An analysis of Austrian banks during the high inflation period of the 1970s

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Motivated by the current economic environment of high inflation and increasing interest rates, we take a closer look at the Austrian banking sector between 1969 and 1985. Given that period's parallels to the current situation, we aim to draw conclusions about the impacts high inflation may have on banks' profitability, balance sheet structure and risk profile. Our findings show that the period under review was characterized by a rapid expansion of banks' total assets. From 1975 onward, profitability declined steadily, as pressure on interest margins was mounting (given increasing competition and funding costs, expansion via investments in low-yield assets and interest rate dynamics) and cost efficiency was on the decline (given increasing wages and expanding branch networks). Due to strong credit growth and risk-inadequate pricing, the cost of risk remained relatively low. Regarding the balance sheet structure, interbank lending became more important in the 1970s, while the share of customer deposits in overall liabilities declined. Finally, banks' equity ratio contracted significantly, which indicated a lower risk-bearing capacity and a weakening capital position. The economic turbulence that characterized much of the 1970s and banks' rapidly declining capital ratios also led to various regulatory initiatives meant to reduce the risk emerging from the expanding banking sector. A comparison with the current situation shows that, today, Austrian banks are less dependent on interbank funding and have a higher share of customer deposits. In addition, Austrian banks' equity ratio is significantly higher today than it was in the 1970s.

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How did Austrian banks fare between 1969 and 1985 in terms of profitability, balance sheet structure and risk profile? Lessons from that period could be highly relevant given parallels to today's economic environment of increasing inflation, interest rates and geopolitical tensions.

Using our own institution's statistical data and historical financial statements of five large Austrian banks², we compiled a representative, comprehensive dataset that allowed us to draw some useful conclusions with respect to current developments.

The paper is structured as follows: in section 1, we take a look at how inflation, interest rates and other macroeconomic variables evolved in Austria between 1969 and 1985. In section 2, we zero in on Austrian banks' performance in terms of profitability and various profit components in that period as well as the evolution

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² Girozentrale Wien, Österreichische Länderbank, Zentralsparkasse, Creditanstalt and Genossenschaftliche Zentralbank AG. Due to incomplete data, Genossenschaftliche Zentralbank AG is only included in the charts on return on equity and equity ratio (charts 4 and 13). The five banks accounted for around one-third of the Austrian banking sector's total assets during the period under review. The data provided by the five banks always reflect the highest consolidation level.

of cost efficiency and cost of risk. In section 3, we analyze structural trends in Austrian banks' balance sheets between 1969 and 1985, while also examining their capital structure and risk-bearing capacity. Finally, section 4 summarizes the key findings.

1 The Austrian macroeconomic framework from 1969 to 1985

To set the scene, we first explore the macroeconomic situation in Austria from 1969 to 1985.

1.1 Austro-Keynesianism, inflation, price dynamics and regulatory initiatives

The period from 1969 to 1985 – dubbed "Austro-Keynesianism" – was characterized by a hard currency policy, wage moderation through collective bargaining with a view to controlling inflation, labor hoarding as well as anticyclical fiscal and coordinated monetary policies. Meant to achieve full employment, these policies led to an unemployment rate below 2% in the 1970s. Only after 1983 did the Austrian unemployment rate start to rise again (Straumann, 2010).

In 1955, the Federal Act on the Oesterreichische Nationalbank (Nationalbank Act) entered into force. Its provisions increased central bank independence and extended the mandate of the Oesterreichische Nationalbank (OeNB) to maintaining both purchasing power at home and the value of the Austrian schilling (ATS) vis-à-vis international currencies. Even before that, in 1953, the Austrian schilling was pegged to the US dollar (ATS 26/USD). Once the Bretton Woods system ended in August 1971, Austria implemented a currency basket ("Indikator") where the schilling was pegged to currencies of Austria's biggest trading partners, expressed in a currency not included in the indicator, i.e. USD.³ Most of the currencies were eliminated from the indicator over time as they turned unstable; this way, the de facto peg to the Deutsche mark emerged in 1976 (Beer et al., 2016; Mooslechner et al., 2007; Schmitz, 2016; Straumann, 2010).

After the 1971 end of the Bretton Woods System and the first oil price shock of October 1973, inflation in Austria and in many other parts of the world soared to new heights in the mid-1970s (chart 1). In Austria, inflation peaked at 10.2% in June 1974, which was followed by a recession. Having been tamed afterward, inflation fell to 3.0% in July 1978. However, when the second oil price shock struck shortly thereafter in 1979 and the cost of energy increased sharply, inflation surged once more, peaking in April 1981 at 7.4%. Inflation spiked again in 1984, which was, among other things, due to an increase in value-added tax (Beer et al., 2016; Pollan, 1984).

Until 1979, interest rates had been kept relatively low, with the goal of forcing economic growth by stimulating investment. In 1980, contrary to most other Western countries, Austria's policy shifted to a covered interest parity approach aimed at preventing short-term capital outflows. During the period under review, the OeNB set the following two interest rates: the discount rate and the lombard rate.⁴

³ The Bretton Woods system formally failed in March 1973, but it may be said to have ended in 1971 given that the gold standard was lifted in that year.

⁴ The discount rate was the interest rate used for selling bills of exchange to the OeNB. The lombard rate was the interest rate the OeNB charged to commercial banks for extending short-term loans, where banks were required to pledge specific securities as collateral. In 1999, the discount rate was replaced by the base rate (Basiszinssatz) and the lombard rate by the reference rate (Referenzzinssatz).

Chart 1

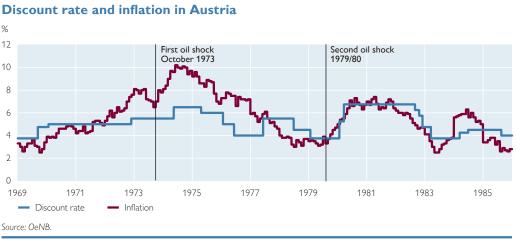


Chart 2

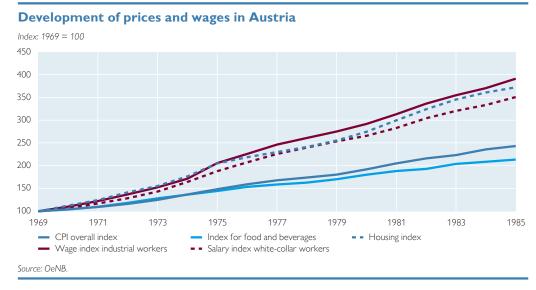
Economic growth and inflation in Austria



From 1969 to 1985, the discount rate remained between 3.75% and 6.75% (chart 1). Raised only gradually during the first inflationary phase, the discount rate was raised sharply during the second such phase, and it peaked at 6.8% in March 1980 (Mooslechner et al., 2007).

Real GDP grew significantly from 1969 to 1975, when the economy contracted for the first time since 1950. In nominal terms, GDP growth remained above 5% during the whole observation period (chart 2). Economic expansion in the first half of the 1970s was mainly driven by considerable export growth on the back of increased foreign demand. Fiscal policy - and especially the Austrian government's investment policy - also contributed to this trend. From the second half of the 1970s onward, rising oil prices and energy costs had a negative impact on the economy, slowing down growth. The lack of coordination in international economic policy observed since 1975 likewise had a downward effect (Kernbauer, 2018).





Consumer prices in Austria increased by 143% in the period under review, which translates into an annual growth rate of 5.7% (chart 3). Food and beverage prices increased at a comparatively lower rate (114%), while housing prices surged (272%). Wages for industry workers grew by 291% and salaries for white-collar workers by 251%. The highest real wage increase (of almost 10%) was observed in 1975 (Straumann, 2010).⁵

The 1970s were not only characterized by significant changes in macroeconomic conditions, but also led to important regulatory milestones. In 1979, Austria adopted its own banking act (Kreditwesengesetz 1979 - KWG 1979), after years of using the German banking act; in addition, voluntary credit control agreements were concluded with the banking industry. The KWG allowed, for example, to open branches without a concession, introduced the dual control principle for important decisions by managers, made it possible to include subordinated capital as equity under specific circumstances, capped loan sums per debtor at a maximum of 5% to 7% of total deposits, prescribed equity requirements depending on total liabilities and allowed professional associations to open deposit insurance schemes. Banking crises in the early 1980s led to amendments of the KWG in 1986, e.g. equity requirements became dependent on asset-side balance sheet items and included contingent liabilities, which meant that foreign currency assets had to be backed by capital; consolidation rules were included; liquidity requirements were to consider the maturity structure; slight supervisory changes were introduced (Döme et al., 2016; Handler and Mooslechner, 1986).

1.2 Inflation today - what is different, what is similar?

Current inflationary dynamics are traceable to a mix of supply chain disruptions, increasing demand after the end of COVID-19-related lockdowns and pandemic-

⁵ For one thing, wage negotiations did not account for the economic downturn in 1975; for another, legal working hours per week were reduced by two hours in 1975, with full compensation. The subsequent years saw smaller wage increases, which was partially due to the high real wage growth in 1975.

related fiscal support measures. Since the outbreak of Russia's war against Ukraine, the dynamics have been amplified by soaring food and energy prices. While employment rates in the euro area have risen to unprecedented levels, wages have not yet increased as much as prices, which mainly reflects the lagged reaction of wages to price movements. In comparison to the 1970s, today's unemployment rate (6%, national definition) is much higher (1970s: around 2%). The current level of high inflation has also led to monetary policy tightening in the euro area (Holler and Reiss, 2023).

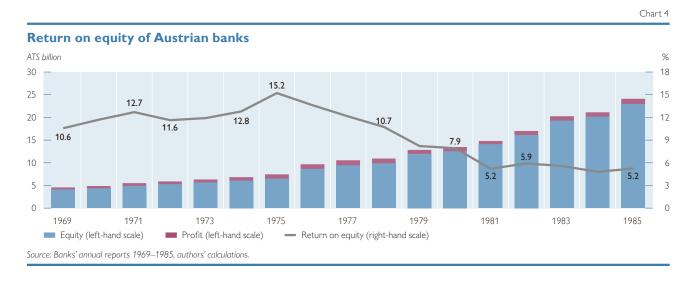
Like in the 1970s, rising energy prices are the main driver of inflation today. However, what differs very much from the 1970s shocks are fiscal and monetary policies as well as the nominal and real GDP growth rates observed up to the inflationary shock. While monetary policy in the years prior to the 2020s inflationary shock was expansive with zero interest rates, the discount rate stood at 3.8% in the early 1970s.

2 Austrian banks' profitability

In this section, we take a closer look at Austrian banks' profitability and cost structure between 1969 and 1985. First, we focus on profit components, zeroing in on the return on equity (RoE) and net interest margin (NIM). Next, we examine the cost structure by analyzing the cost-to-income ratio and cost of risk.

2.1 Profitability increased until 1975, before declining until early 1980s

Between 1969 and 1975, Austrian banks recorded high profitability, measured in terms of RoE, with the RoE increasing from 10.6% to 15.2% (chart 4). However, between 1975 and 1981, the RoE dropped to 5.2% and remained at that low level until 1985. The annual growth rate of bank profits edged up by only around 2% per year between 1975 and 1985, significantly down from the 15% increase observed from 1969 to 1975. Despite rapidly growing balance sheets, Austrian banks' profitability deteriorated. The main reasons were increased competition, which led to higher margin pressure, and higher refinancing costs due to increased capital market funding.



2.2 Factors affecting bank profitability

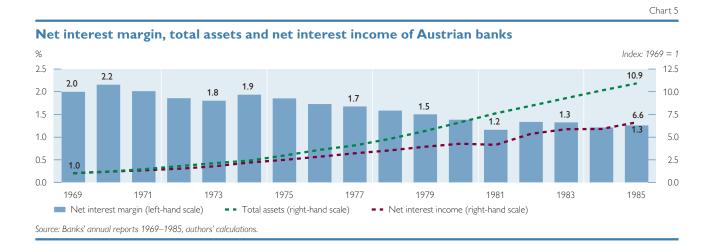
After 1975, Austrian banks' profitability fell largely due to a declining NIM and accelerating costs, while credit risk costs remained relatively low (chart 5). Austrian banks' NIM decreased continuously from 2.2% in 1970 to 1.2% in 1981, and then remained relatively stable until 1985. From 1969 to 1975, banks' net interest income increased at a compounded annual growth rate of 16.4%. In the subsequent ten years, however, the average annual growth rate of net interest income decreased to 10.3%.

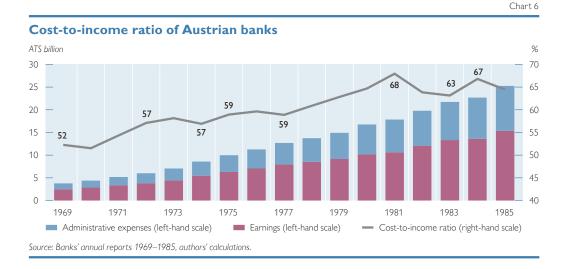
That decrease was largely attributable to a change of the balance sheet structure and the shape of the yield curve in addition to the banks' business model and increased competition. Bank funding underwent significant changes, with the share of interbank liabilities and capital market funding increasing markedly. At the same time, the proportion of low-cost savings deposits declined steadily.

Furthermore, the temporary inversion of the yield curve in the early 1980s adversely affected funding conditions and interest margins (Österreichische Postsparkasse, 1982). This is relevant because a flattening or inversion of the yield curve is often associated with a weak economic outlook, with lower net interest margins and consequently weaker banking profitability (Bluwstein et al., 2021).

Another factor contributing to the decline in profitability and the NIM was the business strategy Austrian banks pursued in the 1970s. Their strong focus on acquiring market share led to stiff competition and subsequently lower margins. From 1969 to 1975, Austrian banks' total assets grew at an annual rate of almost 20%. In the decade until 1985, their growth remained robust, expanding at close to 14% per year, which was significantly higher than nominal GDP growth. During the 1970s, Austrian banks' business abroad grew markedly, consisting mainly of deposits, securities and loans to foreign credit institutions that historically generated low returns. The share of foreign liabilities increased from 7% to 19% during the same period (Kernbauer, 2018).

Moreover, banks' ownership structure may likewise impact profitability. In our sample, three credit institutions (Österreichische Länderbank, Zentralsparkasse and Creditanstalt) were partially or fully state-owned. State-owned banks may exhibit inefficiencies because of government bureaucracy, weak incentives for





managers and potential misallocation of resources (higher risk taking, risk-inadequate pricing) due to political interference (Rumler and Waschiczek, 2016). However, the empirical evidence is not entirely clear; as shown by Dietrich and Wanzenried (2011), government-owned banks may even be more profitable thanks to greater viability and safety during crises.

Another key factor driving down bank profitability after 1975 was banks' cost efficiency, which was on the decrease throughout the 1970s. As earnings did not keep up with the rising costs, banks' cost efficiency deteriorated in the 1970s. The cost-to-income ratio increased from 52% (1969) to 68% (1981) in the period under review (chart 6). Costs were driven by (1) a significant increase in administrative costs (for both staff and material) and (2) rapid growth of the branch network.

Growth of wages and staff expenses exceeded the overall consumer price index. This put pressure on the cost base of Austrian banks and companies in general (Guger and Marterbauer, 2005). Between 1969 and 1975, staff costs increased by around 19% per year, while annual inflation averaged out to 6.8%. In the second half of the observation period, i.e. from 1976 to 1985, staff costs increased by an average 10% per year, and average annual inflation ran to 5%.

Banks' cost efficiency was also weighed down by banks stepping up the expansion of their branch networks in the second half of the 1970s (chart 7). 1978 saw the largest increase in the number of branches (and exchange offices) as branch openings were deregulated in 1977. In light of a general tendency toward market liberalization, the policy to ask the finance ministry for approval before opening a new branch was abolished. After 1978, no prior approval was required for banks to open new branches. This branching deregulation enabled Vienna-based banks to expand their business into rural areas (Dirninger, 2010). Overall, given real wage growth and the rapid expansion of banks and their branch networks (and the ensuing increase in employees), Austrian banks' cost efficiency was under permanent pressure.



Credit institutions and branches in Austria

Box 1

Chart 7

Liberalization in the Austrian banking sector

The main period of liberalization in Austria's banking sector was between the late 1970s and 1990s, which was rather late by international standards. Deregulation was marked by the following three milestones. First, the prior authorization requirement for establishing new branches was abolished in 1977. Second, the interest rate adjustment clause (Zinsgleitklausel) was done away with; under that clause, the government had held interest rates within a stable bandwidth to ensure a stable interest rate environment. Later, interest rates were determined by the market under cartel-like conditions. The most prominent example was the Lombard Club, in which the largest Austrian banks got together on a monthly basis to arrange common conditions and interest rates. Third, banking sector liberalization was also reflected in the expansion of business areas, such as into investment banking, and increasing geographic diversification, e.g. foreign investments (Dirninger, 2010).

Banks' cost of risk⁶ decreased in our sample between 1970 and 1985 (chart 8). From 1971 until 1978, it declined steadily, while being more volatile in the years thereafter. The cost of risk increased from 0.17% (1978) to 0.27% (1980), before falling to an all-time low of 0.09% in 1983. Overall cost of risk remained remarkably low throughout the period under review.

Interestingly, despite the decrease in the cost of risk, the number of insolvencies increased at the same time (chart 9). This counterintuitive trend between the cost of risk and the number of insolvencies can be explained as follows. The main reason why credit risk costs remained relatively low throughout the review period was the high growth of customer loans. Risk provisions increased in absolute terms, but customer loans expanded at a faster pace, which reduced the respective ratio of

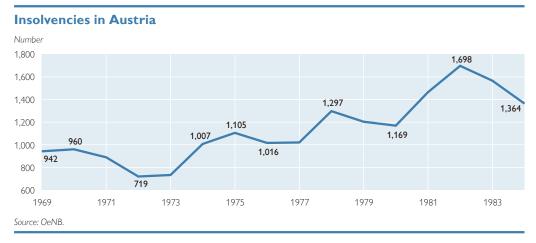
⁶ Cost of risk is defined as the ratio of newly booked risk provisions to claims on customers.

risk provisions to total loans. Importantly also, back then, accounting rules and regulations on provisioning were not as harmonized and granular as today. There are indications that the pricing of credit risk was rather subjective, and often the credit margin level was not adequately risk adjusted (Kernbauer, 2018).

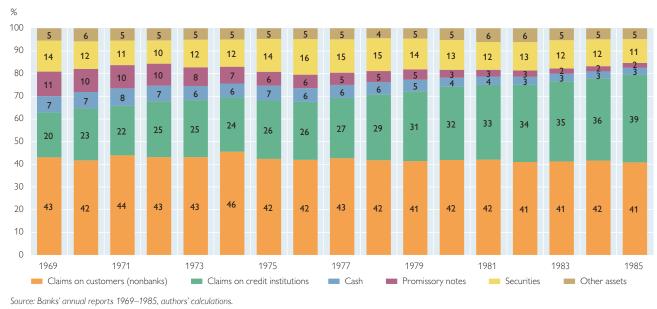
At the time, measures concerning the liability side of the balance sheet were hardly ever economically binding and therefore had little impact on credit growth. However, asset-side measures were somewhat effective in curtailing excessive credit growth. Today's regulatory awareness and standards (e.g. minimum capital requirements) regarding lending are higher (Döme et al., 2016).⁷







⁷ The most prominent asset-side measure was a limit to bank lending called the Limes, which was introduced in 1973, where the OeNB set a target growth rate for credit to nonbanks (1% per month of the stock of loans extended to domestic nonbanks).



Austrian banks' assets

3 Austrian banks' balance sheet structure between 1969 and 1985: weakening funding profile and risk-bearing capacity

This section highlights structural trends in Austrian banks' balance sheets between 1969 and 1985, broken down into the asset side, the liability side and the capital structure.

3.1 Assets: increasing importance of interbank lending

From 1969 to 1985, the share of loans to customers (households and nonfinancial corporations) in total assets remained almost stable, with customer loans representing the most important asset position throughout the period under review (chart 10). Loans to other credit institutions increased remarkably from 20% in 1969 to 39% in 1985, as interbank lending was gaining importance in the 1970s. By contrast, the share of promissory notes, securities and cash balances in total assets decreased significantly. In particular, the share of promissory notes in total assets declined continuously, contracting from around 11% in 1969 to a mere 2% in 1985.

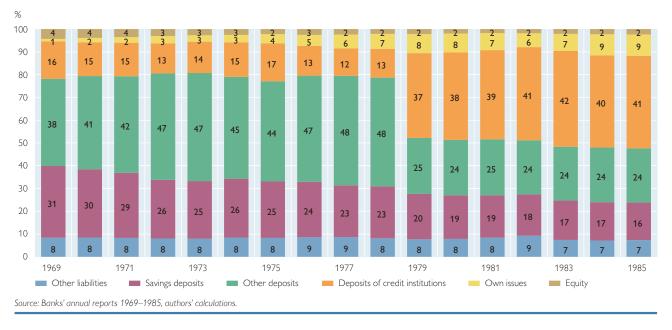
3.2 Liabilities: declining customer deposits offset by interbank lending and banks' own issues

The increasing importance of interbank lending is also reflected in the structural development of Austrian bank liabilities (chart 11). Interbank lending growth (indicated by an increasing share of deposits from other credit institutions) went hand in hand with decreasing savings deposits, whose share fell by half, from 31% in 1969 to 16% in 1985.⁸ Furthermore, the decline in customer deposits (in relation

Chart 10

⁸ Before 1979, creditors were broken down by maturity, and from 1979 onward, following an amendment of Austrian credit law, more detailed information became available on the type of creditor.

Chart 11



Austrian banks' liabilities



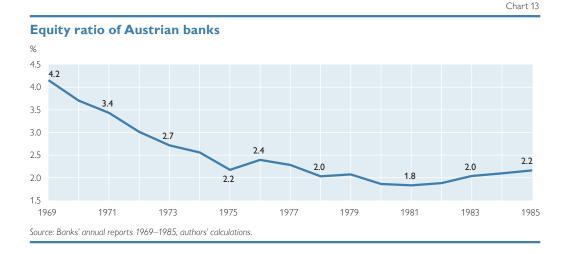
to total liabilities) was partially offset by banks' own issues. While the relative importance of own issues increased, the aggregate equity ratio decreased from 4.2% in 1969 to just 2.2% in 1985.

Overall, the risk profile of the Austrian banking sector deteriorated from 1969 to 1985. As indicated by a decreasing equity ratio, leverage increased, and banks became more dependent on wholesale funding.

The increasing role of interbank lending for Austrian banks is mirrored by a rising loan-to-deposit ratio (chart 12), which resulted in a less stable funding position. The loan-to-deposit ratio increased from 86% in 1969 to 101% in 1985.

3.3 Decline in Austrian banks' equity ratio and risk-bearing capacity

From 1969 to 1975, the relation of equity to total assets, i.e. the equity ratio, decreased significantly, namely from 4.2% in 1969 to 2.2% in 1975 (chart 13). The



downtrend indicated a lower risk-bearing capacity and a weakening capital position. From 1975 to 1985, the equity ratio remained relatively stable at a low level, a trend which was comparable to other countries such as the United States (McNamara et al., 2019).

Banks' decreasing equity ratio was primarily attributable to the rapid increase in total assets during that period. In absolute terms, equity increased as well, but total assets increased at an even faster pace. In combination with the expanding branch network and increasing operative costs, this put the equity ratio on a downward trend throughout the 1970s. Therefore, the declining equity ratio not only reflected the significant increase in total assets but may also be seen as an indicator for Austrian banks' weak profitability during that time. Indeed, having declined markedly from 1975 to 1985, Austrian banks' profitability significantly underperformed the OECD average. Until 1975, the increase in equity (in absolute terms) was mainly due to retained earnings, but thereafter external capital injections became more important as profitability decreased and balance sheets were expanded. In the 1970s, amid rising economic tensions and uncertainties and a global economic slowdown, Austrian banks' deteriorating capital position posed a major risk to the stability of the Austrian banking sector (Kernbauer, 2018).

In light of the global economic turbulence that characterized much of the 1970s, bank capital ratios declined significantly in many countries during that decade. Not surprisingly, by the early 1980s, the Basel Committee on Banking Supervision (BCBS) was mainly concerned with banks' capital adequacy. The BCBS's aim was to counteract the deteriorating capital position of the global banking system and avoid any negative impact on the global financial system, while creating a level playing field for banks. In 1988, the BCBS adopted the Basel Capital Accord (Basel I) that established a minimum capital requirement for internationally active banks of the G10 countries (McNamara et al., 2019).

In Austria, the considerable decline in banks' equity ratio led to an amendment of the banking act, i.e. the Kreditwesengesetz 1979, which took effect in 1986.

Box 2

Comparing Austrian banks' recent balance sheet structure, profitability and risk-bearing capacity with the 1970s⁹

Examining the Austrian banking sector's balance sheet structure, profitability and risk-bearing capacity from 1985 to 2022, we found that loans to other credit institutions have become less important to Austrian banks in recent years. Their share in total assets decreased from 39% in 1985 to 20% in 2006, and stood at 7% in mid-2022. While the share of loans to customers in total assets had remained relatively stable from 1969 to 1985, such loans became more important in recent years, increasing from 49% in 2006 to 60% in mid-2022.

The decreasing role of interbank business in recent years is also reflected on the banking sector's liability side. The share of deposits of other credit institutions in total liabilities shrank from 41% in 1985 to 23% in 2006, and amounted to 10% in mid-2022. Customer deposits, in contrast, increased from 41% of total liabilities in 2006 to 58% in mid-2022. Therefore, interbank lending had increased significantly from 1969 to 1985 (while the share of loans to customers remained stable) but became less important starting with the 2007–2009 financial crisis (while the share of loans to customers increased remarkably). In recent years, Austrian banks have apparently begun refocusing their business models on their core business.

Regarding the risk profile of Austrian banks, we conclude that their funding profile is much more robust today than in the 1970s, given the decreasing importance of interbank lending and the rising share of customer deposits in total liabilities. Furthermore, banks' capital position has improved remarkably in recent years. While the Austrian banks in our sample recorded an equity ratio of 2.2% in 1985, the respective figure for the Austrian banking sector stands at 8.0% in mid-2022.

In comparison to the relatively high net interest margin at the beginning of the 1970s (2%), the aggregate NIM of Austrian banks is remarkably lower today, running to 1.4% (consolidated) and 0.9% (unconsolidated) in mid-2022. As banks today start with lower NIM levels, their operational income provides them with less leeway to increase deposit rates. In 2022, rising interest rates started to have a positive effect on banks' profitability. However, our findings indicate that bank profitability might come under pressure in prolonged periods of high inflation. In the 1970s, banks' cost-to-income ratio increased due to cost pressure stemming from new branches and higher wages, which highlights the importance of cost control during periods of high inflation. During the 1970s, we did not find a significant increase in banks' cost of risk. Yet, in light of modern accounting standards and regulations regarding risk-adjusted pricing, we would expect the cost of risk to rise during periods of high inflation, which would put pressure on banks' profits.

4 Summary and conclusions

Motivated by the current economic environment, we analyzed the development of a sample of Austrian banks between 1969 and 1985. From 1969 to 1975, the banks rapidly expanded their total assets at an annual growth rate of nearly 20%, followed by a slightly lower annual growth rate (14%) from 1975 to 1985. Their profitability remained positive throughout the observation period, peaking in 1975 with an aggregate return on equity of 15.2%. In the second half of the 1970s, however, profitability declined steadily, as pressure on interest margins was mounting (given increasing competition and funding costs, expansion via investments in low-yield

⁹ Source: OeNB (consolidated banking data). Some smaller banks did not report detailed data on their loan structure for 2022; we therefore assumed that those banks' share of loans to other banks is similar to that of the other banks which reported separate data for loans to customers and loans to other banks.

assets and interest rate dynamics) and cost efficiency was on the decline (given increasing wages and expanding branch networks). Credit risk costs remained relatively low from 1969 to 1985, as the increase in risk provisions (in absolute terms) lagged behind rapid loan growth. Furthermore, less comprehensive accounting rules on provisioning also helped keep the cost of risk at a relatively low level.

As to structural balance sheet developments, from 1969 to 1985, interbank lending became ever more important, while the share of customer deposits in total liabilities declined constantly. That decline was offset both by interbank lending and banks' own issues. Austrian banks' growing dependence on wholesale funding was reflected in their aggregate loan-to-deposit ratio, which increased from 86% in 1969 to 101% in 1985.

Importantly, the risk profile of the Austrian banks under review deteriorated significantly from 1969 to 1985, both in terms of funding and solvency. From 1969 to 1975, their aggregate equity ratio almost dropped by half, namely from 4.2% in 1969 to 2.2% in 1975, which pointed to a lower risk-bearing capacity and a weakening capital position. From 1975 to 1985, the equity ratio remained relatively stable at a low level. The decreasing equity ratio reflected both the banks' rapid growth of total assets and weakening profitability. The economic turbulence that characterized much of the 1970s and rapidly declining bank capital ratios led to various regulatory initiatives meant to reduce the risk emerging from the expanding banking sector. Cases in point are the 1988 adoption of Basel I and the 1986 amendment of the Austrian banking act (Kreditwesengesetz).

Today, Austrian banks' funding profile is much more stable than in the 1970s, as their dependence on interbank funding has lessened and the share of customer deposits has increased remarkably. In addition, Austrian banks' equity ratio is significantly higher today than it was in the 1970s. However, as Austrian banks today start with lower levels of net interest margins compared with the 1970s, their operational income provides them with less leeway to increase deposit rates. To date, rising interest rates have had a positive effect on banks' profitability. Bank profitability might, however, come under pressure in prolonged periods of high inflation in the face of increasing administrative and risk costs.

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