5

How Banking Crises Drive Capital Regulation

Changes in banking regulation are often the outcome of financial crises. In the United States, the United Kingdom, and Switzerland, both domestic and international financial instability spurred a series of regulatory reforms in banking during the second half of the twentieth century. Discussions affecting the measurement of capital took place within these countries, and from the 1970s also in international working groups.

In the United Kingdom and the United States, considerations on adequate capital materialised as a result of domestic turbulences. In the United Kingdom, the secondary banking crisis of the 1970s led to a fundamental review of banking regulation. In 1979, statutory banking legislation replaced the previous system based on informal control by the Bank of England. In the United States, the two largest bank failures since the Great Depression in 1973 and 1974 alerted bank supervisors, initiating a shift of their focus on identifying potential 'problem banks'. Financial ratios, such as capital adequacy ratios, received more attention again. In Switzerland, statutory banking legislation and minimum capital ratios had already been introduced much earlier, in 1934, as a result of the Great Depression.

However, the main driver of changes in the banking markets and banking regulation was the globalisation of finance. This increased banking instability, changed the competitive environment of banks, and led to high growth rates among multinational banks. Moreover, global markets triggered the harmonisation of capital adequacy rules through Basel I in 1988. With that, capital adequacy had become one of the key themes in banking regulation.

Figure 5.1 shows the evolution of capital/assets ratios in the United Kingdom, Switzerland, and the United States from 1940 to 1990. The period from the late 1960s was marked by diminishing capital ratios. The capital/assets ratio of US banks shows a steady decline since the 1960s and a rapid deterioration between 1971 and 1973. The Swiss banks' average capital/assets

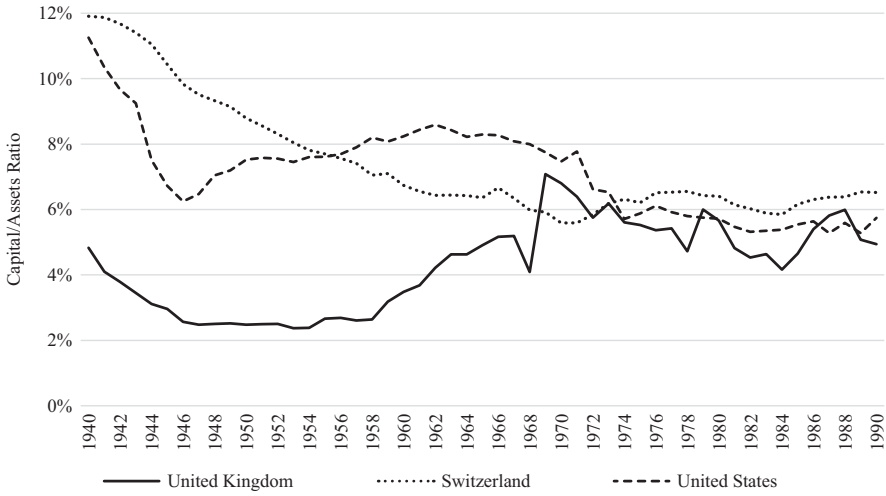

FIGURE 5.1 Capital/assets ratio, United Kingdom, United States, and Switzerland, 1940–90[1]

ratio halved between 1940 and 1970 and then ranged between 6% and 7% until 1990. The aggregated national average, however, conceals the fact that the capital strength of the big banks rapidly deteriorated. British banks' capital/assets ratio fluctuated between 2.4% and 3.0% from 1945 to 1958 and recovered substantially in subsequent years. The sudden increase in capital ratios in 1969 to 7.4% was mostly due to the disclosure of hidden reserves. Not included for British banks is non-paid capital by shareholders, which would increase the 'total capital strength' until the beginning of the 1960s by more than two percentage points.[2]

This chapter focuses on the evolution of capital regulation in the United Kingdom, the United States, and Switzerland up to the 1980s. The financial history literature provides good coverage of the emergence of the Basel Accord in 1988 and the convergence of capital regulation. Perhaps the seminal work in this field is Goodhart's history of the Basel Committee on Banking Supervision (BCBS).[3] Several scholars address the history of the BCBS, placing it into the

[1] Data Switzerland: Swiss National Bank, *Historical Time Series*. Data United Kingdom: 1880–1966, all banks: Sheppard, *The Growth and Role of UK Financial Institutions*; 1967–78: Data obtained from individual annual reports of Big Four/Big Five due to lack of data availability in official statistics (official statistics included subordinated debt as capital); 1979–83, clearing banks: Revell, *Costs and Margins in Banking: Statistical Supplement*; 1984–2008, all banks: OECD, *Income Statement and Balance Sheet Statistics*.

[2] See Section 2.5.1.

[3] Charles A. E. Goodhart, *The Basel Committee on Banking Supervision: A History of the Early Years, 1974–1997* (Cambridge: Cambridge University Press, 2011).

broader perspective of regulatory and supervisory evolution, or provide case studies that aid an understanding of the process of financial globalisation and banking supervision.[4] Moreover, several contributions examine the history of the BCBS from political science or international relations perspectives. One of the first to discuss the Basel Accord was Ethan Kapstein, in 1989 and 1994.[5] Many publications that followed used Kapstein's narrative as a starting point. Moreover, a stream of literature covers the evolution of national regulatory frameworks. In contrast to the existing literature, this chapter focuses mostly on the evolution of capital regulation, how and why capital regulation changed over time, and the use of capital ratios in supervisory practice. Before turning to the national narratives, the changing international landscape as well as the emergence of Basel I is discussed.

5.1 THE INTERNATIONAL ENVIRONMENT AND REGULATORY CONVERGENCE

The macroeconomic and financial sphere was redefined with the end of Bretton Woods at the beginning of the 1970s. The European currencies had already returned to convertibility back in 1958. The balance sheets of the major banks in the United Kingdom and Switzerland expanded rapidly from the 1950s onwards and the financial centres in the respective countries gained in importance. New York was the most relevant financial centre. London established itself as a hub for the Eurodollar market towards the end of the

[4] See, for example, Piet Clement, 'The Missing Link: International Banking Supervision in the Archives of the BIS', in *State and Financial Systems in Europe and the USA: Historical Perspectives on Regulation and Supervision in the Nineteenth and Twentieth Centuries*, ed. Stefano Battilossi and Jaime Reis (Farnham/Burlington, VT: EABH/Ashgate, 2010), pp. 167–75; Catherine R. Schenk, 'Summer in the City: Banking Failures of 1974 and the Development of International Banking Supervision', *The English Historical Review*, 129.540 (2014), 1129–56; Gianni Toniolo and Eugene N. White, *The Evolution of the Financial Stability Mandate: From Its Origins to the Present Day* (Cambridge, MA: National Bureau of Economic Research, January 2015); Christopher Kobrak and Michael Troege, 'From Basel to Bailouts: Forty Years of International Attempts to Bolster Bank Safety', *Financial History Review*, 22.2 (2015), 133–56; Alexis Drach, 'Liberté surveillée: supervision bancaire et globalisation financière au Comité de Bâle, 1974–1988', Histoire (Rennes: Presses universitaires de Rennes, 2022).

[5] Ethan B. Kapstein, 'Resolving the Regulator's Dilemma: International Coordination of Banking Regulations', *International Organization*, 43.2 (1989), 323; Ethan B. Kapstein, *Governing the Global Economy: International Finance and the State* (Cambridge, MA: Harvard University Press, 1994); Tony Porter, *States, Markets and Regimes in Global Finance*, International Political Economy Series (New York/London: St. Martin's Press/Palgrave Macmillan, 1993); Steven Solomon, *The Confidence Game: How Unelected Central Bankers Are Governing the Changed Global Economy* (New York: Simon & Schuster, 1995); Thomas Oatley and Robert Nabors, 'Redistributive Cooperation: Market Failure, Wealth Transfers, and the Basle Accord', *International Organization*, 1998, 35; Duncan Wood, *Governing Global Banking: The Basel Committee and the Politics of Financial Globalisation*, Global Finance Series (Aldershot: Ashgate, 2005); Tarullo, *Banking on Basel*.

1950s, and the financial hub in Switzerland attracted large-scale capital inflows, of which substantial volumes were invested abroad. In the 1960s, the top three financial centres in terms of global importance were New York, London, and Switzerland.[6]

A series of events between the 1960s and 1980s questioned the stability of the monetary system and, with that, the stability of financial markets. The Eurocurrency markets grew rapidly after the late 1950s. The unregulated offshore market for short-term funds in US currency – the Eurodollar market – increasingly undermined the Bretton Woods system of pegged exchange rates and questioned the monetary control of central banks.[7] By 1971, the US government had decided to terminate the convertibility of US dollars to gold, which initiated the transition to a system of flexible exchange rates. The end of Bretton Woods, together with the oil crisis of 1973, led to increasing financial instability, coupled with inflation and diverging interest rates around the world.[8]

The failure of two banks in 1974 triggered the reassessment of risk, regulation, and supervision in banking on an international level. The Franklin National Bank collapsed in May 1974 in the United States. In Germany, the small German Bank Herstatt failed due to speculation on foreign exchange markets.[9] The collapse of Herstatt, in particular, and the disturbances on foreign exchange markets fuelled concern about financial stability and led to the creation of two initiatives to foster international cooperation in the 1970s: the Basel Committee of Banking Supervision at the Bank of International

[6] Youssef Cassis, 'Commercial Banks in the 20th-Century Switzerland', in *The Evolution of Financial Institutions and Markets in Twentieth-Century Europe*, ed. Youssef Cassis, Gerald D. Feldman, and Ulf Olsson (Aldershot: Scolar Press, 1995), pp. 64–77 (p. 71).

[7] On the emergence of the Eurodollar market, see, for example, Catherine R. Schenk, 'The Origins of the Eurodollar Market in London: 1955–1963', *Explorations in Economic History*, 35.2 (1998), 221–38; Stefano Battilossi, 'Introduction: International Banking and the American Challenge in Historical Perspective', in *European Banks and the American Challenge: Competition and Cooperation in International Banking Under Bretton Woods*, ed. Youssef Cassis and Stefano Battilossi (Oxford: Oxford University Press, 2002), pp. 1–36; Ioan Balaban, 'International and Multinational Banking under Bretton Woods (1945–1971) : The Experience of Italian Banks' (unpublished thesis, European University Institute, 2021). Ioan Achim Balaban, 'Banking and Eurodollars in Italy in the 1950s', *Enterprise & Society*, 2022, 1–25.

[8] For an overview on Bretton Woods, see, for example: Michael D. Bordo, 'The Bretton Woods International Monetary System: A Historical Overview', in *A Retrospective on the Bretton Woods System*, ed. Michael D. Bordo and Barry Eichengreen (University of Chicago Press, 1993), pp. 3–108; Bordo, *The Bretton Woods International Monetary System*; Barry Eichengreen, *Globalizing Capital: A History of the International Monetary System* (Princeton: Princeton University Press, 1998), pp. 93–128. For an outline of the international environment from the 1950s to the 1980s and the development of international organisations, see also Youssef Cassis, *Crises and Opportunities* (Oxford: Oxford University Press, 2011), pp. 121–30.

[9] On the effects of banking failures – more specifically, those of Herstatt, Lloyds Lugano, and the Israel-British Bank – on the evolution of the financial system see Schenk, *Summer in the City*.

Settlements (BIS) and the Committees of the European Economic Community (EEC).

First to emerge was an ad-hoc working group established in 1969 by supervisors of the EEC member countries to discuss a potential harmonisation of banking legislation. In 1972, the 'Groupe de Contact' became a permanent place for supervisors to discuss various issues that had surfaced in the context of the internationalisation of finance.[10] Among these issues were, for example, common publication standards for banks, cross-border examinations of banks' foreign subsidiaries, the Euro-currency markets, and the measurement of solvency and liquidity in the respective countries.[11] Many of these discussions were taken up by the European Commission, which produced a first Draft Directive for the coordination of banking legislation in 1972. The proposed paper was an all-encompassing framework that would have regulated all credit institutions and managerial competences, as well as solvency and liquidity.[12] However, the far-reaching regulatory ambitions for the Directive were lowered once the United Kingdom joined the EEC in 1972.[13] The European attitude towards regulation was in stark contrast to the discretionary approach in the United Kingdom. Nevertheless, the First Banking Directive by the European Commission, as well as the establishment of official working groups, had pushed the development of concepts to measure capital adequacy forwards.

The EEC members adopted the First Banking Directive in 1977. The key feature of the Directive was that each member state needed to have an authorisation procedure for credit institutions.[14] The capital requirements stated that institutions 'must possess adequate minimum own funds' when applying for authorisation and that a supervisor could withdraw the authorisation if an institution 'no longer possesses sufficient own funds'.[15] Article 6 also stated that domestic authorities should establish liquidity and solvency ratios for monitoring purposes. In order to harmonise solvency and liquidity definitions, a special Advisory Committee should 'decide on the various factors of the observation ratios'.[16]

[10] The Groupe consisted of officials from the supervisory authorities of the by then six EEC member countries: Belgium, France, Germany, Italy, Luxembourg, and the Netherlands.

[11] Goodhart, *The Basel Committee on Banking Supervision*, pp. 19–22.

[12] See Capie, *The Bank of England*, p. 600.

[13] Kapstein, *Governing the Global Economy*, p. 134.

[14] Peter W. Cooke, 'Self-Regulation and Statute – the Evolution of Banking Supervision', in *UK Banking Supervision*, ed. Edward P. M. Gardener (London: Allen & Unwin, 1986), pp. 85–98 (p. 89).

[15] Council of the European Communities, *First Council Directive on the Coordination of Laws, Regulations and Administrative Provisions Relating to the Taking up and Pursuit of the Business of Credit Institutions*, 1977, Art. 3 & 8.

[16] Council of the European Communities, *First Council Directive on the Coordination of Laws, Regulations and Administrative Provisions Relating to the Taking up and Pursuit of the Business of Credit Institutions*, Art. 6.

The Advisory Committee did not propose minimum capital requirements, but, rather, four different ratios for observational purposes: a risk-assets ratio (own funds/risk assets), a gearing ratio (own funds/other liabilities), a fixed assets ratio (own funds/fixed assets), and a large exposures ratio (own funds/total large exposures).[17] The members of the committee defined 'own funds' as paid-up capital, reserves, and provisions that were made for unexpected losses, and therefore had the character of reserves. With regards to subordinated debt, the committee opted for two definitions of 'own funds': one which included and one which excluded subordinated debt. This distinction reflected the diverging views on the definition of capital in the different EEC member countries.

For the 'risk assets ratio', the Advisory Committee defined three categories with which to weight assets. Zero weighting was given to assets guaranteed by institutions of the EEC or guaranteed by an EEC member country and a specific list of countries (referred to as the 'preferential zone').[18] Assets of credit institutions (and assets with guarantees from such institutions) from the preferential zone were assigned a 20% weight. All other assets were weighted with 100% (e.g. domestic credit to the private sector, assets from the non-preferential zone). For loans covered by 'real estate or marketable securities', the national supervisors could make their own weighting decisions.[19] The EEC's framework did not stipulate a minimum capital requirement but presented a reliable framework for assessing capital adequacy.

In 1989, the European Commission adopted the Second Banking Coordination Directive, introducing the Single Banking Licence in Europe.[20] This 'single passport' allowed banks from the EEC member states to establish subsidiaries and provide services throughout EEC countries. More important with regards to capital adequacy were the 'Own Funds Directive' and the 'Solvency Ratio Directive' in 1989.[21] These two directives, however, did not build directly on the proposals by the EEC's own Advisory Committee

[17] Commission of the European Communities, Advisory Committee on Banking Coordination, *Notice on the Calculation of Observation Ratios for Assessing Bank Solvency*, Committee of London Clearing Bankers. Capital and Liquidity Adequacy of Banks' (London, 1 May 1980), London Metropolitan Archives, CLC/B/029/MS32152B/004.

[18] The countries were the EEC members and Australia, Austria, Canada, Finland, Iceland, Japan, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, and the United States. Commission of the European Communities, Advisory Committee on Banking Coordination, *Calculation Observation Ratios, LMA, CLC/B/029/MS32152B/004*, pp. 7–8.

[19] Commission of the European Communities, Advisory Committee on Banking Coordination, *Calculation Observation Ratios, LMA, CLC/B/029/MS32152B/004*, p. 10.

[20] Council of the European Communities, *Second Council Directive 89/646/EEC of 15 December 1989 on the Coordination of Laws, Regulations and Administrative Provisions Relating to the Taking up and Pursuit of the Business of Credit Institutions*, *89/646/EE*, 1989.

[21] Council of the European Communities, *Council Directive 89/299/EEC of 17 April 1989 on the Own Funds of Credit Institutions*, *89/299/EEC*, 1989; Council of the European Communities, *Council Directive 89/647/EEC of 18 December 1989 on a Solvency Ratio for Credit Institutions*, *89/647/EEC*, 1989.

developed in the 1970s. Instead, the EEC mostly translated Basel I into the European legal framework.

At the BIS, the BCBS had started working on capital adequacy shortly after the EEC's Advisory Committee went to work. In September 1974, the central bank governors at the BIS had decided to establish a 'Standing Committee on Banking Regulations and Supervisory Practices', later termed the 'Basel Committee for Banking Supervision'. The aim of the BCBS was to 'intensify the exchange of information between central banks on the activities of banks operating in international markets and, where appropriate, to tighten further the regulations governing foreign exchange positions'.[22] While this statement in the press release was fairly broad, the internal understanding of the BCBS and its goals was much clearer. George Blunden, the first chairman of the BCBS, noted that 'our main objective is to help ensure the solvency and liquidity of banks'.[23]

The BCBS advanced several suggestions that became cornerstones of banking regulation and supervision. It promoted the concept of home country control, which established that every financial institution, including foreign subsidiaries, is supervised by its national supervisor. The first step in this direction was the BCBS's proposal in 1978 to use consolidated balance sheets and income statements in supervisory practice[24] – a topic, incidentally, which had already been being discussed by the EEC's 'Groupe de Contact' since 1972.[25]

The topic of the soundness and safety of the financial system gained further significance with the outbreak of the Latin American Debt crisis in 1982. After banks had increased their lending to developing countries for many years, the crisis led to a reassessment of sovereign risk and, with that, questioned the solvency of both international banks and regional banks that had engaged in syndicated loans.[26] One impulse seemed to be of particular relevance for the later evolution of the Basel Accord. The US Congress debated the increase of the US quota at the International Monetary Fund in 1983. In this context, the US Congress demanded a review of banking regulation and capital requirements for large domestic commercial banks. Moreover, fearing competitive

[22] The press communiqué published on 10 September 1974 is cited in Goodhart, *The Basel Committee on Banking Supervision*, p. 39.

[23] See notes for the preparation of the opening remarks for the first BCBS meeting by George Blunden, cited in: Goodhart, *The Basel Committee on Banking Supervision*, p. 45.

[24] The necessity of the principle of home country control was demonstrated by the failure of Banco Ambrosiano in 1982, which had a holding company in Luxembourg and subsidiaries in Italy and Panama. See, for example, Ethan B. Kapstein, 'Architects of Stability? International Cooperation among Financial Supervisors', BIS Working Papers, 2006, p. 7; Charles A. E. Goodhart, 'Financial Supervision from an Historical Perspective: Was the Development of Such Supervision Designed, or Largely Accidental?', in *The Structure of Financial Regulation*, ed. Charles A. E. Goodhart, David G. Mayes, and Geoffrey E. *Wood, Routledge International Studies in Money and Banking* (London: Routledge, 2007), pp. 43–64 (p. 58).

[25] It had already been frequently discussed by the Groupe de Contact. Goodhart, *The Basel Committee on Banking Supervision*, pp. 12–25.

[26] Kapstein, *Governing the Global Economy*, pp. 104–6; Wood, *Governing Global Banking*, p. 72.

disadvantage as compared to foreign banks, the Congress also asked to promote the international convergence of capital requirements.[27] Developing a level playing field was certainly of importance both from the US and the European perspectives. The Japanese banks were traditionally operating with much lower capital ratios than their US-American and most of their European competitors.[28] Moreover, Japanese banks were controlling about one-eighth of all US assets, and the United States and Japan were in a trade conflict.[29]

On the US side, a group of supervisors started to work on a new system to measure capital adequacy.[30] Internationally, Paul Volcker, Chairman of the Federal Reserve, took the matter to the meeting of the governors at the BIS in 1984. Volcker even suggested the introduction of a leverage ratio of 5%, which was rejected by the governors.[31]

Even though this first attempt for an internationally agreed capital requirement failed, the BCBS continued its work on a framework for capital adequacy. One of the key problems was the variety of different national standards and definitions of capital, which made the measuring of capital adequacy across countries more difficult. In 1984, the BCBS started to assess the capital level of large international banks using several definitions for capital.[32] Nevertheless, the issue of fundamental differences in the national regulatory systems remained. In January 1987, the United States and the United Kingdom announced that they had reached an agreement on regulating capital adequacy. The bilateral agreement bypassed the work of the BCBS. It consisted of a common definition of capital, the use of a risk-weighted assets approach, and the inclusion of off-balance-sheet items. Later in the year, the agreement was extended to Japan. Confronted with this fait accompli, the BCBS's negotiations were severely accelerated. In December 1987, the supervisors in the BCBS agreed to a common framework for the measurement and adequacy of capital.[33]

[27] Kapstein, *Governing the Global Economy*, pp. 92–95.
[28] Wood, *Governing Global Banking*, p. 77.
[29] Solomon, *Confidence Game*, p. 415.
[30] Supervisors from the Federal Reserve Board in Washington and the Federal Reserve of the Bank of New York were involved in this process. Kapstein, *Governing the Global Economy*, p. 110.
[31] Drach, *Liberté surveillée*, chap. IX.
[32] Goodhart, *The Basel Committee on Banking Supervision*, pp. 151–67; Alexis Drach, 'Liberté surveillée: Supervision bancaire et globalisation financière au Comité de Bâle, 1974–1988' (European University Institute, 2016), pp. 335–41.
[33] The existing literature discusses various reasons that led to the breakthrough in the negotiations. Kapstein established the first narrative by emphasising the leadership of the United States and the United Kingdom, together with the growing recognition for risks in banking (Kapstein, *Resolving the Regulator's Dilemma*; Kapstein, *Governing the Global Economy*). Oatley and Narbors highlight the role of competition and the interest of the United States on a level playing field (Oatley and Nabors, *Redistributive Cooperation*). Drach provides a more differentiated view, incorporating several European countries and showing that Basel I was not simply the result of pressure by the United States and the United Kingdom, but resulted also from a desire for regulatory convergence on a European level, as well as the aim of most European countries to strengthen the capital position of their banks (Drach, *Supervision bancaire et globalisation financière*).

The central bank governors at the BIS adopted the Basel Accord in 1988. The Accord defined capital, set weights for calculating risk-weighted assets, and introduced a capital requirement. The capital requirements specifically addressed credit risks and left the regulation of other risk types to national authorities.[34] The agreement differentiated between core capital (Tier 1) and supplementary capital (Tier 2). The former consisted of paid-up equity capital and disclosed reserves, whereas the latter included hidden reserves, revaluation reserves, general provisions, hybrid debt capital instruments, and subordinated debt. At least 50% of the required capital had to be Tier 1 capital.[35]

The two-tier structure of capital was a compromise between the varying national traditions. The British perceived subordinated debt as comparable to equity capital. In the United States, banking supervisory agencies had varying opinions on the use of subordinated debt for capital requirements. In Switzerland, hidden reserves had been used as part of the required capital since 1961. The Basel Accord also set five risk classes for on- and off-balance sheet items, which allowed for the calculation of risk-weighted assets. Tier 1 and Tier 2 capital would have to be at least 8% of the risk-weighted assets.

The 8% capital ratio was based on a compromise, too. Goodhart argues that the 8% 'emerged naturally', as analyses had shown that the ratios of most banks already ranged in the area of 7–10%.[36] Drach highlights that the BCBS had already been running analyses and solvency calculations since 1984. Suggestions in 1985 and 1987 targeted 10% and 9% as a total capital ratio (Tier 1 and 2 capital). According to the BCBS analyses, Banks in France and Japan were undercapitalised compared to the discussed capital requirements. For the United Kingdom and the United States, the inclusion of subordinated debt was crucial to meet the requirements. The Swiss banks were comparably well capitalised, and meeting the standards did not seem to be an issue.[37]

The BCBS was clearly not where the idea of risk-weighted assets as a tool to assess capital adequacy originated. Goodhart points out that several individuals were a member of two or even three of the committees working on capital adequacy at the same time (the unofficial Groupe de Contact, the official Advisory Committee by the EEC, and the BCBS).[38] Thus, much of the knowledge on bank capital that was further developed by the BCBS was rooted in the work at the domestic and European levels.

[34] Basel Committee on Banking Supervision, *Basel I*, p. 2.
[35] Basel Committee on Banking Supervision, *Basel I*, pp. 3–7.
[36] Goodhart, *The Basel Committee on Banking Supervision*, p. 178.
[37] Drach, *Supervision bancaire et globalisation financière*, pp. 335–42.
[38] Goodhart, *The Basel Committee on Banking Supervision*, p. 24.

5.2 FROM INFORMAL TO FORMAL: THE REGULATION AND SUPERVISION OF BANKING AND CAPITAL IN THE UNITED KINGDOM

Britain's approach towards banking regulation and supervision was different to that in Switzerland and most other continental European countries. On the regulatory side, there was no legislation regulating the financial system and its players. Instead, several Acts evolved after the 1940s that affected specific areas of the financial system. This fragmented regulatory system was, to some extent, reunified by the Banking Act of 1979.[39] On the supervisory side, banking supervision was conducted by the Bank of England without a legal mandate.[40]

In the 1960s and 1970s, the evolution of the domestic and international financial environment charged the British regulatory and supervisory system with tension. The emergence of the Eurodollar markets from the 1950s led to the rebirth of the City of London as an international financial centre.[41] On a domestic level, there were mergers again for the first time in four decades, a wholesale market for the borrowing and lending of large deposits between financial institutions developed, and, with that, the secondary banks emerged. Moreover, politically there was a desire for more competition within the financial system.

It was a crisis that brought the various evolutions to a halt. The secondary banking crisis in 1973/4 paved the way towards a reconsideration of both regulation and supervision. This triggered a review of the financial system (the Wilson Committee) and also a series of joint working papers by the Bank of England and the clearing banks on supervision, capital adequacy, and liquidity.

What were the consequences of these developments for the regulation of capital? The impact was small: the Banking Acts of 1979 and 1987 stated that the capital should be 'appropriate'. Determining capital adequacy was left to the Bank of England, which was already the case before and after the introduction of the Banking Acts. Nonetheless, relevant changes took place from the 1960s to the 1980s. A framework on how to measure capital emerged in the form of a risk-adjusted model. This framework was the result of discussions between the BoE and the clearing banks. The guiding ratio used to assess solvency in supervisory practice changed from the 'free resources ratio' to the 'risk assets ratio'. Another driving factor was the trend towards the harmonisation of capital and liquidity requirements on the European and the international levels. The following sections trace the evolution of capital regulation and the role of supervision in the United Kingdom.

[39] *Banking Act 1979*, C. 37, 1979.

[40] On the Bank of England and banking supervision, see Harold James, *Making a Modern Central Bank: The Bank of England 1979–2003*, Studies in Macroeconomic History (Cambridge: Cambridge University Press, 2020), chap.

[41] Cassis, *Capitals of Capital*, pp. 223–5.

5.2.1 The Irrelevance of Capital: 1945 to 1973

From the 1920s to the 1970s, capital in banking was an issue of only secondary importance in the United Kingdom. In 1918, the topic received significant public exposure for the last time. Discussions surrounding the amalgamation movement increased public attention and created political pressure. The banks raised fresh capital after the First World War. During the inter-war period, the question of capital adequacy was of little importance, most likely because the British banking system went through this period without entering a crisis. The stability of the banking sector was never publicly questioned.[42] Moreover, it was often believed that this stability was rooted in high liquidity requirements.

The irrelevance of capital was emphasised by the reports of several parliamentary committees. In 1929, the Committee on Finance and Industry, known as the Macmillan Committee, investigated the reasons for the depressed British economy.[43] The committee also analysed joint-stock banks. Even though the liability side of the banks' balance sheets was discussed, equity capital as a source of funding that influences the structure of the asset side was disregarded.[44] The final recommendations concerning joint-stock banks focused entirely on liquidity ratios and the control of credit supply by the BoE's policy on reserve ratios.[45]

Another committee was appointed in 1957 to investigate Britain's monetary policy during the 1950s.[46] The Radcliffe Committee discussed the background of the monetary policy, the work and organisation of the BoE, as well as the role of the banks in the economy. In the context of banking, the committee analysed the macroeconomic importance of deposits, advances, and overdrafts. The topic of capital in banking was – once again – neglected. Discussing liquidity, the committee concluded that the 30% liquidity ratio that was followed by the banks in the 1950s was probably too high.[47]

[42] Malcolm George Wilcox, 'Capital in Banking: An Historical Survey', in *UK Banking Supervision*, ed. Edward P. M. Gardener, Reprint of an Article in the Journal of the Institute of Bankers, June 1979 (London: Allen & Unwin, 1986), pp. 205–17 (p. 210).

[43] Committee on Finance and Industry (Macmillan Committee), 'Committee on Finance and Industry (Macmillan Committee): Report of Committee', 1931, The National Archives, T 200/7.

[44] Committee on Finance and Industry (Macmillan Committee), *Committee on Finance and Industry, BNA, T200/7*, p. 37.

[45] Committee on Finance and Industry (Macmillan Committee), *Committee on Finance and Industry, BNA, T200/7*, pp. 33ff, 152ff.

[46] Committee on the Working of the Monetary System (Radcliffe Committee), *Committee on the Working of the Monetary System: Report of Committee* (London: Her Majesty's Stationary Office, 1960).

[47] The liquid assets consisted of cash, call money, and bills and were measured as a percentage of the deposits; 8% of customers' deposits were held as deposits at the Bank of England. Cash in tills and vaults was also considered as 'cash'. Another 6.5–9% was usually at call at the discount market. The rest was usually held as bills, a small portion in commercial bills. and a larger amount in government bills. Committee on the Working of the Monetary System (Radcliffe Committee), *Committee on the Working of the Monetary System: Report of Committee*, para. 147.

Capital in banking did not even become a pressing topic once British banks' capital/assets ratio hit a historical low point of 2.4% in 1953. The background for this drop in the capital levels was the interest rate hikes of the 1950s. From 1932 to 1950, the Bank Rate had been at 2%. The interest rate was raised to 7% in 1957, putting pressure on market prices for government securities. Government papers still contributed about half of the total assets on the banks' balance sheets at the time, so the falling market prices translated into heavy losses for banks. Moreover, the ability of the banks to build up reserves through retained profits was severely restricted. The earnings of the banks on advances were low due to the BoE's credit control.[48] As previously shown, the banks wanted to increase their capital at the time. The BoE – prioritising monetary policy – declined these requests until 1958.[49]

Figure 5.2 shows British banks' capital/assets ratio from 1940 to 1990. The impact of the capital issuances after 1958 was substantial. The capital assets/ratios almost doubled between 1957 and 1965, to 5%. Figure 5.3 displays the capital structure of the Big Five banks from 1940 to 1973, illustrating the build-up of the nominal capital over time. The jump in the capital/assets ratio in 1969 was due to the legal disclosure of hidden reserves. A closer look at the balance

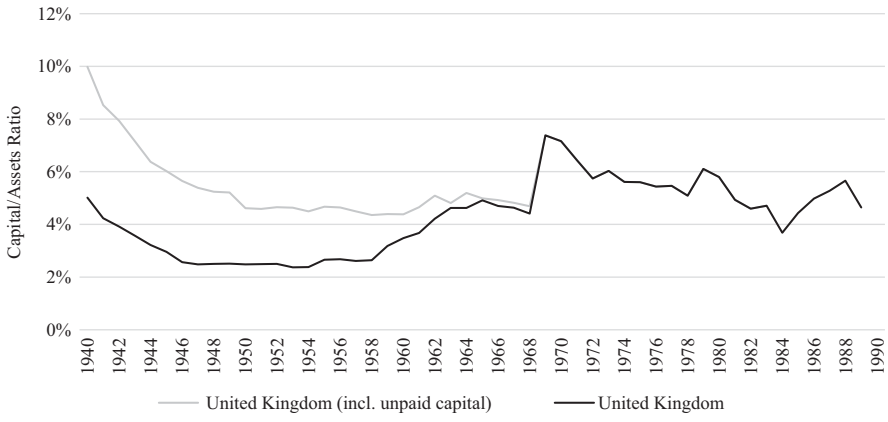

FIGURE 5.2 Capital/assets ratio, United Kingdom, 1940–90[50]

[48] Wilcox, *Capital in Banking: An Historical Survey*, p. 211. For an overview on profitability in banking, see also Capie and Billings, *Profitability in English Banking*.

[49] On monetary policy and more narrowly exchange rate policy, see Alain Naef, *An Exchange Rate History of the United Kingdom: 1945–1992*, Studies in Macroeconomic History (Cambridge: Cambridge University Press, 2022).

[50] Data United Kingdom: 1880–1966, Sheppard, *The Growth and Role of UK Financial Institutions*.; 1967–78: Data obtained from individual annual reports of Big Four/Big Five due to lack of data availability in official statistics; 1979–83, clearing banks: Revell, *Costs and Margins in Banking: Statistical Supplement*; 1984–2008, all banks: OECD, *Income Statement and Balance Sheet Statistics*.

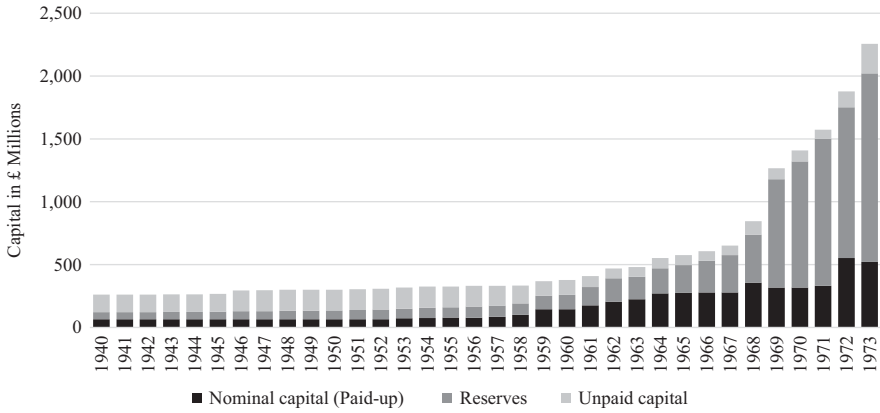

FIGURE 5.3 Paid-up capital, reserves and unpaid capital in £ millions, Big Five banks, 1940–73[51]

sheets of the Big Five reveals that the total reserves grew by £480m in 1969, which was equivalent to almost 3% of the banks' total balance sheets. The increase in public reserves can be attributed almost exclusively to hidden reserves, as shown by the archival research of Billings and Capie.[52]

Until 1979, the BoE maintained its traditional role as an informal banking supervisor. Technically, the Bank of England Act of 1946, which nationalised the BoE, gave it the power to issue directives to banks.[53] This measure, however, was never used.[54] The regulation of financial institutions was based on a mixture of statutory and non-statutory regulations. The BoE distinguished between two types of non-statutory regulation. Self-regulation was based on following commonly accepted guidelines set up by institutions or a group of institutions. The other form of non-statutory regulation was the exercise of authority over financial institutions – a role which was derived from its role and responsibilities as a central bank.[55]

A system often referred to as the 'ladder of recognition' emerged on the statutory side. The status of a bank depended on the level of recognition it received. The BoE viewed the various recognitions as a 'status ladder' via which banks could 'progress as their reputation and expertise developed'.[56] Climbing the ladder of recognition and becoming a fully authorised bank of the highest

[51] Author's calculations. Data obtained from individual balance sheets of Barclays, Lloyds, Midland, National Provincial, and Westminster.
[52] Billings and Capie, *Capital in British Banking*.
[53] *Bank of England Act 1946*, *9 & 10 Geo 6*, para. 4 (3).
[54] Blunden, 'The Supervision of the UK Banking System'.
[55] Cooke, *Self-Regulation and Statute – the Evolution of Banking Supervision*, p. 90.
[56] Bank of England, 'Supervision of Banks and Other Deposit-Taking Institutions', *Quarterly Bulletin*, Q2 (1978), p. 383.

standing took eight to fifteen years.[57] The complex web of regulations also had implications for the capital of banks.

The recognitions were based on lists that were related to the respective acts. The Exchange Control Act of 1947 tasked the Bank of England with maintaining a list of banks that were authorised to deal with foreign exchange.[58] Thus, these banks were referred to as 'authorised banks'. The Companies Act 1948 created a list of banks that were allowed to have hidden reserves.[59] These banks were the 'Schedule 8' banks and were perceived as banks of the 'highest standing'.[60]

Other acts were also applicable to banks, such as the Prevention of Fraud (Investments) Act of 1958, which stipulated a licence requirement for banks dealing with securities for customers.[61] Another example was the Protection of Depositors Act of 1963, which restricted the use of the term 'bank' when advertising for deposits.[62] Initially, the banks allowed to use 'bank' in advertising were the same as the 'Schedule 8' banks. In 1967, however, a section was amended in the Companies Act 1967 for banks exempted from the depositor protection legislation.[63] The amendment created another list: the 'Section 127' banks.

Another recognition was based on Section 54 of the Income and Corporation Taxes Act 1970, which allowed banks to pay and receive interest gross of tax.[64] Yet another recognition was based on the Companies Act of 1967, which allowed the Department of Trade to recognise institutions that conducted banking business ('Section 123' banks). Besides these recognitions, there were also minor forms of recognition, such as membership in the British Bankers Association, having obtained a clearing code from the Committee of London Clearing Banks, or being included in the Bankers Almanac.[65]

The large number of recognitions often came with certain requirements, some of them also in connection with capital. The Section 123 list, for example, required banks to hold capital of at least £250,000 and to conduct a range of banking services, such as issuing cheque books and offering current and deposit accounts. Inclusion in the Section 127 list required capital of £1m, offering a variety of banking services, having adequate liquidity, and good quality of management and a good reputation.[66] For the Big Five banks, these

[57] Capie, *The Bank of England*, p. 597.
[58] *Exchange Control Act 1947*, 1947, c. 14.
[59] *Companies Act 1948*, 1948, c. 38.
[60] Blunden, 'The Supervision of the UK Banking System', p. 188.
[61] *Prevention of Fraud (Investments) Act 1958*, *C. 45*. See also Capie, *The Bank of England*, p. 591.
[62] *The Protection of Depositors (Accounts) Regulations 1963*, 1963.
[63] *Companies Act 1967*, 1967, c. 81.
[64] *Income and Corporation Taxes Act 1970*, *C. 10*. For a discussion, see Edward P. M. Gardener, 'Supervision in the United Kingdom', in *UK Banking Supervision*, ed. Edward P. M. Gardener (London: Allen & Unwin, 1986), pp. 70–81 (p. 72).
[65] Capie, *The Bank of England*, p. 598.
[66] Capie, *The Bank of England*, pp. 596–7.

capital requirements in absolute terms (rather than ratios) were irrelevant, given their large capitals in absolute terms (see Figure 5.3).

A government department – the Department of Trade – was responsible for granting legislative approvals for the various lists. The BoE, as an informal supervisor, however, was always consulted when banks were added to the lists. In this role, the BoE monitored liquidity and solvency ratios and conducted regular interviews with the banks. The actual supervision was usually conducted in informal meetings between representatives of the bank and the BoE's Discount Office when banks submitted their accounts.[67]

The capital ratio used by the BoE during the 1950s to measure solvency was the 'ratio of free resources'. The minimum 'ratio of free resources' ranged between 1:10 for newly established banks to 1:30 for discount houses. These ratios were not applied as target ratios in a strict manner but acted as signal that would alert the supervisors.[68] For liquidity purposes the BoE observed the 'quick assets ratio'.[69]

Given the complicated regulatory framework, it was not surprising that its complexity was about to be identified as a deficiency of the system. Moreover, as it turned out, the legislation failed to target new forms of financial institutions: the so-called secondary banks.

5.2.2 The Relevance of Capital: The Secondary Banking Crisis

The 1960s and 1970s were marked by structural change in Britain's banking sector, which had a lasting impact on competition, the market participants, and their balance sheets. After the Second World War, investments in government debt gradually lost importance. Towards the end of the 1950s, government investments were no longer the largest balance sheet item on the asset side. Advances became the most important asset item again, for the first time since 1929.

The 1960s also brought about the first mergers in four decades. The National Provincial Bank acquired the District Bank in 1962. In 1968, the Westminster Bank merged with National Provincial. In 1969, Martins Bank was acquired by Barclays. Moreover, the British clearing banks developed from domestic to international institutions within a few years, and the number of international banks in London grew rapidly. The clearing banks' balance sheets expanded by, on average, 8.9% p.a. during the 1960s and 20.0% p.a. in the 1970s.[70]

Domestically, policy changes aimed to replace the system of direct control by the BoE with market-guided mechanisms. The implementation of the 'Competition and Credit Control' (CCC) paper lifted many constraints on the

[67] Bank of England, *Supervision of Banks and Other Deposit-Taking Institutions*.
[68] Revell, *Solvency and Regulation of Banks*, p. 47.
[69] Definition: Assets immediately realisable as a percentage of the deposits.
[70] Author's calculations. Data: Individual annual reports.

banks in 1971, suggesting a new approach towards monetary policy.[71] Under the CCC policy, the clearing banks gave up their cartel, which had previously fixed the rates paid on deposits and set minimum rates for advances. In return, the clearing banks were allowed to enter the newly emerged wholesale market.[72] This change allowed them to place funds and raise deposits at other banks, which had previously had to be done through subsidiaries. Moreover, the paper suggested that a universal reserve ratio and adjustments in interest rates and open market operations should replace the existing quantitative control of lending through cash and liquidity ratios.[73]

In contrast to the previous system of credit control, not only clearing banks but all banks would be subject to reserve ratios. Thus, a new type of bank – the secondary (or fringe) banks – was also to be affected by CCC. The BoE already considered that the fringe banks should be invited to adhere to a 10% reserve ratio. However, these attempts were halted by the advent of the secondary banking crisis in 1973.[74]

The fringe banks emerged in the late 1950s and early 1960s. These institutions borrowed on the wholesale market and lent mostly for properties. Both the fringe banks and the wholesale market grew rapidly during the period of expansionary monetary policy between 1971 and 1973.[75] Moreover, the fringe banks competed with the traditional clearing banks in the lending and deposit markets. During 1973 and 1974, falling housing prices put many smaller financial institutions under threat of bankruptcy and the BoE, together with the London and Scottish clearing banks, launched various rescue operations to stabilise the market.[76]

Several issues became apparent as a result of the secondary banking crisis, and some of them would affect the banking legislation to come. Firstly, many financial institutions were not supervised at all. There was only informal supervision of recognised banks by the Bank of England. Fringe banks and foreign banks were out of the supervisory scope. With the secondary banking crisis, the 'old' system based on the informal control of a small number of clearing banks came to an end. Secondly, after a long period of financial stability, awareness of the importance of protecting depositors grew as a result of the crisis. Lastly, the system of the ladder of recognition was too complex and, therefore, hard to understand for the public.[77]

[71] Bank of England, 'Competition and Credit Control', *Quarterly Bulletin*, Q2 (1971), 189–93.
[72] The cartel emerged during the First World War. Turner argues that it 'can be viewed as a quid pro quo to the banks' in exchange for the acceptance of the Bank of England's leadership in supervision. Turner, *Banking in Crisis*, p. 175.
[73] See Capie's chapter on CCC for an overview: Capie, *The Bank of England*, pp. 483–523.
[74] Capie, *The Bank of England*, p. 599.
[75] Capie, *The Bank of England*, p. 524.
[76] Most famously the lifeboat operation. See, for example, Margaret Reid, *The Secondary Banking Crisis 1973–75: Its Causes and Course* (London: Macmillan, 1982). Capie, *The Bank of England*, pp. 524–86.
[77] Blunden, 'The Supervision of the UK Banking System', pp. 189–90.

During 1974 and 1975, it became apparent within the BoE that new legislation was both 'inevitable and desirable', as Peter W. Cooke, at the time responsible for banking supervision at the BoE, noted.[78] The bank also reorganised its system of supervision internally. Until 1974, the Discount Office had been responsible for banking supervision. As a result of the secondary banking crisis, a new supervisory office – the Banking Supervision Division (BSD) – was formed.[79]

As the protection of depositors was questioned, the topic of capital adequacy received attention as well. In 1974, the BoE created a working group to reconsider the purpose of capital, as well as to discuss methods to assess capital adequacy and liquidity. The working group consisted of representatives of the London and Scottish clearing banks and officials from the BoE.

The working group published its results in a paper titled 'The Capital and Liquidity Adequacy of Banks' in 1975.[80] This was the first time since the First World War that the topic of capital had received wider public attention. Moreover, it was also a novelty for the BoE to openly discuss methods for measuring capital adequacy. Until 1975, capital adequacy had been part of the supervisory practice but was only discussed directly between banks and the BoE. The working paper described the existing approaches towards capital adequacy and showed in which direction capital measures were to be developed.

At this time, similar discussions on capital adequacy were also underway in the EEC. The United Kingdom joined the EEC in 1973 and, as Peter Cooke pointed out, tried to influence the debates at the European level towards their interests.[81] With regards to capital adequacy, the British definitions were already quite close to those established by the EEC.

The working paper of 1975 described two methods of assessing capital adequacy. The first approach was based on the 'free resources ratio', measuring the 'free capital resources' as a percentage of the liabilities. A second approach was the 'risk assets ratio'. This new approach related the riskiness of different asset categories to the amount of capital resources. According to the working group, cash and balances with the BoE, advances to

[78] Cooke, *Self-Regulation and Statute – the Evolution of Banking Supervision*, p. 88.

[79] In 1974, the supervisory part of the Discount Office consisted of fifteen people. Until 1978, the number of people working for the BSD increased to about seventy. Bank of England, *Supervision of Banks and Other Deposit-Taking Institutions*, p. 384.

[80] Bank of England, 'The Capital and Liquidity Adequacy of Banks', *Quarterly Bulletin*, Q3 (1975).

[81] Cooke, *Self-Regulation and Statute – the Evolution of Banking Supervision*, p. 89: 'In the course of this process, the United Kingdom took a strong lead in redirecting the energies of the European Commission toward an approach to harmonisation in the banking field more consistent with the realities of the marketplace. An approach, we in the Bank believed, more likely in practice to lead to agreement because it was addressing major points of principle rather than detailed statutory provisions.'

(or guaranteed by) the United Kingdom's public sector, and advances to banks listed in the United Kingdom were regarded as risk free. Thus, such assets would not require banks to hold capital.[82]

The working paper also defined capital. There were two types of capital. The 'free capital resources' were defined as capital minus the book value of infrastructure, also referred to as 'fixed assets'. This definition was closely related to the idea of the purpose of capital at the time. Capital was perceived as necessary to cover fixed assets, and fixed assets were considered the most illiquid asset, especially in times of crisis. The remaining amount of capital should 'protect depositors from losses as a result of business risks' and 'engender the confidence of potential depositors and trading partners'.[83]

A second form of capital, which was used to calculate the solvency ratios, was 'capital resources'. Besides paid-up share capital and reserves, the 'capital resources' also included provisions and loan capital. This was a comprehensive definition of capital. Loan capital was medium- to long-term subordinated debt. According to the view at the time, subordinated debt (in earlier years called 'loan stock') ranked after any other debt in the case of bankruptcy constituted an 'additional line of defence' for depositors.[84]

The inclusion of provisions as a part of capital and the use of subordinated debt is debatable. One can argue that non-specific provisions are a form of capital as they are comparable to general reserves and augmented by retained profits. Specific provisions, however, usually relate to an expected loss and therefore do not serve as a general loss absorber. Yet both forms of provisions were defined by the working paper as being a part of capital resources. Thus, the working group opted for an all-encompassing definition of capital. No ratio that included 'hard' capital, consisting of share capital and reserves alone, was discussed.

The working group deliberately avoided specific minimum ratios, arguing that quantification would reduce the flexibility to consider the different circumstances of individual banks. Nevertheless, it should be possible 'to develop over time broad numerical standards for the different groups of banks which may be used as yardsticks'.[85] Being the product of a joint working group by the BoE and the clearing banks, it is not surprising that much of the paper gives the impression of being a compromise. Regarding numerical capital requirements, the paper explicitly states that 'the special position which the clearing banks occupy in the financial system is recognised'.[86] Nevertheless, it must be remembered that this approach towards capital adequacy was in keeping with the BoE's general principles

[82] Bank of England, *The Capital and Liquidity Adequacy of Banks*, p. 241.
[83] Bank of England, *The Capital and Liquidity Adequacy of Banks*, p. 240.
[84] Wilcox, *Capital in Banking: An Historical Survey*, p. 207.
[85] Bank of England, *The Capital and Liquidity Adequacy of Banks*, p. 240.
[86] Bank of England, *The Capital and Liquidity Adequacy of Banks*, p. 240.

and understanding of regulation and supervision at the time. It was flexible, avoiding rigid rules. It allowed each bank to be judged individually in a personal manner. Moreover, it was an outcome of the Bank's participative approach.[87]

The working paper set the course for the perception of capital in the 1970s and 1980s. Subordinated debt was accepted as an essential part of the capital. In the BoE's statistical publications on the banking market, no differentiation was made between the various types of capital. The Bank's Quarterly Bulletins (Statistical Annexes) reported total capital resources only. The same applies to the international statistics provided by the OECD at the time.[88] For a detailed assessment of a 'narrowly defined' capital base consisting of share capital and reserves only, one has to turn to the annual statements of individual banks.

Now that capital adequacy had finally emerged as a topic, was it viewed as an essential source of stability for British banks? Before the 1970s, the focus was clearly on liquidity, which was linked to the fact that credit control – or, more broadly, monetary policy – can be exercised through liquidity requirements. In 1975, George Blunden, at the time responsible for banking supervision at the BoE, still highlighted that 'liquidity is probably even more important than capital adequacy'. Blunden argued that the secondary banking crisis had been a liquidity problem and not one of inadequate capital.[89] The developments in the working groups on the European and international levels, however, seem to have shifted the focus from liquidity to solvency.

5.2.3 The Banking Acts of 1979 and 1987

By the mid-1970s, it was clear that British banking needed a new regulatory framework. The Banking Act was introduced in 1979 and represented the first legislation since the mid-nineteenth century that specifically regulated banks. The previous regulation, based on general Companies Laws and several pieces of legislation affecting different areas of banking, was mostly replaced. With regards to bank capital, however, the new Act did not introduce specific capital ratios. The Banking Act was in the tradition of British banking supervision, leaving the Bank of England as a supervisor with substantial discretionary flexibility.

The 1979 Act was primarily concerned with deposit-taking. Other areas, such as foreign exchange, securities dealing, and payment services, were left aside. All deposit-taking institutions had to be authorised by the BoE. The Act differentiated between licensed and recognised institutions. Both types of institutions were allowed to take deposits. The main difference was the type

[87] Blunden, *The Supervision of the UK Banking System*, p. 191.

[88] Jack Revell, *Costs and Margins in Banking: An International Survey*, ed. Organisation for Economic Co-Operation and Development OECD (Paris: OECD, 1980); Revell, *Costs and Margins in Banking: Statistical Supplement*.

[89] Blunden, 'The Supervision of the UK Banking System', p. 193.

of supervision. The Act ensured that the supervision of recognised banks could continue mostly on a non-statutory basis – as was already the case.[90]

The Banking Act set minimum capital requirements of £250,000 for licensed institutions and £5m for recognised institutions.[91] There were no prescribed capital ratios, but a general statement on capital adequacy for licensed institutions:

> The institution ... will maintain net assets of such amount as, together with other financial resources available to it of such a nature and amount as are considered appropriate by the Bank, is sufficient to safeguard the interests of its depositors, having regard to the factors specified in subparagraph (2) below.[92]

Subparagraph 2 was defined as follows:

> The factors referred to in subparagraph (1) (a) above are (a) the scale and nature of the liabilities of the institution and the sources and amounts of deposits accepted by it; and (b) the nature of its assets and the degree of risk attached to them.[93]

The paragraph on solvency for recognised institutions was formulated similarly, but was slightly less detailed.[94] The Banking Act defined 'net assets' as paid-up capital and reserves. The definition of capital also opened the door for the use of other forms of capital, referred to as 'other financial resources'. In practice, this meant subordinated debt and guarantees from third parties.[95]

The BoE further detailed the capital adequacy regime in another joint working paper with the British Bankers' Association (BBA), which succeeded the Committee of London Clearing Bankers as a representative body in the discussions with the bank. The paper, titled 'The Measurement of Capital', described the methods and criteria that the bank employed when assessing the capital adequacy of financial institutions and was published in 1980.[96]

The discussions between the involved parties for the working paper were also the basis for the articles on capital adequacy in the Banking Act 1979. When developing the paper, Peter W. Cooke, Head of Banking Supervision at the BoE,

[90] For licensed institutions, the Banking Act established a series of information obligations. The Bank of England could make inquiries about 'the nature and conduct of the institution's business and its plans for future development'. *Banking Act 1979*, para. 16.

[91] The £5m applied to banks that were providing a 'wide range of banking services'. Banks that were offering 'highly specialised banking services' had to hold a capital of £250,000. *Banking Act 1979*, sch. 2, para. 5 & 9.

[92] *Banking Act 1979*, sch. 2, para. 10.

[93] *Banking Act 1979*, sch. 2, para. 10.

[94] The net assets and other financial resources had to be 'considered appropriate by the Bank' as well, but it was not outlined any further how this was measured. In contrast to the paragraph on licensed institutions, the interests of depositors were not mentioned, nor the extent of the liabilities or the risk of the assets. Neglecting these points did not mean that they were unimportant, but probably more that they were taken for granted. *Banking Act 1979*, sch. 2, para. 6.

[95] Ian Morison, Paul Tillet, and Jane Welch, *Banking Act 1979* (London: Butterworths & Co., 1979), p. 42.

[96] Bank of England, 'The Measurement of Capital', *Quarterly Bulletin*, Q3 (1980).

stressed that the Bank aimed to develop a strict method for the measurement for capital adequacy. Referring to the attempts to harmonise capital adequacy in Europe, Cooke also stressed that other countries would not accept a system of 'excessive vagueness'. At the same time, Cooke highlighted that the BoE would judge the assessment resulting from the application of the measurement methods in a flexible way.[97] The representatives of the BBA emphasised that the BoE's proposals were generally acceptable, but they were concerned about moving towards a 'more inflexible, formalised system of supervision'.[98]

The final paper on the 'Measurement of Capital' published in 1980 took the banks' as well as the BoE's concerns into account. It once again confirmed that the regulation and supervision of capital adequacy should be flexible, considering the individual characters of the institutions. It also took a clear stance against fixed minimum ratios, which – according to the paper – could be an incentive for overtrading. The paper also argued that capital ratios should not be public knowledge as this could weaken the ability to issue new capital when a bank is in crisis.[99]

The BoE clearly preferred opaqueness over transparency, adding that 'the Bank's views on capital adequacy have been discussed with individual banks in confidence for some time past. This will continue.'[100] In the internal discussions leading to this final statement, the BBA lobbied strongly for this policy. According to the representatives of the banks, publishing a capital ratio 'could lead to banks carrying more capital than was absolutely necessary in order to avoid a run on confidence'.[101] The BBA also warned about a 'potential risk of misunderstanding' if detailed information on capital adequacy were to be published, as this could undermine 'confidence in international banking' and harm the availability of credit.[102]

The paper on 'The Measurement of Capital' endorsed the same two capital ratios as the first paper in 1975. The 'free resources ratio' ratio was slightly adapted and now termed the 'gearing ratio'. For the second ratio – the 'risk assets ratio' – the BoE stressed that this was more useful and was the concept of

[97] British Bankers' Association, *Note of the Meeting between the British Bankers' Association and the Bank of England on the Measurement of Capital, Held at the Bank of England*, Committee of London Clearing Bankers. Capital and Liquidity Adequacy of Banks' (73/3) (London, 12 September 1979), pp. 2, 5, London Metropolitan Archives, CLC/B/029/MS32152B/001.

[98] British Bankers' Association, *Note Meeting BBA – BoE September, LMA, CLC/B/029/MS32152B/001*, pp. 2–3.

[99] Bank of England, *The Measurement of Capital*.

[100] Bank of England, *The Measurement of Capital*, p. 325.

[101] British Bankers' Association, *Note Meeting BBA – BoE September, LMA, CLC/B/029/MS32152B/001*, p. 6.

[102] British Bankers' Association, *Note of the Meeting between the British Bankers' Association and the Bank of England on the Measurement of Capital, Held at the Bank of England*, Committee of London Clearing Bankers. Capital and Liquidity Adequacy of Banks' (73/3) (London, 13 November 1979), p. 2, London Metropolitan Archives, CLC/B/029/MS32152B/001.

reference going forward.[103] The definitions of the risk assets were much more detailed than in 1975. The paper stated exact weights for different asset classes. Balances with the BoE, for example, had zero weight; loans had a 100% weight. Interestingly, there was also a 200% weight for property owned by a bank, which was probably due to the still recent experience of collapsing property prices at the time.[104] The BoE and the BBA spent much time discussing these risk coefficients in the working group. The BBA aimed for a more comprehensive system with many different risk categories. For advances, for example, the BBA argued that several risk groups should exist, and one risk category alone would not lead to meaningful results. In addition, the BBA argued strongly for the use of the 'risk assets ratio' and questioned the validity of the 'gearing ratio'.[105]

One important area that had changed until 1980 compared to the preceding working paper on bank capital in 1975 was the definition of capital. Provisions for expected losses were excluded from the capital, which was an outcome of the EEC's Advisory Committee recommendations, formulated after the EEC Banking Directive in 1977. However, the importance of subordinated debt as a form of capital had grown substantially. While it was still clear that subordinated debt could not absorb losses, it was increasingly emphasised that it could also be used to finance fixed assets.[106] In 1975, this role was attributed only to equity capital. The working paper of 1980, therefore, manifested the rise of subordinated debt as a substitute for capital.[107]

The working papers of the BoE and the regulation of capital and liquidity in the Banking Act were mostly the results of technical discussions between BoE officials and bank representatives. However, on a broader level, questions were also raised about the regulation and supervision of British financial markets. In 1980, a report by the Committee to Review the Functioning of Financial Institutions (Wilson Committee) was published. As well as its general analysis of the financial system, the committee also discussed the capital levels of the banks. It concluded that capital ratios had been falling during the first half of the 1970s, mainly because inflation had driven the balance sheet growth. The Wilson Committee also noted that the fall in capital ratios would have been even more severe if there had not been an extensive 'raising of loan capital', which underlines the importance of subordinated debt.[108]

[103] Bank of England, *The Measurement of Capital*, pp. 324–27.
[104] Bank of England, *The Measurement of Capital*, p. 329, Appendix A.
[105] British Bankers' Association, *Note Meeting BBA – BoE September, LMA, CLC/B/029/MS32152B/001*, p. 6.
[106] Bank of England, *The Measurement of Capital*, p. 326.
[107] Jack Revell, 'Capital Adequacy, Hidden Reserves and Provisions', in *UK Banking Supervision*, ed. Edward P. M. Gardener (London: Allen & Unwin, 1986), pp. 218–33 (p. 220).
[108] Committee to Review the Functioning of Financial Institutions (Wilson Committee), *Committee to Review the Functioning of Financial Institutions*, Cmnd. 7937 (London: Her Majesty's Stationary Office, 1980), para. 278–84.

Various interest groups submitted reports to the Wilson Committee, among them the Committee of the London Clearing Bankers. The clearing banks highlighted their opinion that simple capital/deposits ratios had lost importance, emphasising instead the trend towards 'measures that reflect the varying degrees of risk attached to different assets'.[109] The Committee of the London Clearing Bankers clearly favoured a 'risk assets ratio'. The clearing banks argued that treasury bills could be financed fully with deposits, as risks of price fluctuations or defaults were negligible. At the other end of the scale, properties could fluctuate and were difficult to sell in a crisis. These characteristics would have to be considered by a capital adequacy framework.[110]

The BoE's working papers on capital adequacy in 1975 and 1980, together with the Banking Act 1979 and the EEC's Banking Directive 1977, had set the stage for the assessment of capital adequacy. The initial catalyst that had brought the topic of capital adequacy back onto the domestic agenda was the secondary banking crisis. However, the development of the framework for assessing capital adequacy on a domestic level interacted with international developments.

The Banking Act of 1979 was replaced by a new Banking Act in 1987. The new Act was mostly the consequence of the rescue of Johnson Matthey Bankers by the BoE in 1984. The bank's failure was followed by another parliamentary report in 1985, which reviewed banking supervision in the United Kingdom.[111] The Act of 1987 brought many changes: it ended the two-tier system of recognised and licensed banks, among other things, and increased the power of the BoE as a supervisor. With regards to the regulation of capital, however, not much altered.

The Banking Act 1987 still required each bank to 'conduct its business in a prudent manner'. This meant that 'net assets' and 'other financial resources' would have to be considered appropriate by the BoE.[112] The amount of capital that a bank needed to maintain would depend on the nature and scale of the institution's operations and the 'risks inherent in those operations'.[113] The Banking Supervision Division of the BoE further outlined the definition of capital adequacy based on its initial working paper from 1980. In a paper on subordinated loan capital, the BSD further specified the requirements of

[109] *The London Clearing Banks: Evidence by the Committee of London Clearing Bankers to the Committee to Review the Functioning of Financial Institutions*, ed. Committee of London Clearing Bankers (London: Committee of London Clearing Bankers, distributed by Longman, 1978), p. 59.

[110] Committee of London Clearing Bankers, *The London Clearing Banks*, p. 69.

[111] Committee Set up to Consider the System of Banking Supervision, *Report of the Committee Set up to Consider the System of Banking Supervision*, Cmnd. 9550 (London: Her Majesty's Stationary Office, 1985).

[112] *Banking Act 1987*, C. 22, 1987, sch. 3, para. 4 (2).

[113] *Banking Act 1987*, sch. 3, para. 4 (3).

subordinated debt to be part of 'other financial resources'.[114] The risk-weighting approach for credit risks on the asset side, developed in 1980, was expanded in a paper in 1986.[115] Other types of risks, such as operational and foreign exchange risks, were also discussed and formed part of the BoE's assessment. Based on an individual analysis of each bank, the BSD defined a minimum capital ratio, termed the 'trigger ratio', and a goal for the capital requirement, referred to as the 'target ratio'.[116] However, little was known publicly about the exact process that led to setting the individual ratios.

When the BCBS issued its first common framework for the assessment of capital adequacy in 1988, the BSD issued a paper on how the international framework could be implemented in the United Kingdom.[117] The BSD noted that the international convergence would not change much for UK banks.[118]

The United Kingdom transferred to a Basel-compliant framework by the end of 1989. One of the key differences was that it also took off-balance-sheet items into account. However, the general approach towards the regulation of capital did not change. Capital requirements in the form of 'triggers' and 'target risk assets ratios' were still set based on individual evaluations of banks and continued to be confidential. The BoE noted that British banks would already meet the 8% capital requirement, and that it would not revise the individual 'triggers' or 'target ratios'.[119]

The introduction of Basel I in the United Kingdom marked the end of the process. Capital in banking had been almost irrelevant from the 1920s to the 1960s, until the secondary banking crisis at the beginning of the 1970s revived discussions about capital adequacy and initiated a series of papers by the BoE on the topic. Risk-based approaches to solvency found increasingly more attention in supervisory practice after 1975. Basel I and its application in 1988 represented only a gradual evolution that built on the already existing domestic framework for capital regulation. As such, this is not surprising. The United Kingdom took part in the discussions at the European and international levels and certainly influenced these discussions. The inclusion of subordinated debt as part of the Tier 2 capital under Basel I, for example, was clearly in the interests of the United Kingdom. At the same time, the international approach towards solvency certainly influenced domestic evolution as well (e.g. the treatment of provisions).

[114] Bank Supervision Division, Bank of England, 'Subordinated Loan Capital', 1986.
[115] Bank Supervision Division, Bank of England, 'Measurement of Capital', 1986.
[116] Graham Penn, *Banking Supervision: Regulation of the UK Banking Sector under the Banking Act 1987* (London, Edinburgh: Butterworth, 1989), p. 167.
[117] Bank Supervision Division, Bank of England, 'Implementation of the Basle Convergence Agreement in the United Kingdom', 1988.
[118] Bank of England, *Bank of England Banking Act Report 1988/89* (London: Bank of England, 1989), p. 15.
[119] Bank of England, *Bank of England Banking Act Report 1989/90* (London: Bank of England, 1990), p. 18.

Despite all the regulatory changes, approaches on the supervisory side did not change to any great extent. The BoE remained independent in setting individual minimum capital ratios for banks, and there was never a legally prescribed capital ratio.

5.3 REGULATION IN SWITZERLAND – AND HOW IT WAS INFLUENCED

The Great Depression and its severe effects, especially on Switzerland's big banks, led to a breakthrough of banking legislation in Switzerland in 1934. Swiss banks were subject to banking legislation on a national level for the first time. Among various other areas, this banking legislation also covered capital and liquidity requirements. The new legislation was comprehensive, regulating many aspects of banking, but light in terms of the strictness of rules. A former Director of the Secretariat of the Federal Banking Commission (FBC), Bernhard Müller, once stated that it was 'easier to open a bank than a restaurant' before the 1970s.[120] Müller's statement might have been an exaggeration, but it emphasises the liberal spirit with which the law was drafted, and the comparably weak position of the supervisor.

Introduced in 1934, it was not until 1961 that the first revisions of the banking legislation were undertaken. The regulatory changes coincided with the growth and internationalisation of Switzerland's banking market. The first revision of the Banking Ordinance in 1961 was significant for regulating capital. It was the basis for later changes in the capital requirements. On a broader level, the revision of the Banking Act in 1971 was even more relevant.[121] It enlarged the circle of supervised institutions to all deposit-taking banks. Moreover, the Banking Act of 1971 incorporated stricter licencing rules for domestic and foreign banks. The revised Banking Act also gave the FBC more power in supervision.[122]

The period between the 1950s and the 1980s became the 'golden age' of Swiss banking, marked by Switzerland's rise as a global financial centre. Two major developments became apparent in the process of the internationalisation of Switzerland's financial centre. Firstly, capital inflows accelerated after the war, triggering monetary problems. There were probably several drivers that contributed to these capital inflows. The Swiss franc was undervalued under the

[120] Müller, *Entwicklung der Bankenaufsicht*, p. 6. Müller was the Director of the Secretariat of the FBC from 1976 to 1985.

[121] *Bundesgesetz über die Banken und Sparkassen vom 11. März 1971*, 1971.

[122] An example of the increasing supervisory power of the FBC was the frequent use of the provision that required the management to have a 'good reputation and guarantee the proper conduct of their business' (Art. 3), *BankG 1971*; Tobias Straumann and Jürg Gabathuler, 'Die Entwicklung der Schweizer Bankenregulierung', in *Krisenfeste Schweizer Banken? Die Regulierung von Eigenmitteln, Liquidität und 'Too big to fail'*, ed. Armin Jans, Christoph Lengwiler, and Marco Passardi (Zurich: NZZ Libro, 2018), pp. 57–86 (pp. 76–7).

fixed exchange rate regime.[123] Switzerland was both economically and politically stable, and banking secrecy was also a key factor. The Swiss National Bank (SNB) was challenged to maintain monetary control over its currency and tried to lower inflation. In this context, various administrative measures were taken to reduce foreign capital inflows. Examples are gentlemen's agreements with the banks on non-interest payments on short-term foreign liabilities (from 1950), on negative interest rates on foreign deposits (1972/4), and the ban on investments in domestic securities and the real estate market (1972).[124]

The capital inflows were both a blessing and a curse. While they created monetary distortions, they also allowed Switzerland to gain considerable international weight. In the 1950s and 1960s, the Swiss financial centre became by far the largest foreign buyer of securities in the United States.[125] By 1970, Swiss investors held about half of the German debt which was invested by foreigners.[126] Moreover, estimates by Max Iklé, member of the SNB's governing board from 1956 to 1968, indicate that Swiss banks bought about 30–40% of the Eurobond issuances in the 1960s.[127] Swiss banks were also major players in the Eurodollar market. By 1963, Swiss banks held Eurodollar assets of USD 1.7bn and liabilities of USD 1.1bn. On par with Japan, Switzerland was the second largest lender on the Eurodollar market after the United Kingdom, and the fourth largest borrower that year.[128]

A second dimension of the internationalisation of Switzerland's financial hub was the attraction of foreign banks. These foreign banks were either established in Switzerland as independent (but foreign-controlled) banks or as subsidiaries.

[123] After the end of Bretton Woods, the Swiss franc tended to be overvalued often, which contributes to the argument that undervalued currency was not the sole driver of capital inflows. See Peter Bernholz, 'Die Nationalbank 1945–1982: Von der Devisenbann-Wirtschaft zur Geldmengensteuerung bei flexiblen Wechselkursen', in *Schweizerische Nationalbank, 1907–2007*, ed. Schweizerische Nationalbank SNB (Zurich: Verlag Neue Zürcher Zeitung, 2007), pp. 119–211 (pp. 123–24).

[124] Swiss National Bank, *75 Jahre Schweizerische Nationalbank, 1907–1982* (Zurich, 1982), pp. 34, 102, 104, 127. For an overview of Switzerland's monetary policy, see also Bernholz, *Die Nationalbank 1945–1982*.

[125] Board of Governors of the Federal Reserve System (US), *Banking and Monetary Statistics, 1941–1970*, 1976, pp. 967–75, 1002: https://fraser.stlouisfed.org/title/41 (accessed 31 July 2018).

[126] Deutsche Bundesbank, 'Die Kapitalertragsbilanz Der Bundesrepublik Im Aussenwirtschaftsverkehr', 1971: www.bundesbank.de/resource/blob/690748/8e5a5e61e9bbcdafe9cfc59122c559bb/mL/1971-03-monatsbericht-data.pdf.

[127] Max Iklé, *Die Schweiz als internationaler Bank- und Finanzplatz* (Zurich: Orell Füssli, 1970), p. 136.

[128] Schenk, *The Origins of the Eurodollar Market in London*, p. 235. For a discussion of why Switzerland did not promote a Eurodollar market in Switzerland, see Tobias Straumann, 'Finanzplatz und Pfadabhängigkeit: Die Bundesrepublik, die Schweiz und die Vertreibung der Euromärkte (1955–1980)', in *Europas Finanzzentren: Geschichte und Bedeutung im 20. Jahrhundert*, ed. Christoph Maria Merki (Frankfurt a.M.: Campus, 2005), pp. 245–68.

By 1970, 76 out of 473 banks in Switzerland were controlled by foreign owners. In 1980, there were 83 foreign-controlled banks and 16 subsidiaries of foreign banks. Therefore, the revision of the Banking Act in 1971 also addressed issues in supervising these foreign banks. For example, before 1968, establishing foreign banks or takeovers by foreign banks did not require authorisation. However, the rapid growth of foreign banks was perceived as a threat.[129] In response, the Swiss parliament introduced licencing requirements for foreign banks in 1968, which were later incorporated in the revised Banking Act.[130]

Besides the number of foreign banks in Switzerland, Swiss banks also attracted substantial foreign capital. One of the prerequisites for the rapid growth of the foreign capital flows was certainly the transition to convertibility of the major European currencies in 1958. In the years from 1960 to 1970, the share of foreign assets in Swiss banks' balance sheets grew from 13.3% to 33.7%. The share of foreign liabilities developed similarly. The numbers regarding foreign assets and liabilities are also impressive when looking at the volumes. In 1958, the volume of foreign assets was CHF 5.9bn. In 1970, foreign assets reached a volume of CHF 70.8bn, and CHF 182bn in 1980. These numbers represent balance sheet data only. Data on the share of foreign customers' securities is not available, but would likely show a significant foreign exposure too.

Most foreign activities stemmed from the three largest big banks (Credit Suisse, the Union Bank of Switzerland, the Swiss Bank Corporation). The rest of the capital flows were directed to or came from foreign banks and private banks in Switzerland. Other banks, such as the cantonal banks or savings banks, played a minor role.[131]

Table 5.1 shows the growth of the total assets of banks in Switzerland. From the 1950s to the 1980s, the average annual growth rate of total assets was between 7.4% and 13.5%. The big banks reached annualised growth rates of 18.3% in the 1960s. Because the total assets grew faster than the equity capital, the capital/assets ratios declined. However, the rapid growth among the big banks became a problem as capital requirements could not be met in certain years.

[129] The Federal Council wrote that some foreign institutions would make 'blatant and intrusive' use of the Swiss banking secrecy and that there are foreign banks with 'most serious grievances'. Moreover, the Federal Council feared a further increase of the monetary base that would lead to domestic credit expansion. Bundesrat, 'Botschaft des Bundesrates an die Bundesversammlung zum Entwurf eines dringlichen Bundesbeschlusses über die Bewilligungspflicht für ausländisch beherrschte Banken', *Bundesblatt*, 2.48 (1968), 756–71 (pp. 759–61).

[130] '*Bundesbeschluss über die Bewilligungspflicht für ausländisch beherrschte Banken vom 21. März 1969*'). For the regulatory history of foreign banks in Switzerland, see Thibaud Giddey, 'The Regulation of Foreign Banks in Switzerland (1956–1972)', *Foreign Financial Institutions & National Financial Systems*, The European Association for Banking and Financial History, 2013, 449–85.

[131] See Henner Kleinewefers, *Das Auslandsgeschäft der Schweizer Banken*, Schriften zum Bankenwesen (Zurich: Schuthess, 1972); Kurt Speck, *Strukturwandlungen und Entwicklungstendenzen im Auslandsgeschäft der Schweizerbanken*, Prospektivstudie über das schweizerische Bankgewerbe (Zurich: Juris Druck Verlag, 1974).

TABLE 5.1 *Decadal average growth rates (p.a.) of total assets, total capital, inflation (consumer price index) and average capital/assets ratio, 1951–90*[1]

	Total assets (growth p.a.)		Total capital (growth p.a.)		Capital/assets ratio (average)		
	All banks	Big banks	All banks	Big banks	All banks	Big banks	*Inflation*[2]
1951–1960	7.4%	8.2%	4.6%	5.0%	7.6%	7.4%	*1.5%*
1961–1970	13.5%	18.3%	11.3%	15.2%	6.3%	5.8%	*3.3%*
1971–1980	8.8%	9.8%	10.5%	12.9%	6.3%	5.7%	*5.0%*
1981–1990	8.3%	8.1%	8.5%	8.4%	6.2%	5.9%	*3.4%*

[1] Bank data: Swiss National Bank, *Historical Time Series*.; Consumer Price Index: HSSO, *Historische Statistik der Schweiz* Online, Tab. H.39, p. 39.

[2] The decadal averages of the inflation rates might be misleading since the time periods do not capture the business cycles. A more appropriate view would be a focus on the periods 1958–66 and 1967–75. The first cycle was marked by strong GDP growth (on average 5.3% p.a.) and moderate inflation (3.9% p.a.). The annual GDP growth fell by about 50% in the second cycle, and inflation rates grew to 6.2% p.a. See Swiss National Bank, *75 Jahre Schweizerische Nationalbank, 1907–1982*, pp. 57–67.

5.3.1 Banking Legislation in the 1930s

Swiss banking legislation consisted of three layers. The banking regulation introduced in 1934/5 was based on the Banking Act and the Banking Ordinance.[132] The former was passed by the government in November 1934 and became effective in March 1935.[133] The latter – the Banking Ordinance – outlined the application of the Banking Act and was introduced in 1935.[134] A third level was introduced in 1936: the Circulars issued by the FBC outlined its position on certain questions over the application of the law. The Circulars were not legally binding but gained soft law character over time. In the Circulars, the commission described how it applied banking legislation in supervisory practice.[135]

The responsibilities for each layer of the banking legislation were and still are different. New laws and amendments have to be passed by the Swiss parliament. In contrast to the Banking Act, the Ordinance requires only the approval of the Federal Council.[136] The Circulars are in the power of the FBC.

[132] *BankG 1934*; *BankV 1935*.
[133] *BankG 1934*.
[134] *BankV 1935*.
[135] See also Amrein, *Eigenmittel der Schweizer Banken im historischen Kontext*.
[136] The Federal Council is Switzerland's highest executive body consisting of seven ministers.

The three-layer system – Banking Act, Ordinance, and Circulars – remains the same today.[137]

The Banking Act was the first comprehensive banking regulation on the national level in Switzerland. The newly introduced legal framework also regulated capital requirements.[138] Article 4 of the Banking Act stated:

> Banks have to make sure, that there is an appropriate ratio between their own capital and their total liabilities. . . . The Ordinance defines the rules that have to be followed under normal circumstances by taking into account the business activities and types of banks.[139]

The Banking Ordinance (Art. 10) further expanded upon Article 4 of the Banking Act. Regulatory capital was defined as paid-up capital, 50% of non-paid-up capital (liability), guarantees from municipalities, disclosed reserves, and retained profits (or losses).[140]

In Article 12, the Banking Ordinance set two different minimum capital requirements, depending on the type of bank and the structure of its assets. Cantonal banks and cooperative banks with the unlimited liability of their members were required to hold a capital equivalent to at least 5% of the liabilities. All other banks had to hold a minimum of 5% of the liabilities that were invested in assets covered by domestic real securities (i.e. mortgages) and government securities.[141]

The Banking Act also stipulated liquidity requirements.[142] There were two types of liquidity ratios: one that included only cash and reserves at the SNB, and one that considered a broader range of liquid assets.[143] The liquidity ratios were measured as a percentage of short-term liabilities.

The roots of the Banking Act of 1934 reach back to a first legislative draft developed between 1914 and 1916. After a series of bank defaults from 1910 to 1914, the Federal Council commissioned Julius Landmann, Professor of

[137] One key difference in the regulatory structure is that the Federal Banking Commission was replaced by the Swiss Financial Market Supervisory Authority FINMA in 2009.

[138] Another important feature of the new legislation was the codification of the banking secrecy in Art. 47 of the Banking Act. For an overview on the history of the banking secrecy, see Guex, 'The Origins of the Swiss Banking Secrecy Law and Its Repercussions for Swiss Federal Policy'; Vogler, 'The Genesis of Swiss Banking Secrecy'. For a more general and contemporary overview, discussing also the developments since the last financial crisis, see Stefan Tobler, *Der Kampf um das Schweizer Bankgeheimnis: Eine 100-jährige Geschichte von Kritik und Verteidigung*, NZZ Libro (Zurich: NZZ Libro, 2019).

[139] Art. 4, *BankG 1934*.

[140] Art. 10, *BankV 1935*.

[141] Art. 12, *BankV 1935*.

[142] 'Banks must ensure that there is an appropriate ratio between tangible assets and readily realisable assets on the one hand and short-term liabilities on the other.' Art. 4, *BankG 1934*.

[143] Liquid (tangible) assets were defined as discountable securities (discountable at the SNB), sight deposits at banks (maturity <1m), treasury bills and acceptances (maturity <3m). Short-term liabilities were defined as sight deposits from customers (maturity <1m), cheques, 15% of saving deposits, bonds and short-term notes (maturity <1m). Art. 13–17, *BankV 1935*.

Economics at the University of Basel, to develop a draft for the regulation of banking.[144] Landmann suggested a discretion-based framework for Switzerland's bank regulation. Given that Swiss banks followed various activities, ad-hoc judgements would ensure that different business models were considered. Moreover, Landmann claimed that a governmental authority would usually be too late to intervene in a rule-based system, proposing flexible regulation without detailed rules. Specific capital and liquidity ratios should result from the 'practice of regulation'.[145]

Landmann's discretion-based approach and a substantial part of his first draft served as a blueprint for the Banking Act of 1934. The pressure of the Great Depression and two big banks on the brink of default finally led to the introduction of a national banking law.[146] When the Banking Act was submitted to the parliament, the Federal Council emphasised the discretion-based approach taken in the regulation of banking. For the regulation of capital, that meant that it was 'difficult or even impossible' to stipulate a universally valid ratio between capital and liabilities for all banks. The Banking Act should provide guidelines only. Nevertheless, specific minimum capital ratios were set in the Banking Ordinance, according to the Federal Council, considering the 'nature of the different institutes'.[147]

The main goals of the new banking regulation were to increase security for creditors, ensure the supply of capital for the economy, and improve the degree of information available to the SNB to enhance transparency.[148] The role of capital was seen as being an absorber of losses to safeguard depositors.[149] The liquidity requirements were viewed as being equally as important as capital adequacy for the stability of banks. Both measures were usually mentioned together and perceived as an instrument for the protection of depositors. The statement by the Federal Council in 1934 is fairly representative of the time: 'It is not sufficient for the deposits to be secured

[144] A study by the Federal Department of Economic Affairs on the banking crisis of 1910–14 counted seventeen defaults, twenty-one liquidations, five restructurings, and two mergers. The total losses were estimated at about CHF 110m. For a discussion of the crisis, see Julius Landmann, *Entwurf eines Bundesgesetzes: betreffend den Betrieb und die Beaufsichtigung von Bankenunternehmungen nebst Motivenbericht* (Bern: Schweizerisches Volkswirtschaftsdokument, 1916), p. 31. Wetter, *Bankkrisen und Bankkatastrophen*.

[145] Landmann, *Entwurf eines Bundesgesetzes*, p. 91.

[146] In that sense, the introduction of banking regulation was very much a story of crises and opportunities, as described by Youssef Cassis: Cassis, *Crises and Opportunities*.

[147] Bundesrat, 'Botschaft des Bundesrates an die Bundesversammlung betreffend den Entwurf eines Bundesgesetzes über die Banken und Sparkassen vom 2. Februar 1934', *Bundesblatt*, 1.6 (1934), 171–224 (p. 176).

[148] Bundesrat, *Botschaft des Bundesrates an die Bundesversammlung betreffend den Entwurf eines Bundesgesetzes über die Banken und Sparkassen vom 2. Februar 1934*, p. 175.

[149] Bundesrat, *Botschaft des Bundesrates an die Bundesversammlung betreffend den Entwurf eines Bundesgesetzes über die Banken und Sparkassen vom 2. Februar 1934*, p. 176.

in principle [by capital and reserves]; they must also be able to be withdrawn within the specified time limits.'[150]

The Federal Department for Finance and Customs was charged with developing the Banking Act and Ordinance.[151] In an internal report, the department analysed the capital structure of the Swiss banks in February 1934.[152] The authors remarked that there was a strong relationship between the level of capital and the share of mortgages: savings and Raiffeisen banks held the lowest capital and had the comparatively highest shares of mortgages on the asset side. The group of cantonal banks, also mainly focused on the mortgage business, held only slightly more capital than the other two bank groups. The authors of the report believed that banks with a predominant mortgage business have lower risks than the big banks. The Federal Department for Finance and Customs also discussed the liability of the banks' owners. Most cantonal banks at the time had government guarantees, and Raiffeisen banks were cooperative banks with unlimited joint guarantees of their members. The department therefore proposed that the mortgage share and the form of the liability should be considered if capital requirements were introduced.[153] Both recommendations found their way into the banking legislation.

The experts developing the law believed that using a bank's mortgage share and liability situation to determine adequate capital was only the second-best option. They thought that capital should depend on the risks of each bank and that the risks could be 'found in the assets'.[154] However, they concluded that 'it is impossible to find a measure for the risks on the asset side; it is not like reading the temperature on a thermometer'.[155] Nevertheless, one could argue that the

[150] Bundesrat, *Botschaft des Bundesrates an die Bundesversammlung betreffend den Entwurf eines Bundesgesetzes über die Banken und Sparkassen vom 2. Februar 1934*, p. 177. See also Paul Rossy and Robert Reimann, *Bundesgesetz über die Banken und Sparkassen vom 8. November 1934: Mit Vollziehungsverordnung vom 26. Februar 1935 und Verordnung des Bundesgerichts betreffend das Nachlassverfahren von Banken und Sparkassen vom 11. April 1935* (Zurich: Polygraphischer Verlag, 1935), p. 21: 'The provisions of this section are intended to safeguard creditors. On the one hand, they oblige banks to ensure a sound financial basis so that depositors do not risk losses in the event of any shock. On the other hand, they require adequate liquidity to be maintained so that a bank does not have to resort immediately to the National Bank when withdrawing funds.'

[151] 'Eidgenössisches Finanz- und Zolldepartement'/'Département fédéral des finances et des douanes'.

[152] Eidgenössisches Finanz- und Zolldepartement, *Bericht über die statistischen Grundlagen für die Aufstellung von Ausführungsbestimmungen zu Art. 10 des Entwurfes zu einem Bundesgesetz über die Banken und Sparkassen vom 2. Februar 1934* (Bern, 2 February 1934), Swiss Federal Archives, E6520A#1000/1059#5*.

[153] Eidgenössisches Finanz- und Zolldepartement, *Bericht statistische Grundlagen, SFA, E6520A#1000/1059#5**, pp. 4–5.

[154] Eidgenössisches Finanz- und Zolldepartement, *Bericht statistische Grundlagen, SFA, E6520A#1000/1059#5**, p. 4.

[155] Eidgenössisches Finanz- und Zolldepartement, *Bericht statistische Grundlagen, SFA, E6520A#1000/1059#5**, p. 4.

final legislation already provided a simple risk-weighted approach; it was just that there were only two risk categories: mortgages and government securities on the one hand, and all other assets on the other hand. Instead of a risk-weighting of assets, two different minimum capital ratios were applied to the two classes.

When discussing various possible capital ratios, the group of experts of the Federal Department for Finance and Customs debated the idea that capital requirements should balance the interests of creditors and shareholders. For creditors, the experts emphasised the role of capital as a buffer against losses. Regarding shareholders and banks, it was argued that excessive capital ratios could lead to more risk-taking by banks since they would be pressured to provide sufficiently high returns to their shareholders.[156]

The considerations for an appropriate liquidity requirement were almost identical to those on capital adequacy. The group of experts argued that banks with a high share of mortgages bore a lower risk. Thus, they should be allowed to have lower liquidity ratios. Furthermore, the experts noted that bigger banks, measured by total assets, should hold more liquid assets as they were systemically more relevant 'to maintain the ability to pay'.[157]

Apart from this argument on the systemic stability of the financial market, another issue became apparent in the context of liquidity: in contrast to capital adequacy, liquidity was perceived as relevant for monetary policy. Liquidity ratios were not actively used to influence the individual business policies of banks, such as domestic lending policies, accepting foreign capital, or investing abroad.[158] The relevance of liquidity ratios for monetary policies, however, was recognised. One of the central concerns of the Banking Act was to increase the transparency of the banking market for the SNB. The commercial banks had to submit monthly or quarterly balance sheets (depending on their size) that allowed the SNB to assess their liquidity.

The final introduction of a minimum capital ratio in the Banking Ordinance is somewhat surprising, given the liberal character of the legislation that was meant to be restricted to a 'few general principles'.[159] The banks themselves did not resist these capital requirements. During the consultation process, various interest groups submitted their suggestions for changes in the draft of the law. Credit Suisse's general manager, Adolf Jöhr, was primarily concerned that private banks should not be excluded from capital

[156] Eidgenössisches Finanz- und Zolldepartement, *Bericht statistische Grundlagen, SFA, E6520A#1000/1059#5**, pp. 6–11.

[157] Eidgenössisches Finanz- und Zolldepartement, *Bericht statistische Grundlagen, SFA, E6520A#1000/1059#5**, p. 20.

[158] Another important feature with regards to the foreign capital flows, however, was that the Swiss National Bank could veto certain foreign transactions. Art. 8, *BankG 1934*.

[159] Bundesrat, *Botschaft des Bundesrates an die Bundesversammlung betreffend den Entwurf eines Bundesgesetzes über die Banken und Sparkassen vom 2. Februar 1934*, p. 174.

requirements.[160] The cantonal banks wanted to be excluded from being subjected to banking legislation altogether, claiming that the regulation of cantonal banks would undermine cantonal sovereignty.[161] And the Berne Audit Association, a self-regulatory body auditing its member banks, suggested a capital/deposits ratio of 10%, as its member banks already voluntarily adhered to this ratio.[162]

The use of capital ratios was already well accepted as a vital factor for the soundness of a bank before the introduction of banking legislation in the 1930s. There were already conventions among the banks with regard to capital adequacy for different groups of banks (e.g. that of the Berne Audit Association). Also, the bank group (e.g. cantonal banks, big banks) served as a proxy for the riskiness of a business model. To some extent, the capital requirements formalised conventions that already existed before. The introduction of a capital threshold was further facilitated by most banks fulfilling the requirements. Based on the year-end figures of 1932, the Federal Department of Finance and Customs had discussed potential capital/liability ratios of between 5% and 15%. The department's analysis showed that most banks would have fulfilled these requirements.[163] On a broader level, the big banks had little negotiating power once they accumulated significant losses in the 1930s.

5.3.2 The Evolution of Capital Regulation: 1934–91

Figure 5.4 visualises the evolution of capital regulation in Switzerland from 1934 to 1991. There are two key components of the regulation: capital requirements (required capital), and the definition of capital from a regulatory point of view (regulatory capital). In 1961, the Banking Ordinance and its capital requirements were revised for the first time. Changes were made on two levels. First, a lowered ratio for investments made in liquid assets was introduced, which reduced the required capital. For banks that were not cantonal or cooperative banks, that meant that were three risk classes on the asset side: liquid assets, assets invested in government securities or covered by mortgages, and all other assets. Second, the definition of the regulatory capital was broadened. The revised Banking Ordinance allowed any kind of 'free

[160] Adolf Jöhr, *Letter from Credit Suisse's General Manager Dr. Adolf Jöhr to the Director of the Department of Finance* (Zurich, 26 December 1933), Swiss Federal Archives, E6520A#1000/1059#5*.

[161] *Letter from the President of the Association of Swiss Cantonal Banks to Minister of Finance* (Basel, 14 October 1933), Swiss Federal Archives, E6520A#1000/1059#23*.

[162] President and Secretary of the Auditing Association, *Letter from the Association for the Auditing of Banks and Savings Banks in Berne to the Minister of Finance ('Revisionsverband der bernischen Banken und Sparkassen')* (Bern, 2 December 1933), Swiss Federal Archives, E6520A#1000/1059#27*.

[163] Schweizerisches Bundesarchiv, E6520A#1983/50#62*.

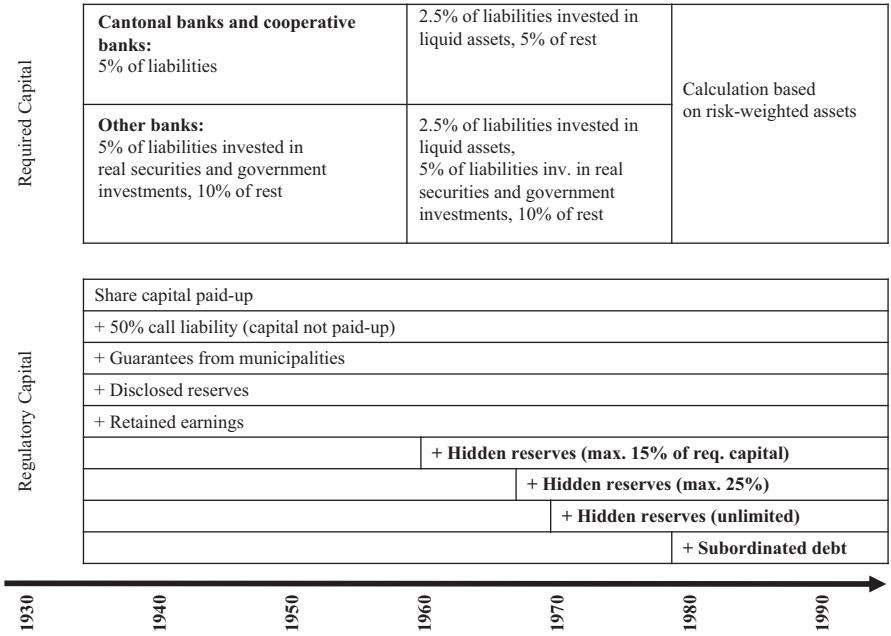

FIGURE 5.4 Capital regulation in Switzerland, 1934–95

reserves' to be used as part of the capital. That included hidden reserves. The extent of this use could be set by the FBC.[164]

The FBC allowed that up to 15% of the required capital could consist of hidden reserves. The ratio was increased to 25% in 1967. After 1972, hidden reserves could be used as part of the required capital without any restrictions at all. After 1981, banks could also use subordinated debt as part of their required capital (up to 10%; the ratio was further increased in 1988). Thus, the definition moved closer towards what came to be Tier 2 capital in Basel I in 1988. By 1981, the definition of regulatory capital in Swiss legislation was almost identical to that in the Basel Accord.

The revision of the Banking Ordinance of 1981 also brought the introduction of a risk-weighted approach. For the first time, capital was not measured against liabilities, but against assets. According to the FBC, the new approach allowed a better consideration of banks' different business activities.[165]

Having presented capital regulation as introduced in 1934/5, and the changes it subsequently underwent up to 1991, the question remains as to

[164] *Vollziehungsverordnung zum Bundesgesetz über die Banken und Sparkassen vom 30. August 1961*, 1961 Art. 9f.

[165] Eidgenössische Bankenkommission, *Jahresbericht 1980 der Eidgenössischen Bankenkommission* (Bern, April 1981), p. 5.

whether or not banks actually met the statutory capital requirements. In order to assess this, one can divide the regulatory capital by the required capital. The percentage is the so-called capital coverage ratio.[166] If the ratio is above 100%, a bank holds more capital than legally required. Until the revision of the Banking Ordinance in 1961, most balance sheet items relevant for calculating the capital coverage ratio were public. After 1961, the opacity of the banking market was significantly increased as hidden reserves could be used as well. In 1953, however, the SNB started to publish the capital coverage ratio for all bank groups in Switzerland.[167] Based on a few assumptions, one can estimate the capital coverage ratio for the period 1935–53 (see footnote 168).

Figure 5.5 shows the capital coverage ratio from 1935 to 1991. The average of all Swiss banks together was above the minimum capital requirement of 100% for the entire period. However, the capital coverage of the group of big

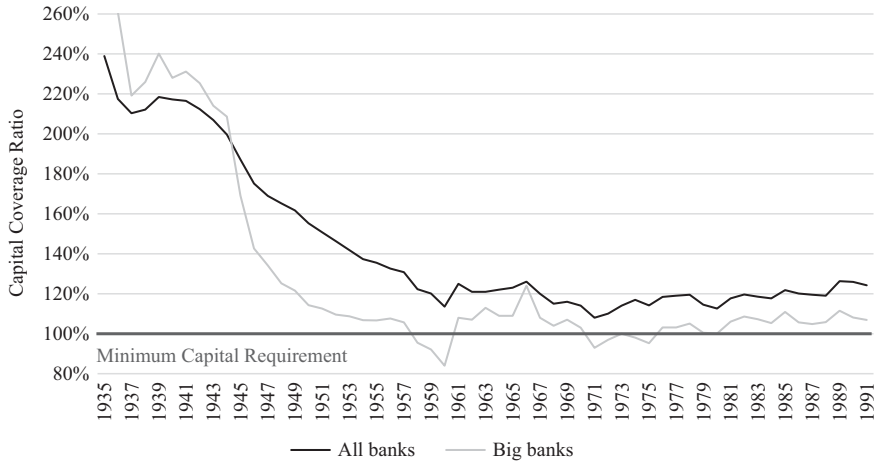

FIGURE 5.5 Capital coverage ratio (regulatory capital vs. required capital), all banks and big banks in Switzerland, 1935–91[168]

[166] In German, the ratio was called 'Eigenmitteldeckungsgrad'.

[167] Swiss National Bank, 'Das Schweizerische Bankwesen 1952' (Zurich: Orell Füssli, 1953).

[168] Calculations and data: 1935–49: Author's calculations and estimates based on balance sheet data of bank groups, taking into account collateralised loans and government securities. It was assumed that 80% of the loans to customers were collateralised. For the calculation of the regulatory capital, the Banking Ordinance of 1935 also allowed the use of municipal guarantees and 50% of unpaid capital. It was assumed that these two forms of capital contributed 1% to the regulatory capital (assumption based on data from the 1960s, for which the detailed disaggregated capital is available). 1950–89: Author's calculation. Data on investments in (respectively loans to) the Federal government, the Federal Railway, cantons, and municipalities were used to adjust for a lower capital requirement for these assets. Data: Swiss National Bank, *Die Banken in der Schweiz (annual issues 1906–2015)*.

banks deteriorated rapidly after the end of the Second World War, and in the mid-1950s the big banks increasingly struggled to meet capital requirements. The capital coverage still reached 105.7% in 1957, but in 1958 it fell below the 100% capital requirement, to 95.5%, for the first time. The low point was reached with a capital coverage ratio of 84% in 1960, meaning that the banks lacked 16% of the required capital. The ratio recovered in the 1960s, only to drop below the minimum capital requirement in 1971 (93.0%). It was only in the 1980s that the big banks managed to improve their capital coverage to above the minimum threshold.

5.3.3 The Influence of Banks on the Evolution of Banking Regulation

The number of non-compliant banks did not change significantly over time. What changed, however, was the relevance of the banks concerned. In 1959, the FBC granted eleven approvals to Raiffeisen banks, savings banks, and one cantonal bank. Besides these banks, the Union Bank of Switzerland and the Swiss Bank Corporation (SBC) also failed to meet capital requirements.[169] At the beginning of the 1960s, Credit Suisse also failed to meet capital requirements.[170] This gap in the capital requirements meant that the three most significant financial institutions in Switzerland lacked capital from a regulatory point of view. The three banks represented about a fourth of Switzerland's banking market (measured by total assets).[171]

Such a situation triggers a reaction from a banking supervisor. Theoretically, a non-compliant bank may be forced to terminate its business and be liquidated or sold. Alternatively, the bank may continue its business by (1) issuing new shares, (2) restructuring (e.g. reducing the total of assets), (3) being granted an exceptional approval for not complying with the regulatory standards, or (4) the regulation is changed altogether and the capital requirements are lowered. In the Swiss case, apart from divesting and reducing the balance sheet sizes, all these alternative options were used.

The Swiss banks frequently sold new shares to their shareholders. The Union Bank of Switzerland increased its paid-up capital in 1959, 1961, 1962, and 1965. Within seven years, the paid-up capital had doubled. Credit Suisse issued fresh capital in 1961, 1963, and 1965. The SBC raised its nominal capital in 1961, 1963, and 1966. The FBC also frequently granted exceptional approvals

[169] Eidgenössische Bankenkommission, *Geschäftsbericht der Eidgenössischen Bankenkommission an den Bundesrat für das Jahr 1959* (Bern, 1960), Swiss Federal Archives, E6520A#1983/50#62*.

[170] Eidgenössische Bankenkommission, *Eigene Mittel der Grossbanken. Notiz an Mitglieder der Eidg. Bankenkommission* (Bern, 21 March 1963), Swiss Federal Archives, E6520A#1983/50#48*.

[171] In 1960, the three banks had a cumulated balance sheet total of around CHF 5bn. For detailed figures, see Swiss National Bank, 'Das Schweizerische Bankwesen 1960' (Zurich: Orell Füssli, 1961), p. 240ff.

for non-compliant banks based on the Banking Act (Art. 23, 3d). In the long run, however, the capital requirements were further eased through lower capital requirements and broader definitions of capital, as shown in Section 5.3.2. Naturally, non-compliant banks have a distinct interest in their regulatory framework. What was the role of the banks in the regulatory changes which took place from the 1960s to the 1980s?

The regulatory changes outlined herein were made upon requests from banks. Besides the big banks, the Swiss Bankers Association (SBA), as a representative body for banking interests, lobbied for the continuous development of banking legislation. The SBA had been established in 1912. One of its goals was to coordinate and promote banking interests domestically and abroad. Since then, it had become one of Switzerland's most influential business interests associations. The SBA also had well-established connections at the political and administrative levels. Members of the SBA were frequently present in extra-parliamentary commissions.[172] There were also links between the SBA and the SNB: several board members of the SBA were also members of the SNB's 'bank council', while some were even members of the SNB's 'governing board'.[173]

The first requests to lower the capital requirements were brought to the FBC by the Swiss Bank Corporation in 1955 and 1956. A second attempt was made in 1957 by the group of the big banks together with the SBA. The banks and the SBA suggested that hidden reserves should be counted as part of the regulatory capital and that the required ratio for liquid assets should be lowered.[174]

The banks used a range of arguments to convince the FBC to broaden the definition of capital. The general directors of the big banks argued that their business activities had changed strongly in the last couple of years: large-scale

[172] Thomas David and others, 'Networks of Coordination: Swiss Business Associations as an Intermediary between Business, Politics and Administration during the 20th Century', *Business and Politics*, 11.4 (2009), 1–38.

[173] The following persons were members of the SBA and SNB bank council (in chronological order): Mauderli Fridolin, Frey Julius, Waldkirch von-Bock Oskar, Sarasin-Iselin Alfred, Bersier Henri, Kurz Hermann, Curchod Gustave, Barbey-Gampert Edmond, Gautier-Fatio Victor, Speich-Jenny Rudolf (Thomas), Gisling Alfred, Leemann Eduard, Schaefer-Hunziker Alfred, Givel Roger, Generali Claudio, Studer Fritz, Gysi Alfredo. The following persons were members of the SBA and the SNB Governing Board: Hirs Alfred, Lusser Markus, Blattner Niklaus. Jöhr Adolf was even a member of the SNB Governing Board (1915–18), the SBA (1920–39), and the SNB bank council (1939–51). For an analysis of links between the SBA and SNB, see also Sancey, *Quand les banquiers font la loi*. Data: Université de Lausanne, Faculté des sciences sociales et politiques, 'Observatoire des élites suisses (OBELIS)', *Données*: www.unil.ch/obelis/home.html.

[174] Eidgenössische Bankenkommission, *Anrechnung stiller Reserven als eigene Mittel. Notiz betr. die Anrechnung stiller Reserven als eigene Mittel vom 11.12.1963*. (Bern, 11 December 1963), Swiss Federal Archives, E6520A#1983/50#49*. Eidgenössische Bankenkommission, *Vorschriften über eigene Mittel. Protokoll der Sitzung vom 20. Januar 1958 zwischen Bankenkommission und Vertretern der Banken* (Bern, 20 January 1958), Swiss Federal Archives, E6520A#1983/50#48*.

industrial investments had become less relevant, their foreign exposure had become more diversified, and, overall, they were developing more towards deposit banks. Furthermore, they argued that liquid assets especially were mostly risk free, and regulation should take this into account. Overall, the proposed changes would, according to the bank managers, not affect the protection of creditors, and the lower risk would justify lower capital requirements.[175] The general director of Credit Suisse argued that 'the solid tradition, with which the banks are run, leads to safety buffers that would allow a more liberal regulation'.[176]

The banks also argued that the high growth rates of the balance sheet totals caused by foreign capital inflows in the previous years might not be sustainable. Thus, balance sheets might contract again, leaving banks overcapitalised.[177] Finally, comparisons to foreign competitors were also often used. The general director of the Union Bank of Switzerland, for example, highlighted that 'the high share capitals of the Swiss banks have proven their worth but are also their most expensive source of capital. Besides, the Swiss dividend rates for bank shares are far below the foreign dividend.'[178]

During the 1930s and 1940s, the position of the FBC had been that the capital requirements were generally too low. The FBC even proposed to the Federal Council that the Banking Ordinance should be revised, and minimum capital, as well as liquidity requirements, increased.[179] The tightening of the requirements failed because 'no agreement with the interested banking groups could be reached', according to the FBC's former Head of the Secretariat.[180]

The view of the FBC changed in the 1950s. Considering the proposals made by the Swiss Bankers Association and the big banks, the FBC drafted a revised Ordinance and submitted it for consultation to the SNB in 1958 and the SBA in 1959.[181] The proposed legislation was then discussed in a conference between the FBC, the SNB, the SBA, and representatives of the big banks in December 1959.

[175] Eidgenössische Bankenkommission, *Protokoll 1958, SFA, E6520A#1983/50#48**, pp. 11–18.
[176] Eberhard Reinhardt, General Director of Credit Suisse. Eidgenössische Bankenkommission, *Protokoll 1958, SFA, E6520A#1983/50#48**, p. 16.
[177] Samuel Schweizer, General Director of Swiss Bank Corporation. Eidgenössische Bankenkommission, *Protokoll 1958, SFA, E6520A#1983/50#48**, p. 14.
[178] Alfred Schäfer, General Director Union Bank of Switzerland. Eidgenössische Bankenkommission, *Protokoll 1958, SFA, E6520A#1983/50#48**, p. 11.
[179] Eidgenössische Bankenkommission, *Geschäftsbericht der Eidgenössischen Bankenkommission an den Bundesrat für das Jahr 1939* (Bern, 25 April 1940), pp. 3–4, Swiss Federal Archives, E6520A#1983/50#62*.
[180] Robert Reimann, *Kommentar zum Bundesgesetz über die Banken und Sparkassen*, 3. Auflage (Zurich: Poly. Verlag, 1963), pp. 12–13. Robert Reimann was the Secretary of the Federal Banking Commission.
[181] Eidgenössische Bankenkommission, *Notiz Anrechnung stiller Reserven, SFA, E6520A#1983/50#49**.

The most crucial change in the draft of the Banking Ordinance was that the FBC would be responsible for setting the percentage of hidden reserves that could be used as regulatory capital. The question discussed in the meeting of the interest groups was where to set the limit on the use of hidden reserves. The SNB had opposed the extensive use of hidden reserves for regulatory purposes. The big banks wanted to use as many hidden reserves as possible. Interestingly, although hesitant at first, the FBC sided with the big banks. The representatives of the Commission argued that the big banks had struggled to fulfil capital requirements for some time and that if there was no change in regulation, the commission would have to continue granting exceptional approvals for non-compliance with the capital requirements. The meeting between the various interest groups in 1959 led to the compromise that 15% of the required capital could be composed of hidden reserves.[182]

According to the FBC, the 15% rule was meant to be a temporary exception to support some undercapitalised big banks. In the view of the FBC, this temporary solution would prevent even bigger capital issuances. The commission was aware that the need for further capital was mainly driven by the large inflows of foreign capital to the big banks.[183] The effect of the regulatory change in 1961 on the capital coverage ratio was striking. Down at 84% in 1960, the ratio of the big banks grew to 108% in 1961 (see Figure 5.5). About half of this increase came from the use of hidden reserves. Archival material indicates that the big banks used at least CHF 104m of hidden reserves for regulatory purposes in 1961.[184] The rest of the change in the capital coverage ratio can be attributed to capital issuances by the big banks (CHF 95m) in the same year. From a regulatory point of view, the banks were suddenly substantially better capitalised.

The cycle of proposals from the banks to the supervisor leading to a compromise that eased capital regulation was repeated several times in later years. A first request to use more hidden reserves by the Union Bank of Switzerland in 1963 was declined.[185] In 1967, however, the SBA asked for an increase of the hidden reserves allowed for regulatory purposes to 30%. The FBC confirmed a 'benevolent' consideration of the Bankers Association's proposal and decided – as a compromise – on 25%.[186]

[182] Reimann, *Kommentar zum Bundesgesetz über die Banken und Sparkassen*, p. 13.
[183] Reimann, *Kommentar zum Bundesgesetz über die Banken und Sparkassen*, p. 13.
[184] Eidgenössische Bankenkommission, *Anrechnung stiller Reserven, SFA, E6520A#1983/50#49**.
[185] Eidgenössische Bankenkommission, *Verhandlungen der Eidgenössichen Bankenkommission vom 29. April, 1963* (Bern, 29 April 1963), Swiss Federal Archives, E6520A#1983/50#49*.
[186] Sekretariat der Eidgenössische Bankenkommission, *Brief des Sekretariats an die Mitglieder der Eidgenössischen Bankenkommission, Bankenkammer. Betrifft Anrechnung stiller Reserven als eigene Mittel / Abänderung der Verfügung vom 30.08.1961.* (Bern, 8 December 1967), Swiss Federal Archives, E6520B#2007_62#239.

In 1971 and 1972, the Banking Act and the Banking Ordinance were revised.[187] During the preparation of the Ordinance, a delegation of the SBA bypassed the FBC and talked directly to Switzerland's Minister of Finance, Nello Celio. The FBC was disappointed to have been excluded from these discussions, even more so as the Minister of Finance made various concessions. At this point, the FBC was clearly against a further weakening of the capital requirements. The experts' group of the FBC tasked with preparing a new Banking Ordinance suggested that a maximum of 80% of the regulatory capital could be hidden reserves. The Minister of Finance, however, decided to allow the unlimited use of hidden reserves.[188]

Publicly, the government argued that the revisions of the Banking Act and the Banking Ordinance in 1971 increased the liquidity and solvency requirements.[189] Both changes were undertaken against the background of the internationalisation of the Swiss financial centre. The revised Banking Ordinance required a minimum capital of CHF 2m for the foundation of a bank (this was what was meant by the 'stricter' capital requirements). The requirement targeted mainly new market entrants – many of them foreign institutions. Established banks in Switzerland, however, were not affected by this change.

The stricter liquidity requirements were the result of growing criticism of the large-scale foreign investments of the big banks. In the consultation process for the new Banking Act, the Social Democrat Party as well as the Workers Union had voiced their concerns that foreign investments – specifically referring to the Euromarkets – had increased the risks of the banks. The Federal Council shared this opinion, commenting that 'the increasing shift of liquidity from the domestic to the foreign market cannot be denied and poses a number of risks' and suggested that the liquidity requirements should be increased.[190]

In 1981, capital regulation in the Banking Ordinance was revised again.[191] For the first time, subordinated debt was allowed to be counted as part of the regulatory capital. The banks had been attempting to introduce such a change

[187] *BankG 1971. Vollziehungsverordnung zum Bundesgesetz über die Banken und Sparkassen vom 17. Mai 1972*, 1972.

[188] Sekretariat der Eidgenössischen Bankenkommission, *Bericht an die Mitglieder der Eidgenössischen Bankenkommission betr. Revision der Vollziehungsverordnung* (Bern, 16 February 1972), Swiss Federal Archives, E6520A#1983/50#49*.

[189] See, for example, the statement of the Federal Council on the revision of the Banking Act: Bundesrat, 'Botschaft des Bundesrates an die Bundesversammlung über die Revision des Bankgesetzes', *Bundesblatt*, 10570, 1.24 (1970), 1144–203.

[190] Bundesrat, *Botschaft des Bundesrates an die Bundesversammlung über die Revision des Bankgesetzes*, p. 1169.

[191] Another relevant change due to the Banking Ordinance was the use of consolidated balance sheets. *Vollziehungsverordnung zum Bundesgesetz über die Banken und Sparkassen vom 1. Dezember 1980*, 1981.

for several years.[192] It was also the first time that Switzerland moved to a capital adequacy model that exclusively focused on the asset risk.[193] The assets were differentiated according to fifteen different categories, and each category was matched with a capital requirement ratio. The underlying idea was the same as in the Basel I framework that was introduced in Switzerland in 1991 and 1994.[194] The application, however, was different. Basel I used risk-weights for each asset category and multiplied the risk-weighted assets with 8%. The Swiss approach in 1981 assigned a capital requirement ratio to each asset category (instead of a risk weight). Despite this, when the Basel I requirements were introduced into Swiss banking legislation ten years later, it did not bring fundamental changes. Subordinated debt, hidden reserves, and hybrid capital instruments could already be partially credited as Tier 2 capital. In addition, taking into account off-balance-sheet items was not an innovation, but rather a development of the existing framework.

Were all these regulatory changes relevant to the big banks? Figure 5.6 shows the structure of the regulatory capital used by the big banks from 1970 to 1995. There is no data available for the period before 1970. In the first half of the 1970s, the hidden reserves were even bigger than the paid-up capital. By 1974, for example, the hidden reserves held by the big banks were CHF 2.2bn, while the paid-up capital was CHF 1.9bn. Thus, the inclusion of hidden reserves as part of the regulatory capital was fundamental. Similarly, the relevance of subordinated debt grew over time. By 1994, the paid-up share capital of the big banks was CHF 9.4bn; the subordinated debt was CHF 11.1bn. Finally, it is also important to note that the largest part of the regulatory capital was disclosed reserves, and not paid-up share capital.

The broadening of the capital definition was absolutely crucial for the growth of the big banks. Estimates show that the total assets of the big banks would have had to be about 15–35% smaller if the capital regulation was not changed. Thus, changing capital requirements was an important factor that allowed banks to grow at such a rapid pace.

Despite the lobbying of the big banks, the change in capital requirements in the 1960s and 1970s is rather surprising, given Switzerland's macroeconomic context at the time. The SNB was constantly fighting foreign capital inflows

[192] Eidgenössische Bankenkommission, *Jahresbericht 1978 der Eidgenössischen Bankenkommission* (Bern, April 1979), p. 13.

[193] Eidgenössische Bankenkommission, *Jahresbericht 1980 der Eidgenössischen Bankenkommission*, p. 5.

[194] The revision of the Banking Ordinance in 1990 harmonised the risk classifications of Swiss legislation and the Basel Accord. In 1994, the capital requirements were changed from a direct to an indirect model. Until then, different requirements ratios were used for the risk classes. After 1994, the risk classes were weighted according to the Basel Accord and then multiplied with the requirement ratio of 8%. *Vollziehungsverordnung zum Bundesgesetz über die Banken und Sparkassen*, 1990; *Vollziehungsverordnung zum Bundesgesetz über die Banken und Sparkassen*, 1994; *Bundesgesetz über die Banken und Sparkassen*, 1994.

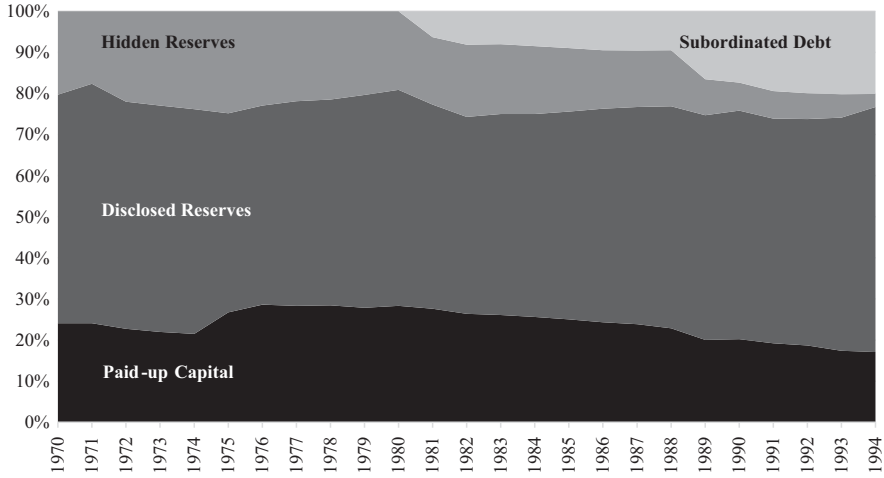

FIGURE 5.6 Structure of the regulatory capital, big banks, 1970–94[195]

during these decades. It took defensive measures to limit the inflow of capital from abroad – for example, by prohibiting investments and negative interest rates on the deposits of non-residents, as well as restricting borrowing abroad.[196] The Swiss economist Edgar Salin termed the state of the economy a 'Devisenbann-Wirtschaft' ('currency ban economy').[197] The assessment made of this period, which lasted until 1979, both by economists and officially by the SNB itself, is clear: the defensive measures by the SNB were largely ineffective.[198]

One measure that might have been effective, however, was stricter capital requirements for the big banks. It is likely that stricter capital requirements would have acted as a brake for the balance sheet growth of undercapitalised banks, which was driven substantially by foreign capital flows. In retrospect, there might be two reasons why stricter capital rules were not considered as a tool for monetary policy.

Firstly, the FBC and various political actors (the Federal Council, parliament) could change the regulatory environment for banks (Banking Act,

[195] Author's calculations. The data was collected from: Eidgenössische Bankenkommission, *Anrechnung stiller Reserven, SFA, E6520A#1983/50#49**; and various editions of Swiss National Bank, *Die Banken in der Schweiz (annual issues 1906–2015)*.

[196] Bernholz, *Die Nationalbank 1945–1982*, pp. 127–43.

[197] Edgar Salin, 'Devisen-Bann-Wirtschaft: über die beginnende Anarchie im westlichen Währungssystem', *Kyklos*, 1964, 149–64.

[198] Kurt Schiltknecht, 'Beurteilung der Gentlemen's Agreements und Konjunkturbeschlüsse der Jahre 1954–1966: Unter besonderer Berücksichtigung der Auslandgelder' (ETH Zurich, 1970), p. 127ff; Swiss National Bank, *75 Jahre Schweizerische Nationalbank, 1907–1982*, p. 102; Bernholz, *Die Nationalbank 1945–1982*, p. 123.

Ordinance, Circulars). The SNB attended conferences that discussed regulatory revisions but could only make recommendations. The archival material suggests that the SBA and the big banks were much more closely involved in the regulatory process than the SNB. The FBC acted more as a mediator between the interests of the banks and the SNB than as an independent supervisory voice. Furthermore, the FBC was a weak supervisor until the revision of the Banking Act in 1971. Its enforcement mechanisms were – even in its own view – 'not sufficient'.[199] In cases of non-compliance with the Banking Act, the commission could make either a criminal complaint to the cantonal prosecution authorities or fine the bank. The handling of such complaints, however, would often take years and reach the statutes of limitations. The FBC also had little success with regulatory fines, as the maximum amount was too low (CHF 20,000).[200] The ultimate threat for a bank – withdrawal of its banking licence – was only possible after 1971.

Second, the SNB had to strike its own bargain with the big banks and the SBA. Many measures to reduce foreign capital inflows were based on gentlemen's agreements – for example in 1950, 1955, 1960, 1962, 1975, and 1976 – negotiated through the SBA.[201] The SNB depended on the cooperation of the banks for these measures. Overall, the regulatory changes in the 1960s and 1970s were clearly in the interest of the banks, and the banks took part in shaping their regulatory environment.

Publicly, the regulatory changes and the non-compliance of the major big banks with the capital requirements were noted, but did not trigger a public debate on the topic. The revision of the Banking Ordinance in 1961, which was a crucial technical change with a significant impact on the growth of the big banks, received little public attention. The *Neue Zürcher Zeitung*, for example, simply described the regulatory changes or the capital ratios of the banks, without further comments.[202] The banks themselves were also silent about their struggle to meet capital requirements at their annual meetings.[203]

The interest of banks in developing the regulatory environment certainly persisted in the 1980s. However, the changes mainly followed trends that were already apparent on an international level. Risk-weighted approaches to

[199] Eidgenössische Bankenkommission, *Jahresbericht 1984 der Eidgenössischen Bankenkommission* (Bern, April 1985), p. 12.

[200] Eidgenössische Bankenkommission, *Jahresbericht 1984 der Eidgenössischen Bankenkommission*, p. 12. See Art. 46, *BankG 1934*.

[201] See the chronicle of monetary and exchange rate policies by the SNB in Swiss National Bank, *75 Jahre Schweizerische Nationalbank, 1907–1982*.

[202] Neue Zürcher Zeitung, 'Keine Revision des Bankengesetzes: Eine neue Vollziehungsverordnung', *Abendausgabe Nr. 3162* (Zurich, 30 August 1961), p. 13; Neue Zürcher Zeitung, 'Das schweizerische Bankwesen im Jahre 1961' (Zurich, 15 January 1963), p. 14.

[203] Neue Zürcher Zeitung, 'Schweizerischer Bankverein' (Zurich, 24 February 1959); Neue Zürcher Zeitung, 'Generalversammlung der Schweizerischen Bankgesellschaft' (Zurich, 9 March 1963).

measuring capital adequacy were being discussed at the beginning of the 1970s at the European level and later in the BCBS. Switzerland took part in the negotiations in the BCBS. In this context, the introduction of the Swiss framework in 1981 is not surprising. Moreover, the use of subordinated debt for regulatory purposes came into fashion too.

5.4 THE UNITED STATES: FINDING THE RIGHT WEIGHT

The Great Depression of the 1930s started a new era for banks in the United States. Only four days after the bank holiday on 5 March 1933, the United States Congress passed the Banking Act (Glass–Steagall), giving the Federal Reserve and the Office of the Comptroller of the Currency (OCC) the authority to reopen or close banks. The Banking Acts of 1933 and then 1935 and the following supervisory changes created a new regulatory regime in US banking. This new regime meant less competition for existing banks, as market entry was controlled. The legislature separated commercial banking from investment banking. Regulation Q introduced a maximum interest rate on savings and prohibited interest rates on demand deposits. Deposit insurance was established, and a new federal bank supervisor, the Federal Deposit Insurance Corporation, was created.[204] Moreover, banking supervision practice changed from a rule-based approach to one where bank examiners received more discretion.[205]

The years from the Second World War into the 1960s were a period with few bank failures, creating a perception of a stable banking system. The environment changed in the 1970s. Domestically, a part of the banking industry collapsed, and the Savings and Loans sector failed entirely.[206] Among the failing banks were also larger institutions, such as the United States National Bank (USNB) of San Diego in 1973 and the Franklin National Bank of New York in 1974, ranking 86th and 20th by size.[207] With growing instability in the banking market, criticism of banking supervision grew.

[204] Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States 1867–1960*, Studies in Business Cycles ; No. 12 (Princeton: Princeton University Press, 1963), chap. 8.

[205] Eugene N. White, '"To Establish a More Effective Supervision of Banking": How the Birth of the Fed Altered Bank Supervision', in *The Origins, History, and Future of the Federal Reserve: A Return to Jekyll Island*, ed. Michael D. Bordo and William Roberds, Studies in Macroeconomic History (Cambridge: Cambridge University Press, 2013), pp. 7–54.

[206] Eugene White, 'Banking and Finance in the Twentieth Century', in *The Cambridge Economic History of the United States: Volume 3: The Twentieth Century*, ed. Robert E. Gallman and Stanley L. Engerman, Cambridge Economic History of the United States (Cambridge: Cambridge University Press, 2000), Vol. III, 743–802

[207] Roger Tufts and Paul Moloney, 'The History of Supervisory Expectations for Capital Adequacy: Part I (1863–1983)', *Moments in History – Office of the Comptroller of the Currency*, 2022, p. 10.

The 1970s were also marked by increased competition domestically and internationally. The banking market in the United States was internationalised internally, with the group of foreign banks being the fastest-growing segment of banks in the United States. And, at the international level, the large international US banks – often referred to as money centre banks – gradually lost importance. By 1970, six out of the ten largest banks in the world were from the United States. Ten years later, only two US banks ranked among the ten largest banks. Japanese banks in particular were expanding quickly.[208]

Nevertheless, measured by total assets, the banks in the United States grew rapidly. Their balance sheet total increased by an annual average of 15% during the first half of the 1970s. The growth rates of the total equity capital averaged about 9% per year.[209] The fact that the expansion of total assets outpaced that of capital resulted in decreasing capital/assets ratios. The capital ratios of US banks fell sharply during the Second World War, recovered to 8.6% in 1962, and entered a period of steady decline to 5.3% in 1980. Much of the decline – about 2.0 percentage points – occurred between 1971 and 1974. A significant change in terms of the structure on the liabilities side of the US banks was the shift towards long-term borrowing. Until the 1960s, savings of consumers and demand deposits were essential funding sources. From the 1970s, the issuance of long-term debt gained importance, a factor which should eventually also alter the definition of capital in banking.[210]

Figure 5.7 shows US banks' capital/assets ratios from 1969 to 1984 for different size groups of banks (measured by total assets). A crucial feature of the declining capital ratios in the 1970s was that large banks were the main driver of this trend. Between 1970 and 1980, for example, the capital/assets ratio of small banks grew, while that of banks with assets between $1bn and $5bn and above $5bn dropped by 0.5 percentage points and 1.2 percentage points, respectively.

The federal bank supervisory agencies had emerged from the Second World War with a new view on capital adequacy. The classic 10% capital/deposit ratio was gone in supervisory practice, and the new perception was that the quality of assets– among other factors – should determine the required amount of capital in a bank. After the Second World War, using a capital/risk-assets ratio was common in supervisory practice. However, the methods to assess capital adequacy soon started to diverge again.

The OCC, the Federal Reserve Board, and the Federal Deposit Insurance Company determined capital adequacy on the level of bank-specific

[208] Wolfgang H. Reinicke, *Banking, Politics and Global Finance: American Commercial Banks and Regulatory Change, 1980–1990*, Studies in International Political Economy (Aldershot: Edward Elgar Publishing, 1995), p. 92.

[209] Refers to FDIC-insured commercial banks. Federal Deposit Insurance Corporation, *Historical Bank Data*, tbl. CB14.

[210] James G. Ehlen, 'A Review of Bank Capital and Its Adequacy', *Economic Review*, Federal Reserve Bank of Atlanta, 54.11 (1983), 54–60 (p. 56).

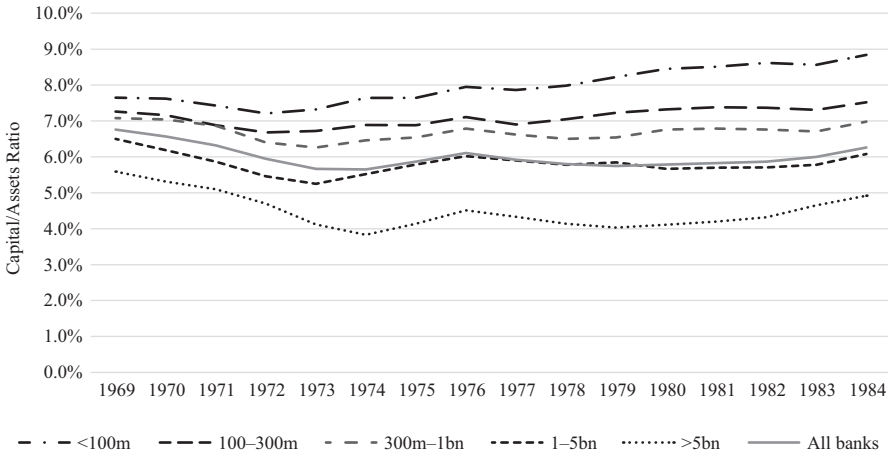

FIGURE 5.7 Capital/assets ratio by bank size (total assets), 1969–84[211]

assessments, providing bank examiners with a certain degree of discretion. Legally, the agencies had limited authority to enforce capital requirements.

The methods for assessing capital adequacy among three federal agencies and the importance of the topic varied between the 1950s and the 1970s. In the 1950s, the three federal bank supervisory agencies publicly discussed their supervisory frameworks for capital. The discourse was rooted in the legacy of the Second World War, leaving banks with high shares of government debt in their balance sheets and challenging traditional measures for capital adequacy.

The Federal Reserve was the leading voice in measuring capital adequacy from the 1940s to the 1980s. Its Analyzing Bank Capital (ABC) formula for capital requirements, developed in the 1950s, was the most advanced measurement method, and the OCC and the FDIC adopted many of the FED's principles.[212] The FED's approach already consisted of a risk-weighting of assets. The capital was then compared to the 'risk assets'.

However, in the 1960s, the question of capitalisation in banking lost some of its importance. The OCC was the federal agency that most emphasised determinants beyond capital when assessing banks. In 1962, the OCC shifted its focus from the risk-assets approach to a total of eight potential factors relevant for analysing a bank's financial stability, such as management quality, earnings and earnings retention, quality and character of ownership,

[211] Data obtained from 'Letter by Paul Volcker to Timothy Wirth, Chairman Subcommittee on Telecommunications, Consumer Protection, and Finance, House of Representatives', in *Hearing Before the Subcommittee on Telecommunications, Consumer Protection, and Finance, 99th Congress, First Session on H.R. 2032*, 99–38 (Washington, DC: US Government Printing Office, 1985), pp. 461–68 (p. 467).

[212] Reinicke, *Banking, Politics and Global Finance*, p. 34.

and deposit volatility.[213] By 1971, the relevance of capital ratios in the OCC's supervisory practice had deteriorated even further.[214]

The FDIC has worked with several capital ratios after the Second World War. The FDIC deducted expected losses both from capital and assets, leading to a net-sound capital and adjusted assets. The Federal Reserve Board used its ABC formula, which it revised in 1972. Among the three government agencies, it was the only one using a risk-weighted assets approach until the 1970s.[215]

Besides the measuring approaches of capital adequacy, the definition of capital itself was also the subject of intensive debate. Banks had aimed to use subordinated or long-term debt as a substitute for equity capital since the 1960s.[216] The Federal agencies answered such requests with different guidelines, leading to varying definitions of capital. The FED was the most hesitant to accept subordinated debt as a part of the capital and considered paid-up capital and reserves as capital from 1970.[217] The OCC and the FDIC followed more liberal approaches than the FED. Under certain conditions, the OCC allowed that up to one-third of banks' capital could consist of subordinated debt after 1962.[218] The OCC analysed aspects such as the ratio of 'earnings to interest on long-term debt' and 'retained earnings to repayments of long-term debt'.[219]

The opinion of the FDIC on subordinated debt seemed to be evolving. It acknowledged the use of subordinated debt with a maturity of more than seven years as a part of bank capital, serving as a protection for depositors against losses.[220] In 1980, the FDIC took a stronger stance and argued that subordinated debt should not have the same quality as equity capital as it cannot absorb unanticipated losses – one of the critical functions of equity capital.[221] In the official statistical appendix of the FDIC's annual report, 'notes and debentures' was listed as an individual item under the banks'

[213] Orgler and Wolkowitz, *Bank Capital*, p. 70.

[214] In the revised version of the 'Comptroller's Manual for National Banks' in 1971, the topic of capital adequacy was no longer discussed in detail. Tufts and Moloney, *The History of Supervisory Expectations for Capital Adequacy: Part I (1863–1983)*, p. 10.

[215] Putnam, *Early Warning Systems and Financial Analysis in Bank Monitoring*, p. 9.

[216] Ehlen, *A Review of Bank Capital and Its Adequacy*, p. 54.

[217] See Amendments to Regulation D (Reserves of Member Banks) and Regulation Q (Interest on Deposits), 12th June 1970 and 4th June 1976. Federal Reserve, 'Annual Report of the Board of Governors of the Federal Reserve System 1970', 1971, p. 73; Federal Reserve, 'Annual Report of the Board of Governors of the Federal Reserve System 1976', 1977, p. 139.

[218] Office of the Comptroller of the Currency, 'Annual Report of the Comptroller of the Currency 1963', 1964, pp. 18–19.

[219] Orgler and Wolkowitz, *Bank Capital*, pp. 67, 76.

[220] FDIC, 'Annual Report of the Federal Deposit Insurance Corporation 1970', 1971, p. 168.

[221] Lee Davison, 'Banking Legislation and Regulation', in *An Examination of the Banking Crises of the 1980s and Early 1990s*, ed. Federal Deposit Insurance Corporation (Federal Deposit Insurance Corporation, 1997), pp. 87–136 (p. 111). Federal Deposit Insurance Corporation, 'Statement on Policy of Capital Adequacy', Federal Register, 46.248 (1981), 62693–4 (p. 62694).

capital from 1966 to 1975. From 1975, it was neither assigned to capital nor liabilities. Proportionally, 'notes and debentures' represented about 5–7% of the banks' total capital (if one views it as capital) between 1966 and 1979.[222]

In the 1970s, the three federal bank supervision agencies arrived at a point where all had acknowledged the importance of the 'quality of assets' to assess capital adequacy. However, the approaches to measuring capital adequacy and the definition of capital varied.

5.4.1 Changes in Capital Adequacy Standards in the 1970s

The increased banking instability in the United States in the 1970s put pressure on the regulators and supervisors. In particular, the criticism towards the supervisors grew, and one of the key arguments was that banking supervisors had not been able to detect 'problem banks' early enough. Moreover, many policymakers identified a second deficiency in the varying measurement approaches and definitions of capital. The Federal bank supervisors concluded that more uniformity in banking supervision and also in the issue of bank adequacy was needed.[223] Aiming to reform bank supervision in the United States, the FDIC, the OCC, and the FED (together with the Federal Home Loan Bank Board and the National Credit Union Administration) established an interagency body, the Federal Financial Institutions Examination Council (FFIEC) in 1979. The purpose of the FFIEC was to promote uniform principles and standards in bank supervision, which also encompassed the measurement and definition of capital.[224]

The OCC made the first attempts to strengthen capital requirements in 1980, suggesting stricter rules for the definition of capital.[225] The banking sector strongly opposed these suggestions, and the OCC eventually refrained from introducing narrower definitions for capital.[226] The work of the FFIEC was more successful than the OCC's first attempt. It published a first draft proposal for a uniform definition of capital and capital requirements in June 1981.[227] By the end of 1981, responding to the call for uniformity, the Federal Reserve and

[222] Author's calculations. Data: FDIC, 'Annual Reports of the Federal Deposit Insurance Corporation 1966–1979', 1980. (all banks)

[223] Reinicke, *Banking, Politics and Global Finance*, p. 136.

[224] Federal Financial Institutions Examination Council, *Annual Report 1979* (Washington, DC, 1980).

[225] Statement of the Comptroller of the Currency, John G. Heimann, before the Senate Committee on Banking, Housing and Urban Affairs, Washington, DC, 21 May 1980. See Office of the Comptroller of the Currency, 'Annual Report of the Comptroller of the Currency 1980', 1981, p. 199.

[226] Reinicke, *Banking, Politics and Global Finance*, p. 137.

[227] Federal Financial Institutions Examination Council, *Annual Report 1980* (Washington, DC, 1981); Federal Financial Institutions Examination Council, 'Proposed Definition of Bank Capital to Be Used in Determining Capital Adequacy', Federal Register, 46.120 (1981), 32498–500.

the OCC issued common guidelines for defining capital and capital requirements. The FDIC adopted slightly different criteria, as the agencies disagreed on the definition of capital.[228]

The FFIEC chose a middle-way between the two positions on using subordinated debt or not-for-capital requirements by defining two types of capital: primary capital consisted of common and preferred stock, surplus, undivided profits, mandatory convertible debt instruments, reserves for loan losses, and other capital reserves. The FFIEC defined other forms of capital, such as limited-life preferred stock and subordinated debt, as secondary capital.[229]

The guidelines of the FED and the OCC largely followed the suggestions of the FFIEC and categorised banks according to three different groups: multinational, regional, and community banks. The guidelines also included numerical minimum capital ratios for the very first time. Regional banks (total assets $1bn to $15bn) had to reach a primary capital/assets ratio of 5% and a capital/assets ratio of 5.5%. Community banks (total assets <$1bn) were required to meet a 6% primary capital/ratio and a 6.5% capital/assets ratio. The FED and the OCC excluded multinational banks from minimum capital requirements, arguing that the complexity of their businesses would require individual analyses. Contemporaries contended that the exclusion was because these banks failed to meet the capital requirements.[230] This argument is underlined by the large banks' capital/assets ratio (total assets above $5bn) in Figure 5.7, which was below the 5% threshold from 1972 to 1984. Both the FED and the OCC were well aware of the difficulties that large banks faced if they had to meet a 5% capital requirement in 1981 and might have opted for informal pressure on these banks instead.[231] Multinational banks reacted and issued substantial amounts of primary capital after 1981.[232]

The FDIC set a 5% minimum capital/assets ratio for all banks and a 6% minimum requirement for all state non-member banks. Several deviations from the concepts of the OCC and the FED emerged. The FDIC guidelines did not differentiate between bank sizes. Moreover, the FDIC adjusted both the capital and the assets by deducting losses and one-half of the doubtful assets. For capital, the FDIC used primary capital, disregarding secondary capital.[233]

Thus, by 1981, the Federal bank supervisory agencies had introduced leverage ratios, and the capital requirements and definitions became – despite some remaining differences – more harmonised between 1979 and 1981. However, three issues remained unresolved.

[228] Reinicke, *Banking, Politics and Global Finance*, pp. 140–1.
[229] Reinicke, *Banking, Politics and Global Finance*, p. 139.
[230] Ehlen, *A Review of Bank Capital and Its Adequacy*, p. 57.
[231] Reinicke, *Banking, Politics and Global Finance*, p. 139.
[232] Ehlen, *A Review of Bank Capital and Its Adequacy*, p. 57.
[233] Federal Deposit Insurance Corporation, *Statement on Policy of Capital Adequacy*.

Firstly, bank supervisors' enforcement of capital requirements – and, respectively, their authority – was still limited. The guiding principles issued by the three federal agencies in 1981 formalised capital requirements, but they were based on guidelines and not on law. Before 1981, there was no direct legal authority to enforce capital requirements, and the OCC, the FED, and the FDIC had to rely on persuasion. Beyond moral suasion, this could mean declining branch or acquisition applications or invoking cease-and-desist orders.[234] However, even with the new guidelines in 1981, the legal reach of the agencies was limited. The FDIC, for example, communicated in its official policy statement that it would use its authority by withholding the 'approval of applications of various types' to impose capital requirements.[235] A case in point for the limited legal authority of the federal agencies was the case of the *OCC* v. *the First National Bank of Bellaire (Texas)*, which became a catalyst for an extension of the legal authority of the three Federal agencies.[236]

The OCC had issued a cease-and-desist order against Bellaire in May 1981, arguing that the bank was operating without adequate capital. Through the order, the OCC requested that the bank issued additional capital to reach a capital/assets ratio of 7% or higher. Bellaire challenged the ruling. In May 1983, the United States Court of Appeals, Fifth Circuit, decided in favour of Bellaire, stating a lack of substantial evidence by the OCC proving that the bank was 'unsafe and unsound'.[237] The court decision undermined the mandate of the OCC, the FED, and the FDIC to set and enforce capital requirements for banks.

Secondly, the new capital ratios introduced in 1981 did not quantitively consider the riskiness of assets, even though all three federal agencies had declared already in the 1930s that asset quality was the most relevant determinant for the required amount of capital and developed capital ratios that to some degree considered asset risk. The FED had even applied its ABC formula for capital adequacy in banking supervision since the 1950s.

5.4.2 The Latin American Debt Crisis as a Driver of Capital Standards

Between 1982 and 1986, the regulation and supervision of bank adequacy was completely transformed. The driver for the change was no longer internal financial instability but increasing international financial instability, leading to further harmonisation of capital requirements in the United States.

The debt of Latin American countries has been growing steadily since the 1970s. External borrowing by Argentina, Brazil, Mexico, and Venezuela grew

[234] Reinicke, *Banking, Politics and Global Finance*, p. 35.
[235] Federal Deposit Insurance Corporation, *Statement on Policy of Capital Adequacy*, p. 62694.
[236] Reinicke, *Banking, Politics and Global Finance*, p. 148; Tufts and Moloney, *The History of Supervisory Expectations for Capital Adequacy: Part I (1863–1983)*, p. 12.
[237] *First Nat. Bank, Bellaire* v. *Comp. of Currency*, 697 F.2d 674, 1983.

by multiples of 7 to 32 from 1970 to 1981.[238] Large US multinational banks were among the major lenders to what was referred to as the less developed countries (LDC). Data from the eight largest US banks indicates that their loan exposure to LDC countries grew from $32.5bn in 1977 to $53.7bn and peaked in 1985 at $58.5bn. Such volumes represented more than 10% of their total assets, or more than three times their capital and reserves (1981).[239]

In 1982, the largest borrowers among the LDC countries – Mexico, Argentina, and Brazil – announced their inability to pay interest and repay their debt. Given the involvement of large US banks in LDC lending, these defaults had potentially severe effects on solvency. Moreover, it triggered the involvement of the US Congress.

The International Monetary Fund (IMF) aimed to substantially increase its resources, including the share of the United States. Such an increase, in turn, required the approval of the US Congress. The new situation changed the balance of power between the legislature, supervisors, and banks. Banks depended on the IMF's support for the LDC countries to avoid severe losses, threatening their own survival. The IMF required additional resources from the United States, which was subject to approval by the US Congress. Moreover, the perception in the hearings of the respective committees on banking in the Senate and the House of Representatives was that banks' capital resources should be strengthened. To a lesser degree, US banks' competitive position in capitalisation was a topic too.[240]

The FED and the OCC reacted to the debate on capital requirements by amending their 1981 guidelines. The multinational banks, previously excluded from capital requirements, had to meet a 5% primary capital/assets ratio.[241] Reinicke emphasises that twelve of the seventeen multinational banks had reached the 5% threshold by then.[242]

In November 1983, Congress passed the International Lending Supervision Act (ILSA). Section 908 of ILSA dealt specifically with capital adequacy and had implications on two levels. Domestically, ILSA gave the Federal banking agencies – for the first time – the legal authority to impose statutory capital requirements. On an international level, the chairman of the Federal Reserve, Paul Volcker, received a mandate to 'encourage

[238] Data: The World Bank, *International Debt Statistics, Data Bank*: https://databank.worldbank.org/source/international-debt-statistics (accessed 20 January 2022).

[239] Timothy Curry, 'The LDC Debt Crisis', in *An Examination of the Banking Crises of the 1980s and Early 1990s*, ed. Federal Deposit Insurance Corporation, 1997, pp. 191–210 (pp. 196–7). Data refers to loans from at the time called less developed countries (LDC). Sixteen out of the LDC countries were from Latin America. About three-quarters of the outstanding LDC debt was from contributed from Argentina, Brazil, Mexico, and Venezuela.

[240] Reinicke, *Banking, Politics and Global Finance*, p. 145ff. Tarullo, *Banking on Basel*, p. 46.

[241] Federal Reserve, 'Annual Report of the Board of Governors of the Federal Reserve System 1983', 1984, p. 74.

[242] Reinicke, *Banking, Politics and Global Finance*, p. 148.

governments, central banks, and regulatory authorities of other major banking countries to work toward maintaining and, where appropriate, strengthening the capital bases of banking institutions involved in international lending'.[243]

During 1984 and 1985, the three federal bank supervisory agencies worked on new, uniform capital requirements. They agreed on a minimum primary capital/assets ratio of 5.5% and a 6% total capital (primary and secondary)/assets ratio for all federally supervised banks.[244] Another outcome of interagency cooperation was the increased emphasis on certain aspects that should determine capital adequacy: The agencies expressed their concern that capital/assets ratios exclude considerations on risk in the balance sheet and risk exposure resulting from off-balance-sheet items. The FED noted that the multinational banks had substantial off-balance sheet risks in the range of 5–15% of total assets.[245] Moreover, the FED noted a shift from low-risk, highly liquid assets to assets with higher risk exposure. Altogether, this meant that the overall risk exposure of large banks likely increased. Capital/assets ratios could not capture such changes and incentivised additional risk-taking by banks. Furthermore, the increasing capital/assets ratios of large banks during the first half of the 1980s even provided an impression of improved financial stability, which was not the case. The solution to these problems was a risk-based capital requirement.[246]

The FED, the OCC, and the FDIC published a series of proposals for risk-based capital ratios between 1986 and 1988. The proposals largely followed the Federal Reserve's ABC formula, placing assets into different risk categories, leading to the 'weighted risk asset and off-balance sheet total' as the denominator.[247] Dividing the primary capital by the risk-weighted assets resulted in the 'risk-based capital ratio'. From 1986 onwards, the proposals for capital adequacy rules also started to integrate elements from discussions on the international level. As a first step, the agencies started integrating the agreement between the federal agencies of the United States and the BoE into

[243] United States. Congress, *International Lending Supervision Act of 1983*, 1983, p. 1281, (3)(C).

[244] Board of Governors of the Federal Reserve System, 'Membership of State Banking Institutions; Bank Holding Companies and Change in Bank Control; Capital Maintenance; Rules of Procedure', Federal Register, 50.79 (1985), 16057–71 (pp. 16058–59); Federal Deposit Insurance Corporation, 'Capital Maintenance', Federal Register, 50.53 (1985), 11128–43.

[245] Often in the form of standby letters of credit, binding loan commitments, or interest rate swaps.

[246] Board of Governors of the Federal Reserve System, 'Bank Holding Companies and Change in Bank Control; Capital Maintenance; Supplemental Adjusted Capital Measure', Federal Register, 51.21 (1986), 3976–84 (pp. 3976–7).

[247] Board of Governors of the Federal Reserve System, *Bank Holding Companies and Change in Bank Control; Capital Maintenance; Supplemental Adjusted Capital Measure*; Federal Deposit Insurance Corporation, 'Capital Maintenance', Federal Register, 51.34 (1986), 6126–32; Office of the Comptroller of the Currency, 'Minimum Capital Ratios; Risk-Based Capital Standard for National Banks', Federal Register, 51.59 (1986), 10602–7.

their proposals for capital adequacy guidelines in 1987.[248] Once the Basel Committee on Banking Regulations and Supervisory Practices reached an agreement in the summer of 1988, the agencies published the final rules incorporating the Basel agreement in January and March 1989, with transition periods until the end of 1992.[249]

Methodologically, the risk-weighted assets approach followed the ABC formula developed by the FED in the 1950s. However, there were differences in the classification of assets and the weights assigned to these risk classes, as well as the treatment of off-balance sheet assets. Beyond that, the Basel I approach multiplied the risk-weighted assets by 8% (respectively, lower percentages in the transition period), which led to the required capital. The definition of capital under Basel I also consisted of two capital tiers, as it was already the approach taken by the United States Federal Agencies. A key difference was the treatment of loan-loss reserves. The federal agencies had previously counted loan-loss reserves as primary capital. Basel I defined such reserves as Tier 2 capital.

The new capital requirements introduced in 1989 supplemented but did not replace risk-unweighted capital thresholds in the United States. The FDIC and the FED did not replace the requirement of 6% total capital/assets. The OCC, however, aimed to introduce a substantially lower total capital/assets requirement of 3%. The three agencies agreed on a compromise of 3% for banks in the best rating category. All other banks had to maintain additional capital between 1% and 2%, resulting in a capital/assets ratio of at least 4–5% for most banks.[250]

The use of unweighted-capital requirements was further strengthened by the Federal Deposit Insurance Improvement Act (FDICIA) in 1991. After more than a decade of increased banking instability in the United States, the FDICIA introduced 'prompt corrective action' (PCA), which aimed to detect undercapitalised banks early and to force such banks to strengthen their capital. Numerical capital requirements were used as triggers that initiated severe supervisory actions. The 5% total capital/assets ratio thus became a de facto threshold.

[248] Federal Deposit Insurance Corporation, 'Capital Maintenance; Risk-Based Capital Proposal', Federal Register, 52.68 (1987), 11476–92; Board of Governors of the Federal Reserve System, 'Capital Maintenance; Revision to Capital Adequacy Guidelines', Federal Register, 52.56 (1987), 9304–12; Office of the Comptroller of the Currency, 'Minimum Capital Ratios; Issuance of Directives', Federal Register, 52.116 (1987), 23045–55.

[249] Office of the Comptroller of the Currency, 'Risk-Based Capital Guidelines', Federal Register, 54.17 (1989), 4168–84; Board of Governors of the Federal Reserve System, 'Capital; Risk-Based Capital Guidelines', Federal Register, 54.17 (1989), 4186–221; Federal Deposit Insurance Corporation, 'Capital Maintenance; Final Statement of Policy on Risk-Based Capital', Federal Register, 54.53 (1989), 11500.

[250] Davison, *Banking Legislation and Regulation*, p. 116.

5.5 CONCLUDING REMARKS

Crises in the United Kingdom, the United States, and Switzerland triggered the introduction of statutory capital requirements. The United States has the longest and richest tradition of banking regulation and supervision among the three countries. The three federal banking supervision agencies had already informally applied a capital/deposits ratio of 10% until the 1930s. However, minimum capital ratios were formalised and harmonised only in the 1970s and 1980s due to increasing domestic financial instability. In 1981, the FDIC, the OCC, and the FED introduced minimum capital/assets ratios of at least 5%. The OCC and the FED, however exempted the large multinational banks from capital requirements in 1981, which many would have failed to meet.

Switzerland introduced banking legislation and capital requirements in 1934/5. The group of the big banks had been profoundly affected by the Great Depression, and losses on foreign loans and securities led to solvency problems. Most of the Swiss banks did not even reject a statutory capital requirement. There were several reasons for this. Firstly, capital has always played an essential role in the Swiss system. It was perceived as a source of stability and trust. Banks often considered the risk of their business activities when considering further capital issuances. Unwritten conventions developed on what amount of capital was deemed adequate for which banking group. The new minimum requirements replaced these informal conventions. Secondly, most banks had already fulfilled the capital requirements and were thus unaffected by the implementation of the new law. Moreover, the banks most affected by higher capital requirements lacked bargaining power on the topic of solvency in the middle of the Great Depression.

The introduction of statutory banking regulation in the United Kingdom came comparatively late. The Banking Act of 1979 was the first comprehensive banking legislation. Before that, banking legislation consisted of several individual pieces of legislation, affecting different areas of banking. Supervision was conducted informally and flexibly by the BoE. The role of capital in British banking was also unimportant until the 1970s. Until then, solvency was rarely discussed publicly, and the BoE attached its primary attention to liquidity. Change was ultimately initiated by the secondary banking crisis, as well as growing competition from foreign banks.

The United Kingdom did not go through a crisis that would have required government rescues of insolvent banks in the 1930s. The absence of solvency problems probably even reinforced British belief in liquidity as the critical determinant of banking stability. Moreover, the 1930s and the Second World War gave rise to a strict monetary policy. This subjected financial policy to monetary goals, enforced by the strict but informal control of the BoE. It took another crisis, decades later, for banking legislation to be reconsidered. The secondary banking crisis in 1973 revealed many of the problems of the existing regulatory framework. It also triggered a reassessment of liquidity and solvency

in banking between 1975 and 1980 through working groups of the BoE and representatives of the clearing banks.

All three countries had already developed risk-weighted capital adequacy frameworks before the Basel Accord of 1988. The BoE's working paper on the 'Measurement of Capital' (1980) set out a system of assessing solvency similar to the Basel I framework. Similarly, Switzerland introduced a risk-weighted approach in 1981. The roots of the Federal Reserve's ABC formula reach back to the 1950s. Academic publications by authors in the United States had already proposed risk-adjusted capital requirements in the 1940s. And Switzerland's initial capital regulations of 1934/1935 were also adjusting for risk. It was just a different methodology with two categories of assets (mortgages and government securities versus all other assets) requiring a different percentage of capital. The development towards the risk-based capital adequacy guidelines of Basel I was an evolution, not a revolution.

Beyond the domestic discourses, financial globalisation and international instability initiated discussions on capital adequacy on the international level. Key venues for these discussions were the committees in the European Economic Community and the Basel Committee on Banking Supervision. The discourses at the BCBS and the EEC interacted with the evolution of the national capital requirements framework. In the United Kingdom, the discussions between the BoE and the clearing banks coincided with attempts by the EEC to harmonise financial legislation in the 1970s. While not the catalyst for the reassessment of capital adequacy in the United Kingdom, the discussions on the European level certainly provided impulses for British policy change. This development can also be traced in the supervisory practice of the BoE. Up until the 1970s, the BoE still used the 'free resources ratio'. From the late 1970s, the 'risk assets ratio' became more fashionable, categorising the assets into different risk categories and attaching a certain risk weight to each category. Similarly, the US federal bank supervision agencies had already started the process of integrating 'international' elements from the BCBS negotiations into domestic guidelines in 1986.

While financial crises triggered the implementation of capital requirements, financial globalisation and the rapid growth of large banks were the driver of change for the definition of capital and capital requirements. During the 1960s and 1970s, average annual growth rates of British, Swiss, and US banks' total assets in the range of 10% were common, and large banks grew even faster. Given this rapid growth, it was increasingly challenging for large banks to meet capital requirements. Subordinated debt was a vital funding source in all three countries, allowing banks to grow despite thin equity cushions. In the United Kingdom, subordinated debt was perceived as equal to equity capital from the 1970s. For US banks, the FDIC and the OCC allowed banks to use subordinated capital from 1962. Swiss banks could use subordinated debt as regulatory capital from 1981 (the use of hidden reserves for that purpose had already been allowed since 1961).

A commonality of the banking regulation in the three countries lies in the involvement of banks in shaping the regulatory environment. In Switzerland, the changes in capital regulation were initiated by the big banks and the Swiss Bankers Association. In the United Kingdom, the system of supervision was, by definition, participative and personal. The Committee of London Clearing Bankers and later the British Bankers' Association were part of joint working groups led by the BoE from the 1970s. These working groups developed the relevant policy papers for assessing capital adequacy. In the United States, first attempts by the OCC to introduce a minimum capital ratio in 1980 failed due to banks' lobbying. Once capital ratios were introduced in 1981, the large international US banks were exempted from these requirements until 1983.

However, it has to be mentioned too that banking and government interests might have been congruent many times – and the outcomes regarding capital requirements were more than the simple result of lobbying. Regulatory development occurred in the context of financial globalisation and growing international competition. In particular, the topic of foreign competition seemed to be the standard argument in discussions between banks and supervisors, whether in Switzerland, the United Kingdom, or the United States. Nevertheless, there was a clear imbalance in the involvement of interest groups other than banks in the regulatory development process.

The banking crises of the twentieth century, resulting in capital regulation and changes in capital requirements, seemed to be a missed chance. In particular, three common features across the twentieth century and in all three countries stand out. First of all, new capital requirements were never strict. Average ratios of existing banks were often taken as the benchmark for what was considered adequate. There were usually a few banks below the new requirements, but these were exempted in some cases (money centre banks in the United States) or not penalised if they failed to meet requirements (big banks in Switzerland).

Secondly, capital requirements were seldom (United States: once) or never (Switzerland, United Kingdom) increased – not even in the aftermath of crises, which would have been the opportunity for new measures. Basel I, specifically, was a missed opportunity. The threat of financial instability as a result of financial globalisation was recognised. This triggered international financial cooperation. Many countries already had risk-weighted capital adequacy frameworks in place. With regards to stricter capital requirements, however, the threat of financial instability was not acted upon. Instead, requirements oriented themselves on already existing capital ratios, and the definition of capital was a compromise incorporating the capital definitions of various countries. In retrospect, the goal for a level playing field for international banks – and, thus, national interests – seemed to win over financial stability concerns.

Third, and related to that, financial stability seemed to receive little attention when it came to drafting new rules. The history of capital regulation presents itself as highly path dependent. New regulations always addressed problems of the past by further developing existing regulatory frameworks. The framework that should provide financial and banking stability was never fundamentally questioned.