fire sales (which are not in the interests of fund investors due to the dilution they cause) and therefore mitigate transmission to other asset classes.

How can academic research such as that presented in this publication influence the way Swiss practitioners conduct their business?

Finance as an academic discipline is by its nature an applied science. Ongoing discussion and the exchange of ideas—as occurs in this SFI Practitioner Roundup—are the key to success. Academics learn from practitioners what the most relevant problems are to conduct research on. Practitioners benefit from academics' ability to dive deep into a topic and their use of state-of-the-art methods. On top of that, academia is the ground for high-quality education, which is and will continue to be the main strength of the Swiss Financial Market.

Academic research sometimes provides learnings that significantly differ from what the regulators impose upon financial institutions. How do financial institutions manage in such situations and how do you assess the value of academic research?

Regulation is like tax: you recognize its necessity, you don't really love it, and its benefit depends on how well it is thought through and designed. We all know that regulation doesn't always meet the principle of good design. Very often, the bold lines are blurred by an extremely high level of detail, leading to a tick-the-box mentality. Academic research like the papers presented in this SFI Practitioner Roundup can help to uncover the key points. We should focus on these key points when drafting new regulations and defining how to comply with them. The financial markets benefit from a concise discussion between the different regulatory bodies and regulated entities based on academic research.

Swiss Finance Institute

Swiss Finance Institute (SFI) is the national center for fundamental research, doctoral training, knowledge exchange, and continuing education in the fields of banking and finance. SFI's mission is to grow knowledge capital for the Swiss financial marketplace. Created in 2006 as a public–private partnership, SFI is a common initiative of the Swiss finance industry, leading Swiss universities, and the Swiss Confederation.

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