49. International banking regulation

National and international banking regulation is a learning-by-doing process. Until the late 1980s, there was no global banking regulation existing. As a response to the Latin American debt crisis, during which many Latin American countries were no longer able to serve and repay their foreign-currency debt with western banks, the Basel Committee on Banking Supervision (BCBS) at the Bank for International Settlements drafted the Basel Capital Accord on behalf of the Governors of G10 central banks.

Basel I

The Basel Capital Accord (BCBS 1988) of 1988 became the compulsory standard for internationally operating credit institutes in most jurisdictions. It introduced capital requirements based on different risk weights for the cross-border exposure of credit institutes. The Basel Capital Accord was relatively simple as risk weights and capital requirements were allocated according to only three criteria: namely, membership in the Organisation for Economic Co-operation and Development (OECD) (OECD/non-OECD), maturity of claims (short/long), and debtor categories (sovereigns, banks, corporates).

For all exposure against debtors from non-OECD members and short-term claims on banks, the assigned risk weight was 100, with a capital requirement of 8 percent of these claims. In contrast, claims on sovereigns that were members of the OECD held a risk weight of zero, implying an absence of risk and repayment certainty. Any exposure of OECD member credit institutes and short-term exposure of non-OECD members required a 20 percent risk weight. The uniform standard of the Basel Capital Accord was easy to apply by both banks and banking regulators due to its rule-based approach. One major critique, though, was that the Basel Capital Accord was drafted behind closed doors, excluding countries of the Global South, although they were at the heart of the financial crisis (Metzger 2006; Ward 2002). The Basel Capital Accord was amended in 1996 to respond to the Mexican currency crisis in 1994. It included capital requirements for risks arising from changing market prices such as foreign exchange rates, commodities, and interest rates (BCBS 1996).

Basel II

The major impulse to revise the Basel Capital Accord was the Asian financial crisis 1997–1998. The BCBS drafted a revision of the old Basel Capital Accord, outlined in three so-called consultative proposals in 1999, 2001, and 2003, to introduce more risk-sensitive standards for international active credit institutes. According to the proposals for Basel II, capital requirements for exposures should also reflect the individual debtor's different risks and not only the debtor category as stipulated in the uniform standard of the old Basel Capital Accord, now Basel I. After repeated postponements, the Basel Committee on Banking Supervision finally adopted Basel II in 2004, and more than 100 jurisdictions implemented it after that (BCBS 2005).

While Basel I rested on only one pillar, the Basel II Accord extended banking regulation to three pillars, introducing more risk-sensitive minimum capital requirements (pillar one), strengthening of the supervisory review process (pillar two), and enhanced public disclosure commitments to enforce market discipline (pillar three). While the second and third pillars aim to enable both supervisory authorities and market participants to sanction a single bank in case of non-compliance with financial regulations or market failure, the first pillar aims at changing credit expansion to prevent a *systemic failure of banking systems*.

Basel II changed pillar one in three areas. First, it introduced more differentiated capital requirements. Basel II assigns different risk weights to not only different debtor categories and different maturities similar to Basel I but *different individual debtors within the same debtor category*. Basel II obliged credit institutes to use their own internal or external risk assessments by rating agencies to calculate capital requirements for *individual* exposure.

Second, Basel II approved three approaches to measure credit risks; i.e., the standardized approach, the internal ratings-based (IRB) foundation approach, and the IRB advanced approach. The standardized approach is

a modified version of the Basel I standard. Credit institutes would use external ratings to assess credit risks. Basel II assigns different risk weights, starting with 0 percent for triple-A sovereigns up to 150 percent for corporates below BB- and below B- for all other debtors, and different capital requirements between 0 to 12 percent to the different borrower grades based on the external ratings. However, all international active credit institutes use their own risk estimation systems. Thus, one of the IRB approaches with up to nine borrower grades for performing loans and two for non-performing loans. Credit institutes need to fulfill specific standards and demonstrate compliance with their supervisory authority, such as the existence of minimum data observation periods of five years for probability-of-default (PD) and seven years for loss-given-default (LGD) and exposure-at-default (EAD) calculations. Credit institutes using the IRB foundation approach calculate the PD and get operational values for other risk components from their national supervisory authority. Credit institutes adopting the advanced IRB approach will calculate all those risk components themselves. Basel II does not allow a parallel use of different approaches by one bank, though a parallel use of different approaches by different banks operating in one country is possible.

Thus, compared to Basel I, Basel II introduced more risk-sensitive capital requirements, which terminated the uniform standard in international banking regulation. It created a wider spread of borrower grades, risk weights, and capital requirements. More importantly, the risk-sensitive capital requirements contradict the original function of capital requirements (Metzger 2010). Bank's equity does not prevent the emergence of non-performing loans but prevents non-performing loans from resulting in the bank's insolvency. Suppose a credit institute has correctly estimated the credit risk at the time of credit granting. In that case, the interest rate will reflect this risk and generate sufficient financial resources to cover losses resulting from the credit risk, including arrears. If, however, the credit institute has underestimated the risk at the time of credit granting, then the interest payment will be too low to cover the losses resulting from the credit risk. Thus, a credit institute has to rely on its equity precisely when its risk assessment at the time of credit granting turns out to be wrong later. In contrast, when capital requirements are risk-sensitive, as Basel II suggested, the equity is too low when the risk materializes. In sum, Basel II created a structural underprovision of capital for credit institutes and thus reduced their capacity to absorb shocks from their asset side.

In addition, the risk-sensitive capital requirements of Basel II increased the pro-cyclical lending of credit institutes. They enhanced underlying boom–bust cycles and herding behavior during a financial crisis. The application of the IRB approaches reinforces the pro-cyclical tendency of bank lending, most obvious in the bust period, when capital requirements may skyrocket to 47 percent of the exposure for sovereigns with triple-C ratings while reaching the top score of 12 percent within the standardized approach and only 8 percent in Basel I (Metzger 2006).

Finally, Basel II changed pillar one by including an operational risk into underlying capital requirements. Operational risk is a risk from computer failures, data security breaches, poor documentation, corruption, and fraud, to name a few.

However, Basel II might experience a conflict of interest for the credit institute when properly and adequately considering its operational risk. If self-assessed operational risk were higher than the industry's average, then a disclosure of that higher operational risk by higher capital requirements would result in higher refinancing costs. Thus, Basel II sets an incentive to keep operational risk lower than perceived to forego higher costs for equity and refinancing. Other market participants cannot assess whether the presented operational risk and, thus the underlying equity is adequate until risk occurs.

Basel III

In contrast to Basel I and Basel II, the kick-off of large-scale endeavors to reform international banking regulation was due to a financial crisis in advanced countries. Many advanced countries' banking sectors displayed widespread systemic risk, involving too-big-too-fail financial institutes, requiring unprecedented monetary and fiscal policy intervention. This included conventional and unconventional monetary policy such as quantitative easing, bailouts of financial

institutes, and economic stimulus packages. The Global Financial Crisis started in the USA with the subprime crisis; due to high cross-border exposure between financial institutes, there was strong and rapid spillover to financial institutes in other advanced countries. The Global Financial Crisis course displayed excessive regulation flaws and supervisory failure. There was an instant consensus that financial market architecture had to be revised; thus, subsequent reform initiatives quickly started.

A second distinctive feature of Basel III initiatives is that countries of the Global South were sitting at the table from the beginning. Emerging market economies had gone through the global financial turmoil not only better in terms of financial and macroeconomic stability than expected, taking into account their former crises performances, but also better than G7 countries. Accordingly, in 2009 the G7, which until then constituted the unchallenged major international policy coordination group on global macroeconomic and financial issues, gave way to the G20. This group had displayed a rather dozy performance most of the years since coming into existence during the Southeast Asian currency crisis. It was the G20 that managed the regulatory response on the global level by delegating tasks to the Financial Stability Board. While the G20 brings together financial ministries and central banks, the FSB additionally involves more member countries, financial regulatory and supervisory authorities, international financial institutions, and standard setters. The FSB functions as the central coordination forum on financial market topics between the various institutions and organizations dealing with these matters under the auspices of the G20.

Basel III is a regulatory framework consisting of several documents covering various issues for all three pillars (see BCBS Basel III website: www.bis.org/bcbs/basel3.htm). Significant reforms, though, focused on pillar one, e.g., minimum capital requirements (quantity, quality, leverage ratios), risk coverage (for instance, revised IRB framework, significant exposures, output floor, to name a few) and liquidity (liquidity coverage ratio, net stable funding ratio) with transitional implementation arrangements stretching until 2027 (BCBS 2017a).

Basel III requires an increased quantity and quality of capital requirements to mitigate the pro-cyclicality in credit supply in the boom, increase the loss-absorbing capacity of banks' equity in the bust, and limit systemic risk accumulation equally in both boom and bust. Basel III introduced five new capital buffers (capital conservation buffer, counter-cyclical buffer, systemic risk buffer, global systemic institutions buffer, and the other systemic institutions' buffer). Credit institutes are required to build these up in good times and can deplete them in stressful times. As the capital conservation buffer is compulsory for all banks, the minimum capital amount will increase from 8 percent to 10.5 percent of risk-weighted assets (BCBS 2017b).

Furthermore, the qualitatively higher Tier 1 capital will rise. Tier 1 capital consists of *Common Equity* and additional Tier 1 capital. Common Equity is a bank's core capital and includes common shares, retained earnings, and other types of accumulated income. On the other hand, additional Tier 1 capital consists of assets, which banks can quickly convert into equity when needed and can participate in loss absorption. Tier 2 capital is less reliable than Tier 1 capital. Tier 2 capital includes (innovative) hybrid capital with very limited or even non-existent loss-sharing capacity (Metzger 2010). In addition, Basel III reduced the risk sensitivity in both the standardized and IRB approach for credit risk assessment (BCBS 2017a, 2017b). Finally, banks need to cover more risks as, for instance, securitizations and off-balance sheet items, which had been at the heart of the Global Financial Crisis.

The consideration of macroprudential supervision is entirely new in international banking regulation, though practiced widely by emerging markets (Metzger and Taube 2010). Until the Global Financial Crisis outbreak, advanced countries' regulatory authorities and policymakers perceived their financial sectors as stable and crisis-resilient. Accordingly, these regulatory authorities applied only microprudential supervision, deducting from simple compliance of individual financial market institutions with rules and regulations the absence of systemic risk in their financial sectors. However, the Global Financial Crisis proved this approach utterly wrong. As Janet Yellen (2010), the then-former Vice Chair of the Federal Reserve System, stated:

MARTINA METZGER

> It is now clear that our system of regulation and supervision was fatally flawed. Despite volumes of research on financial market metrics and weighty position papers on financial stability, the fact is that we simply didn't understand some of the most dangerous systemic threats. Looking back, I believe the regulatory community was lulled into complacency by a combination of a Panglossian worldview and benign experience. The notion that financial markets should be as free as possible from regulatory fetters had evolved into the conviction that those markets could, to a very considerable extent, police themselves … we appeared to have entered a new era of stability. We even gave it a name: the Great Moderation. We were left with the mirage of a system that we thought was invulnerable to shock, a financial Maginot Line that we believed couldn't be breached. We now know that this sense of invincibility was mere hubris.

Basel III introduced macroprudential supervision to better monitor systemic risk and detect system-wide financial instability, with a particular focus on institutional interconnectedness of financial intermediaries (for instance, the notorious link between originators and special purpose vehicles), risk correlation among financial intermediaries, and the ability of financial institutes to cope with financial and economic shocks. In the course of Basel III, many jurisdictions widened the mandates of their regulatory authorities to include systemic risk and macroprudential supervision. Some jurisdictions even created various macroprudential institutions, particularly the Eurozone.

Concluding, Basel III undertakes steps in the right direction; e.g., the quantitative increase and the qualitative improvement of capital, more comprehensive coverage of risks, and some revision of pro-cyclical features, as well as the acceptance of systemic risk as a notion also for advanced countries financial markets and the introduction of macroprudential supervision (Herr et al. 2019). However, the most critical flaws in Basel III are the risk-weighted capital requirements, their pro-cyclical effects and the structural underprovision of capital in a systemic meltdown, though less pronounced than in Basel II. Still unresolved is which indicators are the most meaningful to capture the accumulation of systemic risk; this uncertainty limits the effectiveness of forward-looking macroprudential supervision. Moreover, there is a widespread unfinished regulatory agenda as for instance, the cross-border cooperation and cross-border resolution of banking failures, stricter regulation of hedge funds, over-the-counter derivative markets, and credit-rating agencies, and less pro-cyclical global accounting standards, but also measures to deal with non-cooperative jurisdictions and general questions of burden-sharing of financial crises costs.

MARTINA METZGER

References

BCBS—Basel Committee on Banking Supervision (1988), *International Convergence of Capital Measurement and Capital Standards*, Basel.

BCBS—Basel Committee on Banking Supervision (1996), *Overview of the Amendment to the Capital Accord to Incorporate Market Risks*, Basel.

BCBS—Basel Committee on Banking Supervision (2005), *International Convergence of Capital Measurement and Capital Standards: A Revised Framework*, Basel.

BCBS—Basel Committee on Banking Supervision (2010), *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems* (December), Basel.

BCBS—Basel Committee on Banking Supervision (2017a), *High-Level Summary of Basel III Reforms* (December), Basel.

BCBS—Basel Committee on Banking Supervision (2017b), *Basel III: Finalising Post-Crisis Reforms* (December), Basel.

BCBS—Basel Committee on Banking Supervision, Basel III: International Regulatory Framework for Banks, www.bis.org/bcbs/basel3.htm (accessed on August 1, 2022).

Herr, Hansjörg, Metzger, Martina, and Zeynep Nettekoven (2019), Financial Market Regulation and Macroprudential Supervision in EMU: Insufficient Steps in the Right Direction, in: Herr, Hansjörg, Priewe, Jan, and Andrew Watt (eds.), *Still Time to Save the Euro: A New Agenda for Growth and Jobs with a Focus on the Euro Area's Four Largest Countries*, Berlin: SE Publishing in cooperation with Hans-Böckler-Stiftung, 2019, pp. 103–122.

Metzger, Martina (2006), Basel II – Impacts on Developing Countries, *Intervention: Journal of Economics* Vol. 3, No. 1, pp. 131–150.

Metzger, Martina (2010), Stellungnahme zum Entwurf eines Gesetzes zur Umsetzung der geänderten Bankenrichtlinie und der geänderten Kapitaladäquanzrichtlinie (Drucksache 1720 vom 17. Mai 2010) im Auftrag des Finanzausschusses des Deutschen Bundestages (English: Opinion on behalf of the Financial Committee of the Bundestag, the German

Federal Parliament, on the Draft Law on the Implementation of the Amendment of the Capital Requirements Directive (Bundestag printed paper of 17th May 2010)). www.hwr-berlin.de/fileadmin/portal/Dokumente/Prof-Seiten/Metzger/21_Dr__Martina_Metzger.pdf (accessed August 1, 2022).

Metzger, Martina, and Günther Taube (2010), *The Rise of Emerging Markets' Financial Market Architecture: Constituting New Roles in the Global Financial Governance*, BIF Working Papers on Financial Markets (October).

Ward, Jonathan (2002), Is Basel II Voluntary for Developing Countries? *Financial Regulator* Vol. 7, No. 3, pp. 51–58.

Yellen, Janet L. (2010), *Macroprudential Supervision and Monetary Policy in the Post-Crisis World*, Speech at the Annual Meeting of the National Association for Business Economics, Denver, Colorado (October 11). www.federalreserve.gov/newsevents/speech/yellen20101011a.htm (accessed on August 1, 2022).

MARTINA METZGER