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Risk management, expectations and global finance: The case of Deutsche Bank 1970-1990

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Risk Management, Expectations and Global Finance

The Case of Deutsche Bank 1970-1990

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Abstract:

What impact do past experiences have on the expectation formation of banks? This article analyses the risk management of Germany's largest bank during the 1970 and 1980s. In this period, financial deregulation and globalization increased the likelihood of credit defaults and forced banks to implement new strategies of risk assessment. The Herstatt failure of 1974 triggered a series of new regulations, partly based on initiatives of the banks themselves. After the sovereign debt crisis of the 1980s, banks introduced a comprehensive strategy of country-risk assessment. They systematically professionalized their information resources and integrated risk and liability management. Economic forecasting was often based on historical data used for the classification and diversification of risks. However, learning from past experiences had limitations, as recent events were often overrated. This had the effect that the banks' country risk assessment focused mainly on developing countries while the industrial world was not included in the schemes. This might explain why many banks have continually underestimated the financial risks present in developed countries since the 1990s.

Keywords: Risk management, financial markets, banks, expectations, historical experience

JEL Classification: F65, G15, G17, G32, N2

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1. Introduction

The banking sector underwent fundamental transformation beginning in the early 1970s. Over the next decades, most countries deregulated their financial markets and lowered entry barriers for foreign investors. Cross-border flows increased rapidly, while new securitized assets and derivatives (mortgage-backed securities, exchange swaps, zero bonds) emerged.¹ Digital trading made financial transactions not only faster, but also less expensive. To a certain extent, this allowed households to participate directly in capital markets. At the same time, the financial industry became more heterogeneous. Insurance companies, mutual funds, and postal and saving banks started offering their customers investment services, challenging the position of established commercial banks. Even though the share of finance relative to GDP has grown over-proportionately since the 1970s, many credit banks faced falling profit margins due to stagnating or even declining interest rate income. As a result, most institutions expanded their investment activities, while traditional lending became less important. German universal banks such as Dresdner, Deutsche and Commerzbank abandoned their mixed business approach with the aim of becoming global investment houses.²

This transformation of the business model has been identified as one of the main reasons for excessive risk-taking by banks, leading to more bank failures and systemic financial crises over the past decades. According to this view, German banks – once the symbol of financial solidity – adopted the aggressive style of Anglo-American finance without preparing themselves for the specific risks and imponderabilities of these practices. German bankers – raised in the well-protected climate of *Rhenish capitalism* – were

¹ From the extensive literature see *M. H. Miller*, Financial innovation: the last twenty years and the next, in: *Journal of Financial and Quantitative Analysis*, 21, 1986, p. 459-471; *G. R. Krippner*, The Financialization of the American Economy, in: *Socio Economic Review* 3, 2005, p. 173-208; *G. A. Epstein (ed.)*, Financialization and the World Economy, Cheltenham/Northampton 2005; *R. Greenwood/D. Scharfstein*, The Growth of Finance, in: *Journal of Economic Perspectives* 27, 2013, p. 3-28.

² *M. Schröder et al.*, The Role of Investment Banking for the German Economy. Final Report for Deutsche Bank AG, Frankfurt/Main, Mannheim, October 14th 2011, Zentrum für Europäische Wirtschaftsforschung (ZEW) Dokumentation Nr. 12-01, <http://ftp.zew.de/pub/zew-docs/docus/dokumentation1201.pdf>, September 12th 2022; *W. Plumpe/A. Nützenadel/C. Schenk*, Deutsche Bank. The Global Hausbank 1870-2020, London 2020.

not familiar with the dynamics of global capital markets and the unwritten rules that characterized the financial centers of London, New York, and Singapore.³

However, beyond anecdotal evidence, there is little empirical research on the risk-taking of financial institutions. Most studies in this field have focused on individual investors, while banks and other intermediaries have received scant attention. This is partly due to the *behavioral turn* in finance with its emphasis on cognitive biases and information errors at the micro level. The changing institutional environment and the specific forms of corporate risk management have been widely ignored, even though institutional investors have increased their share of financial transactions.

This article takes a more structural look at the transformation of risk-taking in the banking sector. Its theoretical background is the concept of financial intermediation. According to older versions of this theory, the main function of banks consists in channeling funds from household deposits to companies and investors who have different maturity- and risk- preferences. Banks play an important role in reducing transaction costs and information asymmetries.⁴ However, as Allen and Santomero argued, this traditional function of banks has become less important since the 1970s.⁵ Empirical evidence proves that financial intermediation has increased, even though transaction costs and asymmetric information have declined.⁶ The authors explain this development in terms of the growing costs of risk management. Especially in the first years of globalization, new financial products involved high risks, while the overall monitoring of markets by public media, financial analysts and rating agencies was not fully functional. At the same time, the supervision of banks by government departments, central banks and regulatory agencies

³ See *S. Janssen*, *British and German Banking Strategies*. London 2009; *R. Schmidt*, *German Finanzkapitalismus: A narrative of Deutsche Bank and its role in the German financial system*, IBF Paper Series, No. 01-20, IBF - Institut für Bank- und Finanzgeschichte, Frankfurt/M. 2020.; *F. Schwarz*, *Die Deutsche Bank—Riese auf tönernen Füßen*, Frankfurt 2003;

⁴ See for older accounts of this view: *J. G. Gurley/E. S. Shaw*, *Money in a Theory of Finance*, Washington, D.C. 1960; *T.S. Campbell/W.A. Kracaw*, Information production, market signaling, and the theory of financial intermediation, in: *Journal of Finance*, 35, 1980, p. 863-882; *D. Diamond*, Financial intermediation and delegated monitoring, in: *Review of Economic Studies*, 51, 1984, p. 393-414.

⁵ *F. Allen/A. M. Santomero*, The theory of financial intermediation, in: *Journal of Banking & Finance* 21, 1997, p. 1461-1485.

⁶ *Ibidem*; see also *Th. Phillipon*, Has the U.S. Finance Industry Become Less Efficient? On the Theory and Measurement of Financial Intermediation, in: *The American Economic Review* 105, 2015, p. 1408–38.

became less strict. Deregulation lowered transaction costs on financial markets but increased the cost of risk prevention. Private households and small investors often lacked information about security markets, and they were unable to operate comprehensive risk strategies such as portfolio diversification or hedging.⁷ As a result, they frequently turned to bank services for their financial investments. Indeed, the share of equity owned directly by private households fell in most advanced economies during the period under consideration. While in 1970, around 80 per cent of all US corporate equity was held by individuals, this was lower than 50 per cent in 1985.⁸ This paper argues that commercial banks regarded the trading and management of financial risk as the core of a new business strategy. They heavily invested in their information resources and diversified risks both in geographical and temporal terms.

But how efficient was the risk management of banks in practice? Were financial intermediaries able to compensate for market frictions and the information biases of individual investors? Did they possess better information about complex financial innovations and international markets? How did banks assess long-term risks, and how much did they learn from experience? All these questions point to the larger problem of expectation formation, a problem which has been intensely discussed as a key variable in understanding financial markets.⁹ Behavioral economists have especially contributed to this debate, analyzing the impact of past experiences on investment decisions. Drawing on the older theory of Kahneman and Tversky,¹⁰ Gennaiolo, Shleifer and Vishny introduced the model of *diagnostic expectations*. According to this model, investors rely on incoming information in making decisions, but overrate their direct experience, which they often consider to be representative.¹¹ Other studies have shown that financial actors frequently operate with an extrapolation bias, thus overemphasizing recent experiences.¹² Based on

⁷ N.G. Mankiw/S. P. Zeldes, The consumption of stockholders and non stockholders, in: *Journal of Financial Economics* 29, 1991, p. 97-112; F. Allen/D. Gale, Limited market participation and volatility of asset prices, in: *American Economic Review* 84, 1994, p. 933-955.

⁸ Allen/Santomero, *Theory*, p. 1469.

⁹ O. Coibion/Y. Gorodnichenko, Information rigidity and the expectations formation process: A simple framework and new facts, in: *American Economic Review* 105, 2015, p. 2644-2678.

¹⁰ D. Kahneman/A. Tversky, Subjective probability: A judgment of representativeness, in: *Cognitive Psychology*, 3, 1972, p. 430-454.

¹¹ N. Gennaioli/A. Shleifer/R. W. Vishny, *Neglected Risks: The Psychology of Financial Crises*, in: *American Economic Review: Papers & Proceedings* 2015, 105, p. 310-314.

¹² A. Fuster/D. Laibson/B. Mendel, Natural Expectations and Macroeconomic Fluctuations, in: *Journal of Economic Perspectives* 24, 2010, p. 67-84; see also M. Kaustia/S. Knüpfer, Do Investors

historical household surveys, Malmendier and Nagel have instead argued that long-lasting experiences – either biographical or as the result of collective memory – are more detrimental for investor choices than current (or very recent) information.¹³ The *experience effect* of financial shocks is particularly strong and explains generational variations in beliefs. Like most behavioral economists, Malmendier and Nagel question Bayesian learning and other rational strategies of agents to collect and assess information from other sources.

However, in all these studies it remains unclear what distinguishes the expectation formation of financial institutions from that of individual investors. More recently, Malmendier and Wachter have claimed that experience effects are not limited to untrained individual investors but similarly influence financial experts.¹⁴ Even though the authors provide no empirical evidence, there are reasons to assume that experiences also affect the decision-making of financial institutions and account for macro-level phenomena such as asset pricing or corporate risk strategies.¹⁵

The following article analyses the implementation of risk management by Germany's largest financial institution, Deutsche Bank.¹⁶ Founded in 1871 to fund German industry's foreign trade, Deutsche Bank soon transformed itself into a universal bank and offered a wide range of credit and investment services. Following World War I, the bank expanded into the home market and built up a network of local branches. Its international business continued to be substantial, but the domestic market gained in importance. Since the 1970s, however, the model of *Rhenish capitalism* with its close co-operation between banks, state and industry has fallen into crisis. Confronted with falling market shares and

Overweight Personal Experience? Evidence from IPO Subscriptions, in: *The Journal of Finance*, 63, 2008, p. 2679-2702; Sh. Shlomo, Excessive Extrapolation and the Allocation of 401 (k) Accounts to Company Stock, in: *The Journal of Finance* 56, 2001, p. 1747-1764.

¹³ U. Malmendier/S. Nagel, Depression babies: Do macroeconomic experiences affect risk taking?, in: *The Quarterly Journal of Economics*, 126, 2011, p. 373–416.

¹⁴ U. Malmendier/J. Wachter, Memory of Past Experiences and Economic Decisions, in: M. Kahana/A. Wagner (eds.), *Handbook of Human Memory*, Oxford (forthcoming).

¹⁵ See P. Scranton/P. Fridenson, *Reimagining Business History*, Baltimore 2013, p. 211-217. J. Coval/K. Pan/E. Stafford, How markets learn, Working paper, Harvard Business School, Boston 2014, see also the case study of V. Barnes/L. Newton, British Banks and Their Aesop's Fables: Organizational Memories of the Governance and Management of Financial Crisis, in: Y. Cassis/C. Schenk (eds.), *Remembering and Learning from Financial Crises*, Oxford 2021, p. 184-206.

¹⁶ See for the historical evolution L. Gall et. al., *Die Deutsche Bank 1870-1995*, München 1995; W. Plumpe/A. Nützenadel/C. Schenk, *Deutsche Bank*.

profit margins, Deutsche Bank thus decided to strengthen its foreign capital investments. It opened new branches abroad, expanded its global network of correspondent banks and acquired subsidiaries in financial centers such as London, New York, and Hong Kong. However, its transformation into a global investment bank, initiated in the early 1980s under the guidance of Alfred Herrhausen, took longer than expected. Internal struggles within management overlapped with structural limitations such as the lack of skilled investment bankers and the complex organization of the bank. In the first period of financial globalization, therefore, Deutsche Bank focused on segments where it already had long-standing expertise: the issuing of international bonds on the Euromarkets and the financing of sovereign debt in developing countries and the Soviet empire. This paper argues that these activities were detrimental to Deutsche Bank's refined risk management system as it came to emerge in the 1970s.

2. Hazard and Crisis: From Gentleman Banking to Regulation

Like most banks, Deutsche Bank had not operated a centralized system of risk monitoring for a long time. Until the 1930s, the bank based its risk assessments on „bedrock principles“ such as credit limits and the requirements of liabilities for lending.¹⁷ Moreover, it kept a certain amount in reserves or liquid assets, and diversified credit risks across different branches and maturities. To finance large projects, the bank often formed syndicates with other houses to share the risks. In the case of very large loans, a more detailed assessment of balance sheets, business reports and the financial solidity of the borrower was required, even though such information was often less decisive than the reputation of the client.

While this system of informal rules was sufficient in times of stability, the situation changed after the First World War. Hyperinflation, financial volatility, and political crises led to a series of bankruptcies, while financial fraud and mismanagement increased.¹⁸ Just

¹⁷ *P. Mathias*, Capital, credit and enterprise in the Industrial Revolution, in: *Journal of European Economic History*, 2, 1973, p. 121–143.

¹⁸ *M. H. Geyer*, What Crisis? Speculation, Corruption, and the State of Emergency during the Great Depression, in: *Bulletin of the GHI Washington*, 55, 2014, p. 9-35.

as many corporate clients became insolvent during the Great Depression, banks were likewise exposed to systemic risks. This was apparent after the banking crisis of 1931, when the bankruptcy of the Darmstädter Nationalbank triggered a bank run and forced the Reichsbank to bail out the major German credit houses.¹⁹ A series of legal reforms established a comprehensive framework of supervision and forced banks to introduce more formalized internal rules. The Banking Act of 1934 (*Kreditwesengesetz*) created a *Banking Supervisory Office* at the Reichsbank. The law introduced a formal system of licensing, rules on reporting, as well as reserve and liquidity requirements for commercial banks. Deutsche Bank responded by significantly expanding its internal accounting system. In doing so, it was complying with the new regulations, but it was also aiming to strengthen its own risk prevention. Although Deutsche Bank – which had merged with Deutsche Disconto Gesellschaft in 1929 – came through the crisis better than other major banks, it suffered heavy losses, and therefore learned lessons from the biggest financial crisis in German history.

The Banking Act of 1934, which provides the legal framework for banking supervision in Germany to the present day, not only passively exposed banks to state regulation, but made them regulatory actors themselves.²⁰ The German tradition of corporate self-regulation continued to play an important part in the financial industry during the Nazi period, as well as in the post-war decades. Deutsche Bank thus expanded its central credit department and tasked the Supervisory Board with independently reviewing all large loans of RM 1 million or more.²¹ The bank also strengthened its economic expertise in anticipation of fluctuations and shocks. In 1931, an Academic Advisory Board was set up under the direction of the monetary expert Melchior Palyi, a professor of economics and director of the Berlin Institute for Monetary Research. In addition, the “archive” of the bank, which until then had mainly collected the annual reports of other banks and companies, along with evaluations in the economic press, was transformed into the Economics

¹⁹ J. Bähr, Die deutsche Bankenkrise 1931, in: J. Bähr/B. Rudolph, 1931 - Finanzkrisen – 2008, Munich/Zurich, 2011, p. 15-142; K.-E. Born, Die deutsche Bankenkrise 1931. Finanzen und Politik, Munich 1967.

²⁰ See J. Bähr, Modernes Bankrecht und dirigistische Kapitallenkung. Die Ebenen der Steuerung im Finanzsektor des „Dritten Reichs“, in: D. Gosewinkel (ed.), Wirtschaftskontrolle und Recht in der nationalsozialistischen Diktatur, Frankfurt am Main 2005, S. 199-223.

²¹ G. Feldman, Die Deutsche Bank vom Ersten Weltkrieg bis zur Weltwirtschaftskrise 1914-1933, in: Gall et al., Deutsche Bank, p. 286f.

Department. A group of economists, statisticians and accountants now regularly prepared comprehensive reports on the economic situation, based on their own research as well as forecasts from other German research institutes.²²

Over the decades that followed, however, the Economics Department remained a relatively small unit within the bank and had a limited impact on its operational risk management. Under the Nazi regime, war funding became the major task of banks, while financial markets were repressed. As all economic and financial resources had to be mobilized for rearmament, the Nazis suspended capital and liquidity requirements for banks.²³ After 1945, the bank was decentralized, and risks were managed mainly at the level of branches and the ten head offices in Düsseldorf, Frankfurt, Munich etc. When the bank was reunified in 1957, the decentralized structure partly survived, which made it difficult to implement a coherent and overarching risk system. Formalized risk control was, however, not a priority, given that the house pursued a rather conservative style of finance under the guidance of Herrmann J. Abs.²⁴ Even after the return to free currency exchange in 1958, Deutsche Bank did not lend to foreign non-bank customers or make large investments in security markets.²⁵ Nor did the house actively expand through foreign branches. It conducted international activities in a restrained fashion, based on a correspondent network, banking consortia and minor subsidiaries.

3. New Risks, New Rules?

This situation changed profoundly throughout the following years, as Deutsche Bank slowly re-entered international financial markets. It began in 1965 to grant direct loans to

²² *Nützenadel*, *Between State*, p. 300.

²³ *Th. Balderston*, *German Banking between the Wars. The Crisis of the Credit Banks*, in: *Business History Review*, 65, 1991, p. 554-605, 588; see also *D. Ziegler*, „A Regulated Market Economy”. *New Perspectives on the Nature of the New Order of the Third Reich*, in: *H. Berghoff/J. Kocka/D. Ziegler* (eds.), *Business in the Age of Extremes. Essays in Modern German and Austrian Economic History*, Cambridge 2013, p. 139-152; *H. James*, *Die Deutsche Bank im Dritten Reich*, Munich 2009.

²⁴ See *L. Gall*, *Der Bankier. Hermann Joseph Abs. Eine Biographie*, Munich 2004, p. 293-318.

²⁵ See *Historisches Archiv der Deutschen Bank (HADB)*, V10/73: *Executive Board Meetings*, June 6-7, June 30, and Oct. 10-11, 1966.

foreign non-bank clients and in 1968 to forfeit exports, which meant that the bank assumed the default risks of trade bills.²⁶ In 1970, Deutsche Bank opened a subsidiary in Luxembourg that processed most of the loans to foreign non-bank customers.²⁷ Over the next few years, further branches and subsidiaries were opened in London, Paris, New York, Singapore and Hong Kong as well as in emerging offshore centers such as Bahrain and the Cayman Islands. With the end of the Bretton Woods system of fixed exchange rates, currency risks increased considerably, boosting the demand for new hedging instruments such as foreign currency options, spots, or forward contracts. Proprietary trading on security and exchange markets became a highly profitable source of income. Moreover, Deutsche Bank established itself as the leading international issuing bank, occupying a strong position especially in the Eurodollar market. This market had emerged in the 1950s when American banks opened dollar-denominated accounts at British - and later at other European - Banks to circumvent the supervision of the US Federal Reserve Board.²⁸ The Eurodollar accounts fueled the emergence of a rapidly growing capital market. Deutsche Bank was particularly engaged in the issuance of large international bonds, often as a leader of bank consortia. In 1975, Deutsche Banks' share of Eurobonds traded worldwide accounted for more than 12 per cent.²⁹ The bank also became heavily involved in redirecting petrodollars from the oil-exporting countries into global financial circuits. By the end of the 1970s, international business represented more than 40 per cent of Deutsche Bank's activities.³⁰

Within the banks' management, awareness of rising international exposure grew. The almost entirely unregulated Eurodollar market with its overheated liquidity was seen as a particular danger, especially as this market was largely based on short-term interbank

²⁶ HADB, V10/47: Thierbach to Ullrich, July 22, 1966.

²⁷ HADB V1/574: Report of Dr. Guth, Meeting of the Supervisory Board, October 25, 1978, p. 6.

²⁸ *G. Burn*, The State, the City and the Euromarkets, in: Review of International Political Economy 6, 1999, p. 225-261; *C. Schenk*, The Origins of the Eurodollar Market in London: 1955-1963, in: Explorations in Economic History, 35, 1998, p. 221-238.

²⁹ HADB, V1/574: Report of Dr. Guth, Meeting of the Supervisory Board, October 27, 1976, p. 10; HADB, B733: Michael von Brentano, Investment Banking Activities in Europe, 1989.

³⁰ HADB, V1/574: Report of Dr. Guth, Meeting of the Supervisory Board, October 25, 1978, p. 6; see also *Ch. Kopper*, The recycling of Petrodollars, in: Revue d'économie financière 1, 2009, p. 37-46; *F. Sattler*, Durchbruch zum „Finanzmarktkapitalismus“? Nixon-Schock, Ölpreiskrisen und die Finanzialisierung des globalen Ölmarkts, in: *J.-O. Hesse et al.* (eds.), Moderner Kapitalismus. Wirtschafts- und unternehmenshistorische Beiträge, Tübingen 2019, p. 493-510

transactions.³¹ Bank-to-bank payments under volatile exchange rates engendered serious risks, as the failure of Herstatt Bank in June 1974 made clear when thousands of depositors lost their savings. Herstatt, a private investment house based in Cologne, had invested high sums in foreign exchange markets. In summer 1974 it had accumulated losses of 64 million DM, which consumed 89 per cent of the bank's equity. The Herstatt crisis set off alarm bells on the management floors of Deutsche Bank, given that other German institutions such as the Hessische Landesbank and the Westdeutsche Landesbank had also suffered large losses. In June 1974, the major German credit institutes rejected the plan of a rescue of Herstatt, as proposed by the then president of the Bundesbank Karl Klasing. However, it was evident that the problem of increasing exchange rate risk affected the entire financial industry. Internal reports of Deutsche Bank referred to a „decline in morals and customs on foreign exchange markets“, something which was considered „incompatible with the conservative values“ of Deutsche. More than that, it was feared that „speculative activity on this scale may sooner or later give rise to administrative counter-measures and must damage the reputation of the banks as a whole“.³² For this reason, the bank – at least for some years – abstained from foreign exchange speculations by external brokers and did not participate in floating-rate bonds and roll-over credits, which became popular in the 1970s due to high inflation.³³

As expected, the bank crash of 1974 led to increased pressure for stricter regulation.³⁴ Already in September 1974, the Banking Supervisory Board introduced new rules for foreign exchange trading.³⁵ In order to prevent further legal interference, German commercial banks founded a special institute, the *Liquiditäts-Konsortialbank GmbH* in Frankfurt. It had the task of providing commercial banks with liquidity in the case of payment

³¹ F. H. Ulrich, The Eurodollar Market: A view from the Federal Republic of Germany, in: H. V. Prochnow, The Eurodollar, Chicago 1970, p. 175-187; see also G. Bell, The Euro-Dollar Market and the International Financial System, London 1973; B. Heinevetter, Liquidity Creation in the Euromarkets, in: Journal of Money, Credit and Banking, 11 1979, p. 231-34; E. Storck, Euromarkt. Finanz-Drehscheibe der Welt, Stuttgart 1995.

³² HADB, V1/560: Kunz to Thierbach, Nov. 1973.

³³ HADB, ZA 11/57: Report to Dr. Guth, May 3, 1976.

³⁴ Ch. Kaserer, Der Fall Herstatt 25 Jahre danach – Überlegungen zur Rationalität regulierungspolitischer Reaktionen unter besonderer Berücksichtigung der Einlagensicherung, in: Vierteljahresschrift zur Sozial- und Wirtschaftsgeschichte 87, 2000, p. 166–92.

³⁵ Geschäftsbericht der Deutschen Bundesbank für das Jahr 1975, p. 69-75 (<https://www.bundesbank.de/resource/blob/690146/c9d82f8fa7660117531ac6ecd3c4526c/mL/1975-geschaeftsbericht-data.pdf>).

defaults. Private bailouts had been unusual in the past, but they were now regarded as the means of choice to prevent a bank collapse. In line with this, the German Banking Association introduced a Deposit Protection Fund in November 1975. Almost all private banks contributed a fixed sum (one-third of the liable equity) to the fund in order to compensate depositors in case of a bank failure. Germany was thus a good example of a country where formal supervision by the state was partly supplanted by more regulation by banks themselves.³⁶

At the same time, the demand for international co-ordination and harmonization of supervision grew. While national legal standards still restricted transactions across borders, offshore finance and non-regulated interbank flows had amplified, with unpredictable effects on stability and risks.³⁷ In 1975, the G-10 member states founded the Basel Committee on Banking Supervision under the auspices of the Bank for International Settlements.³⁸ It enforced the monitoring of international financial markets and formulated some basic rules for the harmonization of supervision. These were just recommendations which were not binding on the member states, but they enhanced the awareness of new financial risks, for example, regarding the rapidly expanding Eurodollar market which was mainly based on wholesale banking transactions. The management of Deutsche Bank took the dangers of financial globalization seriously, as several internal reports on the Eurodollar market document.³⁹ However, demands for greater government regulation were rejected.⁴⁰ The bank's line was that the financial institutes themselves would have to take sufficient precautions to contain new risks effectively.

³⁶ For a general account see *Ch. Kaserer*, Fifty Years of Financial Regulation in Germany, in: *A. Drach/Y. Cassis* (eds.), *Financial Deregulation: A Historical Perspective*, Oxford 2021, p. 101-120.

³⁷ *Bank of International Settlements*, *The International Interbank Market: A Descriptive Study*, *BIS Economic Papers*, n. 8., 1983; *K. Campbell*, *Euromarkets: The Age of the Hybrid*, in: *The Banker*, 134, 1984, p. 41-44.

³⁸ *C. Schenk*, *Summer in the City: Banking Failures of 1974 and the Development of International Banking Supervision*, in: *The English Historical Review* 129, 2014, p. 1129-1156; *D. Wood*, *Governing Global Banking: The Basel Committee and the Politics of Financial Globalisation*, London 2005, p. 48-50; for a general account of the BIS see *C. Borio et. al.* (eds.), *Promoting Global Monetary and Financial Stability. The Bank for International Settlements after Bretton Woods, 1973-2020*, Cambridge 2022.

³⁹ See i.e. HADB, V30/132: Economics Department, *Report on the future of Euromarkets*, November 1973.

⁴⁰ See HADB, Christians, 16.5.1979 *.

Indeed, Deutsche Bank began at this point to reorganize its internal accounting and risk management. Internal credit monitoring became not only stricter, but also more centralized. Until then, corporate loans had usually been granted by branches, but central offices and the Management Board (including the credit committee on the Supervisory Board) now became more directly involved in controlling large loans. The bank also started to monitor the debt condition of large corporate clients independently of specific loan requests,⁴¹ and the bank's foreign risk exposure was carefully monitored.⁴² In the following years, it introduced a new system of accounting and information flows, partly based on computerized data analysis. The Economics Department received new analytical resources and became more directly involved in operative and strategic decisions. In 1971, Franz-Josef Trouvain, a trained economist with a Ph.D. from the University of Marburg, was appointed director of the department. Trouvain had joined the bank in 1953 as personal assistant to the Board's spokesman Hermann-Joseph Abs and worked in the Economics Department for many years. He now received the title of *Chief Economist* and cooperated closely with Alfred Herrhausen, who had joined the Management Board in 1971. Herrhausen, an economist himself, regularly used reports and statistics from the Economics Department for both public speeches and internal statements.⁴³

Herrhausen and Trouvain agreed that a more professional economic research unit was indispensable for a leading financial institution such as Deutsche Bank. They increased staffing resources and reorganized the department, which was subdivided into six units with research competences on the general economic situation, foreign markets, different branches, etc. The department was also responsible for the bank's other information resources, including its library and archive.⁴⁴ In 1977, the bank centralized its archive which until then had been scattered in different places. The archive's main function was not to preserve historical documents – a separate historical archive had been founded for this purpose in 1961 – but to provide an up-to-date information system on business partners,

⁴¹ HADB, V1/558: Report to the Management Board, November 2, 1971.

⁴² HADB, V1/560: Blessing to Thierbach, February 2, 1972 (Survey of foreign exposure of Deutsche Bank).

⁴³ F. Sattler, Herrhausen. Banker, Querdenker, Global Player. Ein deutsches Leben, Munich 2019, p. 158-164 and 425-430; Trouvain not only provided internal reports for Herrhausen, but also published articles and books on general economic questions; see, for example F.-J. Trouvain, *Die internationale Verschuldung aus der Sicht der Banken – Ursachen, Probleme, Perspektiven*, Frankfurt a.M. 1986.

⁴⁴ HADB, V1/560: Organization Plan of Central Administration, May 25, 1973.

foreign markets, and statistical data.⁴⁵ A major task was to use evidence from the past for the new system of risk assessment. As we will see, this historical data would also be made use of in developing an internal country rating over the next years, in order to help evaluate the creditworthiness of sovereign debtors and make reliable predictions on inherent default risks. The reference to historical data reflected a general trend in economic forecasting where time series were used to calculate model parameters. While this approach had already been established in professional economic forecasting models beginning in the 1950s, banks only now began to analyze historical data thoroughly. While in Deutsche Bank, information from the archive had been used in the past for specific tasks, for example to provide information on the creditworthiness of business partners, it was now systematically integrated into the banks' risk assessments. The Economics Department assembled data from a variety of sources – both external institutions such as the Deutsche Bundesbank or the OECD, and internal accounts – and was more proactive in its research. While previously, it had drafted statements mainly in response to demands from Board members, it now regularly reported on international banking, financial markets, or the macroeconomic situation in different world regions. Trouvain himself also played a major role in the professionalization of corporate scientific counselling and banking research in Germany, for example as the chairman of the German Association of Economic Councils within the Confederation of Employers' Associations (BDA).

4. From Poland to Mexico: Banks and Sovereign Debt

Starting in the 1970s, financing sovereign debt became highly profitable for commercial banks.⁴⁶ While public debt had declined (or at least remained stable) in most countries during the post-war era, many governments in Europe and North America – but especially in developing countries – now began to face increasing budget and balance of payments deficits.⁴⁷ Structural changes such as the expansion of welfare expenditure went hand in hand with the increasing cost of oil, economic stagnation, and unemployment. Financing

⁴⁵ HADB, ZA16/145: Report to Dr. Guth, September 30, 1977.

⁴⁶ See *L. Rischbieter*, *Risiken und Nebenwirkungen. Internationale Finanzstrategien in der Verschuldungskrise der 1980er Jahre*, in: *Geschichte und Gesellschaft* 41, 2015, p. 465–493.

⁴⁷ *F. Sattler*, *Das Geschäft mit den Staatsschulden. Banken, Kapitalmärkte und die Securitization of Debt nach der Ölpreiskrise von 1973/74*, in: *Geschichte und Gesellschaft* 41, 2015, p. 418–446.

this debt via the capital market became more difficult, as soaring inflation made government bonds with long maturities unattractive. Many countries therefore introduced bonds with shorter maturities or inflation-indexed bonds.⁴⁸ Such strategies, however, required a developed domestic capital market and a well-established banking system. Poor countries in the Global South (especially those without oil reserves) and many socialist states became increasingly dependent on foreign loans which were mostly provided by large commercial banks from Western Europe, Japan, or the United States.

Since the late 1950s, Deutsche Bank had regularly placed bonds of foreign municipalities, governments, and public corporations onto the German capital market. The bank also took a leading role in issuing large bonds for international development agencies such as the World Bank or the Inter-American Development Bank.⁴⁹ In 1968, sovereign bonds accounted for 75 per cent of the bank's issuance volume, while corporate bonds represented only 25 per cent.⁵⁰ The bank considered the risk of such bonds manageable, even though in some cases the securities could not be entirely placed on the capital market. Deutsche Bank then had to temporarily put them onto its own books, often below par.⁵¹

Until the late 1960s, banks had mainly funded the sovereign debt of OECD countries. This now changed profoundly. Deutsche Bank became involved in large credit operations in the Soviet bloc. In 1970, it was the lead bank in a German consortium that funded a 1.2 DM billion gas pipeline project in the Soviet Union. Even though the conditions of this credit were not very attractive, given a maturity of 12 years with an interest rate of only 6.25 per cent, Deutsche Bank was eager to lead the consortium for strategic reasons, as this credit looked like path to further credits.⁵² In fact, by 1978, three more large loans with similar terms had been granted to the Soviet Union under the direction

⁴⁸ See for example the case of Italy: *A. Nützenadel*, State, Banks and the Financialization of Sovereign Debt in Italy since the 1970s, in: *N. Barreyre/N. Delalande* (eds.), *World of Public Debts: A Political History*, Basingstoke 2020, p. 405-25.

⁴⁹ *A. Nützenadel*, Between State and Market, 1914-1998, in: *W. Plumpe/A. Nützenadel/C. Schenk*, Deutsche Bank. The Global Hausbank 1870-2020, London 2020, p. 422.

⁵⁰ Deutsche Bank, Geschäftsbericht für das Jahr 1968, p. 29f.

⁵¹ This happened already *Nützenadel*, Between State and Market, p. 421-2.

⁵² HADB, ZA1/1179: Report Lins (1971); ZA1/155: Speech Ulrich, March 22, 1973.

of Deutsche Bank. In 1973, the bank opened an office in Moscow to enhance its position as a major financial partner of the USSR and other COMECON states.⁵³

While the Soviet Union had been able to improve its international payment position in the late 1970s due to its high oil revenues, the other COMECON states had come under increasing financial trouble. Since the early 1970s, Deutsche Bank had constantly expanded its credit lines, especially to Poland and the GDR, and offered these countries various facilities such as Eurocredits, medium-term investment loans, trade financing through forfaiting, or even the issuance of long-term bonds. Poland had already drawn on Eurocredits of around \$500 million in 1975 and was thus only just behind the Soviet Union with a volume of \$750 million. Deutsche Bank's lending policy was based not least on political considerations. Since the early 1970s, economic relations with Poland and the GDR had been an important element of Bonn's policy toward the East and were promoted by government measures. In 1973, for example, the federal government promoted loans to Poland with an interest subsidy, while the GDR was granted an interest-free overdraft (*Swing*) of DM 600 million to fund trade between the two German states.⁵⁴

However, against the background of a global economic recession, the foreign debts of the COMECON states reached dramatic levels in the 1970s. Between 1971 and 1981, they increased from \$8 billion to \$95 billion, while annual debt service grew from \$1.6 billion to \$24 billion. These were alarming figures in view of the high foreign trade deficits, which amounted to \$4 billion for the entire COMECON area in 1981.⁵⁵ High interest rates aggravated the problems of the debtor states. In Poland, the economic situation deteriorated during the political crisis in 1981 when GDP dropped by 13 per cent, while the country accounted for 30 per cent of all foreign debt in the COMECON states.⁵⁶

⁵³ HADB, ZA47/567: Taubner: Report on loans for pipelines, 1970-1982, July 1985, p. 6; see also *Nützenadel*, State, p. 439-442; *M. Pohl*, *Geschäft und Politik. Deutsch-russisch/sowjetische Wirtschaftsbeziehungen*, Mainz 1988, p. 142-159.

⁵⁴ HADB, ZA1/1179: Burghard to Linss, November 26, 1973; see also *F. W. Christians*, *Wege nach Rußland. Bankier im Spannungsfeld zwischen Ost und West*, Hamburg 1989, p. 69-79.

⁵⁵ Report Seitz on the International Debt Crisis, in: *Akten zur deutschen Auswärtigen Politik 1982*, vol. 2, Munich 2013, p. 1189-1194; see also *W.R. Cline*, *International Debt Reexamined*, Washington DC 1995, p. 26-29, 80.

⁵⁶ HADB, ZA1/1178: Steves on the economic situation in Poland, December 31, 1981; see also *F. Bartel*, *Fugitive Leverage: Commercial Banks, Sovereign Debt, and Cold War Crisis in Poland, 1980-1982*, in: *Enterprise & Society* 18, 2017, p. 72-107.

Deutsche Bank's economic research department had already warned about Poland's impending insolvency in 1980 and placed the country in the worst group in its internal risk assessment. At the end of 1981, Poland's foreign debt of \$23 billion put it in third place among the group of less developed economies, after Brazil and Mexico.⁵⁷ The bank also had substantial exposures to the other countries of Eastern Europe, especially Yugoslavia and Romania. A further reason for concern lay in the fact that COMECON no longer formed a "unit of borrowers". Each country now had to cover its own liabilities. The „umbrella theory" of the 1970s had led many Western banks and governments not to examine the creditworthiness of individual countries too rigorously, expecting that the USSR would step in as „lender of last resort". Against the background of the growing disintegration of the Eastern bloc, however, this assumption had become questionable.⁵⁸ The debt crisis in Eastern Europe was also critical for Deutsche Bank because a large part of its loans to the COMECON countries had been directed to the state banks of these countries. When Poland suspended payments to foreign creditors in 1981, Deutsche Bank had an exposure of around half a billion DM in this country, for which adjustments were necessary.⁵⁹

Poland's liquidity problems marked the beginning of a global debt crisis that quickly affected the developing countries of the Global South.⁶⁰ The reasons were similar almost everywhere. Many poor countries had become heavily indebted in the early 1970s, when surplus liquidity from oil-producing countries entered the international financial system and capital became available on favorable terms.⁶¹ Low interest rates and lax lending by European and American banks played an important role in this. Banks granted large loans to developing countries in Asia, Africa, and Latin America, which had high growth rates and were on the threshold of industrialization.⁶² However, many of these countries ran into payment difficulties in the early 1980s when interest rates rose, and

⁵⁷ HADB, ZA1/120: Economic Department, Report on the European COMECON states, May 1981.

⁵⁸ HADB, ZA1/1183: Martiny, Report on financial problems with countries in Eastern Europe, September 5, 1980, p. 2.

⁵⁹ HADB, V1/575: Guth in meeting of supervisory board, July 9, 1981, p. 4; HADB, ZA1/82: Marx/Krumnow, Gentlemen's Agreement on financial consolidation, February 2, 1984.

⁶⁰ See *R. Devlin*, *Debt and Crisis in Latin America: The Supply Side of the Story*, Princeton 1993.

⁶¹ *C. A. Altamura*, *European Banks and the Rise of International Finance. The Post-Bretton Woods Era*, New York 2017, p. 88-136.

⁶² *Altamura*, *Banks*, p. 195-256; see also *Ph. A. Wellons*, *Passing the Buck. Banks, Governments, and Third World Debt*, Boston 1987; *W. A. Darity/B. L. Horn*, *The Loan Pushers: The Role of Commercial Banks in the International Debt Crisis*, Cambridge, Mass. 1988, p. 74-75.

energy prices slowed economic growth after the second oil price shock in 1979. Especially countries without oil reserves now faced insoluble difficulties. Between 1971 and 1981, the gross debt of developing countries had risen from \$87 billion to \$524 billion, and debt service in 1981 amounted to \$112 billion.⁶³ Among the defaulting countries figured African states such as Tanzania, Ghana, Libya, and Zaire who urgently required debt rescheduling. Turkey and many Eastern European countries were also at risk. Even more serious, however, was the situation in Latin America, namely in Mexico, Brazil, and Argentina. Given their size and international exposure, a sovereign debt default would represent a systemic risk for global finance. Like many other European and North American institutes, Deutsche Bank had expanded its credit lines in Latin America since the early 1970s, although with lower rates than other international banks. In November 1977, for example, the bank participated in an international consortium with 113 other financial institutions that arranged a loan of \$1.2 billion for Mexico.⁶⁴

Already in the wake of the Polish crisis, Deutsche Bank had started to build reserves. In retrospect, the high write-downs in Eastern Europe proved to be an advantage for the bank, as it began earlier than other institutes to reduce its international exposure. At the end of 1980, the Board of Management decided to transfer a "substantial part of the operating profit to risk provisioning."⁶⁵ However, it soon became apparent that the crisis in Latin America would demand value adjustments in different dimensions. In October 1983, the bank had an exposure of DM 7.6 billion in 27 highly indebted developing countries. Brazil (DM 1.7 billion), Mexico (DM 1.1 billion), and Argentina (DM 0.8 billion) accounted for the largest share. Lower but still substantial credits in a range of DM 300-600 million had been granted to Iraq, Poland, Venezuela, Yugoslavia, Chile, Nigeria and Turkey. Even though Deutsche Bank's exposure was lower than that of other German institutes,⁶⁶ substantial value adjustments were indispensable. By the end of 1983, the banks' adjustments amounted to DM 2.6 billion. Internal reports listed 50 countries with payment difficulties, for which 30 debt rescheduling agreements

⁶³ Report Seitz on the International Debt Crisis, in: Akten zur deutschen Auswärtigen Politik 1982, vol. 2, Munich 2013, p. 1189-1194.

⁶⁴ *Nützenadel*, *Between State*, p. 444; see also *S. Alvarez*, *Mexican Banks and Foreign Finance: From Internationalization to Financial Crisis 1973–1982*, New York 2019.

⁶⁵ HADB, V1/575: Report of Christians in the Meeting of the Supervisory Board, 31.3.1981, S. 2.

⁶⁶ HADB, V29/6: Storf, Report on the international debt crisis, September 15, 1986, p. 6.

involving the IMF, the banks and numerous governments had been initiated in the fall of 1983.⁶⁷ Obviously, this did not mean that all problems had been resolved. In 1984, the Economics Department predicted that the net borrowing requirements of developing countries from banks would increase by about 40 percent by 1990. This would result in a further adjustment of about DM 1.6 billion for Deutsche Bank, without considering the potential losses of foreign subsidiaries.⁶⁸

5. International Risk Management and Country Rating

The risks of the Eurodollar markets and Deutsche Bank's increasing exposure in countries with high sovereign debt and balance of payment deficits were observed with growing concern. How should the bank deal with these risks? Internal discussion about a more elaborate system of risk management began as early as 1977. Since Deutsche Bank was often the leading bank in large, syndicated credits, a thorough assessment of specific country risks related to the banks' exposure was essential. Until then, information about the specific risks of syndicated lending had usually been gathered by an account manager along with experts from the central credit department. However, most credits had been granted on a case-to-case basis, and often the risk assessment had not been binding. Especially in the case of very large credit consortia, prestige and market strategy had been considered more important than the alleged default risks.⁶⁹ Moreover, Deutsche Bank's International Department, which was responsible for monitoring country risks, had lacked the statistical and economic expertise to carry out systematic risk assessments. Essentially, it had compiled a country documentation based on eclectically collected data and the travel reports of bank representatives abroad. At this point, a more coherent approach was necessary. The idea of introducing a joint risk assessment scheme under the auspices of the Federal Association of German Banks was dropped, given that German commercial banks were in fierce competition with each other. The management of Deutsche Bank was determined not to give any detailed information on its risk assessment system to other

⁶⁷ Ibidem; see also *J. M. Boughton*, *Silent Revolution: The International Monetary Fund, 1979 – 1989*, Washington, DC 2001; *M. S. Copelovitch*, *The International Monetary Fund in the Global Economy. Banks, Bonds, and Bailouts*, Cambridge/ New York 2010.

⁶⁸ HADB, V30/860: Blessing, Report on credit requirements, 1984-1990.

⁶⁹ HADB, V30/351: Memorandum Blessing and Gaertner, October 26, 1977; Blessing and Trouvain to Guth and Herrhausen, August 12, 1977.

banks.⁷⁰ Moreover, existing statistical data on financial risks provided by the Bundesbank or international agencies such as the World Bank, the International Monetary Fund and the Bank for International Settlements (BIS) often lacked the information required for a more detailed risk survey. The BIS, for instance, only included long-term loans in its statistical accounts, while the commercial banks reported only national data to the BIS. This meant that the exposure of foreign subsidiaries and branches was not considered, although they were highly relevant for the overall exposure of international bank groups.⁷¹

Against this background, Deutsche Bank introduced a new comprehensive risk assessment scheme in the autumn of 1977, produced by a joint effort of the bank's Economics and International Departments.⁷² The new rating system comprised a total of 60 states, but the focus was on 47 *developing states* including the *state-trading countries* and the entire Southern European region. These 47 countries accounted for about 40 per cent of the bank's entire foreign exposure. For each country, the overall risk was measured using a scheme of seven different indicators: the country's debt service burden, net borrowing requirements, currency reserves, economic growth, foreign trade structure, export expectations and foreign debt. Each country was then assigned to one of five risk categories and re-evaluated annually. Based on the risk categories, limits on lending were introduced for each country. Other important innovations followed. For example, the numerous liabilities were now centrally accounted for, which was technically challenging in view of Deutsche Bank's complex group structure with its many foreign branches, subsidiaries, and participations.⁷³ Foreign exposure included not only loans, but also acceptances, securities and placements which represented claims on residents of a specific country. Centralized accounting allowed Deutsche Bank for the first time to calculate not only specific country risks, but also the bank's aggregate foreign exposure.

⁷⁰ However, the economics departments of the European Banks' International Company (EBIC) met regularly to exchange views on the risk assessment of specific countries; see HADB, V5/89: EBCI Foreign Managers Meetin in Amsterdam, January 16, 1978.

⁷¹ HADB, V30/351: Hollenberg (ZIA) to Herrhausen, Thierbach and Kopper, August 21, 1978.

⁷² HADB, ZA16/149: Guth to Herrhausen, Thierbach and Kopper, May 25, 1977; L HADB, V30/351: Blessing and Trouvain, Report on Cooperation between Economics and International Department, August 12, 1977.

⁷³ An overview of the foreign participations is provided in: HADB, ZA47/624: Report, March 14, 1977.

However, the early versions of the new rating system had substantial weaknesses, including that country limits were non-binding for credit decisions. Additionally, it became apparent during the debt crisis that the rating only incompletely captured the real lending risks. For example, a breakdown of the different maturities of liabilities was not possible. Many structural economic and political risks were underestimated even though they had a huge impact in developing countries. For example, countries with a high level of insecurity such as Mexico, Argentina and Brazil had been grouped in the medium risk category (III). Mexico was even upgraded in June 1980 and was in category II until shortly before the outbreak of the debt crisis.⁷⁴ Wilfried Guth, a member of Deutsche Bank's Board of Directors, stated in October 1982 that the „combination of many negative factors in the case of Mexico had not been foreseen.“⁷⁵

These “negative factors” included such external shocks as the second oil price crisis and the impact of the monetary revolution in the USA in 1979. Under its new chair Paul Volcker, the American Federal Reserve Board raised its interest rates to a record of 20 per cent to end inflation.⁷⁶ This shock treatment had global effects and put enormous pressure on countries with high foreign debt and balance of payment deficits. However, the US economy also suffered under the monetary restrictions with rising unemployment, a large number of corporate insolvencies, and credit defaults. For Deutsche Bank, the „Volcker shock“ was sudden and unexpected, and made a reform of existing internal risk assessment schemes indispensable.

In 1982, the Economics Department presented an improved version of the international country rating system. The number of risk groups was increased to seven, and the number of countries under scrutiny to 129.⁷⁷ While industrial countries had until then been excluded from risk monitoring, they could now be monitored as well, even though

⁷⁴ HADB, V29/5: Economics Department, Report on Latin America, January 8, 1980; Blessing to Management Board, June 2, 1977; HADB, ZA16/x149: Economics Department, Report on trends of economic development until 1982, September 1977; HADB, V29/5: Economics Department, Report on Country Risks, December 1981, p. 5.

⁷⁵ HADB, V29/5: Trouvain to Guth, July 27, 1982.

⁷⁶ *M. Goodfriend/R. King*, The Incredible Volcker Disinflation, in: *Journal of Monetary Economics* 52, 2005, p. 981-1015.

⁷⁷ HADB, V29/5: Economics and International Departments, Report on Country Risks and Exposure Rules, January 26, 1982.

in practice the focus remained on developing countries. The intervals between the evaluation of the risk assessment were reduced. Instead of one, there were now three evaluations per year. A much more rigorous assessment of risks was now undertaken. The number of risk categories was increased to twelve. Macroeconomic indicators and statistics were more carefully evaluated in making predictions about a country's potential performance. Finally, political, social, and environmental risks were more carefully considered in the new scoring system. This included a variety of factors such as the quality of the legal system and public institutions, social stability, entrepreneurial culture, climate and environmental problems, the mental openness of the population to foreign influences and a country's involvement in military, ethnic or religious conflicts. Assessments now addressed not only short-term, but also long-term risks based on a structural analysis of each country's economic performance. Each overall country score was now subdivided into 12 categories within three groups, measuring the short-term and long-term economic and political risks of each country. The newly elaborated rating scheme led to a reshuffling of risk groups. For example, Brazil, Mexico, and Argentina were now classified in the highest risk group VII, and numerous other countries moved into a more critical category. By 1987, group VII had grown to include 29 countries, making it by far the largest category within the system.

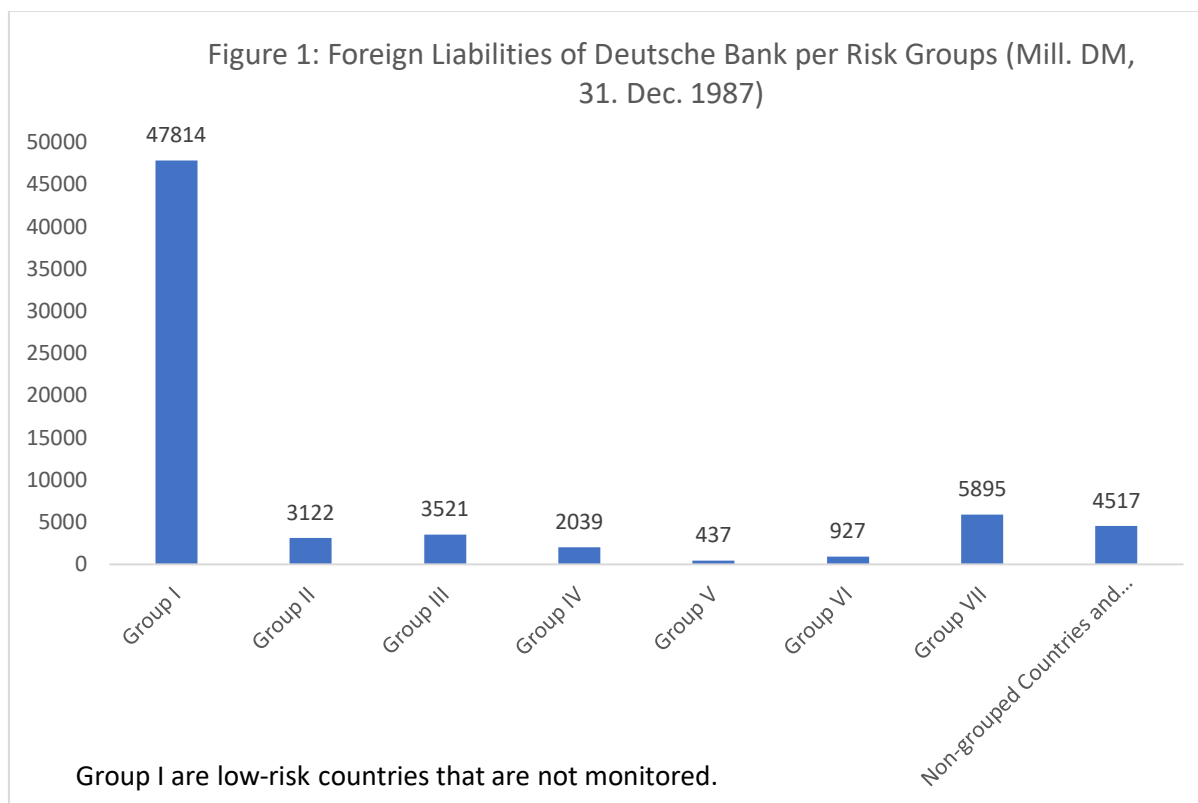
An important innovation of the new rating system was the expanded time horizon. It was intended to consider not only current risks, but also long-term changes in the risk structure of each borrowing country. A country's past performance – including its record of servicing and repaying external debt – was seen as an important indicator for future default risks.⁷⁸ For this reason, even small changes over the last 5 years were carefully evaluated to detect possible threats in advance.⁷⁹ Moreover, the bank developed its own phase model which linked changes in the various indicators to specific moments in a country's debt crisis. This model distinguished 8 phases which all countries typically had to pass through during a sovereign debt default, and recommended counter strategies for the bank in order to limit the effects of a credit default on the balance sheet.⁸⁰ In a sense, the static risk analysis that had been used until then was to be turned into a dynamic „early

⁷⁸ See HADB, ZA47/566: Christoph von der Decken (Dresdner Bank), Report on Country-Risks in Eastern Europe (1982).

⁷⁹ See, for example, HADB, V29/6: Economics Department, Report on Italy, May 30, 1986.

⁸⁰ HADB, ZA 16/149: Economics Department, Report on Country Risks, March 1981.

warning system“ to predict debt and payment problems, so that the bank could adjust its lending practice accordingly.⁸¹



Source: HADB, ZA18/2: Schultze-Kimmler, Presentation on International Activities, April 19, 1988.

In addition to producing a detailed quarterly report of all countries' risks, the Economics Department also drew up more specific statements. These addressed the potential insecurity of a region and the impact of cluster risks or spill-over effects that arose from the default of one country.⁸² In this regard, the economists relied on complex macroeconomic forecasting models, often with a time horizon of 6 to 10 years. For example, a long report drafted in 1984 estimated the expected credit demand of 27 high-risk countries up to the year 1990.⁸³ The forecast was linked to projections of key macroeconomic parameters

⁸¹ HADB, V29/5: Trouvain to Guth, July 27, 1982.

⁸² See HADB, ZA1/82: Economics Department, Report on different alternatives on balance of payment evolution in development countries until 1982; HADB, V29/6: Economics Department, Report on the consequences of falling oil prices of high indebted countries, February 2, 1986; HADB, V29/6: Economics Department, Report on discussions about interest rates, July, 23 1987.

⁸³ HADB, V30/860: Economics Department, Report with economic model on the credit demand of countries for which Deutsche Bank has built up risk reserves 1984/90der Länder, August 1984.

such as interest rates, inflation expectations and a country's balance of payments. Again, historical data was used for the predictions. The results were used to estimate the potential impact on the bank of a credit default under various macroeconomic scenarios. Moreover, the study supplied the data to calculate Deutsche Bank's reserve provisions for high-risk countries.

6. Theory vs. Practice: Risk Management and Bank Competition

The statistical analyses and forecasts provided by the Economics Department were not only of academic interest but also served for operational decision-making by the bank's governing bodies. Alfred Herrhausen, who became the spokesman of the Management Board in 1985, frequently drew on the Economics Department's studies and often quoted them in international negotiations, public speeches, and interviews.⁸⁴ He also encouraged more systematic planning of all international activities and expanded the bank's analytical resources. While individual investors, he argued, were able to correct choices and to learn through trial and error, banks required more sophisticated and coordinated strategies of decision-making.⁸⁵

The new system that risk management was meant to be the core of was designed not only to determine countries' risks and lending limits, but also to calculate the bank's overall exposure. The objective was to integrate the banks' risk management with the structure of the international lending portfolio. Some basic rules were now established for international lending. For example, a single country's liabilities were limited to 5 per cent of total foreign exposure, while total interest defaults were not to exceed 20 per cent of the previous year's operating profits. The bank's total foreign exposure was not to exceed half of its total lending.⁸⁶

The professionalization of economic risk surveying thus had an increasing impact on lending practices and liability management. Stefano Battilosi has argued that the reor-

⁸⁴ *Nützenadel*, *Between State*, p.

⁸⁵ *A. Herrhausen*, *Koordinierung und Steuerung des Konzerns*, in: *Deutsche Bank aktuell* 112 (1986), p. 13-15

⁸⁶ HADB, V29/5: *Economics and International Departments, Report on Country Risks and Exposure Rules*, January 26, 1982.

ganization of liability and portfolio management was the most important financial innovation that banks introduced during the 1970s and 1980s.⁸⁷ In this process, banks began to analyze the impact of systemic risks on their own balance sheets.

At the same time, risk and liability management became an important strategy in the fierce international competition between commercial banks. Much of this strategy was based on wholesale interbank funding in the Eurodollar market. As this market was still unregulated and thus considered a potential source of considerable balance sheet risks, banks began to monitor their exposure more carefully.

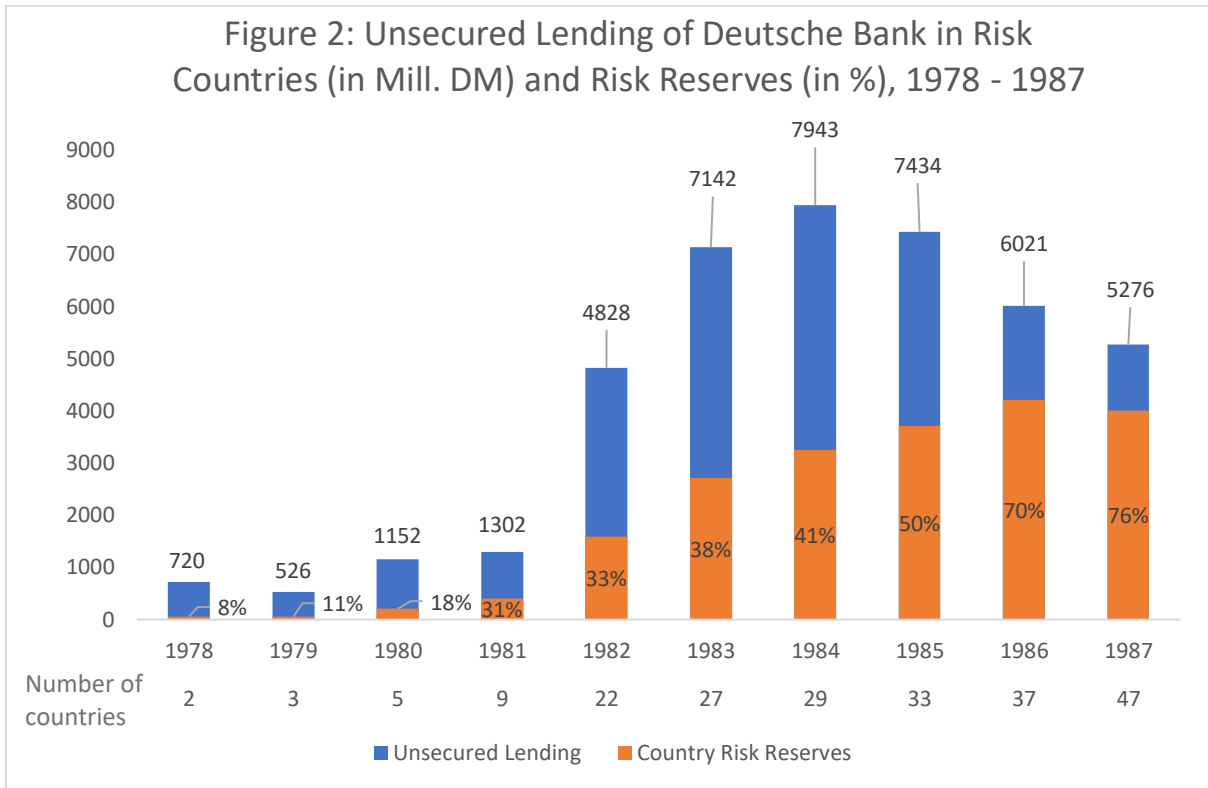
Deutsche Bank was a forerunner in the establishment of new forms of risk and liability management. In 1980, American bankers were already deeply impressed by the sophisticated risk evaluations undertaken by Germany's leading bank.⁸⁸ With the organizational reform of 1986, Deutsche Bank created two new areas at the management level, responsible for liability structuring and risk supervision.⁸⁹ Nevertheless, the bank was not willing to co-operate with other banking houses or to reveal details of its internal risk monitoring, as this was considered a commercially sensitive advantage. Indeed, the institute was able to consolidate its foreign exposure after 1982 without losing its strong position in international lending. It slowly reduced its unsecured foreign liabilities in high-risk countries, while it increased reserves to cover foreign default risks.⁹⁰ The number of countries for which the bank introduced reserves grew from 2 in 1977 to 47 in 1987 (Figure 2). At the same time, the maturity of aggregate exposure was reduced step by step. By 1987, the bank had shifted a large part of its foreign claims to short-term interbank loans. It was now able to reduce more than 60 per cent of its foreign engagements within three months (Figure 3). Also, the bank had much lower exposure in high-risk regions. Only 25 per cent of its foreign credits were in developing and socialist states (Figure 4).

⁸⁷ *S. Battilossi*, 'The Eurodollar Revolution in Financial Technology. Deregulation, Innovation and Structural Change in Western banking in the 1960s-70s', in: *A. Kyrtis* (ed.), *Financial Markets and Organizational Technologies. System Architectures, Practices and Risks in the Era of Deregulation*, London, p. 29–63; see also *E. J. Kane*, 'The Three Faces of Commercial Bank Liability Management', in: *M.P. Dooley/H. M. Kaufman/R. E. Lombra* (eds), *The Political Economy of Policy-Making*, Beverly Hills, London 1979, p. 149-74; *S. Battilossi/Y. Cassis* (eds.), *European Banks and the American Challenge: Competition and Cooperation in International Banking under Bretton Woods*, New York 2002.

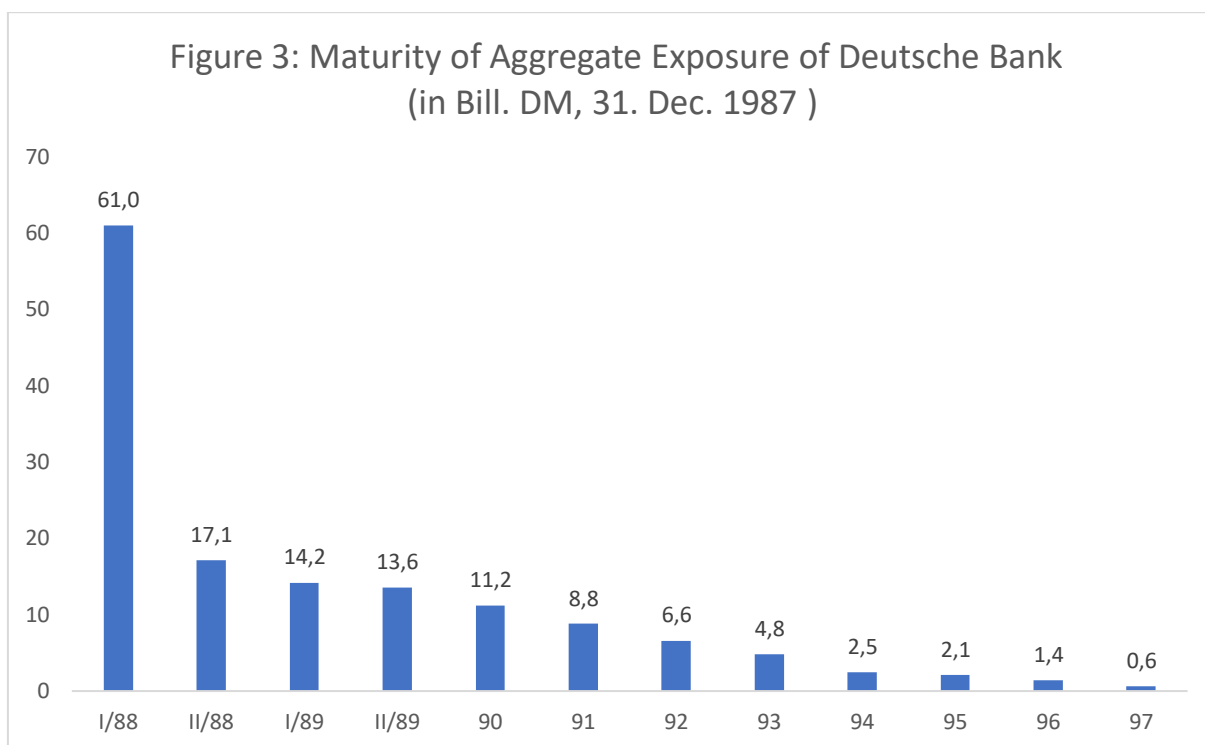
⁸⁸ *Sattler*, *Geschäft*, p. 439.

⁸⁹ *Nützenadel*, *Between State*, p.391.

⁹⁰ HADB V30/351: Economics Department, Country distribution of foreign credits, 1982 December.



Source: HADB, ZA18/2: Schultze-Kimmler, Presentation on International Activities, April 19, 1988.



Source: HADB, ZA18/2: Schultze-Kimmler, Presentation on International Activities, April 19, 1988.



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German banks were involved in many international credit negotiations with debtor countries. Since many loans had been granted through large consortia of several hundred banks, the creditors had to coordinate among themselves, which was not easy in view of diverging interests.⁹¹ For example, some U.S. banks were so heavily involved in Latin America that a quick debt cut would have driven them into insolvency themselves. They therefore tried to delay negotiations to gain time. Banks with lower exposure, on the other hand, were interested in reaching a quick agreement to reorder their balance sheets through a rapid write-down. As already mentioned, this was a strategy of Deutsche Bank, which – unlike many US banks – had no high single country exposure. In addition to the divergent interests of the creditors involved, there were a variety of legal, financial, and political disputes that often led to long and difficult negotiations. To improve coordination, the creditor banks therefore joined together in an informal body - the London Club - which has regularly led negotiations with the debtor states since the 1980s. As a rule, the "Club" appointed a committee headed by a creditor bank for this purpose. This prestigious task was often performed by large American financial institutions such as Citibank or Bank of America, but also by European institutions including Deutsche Bank.

For Deutsche Bank, this position allowed it to also propose more general solutions to the debt problem. At the annual meeting of the World Bank and IMF in Washington in September 1987, Alfred Herrhausen initiated an international debt cut for developing countries. What appeared to be a generous gesture by Germany's largest financial institution was in fact a strategic move, given that the bank was far less engaged in Latin America than many US houses.⁹² In any case, it had become unlikely that these countries would ever fully repay their loans. There was no alternative to an overall debt restructuring. Herrhausen suggested that deferred loans should be transformed into debt-to-credit-swaps with guarantees from the World Bank or the IMF – an initiative that was supported by US Treasury Secretary Nicholas Brady and finally accepted by most other commercial banks.⁹³

⁹¹ For an overall analysis see *E. Truman*, The road to the 1980s write-downs of sovereign debt, in: *Financial History Review*, 28, 2021, p. 281-299.

⁹² *Sattler*, Herrhausen, p. 595.

⁹³ *A. Herrhausen*, Die Zeit ist reif – Schuldenkrise am Wendepunkt (1989), in: *K. Weidemann* (ed.), *Alfred Herrhausen. Denken – Ordnen – Gestalten. Reden und Aufsätze*, Berlin 1990, p. 275-287; see

Due to its provisions to capital against expected losses and a highly diversified foreign exposure, Deutsche Bank managed to survive the crisis relatively unscathed. For example, in the case of Mexico – which in 1989 still had \$53 billion in uncovered foreign liabilities – Deutsche Bank had to contribute only a share of DM 170 million out of a total of \$7.7 billion that had to be raised by the banks under the Brady Plan.⁹⁴ All in all, the direct financial impact of the debt crisis was less severe for the bank than the uncertainty that paralyzed global capital markets in this period. Until the end of the 1980s, the bank had been able to consolidate its position in international lending. In 1989 alone, Deutsche Bank participated in the issuance of 563 Eurobonds with a value of \$108 billion. It also acted as lead manager for many large bonds such as the World Bank's first global bond issue totaling \$1.5 billion.⁹⁵

Conclusion

The case of Deutsche Bank illustrates that establishing an overall risk structure is a key business strategy for banks. Rising market volatility, exogenous shocks and global political uncertainty have provided strong incentives for banks to invest in their information resources and to build up a comprehensive risk management.⁹⁶ As the sovereign debt crisis threatened international commercial banks, diversification of country exposure helped banks to survive. Competition between banks played an important role in this process. Deutsche Bank had been refining its own risk system in the wake of the Herstatt crash and had substantially reduced its foreign exposure in the early years of the sovereign debt crisis. The bank's strong engagement in Poland and other Eastern European coun-

also *J. Clark*, Debt reduction and market reentry under the Brady Plan, in: Federal Reserve Bank of New York Quarterly Review, Winter 1993–4, p. 36–62.

⁹⁴ HADB ZA/01/x2853: Report on Mexiko, August 29th 1989.

⁹⁵ Deutsche Bank, Geschäftsbericht 1989 (https://www.bankgeschichte.de/files/documents/facts-figures/deutsche-bank/Geschaeftsbericht_1989.pdf?language_id=3, 7.8.2022), S. 24.

⁹⁶ *L. Pastor/Lucian Taylor/P. Veronesi*, Entrepreneurial Learning, the IPO Decision, and the Post-IPO Drop in Firm Profitability, in: Review of Financial Studies 22, 2009, p. 3005–3046; *L. Pastor/P. Veronesi*, Learning in Financial Markets, in: Annual Review of Financial Economics 1, 2009, p. 361–381; see also *C. Schenk*, The Past as Practice or Parable? Anticipating Financial Crisis in the 1960s and 1980s, in: *Cassis/Schenk* (eds.), Remembering, p. 82–104.

tries triggered a reform of internal risk assessment and lending limits for high-risk countries. This might explain why Deutsche Bank – like other German institutes – had a lower risk profile than many US or British banks which had no exposure in Eastern Europe.⁹⁷

This case study provides evidence that banks use historical information for their expectation formation. The introduction of new risk assessment schemes was strongly influenced by the experience of rising insecurity in financial markets. Moreover, the evaluation of past repayment records played an important role in determining the lending practice of banks. The case of Deutsche Bank thus confirms older empirical studies of financial memory. They indicate that banks evaluate the „credit history“ not only of individual or corporate clients, but also of states. However, the learning effect from history lasts or only a relatively short time. As we know from empirical studies, the memory of the sovereign debt defaults before the 1930s had only a small impact during the crises of the 1970s and 1980s.⁹⁸ Interestingly, banks not only integrated large shocks or credit defaults into their historical memory, but also systematically monitored incremental changes in past risks. The new indicator system combined the analysis of historical data with an evaluation of a variety of other information sources. The aim was to achieve systematic medium-range forecasts of country risks and foreign exposure.

This paper shows that financial actors rely on both past and present information in forming expectations. What distinguishes them from individual investors is the fact that they constantly review and update their beliefs after obtaining new information. Professional economic forecasting in combination with a comprehensive system of risk and liability management are important features of banks' expectation formation. The capacity to learn systematically from past errors and to use that experience in their forecasting provides banks with a key advantage over individual investors who often merely extrapolate past developments. Banks – like individual investors – are affected by past experiences, but they usually combine this with more sophisticated forms of information-based learning.

⁹⁷ See HADB, ZA47/566: Christoph von der Decken (Dresdner Bank), Report on Country-Risks in Eastern Europe (1982).

⁹⁸ Ş. Özler, Have Commercial Banks Ignored History?, in: The American Economic Review 83, 1993, p. 608-620.

However, learning from history also has its pitfalls. Two reasons are responsible for this. Firstly, the time horizon of experience-based learning is usually limited to a short period of 5-10 years. Recent events are thus often overweighted. Secondly, the instruments of financial institutions to assess risks and form business expectations are usually unchanging once established. Learning from the past is thus based on an existing set of cognitive techniques and models. This might have the effect that new systemic risks are not fully recognized as the established risks schemes are kept in place. Again, Deutsche Bank is a good case in point. The new country exposure scheme established in the 1970s and 1980s concentrated on the Global South and the COMECON area. Except for Italy, no other OECD country was ever included in one of Deutsche Bank's exposure categories, and, consequently, no credit limits were ever applied to industrial countries. The sovereign debt crises of the 1970s and 1980s would come to have detrimental effects on risk management as well, as the new financial risks emerging throughout the industrialized world from the late 1980s were to be systematically underestimated.⁹⁹ Historical experiences are therefore an ambivalent forecasting instrument as new risks are often not fully addressed.

⁹⁹ This was not even changed by the stock-market crash of 1987; see *L. Quennouëlle-Corre, The 1987 Stock Exchange Crash in Historical Perspective: A Crisis Denied?*, in *Cassis/Schenk (eds.), Remembering*, p. 165-183.