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***Why it vanished in the US but survived in Germany  
during the stagflation period (1966–1983)***

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# The fate of the passbook

Why it vanished in the US but survived in Germany during the stagflation period (1966–1983)

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## **Abstract:**

*In his article, Sebastian Knake challenges the general assumption that traditional savings accounts in the US disappeared naturally as a result of the combination of interest rate regulation and extraordinarily high market interest rates during the stagflation period. By comparing the US experience with simultaneous developments in West Germany, he finds that the opportunity costs of owning a regular passbook were comparable in both countries. In contrast to the US case, however, the passbook remained a cornerstone of household saving in Germany. Drawing upon research in several bank archives in the US and Germany, Knake explains these divergent developments in terms of fundamental differences in how banks and their customers communicated over prices. In the US, a peculiar combination of regulative rules forced banks, and especially savings institutions, to aggressively promote new types of bank accounts that were introduced by federal regulation authorities, thereby increasing nominal interest rate expectations. In Germany, by contrast, banks confined information about advantageous investment opportunities to the smallest possible share of the customer base. These divergent communication strategies reflect a difference in the balance of power in the bank–customer relationship. German customers depended on their primary—and in most cases only—bank relationship to acquire information on alternative investments, while US customers could draw on several relationships with banks and savings institutions to obtain the relevant information. Thus, the fate of the passbook was sealed by the ability or inability of banks to keep their customers in the dark about the real opportunity costs of passbook saving.*

**Keywords:** Savings, Deposits, Interest Expectations, Portfolio Choice, Financial History, Passbook, Comparative History,

**JEL Classification:** G14, G21, N20, N22, N24

## 1. Introduction

In 1984, Charles Gibson, the head of the financial planning unit at the Philadelphia Savings Fund Society (PSFS)—at the time, the largest and oldest savings bank in the United States—tried to explain to the board why the PSFS had lost a large part of its deposits since the beginning of the decade. In doing so, Gibson provided a long-term overview of the developments in the retail deposit market, beginning his story with the situation only a few years prior:

Prior to this time, consumers had little choice where they would deposit their financial assets. They put them in a bank, usually the closest one to their home. Some consumers, who were more rate conscious, put their savings in thrift institutions where they received a quarter point more interest. This was the principal cause of the growth of PSFS and other thrifts. Deposits were usually in the form of passbook savings.<sup>1</sup>

Thus, there was a time when US households managed a part of their savings in a similar way as their German or Japanese counterparts did. As late as 1977, almost 80% of US households owned at least one ordinary savings account. At the time of Gibson's statement, however, this era had already ended. Within a few years, the practice of passbook saving had all but disappeared, and in 1986, the *American Banking Journal* jokingly likened passbooks to dinosaurs on the basis of both *species* being extinct.<sup>2</sup> The sudden death of the passbook in the US in the late 1970s and early 1980s stands in stark contrast to the experience of most European countries and especially to developments in West Germany, where the passbook remained the cornerstone of household saving until the end of the century.

At first sight, there seems to be a straightforward explanation for this striking divergence. In the literature on the US case, the decline of the passbook is linked to the late, uneven and flawed deregulation of the retail deposit market during the Great Inflation of the 1970s and early 1980s.<sup>3</sup> The interest rate ceiling on passbooks was only lifted in 1986. By that time, a large number of alternatives were available to retail investors, including money market mutual funds (MMMFs) and money market deposit accounts (MMDAs). These alternatives offered returns far in excess of those of passbooks and consequently replaced them as the primary type of storage for liquid assets. By contrast, German interest rate regulations were lifted as early as 1967, giving banks the ability to adjust interest rates on passbooks to fluctuating market interest levels during the stagflation period.<sup>4</sup>

However, a closer look at the developments in both countries during the stagflation period raises doubts on this narrative. A recent study discovered that the death of the passbook in the US coincided with an extremely high *pass-through* of money market rates into the deposit market on a level not measured either before or after the short period between 1978 and 1984. Thus, banks had to pass the

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<sup>1</sup> Deposit Flow Analysis, April 1984, p. 7, Policy Committee: Minutes 1980 – May 1984, in: Hagley Museum and Historical Archive, Accession 2062: Philadelphia Saving Fund Society Archive (henceforth Hagley 2062), Record Group (RG) I/2-B, Box 29.

<sup>2</sup> *American Banking Journal*, September 1986, 120.

<sup>3</sup> Walker, Dustin R. (2018), *Unleashing the Financial Sector: Home Loan Deregulation and the Savings and Loan Crisis, 1966-1989*, Diss., Santa Barbara; Hendrickson, Jill M. (2011), *Regulation and Instability in US Commercial Banking. A history of Crises*, Basingstoke; Mason, David L. (2004), *From Buildings and Loans to Bail-Outs. A History of the American Savings and Loan Industry, 1831-1995*, Cambridge, MA. Berger, Allen N.; Kashyap, Anil, Scalise, Joseph M. (1995), *The Transformation of the US Banking Industry: What a long strange trip it's been*, *Brookings Papers on Economic Activity*, 2, 55-218; Nocera, Joseph (1994), *A piece of the action. How the middle class joined the money class*, New York.

<sup>4</sup> Schulz, Günther (2005), *Die Sparkassen vom Ende des Zweiten Weltkriegs bis zur Wiedervereinigung*, in: Hans Pohl; Bernd Rudolph; Günther Schulz: *Wirtschafts- und Sozialgeschichte der deutschen Sparkassen im 20. Jahrhundert*, Stuttgart, 249-427, 338.

extremely high interest rates prevalent in the money market in these years on to their customers almost entirely.<sup>5</sup> This effect strongly exaggerated the opportunity costs of holding money in passbooks in the US. By contrast, the rate on passbooks in Germany did not adjust adequately to the conditions of the money market, despite banks being free to set rates at will. Thus, German retail customers endured high opportunity costs during the stagflation period, even though alternatives such as time deposits, which paid money market rates, were available.<sup>6</sup>

In this article, I argue that the difference between the experiences of German and US customers can be traced to how banks and customers communicated over prices. In the US, a specific set of regulations shaped the retail deposit market in a way that vastly increased the potential for aggressive price competition throughout the entire retail deposit market. Thus, whenever regulatory changes opened opportunities to compete over prices, banks would engage in *rate wars* that quickly pushed up the average rate on deposits to the new limit or market level. The strong exposure of the public to interest rates shaped the interest expectations of US households and further encouraged banks to meet these expectations. In Germany, by contrast, the structure of the retail market after the lifting of regulations was dominated by a set of formal and informal institutions that encouraged practices of price discrimination. German banks thus successfully restricted access to high-yielding deposits to their best-informed customers, while the vast majority of depositors were confined to the low rates prevalent among standard passbooks. This strategy was accompanied by the strong efforts of German banks to keep the returns of these special deposits secret. This secrecy slowed the diffusion of market information among depositors and reinforced the potential success of price-discriminatory practices. In summary, the fate of the passbook came down to the ability or inability of banks to exclude customers from profiting from the recurring very high interest rate levels during the stagflation period.

I use a qualitative historical approach that is centered on the main actors in the retail deposit market and analyze banks and other depository institutions by using bank archives in Germany as well as the US. The archival material is complemented by trade publications. I also use these sources for retail customers to achieve a second-order observation of customer behavior. This observation is amended by the analysis of published as well as unpublished contemporary surveys focused on customer behavior and sentiments. As part of the reconstruction of the communication structure, I integrate articles from popular nationwide newspapers. I contrast this view with data on the portfolio structures of households as a revealed preference approach to portfolio choice. Finally, I examine the regulatory authorities using mainly archival sources.

While the line of my argument is contrary to the dominant narratives, it is bolstered by an extended theoretical and empirical literature that points to the significance of the factors just described. The striking failure of German bank customers to react to the enormous opportunity costs of passbook deposits has long been essentially ignored by both economists and historians. In examining the German case in isolation, contemporary economists focused on the gradual decline of savings deposits as a share of household wealth between 1973–1983 and concluded that the interest sensitivity of households had increased over time.<sup>7</sup> More recently, studies have acknowledged that the portfolio diversi-

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<sup>5</sup> Drechsler, Itamar; Savov, Alexi; Schnabl, Philipp (2020), The Financial Origins of the Rise and Fall of American Inflation, NYU Stern School of Business, SSRN 3538569.

<sup>6</sup> Knake, Sebastian (2023), The Spareckzins. The making of Germany's most important price for household savings 1967-1983, Vierteljahrsschrift für Sozial- und Wirtschaftsgeschichte (VSWG) 110/1, S. 30-73.

<sup>7</sup> Miegel, Meinhard (1985), Neuere Tendenzen in der Vermögensverteilung, in: Ehrlicher, Werner; Simmert, Diethard B. (Ed.), Der volkswirtschaftliche Sparprozeß, Beihefte zu Kredit und Kapital 9, Berlin, 297-316; Sandvoss, Ernst-Otto (1989), Wandlungen in den Anlageformen, in: Ibid., 253-266; Hornung-Draus, Renate, Das Vermögen der privaten Haushalten der Bundesrepublik Deutschland: Bestand, Entwicklung und Verteilung, in: Jahrbücher für Nationalökonomie und Statistik, 206/1, 18-47.

fication in Germany differed from developments in other Western countries. However, they interpreted this to be a merely transitional factor.<sup>8</sup> Only during the low interest period following the financial crisis of 2007/08 did the views of economists on German saving behavior become more critical. The peculiar investment decisions of German households were understood to impede their ability to profit from the high capital gains prevalent over the previous four decades.<sup>9</sup> Most recent research confirms that in the last three decades, the German middle class was forced to continue saving at high rates to retain their share of wealth. Meanwhile, already well-off households increased their wealth, mainly via capital gains (equity and housing), during the same period.<sup>10</sup> These troubling results for more recent periods have raised the question of the historical origin of the *irrational* investment pattern of German households. The renewed interest in this question has enabled the author of this article to conduct research on exactly this question.

Economic research on deposit rates has questioned the existence of a close relationship between deposit and market interest rates and instead found deposit rates to be *sticky*. Thus, they usually do not closely follow market rates.<sup>11</sup> How large the elasticity of deposit rates is depends on several factors. Kaspar Zimmermann shows for several Western countries that from 1870 to today, the spread between deposit and market rates has widened during high-interest periods.<sup>12</sup> The most commonly mentioned factor is market concentration. Thus, competition increases the elasticity. While most literature refers to local concentration, banks can achieve a similar effect by creating a deposit *franchise*. Here, the exclusivity of the bank–customer relationship, rather than regional concentration, is the key explanation for sticky deposit rates.<sup>13</sup> Many empirical studies have proven the importance of bank loyalty

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<sup>8</sup> Börsch-Supan, Axel; Eymann, Angelika (2000), Household Portfolios in Germany, Beiträge zur angewandten Wirtschaftsforschung 603-01, Mannheim.

<sup>9</sup> Deutsche Bundesbank, Vermögen und Finanzen privater Haushalte in Deutschland: Ergebnisse der Vermögensbefragung 2017, Monatsbericht der Bundesbank, April 2019, 13-44; Heilmann, Dirk; Lansch, Rita; Rürup, Bert (2014), Sparverhalten der Deutschen Haushalte – Eine neue Sicht, Studie des Handelsblatt Research Institute; Zentrum für Europäische Wirtschaftsforschung (Ed.) (2005), Anlageverhalten privater Haushalte: Auswirkungen von renditeorientierten Portfolioumschichtungen in der Langfristperspektive. Kurzstudie, Mannheim. Partly, the increased interest derived from newly available panel data from the SAVE Study, conducted between 2001 and 2007 at the Mannheim Research Institute for the Economics of Aging (MEA). See: Börsch-Supan, Axel et. al. (2008), The German SAVE study. Design and Results, Mannheim.

<sup>10</sup> Albers, Thilo N.H.; Bartels, Charlotte; Schularick, Moritz (2022), Wealth and its Distribution in Germany 1895-2018, World Inequality Lab, Working Paper 2022/09, 32-36.

<sup>11</sup> Hannan, Timothy H.; Berger, Allen, N. (1991), The rigidity of prices. Evidence from the banking industry, in: American Economic Review 81/4, 938-945; Neumark, David and S. Sharpe, Steven A. (1992), Market structure and the nature of price rigidity. Evidence from the market for consumer deposits, in: Quarterly Journal of Economics 107/2, 657-680; Hannan, Timothy .H.; Liang, J. Nellie (1993), Inferring market power from time-series data. The case of the banking firm, in: International Journal of Industrial Organization 11, 205-218; Berlin, Mitchell; Mester, Loretta J. (1999), Deposits and relationship lending. The Review of Financial Studies 12/3, 579-607; Discroll, John C.; Judson, Ruth (2013), Sticky Deposit Rates, FEDS Working Paper 2013-80.

<sup>12</sup> Zimmermann, Kaspar (2019), Monetary Policy and Bank Profitability, SSSRN Working Paper 3322331.

<sup>13</sup> Drechsler, Itamar; Savow, Alexi; Schnabl, Philipp (2021), Banking on Deposits: Maturity Transformation without Interest Rate Risk, in: Journal of Finance, 76/3, 1091-1143.

and switching costs in the retail deposit market.<sup>14</sup> Elisabeth Kiser shows for the US that high switching costs prevent customers from reacting to short-term changes in deposit rates.<sup>15</sup>

A separate field of economic research explores the relationship between price discrimination and information costs. Michael Katz differentiates between informed customers who buy at the cheapest store and uninformed customers who choose at random.<sup>16</sup> Because only informed customers are sensitive to price differentials, competition between firms for such customers is higher than for uninformed customers. An extended literature on search behavior and search costs provides dynamic concepts of information-seeking behavior.<sup>17</sup> Prominent research objects in this literature are informational gatekeepers or *clearinghouses* (such as newspapers) that make price information available to the public. A related question is how large the group of informed customers must be for firms to change strategy.<sup>18</sup> Because search costs affect a seller's ability to discriminate between customers, firms can benefit by keeping information costs as high as possible. In the literature, different versions of this strategy are discussed, including obfuscation,<sup>19</sup> add-on pricing<sup>20</sup> and demarketing.<sup>21</sup> Another strategy is to allow for haggling. Marshall shows for wholesale markets that if prices are personalized, they can differ by as much as 70%, for two primary reasons: First, customers do not start seeking alternatives if prices do not increase, so any cut in production costs benefits the seller. Second, firms exploit differences in customer propensity to search for better deals.<sup>22</sup>

Numerous articles apply the concept of price discrimination to the market for retail finance. Allen et al. show the impact of negotiated prices in the Canadian mortgage industry.<sup>23</sup> Most interesting with regard to the present study is the fact that mortgage lenders publish official common interest rates, while only 25% of new homebuyers actually pay the official rate. A different strand of literature deals with information asymmetries between banks and customers. Many studies have found that financial advice offered by financial institutions changes the investment behavior of customers to resemble the interests of the institutions rather than their own.<sup>24</sup>

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<sup>14</sup> Gondat-Larralde, Céline; Nier, Erlend W. (2004), The economics of retail banking. An empirical analysis of the UK market for personal current accounts, in: Bank of England Quarterly Bulletin, 44, 153–159; Rhoades, Stephen A. (2000), Bank mergers and banking structure in the United States - 1980–1998, Staff Studies 174, Board of Governors of the Federal Reserve System; Sharpe, Steven A. (1997), The Effect of Consumer Switching Costs on Prices. A Theory and its application to the Bank Deposit Market. Review of Industrial Organization, 12/1, 79–94.

<sup>15</sup> Kiser, Elisabeth K. (2002), Predicting household switching behavior and switching costs at depository institutions, in: Review of Industrial Organization, 20/4, 349–365.

<sup>16</sup> Katz, Michael L. (1984), Price discrimination and monopolistic competition, in: Econometrica, 52, 1453–1471.

<sup>17</sup> For an overview, see: Baye, Michael R.; Morgan, John; Scholten, Patrick (2006), Information, Search and Price Dispersion, in: Hendershott, Terrence (Ed.), Economics and Information Systems, Handbooks in Information Systems, 1, New York, 323–76.

<sup>18</sup> Brown, Jeffrey R.; Goolsbee, Austan (2002), Does the Internet Make Markets More Competitive? Evidence from the Life Insurance Industry, in: Journal of Political Economy, 110, 481–507.

<sup>19</sup> Ellison, Glenn; Wolitzky, Alexander (2012), A search cost model of obfuscation, in: RAND Journal of Economics, 43/3, 417–441.

<sup>20</sup> Ellison, Glenn (2005), A Model of Add-on Pricing, in: Quarterly Journal of Economics, 120, 585–637.

<sup>21</sup> Kim, Jaesoo; Shin, Dongsoo (2016), Price Discrimination with Demarketing, in: The Journal of Industrial Economics, 64/4, 773–807.

<sup>22</sup> Marshall, Guillermo (2020), Search and Wholesale Price Discrimination, in: RAND Journal of Economics, 51/2, 346–374.

<sup>23</sup> Allen, Jason; Clark, Robert; Houde, Jean-François (2014), Search Frictions and Market Power in negotiated Price Markets, NBER Working Paper 19883, Cambridge.

<sup>24</sup> Hoechle, Daniel et. al. (2015), Financial advice and bank profits, Working Paper; Bluethgen, Ralph et. al. (2008), Financial advice and individual investors' portfolios, Working Paper, European Business School; Hackethal, Andreas et. al. (2012), Financial advisors. A case of babysitters?, in: Journal of Banking and Finance, 36/2,

The article is organized as follows. In the subsequent section, I give a quantitative overview of the fate of the passbook, the flow of funds and the main interest rates during the stagflation period. Afterward, I summarize the structural and regulatory differences between the US and German banking industries during the stagflation period. I then trace the development of the retail deposit market in both countries during this period. I start with the years 1966/67 and the regulation (US) vs. deregulation (Germany) of deposit rates. I then examine the high-interest period in 1973/74 and the simultaneous experiments with money market deposits in both countries. Finally, I look at the years between 1978–1983 and discuss in detail why a savings revolution occurred in the US but not Germany. I conclude by summarizing my main argument and briefly discussing the consequences of this divergent development.

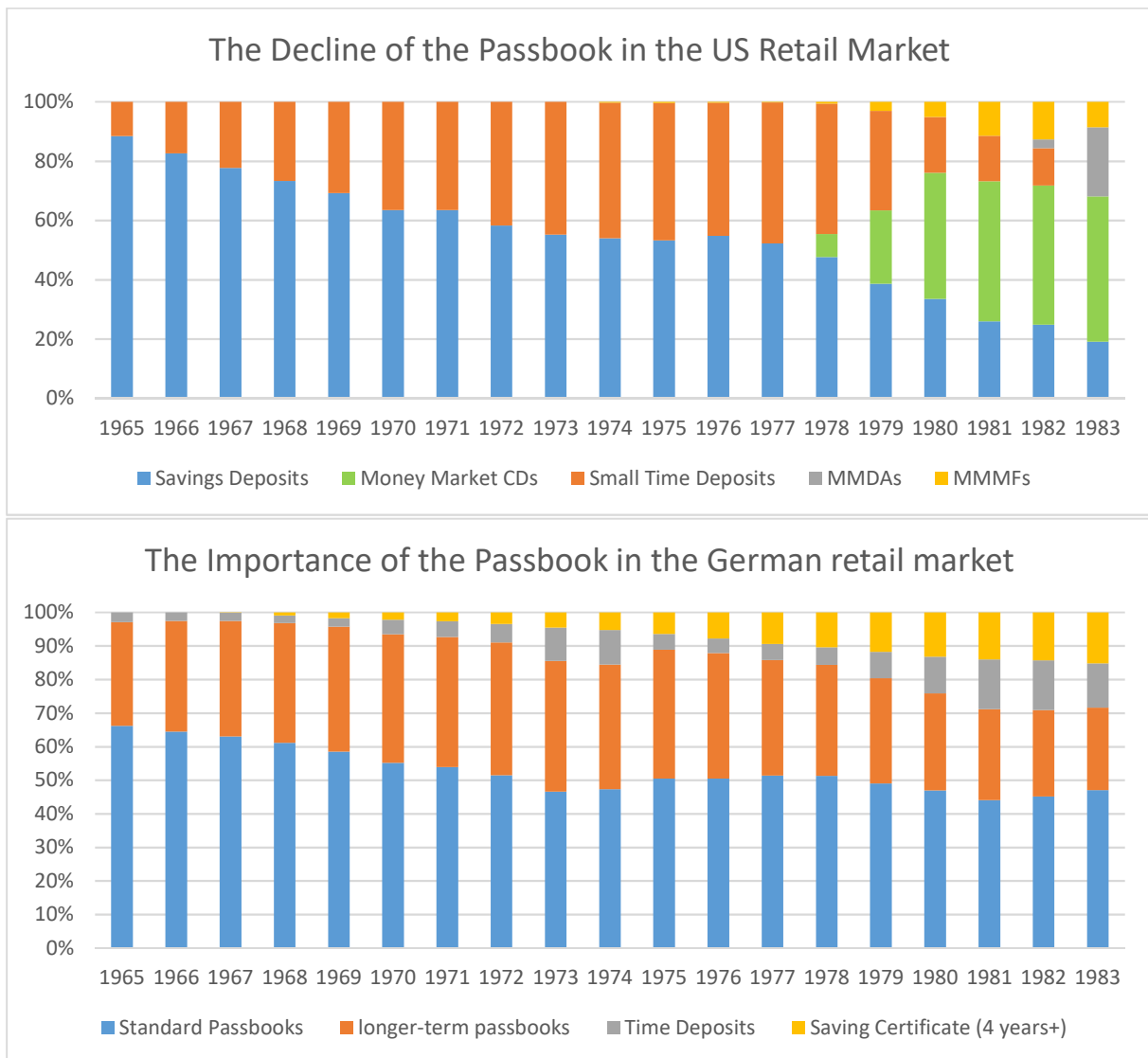
## 2. Data on the fate of the passbook

The data on the retail deposit market reveals the different fates of the passbook in the US and Germany. Figure 1 shows the composition of the market for non-transaction retail deposits. In the US, the categories of savings deposits include passbooks and statement savings accounts. Small-time deposits consist mainly of regular savings certificates and open accounts. Money market certificates of deposits (CDs) include the original money market certificate (MMC) and the small saver certificate (SSC). In 1983, the entire certificate market was deregulated, so that all certificates subsequently paid market prices. Thus, the regular certificates disappeared. As the data shows, there were two periods of relative decline in the passbook. From 1966–1973, we see a gradual decline that was followed by a period of relative stagnation. From 1978, the share of the passbook plunged toward insignificance. In the final period, even the absolute nominal value of savings deposits declined by almost \$200 billion.

In Germany, the asset that is best comparable to the US passbook account is the standard passbook. It had a mandatory notice period of 3 months, but several exceptions ensured that passbook owners could withdraw at least a part of their money instantly. There were, however, other types of passbooks with longer notice periods, which can best be compared with regular savings certificates in the US, although key differences also exist. By contrast, the *Sparbrief* differed greatly from US savings certificates. As I show below, it can best be compared with the *wild card* certificate that was introduced in the US in 1973 but pulled shortly afterward. Finally, time deposits in Germany are best comparable to money market deposits, because they were overwhelmingly short term and paid money market rates. The data shows that until 1978, the German retail deposit market more or less followed a similar path as the US. In both countries, customers exchanged liquidity for a higher yield. However, since 1978, the two paths have diverged fundamentally. In Germany, standard passbooks defended their market share, while time deposits and *Sparbriefe* took over a part of the market share of longer-term passbooks. Even these changes seem gradual compared to the savings revolution in the US.



Figure 1: The fate of the passbook in numbers



Shares of different bank deposits and deposit-like assets in the retail deposit markets in Germany and the US at year end. Demand and other checkable deposits, as well as large-time deposits, are excluded. Source: Federal Reserve Board. H.6 Money Stock Measures; Bundesbank, Finanzierungsrechnung.

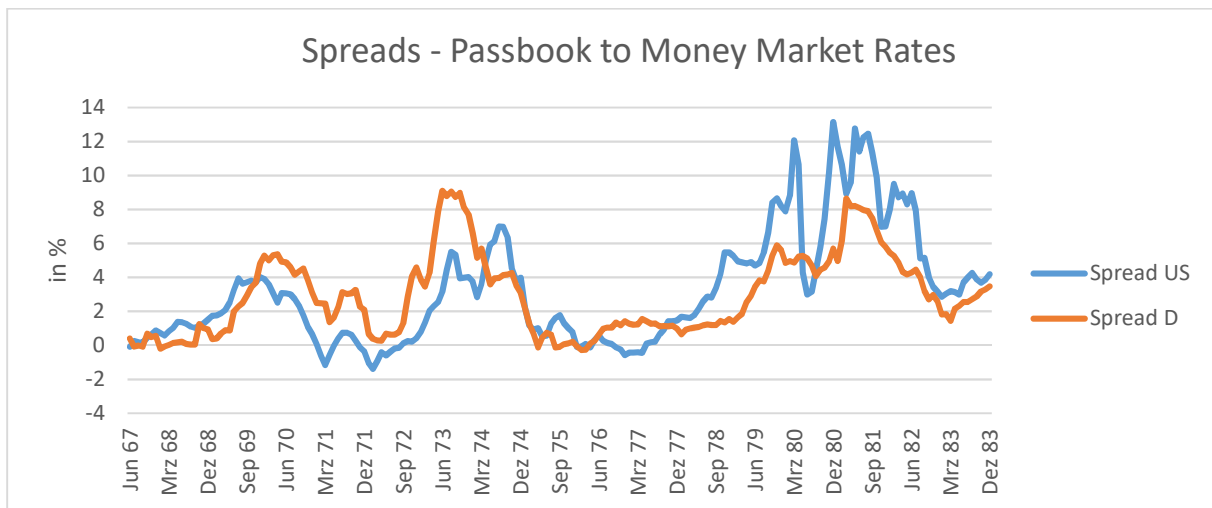
How did the savings revolution affect the savings rate? Contemporary sources in the US had sounded the alarm over the personal savings rate seemingly approaching zero in the early 1980s. However, later data revisions revealed that this was largely a *fata morgana*. Leonard Nakamura and Tom Stark show for 1979 how later revisions doubled the personal savings rate in the US from 4.5% to 8.9%.<sup>25</sup> The revised numbers reveal that the savings rate in the US was remarkably stable during the stagflation period. Thus, the savings revolution was neither preceded nor directly followed by a drop in the personal savings rate in the US. Only from the 1990s did the savings rates of both countries diverge fundamentally.

One way to explain the vast differences in investment patterns is in terms of opportunity costs. Figure 2 shows compiled interest rate spreads between the current passbook rate and a money market rate. In the case of the US, the rate on large savings certificates represents the inter-banking lending rate.

<sup>25</sup> See Nakamura, Leonard; Stark, Tom (2005), Benchmark Revisions and the US Personal Savings Rate, Federal Reserve Bank of Philadelphia Research Paper No. 05-6.

In the case of Germany, it is the 3-month inter-banking lending rate in Frankfurt as published by the Bundesbank. The surprising result of the comparison is that the average spread between money market and passbook rates during the stagflation period was almost exactly the same: 3.2% in the US and 2.9% in Germany. These are, of course, only theoretical opportunity costs, because households were not able to invest in the inter-banking market. However, it is difficult to make a comparison using money market retail deposits, because the accessibility of these assets differs fundamentally. In the US prior to 1978, the only possibility to achieve money market rates was to directly engage in this market, for example, by buying Treasury bills. In Germany, however, time deposits offered near-market rates and were available at any retail bank. For the entire period, the spread between passbook and 3-month T-bill rates in the US is 0.5% higher than that of passbook and retail time deposits in Germany. However, if we assume that the vast majority of passbook owners did not have the opportunity directly to invest in the money market and only consider retail deposits, the opportunity costs converge again (1.7% to 1.6%).

Figure 2: Opportunity costs of passbook savings in Germany and the US



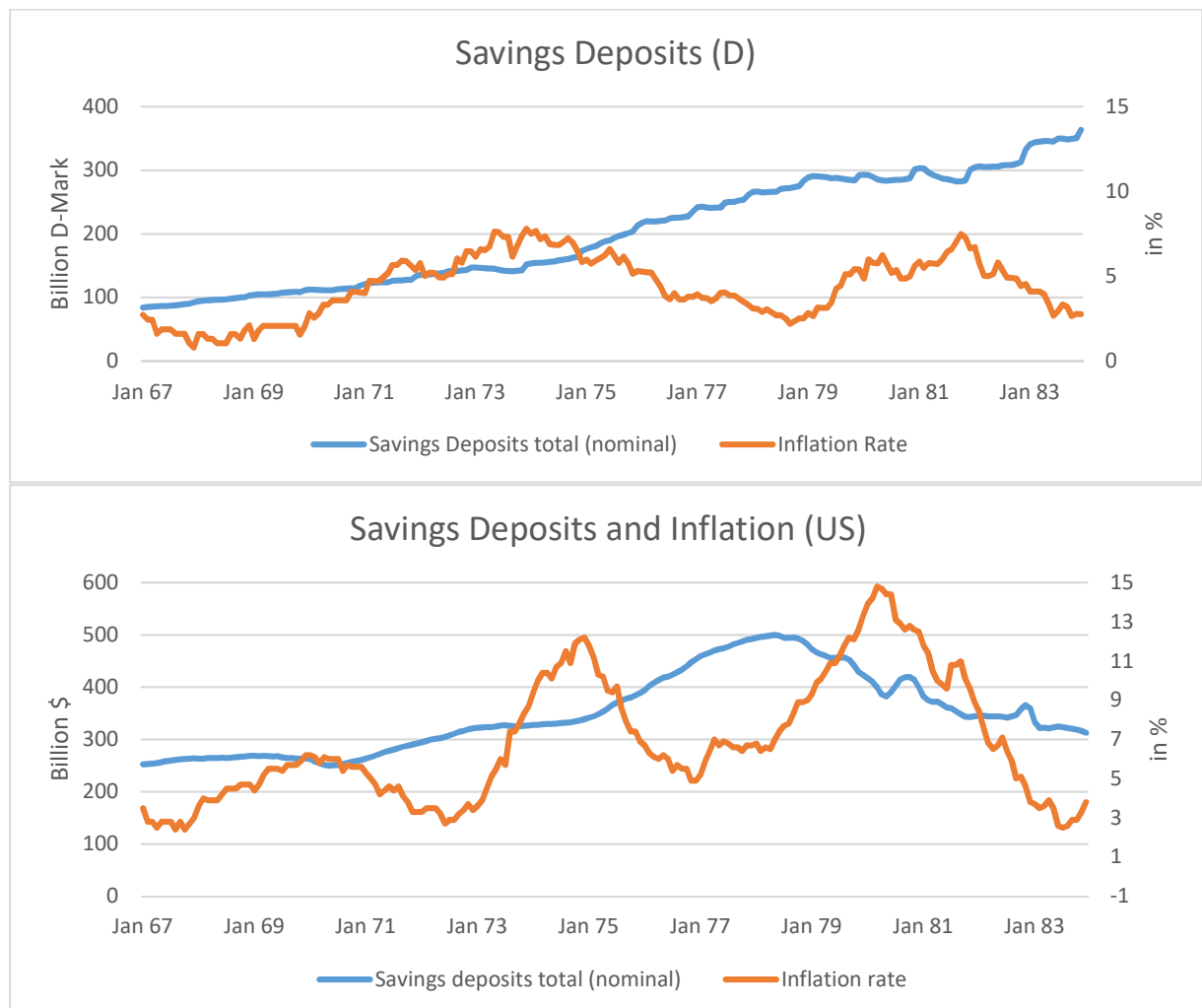
Interest spreads between passbook and money market rates. For the US, the difference is between the average rate of large CDs and the passbook ceiling rate; for Germany, the difference is between the Dreimonatsgeld in Frankfurt and the Spareckzins. Sources: Federal Reserve; Bundesbank

Another possible explanation relates to the large differences in the inflation rates prevalent in both countries. As Beyer et. al. have shown, Germany had considerably lower inflation rates compared to the US.<sup>26</sup> These lower rates translated into higher real interest rates in Germany vis-à-vis the US, where the average real rate on passbooks during the research period was -1.7%, compared to -0.3% in Germany. While this is a significant difference, it does not explain the fundamental and permanent change in trend of passbook savings that occurred in the US around 1978. The first large wave of inflation in 1973/74 was not dissimilar from the wave beginning in 1978. However, passbook owners reacted in a fundamentally different way to the second compared to the first wave. Until 1978, US passbook owners behaved similarly to their German counterparts, slightly slowing down new investments in passbooks during periods of rising inflation while increasing them when inflation fell. From 1978, however, savings deposits decreased sharply and kept falling, even when inflation was also falling steeply. This new investment pattern points to a permanent secular change in customer behavior that exclusively occurred in the US after 1978. This divergence in the investment behavior of retail customers has its

<sup>26</sup> Beyer, Andreas; Gaspar, Vitor; Gerberding, Christina; Issing, Otmar (2008), Opting out of the Great Inflation: German Monetary Policy after the Breakdown of Bretton Woods, NBER Working Paper 14596.

roots in the differing structures of the retail deposit markets in the two countries, which I explain in detail below.

*Figure 3: The fate of the passbook and inflation*



*Total savings deposits (not price adjusted) and inflation rate in the US and Germany. Sources: Federal Reserve; Bundesbank*

### 3. Historical differences between German and US retail deposit markets

In general, the passbook is a financial asset that allows savers to invest small amounts of money on a regular basis and thereby receive interest on their savings. The passbook is personally linked to the owner, which makes it less liquid but safer than cash. Historically, the passbook was closely linked to special savings institutions, or savings banks. From the 18<sup>th</sup> to 19<sup>th</sup> centuries, philanthropic societies in several European cities founded the first savings banks to give their poor fellow citizens a means to save money to fall back on during times of hardship. Thus, the main motive was to help poor people take care of themselves. As a side effect, public funds for poor relief would be partly relieved as well.

Initially, the US constituted a vital part of the global savings banks movement. Along the northern East Coast, philanthropic societies founded savings banks in virtually all large cities. However, only about 10% of US citizens owned passbooks, compared to 30–40% in the European states. Savings banks failed to spread beyond a rather narrow area along the northern East Coast. Sheldon Garon attributes this

failure to a weak societal and political commitment to building institutions of savings promotion.<sup>27</sup> Outside the Northeast, commercial banks took over the task of providing basic financial services. However, they overwhelmingly focused on businesses as their prime customers, while households generally lacked access to financial services. Sheldon Garon shows that the lack of a nationwide savings network was mainly responsible for the failure of the US to develop a culture of thrift. Additionally, regular banking crises and bank runs made saving at banks a risky business, especially during the Great Depression. This problem was eventually solved by the introduction of the Federal Deposit Insurance Corporation (FDIC) and later the Federal Savings and Loan Insurance Corporation (FSLIC), which insured bank deposit up to a certain size. A breakthrough in US saving behavior was first achieved via the sale of savings bonds during World War II. After a plunge in saving directly after the war, US households finally started saving in peacetime on a meaningful scale. This was mainly due to high incomes that provided US households with enough funds to spend and save simultaneously. For the first time, the savings boom mainly benefited bank deposits rather than securities. By 1960, the majority of US households (53%) owned a savings account. The rise of the passbook in the US coincided with the spectacular boom of the savings and loan industry after the war. Originally called building and loan associations, these institutions offered passbook accounts at attractive rates, partly because they were not subject to interest rate regulation until 1966. With the boom of the savings and loan industry, the US had finally developed a nationwide network of accessible and (seemingly) reliable savings institutions.<sup>28</sup>

In Germany, the growth of savings banks in the 19<sup>th</sup> century was mostly due to the engagement of municipalities, which owned the vast majority of savings institutions in Germany. In the second half of the 19<sup>th</sup> century, local savings banks created regional associations and, in 1884, a national body, the *Deutscher Sparkassenverband*. In the two decades preceding World War I, the savings banks organizations conducted a broad lobbying campaign to be granted checking privilege. The right to participate in the market for cashless transactions was finally granted in 1908. However, German savings banks did not introduce checking accounts on a large scale but instead created a cashless transfer system called *Giroverkehr* that relied on remittances. To that means, the savings banks founded a regional network of payment centers called *Girozentralen* and, in 1918, the *Deutsche Girozentrale*.<sup>29</sup> After the war, savings banks fought off all attempts by competitors to confine them to their core business of taking savings deposits and lending mortgages. Instead, the development of savings banks into universal banks was officially confirmed in the *Kreditwesengesetz* of 1934, the first comprehensive bank regulation in Germany. In a reaction to the expansion of the savings banks, large commercial banks started to offer savings deposits in 1926. Because credit unions had offered passbooks from their beginnings in the late 19<sup>th</sup> century, all major banking groups had entered the savings market by the 1920s.<sup>30</sup>

Meanwhile, passbook savings withstood two wars and the subsequent hyperinflations that were accompanied by the loss of the vast majority of savings deposits, in 1923 and again in 1948. Each time, the enormous loss of deposits after the currency reforms was followed by a *Sparwunder*, a savings “miracle” that saw people invest in the very asset that had turned out to be extremely risky.<sup>31</sup> After

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<sup>27</sup> Garon, Sheldon (2012), *Beyond our means. Why America spends while the world saves*, Princeton, 97-99.

<sup>28</sup> *Ibid.*, 313-315.

<sup>29</sup> Wagner-Braun, Margarete (2009), *Die Deutsche Girozentrale als Antwort auf Finanzprobleme des frühen 20. Jahrhunderts. Vorgeschichte und erste Geschäftsjahre 1918-1931*, in: *Die DekaBank seit 1918. Liquiditätszentrale, Kapitalanlagegesellschaft, Asset Manager*, published by Deutscher Sparkassenverlag, Stuttgart.

<sup>30</sup> Hillen, Barbara (2007), *Neue Zeiten, neue Ziele! Johann Christian Eberle und die Modernisierung der Sparkassen*, Stuttgart; Wsocki, Josef (1987), *Die bankmäßige Entwicklung der Sparkassen (1908 bis 1931)*, in: Mura, Jürgen (Ed.), *Die Entwicklung der Sparkassen zu Universalkreditinstituten*, Stuttgart, 36-46.

<sup>31</sup> For the *Sparwunder* during the Weimar Republic, see: Hardach, Gerd (2018), *Sparen in der Weimarer Republik. Inflation, Stabilisierung und Krise 1918 bis 1932*, in: Muschalla, Robert (Ed.), *Sparen. Geschichte einer Deutschen Tugend*, Darmstadt, 73-90, 78-82. For the savings behaviour after World War II, see: Schulz (2005), 286-301.

1948, the federal government actively encouraged savings to raise capital for the reconstruction of the war-torn country. The first savings incentive scheme was a tax shelter for savers who agreed to invest money in long-term savings or building society contracts. Later, the incentive scheme was changed from tax incentives to premium payments. The premiums made long-term saving very attractive for small and medium savers. Thus, part of the postwar savings miracle was due to state subsidies.<sup>32</sup> Apart from building society contracts, the passbook benefited most from these subsidies. By the 1960s, the passbook was consequently the unchallenged champion of household savings in Germany. In 1966, passbooks held almost 40% of all household financial assets, and in 1969, almost 90% of households in Germany owned at least one passbook.

### *Structural differences between the German and US banking industries*

In Germany, three banking groups emerged as the main pillars of the banking system: commercial banks, savings banks and credit unions. The market for savings deposits was dominated by the savings banks, who in 1964 owned about two-thirds of the market. Commercial banks had undergone a period of rapid concentration in the 1920s and 1930s,<sup>33</sup> which resulted in the dominance of this group by only three banks: Deutsche Bank, Commerzbank and Dresdner Bank. In 1964, they held more than 60% of savings deposits at commercial banks. The other two banking groups had not gone through similar periods of concentration. Thus, these groups consisted of large numbers of medium-sized (savings banks) and small (credit unions) independent institutions and had developed strong mutual ties via powerful regional and federal associations. The collective bodies enabled savings banks and credit unions to engage in effective collective action. A key feature of the German banking system follows directly from this structure: Each banking group established their own deposit insurance system. Thus, in Germany, deposits were guaranteed not by the government but by collectives of banks.<sup>34</sup>

*Table 1: Bank and branch density in Germany and the US (1965–1983)*

	Bank density (people per bank)	Branch density (people per branch)
US 1965	9,200	5,000
US 1983	11,600	3,000
D 1965	13,300	1,700
D 1983	23,000	1,400

*Author's calculation. Sources for bank and branch numbers: Federal Reserve Bulletin, Mutual Savings Banking National Fact Book, Savings and Loan Fact Book, Bundesbank Monatsberichte; Sources for population size: US Census Bureau; Statistisches Bundesamt.*

In Germany in 1965, there were about 350 commercial banks, 860 savings banks and 9,500 credit unions, or one bank per 5,500 people. By 1983, the number of institutions had more than halved to one bank for every 13,300 people. At the same time, the number of branches almost doubled, from 23,000 in 1965 to more than 40,000 in 1983. Overall, both the savings banks and credit unions operated al-

<sup>32</sup> Ibid., p. 266-268, 289-293; Knake, Sebastian (2019), *Moderne Vertriebswege. Die Verbreitung erfolgsorientierter Vergütungsformen im Privatkundengeschäft bei Banken und Versicherungen in Westdeutschland in den 1970er und 80er Jahren*, in: *Zeitschrift für Unternehmensgeschichte*, 64/1, 49-82, 59f.

<sup>33</sup> Pohl, Manfred (1982), *Konzentration im deutschen Bankwesen 1848-1980*, Frankfurt/Main.

<sup>34</sup> This is only partially true for savings banks, since they were usually owned by municipalities who were legally liable for their institutions.

most 20,000 bank offices each. Commercial banks followed, with about 6,000 offices. The density increased from one bank per 1,700 to one per 1,400 people. For customers, this meant that a bank branch was just around the corner.

The appliance of the universal bank concept to the German retail market ensured that all banks offered basic financial services at comparable levels of quality and security. When the expansion of cashless wage payments in the 1960s led to a rapid expansion in the ownership of *Girokonten*—the German equivalent of a checking account—the savings banks secured a large part of that market to become the prime supplier of basic financial services in Germany. In 1973, 84% of adult Germans had at least one *Girokonto*. Of account owners, 57% had their accounts at savings banks, 23% at credit unions and 20% at other banks. For savings accounts, 57% of owners had their account at a savings bank, 17% at credit unions and 26% at other institutions.<sup>35</sup> Thus, by the early 1970s, the market for basic financial services was already saturated and firmly distributed among the main banking groups.

*Table 2: Share of passbook accounts and deposits in Germany and the US in the early 1970s*

	Passbooks Germany (1973, share of accounts)	Passbooks Germany (1972, share of deposits)	Passbooks US (1971, share of accounts)	Passbooks US (1971, share of deposits)
Commercial banks	26% (incl. other)	21% (incl. other)	71%	47%
Savings institutions	57%	58%	35%	50%
Credit unions	17%	19%	18%	4%

Sources: *Survey of Consumer Finances (University of Michigan) 1971*; *Deutscher Sparkassen- und Giroverband (DSGV) – internal market studies*.

The similarity in the quality of basic services resulted in a relatively small number of customers who did business with more than just one bank. In a survey from 1976 conducted by the Allensbach Institute for the federal association of credit unions (BVR), 23% of respondents stated that they had more than one bank address. Among savings banks, 17% had more than one bank address, 29% among customers of credit unions and 31% among customers of the large banks. Asked of their motives to have multiple bank connections, half of the multi-bankers stated that it “just so happened” —mostly because of marriage or relocation. Thirty percent stated occupational reasons, while another 30% stated that they did not want one bank to know everything about their finances.<sup>36</sup>

In the US, the market for retail deposits was highly regulated until the 1980s. One of the most fundamental differences in comparison to Germany was the duality of federal and state charters for banks.<sup>37</sup> The regulation for banks thus differed according to location. For state-chartered banks, interstate banking was prohibited by state laws until the 1980s, when several states loosened their restrictions. Intrastate expansion was also restricted by most states until the 1980s. Thus, state-chartered banks were not allowed to open branches without permission from the state government. In most states, banks were legally confined to operate only in the city or county where they were situated. Some states even prohibited branching altogether. Thus, unlike in Germany, US banks were not able to expand their operations geographically in the stagflation period.

<sup>35</sup> DSGV (Ed.): *Marketing-Zielgruppen im Mengengeschäft*, Series: *Marktforschung-Marketing-Planung* 7, 1974, p. 8, in: *DSGV Archive* (no designation).

<sup>36</sup> *Primäre Marktforschung*, Rundschreiben des BVR Gr. III – 60/1977 vom 25. August 1977, in: *GenoArchiv* (no designation).

<sup>37</sup> See: Krieghoff, Niels F. (2013), *Banking Regulation in a Federal System. Lessons from American and German Banking History*, Diss., London.

The result was a decentralized structure with a large number of small commercial banks (see Table 1). In 1965, the US hosted more than 20,000 banks, or one bank per 9,200 people. During the stagflation period, this number remained largely constant. In 1983, there were 14,800 commercial banks, almost exactly the same number as 1965. The same held true for mutual savings banks. Only the number of savings and loan associations had declined somewhat by 1983. Overall, there was still one bank business per 11,600 people. Among commercial banks, concentration declined during the stagflation period on the national as well as local level.<sup>38</sup> However, these numbers mask a hidden concentration that occurred via the growth of bank holding companies. In 1980, 361 multi-bank holding companies owned 2,400 banks, a strong increase from 86 holding companies owning 723 banks in 1969. Thus, while some concentration took place even though the number of banks did not decline, this concentration was nowhere near as substantial as in Germany. The number of branches at savings institutions skyrocketed from 3,000 in 1965 to more than 21,000 in 1983. For commercial banks, the number of branches more than doubled from about 16,500 to almost 40,000. The overall number of bank offices doubled between 1965 and 1983 from 40,000 to about 80,000, and the density grew from one office for every 5,000 to one per 3,000 people. However, the density of bank offices remained far beneath that of Germany.

While German banks largely followed the universal bank model, the US market for retail financial assets was strongly segmented. During the stagflation period, savings and checking accounts achieved nearly universal coverage. The ownership rate of passbooks rose from 57% in 1965 to 77% in 1977. Similarly, the share of families owning at least one checking account rose from 67% to more than 80% during the same period.<sup>39</sup> However, the distribution of market shares in the two assets differed fundamentally. In 1971, 70% of passbook owners had their savings accounts at commercial banks, while 35% were customers of savings institutions, and about 18% used credit unions. While they had fewer customers, savings institutions held a larger share of savings deposits (savings and small-time deposits) than commercial banks. In 1971, commercial banks held 47% of savings deposits, while savings institutions held a combined 50% of savings deposits. Both ratios remained largely constant from 1965–1977.<sup>40</sup> Thus, while savings institutions had fewer customers, those customers had on average larger account balances.

As the account share numbers reveal, account ownership across multiple banks and banking groups was rather common in the US. A Gallup survey from 1969 showed that 60% of owners of savings and loan savings accounts also had savings accounts at one of the other banking groups, and 50% had one at a commercial bank. The same held for customers of credit unions. Only commercial banks had more exclusive customer relationships, with only 30% owning savings accounts at savings institutions and/or credit unions.<sup>41</sup> The reason why so many customers of savings institutions had additional accounts at commercial banks is simple: Until 1980, both savings and loan associations and mutual savings banks were generally not allowed to offer checking accounts.<sup>42</sup> Because few people owned a savings account without also owning a checking account, the vast majority of customers of savings institutions were simultaneously customers of commercial banks. As I show below, this circumstance had an enormous impact on not only the business strategies of depository institutions but also regulatory action.

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<sup>38</sup> Federal Reserve Bulletin, February 1982, Developments in Banking Structure, 1970-1981, 77-85

<sup>39</sup> Curtin, Richard T.; Neubig, Thomas S. (1979), Asset Ownership, Surveys of Consumer Attitudes, Publication of the Institute for Social Research of the University of Michigan, 23.

<sup>40</sup> Savings and Loan Fact Book, Year 1983, 18.

<sup>41</sup> Central results of the Gallup survey were published in Savings and Loan News, October 1969, 61-65.

<sup>42</sup> In 1980, the Depository Insurance Deregulation and Monetary Control Act (DIDMCA) legalized the issuance of so-called NOW-Accounts (NOW short for Negotiable Order of Withdrawal) by savings institutions that acted as a close substitute for checking accounts. Walker (2018), 35f.

### *Differences among customers*

The structural differences in the market for deposits in Germany vis-à-vis the US led to several differences in the retail deposit market, namely among passbooks. It is not easy to compare the data on passbook accounts. First, the data contains three basic units: savings account, customer and household. For each of these categories, a number of surveys were conducted in both countries at different points in time. The other problem is comparing the relative worth of savings accounts. I use a twofold approach. First, I use purchasing power parities (PPP) to compare the purchasing power of savings deposits, because retail savings deposits are overwhelmingly intended to be spent domestically. To compare the owners' utility of their deposits, one must ask for their spending power at home. Second, I use the ratio of savings accounts to total financial wealth to determine the relative importance of the passbook.

In Germany, the savings banks organization published yearly data on average account size, as did the Savings and Loan League in the US. However, a comparison of these two datasets is misleading, because the US data includes other time deposits such as savings certificates, while the German data encompasses only passbooks. As I explain below, savings and loan associations hold a different position in the US banking industry than do savings banks in Germany. These differences also affect savings accounts. In Germany, savings banks administered the vast majority of passbooks, while the average account size was lower compared to commercial banks. In the US, commercial banks accounted for the vast majority of savings deposits, while the passbooks of savings associations had a significantly higher value on average. Thus, from the perspective of relative competitive position, German savings banks compare to US commercial banks rather than savings associations. In terms of the average account sizes of US commercial banks and German savings banks, in 1966, the value of German accounts was merely a third of that of US commercial bank accounts. However, the growth of passbook deposits was much stronger in Germany vis-à-vis the US. By 1983, German passbook owners had on average more money in their savings account than did their US counterparts. This was due to a choice of households, because overall financial wealth per household was still much higher in the US vis-à-vis Germany.<sup>43</sup>

*Table 3: Distribution of deposit sizes per household in Germany and US (1977/78)*

Savings deposit per household	US (1977)	Germany (1978)*
Less than \$1,000	36.7	19.0
\$1,000–5,000	30.8	46.5
\$5,000–10,000	11.0	20.1
\$10,000+	21.4	15.8

\* *Purchasing Power Parities D-Mark to US Dollar (Data: OECD); Source: Survey of Consumer Finances 1977, University of Michigan; Einkommens- und Verbrauchsstichprobe (EVS) 1978*

Another key difference lies in the distribution of savings deposits (see Table 3). Here, the earliest comparable data is available for 1977 (US) and 1978 (Germany), just at the eve of the savings revolution. In the US, 21% of households owned savings deposits worth at least \$10,000 in 1977. On the other side of the distribution, 37% had less than \$1,000 in their account. By contrast, in Germany, about 16% owned an account worth more than \$10,000 in 1978, while 19% of households owned savings deposits worth less than \$1,000. Thus, in Germany, the ownership of medium-sized deposits dominated. Meanwhile, in the US, the ownership of savings accounts was concentrated at the top and at the bottom.

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<sup>43</sup> The stated numbers in this paragraph are based on the author's calculations based on PPP exchange rates. Sources for the US: Results of 1966 Savings Survey. A national Study, prepared by the Department of Economics and Research for the American Bankers Association (ABA); Survey of Consumer Finances 1983, raw data. For Germany: DSGV-Jahresbericht 1971, 85; Statistisches Bundesamt (Ed.) (1986), Einkommen- und Verbrauchsstichprobe 1983, Fachserie 15, Heft 2: Vermögensbestände und Schulden privater Haushalte, Stuttgart/Mainz.



Conversely, the number of households that owned a savings account worth more than \$5,000 was higher in Germany. As I show below, the \$10,000 threshold was crucial in the US savings revolution, while the \$5,000 threshold was important in Germany.

*Table 4: Information-seeking behavior of German and US retail customers, early 1980s*

Type of Information	US (1983)	Germany (1980)
Advice from bank officer	33	50
News media	57	20
Family	17	51
Friends/colleagues	25	23

Sources used in %, multiple choice possible; Source: Hesse, Wolfgang, *Soll und Haben. Das Leben des Menschen mit seiner Bank, in: Soll und Haben. Analyse und Kommentar, Spiegel-Verlag, Hamburg 1982, 47-86, 58; Americans and their Money 3, The Third National Survey from Money Magazine, 1985, 62-64.*

Despite one striking similarity, the importance of individual advisory activity by banks, the information behavior of customers in the US and Germany had many key differences. The family is the most important source for financial information for German customers but does not matter much in the US. Conversely, US customers rely much more on the news media (incl. advertisements), compared to their German counterparts. As I explain later, these search strategies are at least partly informed by how banks communicate prices in the two countries.

### *Differences in the money markets*

A primary difference in the financial systems of Germany vis-à-vis the US was the structure of the money market. In the US, the most important actor in this market was the Treasury. The bulk of short-term federal debt was sold in the money market via Treasury bills. The share of this instrument in total US federal debt increased from 17% in 1966 to 25% in 1983.<sup>44</sup> Because the emission volume was large and relatively continuous, Treasury bills were the foundation of the money market, and the *T-bill rates* acted as a benchmark for this market. In the *New York Times*, the 3-month T-bill rate was one of the six *key rates* published daily in the business section.<sup>45</sup> Even the econometric model of the Federal Reserve Bank Board frequently used the 3-month T-bill rate as the benchmark for their money market models. So did the deposit forecast model of the PSFS.<sup>46</sup> Thus, the US financial system featured an established and widely publicized benchmark rate for the money market that was independent from central bank rates.

The market for interbank lending depended primarily on large-denomination CDs. Thus, the interbank money market was also in part securitized. The large CD market, which grew from \$20 billion in 1966 to more than \$300 billion in 1983, was dominated by large commercial banks.<sup>47</sup> The savings and loan industry had its own system of liquidity provision: advances from the Federal Home Loan Bank Board (FHLBB). While these were not sold in the money market, savings institutions sold mortgages in the

<sup>44</sup> Author's estimation. Source: Treasury Bulletin, published by the US Treasury Department, December 1966 and 4<sup>th</sup> Quarter 1984.

<sup>45</sup> As an example, on the day of the introduction of the MMC, June 1 1978, the Key Rate section was on page 11 of the business section. It stated the rate from the day and two days before as well as that of the previous year. The rates were ordered by maturity with the T-bill rate ranking second after the Fed Funds Rate. The other rates were 7-year Treasury Notes, Treasury Bonds, the rate on Bonds of the Bell company (benchmark for Corporate Bonds), and Municipal Bonds. See *New York Times*, June 1, 1978, p. D11.

<sup>46</sup> See, Knake, Sebastian (2023), *Changing Forecasts – Forecasting Change. The US market for savings deposits in econometric models and the market for econometric models among depository institutions, 1960s to 1980s*, Working Paper 41 of German Research Foundation's Priority Programme 1859, Humboldt University Berlin.

<sup>47</sup> Federal Reserve Board. H.6 Money Stock Measures.

market via federally guaranteed mortgage-backed securities (MBS).<sup>48</sup> Finally, large non-bank companies issued commercial paper in large quantities. In summary, the US had a vibrant and large money market led by short-term government securities.

In contrast to the US system, the German money market was dominated by bank loans. As for short-term government debt, it was almost exclusively in the form of promissory notes (*Schuldscheindarlehen*). Of the overall short-term public debt in 1983, two-thirds were in the form of promissory notes. For comparison, the German version of T-bills, the tradable *U-Schätze* (*unverzinsliche Schatzanweisungen*) comprised only 2% of public debt.<sup>49</sup> Promissory notes were mainly taken up by banks and insurance companies. A primary advantage of promissory notes was their discretionary nature, as the Bundesbank pointed out: “Since the loans are usually concluded in direct discussions between the lender and the borrower, the terms can be adjusted flexibly and without major publicity to the rapidly changing market conditions.”<sup>50</sup>

Conversely, these notes were not fungible and could therefore not be traded in the market. Interestingly, the German government had made attempts to offer debt securities directly to the retail market, the most important of which were *Bundesschatzbriefe* and *Bundesobligationen*. However, both were long-term assets mainly competing in the market of the *Sparbrief*, the German version of the savings certificate.<sup>51</sup>

The interbank lending market was also completely different from its US counterpart. Two of the three main banking groups—savings banks and credit unions—had their own liquidity systems. The savings banks collectively owned *Girozentralen*, which were mostly part of the Landesbanken, while the credit unions had created a system of *Zentralkassen*. Both types of institutions served as central banks for their peers. At the top of these systems were the Deutsche Girozentrale for the savings banks and the Deutsche Zentralgenossenschaftskasse (DG Bank, later DZ Bank) for the credit unions.<sup>52</sup> These special liquidity systems fragmented the German money market and drastically reduced the number of independent actors. Very much like public short-term debt, the interbank market was personal and bilateral: One bank owned deposits at another. While US banks securitized this kind of debt, German banks hardly ever did so. Thus, there was no official market from which a benchmark rate for the money market could have originated. Although the Bundesbank did publish money market rates for the Frankfurt banking center, it pointed to the fact that these rates were neither officially listed nor determined but derived from daily surveys in Frankfurt. Thus, they were predecessors of later benchmark rates such as the Libor. To investors outside this narrow local money market, they were completely unknown.

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<sup>48</sup> For a detailed discussion of the consequences for the thrift industry, see: Walker (2018), 31-73.

<sup>49</sup> Monatsberichte Bundesbank, January 1984, 21-29.

<sup>50</sup> Ibid., 27. Author’s translation from German original.

<sup>51</sup> The *Bundesschatzbrief* had a minimum maturity of one year. Since the interest rate increased with every year, it made no sense to buy this security for short-term purposes. The *Bundesobligation* matured after five years.

<sup>52</sup> For the history of the *Deutsche Girozentrale*, see: Die DekaBank (2008). For the history of the *Zentralkassen* of the credit unions see: Guinnane, Timothy et.al. (2013), Die Geschichte der DZ Bank. Das genossenschaftliche Zentralbankwesen in Deutschland vom 19. Jahrhundert bis heute, München.

#### 4. 1966/67: Regulation vs. deregulation of bank interest rates

The years of 1966/67 were decisive for the fate of the passbook in both the US and Germany. In both countries, general economic developments led to permanent changes in the regulatory framework of the retail banking market.

##### *The 1966 credit crunch and introduction of the rate differential in the US*

After the many bank failures of the 1930s, both countries introduced far-reaching regulation regarding bank interest rates. However, key differences also existed between the two frameworks. In the US, Regulation Q was designed to eliminate cutthroat competition among commercial banks.<sup>53</sup> Hence, it did not apply to savings and loan associations. The Federal Reserve Board, which had been assigned the task of setting interest rate ceilings, usually raised maximum rates before they could become binding for the majority of banks. Before 1966, Regulation Q had no systemic relevance for the retail deposit market.<sup>54</sup> However, the situation changed fundamentally in that year due to a “credit crunch.”

The underlying reason for this crunch was the simultaneous increase in the demand for capital of both the federal government and corporate sector (spurred by the Vietnam War), which led to significant increases in the interest rates of securities and bank business loans. However, the higher interest level did not curb demand for capital. For the government, money spent on the war effort was inelastic to interest rates. For businesses, investments were profitable even at higher interest costs. The inelasticity of capital demand pushed interest rates even higher. Commercial banks tried to meet increasing demand for business loans by aggressively bidding for time deposits, which the Federal Reserve Board had allowed when it raised the interest rate ceiling for time deposits from 4.5% to 5.5% in December 1965. The ratio of time to demand deposits consequently rose significantly in the first half of 1966.

Among other measures, the Federal Reserve Board tried to fight the inflationary pressure arising from the credit expansion in the summer of 1966 by unleashing the potential of Regulation Q to interfere with the deposit market. Commercial banks had acquired time deposits mainly via the sale of large-denomination negotiable CDs. The interest rates on these assets had increased steadily since their introduction in 1962. However, when the rates on large CDs reached the ceiling limit in the summer of 1966, the Federal Reserve refused to increase the interest rate ceiling, in a significant departure from previous policy. This action led to fears of disintermediation among commercial banks—the flow of funds from bank deposits to the capital and money markets—because the spread between market rates and the ceiling rate continued to grow. Banks reacted to the action of the Fed by reducing their lines of credit to businesses, thereby producing the “credit crunch”—or at least half of that crunch.<sup>55</sup>

In August 1966, the Federal Reserve Board found that the expansion of commercial bank time deposits had begun to be dominated by a new class of asset—the “consumer-type” CD or savings certificate.<sup>56</sup> In a statement to Congress, James L. Robertson, Vice-Chairman of the Fed, described the type of consumers who bought this new asset in the following way:

These consumer CDs cannot be thought of, however, as being held by small savers not particularly sensitive to interest rate differentials. A sizable portion of the funds in this area represents

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<sup>53</sup> Calomiris, Charles W. (2010), The political lessons of Depression-era banking reform, in: Oxford Review of Economic Policy, 26/3, 540-560.

<sup>54</sup> Burger, Albert E. (1969), A Historical Analysis of the Credit Crunch of 1966, in: Review of the Federal Reserve Bank of St. Louis 51, September issue, 13-30, 24f.

<sup>55</sup> Ibid., 25f.

<sup>56</sup> Changes in time and savings deposits. December 1965-May 1966, in: Federal Reserve Bulletin (FRB), August 1966, 1102-1136, 1103.

fairly large blocks, and we have abundant evidence that holders of these CDs have been prepared to shift their funds fairly promptly to take advantage of attractive interest rate differentials.<sup>57</sup>

The Fed had found a strong relationship between relative interest rates and deposit flows. Thus, banks with higher interest rates secured larger flows of time deposits. This effect also partly offset the overall growth of deposit flows, because part of the growth in time deposits was offset by a decline in passbook deposits. Strikingly, the Fed found this effect of internal disintermediation only at large banks. Small banks increased both savings and time deposits.<sup>58</sup>

The outflow of money from passbooks affected not only commercial banks but also savings institutions. Until the early 1960s, savings institutions had a major interest rate advantage over commercial banks. In 1960, savings and loan associations on average offered 3.9% on passbooks, while commercial banks offered an average of 2.6% on savings and time deposits. Thus, savings institutions had a rate advantage of 1.3%. This large interest rate differential was a result of a fractured deposit market rather than regulation. After 1960, however, the differential declined substantially. By 1965, it was only 0.5%.<sup>59</sup> This decline was mainly due to a change in the composition of commercial bank deposits caused by the introduction of CDs in the early 1960s. CDs were responsible for 40% of deposit growth at commercial banks between 1961–1965. Along with rising market rates, the interest on CDs increased substantially after 1963. By the end of 1965, it had surpassed the average passbook rate at savings and loan associations for the first time. When commercial banks introduced consumer CDs in 1966, they used this new asset class to circumvent the ceiling on passbooks. According to the Fed, almost 90% of CD deposits were held by banks that offered a maximum rate above the passbook ceiling rate. Thus, commercial banks started to outbid savings institutions in the retail market.<sup>60</sup>

In this new competition, savings institutions lost out, partly due to the structures of their asset portfolios, which consisted primarily of fixed-interest mortgages. Because they could change the interest rate only on new mortgages but not existing ones, savings institutions could not match the ability of commercial banks to increase the rate on short-term business loans. However, in a speech before officials of the American Bankers Association (ABA) in October 1966, Federal Reserve Board member J. Dewey Daane laid out another reason for the savings institutions inability to compete:

[M]any banks could hold down the cost of such strong bidding for time accounts by offering the highest rates only on CDs or other special instruments sold primarily to the margin of the most interest-sensitive customers... Other depository institutions were simply not able to keep pace with commercial bank activities in this area. Why? Not because they were any less interested in meeting customer loan demands, but chiefly because they were not as flexible as banks in the interest rate attaching to either assets or liabilities in their balance sheets. Mutual savings institutions of all types, wedded to the idea of making all interest and dividend rate increases applicable across-the-board... are exposed to much more serious earnings squeezes than banks when interest rates rise sharply.<sup>61</sup>

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<sup>57</sup> Statement to Congress, in: *Ibid.*, 1141-1148, 1142.

<sup>58</sup> Changes, in: *Ibid.*, 1101.

<sup>59</sup> Savings and Loan Fact Book, year 1971, 17.

<sup>60</sup> Changes, in: FRB August 1966, 1105.

<sup>61</sup> J. Dewey Daane, Savings Flows and Public Policy, Remarks before the Annual Meeting of the Savings Division of the American Bankers Association in San Francisco, 24 October 1966, p. 6, in: Statements and Speeches of J. Dewey Daane, FRASER Online Archive, URL: [fraser.stlouisfed.org/title/statements-speeches-j-dewey-daane-927/savings-flows-public-policy-36048](https://fraser.stlouisfed.org/title/statements-speeches-j-dewey-daane-927/savings-flows-public-policy-36048).

Thus, banks were able to suppress costs by engaging in a practice of price discrimination, whereas only *margin of interest-sensitive customers* were offered the maximum rate. The public mission of savings institutions hindered them from doing the same. Hence, they either had to offer the highest rate to all customers and thereby push down net earnings, or they faced significant outflows. While the flow of funds to commercial banks declined by 10% in the first 7 months of 1966, it decreased by about 50% at savings banks and 80% at savings and loan institutions. Thus, commercial banks were able to compensate for their losses to the money market by redirecting funds from savings institutions. The slow-down of deposits forced savings institutions to stop issuing new mortgages. The strong decline in the volume of new mortgages represents the second part of the credit crunch.<sup>62</sup>

The most important consequence of the 1966 credit crunch was an extension of Regulation Q. In a first step, authorities introduced a new ceiling specifically for consumer-type CDs with denominations less than \$100,000, which was set at 5%.<sup>63</sup> The Fed thus recognized the emergence of a new class of retail deposits by regulating its price. The second step was the imposition of interest rate ceilings for savings institutions. The FHLBB was assigned the authority to impose ceilings on savings deposits at savings and loan associations. The ceiling rate on passbooks was set at 4.75%. For the newly introduced class of consumer CDs, called savings certificates among savings institutions, the ceiling was set at 5.25%.<sup>64</sup> Thus, the new regulation on interest rates established an official rate differential between savings associations and commercial banks for both passbooks and consumer CDs. This regulation stripped commercial banks of the opportunity to compete for the savings associations' most interest-sensitive customers. While savings institutions had enjoyed a rate advantage before 1966, this advantage had mainly reflected market conditions. After 1966, it solely depended on government regulation. Or, as Carl Distelhorst, a consultant at the US League of Savings and Loan associations put it,

Through the years the willingness and ability of savings and loan associations to pay substantially higher rates of return on savings than banks has been our most effective weapon. Now that difference has all but faded away and such differential in rate which remains in our favor hangs on a thin thread which could easily be cut.<sup>65</sup>

From 1966, savings institutions became dependent on Regulation Q to remain competitive with commercial banks. Furthermore, the government-sponsored rate advantage became their main selling point in the intensifying competition for household savings. The aggressive marketing of the rate differential proved effective. Surveys show that in the second half of the 1960s, customers increasingly looked to interest rates to decide where to open a savings account. A 1966 survey from Market Facts Inc. showed that the prime reason for this choice was a convenient location. Next were the variety of services offered and the safety of the institutions. Interest rates followed as a distant fourth. However, when the choice fell on a savings and loan association, 62% of respondents named interest rates as the reason.<sup>66</sup>

Only a few years later, interest rates had taken center stage in the market for savings deposits. In a Gallup survey from 1969, 61% of customers named high interest rates as a factor in their choice of where to open a savings account. More importantly, interest rates topped the lists of the most important (27%) and second most important reasons (22%) for customers to choose a particular institu-

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<sup>62</sup> Brimmer; Andrew F., "Strategy of monetary policy in a high employment economy", in: California Savings and Loan Journal, November 1966, 16.

<sup>63</sup> Burger (1969), 24.

<sup>64</sup> Savings and Loan News, July 1967, 7f.

<sup>65</sup> Distelhorst, Carl, The new Destiny of the Savings and Loan Business, in: Savings and Loan News, August 1967, 38-45, 41.

<sup>66</sup> Both studies are discussed in detail in Savings and Loan News, August 1971, 45-49.

tion for their savings deposits. At the same time, 55% of respondents identified savings and loan associations as high interest-paying institutions, and another 41% named savings banks, while only 33% thought that commercial banks would pay high interest.<sup>67</sup> In a follow-up survey in 1971, interest rates were named by 68% of respondents as a factor in their choice, by far the most-named reason. This was the only factor for which savings institutions beat commercial banks in the eyes of their customers.<sup>68</sup>

The officially guaranteed rate differential shaped the competitive environment for the entire stagflation period. The rate advantage was extended to all newly introduced savings certificates until 1982, with the exception of the “wild card” experiment (see below). For savings institutions, the rate differential became their main selling point, primarily due to their inability to offer checking accounts, which put them at a great disadvantage against commercial banks. One result of the aggressive competition for funds was a boom in consumer-type certificates. In the following years, consumer or savings certificates became an important part of the retail deposit market. Among commercial banks, the share of passbook deposits in all retail savings deposits declined from 80% in May 1966 to 59% in 1969 and to 55% in 1972.<sup>69</sup> Thus, commercial banks saw their share of passbooks dropping quickly in the years immediately following the credit crunch. After 1969, the share more or less stagnated. Among savings and loan associations, the trend was more gradual and continuous. The share of passbook deposits among retail savings deposits was 88% in October 1966 and declined to 69% in 1969 and to 50.6% in 1972.<sup>70</sup> At mutual savings banks, the data is more fractured, so the first estimate of the share of certificates to all savings deposits is from 1970. In this year, the passbook share was still at 92%, but it dropped to 68% in 1973.<sup>71</sup> In summary, by the end of 1972, passbook deposits comprised about half of the entire retail savings market. The other half was captured by savings certificates.

#### *Deregulation of interest rates in Germany, 1967*

Meanwhile, on the other side of the Atlantic, only a few months after the US credit crunch, the German Minister of Economic Affairs Karl Schiller rather abruptly decided to abolish the entire regulation of bank interest rates in March 1967. Deutsche Bank CEO Hermann Josef Abs assumed that Schiller had made this decision because he was angry at the actions of the German central bank, the Bundesbank. In 1966, West Germany had experienced its first postwar recession, and Schiller had counted on the Bundesbank to lower its discount rates to boost business lending. However, the Bundesbank refused to follow suit in order to prevent inflationary pressures. By statute and tradition, the Bundesbank was largely independent from political influence and thus could not be forced by Schiller to fall in line with his economic policies. Instead, Schiller hoped that increased competition among banks would push down lending rates and thus accomplish his goal without the help of the Bundesbank, which strictly opposed deregulation because it would diminish the bank’s power to influence the general interest rate level in the economy.<sup>72</sup>

While the decision to deregulate bank interest rates came rather abruptly, it did follow a long-term debate on the merits of the regulation regime. The German version of Regulation Q had been implemented in the 1930s. It was structured very differently compared to the US system. Instead of the central bank, a committee consisting of the federal bodies of the major banking groups was assigned

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<sup>67</sup> Main results of the Gallup survey were presented in the October 1969 issue of *Savings and Loan News*, 61-65.

<sup>68</sup> Results of this survey were published in the August 1972 issue of *Savings and Loan News*, 68-70.

<sup>69</sup> Federal Reserve Bulletin, Issues: April 1967, 518; March 1970, 212; October 1973, 730.

<sup>70</sup> *Savings and Loan Fact Book 1975*, 20

<sup>71</sup> National Fact Book of Mutual Savings Banking 1971, 20f; Mutual Savings Bank Annual Report 1975, 6.

<sup>72</sup> Vermerk vom 7. Februar 1967 über die Besprechung im Bundesaufsichtsamt für das Kreditwesen am 3. Februar 1967, p. 2, in: Historical Archive of Deutsche Bank (HADB) V1/3769.

the task to set a *normal* rate for passbooks, later called *Spareckzins*. The federal banking authority later gained the authority to make this rate binding for all retail banks.<sup>73</sup> From the beginning, German interest rate regulation had a systemic component. It was not primarily intended to eliminate cutthroat competition but instead had been part of a comprehensive effort to lower the overall interest level in the German economy at the time.<sup>74</sup>

Beginning the early 1960s, savings banks lobbied for a partial deregulation of interest rates, while all other banking groups more or less severely opposed a complete abolishment of interest rate regulation. To get the other groups on board, for the immediate period after deregulation, the savings banks proposed issuing joint interest rate recommendations for passbooks to the member banks of all major banking groups. After Schiller's announcement of the abolition of rate regulations, the other banking groups accepted the idea of central interest rate recommendations. On the day when the deregulation decision came into effect, all major banking groups issued identical recommendation to their peer banks. This first recommendation stated that the federal associations recommended holding all rates steady. Thus, the federal associations of the banking groups took over the task of deciding upon the *Spareckzins*, the benchmark rate for passbooks.<sup>75</sup>

A key feature of the *Spareckzins* was that it served as a benchmark for not only standard passbooks but also passbooks with longer notice periods. The most popular of these special passbooks were those with 1-year notice, with rates typically set at 1% above that of standard passbooks. In the early 1970s, these longer-term passbooks became popular enough to start a discussion among savings banks about the introduction of a new benchmark rate that was bound to 1-year passbooks.<sup>76</sup> While this was never a realistic option, it is questionable whether this step would have increased competition among German banks. In the summer of 1971, the Kreissparkasse Bielefeld started an extended marketing campaign to increase their market share among longer-term passbooks. To bolster this campaign, the bank offered between 0.5%–0.75% higher rates than their direct competitors did. However, half a year later, bank managers admitted that this campaign had not led to any results. Bank officials concluded that customers were not as sensitive to interest rate differentials as the bank had anticipated. The rates were consequently adjusted to the lower rates of their competitors.<sup>77</sup>

The most competitive part of the market for passbooks were PVS/VL accounts, which collected the bulk of the two generous German public savings incentive schemes: *Sparprämien* and *Vermögenswirksame Leistungen*. These schemes provided the financial industry with an almost unbeatable offer: a passbook that received both subsidies had a yearly return of between 20%–30%, far higher than the yield on any ordinary financial asset. While this extremely high return was only achievable for the money accumulated within 1 year, and only if the customer made continuous contributions to a long-term savings plan, it was still a highly attractive way to save money for long-term purposes. Meanwhile, the banks only had to pay the ordinary interest rate, usually the rate for 4-year-notice passbooks. The market for subsidized savings plans was consequently highly competitive. Among *Sparprämien*, savings banks had traditionally led the market, with a share of almost 70% in 1964. By 1972, however, their market share had declined to below 60%, with all other banking groups making small gains.<sup>78</sup> The entire *Sparprämien* scheme coexisted with a similar program for building society contracts

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<sup>73</sup> Knake (2023a), 38-40.

<sup>74</sup> Knake, Sebastian (2020), Unternehmensfinanzierung im Wettbewerb. Die Braunschweigische Staatsbank 1919-1969, Berlin/Boston, 132f, 172f.

<sup>75</sup> Knake (2023a), 40-44.

<sup>76</sup> See for the discussion: Ibid, 59-63.

<sup>77</sup> Niederschrift der Zweigkassenleitersitzung der Kreissparkasse Bielefeld vom 19. Januar 1972, p. 5, in: HASB AII3/169.

<sup>78</sup> Marktstellung der Sparkassen im Spargeschäft (1974), published by DSGV, Series Marktforschung-Marketing-Planung Vol. 6, p. 46f, in: DSGV Archive (no designation).

called *Bausparprämien*. Because customers had to choose between these two subsidies, banks competed with building societies, as well as with other banks. As for the *Vermögenswirksame Leistungen*, passbooks competed with building society contracts and life insurance. The latter entered this market in 1970. As I explain elsewhere, the competition for subsidized savings contracts transformed the banking industry's entire marketing strategy. The crucial factor in this competition was the access to potential receivers of the subsidies. Especially among the *Vermögenswirksame Leistungen*, access to employees either via unions or via the company management was the key to success.<sup>79</sup>

While deposits inside government-subsidized savings plans comprised only about 10% of overall passbook deposits, they generated a continuous flow of money in an otherwise highly volatile market. Among savings banks, the volume of mature PVS/VL savings contracts rose sharply, from 1.6 billion D-Mark in 1966 to nearly 5 billion D-Mark in 1971, and reached its maximum in 1977, with over 11 billion D-Mark. Internal evaluations of the savings banks on investment decisions of customers regarding matured savings contracts show that about half of this money was transferred to ordinary passbooks after the maturity of the plan. This relatively steady flow of money became a crucial factor in the late 1970s, when the overall flow of new money into passbooks decreased substantially. Subsidized passbooks were counted among longer-term passbooks and contributed to their growing importance and market share, as shown in Figure 1. In contrast to the situation in the US, this change occurred mainly within the passbook category. Changes in the market share of major banking groups remained small. Between 1964–1972, the market share of savings banks regarding savings deposits declined somewhat, while that of the credit unions increased. For the market for longer-term passbooks, the decrease in market share was somewhat more pronounced.<sup>80</sup>

While some parts of the German passbook market were highly competitive, this competition did not depend on prices, primarily due to the existence of the *Spareckzins*. There were no large-scale marketing campaigns or *rate wars* in Germany. Advertising for passbooks almost never featured interest rates. This duality is reflected in the annual surveys of the market research firm EMNID on the savings and investment behavior of German bank customers.<sup>81</sup> In 1972, only 24% of respondents could name a bank or banking group that—according to the respondent—offered the highest interest rate. Another 14% suggested that there were differences but did not name an institution or banking group as price leader. A third of respondents believed that all banks offered the same interest rates, and 30% did not answer the question. Among the group who did name a certain bank or banking group as price leaders, the answers were almost evenly distributed across the major banking groups. The *Sparkassen-Werbedienst*—an internal marketing journal of the savings banks—concluded: “[T]he study also shows that it is not correct to assume that the 'rate conscious' saver, i.e. the subgroup that assumes different interest rates, also has an overview of the market.”<sup>82</sup>

While the continued practice of a common benchmark rate diminished the opportunity for price competition, it did not eliminate it. The deregulation of interest rates gave both banks and their customers the opportunity to deviate from recommended rates. The duality of the existence of a common benchmark rate and the opportunity to opt out of it had no immediate effect. However, as I explain below, it became a crucial factor in the German passbook market in the mid-1970s.

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<sup>79</sup> Knake, Sebastian (2019).

<sup>80</sup> *Ibid.*, 52.

<sup>81</sup> The main results of the EMNID surveys were published in the *Sparkassen-Werbedienst*. The latter is a periodical dedicated exclusively to marketing specialists within the savings banks organization. It was not available to customers or the public.

<sup>82</sup> See *Sparkassen-Werbedienst*, 3/1973, 56-58, 58. Author's translation from the German original.



## 5. *Wild Cards and Sparbriefe*—The early 1970s

In early July 1973, the US Federal Reserve Board introduced regulatory changes to the retail deposit market, the most important of which was the introduction of a 4-year savings certificate with a minimum denomination of \$1,000. In contrast to all other retail deposits, this new CD did not feature an interest rate ceiling. Thus, depository institutions were free to offer any rate. The Fed caught the FHLBB, which was in charge of regulating the savings and loan industry, completely off guard. The FHLBB had no choice but to allow its peer institutions to offer the same CD to their customers as well.<sup>83</sup> Due to its experimental character, as well as the circumstances of its introduction, the new CD was nicknamed *wild card* certificate. Only 4 months after its introduction, the regulatory authorities decided to end the experiment and set a ceiling for the 4-year certificates due November 1, including the rate differential between commercial banks and savings institutions. By that time, depository institutions sold *wild card* certificates worth almost \$20 billion, about 5% of the entire amount of savings and small-time deposits. The share might have been even higher if the individual banks had not been constrained by a rule that limited wild card sales to 5% of their liabilities. The vast majority of savings and loan associations had reached the limit by September, when the entire group had sold *wild cards* worth 4.3% of their total deposits.<sup>84</sup> Most commercial and savings banks, where the quantitative limit had been imposed later than among savings and loans, had reached the limit by October.

The results of the *wild card* experiment were highly contested between the different banking groups. The savings and loan industry used the alleged failure of the experiment as proof of the general dangers of deregulation. Without deregulation, so the argument went, free competition between commercial banks and savings institutions would benefit the former at the expense of the latter. Outflows of deposits among savings institutions would lead to another credit crunch, thereby affecting the housing and construction sectors. This narrative was so powerful that the savings institutions were able to fend off all attempts to eliminate the rate advantage on retail deposits until the early 1980s.<sup>85</sup>

### *[Ads of Metropolitan Savings Bank and National Bank of North America]*

Commercial bank officials vehemently contested this narrative. In an analysis of interest rate settings during the “wild card” experiment, Edward Kane, a former executive of the FDIC, proved that the vast majority of commercial banks had not offered unusually high rates. The average rate among commercial banks by the end of July 1973 was 7.27%, almost exactly the ceiling rate imposed on 4-year certificates in November 1973. Even more crucially, it was below the average rate offered by savings and loan associations. Generally, commercial banks did not outbid savings institutions during the *wild card* experiment. Moreover, all banking groups stayed well below the rate on Treasury bills during this time. This indicates that instead of an outsized price, *wild cards* rates represented a good approximation of what a market price for long-term retail deposits would have looked like in the summer of 1973.<sup>86</sup>

To demonstrate the dynamic development after the official introduction of the *wild cards*, I begin by describing the advertising strategies of New York depository institutions in the *New York Times*,<sup>87</sup> which had published a story on the regulatory changes among retail deposits on the front page of their

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<sup>83</sup> “How the Rate War began”, in: Savings and Loan News, August 1973, 27.

<sup>84</sup> Kane, Edward T. (1978), Getting along without Regulation Q: Testing the Standard View of Deposit-Rate Competition During the “Wild Card Experience”, in: Journal of Finance, 33/3, 921-932, 927.

<sup>85</sup> Kane (1978), 926f. Kane called this narrative the “Wild Card Mythology.”

<sup>86</sup> Ibid., 927-929.

<sup>87</sup> As shown below, American banks advertised two interest rates. Among the nominal rate, all ads featured an effective rate that includes compounded interest *within* one year. The effective rate was about 0.4% higher than the official rate.

July 6 issue.<sup>88</sup> While this article also contained information on the wild cards, New York savings banks initially focused on other newly available offers, such as the higher rate on regular passbooks. For the wild card certificate, the East River Savings Bank stated in an ad, “For anyone who has \$1,000 or more and is willing to deposit from 4 to 7 years, we have an even better way. Ask for information at any of our convenient offices.”<sup>89</sup>

Similar notes can be found in many other ads in the first weeks after the introduction of the *wild cards*.<sup>90</sup> Only a week later, however, the focus of the ads changed. Savings banks now put the wild cards on top of the list of offerings,<sup>91</sup> in reaction to a few commercial banks who had started to bid aggressively for savings. While the savings banks still offered a 7% nominal rate, the National Bank of North America offered a 7.50% rate and printed this number along with an even higher effective rate, in possibly the largest available font in a full-page ad.<sup>92</sup> Another week later, the first savings banks had increased their rates to match the National Bank of North America’s offer.<sup>93</sup> Interestingly, there was another note for customers with “substantial monies to invest”—this time to contact a bank office for a “bonus interest rate.”<sup>94</sup> Thus, many New York savings banks tried to offer higher rates to only their most important customers. At the end of July, however, savings banks were offering 8% on the wild cards,<sup>95</sup> mostly limited in time or to a certain amount, such as \$25 million of total investments. Some savings banks even openly advertised the imposed limit on the overall number of wild cards that banks were allowed to sale: “The Bowery urges you to act now. New federal regulations strictly limit the amount of Guaranteed Investment Certificates [brand name of Bowery wild cards] that we can issue—and we are rapidly reaching that mark.”<sup>96</sup>

Even East River, which had previously confined wild cards to individual sales, now offered a *limited edition* of their wild card with 7.75% interest.<sup>97</sup> Thus, customers had to act quickly to get the high rate or lose out on the investment opportunity. At this point, savings banks had already started to outbid commercial banks such as Chase Manhattan, which still only offered 7%.<sup>98</sup> Meanwhile, the initial attempt of savings banks to discriminate between savers had vanished; the note on bonus payments for large investments had disappeared.

The described chain of events was coined a *rate war* by contemporary sources. While the New York market was an extreme case, *Savings and Loan News* magazine collected similar stories from across the country. The CEO of *Sooner Federal Savings* in Tulsa, Oklahoma, described the first few weeks after the introduction of the wild cards in the following way:

The banks were first to advertise, and then it all started. Big headlines on the front page of the newspaper talked about increased rates. The public was alerted, and it was a matter of how fast you could get your rate ads into print.<sup>99</sup>

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<sup>88</sup> „Rise approved in Interest Rates paid on Savings”, in: NYT, 6 July 1973, p. 1.

<sup>89</sup> Ad of East River Savings Bank, in: NYT, 10 July 1973, p. 18.

<sup>90</sup> See for instance: Ad of South Brooklyn Savings Bank, in: Ibid, 35;

<sup>91</sup> See the following ads: New York Bank for Savings, NYT, July 17 1973, p. 10, Seaman’s Bank for savings, Ibid., p.14; Dry Dock Savings Bank, Ibid., 22; Greenwich Savings Bank, Ibid. p. 35.

<sup>92</sup> Ad of National Bank of North America, in NYT, 17 July, 1973, p.25

<sup>93</sup> Ad of Metropolitan Savings Bank, in: NYT 24 July 1973, p. 12.

<sup>94</sup> Ad of Prudential Savings Bank, in: NYT, July 24, p. 32.

<sup>95</sup> Ad from Roslyn Savings Bank, NYT, 31. July 1973, p. 12; Ad from Harlem Savings Bank, in: Ibid. p. 42; Ad from West Side Federal Savings, NYT 01 August 1973, p. 6.

<sup>96</sup> Ad of Bowery, in: NYT, 1 August 1973, p. 23.

<sup>97</sup> Ad of East River Savings Bank, in: NYT, 2 August 1973, p. 25.

<sup>98</sup> Ad of Chase Manhattan in: NYT, 1 August 1973, p. 13.

<sup>99</sup> *Savings and Loan News*, September 1973, 67.

In Pennsylvania, the PSFS entered the wild card market just weeks after the start of its new marketing strategy, which replaced the old convenience-based message with one that emphasized the rate differential. The new slogan read, "PSFS pays more than ordinary banks." The rationale of this change was the notion that deposit growth at the PSFS had fallen behind that of commercial banks. The bank noted that this was not a local phenomenon but had happened nationwide, and bank officials believed that this was due to the lack of public knowledge on the rate differential.<sup>100</sup> The wild card experiment immediately put the new campaign into question, because the rate advantage was no longer guaranteed. On July 10, in the same employee newsletter that announced the introduction of the new wild card certificate, PSFS management doubled down on their campaign, although they modified it slightly: "The hard hitting approach of our recent advertising campaign will continue with the basic theme 'PSFS Still Pays More than ordinary banks.'"<sup>101</sup>

Of course, the campaign promise implied that the PSFS did actually pay more than their commercial bank rivals did. While the PSFS started with 7% on July 11, it increased the rate to 7.6% (the effective rate was a better marketable 8%) only 2 weeks later.<sup>102</sup> Western Savings, a competing Philadelphia savings bank, even outbid the PSFS, offering a base rate of 8% (effective 8.45%). Similar to the New York case, these offers coincided with the fact that these banks rapidly approached the official sales limit. Additionally, all savings institutions in Philadelphia had to cope with the aggressive competition by First Pennsylvania Bank, which sold its wild cards under the name of *inflation fighter certificate*. This made headlines across the country. The special feature of this certificate was its rate being tagged to inflation.<sup>103</sup> This feature made it more difficult for the savings banks to compete; the *inflation fighter* not only paid a high rate but insulated owners from uncertainty over future inflation.

Like all savings institutions, the PSFS and Western Savings were vulnerable to competition from commercial banks. Of Western Savings' customers, 90% owned checking accounts, all of them at competing commercial banks. In addition, 97% owned savings accounts, but only 53% of these accounts were held at Western; 17.5% were at other savings banks, 13.7% at commercial banks and almost 10% at savings and loan associations. Almost half of Western Savings' customers held only certificates at the bank. Western Savings' customers were thus in regular contact with commercial banks due to their checking accounts. Additionally, half of the savings accounts of Western customers were at competing institutions.<sup>104</sup> Thus, Western always had to advertise its rate advantage aggressively to make up for the higher convenience of their competitors. This is the underlying reason for the aggressive pricing of the *wild cards* mentioned above.

The cumulative evidence of these developments stimulated an inflationary use of war metaphors among the savings and loan industry. In the title story of the September issue of *Savings and Loan News* magazine, cannons and cannon balls featured prominently beneath the title "The Money War."<sup>105</sup> One consequence of these *rate wars* was an increase in market transparency. Thus, many

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<sup>100</sup> PSFS On-Line Employee circular, 73-28, 5 June 1973, in: Hagley 2062, RG V/1-C, Box 63.

<sup>101</sup> PSFS On-Line Employee circular, 73-37, 10 July 1973, in: Hagley 2062, RG V/1-C, Box 63.

<sup>102</sup> Note of President M. Todd Cooke to the PSFS Board, July 26 1973, Attachment to Board Meeting Agenda for August 10, 1973, in: Hagley 2062, RG I/2-A, Box 10.

<sup>103</sup> *Savings and Loan News*, September 1973, 67; Charles Gibson also mentions the "Inflation Fighter Certificate" in his history of the deposit market. *Deposit Flow Analysis*, April 1984, p. 7, Policy Committee: Minutes 1980 – May 1984, in: Hagley 2062, RG I/2-B, Box 29.

<sup>104</sup> Accountline Survey for Western Savings Bank – Special Sample, March 23, 1977, in: Hagley 2062, RG XVI/7-E, Box 122.

<sup>105</sup> *Savings and Loan News*, September 1979, Title page and p. 54-56.

more retail customers became accustomed to interest rates that exceeded 7%: “And the general public, buffeted by rate ads, investment stories in newspaper and bridge table talk was, as a result, confused and unhappy—and much more conscious of rate.”<sup>106</sup>

Did savings institutions lose out in the *wild card* experiment? Edward Kane concluded that the bulk of funds that went into commercial bank *wild cards* did not originate from savings institutions. Instead, they consisted mostly of internal transfers from passbooks and other savings certificates, as well as from new household savings. He speculated that *wild card* sales significantly reduced the outflow of deposits to open market assets such as Treasury bills for commercial banks, as well as savings institutions, at the expense of internal transfers from lower to higher-yielding deposits.<sup>107</sup>

It is actually impossible to track the money flows between banks or from banks to money markets for an entire economy. The PSFS had net sales of wild cards worth \$150 million in the first 2 months, already reaching the 5% limit in August. Afterward, sales dropped to nearly zero in the following month. This strong growth was compensated for entirely by an equally large loss in regular savings certificates. The strong decrease among regular savings deposits translated into an overall loss of deposits of about \$70 million in the 2 months.<sup>108</sup> Of course, these are only balance sheet aggregates, which do not tell something about the actual internal transfers in the bank. However, the PSFS had developed an econometric deposit forecast model that singled out the effect of the *wild card* experiment on the bank via dummy variables. According to the model, the wild cards were solely responsible for outflows from passbooks that amounted to 2% of the bank’s retail deposits. Additionally, nearly 1% of the bank’s retail deposits were transferred from passbooks to certificates. Given that passbook deposits had comprised two-thirds of deposits at the PSFS in June 1973, the bank lost almost 5% of its passbook deposits due to the experiment, the majority of which left the bank for good.<sup>109</sup>

*Table 5: Western Savings of Philadelphia—Changes of passbook savings during the wild card experiment, July–September 1973*

Size of account (\$)	Total change (million \$)	% Change
<1,000	0	-0.3
1,000-20,000	-15.3	-2.7
20,000-50,000	-11.8	-9.5
50,000-100,000	-4.6	-19.1
100,000+	-5.6	-40.5
Total	-37.2	-5.0

Source: Western Savings Fund Society, Board Minutes, Reports, August 14, 1973, statistical material, in: Hagley 2062, RG XVI/2: Board of Managers, Box 105.

Especially worrying for the savings institutions was the fact that this outflow did not only affect the largest deposits. Western Savings in Philadelphia had examined the impact of passbook outflows during the wild card experiment on different size categories of accounts (see Table 5) and found that it lost almost half of its large accounts (\$100,000+) and 20% of those accounts with deposits between \$50,000–\$100,000. However, in absolute terms, it lost more money in the lower categories. What hurt Western Savings most was not the interest sensitivity of the very large accounts but the withdrawal of money from medium-sized accounts. It is reasonable to assume that holds of the largest accounts

<sup>106</sup> Ibid, p. 70.

<sup>107</sup> Kane (1978), 931.

<sup>108</sup> PSFS Report to the Board of Trustees, July and August 1973, in: Hagley 2062, RG I/2-A, Box 17.

<sup>109</sup> PSFS Deposit Forecast Model – 1980 Version, Attachment to the Report of the Liquidity Task Force of the PSFS as of July 14, 1980, in: Hagley 2062, RG XX/3, Box 137.

would have moved their money elsewhere without the existence of *wild cards*. However, the wild card experiment had done more than just compensating for disintermediation. It had made contact with the middle class.

Despite the short period of its existence, the wild card experiment had a lasting legacy. In 1984, Charles Gibson of the PSFS explained this legacy:

To explain the reasons for the shift in deposit structure more clearly, it is necessary to go back ten years to the “wild card” certificate issuance of the summer of 1973... The marketing of the ‘wild card’ certificates was stopped by regulators after a short time, but it marked the beginning of a new period for thrifts.<sup>110</sup>

The *wild cards* popularized long-term certificates. The share of certificates with a maturity of at least 4 years to all savings deposits at savings and loan associations skyrocketed from less than 4% in September 1973 to 42% in March 1978. The main victims of this development were short-term certificates with a maturity of less than 1 year. However, the share of passbooks also declined from almost 50% to 39%. Thus, by 1978, savings and loans had significantly more savings deposits in certificates than on passbooks. This was not true for commercial banks, where the share of passbook deposits actually increased between 1973–1978.<sup>111</sup> For mutual savings banks, the share of passbook deposits to all savings deposits fell from 68% in 1973 to 59% by the end of 1977.<sup>112</sup> The internal restructuring of retail deposits led to further specialization in the deposit market. Commercial banks were able to extend their lead in the market for passbook deposits. Conversely, savings institutions became the leader in the market for savings certificates. This development reinforced the trend toward interest-sensitive assets among savings institutions, while commercial banks—forced by the rate regulation regime—*specialized* in less rate-sensitive money. The PSFS consequently continued to advertise its slogan “PSFS pays more than ordinary banks” for another 6 years, until 1979.

The second lasting effect of the *wild card* was that it introduced a new long cycle into deposit flows. For individual banks, *wild cards* resurfaced as a problem in 1977, when they first became due. This is reflected in the PSFS deposit forecast model, which featured a second dummy variable, for the rollover period in 1977. Thus, the wild cards repeatedly disturbed the pattern of money flows, even in later years. In 1977, the PSFS managed to convert most wild cards into regular 6-year certificates. However, this conversion only postponed the problem further. Gibson spoke of a “time bomb,” which went off in 1983. Thus, the money that came into the bank on the *wild card* ticket never diffused into the general deposit structure but remained a disrupting force for a very long time.<sup>113</sup>

#### *German Sparbriefe and bonus payment schemes 1973/74*

In Germany, the years of 1973/74 were a high-interest period with rates on the money market eclipsing the US rates and reaching double digits in the summer of 1973. Yet, despite the deregulation of interest rates, the official benchmark rate on passbooks, the *Spareckzins*, did not move beyond 5.5%. Thus, despite the deregulation of interest rates, official passbook rates did not adjust to the market. As I

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<sup>110</sup> Deposit Flow Analysis, April 1984, 7, Policy Committee: Minutes 1980 – May 1984, in: Hagley 2062, RG I/2-B, Box 29.

<sup>111</sup> Cook, Timothy Q. (1978), Regulation Q and the Behavior of Savings and Small Time Deposits at Commercial Banks and the Thrift Institutions, in: Economic Review (Federal Reserve Bank of Richmond), November issue, 14-28, 19f.

<sup>112</sup> Mutual Savings Banking Annual Report of the President of the NAMSAB, May 1978, 11.

<sup>113</sup> Deposit Flow Analysis, April 1984, 7, Policy Committee: Minutes 1980 – May 1984, in: Hagley 2062, RG I/2-B, Box 29.

explain elsewhere, this inertia was in part due to the specific practice regarding decisions on the benchmark rate. Here, the discount rate of the Bundesbank was crucial. However, due to the duality of internal and external inflationary pressures, at a certain point, the Bundesbank closed the discount window for banks and thereby stopped moving the discount rate. This inaction deprived the public of the most important signal on which to form interest expectations with regard to the *Spareckzins*. Thus, there was not enough public pressure on the banking groups to take action.<sup>114</sup>

Conversely, the deregulation of interest rates offered a favorable alternative to the increase of the benchmark rate: price discrimination. In the early 1970s, most banks in Germany began to offer interest-sensitive owners of large accounts a bonus on the official rate of their passbooks. These bonus payments closed the gap between the official rate and current money market rate. In another article, I estimate that at the peak of the high-interest period, between 2%–4% of passbooks and about 10% of savings deposits received such a bonus payment, despite the fact that accounts worth less than 10,000 D-Mark were usually excluded from this offer by bank policy.<sup>115</sup> From the perspective of banks, this system had several advantages. First, money could stay on passbooks, which meant that the banks could use it as funds for long-term lending purposes. Short-term time deposits were generally excluded from funding long-term loans. Second, the bonus agreements were temporary, which meant that once the high-interest period was over, customers would return to being ordinary passbook savers. I explain the properties and the importance of these bonus programs in more detail in the following section.

From the early 1970s, longer-term passbooks started to fall out of fashion, primarily due to the rise of the *Sparbrief*, the German version of the *wild card* certificate. Originally invented by the credit unions in 1964, the *Sparbrief* was popularized by savings banks under the name *Sparkassenbrief* beginning in 1968. By 1973, the *Sparbrief* was already well established, with 5% of households owning at least one certificate.<sup>116</sup> Like the *wild cards*, *Sparbriefe* featured a 4-year maturity and a fixed-interest rate that was freely determined by the individual bank. Statistics from the Bundesbank show that the average rate of these savings certificates at point of sale closely followed the market for medium-term securities. Thus, these were among the few successful retail deposits that featured a market rate.<sup>117</sup> In the early 1970s, savings banks dominated the certificate market even more than the passbook market, holding about 80% of the volume in 1974. However, it took the savings banks 4 years, until 1972, to convert 4% of their deposits into *Sparbriefe*—a threshold reached by the US savings and loan industry within 2 months in 1973. The credit unions never achieved a comparable deposit share, and the commercial banks largely ignored this market.<sup>118</sup> During the high-interest period in 1969/70, the average *Sparbrief* rate peaked at 7.5%, far above the 5% *Spareckzins*. In 1973/74, the average rate on *Sparbriefe* peaked at 9%, while the *Spareckzins* remained at 5.5%.<sup>119</sup> This compares to a spread of about 2% between passbook rate and average *wild card* rate in the US during the same period. Thus, while the *Sparbriefe* were popular among German retail customers, they did not show the disrupting potential

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<sup>114</sup> See for a detailed discussion of the dynamics of the *Spareckzins*: Knake (2023a).

<sup>115</sup> Knake, Sebastian (forthcoming), Stupid German Money? Bonus interest rate payments on passbooks during the stagflation period 1967-1984, in: Economic History Yearbook (Jahrbuch für Wirtschaftsgeschichte).

<sup>116</sup> Statistisches Bundesamt (Ed.) (1976), Einkommen- und Verbrauchsstichprobe 1973, Fachserie M, Reihe 18, Heft 2: Vermögensbestände und Schulden privater Haushalte, Stuttgart/Mainz.

<sup>117</sup> A comparison between the average monthly interest rates of *Sparbriefe* and the monthly average emission yield of *Pfandbriefe* (German Mortgage-backed Securities) demonstrates the close relationship between these two assets. The average spread between these two rates from 1970 to 1983 is less than 1%, while the average spread between passbook rates and those on short-term time deposits is more than double this amount. See the respective monthly time series by the Bundesbank. For *Sparbriefe* it is: BBK01.SU0031, For the emission yield of German MBS it is: BBK01.WU0033.

<sup>118</sup> DSGVO-Jahresbericht, div. Volumes.

<sup>119</sup> See the respective monthly time series of the average rate of *Sparbriefe* by Deutsche Bundesbank: BBK01.SU0031

of the wild cards. They only affected the market for longer-term passbooks, whose popularity declined in the 1970s. However, the overall market share of *Sparbriefe* remained small. In 1974, they had a share of household financial wealth of 2%, compared to the 38% share that passbooks held in that year.<sup>120</sup> Even among the savings banks that owned the bulk of *Sparbriefe* deposits, savings certificates comprised only about 7% of liabilities in 1974, compared to a share of almost 70% of passbooks.<sup>121</sup>

In contrast to the secret bonus programs, the interest rate of *Sparbriefe* was prominently featured in advertising campaigns. However, evidence exists that banks varied their advertising efforts according to the size of the rate spread between *Sparbriefe* and *Spareckzins*. When the interest rate on *Sparbriefe* reached 7% in 1970, the Bielefeld County Savings Bank gave its branch managers the following advice:

Given the relatively high interest rates for savings bank certificates and deposits with a four-year notice period, these deposits should not be specifically advertised. However, this type of investment should be brought into discussion to ensure that deposits remain with us.<sup>122</sup>

The bank held on to this defensive strategy for 19 months, before shifting to a more aggressive sales strategy in August 1971. However, bank management stressed the voluntary nature of this turnaround.<sup>123</sup> The difference in the intensity of price-based competition is also visible in how interest rates were paid on the 4-year certificates. In Germany, only credit unions could offer interest payments more than once a year.<sup>124</sup> Thus, the nominal rate was usually also the effective rate.

While the wild card certificate and the *Sparbriefe* were technically the same asset, they had a fundamentally different impact on the retail savings market. In the US, the wild cards had enormous financial and political repercussions that went so far as to result in the experiment being aborted after only a few months. The *Sparbrief*, by contrast, integrated almost frictionlessly into the German retail market. The stark contrast was not and could not have been due to differences in the experience of high interest or inflation rates. In 1973/74, interest rates were higher in Germany compared to the US, and German households faced similar inflation rates as their US counterparts. Instead, the contrasting behavior is due to two factors. First, German banks simultaneously offered short-term deposits that paid market rates, such as time deposits or bonus payments on passbooks. With these offerings, banks answered a growing demand, but they were simultaneously able to confine these money market deposits to their most interest-sensitive customers. The successful discrimination against uninformed customers was possible because the industry structure discouraged aggressive pricing strategies. Thus, the vast majority of German banks chose a defensive marketing approach to these short-term assets. Conversely, the *Sparbrief* was only interesting for customers who sought long-term investments. Here, it competed successfully with medium-term securities. Conversely, as the only deposit that offered a market rate, the US *wild card* appealed to both short- and long-term retail investments. In contrast to the situation in Germany, US banks were generally not able to sustain defensive marketing approaches. This was also due to the specific industry structure that forced savings institutions to bid aggressively for deposits.

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<sup>120</sup> Author's calculations. Source: Finanzierungsrechnung der Bundesbank (German Flow of Funds Statistics), available online at [www.bundesbank.de](http://www.bundesbank.de). Series: BBK10.Q.CEBSOI (value of *Sparbriefe* held by households), BBK10.Q.CEBTOI (value of passbook deposits held by households) and BBK10.Q.CEB00I (financial wealth of households).

<sup>121</sup> DSGVO-Jahresbericht 1975, p. 89.

<sup>122</sup> Rundschreiben der Kreissparkasse Bielefeld Nr. 13/1970 vom 29. Januar 1970, in: Historical Archive of Sparkasse Bielefeld (HASB), AII3/166. Author's translation of the German original.

<sup>123</sup> Rundschreiben der Kreissparkasse Bielefeld Nr. 84/1971 vom 6. August 1971, in: HASB AII3/168.

<sup>124</sup> Niederschrift über die Zweigkassen- und Abteilungsleiterbesprechung der Kreissparkasse Bielefeld am 21. November 1967, p. 4f, in HASB, AII3/161.

## 6. Savings revolution vs. savings evolution (1978–1983)

In June 1978, US regulatory authorities introduced a new savings certificate with a high minimum investment requirement of \$10,000 and a maturity of 6 months. It was subject to Regulation Q, yet its ceiling rate was not fixed. Instead, it was bound to the rate of 6-month Treasury bills. Because Treasury bill rates served as benchmarks for the money market, the new certificate was called a *money market certificate*.

Three years later, William Donoghue, a financial expert, wrote a book called *Complete Money Market Guide*.<sup>125</sup> Despite being badly written and confusingly structured, this book reached No. 3 on the *New York Times* bestseller list for non-fiction in 1981.<sup>126</sup> By that time, money market assets had obviously made their way to the center of public discourse. Donoghue began his story of the money market revolution with the following paragraph:

Although, like any other major movement, the growth and popularity of the money market evolved over time and started in many places, I like to refer to June 1, 1978, as Savers' Liberation Day. That's the day banks were first authorized by the Federal Reserve Board to begin offering the six-month money market certificates.<sup>127</sup>

As Donoghue believed, the savings revolution began with the introduction of the MMC as a means to fight off disintermediation—the flow of savings from the banking industry into money and capital markets. The high minimum investment requirement of \$10,000 was added to limit access to investors who had the potential to invest directly in money market assets such as Treasury bills. One lesson of the *wild card* experiment in 1973 was that these assets attracted customers who would not have been able or willing to invest in actual market assets. The high minimum requirement was an attempt to prevent this kind of spillover effect. Like all other savings and small-time deposits, the MMC featured a rate differential, allowing savings institutions to offer higher rates than commercial banks. By this means, the regulatory authorities avoided the political backlash from savings institutions that had sealed the fate of the *wild card* certificates. It seemed that the regulatory authorities had finally found a tool against disintermediation that did not fundamentally disrupt the retail deposit market.

The rationale of the MMC rested on the previous experience that periods of extraordinarily high interest rates are possible but short-lived. The regulatory authorities assumed that the MMC would self-destruct by early 1979, because the T-bill rate would have fallen to levels close to the passbook ceiling rate by then.<sup>128</sup> Instead, the 6-month T-bill rate soared to double digits in 1979, reaching 15% in 1980 and 1981.<sup>129</sup> In this period, the spread between money market assets and still-regulated regular savings deposits became so large that at some points, money market assets earned more than three times the yield compared to regulated passbook accounts. Within 3 years, the MMC revolutionized the entire retail deposit market in the US. The MMC itself peaked in 1981 with deposits worth almost \$500 billion, about one-third of the market. However, the MMC not only directly influenced the market but also inspired complementary developments that reinforced its direct impact. One such development was the creation of an entire family of MMCs, the most important being the SSC. Taken together, this new

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<sup>125</sup> Donoghue, William E. (1981), *Complete Money Market Guide*. The Simple Low-Risk Way you can profit from Inflation and fluctuating interest rates, New York et. al.

<sup>126</sup> NYT, 29 March 1981, p. 40. It stayed on the list for almost five months.

<sup>127</sup> Donoghue (1981), 2.

<sup>128</sup> *Savings and Loan News*, June 1978, 14f; March 1980, 34f.

<sup>129</sup> Board of Governors of the Federal Reserve System (US), 6-Month Treasury Bill Secondary Market Rate, retrieved from FRED, Federal Reserve Bank of St. Louis. <https://fred.stlouisfed.org/series/DTB6>.



family of certificates comprised about half of retail deposits by the end of 1981.<sup>130</sup> The other key development was the growth of a new competitor in the savings market: the MMMFs. These funds also started from nowhere in 1978 and were worth \$200 billion 4 years later.<sup>131</sup> The success of the MMMFs in turn pressured regulatory authorities to introduce the MMDA in December 1982. This dealt the final blow to standard savings accounts, which were largely pushed out of the market by the mid-1980s. This entire chain of events relied on the introduction of the first MMC in June 1978. In the following section, I demonstrate how the MMC caused this revolution by fundamentally changing the interest expectations of its customers.

In contrast to the *wild card* experiment, the decision to introduce the MMC was jointly taken by all three regulatory authorities: the Fed, FDIC and FHLBB. When discussed at the Federal Reserve Board in May 1978, board members admitted that they simply did not know what would happen after the introduction of the MMC: “On the 6-month certificate, we have to admit that we’re working in an area of considerable uncertainty. We’ve never had anything like this, we don’t know how big the impact will be.”<sup>132</sup>

Contemporary surveys demonstrate that the impact of the MMC was immediate and significant. By the end of June, between 75%–90% of savings and loans offered the MMC.<sup>133</sup> By November 1978, the share had stabilized at 90%. Among mutual savings banks, 75% introduced the MMC in June 1978, and by February 1979, 95% of savings banks offered the new certificate. Conversely, commercial banks were a bit slower to react. By the end of July, about two-thirds of banks reporting to the Federal Reserve System offered the MMC. The share increased to 85% by February 1979.<sup>134</sup> The difference between the thrifts and commercial banks is also obvious in the size of MMC deposits. In January 1979, savings and loan associations and savings banks together controlled roughly 70% of the MMC market, with commercial banks owning the other 30%. At the same time, the MMC comprised 12%–13% of retail deposits of savings institutions, while at commercial banks, it comprised only about 8%.<sup>135</sup> This discrepancy was mainly due to the imposed rate differential that put commercial banks at a disadvantage vis-à-vis savings institutions.

A principal question regarding the MMC was whether it would deliver new funds to depository institutions or whether customers would simply transfer money from existing deposits. A national survey among savings and loan associations conducted at the end of June 1978 found that 42% of investments in the MMC came from new money, while 47% were transferred from passbooks and 11% from certificates. A similar survey among savings banks found only 26% of the MMC investments to be new money. The reason for this discrepancy was explained by the location and average size of savings banks vis-à-vis savings and loan associations. It coincided with the fact that the share of MMC deposits in liabilities also increased with the size of the institution:

[I]t appears, that many of the assumptions about big city competition and the interest rate sensitivity of big city customers explain both the dollar volume of MMC activity and the higher rate of conversions from passbooks to the six-month certificates.<sup>136</sup>

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<sup>130</sup> Author’s calculation. Sources: Savings and Loan Fact Book / Source Book, div. volumes; Board of Governors of the Federal Reserve System (US), H.6 Money Stock Measures, published in the Federal Reserve Statistical Releases series, online available at FRASER <https://fraser.stlouisfed.org/title/53>.

<sup>131</sup> Mutual Fund Fact Book, published by the Investment Company Institute, div. volumes.

<sup>132</sup> Transcript of the Federal Open Market Committee Meeting of May 16, 1978, 12. Online-Resource of FRASER.

<sup>133</sup> Savings and Loan News, Issues: August 1978, 100f; January 1979, 14.

<sup>134</sup> Federal Reserve Bulletin, Issues: November 1978, 838f; May 1979, 388-391.

<sup>135</sup> See Footnote 130.

<sup>136</sup> Savings and Loan News, August 1978, 100-103, 102f.

Thus, the savings revolution started in urban areas and among large depository institutions. However, not only geography and bank size shaped the market for MMCs. How individual banks fared in this new retail market was at least partly determined by their initial sales strategy.

In its June issue, *Savings and Loan News* magazine identified three possible strategies for depository institutions with regard to the MMC: Institutions using the *passive* approach would refuse to offer the certificate and live with the consequences of disintermediation. As shown above, the number of institutions that remained passive toward the MMC was small in June and decreased to insignificance by January 1979. The *defensive* strategy implied that institutions would refrain from paying the highest possible rate and offer the MMC only to existing customers. Finally, the *aggressive* strategy would target new customers and be accompanied by aggressive advertising, along with the highest possible rates.<sup>137</sup>

[City Federal Ad: Big 'T']

For most banks, the approach varied between the defensive and aggressive strategy. The PSFS issued a news release on May 30 in which it disclosed that it would offer the new certificate to existing as well as new customers, if the latter would also open another account with a minimum deposit of at least \$500.<sup>138</sup> Thus, the PSFS approached the new certificate with a mildly aggressive strategy. The City Federal savings and loan association in New Jersey started an even more aggressive ad campaign that emphasized the *Big "T" Bill Certificate*.<sup>139</sup> Meanwhile, Western Savings from Philadelphia used a defensive approach. Its strategy choice resulted from its current financial situation:

Our deposit behavior is currently satisfactory, so we do not wish to encourage substantial inflows by aggressively promoting these certificates, at least immediately. However, we have decided that to hedge against massive disintermediation, we will offer both certificates beginning June 1<sup>st</sup>, through promotion pieces in the branch offices, and in letters to holders of maturing certificates.<sup>140</sup>

The difference in initial sales is striking. City Federal in New Jersey was able to secure more than \$7 million on the opening day, almost 90% of which was new money. This initial success lifted numbers into the following months, when 34% of funds going to certificates were new money, and only 20% were transfers from passbooks.<sup>141</sup> Western Savings sold \$18.5 million worth of the newly approved certificates in June, of which less than 24% were new money, while almost 60% came from existing passbook accounts. While the savings industry as a whole was able to increase net savings in June, even after interest payments was subtracted, Western Savings actually lost deposits. As a consequence, the management decided to start mass advertising the MMC.<sup>142</sup>

While initial differences in strategy and results could be large, the banking industry converged on the aggressive strategy over the course of the following 6 months. This becomes clear by tracking the share

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<sup>137</sup> *Savings and Loan News*, June 1978, 41.

<sup>138</sup> PSFS Press Release, May 30, Material for the Meeting of the Board on 11 August 1978, Board Agendas, in: Hagley 2062, RG I/2-B, Box 14.

<sup>139</sup> City Federal Savings and Loan Association, Big 'T' Bill Certificate Ad, in: Rutgers University Library, Special Collections and Archives, CITIFED Financial Corporation, MC 920, Box 21.

<sup>140</sup> Letter of Western Savings' President Bates to Members of the Board of Managers, May 25 1978, in: RG XVI/3-B, Box 111.

<sup>141</sup> New Certificate Accounts opened – Source of Funds; Attachment to: Confidential Management Committee Meeting, August 10, 1978, in: Rutgers University Library, Special Collections and Archives, CITIFED Financial Corporation, MC 920, Box 6.

<sup>142</sup> Executive Committee Meeting Minutes, June 20, 1978; incl. Attachment "Analysis of Deposits"; Hagley 2062, RG XVI/2, Box 106.

of institutions offering the maximum rate on the MMC. In June 1978, 80% of savings and loans paid the highest possible rate.<sup>143</sup> For savings banks, the share was even higher, with 95% of institutions offering the ceiling rate. This can be explained by their locations in large urban centers on the East Coast. Interestingly, in the following months, savings banks tried to push down the rate, and by November 1978, only 64% offered the ceiling rate. Yet, when the first MMCs matured at the end of December, the savings banks moved the rate back to the ceiling. By the first quarter of 1979, 90% were again offering the ceiling rate.<sup>144</sup> Among commercial banks, initially only 60% paid the maximum rate.<sup>145</sup> The rationale behind the relatively low share might have been that commercial banks felt that they were not able to compete with thrifts on price due to the regulatory rate differential. Thus, they could rely on their customers' relative insensitivity regarding interest rates, while the savings institutions had to offer the highest rate to their more rate-conscious customers. However, the share of commercial banks offering the ceiling rate increased to 90% in January 1979.<sup>146</sup> Thus, by the time the first MMCs matured, virtually all depository institutions were offering the highest possible rates. The spokesperson of a large savings and loan association from the Northwest explained what happened to depository institutions that tried to sell MMCs with a rate beneath the maximum: "It was a disaster... In fact, we lost some accounts and were forced into offering the going rate."<sup>147</sup>

The imperative to offer the highest possible rate was reinforced when, in March 1979, the authorities effectively ended the rate differential between savings institutions and commercial banks.<sup>148</sup> In the first 9 months of the MMC's existence, savings institutions had dominated the market for MMCs. By March 1979, commercial banks had only sold about half the volume of MMCs held by savings institutions. By eliminating the rate differential, the Federal Reserve Board deliberately aimed to curb the inflow of money into savings institutions:

The action taken is in further support of efforts to restrain inflation. The changes are designed to reduce somewhat the cost of money market certificates and to moderate the flow of funds into thrift institutions in the current inflationary environment. While this action will affect savings flows of thrift institutions, it will permit them to continue to remain competitive in attracting funds for housing.<sup>149</sup>

Only days after the decision, many commercial banks started extended advertising campaigns that directly targeted the claim of thrift institutions that they offered the highest rate on the market. Instead, the large New York-based banks Citibank and Marine Midland noted that they too could now pay the highest possible rate.

[Ad from Marine Midland]

The campaigns of commercial banks were successful, with commercial banks selling twice as many MMCs as savings institutions in May 1979. The growth trajectory of MMCs at savings institutions slowed somewhat over the following months. As a consequence, the gap of MMCs outstanding between commercial banks and savings institutions narrowed. However, it took commercial banks until 1982 to surpass savings institutions in the volume held among MMCs.<sup>150</sup>

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<sup>143</sup> Savings and Loan News August 1978, 100f; January 1979, 14.

<sup>144</sup> Mutual Savings Banking, Annual Report of the President of the NAMSAB, May 1979, 8.

<sup>145</sup> Federal Reserve Bulletin, November 1978, 839.

<sup>146</sup> Federal Reserve Bulletin, May 1979, 391.

<sup>147</sup> Savings and Loan News, October 1978, 15.

<sup>148</sup> Technically, the regulatory authorities only lifted the rate differential in the case of a T-Bill rate of at least 9%. Since in the following years the T-Bill rate was usually above that threshold, the rate differential effectively ended in early 1979.

<sup>149</sup> Federal Reserve Bulletin, March 1979, p. 247f.

<sup>150</sup> See Footnote 130.

The elimination of the rate differential reinforced a previous trend that shifted the focus from inter-bank competition to competition between different kinds of deposits. The imperative for depository institutions to offer the highest possible rate was at least partly due to the increasing public knowledge on MMCs. In November 1978, the *New York Times* began including the current MMC rate in its *key rates* section, which included only the most important benchmark rates, such as the Fed Fund Rate.<sup>151</sup> With newspapers regularly publishing the current MMC rate, investors had an independent and easily accessible source of information on the current market rate for retail deposits.

As a consequence, an increasing number of customers withdrew money from passbooks and invested it in MMCs. Beginning in October 1978, this new phenomenon was known as *passbook disintermediation*—the outflow of passbook deposits due to internal transfers.<sup>152</sup> This new phenomenon caused a fundamental change in banks' expectations of savings flows. At the PSFS, the deposit forecast model underwent an extended revision. Before the introduction of the MMC, savings flows had mostly been determined by two rates: the unemployment rate and 3-month Treasury bill rate.<sup>153</sup> The T-bill rate was negatively correlated to savings deposits, a feature that simulated classical disintermediation. Internal transfers from passbooks to certificates were set constant. In the revision, transfers from passbooks to certificates were now measured by a separate equation that was dominated by a positive correlation between transfers and the spread between the rate of the highest certificate and the passbook rate<sup>154</sup>—hence, passbook disintermediation. Yet, the phenomenal success and transformative power of the MMC did not only have consequences for the depository institutions:

Of even more significance has been the education of the public about the structure of interest rates and the wide range of investment opportunities that are available. Strong political pressure has been exerted on Congress and the federal agencies to lower the minimum balance requirements on the MMC.<sup>155</sup>

As indicated in the quote, the MMC received strong criticism from consumer activists such as Democratic Senator William Proxmire, who criticized that the minimum investment requirement of \$10,000 excluded small savers from MMC investments. He compared the ceiling rates on passbooks (about 5%) to the current ceiling rate on MMCs (about 10%) and asked, “Why this discrimination against the little man?”<sup>156</sup> To end this discrimination, Proxmire drafted the “Small Savers Equity Resolution” in early 1979, which would have forced the regulatory authorities to introduce another savings certificate with a rate comparable to the MMC but a lower minimum deposit requirement.<sup>157</sup> While the Resolution was never enforced, the regulatory authorities introduced a new certificate in early 1980 that tried to answer the political demands. This new SSC had a minimum deposit requirement of only \$100. However, it was not a perfect substitute for the MMC, because it had a maturity of 2.5 years. The interest rate was pegged to the rate of 30-month Treasury notes. Thus, it was an instrument to lock in high interest rates when they were expected to fall.<sup>158</sup>

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<sup>151</sup> NYT, November 15, 1978, p. D10.

<sup>152</sup> Savings and Loan News, October 1978, 46.

<sup>153</sup> PSFS Deposit and Cash Flow Model, Agenda of Board Meeting of April 14, 1978, in: Hagley 2062, RG I/2-B, Box 13.

<sup>154</sup> PSFS Deposit Forecast Model – 1980 Version, Attachment to the Report of the Liquidity Task Force of the PSFS as of July 14, 1980, in: Hagley 2062, RG XX/3, Box 137.

<sup>155</sup> Savings and Loan News, August 1979, 41.

<sup>156</sup> Savings and Loan News, March 1979, 18.

<sup>157</sup> Ibid.

<sup>158</sup> The debate that preceded the introduction of the Small Saver Certificate was actually part of a more general debate on the effect of Regulation Q on the small saver, as discussed by Walker (2018), 178. However, Walker fails to mention the debate on the MMC and the introduction of the Small Saver Certificates.

While the MMC and SSC led the saver revolution, public attention later shifted toward a newcomer in the deposit market: MMMFs. The mutual fund industry was able to penetrate the deposit market because the investment companies exploited two major shortcomings of the existing money market assets. The MMC was relatively liquid but had a high minimum investment requirement. The SSC had a low minimum denomination but a long maturity period. MMMFs offered an account-like investment that had no maturity and low financial entry barriers. Some MMMFs did not require a minimum investment at all. Additionally, MMMFs offered higher rates than MMCs because they invested in not only T-bills but a variety of money market assets such as large CDs or commercial paper. Because T-bills were usually at the bottom of the money market interest spectrum, the orientation of the bank deposits on these government bills put them at a disadvantage vis-à-vis MMMFs.

However, if one compares the growth pattern of MMMFs to that of the combined money market bank deposits (MMC and SSC), the growth of the fund industry seems less spectacular. From 1978–1980, the growth of the MMMFs was underwhelming compared to the money market deposits. Only in 1981 did the growth of MMMFs eclipse that of MMCs. However, even at the height of the boom in late 1982, the volume of money market deposits was almost four times as large as that of MMMFs. Thus, MMMFs did not overtake banks as the prime suppliers of deposits at any time during the stagflation period, nor were they the prime cause of the earning problems of the savings institutions.<sup>159</sup>

So where did the MMMFs get the image of a disruptor of the deposit market? Part of this was industry expectation. In 1977, the *Savings and Loan News* journal published an article with the indicative title “Know your competition.” Here, the potential impact of MMMFs was described as follows: “They will be strong competitors during the next period of tight money and rising interest rates.”<sup>160</sup>

However, it took a long time for this expectation to materialize. In September 1979—more than a year after the introduction of the MMC—the *American Banking Journal* surveyed a number of commercial banks on who their main competitor would be in the following 5 years regarding deposits. Almost all answered that they expected savings institutions to be their main competitors for deposits. Mutual funds were rarely mentioned and only as also-rans.<sup>161</sup> By the end of 1979, savings institutions still saw MMMFs as future threats, while the reasons for concern had shifted from the question of yield to that of liquidity:

More than 50% of the money in passbook balances at savings associations is in accounts of \$10,000 or more. The fact that this is still the case 15 months after the introduction of money market certificates indicates that these investors place a high value on liquidity even when offered the high yields of the MMC... the increased exposure of savers to money market rates, the increased advertising and the increased sophistication of investors all point to the potential success of money market funds in drawing away passbook savings.<sup>162</sup>

In 1980, the growth of MMMFs finally led to reactions among the banking industry. The ABA established a “strike force” to combat MMMFs on all levels, but with a focus on lobbying for political support.<sup>163</sup> By March 1980, their efforts showed first results. The Federal Reserve Board decided that from April 1980, MMMFs were required to hold a reserve at the Fed,<sup>164</sup> which dampened the growth trajectory of MMMFs for 1980. The urgency among depository institutions to report on MMMFs consequently declined. In an editorial of the November volume of *Savings and Loan News* on the general

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<sup>159</sup> See Footnote 130.

<sup>160</sup> *Savings and Loan News*, May 1977, 49.

<sup>161</sup> *American Banking Journal*, September 1979, 32-42.

<sup>162</sup> *Savings and Loan News*, November 1979, 32-35, 35

<sup>163</sup> *American Banking Journal*, March 1980, 4-9.

<sup>164</sup> *Federal Reserve Bulletin*, April 1980, 317.

challenges of the industry, MMMFs were not mentioned at all.<sup>165</sup> Only in March 1981 did the threat from MMMFs take center stage. In contrast to prior fears, depository institutions feared imminent outflows not from passbooks but from the large volume of maturing MMCs. In April alone, more than \$100 billion worth of MMCs became due, a volume that almost matched the entire worth of assets of all MMMFs at the time. Here, it was not the large amounts of due MMCs alone that concerned the thrift managers but also the attitudes of MMC investors: “The six-month MMC has succeeded in creating an unprecedented amount of highly interest-sensitive savings ready to shift to the highest bidder—most likely, money market funds.”<sup>166</sup>

Thus, the success of the MMC had built the foundation on which MMMFs could successfully compete for funds. By introducing and promoting the MMC, the banking industry created a giant pool of retail deposits that was liquid and highly sensitive to relative interest changes. Conversely, MMMFs helped sustain and broaden this pool, both directly and indirectly. Their direct influence was evident in their own growth trajectory. The indirect influence manifested in two ways. First, by competing with MMMFs, both thrifts and commercial banks had to continue their aggressive pricing and marketing strategies regarding existing deposit products. As early as February 1980, Federal Reserve Bank Board member Charles Partee pointed out the impact of MMMFs on the sales promotion of depository institutions:

Indeed, the increased attractiveness to depositors of market instruments, including the shares of money market mutual funds, has led banks and thrift institutions to promote aggressively the money market certificate—their one short-term deposit instrument whose ceiling rates rises in tandem with six-month Treasury bill rates.<sup>167</sup>

Sustainedly high rates on certificates also meant the continuation of passbook disintermediation. However, money did not usually move from passbooks straight to MMMFs. In a report to the Board of Directors of the PSFS in late 1982, the authors explained this weak link in the following way:

As the unemployment picture became worse during the third quarter, people built liquidity using their passbooks. It may seem somewhat paradoxically to do this when Money Funds offer an alternative. However, the type of customer who uses regular savings to build liquidity is unlikely to have a Money Fund Account.<sup>168</sup>

The second indirect influence of MMMFs was that their success accelerated fundamental changes in the regulation regime. In April 1980, the Carter administration pushed through the Depository Institution Deregulation and Monetary Control Act, which determined the phase-out of Regulation Q within 6 years. To implement this phase-out, the administration created a new body, the Depository Institutions Deregulation Committee (DIDC), tasked with deciding on the detailed steps of the phase-out. Considering regular savings accounts, however, the DIDC decided to continue the interest rate ceiling until the end of the defined period in 1986.<sup>169</sup> Another major deregulation legislation—the Garn-St. Germain Depository Institution Act of 1982—required the regulatory authorities to introduce an

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<sup>165</sup> Savings and Loan News, November 1980, 54-60.

<sup>166</sup> Savings and Loan News, March 1981, 38.

<sup>167</sup> Federal Reserve Bulletin, February 1980, 130f.

<sup>168</sup> Deposit Trends, Third Quarter 1982, p. 1f, Policy Committee Minutes September to December 1982, in: Hagley 2062, RG I/2-B, Box 29.

<sup>169</sup> A detailed history of this political decision can be found at Walker (2018), 150-207.

MMDA.<sup>170</sup> The new account was not subject to rate ceilings and had no notice or maturity but a minimum investment requirement of \$2,500.<sup>171</sup> Many officials and executives in the banking and thrift industries had high hopes for the new account to claim money back from mutual funds. Others were more cautious about the MMDA. Many insiders feared that the MMDA would primarily attract the still-regulated passbook deposits. An example for this cautionary expectation was the PSFS. A financial forecast of the impact of the MMDA estimated that the contribution of the MMDA to the inflow of new money would be slow at first but increase gradually over time. At least in the early years, the main source for MMDA deposits was existing accounts at the PSFS, mainly passbooks. The internal transfers would cost the PSFS an extra of \$25 million in reduced income during the first 3 years. This expectation led the bank to pursue a defensive pricing strategy regarding the MMDA.<sup>172</sup> The PSFS was not alone in picking a cautionary strategy. In a representative survey of 238 savings and loan associations, 42% stated that they offered an interest rate of up to 1% beneath that of their main competitor. Thirty percent stated that they matched that rate. As far as the aim was to bring in new money, playing defense was the wrong strategy.<sup>173</sup>

In the first 6 months of its existence, MMDA accounts skyrocketed to \$370 billion, twice the total worth of all MMMFs. It is clear from the numbers that the new account did not primarily draw its deposits from mutual funds. The latter lost more than \$50 billion between November 1982 and June 1983, about a quarter of their worth. However, the main sources for the MMDA seem to have come from maturing certificates and passbooks. Inside the MMDA market, commercial banks far outpaced savings institutions. Commercial banks took in \$215 billion by June 1983, while savings and loan associations only held \$115 billion by that time. Mutual savings banks held about \$40 billion. Overall, commercial banks profited enormously from the MMDA, with their entire savings and small-time deposits increasing by 20% between November 1982 and June 1983. By contrast, savings and loan associations only increased their deposits by less than 7% and mutual savings banks by 9%.<sup>174</sup> In January 1983, a survey of the FHLBB found that about 30% of the MMDA deposits among savings and loan associations came from outside the respective association, while 25% came from passbooks and another 40% from various other deposits within the association.<sup>175</sup> Given their cautious pricing strategy, this outcome was more or less a choice of the thrift industry.

With the waning of the MMDA boom in the summer of 1983, the transformation of the deposit market was complete, and the savings revolution had effectively ended. In 1983, about 30% of US households owned some kind of money market account (either MMC, MMDA or MMMF). More strikingly, 57% of households with at least \$5,000 and 65% of households who owned at least \$10,000 in liquid assets held short-term money market assets.<sup>176</sup>

### *Saved by price discrimination—The passbook in Germany (1979–1983)*

In Germany, the situation during the last part of the stagflation period was fundamentally different from that in the US. First, the period started in 1979, more than a year after interest rates had started to rise in the US. Second, interest rates did not surpass the levels reached in 1973/74. Thus, in contrast

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<sup>170</sup> Savings and Loan News, November 1982, 96f

<sup>171</sup> Savings and Loan News, December 1982, 6f.

<sup>172</sup> Financial Review of Money Market Investment Accounts (MMIA), Memorandum to the Chairman of Products & Projects Committee by J.P. Nugent, 21 December 1982, Exhibit IV, in: Hagley 2062, RG V/1-C/i, Box 69.

<sup>173</sup> Savings and Loan News, April 1983, 102f.

<sup>174</sup> See FN 130.

<sup>175</sup> Savings and Loan News, April 1983, 102f

<sup>176</sup> Author's Calculations. Source: Survey of Consumer Finances 1983, raw data.

to the situation in the US, the last high interest rate period was not a unique phenomenon in Germany. Third, inflation peaked at only half the maximum rate in the US. Nevertheless, money market rates reached double digits between 1980 and early 1982. Yet again, the banks did not move the benchmark rate for passbooks, the *Spareckzins*, in line with money or capital markets. This time, the *Spareckzins* peaked at 5%, even lower than in 1973/74. The low *Spareckzins* level boosted the interest spread between money market and passbook rates, which surpassed 8% in 1981 (See Figure 2). However, the banking industry as a whole refused to reduce this spread either by increasing the *Spareckzins* or disentangling the rate on longer-term passbooks from the *Spareckzins*. At least internally, savings banks were outspoken about their reasons:

In addition, in terms of profitability, the savings banks do not want to accept a significant increase in passbook rates or a significant widening of the interest rate spread [between standard and one-year passbooks], which would possibly prevent a further reallocation of savings deposits into time deposits and securities [...]. The bonification of savings deposits [...] is the 'lesser evil' in this situation.<sup>177</sup>

Thus, German banks reintroduced the bonus programs, which they had developed in the previous high-interest period, because they were cheaper than all other alternatives. By 1981, about 60% of all savings banks in Germany used this practice.<sup>178</sup> As a case study in the rural Harburg County demonstrates, this practice was also common among credit unions.<sup>179</sup> Deutsche Bank, the largest commercial bank in Germany, introduced bonus payments in November 1979.<sup>180</sup> Bonus programs were the principal tool against transfers from passbooks to time deposits. Technically, a full-scale bonus program like that of Sparkasse Bielefeld closely resembled the US MMMF or MMDA accounts—with the important difference that the German version was much more exclusive. Elsewhere, I estimate that at the peak of the popularity of bonus schemes, about 2–4% of customers received bonus payments.<sup>181</sup> For time deposits, numbers from the association of Westphalian savings banks show that the number of retail time accounts rose from less than 10,000 to more than 170,000 between 1978–1981. If one combines passbook and time accounts, time accounts comprise less than 2% of the total in Westphalia in 1981. Assuming the ownership of time deposits and bonus passbook accounts to be mutually exclusive, this scattered data allows for a rough estimate of 5% of non-transaction retail deposits paying market rates.<sup>182</sup>

However, the main differences were not among small savers, who were excluded from receiving market prices in Germany as well as the US. Instead, the most striking difference was among owners of large accounts. For Germany, no comprehensive dataset for bonus programs exists. From micro-data inferred from the case study on Volksbank Rosengarten in Harburg County, I found that at the peak of the program in 1982, about 18% of the \$5,000+ passbook accounts received bonus payments. Interestingly, the ratio for \$10,000+ accounts was the same as for the \$5,000+ accounts, which implies that beyond a certain threshold, larger account sizes did not lead to larger shares of bonus accounts. I explain the generally low and constant share among large accounts with a particular large information asymmetry that affected owners of large accounts, as well as small savers.<sup>183</sup> Again taking numbers from the Westphalian savings banks, the share of time deposits among all non-transaction deposits

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<sup>177</sup> Protokoll der Verbandsvorsteher-Konferenz der deutschen Sparkassen vom 22. September 1981, p. 4; DSGV-Archiv I.B/9/29. Author's translation from the German original.

<sup>178</sup> WLSGV-Mitteilung Nr. 106 vom 22. Juni 1981, in: HASB AIV2/30.

<sup>179</sup> See Knake (forthcoming).

<sup>180</sup> Auszug aus dem Protokoll über die Vorstandssitzung der Deutschen Bank am 23. Oktober 1979, 7. November 1979, in: HADB ZA09/0057.

<sup>181</sup> Knake (forthcoming).

<sup>182</sup> Zusatzangaben III u. IV, Anlage zur WLSGV-Mitteilung Nr. 59 vom 22. März 1982, in HASB AIV/2 74.

<sup>183</sup> See Knake (forthcoming).



worth more than \$5,000 was 17% in 1981. If bonus accounts and time deposits were mutually exclusive, this would mean that about one-third of \$5,000 plus retail accounts had achieved market prices—compared to almost two-thirds in the US.<sup>184</sup>

The main reason for this asymmetry was the lack of price competition in the market for retail deposits. The existence of the *Spareckzins* largely eliminated the potential for *rate wars* among the most basic of financial services. Because all banks in Germany offered similar financial services at mostly the same prices, few reasons existed for customers to change banks. The share of customers who entertained relationships to more than one bank consequently remained low throughout the stagflation period. In the above-cited BVR survey from 1976, only 11% of respondents stated that they had considered changing their bank address. Of those who had already done so, 65% said that it had nothing to do with the bank. Instead, the bank change resulted mainly from marriage, relocation or occupation.<sup>185</sup> The general finding of the 1976 survey was confirmed in 1980 by the *Soll und Haben* survey. Although the numbers were slightly higher, the similarities about the reasons for the change in the bank relationships are striking. The authors of the study concluded, “The competition between the individual banking groups is not yet leading to increased bank switching behavior of customers. Marriage and a change of residence are primarily responsible for such switches.”<sup>186</sup>

The fact that only a few retail customers were switching banks—and even fewer did so with the intention of increasing interest payments—gave all German banks an advantage compared to their US counterparts: German institutions could expect those customers who were dissatisfied with low interest rates to come to them first. This expectation gave banks the opportunity to use a defensive approach among their bonus programs, offering market rates only to those customers who asked for them. At the same time, high switching costs discouraged banks from using a more aggressive approach, because the chances of winning over new customers were relatively low. Together with the widespread fear of passbook disintermediation and the accompanying roll-up costs, banks overwhelmingly chose to keep their bonus programs secret and confined to their most active and interest-sensitive customers.

The second reason for the successful price discrimination was the lack of public reference points that would have helped customers to align interest expectations to market rates. As explained above, the German money market lacked a benchmark rate other than central bank rates. Like in 1973/74, the Bundesbank discount rate was not a good proxy for the rates prevalent in the money market. The rate peaked at 7.5% during the period, far below the 13% peak in the inter-banking market and the 11% peak among retail time deposits. The relatively low discount rate had a clear impact on the *Spareckzins*.<sup>187</sup> However, in the absence of another accessible benchmark rate, the discount rate also shaped the expectations of customers who were in principle eligible to time deposits or bonus programs. In 1980, the *Soll und Haben* survey examined the information behavior of participants regarding financial assets. While 64% of respondents stated that they had acquired substantial information on specific financial assets, only 7% had acquired information on time deposits.<sup>188</sup> Even if one considers that the minimum investment requirement of time deposits was usually 10,000 D-Mark, the share of informed customers among owners of large savings deposits was unusually low, given the enormous opportunity costs of holding money in passbooks. According to a major demographic study among

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<sup>184</sup> Zusatzangaben III u. IV, Anlage zur WLSGV-Mitteilung Nr. 59 vom 22. März 1982, in: HASB AIV/2 74.

<sup>185</sup> Primäre Marktforschung, Rundschreiben des BVR Gr. III – 60/1977 vom 25. August 1977, in: GenoArchiv (no designation).

<sup>186</sup> Hesse (1982), 70. Author’s translation of the German original.

<sup>187</sup> Knake (2023a), 68.

<sup>188</sup> *Soll und Haben 2*, Spiegel-Verlag, Hamburg 1985, 10.

their customers from 1979, the savings banks found that about 20% of their adult customers owned passbook deposits worth more than 10,000 D-Mark.<sup>189</sup>

The third reason for the success of German banks in confining market prices to a small part of their customers was the absence of a competitor from outside the banking system. In contrast to the situation in the US, the German mutual fund industry did not offer money market funds during the stagflation period, partly due to the low liquidity and lack of securitization of the German money market, which was dominated by direct interbank lending practices. Another reason was the captive nature of the general market for mutual funds in Germany. Because of the spectacular bankruptcy of the US company *Investors Overseas Service* in 1970/71,<sup>190</sup> the German investment fund industry was dominated by subsidiaries of banks or banking groups. Of the five leading investment companies, three belonged to the large banks, while both the credit unions and savings banks collectively owned another company each. This captive structure was due to the German system of universal banking, as opposed to the division of investment and commercial banking in the US. For Germany, it eliminated the potential for competition for deposits deriving from an independent fund industry. However, it is questionable whether the presence of a competing fund industry would have forced the banks to shift their strategy. As I have shown above, the MMMFs were not primarily responsible for the US savings revolution. Even more importantly, German banks saw the bonus programs as perfectly competitive vis-à-vis money market funds. This becomes clear in a discussion among the board of directors of Deutsche Bank in 1982 about the potential threat of MMMFs. Board members were concerned about the possibility that the large US investment companies would introduce MMMFs to the German market in the near future:

US money market funds and their possible activities in Europe, particularly aimed at German investors, were discussed. With regard to possible offers from these funds, we want to continue to monitor developments very closely and, if necessary, use our bonus system even more aggressively to defend our savings deposits.<sup>191</sup>

Thus, Deutsche Bank saw their bonus system as the weapon of choice in a potential standoff with the US funds industry. In fact, they doubled down on their defensive discriminatory strategy. Thus, it is highly likely that German banks would have responded to a threat from an outside competitor by extending the bonus programs instead of replacing them.

In the absence of strong inside and outside competition, the main opposition to the double pricing strategy of German banks came from the public. In the early 1980s, both the low *Spareckzins* and the reestablishment of the bonus programs faced harsh public criticism, because this excluded the vast majority of savers from receiving market rates. Following up on an article in the magazine *Der Spiegel*,<sup>192</sup> even the German Parliament discussed the low level of the *Spareckzins* and bonus programs in October 1981. Several MPs raised the suspicion that the banks were using low interest rate levels to compensate for losses caused by failed investments. Another MP repeated the claim by *Der Spiegel*

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<sup>189</sup> Sparkasse, 11/1980, S. 407.

<sup>190</sup> For the story on the IOS see: Raw, Charles; Page, Bruce; Hodgson, Godfrey (1971), Do you sincerely want to be rich? – The full story of Bernard Cornfeld and IOS, New York. For the reaction of the German investment companies see: Bähr, Johannes (2006), 50 Jahre dit. Aufbruch, Wachstum, Zukunft 1955-2005, Frankfurt am Main, 35f; DWS Investments. Eine Erfolgsgeschichte 1956-2006, hrsg. von der Historischen Gesellschaft der Deutschen Bank, München; Zürich 2006, 102-113. Sattler, Friederike (2010), Investmentsparen – ein früher Durchbruch der Geschäftsbanken zu breiteren Privatkundenkreisen?, in: Ahrens, Ralf; Wixforth, Harald (Ed.): Strukturwandel und Internationalisierung im Bankwesen seit den 1950er Jahren, Stuttgart, 35-70.

<sup>191</sup> Statement von Dr. Ehret und Dr. von Hooven in der Vorstandssitzung der DB am 29. Juni 1981 in Frankfurt, 4. August 1981, in: HADB ZA09/0057. Author's translation of the German original.

<sup>192</sup> „Völlig Leer. Banken und Sparkassen schröpfen ihre Sparbuch-Kundschaft“, in: *Der Spiegel*, 21.9.1981, 76-78.

that Deutsche Bank had proposed raising the *Spareckzins* substantially but refrained from doing so for the benefit of their peer banks.<sup>193</sup> This last claim was in fact true. Deutsche Bank had proposed raising the rate on standard passbooks by as much as 2% in August 1981 but refrained from this idea after an intervention from the other two large banks.<sup>194</sup>

One important consequence of the increasing public pressure was that it revived a discussion among savings banks from the early 1970s on the replacement of the *Spareckzins*. In October 1981, the federal association of savings banks, DSGV, created a new study group tasked with devising a better passbook rate strategy.<sup>195</sup> The study group circulated a draft paper of the proposed new strategy in May 1982. The paper, eventually finalized in September 1982,<sup>196</sup> defined two major goals of the interest strategy. First, passbooks should remain a main source of funds for saving banks. Second, passbooks should remain a major financial asset for long-term household saving. As in the earlier period, the general idea was to disentangle the interest rate of longer-term passbooks from that of standard passbooks. The standard passbook would be confined to its role as an asset for holding liquidity reserves. Yet, in contrast to the proposals of the early 1970s, the paper proposed introducing a new passbook. Designed as a standard passbook with an initial blocking period of 1 year, it featured a fixed interest rate at the level of 1-year securities. The main difference from the traditional longer-term passbooks was that after the end of the blocking period, it became a standard passbook. During the blocking period, the interest rate was fixed, while afterward it fell back to that of the *Spareckzins*.

Thus, this new plan merged ideas from the early 1970s to replace the *Spareckzins* with the savings banks' experiences with bonus payments during the previous high interest rate period.<sup>197</sup> The draft paper acknowledged that the success of the strategy would significantly increase the savings banks' overall interest expense, but it saw the saving banks as well equipped to handle the extra costs.<sup>198</sup> The discussions eventually led to the introduction of a new class of passbooks called *S-Vermögenssparen* in 1983. While they came too late to influence developments during the stagflation period, these new passbooks were crucial in the subsequent decade. The first comprehensive statistics on this new passbook class stems from 1986 and shows a share of more than 20% among all passbook deposits. The share increased to 30% in 1989.<sup>199</sup>

Overall, the double pricing strategy of the German banks worked well throughout the stagflation period, although the share of passbook money of all household bank deposits decreased from 70% to 60% between 1978 and 1983. The largest gains in that period were made by short-term time deposits, whose share increased from 4% to 11% between 1978–1983. *Sparbriefe*, the German *wild cards*, also profited. Their share among household bank deposits grew from 9% to 14% in the same period.<sup>200</sup> However, far from becoming irrelevant, the passbook remained the cornerstone of German retail banking.

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<sup>193</sup> Protokoll der 56. Bundestagssitzung vom 9. Oktober 1981, p. 3276; Bundestagsprotokolle online.

<sup>194</sup> Protokoll der Verbandsvorsteher-Konferenz der deutschen Sparkassen vom 2.-3. November 1981, p. 4; DSGV-Archiv I.B/9/29.

<sup>195</sup> Protokoll der Verbandsvorsteher-Konferenz der deutschen Sparkassen vom 2.-3. November 1981, p. 4; DSGV-Archiv I.B/9/29.

<sup>196</sup> Schreiben des Präsidenten des DSGV an die Herren Verbandsvorsteher und die Direktoren der Girozentralen vom 29. September 1982; DSGV-Archiv I.K/82.

<sup>197</sup> *Ibid.*

<sup>198</sup> *Ibid.*

<sup>199</sup> Author's calculation. Source: Monatsbericht der Bundesbank, Mai 1997, p. 62.

<sup>200</sup> Author's calculation. Source: Finanzierungsrechnung der Bundesbank (German Flow of Funds Statistics), available online at [www.bundesbank.de](http://www.bundesbank.de).

## 7. Conclusion

In the above article, I explain why the deregulation of the retail deposit market during the stagflation period led to a *savings revolution* in the US but not in Germany. Hence, why did US retail customers abandon their savings accounts while their German counterparts held on to them? I rule out macroeconomic factors as the main driver of this divergence, because the macroeconomic experiences of Germany and the US were rather similar. German households faced similar inflation rates and even higher opportunity costs for passbook holdings than their US counterparts until the mid-1970s. Throughout the 1970s and early 1980s, German passbook owners faced negative real interest rates. Even more strikingly, contrary to the situation in the US, German households did have a realistic opportunity to realize money market rates throughout the stagflation period. Why did US households take every opportunity to move money into higher-yielding assets, while their German counterparts did not?

The answer that I gave in this article points to the structure of the banking industry. The restrictions among US savings institutions in the market for transaction accounts prohibited the establishment of exclusive customer relationships or *deposit franchises*. As a form of compensation, the regulatory authority established a rate differential that gave savings institutions a price advantage over their competitors. This peculiar regulation regime led to a specialization in the retail market, where savings institutions focused on their price advantage, while commercial banks pointed to their superior convenience. The specialization in turn led to a form of self-selection among retail customers that saw interest-sensitive customers concentrate among savings institutions.

This peculiar market structure collided with the periodic attempts of regulatory authorities to help depository institutions sustain periods of *disintermediation*. By introducing new, higher-paying forms of deposits, regulators tried to prevent the most affluent and rate-conscious bank depositors from redirecting their deposits to the money market when short-term interest rates rose above the ceilings of deposit rates. At the same time, through various measures, regulators and depository institutions tried to prevent their regular customers from taking advantage of these new high-yielding deposits. Thus, they tried to engage in practices of price discrimination. While the fight against disintermediation largely worked, banks failed to restrict access to market-rate deposits. Despite initial caution, aggressive price competition dominated the market for these new deposits soon after their introduction. As a consequence, banks involuntarily changed their customers' interest rate expectations, which started to move in accordance with the money market. This shift in interest expectations sealed the fate of the passbook in the US.

In Germany, the entire structure of the retail market discouraged price competition, despite all interest rate regulations having been eliminated in 1967. A common benchmark rate—the *Spareckzins*—significantly reduced price competition in the passbook market. Conversely, German banks always had the opportunity to offer important customers a better deal. However, they were much better able to restrict access to market-rate deposits, mainly by slowing the spread of interest information. This was due to two factors. First, banks in Germany overwhelmingly enjoyed exclusive customer relationships. Thus, they had successfully built *deposit franchises* over many decades. This encouraged defensive sales strategies and discouraged aggressive sales strategies. Second, retail investors lacked obvious reference points to realize the true amount of the opportunity costs of holding money in passbooks, primarily due to the lack of tradable federal short-term debt and the specific strategies of the Bundesbank, which froze the discount rate during the peak of high-interest periods. Importantly, the bank strategy in Germany relied not on the ignorance of small savers but on the inertia of the majority of owners of large savings accounts. The success of this strategy ensured the survival of the passbook in Germany.

A number of qualifications for this new narrative must be noted. I do not deny that the higher inflation rate in the US vis-à-vis Germany in the late 1970s, as well as the *Volcker revolution*, contributed to the savings revolution in the US. Instead, I contest that these macroeconomic factors alone explain the fundamental shift in household investment behavior. A similar qualification can be stated for the role of MMMFs, which did not exist in Germany. Again, I do not deny any influence of these funds on the savings revolution, but this role was much smaller than previously assumed. It certainly did not start the revolution, which instead began as a kind of unintended consequence of the efforts of regulatory authorities to prevent classical disintermediation. On paper, the MMC was more restrictive than German market-rate deposits. It started the revolution anyway.

The consequences of this divergent behavior have been enormous. In the US, the thrift industry collapsed in the savings and loan crisis of the late 1980s. While commercial banks did not go under like their former main competitors, the banking industry went through a fundamental change. In general, depository institutions in the US lost their role as key stores of financial wealth. In a report from 1994, the ABA's *Market Share Task Force* found that the share of bank deposits in household financial wealth had almost halved, from 34% in 1973 to 19% in 1993.<sup>201</sup> The report also found an interesting link between the decline of the market share of deposits and household expectations:

The current low nominal interest rate environment has made bank deposits appear relatively less attractive to many savers. Following years of high nominal rates, consumers have “sticker shock” when faced with deposit rates in the 2.5 to 4 percent range.... Many of these customers have been willing to trade the safety of bank deposits for higher risk instruments that offer higher returns (albeit on a non-risk adjusted basis).<sup>202</sup>

In Germany, the structure of the banking system, as well as the traditional business model of depository institutions, stayed largely intact during the stagflation period. At the same time, the share of bank deposits had only declined slightly and still comprised nearly half of household financial wealth in 1993. Even more importantly, the *Spareckzins* had retained their important role as a reference point for interest expectations. In 1987, the Savings Banks Federal Association pointed to this fact in one of their central committees: “In the public discussion about the interest rate policy of credit institutions, the interest rate for savings deposits with a statutory notice continues to play a special role.”<sup>203</sup>

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<sup>201</sup> Report of the Market Share Task Force, ed. by the American Bankers association, Washington D.C. 1994, iii.

<sup>202</sup> *Ibid.*, 10.

<sup>203</sup> Protokoll der Sitzung des Sparkassenausschusses vom 10. März 1987, 1; DSGVO-Archiv I.K/82. Author's translation of the German original.

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