Swiss Finance Insight
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The impact of Basel 3 on Swiss banks

The Basel 3 capital rules went live in Switzerland on January 1st, 2013 – a year ahead of other European countries. Helen Campbell, Partner at KPMG's Financial Services unit, talks to us about the impact of the regulation on Swiss banks.

Can you tell us more about the three key pillars of Basel 3: Capital, liquidity, and financial stability?
The **capital** pillar requires greater risk coverage – that is, capturing more risks that a bank must hold capital for, while at the same time increasing the amount, and improving the quality, of the required capital. For example, banks must now hold capital for the impact of mark-to-market losses due to changes in counterparty credit worthiness. The minimum amount of total capital required has been increased from 8% of risk-weighted assets under Basel 2 to 10.5% (including the capital conservation buffer).

In addition, Basel 3 introduced a simple backstop measure – the leverage ratio – as a response to the excessive build-up of on- and off-balance sheet leverage in the banking system.

The crisis demonstrated that lack of **liquidity** is a major threat to financial markets and the banking sector. This leads us to the second pillar. The *Principles for Sound Liquidity Risk Management* issued by the Basel Committee in 2008 and the Basel 3 liquidity framework introduce qualitative and quantitative requirements for liquidity risk management.

The qualitative requirements [applicable in Switzerland since January 1st, 2014] include elements such as identifying profit and risk drivers from a liquidity perspective, planning liquidity needs, stress testing, closely monitoring the refinancing structure, and allocating liquidity costs appropriately.

The quantitative requirements, the Liquidity Coverage Ratio and the Net Stable Funding Ratio, are introduced in Switzerland as minimum standards [from 2015 and 2018, respectively] following a mandatory reporting period for all banks that is used to calibrate the requirements.

The third pillar of Basel 3 – **financial stability** – identifies global and domestic systemically important banks ("Too Big To Fail") and requires detailed recovery and resolution plans that can be swiftly activated in a crisis.

What is the main impact of Basel 3 on Swiss banks individually?
Most banks in Switzerland – the smaller cantonal and private banks – are not significantly impacted. They largely met the capital requirements already and do not offer the investment banking products impacted by the higher capital charges.

Generally, internal models to calculate capital are not widely used and the more straightforward standardized capital charges can be calculated using standard software for regulatory reporting purposes. The biggest impact comes from the need to comply with the new liquidity requirements that might impact a bank's overall business and risk management strategy and require new IT and operational processes.

For larger banks with investment banking arms, the requirements with the largest impact have been those related to liquidity and to core equity Tier 1 capital, as well as the leverage ratio. This has seen a focus on reducing the balance sheet and identifying businesses that are not capital efficient, particularly in certain areas within rates, commodities, and securitization. The phase out of Basel 2 capital instruments has also meant increased issuance of Basel 3 compliant instruments, such as high- and low-trigger contingent convertible bonds.

What are the main consequences for the Swiss banking industry as a whole?
Most of the industry hasn't been significantly affected by the Basel 3 capital and financial stability requirements. However, for larger, more complex banks there has been a big focus on capital requirements; this has led to reducing the size of investment banking divisions and a stronger focus on wealth management and private banking. For the rest of the industry, the qualitative liquidity requirements and the liquidity ratios have a far greater focus.

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As this Q&A highlights, the effects of capital and liquidity requirements on a bank depend considerably on the bank's size and other features. New SFI research presented on page 2 takes a closer look at these effects.

SFI NEWS

Paper award
SFI Professor Harald Hau (University of Geneva) and Matthias Efing (SFI PhD student, University of Geneva) received the prize for Best Paper on Financial Markets at the Paris December 2013 Finance Meeting of EUROFIDAI - *Institut européen des données financières.*
www.SFI.ch/Hau

Swiss Banking Transformation Testimonials
In a new seminar series, leading Swiss banking experts talk about the current transformation processes banks in Switzerland are going through. The first talk will take place on March 25 with Boris Collardi, CEO of Julius Baer.
www.SFI.ch/Events

Lunch & Learn @ SFI
On a regular basis, the Swiss Finance Institute holds information sessions where participants can gather information about its education offerings. Every session takes place at SFI's Zurich offices from noon to 2 p.m. A small lunch is also provided.
www.SFI.ch/Events

Upcoming Events

May 15, 2014 – Zurich
Breakfast seminar with Jürg Syz, CEO of Diener Syz Real Estate.
Dr. Syz will talk about the consequences of urbanization in Asia for the real estate market.

June 3, 2014 – Zurich
Breakfast seminar with Martin Scholl, CEO of Zürcher Kantonalbank.
The talk is part of SFI's Swiss Banking Transformation Testimonials series.

For more information on upcoming events: www.SFI.ch/Events

Bank capital, liquidity, and insolvency risk

The costs and benefits of regulatory requirements

"Increasing capital ratios to 20% – as recently suggested by some academics – could decrease bank asset value by as much as 6%."

HUGONNIER & MORELLEC

Recent regulatory proposals aim at reducing the risks posed by banking activities on society. New SFI research provides a method to assess the costs and benefits of capital and liquidity requirements.

Banks can impose major risks on the economy. Avoidance of these risks and the associated costs on society is the overwhelming concern of what is referred to as "prudential regulation." Given the experience in the recent financial crisis, in which insufficient liquidity buffers and excessive leverage made the financial system unable to withstand large negative shocks, the debate on banking regulation has evolved around two main ideas.

The first idea is that equity capital requirements should be significantly increased, to make sure that a decline in the value of banks' assets would not automatically lead to distress and that losses would be borne to a larger extent by the shareholders of the banks. The second idea behind recent regulatory proposals is that banks should hold a buffer of liquid reserves in order to be able to cope with short-term losses.

While these capital and liquidity requirements have been extensively discussed in the academic literature, little has been achieved in terms of developing models that provide quantitative guidance for the use of different instruments of prudential regulation. In addition, "as useful as they are, many of the recent discussions on banking regulation ignore important incentive effects that regulatory requirements may have on bank behavior," explains Erwan Morellec, SFI Professor at EPF Lausanne.

Prof. Morellec has recently addressed this topic in a study conducted with Julien Hugonnier, another SFI Professor at EPF Lausanne. Their study, "Bank capital, liquid reserves, and insolvency risk," has two main objectives.

First, Hugonnier and Morellec seek to develop a model that determines banks' choices of liquid asset holdings, financing, payout, and default policies in the presence of realistic market frictions. The authors' second objective is to use this model to characterize the response of banks to the imposition of liquidity and capital requirements and to measure the effects of such requirements on banks' insolvency risk.

As a first step, the authors analyze what banks' choices would be in terms of asset risk, asset liquidity, or capital ratios if these banks were totally unregulated. Their analysis highlights a trade-off between managing the risk exposure of the bank ex ante via capital ratios versus ex post via buffers of liquid assets, such as cash or safe government bonds. That is, their analysis shows that liquidity management, capital structure policies, and default decisions are interlinked and should be jointly determined to maximize a bank's franchise value.

By providing a new method to assess the costs and benefits of regulatory requirements, the study by Hugonnier and Morellec complements well a new study by SFI Professor Jean-Charles Rochet that provides a thorough analysis of capital requirements and their costs to the Swiss Banking industry.

In the next step of their study, the authors examine the potential effects of prudential regulation on banks' policy choices and insolvency risk. When adding liquidity requirements to the picture, Hugonnier and Morellec find that banks should optimally increase their liquid assets holdings in order to reduce the costs associated with breaches of the requirement. They also show that liquidity requirements have no long-term effects on bank risk-taking or insolvency risk. However, by distorting banks' optimal policies, such requirements lead to a drop in franchise value and to an increase in insolvency risk in the short-run.

In addition to liquidity requirements, banks may be subject to capital requirements, which indicate how much equity capital banks should have relative to their total assets. For example, banks are expected to maintain a Tier 1 capital to asset ratio of 3% under Basel 3. The authors show that such requirements increase cash flows to bank shareholders and thereby significantly decrease the probability of bank default. However, the same requirements lead to an increase in the bank's cost of capital and to a decrease in total bank value. The study shows that increasing capital ratios to 20% – as recently suggested by some academics – could decrease bank asset value by as much as 6%.

In future research, Hugonnier and Morellec plan to extend this framework and examine additional issues related to banks' optimal capital structures and asset choices.

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Links

- **"Bank capital, liquid reserves, and insolvency risk",** by J. Hugonnier and E. Morellec: bit.ly/OobnGm
- **Prof. Erwan Morellec:** www.SFI.ch/Morellec
- **Prof. Julien Hugonnier:** www.SFI.ch/Hugonnier

Impressum

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