NO BANKS WITHOUT STATES, NO STATES WITHOUT BANKS

THE POLITICAL ORIGINS OF THE AUSTRIAN AND HUNGARIAN BANKING CRISES IN 1931

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Abstract
The paper argues that the 1931 banking crises in Austria and Hungary can be traced back to political decision-makers' meddling with the incentives of the banking system. The international exchange system what Keynes famously called 'the golden cage' put severe limitations on the ability of fiscal authorities to spend and borrow. Thus, governments in both countries chose to rely on and use their respective financial systems to break out of the macroeconomic trilemma. In Austria, authorities and the largest banks, who were major industrial holding companies, collaborated to maintain the country's redundant and inefficient industrial enterprises. By retaining the underutilized industrial base, authorities could avoid increasing unemployment and social unrest and banks could retain their economic clout. In Hungary, authorities created incentives and gave generous support to the financial system to motivate their lending towards the inefficient agricultural sector. By promoting agricultural lending, Hungarian authorities could cater to the demands of their most important constituency and avoid political turmoil while banks obtained state guarantees which ensured a steady flow of business. In both countries, authorities' intervention into the banking system created moral hazard, led banks to believe that they would be supported in times of trouble and hence encouraged imprudent lending. Authorities' interference with the incentive structures of commercial banks thereby increased the vulnerability of Austrian and Hungarian financial institutions and contributed to the banking crises of 1931.

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Politicians do not like laissez faire. Not only because they need to justify their own importance but mainly because, through intervening into the economy, they can pick and choose winners and build their constituency. US politicians, in their drive to maximize their popularity, advocated increased home ownership in the 1990s and early 2000s and thus chose to overtly promote mortgage lending (Calomiris and Haber 2013 chapters 7-8). For almost a decade, everything seemed perfectly fine. The period witnessed an economic resurgence: the fiscal side was solid, monetary conditions were easy, and everybody, even those without income could invest in property. However, unfunded liabilities were accumulating in the financial system and, before anyone could identify their existence, the housing bubble blew up and the infamous sub-prime crisis began to unfold.

The politicians of the interwar period in two peripheral countries were no better. Austria and Hungary experienced a banking crisis in 1931. This article argues that the state's meddling with the incentives of the banking system in the 1920s greatly contributed to the weakening and the eventual collapse of the financial systems of these two countries.

Having lost the war and the Empire, having failed to maintain the territory and population of their countries, and having imposed poverty, famine, and financial hardship on their populations, the political elites of both Austria and Hungary had lost their legitimacy and were struggling to stay in power. The Austrian government was facing a society characterized by warring militias from the extreme right and left and was engulfed by the demands of a powerful industrial lobby (März 1984, 1990). Hungary experienced a brief communist takeover in 1919 and the extremely poor population continued to challenge the imperial political elite (Tomka 2015). In order to hold on to their power, the political class had to cater to the demands of these groups.

The problem was that they did not have fiscal and monetary independence to do so (Obstfeld 1997). The excessive use of the printing press in the years following the war had led to hyperinflation in both countries. Their economies were stabilized through a reconstruction scheme arranged by the League of Nations. The program involved the introduction of a new gold-based currency, the establishment of an independent central bank, and demanded a balanced government budget. The reconstruction also entailed the close surveillance of government spending and borrowing. Although the two countries were now re-admitted to international financial markets, their policy-makers' hands were tied and they could not freely pursue domestic political goals such as allaying the hardship of various parts of society.

Therefore, instead of spending and borrowing themselves, policy-makers induced the banking system to do that. They set the incentives of the financial system in a way that banks served the needs of politically important groups. This is why Austrian banks were able to maintain their bankrupt industrial base throughout the period, and this is how essentially all Hungarian banks became agricultural lenders.

The political bargain, however, backfired in 1931. Just as in the US sub-prime crisis where bankers were extending mortgages regardless of whether the recipients had any income, Austrian and Hungarian financial institutions were also lending irrespective of risks and future returns. The moral hazard that the new incentives had created led bankers to pursue businesses that they would not have entered into, had they had to take financial responsibility for their decisions. Since

financial institutions were incentivized by authorities to pursue political objectives and directed their lending accordingly, they worked under the implicit (and often explicit) assumption that they enjoyed unlimited state support and guarantees. And their assumption was eventually proved right: when their insolvency could not be hidden behind new liquidity any further in 1931 and they ultimately weakened, they were bailed out by the authorities.

This Chapter is structured as follows. The first section provides an overview of the political economy background to interwar Austria and Hungary. Next, I discuss the role of banks in these two economies and propose to use the Calomiris and Haber framework to understand the role of the Austrian and Hungarian financial systems within a political economy context. Afterwards, I describe how the Austrian political class incentivized the universal banks to maintain their failing industrial base throughout the 1920s and what incentives the Hungarian authorities introduced to direct all lending towards agriculture. The final section concludes.

BACKGROUND

The post-WWI settlement was a political and economic shock that the Austrian and Hungarian political elites could only overcome through a League of Nations reconstruction scheme. However, the program forced orthodox economic and monetary principals upon the two countries which prevented them from addressing the social and political demands of the population.

The political and economic shock of the post-war settlement

The post-World War I (WWI) settlement was an extreme political and economic shock to Austria and Hungary. The war transformed the nature of political power globally. Whereas prior to 1914 most governments could largely ignore the demands of the populace who had then no say in the affairs of the state, this was no longer possible after 1918. The formerly disenfranchised population was demanding the right to vote and compensation for their sacrifices during and after the Great War (Eichengreen 1992). The political situation in Austria and Hungary was further aggravated by the military defeat and the disintegration of the empire. The Peace Treaties of Saint Germain in 1919 and Trianon in 1920 dismantled the Habsburg Empire and deprived Austria and Hungary of two thirds of their territory and population. The economic dislocation that the war had left behind further aggravated political tensions. The impoverished population demanded state support for the returning and retired troops, war widows, the unemployed, and the poor. Austria experienced periods of starvation and only its large agricultural sector saved Hungary from a similar fate (Berend 1985).

Furthermore, Austrian and Hungarian political elites of the pre-WWI era had fallen from grace. Having lost their empire and great-power status, facing their war-shattered population suffocating under severe shortages, and experiencing the mass influx of fellow Germans and Hungarians who had fled from neighboring states, the imperial elites were struggling to stay in power. In the first years following the war, government policy was little more than a sheer quest for survival. Hungary experienced a brief communist takeover in 1919 and Austria was struggling under the threat of both the radical left and right (März 1984, Romsics 1991).

Nonetheless, Austria and Hungary had no financial means to adequately address political and social challenges. Deficient state legitimacy, poverty, and social unrest did not allow an increase in tax revenues that could have financed an increase in government spending. Further, due to the loss of state legitimacy and since wartime inflation wiped out private savings, there were limited prospects for issuing state debt domestically. Foreign capital also avoided these countries

as they had been on the losing side in the war and were thus highly indebted due to reparations obligations. The lack of transparency around the exact value of reparations and the lack of domestic assets that could be used as loan collateral further alienated foreign creditors. Under these circumstances, the Austrian and Hungarian governments could only resort to monetizing the deficit, in other words, relying on the central bank's printing press. Excessive note issue, however, resulted in hyperinflation which further estranged foreign capital, placing the two countries into the vicious circle of financially non-viable economies.

Stabilization: panacea and a political straitjacket

When the situation became politically and economically untenable, both countries turned to the League of Nations and both received a large foreign loan through the help of the international organization. Austria obtained such international support in 1923, Hungary in 1924. In both countries the program successfully stabilized the economy, introduced a new currency fixed to gold, and established an independent central bank (März, 1984, Marcus forthcoming, Bácskai 1999).

International support, however, came with stringent conditions.[1] In both countries, the stabilization loan was conditional upon a period of close surveillance until the government budget was balanced, and afterwards on regular reporting to the Financial Committee of the League. Tax revenues were committed as collateral to the League loan and government spending was entirely controlled by a locally stationed League delegate who was in charge of releasing outgoing monies. Monthly budgets had to be approved by the League and their local representative had veto right over every spending item. The actions of the central bank were also closely monitored by a domestically placed representative delegated by the Bank of England. Having most of their revenues collateralized and holding conditional debt liabilities towards the Reparations Commission, the Austrian and Hungarian governments were forbidden from raising capital abroad without the approval of the League and the Reparations Commission.[2]

The side effect of the liberal fiscal and monetary orthodoxy implemented through the directives of the League of Nations and demanded by international capital markets was that it did not leave any room for independent domestic policy-making. Hungarian and Austrian authorities were restricted by the economic trilemma. The impossible trinity holds that of the three desirable policy goals - a fixed exchange rate, free capital flows, and independent monetary policy - only two can be simultaneously implemented. Under the interwar gold exchange standard, countries committed themselves to the first two conditions, leaving the third unattainable (Obstfeld 1997). Policy-makers thus did not have the freedom to independently stimulate the economy in times of downturn. While in the pre-WWI period of the classical gold standard deflationary spirals emanating from such a policy commitment were swallowed by economies and suffered through, they became intolerable in the increasingly enfranchised societies of the post-WWI gold exchange standard (Eichengreen 1992). In a society, which is based largely on democratic pillars, periods of economic recession very often lead to the fall of the ruling political elite. By committing to the interwar orthodoxy, Austrian and Hungarian governments simultaneously gave up their fiscal and monetary independence, accepted restrictions on their spending and borrowing, and hence surrendered the power to effect economic stimulus at their own will.

[1] BoEA, files OV9/145, 146, 148, 234, 235, Papers of Otto Ernst Niemeyer, Committee of Control, League of Nations

[2] LSEA, League of Nations documentation

At the same time, they could not simply ignore political and social pressures. The ephemeral stability that the reconstruction scheme had established had to be sustained. Continued economic strength and growth were essential if the political elite were to stay in power. And for that spending and borrowing were necessary.

THE GAME OF BANK BARGAINS

The solution was the Austrian and Hungarian state's reliance on their respective banking systems. Banks were not restricted as policy-makers were by international organizations and the markets, and they had thus become a channel through which clandestine economic stimulus could be effected in the two countries.

Gerschenkronian universal banks

The modern Austrian and Hungarian financial systems had their roots in the first half of the 19th century. The first Austrian savings bank, the Erste Österreichische Spar-Casse was established in 1819 while Hungary's Pesti Hazai Első Takarékpénztár followed 20 years later.[3] Austria's first universal bank, the Credit-Anstalt was established in 1855 and it later acted as a founder of the first Hungarian universal bank, the Magyar Általános Hitelbank.[4] Another important Hungarian bank, the Pesti Magyar Kereskedelmi Bank, which only in the late 19th century established itself as a universal bank, was in fact founded 14 years before the Credit-Anstalt, in 1841, and it also acted as a bank of issue during the revolution of 1848-49.[5] Both banking systems had a dual structure as they were composed of savings banks (*Sparkassen*) and universal banks. While *Sparkassen* had a special role in each economy, it was the universal banks that dominated the financial system.

Universal banks are well known from Alexander Gerschenkron's seminal work on late industrialization (Gerschenkron 1962). Gerschenkron applied his argument to the German universal banks but since his writing, research has shown that Austria and Hungary also had similar structures with a similar role as their German counterparts (Teichova 1994, p. 63-74; Ránki 1983; Tomka 1995, Pogány 1989). These banks had a mixed purpose: they acted as commercial and investment banks under one roof as they not only extended loans to corporations but they were also shareholders of these entities, holding equity positions. Universal banks were important financiers of the economy and acted as market-makers by founding companies, providing seed capital for their early growth and listing them in public financial markets once their business models were solid (Rudolph 1976). The banks maintained a long-term ownership stake in their clients and continued to finance them through both debt and equity. An often cited German example is that of the close relationship between the Deutsche Bank and Siemens (Guinnane 2000), but Austria and Hungary offer similar cases for banks following companies "from cradle to grave" such as Pesti Magyar Kereskedelmi Bank's connection to the Első Budapesti Gőzmalmi Rt. (Pogány 1989; Nagy Magyar Compass 1925-26, p. 93) and the Credit-Anstalt's connection to AG der österreichischen Fezfabriken (März 1984, diagram 3; Financial Compass 1926, p. 374). The economic network that

[3] Unless otherwise indicated, details and data on Austria's financial system are based on the *Financial Compass*, reviewed for the years 1926-35 and details and data on Hungary's financial system are based on the *Nagy Magyar Compass*, reviewed for the years 1925/26 – 34/35. *Erste Österreichische Spar-Casse* in English: First Austrian Savings Bank*; Pesti Hazai Első Takarékpénztár in English:* First Domestic Savings Bank of Pest
[4] Magyar Általános Hitelbank in English: Hungarian General Creditbank
[5] *Pesti Magyar Kereskedelmi Bank* in English: Hungarian Commercial Bank of Pest

was thus developed around the universal banks was called their “Konzern”.[6] Austria had app. 8-10, Hungary 3-5 universal banks which were active financiers as well as owners of their own country’s economy.[7]

Gerschenkron argues that universal banks had a critically important role in the 19th century as they substituted for late industrializers’ “missing prerequisites”. While the second industrial revolution occurred in industries which were heavily reliant on a large, initial capital investment (e.g. coal, mining, steel, etc.), late industrializers had underdeveloped capital markets that could not service this demand for capital. Universal banks offered an apt institutional solution to this challenge as they offered essentially long-term investment financing to the expanding heavy industry in these countries. They thus fulfilled a highly useful function from the perspective of the state as they financed these countries’ rise out of backwardness.[8]

What Gerschenkron does not emphasize is that besides their role in economic development, the universal banks were also closely involved in the political matters of the state. The universal banks were active funders of government debt. The Rothschild Syndicate was the exclusive financier of both the Austrian and the Hungarian state in independent as well as empire-based fundraisings. The Rothschild Syndicate could count the largest universal banks among its members from both countries of the Empire (Kövér 2005). One of them, the Magyar Általános Hitelbank also had a separate agreement with the Hungarian Ministry of Finance from 1873, annually renewed until 1918, and then from 1927, based on which the bank assumed the role of the “state’s banker”. The arrangement required the bank to fulfill banking and treasury functions for the government, arrange sovereign issues, and regularly report to the Minister of Finance on macroeconomic and international matters, etc.[9] The bank also had a central role in the monetary stabilization of the early 1890s. Further, having an extensive international network, universal banks also acted on behalf of their country as “special envoys” in international financial circles. They were able to tap the interest of foreign markets towards new sovereign debt issues, they arranged these flotations through their international connections, and they acted as trustees for the international financiers following the issue.

The cooperation between fiscal and monetary policy-makers and the owners and managers of financial institutions was made easier by the fact that these groups were closely connected at a personal level. Ausch (1968)’s work provides a detailed narrative of how contemporary Austrian political and financial elites intermingled. Fritz Weber (1991) and Peter Eigner (1994, p. 260-93 and 1997) also highlight authorities’ presence in banks’ management and board rooms. For Hungary a number of authors have studied the power of bankers during the period (Kövér various works; Tomka 1995; Pogány 1989). Due to their close business relations with the state, bankers were often appointed into political positions. The revolving door between universal banks’ board and top management seats and ministerial and central bank positions greatly reduced the distinction between the financial and political elites.

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[6] The term has been applied consistently in the literature on Austria to the industrial clientele of the large universal banks. Hungarian authors only seem to apply the term when they are writing in English, see for example Boross (1991, p. 158-78)

[7] Hungary based on Nagy Magyar Compass, 1912/13, Austria based on Weber (1991b)

[8] Although there is disagreement as to what extent universal banks contributed to the industrialization of the Austro-Hungarian Monarchy (Hilferding 1981, Gerschenkron 1962, Rudolph 1976, Good 1984), based on the privileges they received from the state, they must have been perceived by the contemporary political class as fulfilling a useful function in financial markets and the overall economy.

[9] HNA, file Z51, bond 56, item 832

That is, the role corporate financial institutions played in the Habsburg Monarchy transcended the role prescribed to them by Gerschenkron. They did not only facilitate industrial development. They also substituted for important government functions that the state, due to lack of funds or know-how, was not able to provide.

The political economy framework of banking

A framework that takes into account banks' economic as well as political role and places the banking system into a political economy context has been put forth by Charles W. Calomiris and Stephen H. Haber (2014). In their seminal work on banking and credit, the authors argue that a country's banking system, its structure, development, and riskiness, are all dependent upon the country's political institutions.

The main tenet of the Calomiris and Haber argument is that there is mutual dependence between the bankers and the state. Banks need the state because, due to its inherent riskiness, banking is a non-viable business unless assurances are provided to deposit holders by a third-party. Banks are "maturity transformers": they borrow short-term but invest long-term. As such, their business is highly risky and unless deposit holders receive a guarantee that they would not be expropriated, they will not place their savings into a bank. The state can provide such an assurance and thus it plays an inevitable role in making banking feasible. At the same time, the state is also dependent on the financial system. Banks are an essential source of public finance and they are important in financing the debt of the state. Therefore, there are "no banks without states and no states without banks".

The core of the problem, according to Calomiris and Haber, is that state officials face three sets of conflict of interest when making their decisions about the institutions governing the financial system. First, they must act as regulators towards the banks, but at the same time, they are also counting on banks to finance government and state expenses. Second, the government must also act as an enforcer of the contract between the banks and their debtors but the latter are also the government's voters who should be more pleased if the contracts were not enforced. Finally, while the government should urge deposit holders to take financial responsibility for the performance of the bank in which they are placing their savings, depositors are also voters who should find state-financed deposit insurance a more appealing offer to the information asymmetry between them and the bank. The state must, therefore, decide on the institutions governing the banking system on the basis of its own conflicting incentives.

How the institutions governing the banking system evolve thus depends on how the state responds to its own conflicting interests, what the relative power of the state and the bankers is, and how the continuous negotiations between these two parties evolve. Calomiris and Haber refer to this phenomenon as the "Game of Bank Bargains" between the state and the bankers (Calomiris and Haber 2014, p. 27). This bargaining ultimately determines the rights and obligations of the financial system.

Calomiris and Haber also demonstrate that the Games of Bank Bargains has a role to play in financial crises. Different historical bargains have led to different institutional settings for banking which hence have given rise to banking systems with a varying degree of susceptibility to crises. The authors show that the Canadian financial system has not experienced a panic for over a century while the banking system of the United States goes through a crisis every few decades. Although the authors do not analyze the case in detail, they do refer to interwar Germany as a potentially interesting test case for a bargain (Calomiris and Haber 2014, p. 467-69). Having a financial system structurally very similar to that of Germany, Austria and Hungary were probably very similar to their big western neighbor in this regard as well.

Proposed framework for banking in interwar Austria and Hungary

I argue that the complex role of Austrian and Hungarian universal banks in their respective country's economy and politics can be best understood through the Calomiris and Haber political economy approach.

The arrangement between the Austrian and Hungarian states and their own universal banks in the decades before WWI fully fits the "centralized autocratic network" described by Calomiris and Haber (Calomiris and Haber 2014, p. 40). Based on this framework a weakly autocratic and non-democratic state relies on the services of the financial system and incentivizes financial institutions in a way that the latter become an extension of the interests of the state and, to some extent, part of the government. Bankers enjoy privileges granted by authorities for fulfilling this service and the privileges generate rents as compensation. This theoretical framework perfectly fits the actual case of 19th century Austria and Hungary, where a select group of universal banks were entrusted with the financing of industry and funding the sovereign debt through domestic and international issues. In Austria and Hungary, exclusive rights, such as being the state's banker, being one of a very few who was chartered to underwrite loans, and being the one who could float state debt domestically and abroad, generated profits for the universal banks that other incumbents of the financial sector could not access. When a country's banking system is a centralized autocratic network, credit penetration is not deep: credit is directed to a privileged few, to the political, economic, and financial elites.

The post-WWI settlement, however, altered the bargain between the states of Austria and Hungary and these countries' respective banking systems. While the arrangement before the war did not ensure the broad diffusion of credit, it did lead to a stable, growing banking system. However, the war gave strength to a populist undercurrent that was challenging the weak political classes who were sitting on top of their ruined states and were desperate to hold on to power. Moreover, policy-makers were also bound by the economic trilemma and thus did not have the means (that is, the spending and borrowing power) to adequately tackle social and political challenges. Anxious to stay on top, they started using the banking system to do what they themselves were not permitted to do. In the new post-war context, this required a new political bargain that was able to address the pressing social and political concerns of the broader electorate and not only cater to the financing needs of a privileged few. This new arrangement fits Calomiris and Haber's "populist democracy with politically determined credit" category (Calomiris and Haber 2014, p. 40). In this new system, the political elite was forced to respond to pressure from below and had to take into consideration the demands of the majority of the population when setting the incentives of the banking system.

AUSTRIA: COMMITMENT TO INDUSTRY

Austria inherited large industrial structures and a peculiar form of industrial financing from the times of the Habsburg monarchy. Prior to WWI, industrial capacities serviced the markets of the whole Empire and international trade. The country's industrial development was funded by the universal banks, which were active financial supporters of start-ups and capital formation through shareholding as well as lending (Good 1984). By 1914, the Austrian universal banks were majority owners of all of Austrian joint-stock enterprises (Mosser and Teichova 1991, Teichova and Cottrell 1983).

However, in the post-war years of diminished domestic demand and international trade connections saddled by political animosity, Austria's large industrial capacities, originally fit for

the whole Empire, became disproportionate (Mosser and Teichova 1991, p. 122-57). This resulted in unemployment and a strengthening trade union movement. Since the economy within the new borders was predominantly industrial, it could not rely on the agricultural sector to "hide" the jobless and keep them fed, as could neighboring Hungary (Berend 1985). The unemployment rate was hence high among industrial laborers and the ensuing poverty created social problems and political instability. The general disillusionment with the Austrian political, industrial, and financial elite culminated in frequent trade union demonstrations and public displays of social unrest jumping on every sign of political weakness (März 1984, 1990).

The political class was, understandably, adamantly against the liquidation of old, excessive industrial structures. Their vested interest against industrial restructuring originated from the fact that this would have suppressed economic growth and would have led to further increase in the unemployment level and political instability. To avoid the threat of a communist takeover, similar to the one that its eastern neighbor had experienced, and mitigate the threat of a regime change, the Austrian political class was committed to maintaining redundant, old industrial structures.

The universal banks' objectives coincided with those of the state: reducing the size of industry was similarly anathema to them. As owners and financiers of industrial enterprises, they were against liquidations which would have reduced their own assets and created great losses for them. Furthermore, the universal banks were also facing the risk of escalation: since the members of the Konzern were interconnected, the liquidation of only a small number of enterprises could have initiated a domino effect and buried the entire Konzern and the bank under itself. This was especially likely given Austrian industry's significant overcapacities: the lower the capacity utilization, the sharper are the effects of revenue loss to the economic viability of the enterprise (exactly the opposite of the advantage derived from economies of scale). Therefore, universal banks, just like the political class, had a deep-rooted interest in preserving old and excessive industrial structures.

The common goal of maintaining redundant and inefficient Austrian industry was hence the basis of the interwar bargain between the universal banks and the political elite. Universal banks chose to maintain the structure because it was a cheaper alternative than having to liquidate weak enterprises. Cheapness was, in turn, guaranteed by the state which wanted to maintain Austrian industry to avoid social and political unrest and to maintain its own political power.

Masquerading as profitable banks

Before the collapse of the Credit-Anstalt in 1931, three other universal banks disappeared. The Verkehrsbank and the Unionbank in 1926, and then in 1929, the Boden-Credit-Anstalt sank into distress. Finally, the crisis in 1931 erupted with the announcement of the Credit-Anstalt's losses. Nonetheless, all four universal banks pretended to be profitable enterprises until only weeks before their spectacular collapse.

As Chapter 2 has demonstrated, these four universal banks were all carrying highly leveraged Konzerns with low profitability levels, and they themselves had been insolvent as far back as 1925. Nonetheless, their insolvency was very well hidden by their financial statements. They did not write off their non-performing loans and they did not build reserves for future losses. Table 1 shows the figures for each of the four banks for the financial year before their failure. In its 31 December 1926 accounts, the last financial statement before its disappearance and merger into the Boden-Credit-Anstalt, the Unionbank only acknowledged that 0.09% of its total assets were non-performing. With this figure, the bank was the most honest among the four. The Verkehrsbank admitted to a 0.03% level while the Boden-Credit-Anstalt and the Credit-Anstalt reported 0% in write-offs and reserves for future losses in their financial statement issued before

Table 1

Accounting fraud at the failed universal banks

Name of bank	Reserves for losses and write-offs	Income	Date of the financial statement	Date of last dividend payment before failure**	Per share value of dividend	Volume of dividend payment	Change in per share dividend vis-a-vis previous year	Change in volume of dividend paid vis-a-vis previous year	Date when rumors about failure emerge*	Date of the merger/failure
	% of total assets	*AS*			*AS/share*	*AS*	*% increase*	*% increase*		
Unionbank	0.09%	-3,792,812	31-Dec-1926	1-Jul-1926	2.5	2,000,000	257%	-29%	20-Sep-1926	25-Mar-1927
Verkehrsbank	0.03%	-1,455,722	31-Dec-1925	1-Jul-1925	0.3	1,312,400	-40%	-40%	3-Dec-1926	25-Mar-1927
Boden-Credit-Anstalt	0.00%	10,220,828	31-Dec-1928	1-Jul-1929	7.5	8,250,000	0%	10%	12-Oct-1929	31-Dec-1929
Credit-Anstalt	0.00%	-140,511,870	31-Dec-1930	1-Jul-1930	3.4	7,225,000	-15%	-15%	11-May-1931	11-May-1930

**Based on BoEA*

***Based on bank's offical deadline or, if information unavailable, assume Jul-1 of given year which seems to be the practice*

Source for UB: Financial Compass (1927), p. 420, 423-24; Financial Compass (1928), p. 459-60

Source for VB: Financial Compass (1927), p. 428, 430-31; Financial Compass (1928), p. 461-62

Source for BCA: Financial Compass (1930), p. 255, 264-65

Source for CA: Financial Compass (1931), p. 263, 274

their failure. The rationale behind avoiding write-offs and the creation of reserves for losses was that had the banks done these, the negative profit would have translated into a direct loss of their equity and their shareholders would have had to inject new capital into them. It was hence simpler and cheaper to keep the bad loans on their books and pretend right until the end that they were healthy assets.

Nonetheless, the four banks did even more egregious things than this simple accounting trick around non-performing loans. They continued to book interest income on the non-performing loans, thereby they remained profitable on paper, and paid dividends just a few months before they collapsed. That is, they masqueraded as profitable banks until their failure. The Boden-Credit-Anstalt was the most flagrant in this regard. Table 1 shows that in its last financial statement before its failure, dated 31 December 1928, it reported a profit of app. AS 10 million. Based on these earnings, it paid dividends around June-July of 1929. This occurred only two-three months before rumors around its financial distress started spreading in mid-October 1929. What makes this even worse, is that while on a per share basis, the value of dividends was the same as in the previous year, AS 7.4, the total volume of dividend payment in the summer of 1929 was AS 8,250,000, which was 10% more than a year before. That is, just a few weeks before its collapse, the Boden-Credit-Anstalt pretended to be doing just as well as a year before in terms of profitability, if not better.

The other three banks were no less shameless than the Boden-Credit-Anstalt. The Unionbank's financial difficulties became known in the late summer, early fall of 1926. A few weeks before that, in June-July, the bank paid dividends which were significantly higher on a per share basis than in the previous year: AS 2.5 per share was paid which was 257 percent higher than in the year before. A few weeks afterwards, the bank's financial distress became known and for the financial year ending 31 December 1926, the Unionbank reported a loss of close to AS 4 million. That is, the bank pretended to have an increasing level of profitability in the summer of 1926 and a few weeks after that, in the fall of 1926, it announced its distress and failed. The Credit-Anstalt was a bit more responsible at its last dividend payment: it declared a dividend of AS 3.4 per share for the financial year of 1929, reduced from AS 4 in 1928. However, considering that a few months afterwards the bank reported a loss of AS 140 million, even this reduced dividend payment seems excessive. Finally, the Verkehrsbank went through the same process: paying dividends just a few weeks before its financial difficulties became known to the public. The only difference between this bank and the rest was that it became unprofitable two years before its failure and had the decency not to pay dividends when its earnings were already negative.

Collusion at the mergers

Another intriguing element of the story of the four universal banks is that none of them actually failed; all of them were bailed out. The Credit-Anstalt was rescued by the Austrian state in 1931 and serves as an interesting case for authorities' intervention into the banking system, discussed later. The other three universal banks were, on the other hand, saved by industry incumbents: the Verkehrsbank and the Unionbank were merged into the Boden-Credit-Anstalt and the Boden-Credit-Anstalt was absorbed by the Credit-Anstalt. The study of the details of these three mergers reveals that the banks colluded at these transactions to hide the failing bank's losses. Table 2 presents the details.

Table 2

The structure of the three mergers among universal banks in the 1920s

	Credit-Anstalt (CA) - Boden-Credit-Anstalt (BCA)	Boden-Credit-Anstalt (BCA) - Unionbank	Boden-Credit-Anstalt (BCA) - Verkehrsbank
Receiving bank	CA	BCA	BCA
Merged bank	BCA	Unionbank	Verkehrsbank
Successor entity	CA	BCA	BCA
Year	1930	1927	1927
Structure of the merger	- CA issued 275,000 new shares in the total value of AS 96m on January 1, 1930 (capital increase) - This translated to a per share value of app. AS 349 - The market price of CA shares at the end of 1929 was AS 50.75, the market price of BCA shares on the last day of 1929 was AS 99.75 - The new CA shares were swapped for BCA shares at a ratio of 1:4 - In addition, the CA issued shares at the value of AS 125m on January 1, 1930 for which shareholders had no subscription right	Equity: - Capital increase of AS 15m by issuing new shares - BCA purchases Unionbank through a share swap in the ratio of one BCA share for 18 Unionbank shares Assets: - The BCA's assets increased from AS 506m in 1926 to AS 846m in 1927 - The Unionbank's assets in 1926 were AS 178m	Equity: - Capital increase of AS 15m by issuing new shares - BCA purchases Verkehrsbank through a share swap in the ratio of one BCA share for 33 Verkehrsbank shares Assets: - The BCA's assets increased from AS 506m in 1926 to AS 846m in 1927 - The Verkehrsbank's assets in 1926 were AS 139m
Valuation of the share swap	Based on market prices: - one AS 50 CA share bought four AS 100 BCA shares - equity holders of the BCA incurred 87.5% loss (1 BCA share was paid AS 12.5 instead of AS 100) Based on book value (BV): - BV of equity at BCA in 1928: AS 130/share - BV of equity at CA in 1928: AS 56/share	Based on market prices: - one AS 125.8 BCA share bought 18 AS 6.6 Unionbank shares - One Unionbank share was paid AS 6.99 instead of AS 6.6 Based on book value (BV): - BV of equity at BCA in 1926: AS 84.67/share - BV of equity at Union in 1926: AS 45/share	Based on market prices: - one AS 125.8 BCA share bought 33 AS 3.75 Verkehrsbank shares - One Verkehrsbank share was paid AS 2.67 instead of AS 3.75 Based on book value (BV): - BV of equity at BCA in 1926: AS 84.67/share - BV of equity at Verkehrsbank in 1926: AS 32.07/share

	- a holder of one BCA share valued at AS 130 received AS 14 for his share, i.e. incurred a 90% loss	- a holder of one Unionbank share valued at AS 45 received AS 4.7 for his share, i.e. incurred a 90% loss	- a holder of one Verkehrsbank share valued at AS 32.07 received AS 2.57 for his share, i.e. incurred a 90% loss
Acknowledged losses	- AS 55m was the BCA's equity in 1928 - Of this 90%, i.e. AS 49.5m was recognized as a loss - This was only 5.8% of the BCA's total assets in 1928	- AS 28m was the Unionbank's equity in 1926 - Of this 90%, i.e. AS 25.2m was recognized as a loss - This was only 14.1% of the Unionbank's total assets in 1926	- AS 8.75m was the Verkehrsbank's equity in 1926 - Of this 90%, i.e. AS 7.875m was recognized as a loss - This was only 5.7% of the Verkehrsbank's total assets in 1926
Summary	Bail-in of shareholders: - 90% loss ratio Bail-in of depositors and creditors: - Guaranteed by the authorities	Bail-in of shareholders: - 90% loss ratio Bail-in of depositors and creditors: - None: depositors and creditors did not incur any losses	Bail-in of shareholders: - 90% loss ratio Bail-in of depositors and creditors: - None: depositors and creditors did not incur any losses
Source	*Financial Compass (1930), p. 256, 264-65* *Financial Compass (1931), p. 262-63, 274*	*Financial Compass (1928), p. 272-73, 279-80, 459-60*	*Financial Compass (1928), p. 272-73, 279-80, 461-62*

The transactions were structured through a share swap. The valuation of the swaps reveals that in each of the three cases the shareholders of the acquired entity incurred an app. 90% discount in the value of their equity investment. The very fact that the equity holders of the "acquired" entity were willing to enter into a transaction at such terms, and thereby accept such an enormous loss on their share capital confirms that the three merged banks were in severe financial distress.

However, this distress was not fully acknowledged by the structure of these transactions. The liabilities of failed banks (i.e. the depositors and creditors) were transferred from the merged entity into the successor entity at book value. This means that the value of these resources was not depreciated at the mergers. Therefore, the structure of these transactions recognized failing institutions' non-performing assets and past losses only to the extent of shareholders' reduced capital but not beyond that. The column "Acknowledged losses" of Table 2 calculates the amount of losses that were actually admitted at the mergers. In the case of the Unionbank this amounted to 14.1% of assets while for the Verkehrsbank and the Boden-Credit-Anstalt the figure was even lower, only 5.7% and 5.8% of their assets, respectively. It is very unlikely that shareholders were willing to give up almost their whole ownership stake for such low cumulative losses. It is much more likely that the failed institutions' past losses were not fully written off but were kept on the successor entity's books. The banks thus followed their regular fraudulent accounting practices at these mergers and continued to hide the weakness of the Konzerns.

The 90% figure used in all three mergers reinforces this view. While it is theoretically possible that in each of the three transactions, the magical 90% of equity discount exactly accounted for each individual bank's past losses, it is much more likely that the 90% figure was an industry "best practice". The recurring 90% figure in these mergers seems to have been a solution which served the interest of all parties involved. Rather than having to acknowledge the actual losses of their Konzern, the failed banks' owners could strike a deal with another bank which was also interested in maintaining the failing Konzern. The loss of 90% of their capital was the price that the failing bank's shareholders paid for keeping their Konzern in operation, keeping the board seats they had in their Konzern companies, and for the opportunity to remain minority owners of the successor entity. Considering that they could have been left with nothing, this seems like a good deal. On the other hand, the managers of the absorbing financial institution also gained from the arrangement. They were able to avoid the write-offs and liquidations within industry which could have started a chain reaction of bankruptcies that could have easily melted away their own Konzern as well. The mergers were thus complicit agreements between bank managers who were all interested in hiding the losses of the inefficient and failing industrial corporations they owned.

Since past losses were not acknowledged at these transactions, the cash-deprived, non-viable Konzern companies were kept alive within the absorbing bank. These failing companies continued to use up fresh funds from the acquirer - a classic case of throwing good money after bad. This chain of mergers, nonetheless, did nothing else than disguised the actual performance of the universal banks, and deepened the problems of the Austrian banking system.

Authorities' involvement

How could these banks get away with accounting fraud? The answer is that authorities turned a blind eye to these practices and, especially in times of trouble, they actually supported the big banks to hide losses and stay afloat.

For one thing, Austrian financial institutions were barely monitored by the fiscal authority and the Ministry of Finance accepted and seems to have even supported this situation. Austria had a Banking Commission, established in 1921 with the goal to oversee financial institutions and make reports to the Federal Parliament (Enderle-Burcel, 1994). However, the Commission was weak: it

did not have enforcement rights and it was inhibited in its observations. Naturally, banks did try to curtail the activities of the Commission. But what is stranger is that so did the Ministry of Finance. The Ministry did not provide the necessary information to the Commission and neglected its recommendations. The charter of the Commission expired on 31 December 1926 and it was not prolonged. Two years later a new body was set up, the Österreichische Revisions- und Treuhandgesellschaft whose purpose was to provide chartered accounting and audit services to the whole private sector.[10] However, audits were not compulsory: they were only carried out at the request of the private institution.[11] The primary purpose of the organization seems to have been not to ensure financial prudency but to please Bank of England and League of Nations officials that Austria on paper had a supervisory organization.

The Austrian National Bank's (ANB) supervisory authority was no more intrusive. Commercial banks reported their financial statements to the central bank on an annual basis and they refused to increase the frequency. To put this into perspective: the Reichsbank, the German central bank, required German financial institutions to publish their accounts on a monthly basis.[12] Even in the post-crisis period after its collapse in 1931, the Credit-Anstalt refused to publish monthly reports.[13]

Lack of supervision was a passive way through which the authorities supported the survival of the insolvent universal banks. Turning a blind eye to accounting fraud allowed the universal banks to pretend that their loans were not delinquent, book revenues on them, and remain profitable on paper. Thereby, these banks could hide their insolvency and they could sustain this game as long as they were able to gain access to liquidity.

In addition to that, there is evidence that in a number of fraudulent cases authorities not only overlooked fraud but were actually actively involved in arrangement it. How could the universal banks pay dividends just weeks before they failed? This suggests that even though they were insolvent at the moment of the payment, they had access to some source of liquidity. Who was supplying that liquidity? Archival evidence implies that in the case of one of the four bank failures, that of the Boden-Credit-Anstalt, the liquidity source was very likely none other than the ANB. The central bank's president, Richard Reisch's seems to have been partial towards the BCA, which in fact was his previous employer. Reisch was a former Minister of Finance, a former vice-president of the Boden-Credit-Anstalt, and the president of the ANB from 1922 (Eigner 1997). Archival records reveal that Reisch chose not to listen to warnings presented to him by the management of the ANB regarding the weak position of the Boden-Credit-Anstalt and did not put an end to the ANB's rediscounting of BCA bills until the very end.[14] This occurred despite the fact that Reisch had been closely scrutinizing the Boden-Credit-Anstalt's financials from 1927 and was hence fully aware of the banks' financial difficulties which became clearly pronounced from 1927 (Weber 1991). He was "ein alter Gönner" of the Boden-Credit-Anstalt (Eigner 1997).[15] However, by retaining the ANB rediscount support towards the Boden-Credit-Anstalt even against questionable collateral, Reisch acted against the statutes of the ANB.[16] Additionally, through this he supplied the liquidity from which the shareholders of the insolvent bank could pay themselves

[10] BoEA, file OV28/32, Letter from Kay to Siepmann, 2 Nov 1928
[11] BoEA, file OV28/1, Draft legislation on Chartered Accountants and Raison d'etre, 19 Mar 1927
[12] HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 25 Jan 1928
[13] BoEA, file OV28/5, Memorandum: Report No III by Mr Bruins, 28 Aug 1931
[14] BoEA, file OV28/34, Letter from Brauneis to Siepmann, 12 Oct 1929
[15] In English: „an old patron"
[16] BoEA, file OV28/34, Letter from Brauneis, 12 Oct 1929

the same dividend as in previous years.[17] Put more simply: BCA shareholders' compensation was paid by the ANB just a few weeks before the bank failed.

Evidence also confirms that authorities were aware and supportive of the terms under which the bailout of the various universal banks was agreed on. Their support implies their acceptance of fraud since the terms of these transactions acknowledged past losses to a limited extent, they did not require banks to raise fresh capital, and they were a clear sign of collusion between the universal banks. While there seems to be limited information on authorities' involvement in the Verkehrsbank transaction, the opposite applies to the Unionbank and the Boden-Credit-Anstalt amalgamations. Archival records reveal that Reisch closely monitored the 1927 event to ensure that the Unionbank's shares were eventually transferred to his former employer, the Boden-Credit-Anstalt.[18] Further, the merger of the Boden-Credit-Anstalt and Credit-Anstalt in 1930 happened not only with the support of the authorities but the transaction was managed by them and they provided financial support to make it happen. The two banks' merger was, in fact, forced through against the will of the acquiring entity's, the Credit-Anstalt's management. When Chancellor Schober heard that the Credit-Anstalt was unwilling to absorb its smaller competitor, he called on the management of the Credit-Anstalt, and told them that:[19]

> [...] he had accepted the post of Chancellor at the special request of the representatives of Finance, Commerce and Industry. He considered it therefore the duty of these representatives to spare him the trouble of any disturbance of a financial and economic character. If *he could not reckon on their help in the Boden-Credit-Anstalt crisis*, he would resign immediately.[20]

A statement from the managing director of the ANB also seems to suggest that the CA had to acquire the BCA against its will and under the watch of the authorities. Brauneis wrote to a Bank of England Official that "the amalgamation will afford the Credit-Anstalt considerable possibilities for profit and that *it will not have to regret that it has embarked in this enterprise*."[21]

Additionally, the government and the ANB remained active in the BCA-CA merger's afterlife as well. After the transaction, the Credit-Anstalt received the largest support from the government. Besides providing tax and duties exemptions, it was rumored that the government made a pledge to guarantee all of the deposits and ANB advances of the merged entity.[22] The value of this assumed government liability is unclear because neither merging bank reported the liquidity support it received from the ANB. At a minimum, the value was around AS 290 million but it could have been as high as AS 1,000 million. This translated to 15-52% of total government revenues and 2.4-8.3% of the nominal GDP for 1929.[23] This was an outstandingly high off-balance sheet liability for the state in the middle of a recession.

On top of the government's guarantee, the Credit-Anstalt was also treated to the ANB's scheme, the so-called cross-deposits. Through this channel the ANB was able to indirectly lend to the Credit-Anstalt.[24] After the merger, the ANB made an agreement with a number of foreign banks based on which it deposited certain US dollar or British pound amounts at these banks which then,

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[17] Ibid.
[18] BoEA, file OV28/32, Letter from Kay, 2 Mar 1927
[19] BoEA, file OV28/32, Letter from Kay, dated 22 Feb 1927
[20] BoEA, file OV28/2, Statement from Schober, 22 Oct 1929, emphasis added
[21] BoEA, file OV28/34, Letter from Brauneis to Siepmann, 12 Oct 1929, emphasis added
[22] BoEA, file OV28/2, Memorandum on the BCA
[23] The author's own calculations based on the *Financial Compass (1926-1935)*, WIFO (1965), *Statistisches Handbuch* and *Statistisches Jahrbuch*, various years
[24] BoEA, file OV28/75

in turn, deposited the same amounts at the Credit-Anstalt for a profit margin of 1%. The estimated total value of cross-deposits was USD 8 million, app. 5% of the Credit-Anstalt's total assets in 1930 (after its merger with the Boden-Credit-Anstalt).[25]

Authorities clearly did not want to let the universal banks simply go under. Each bailout, whether organized by the banks or by the authorities, enjoyed the implicit and, in the case of the Boden-Credit-Anstalt and the Credit-Anstalt merger, the explicit support of the government and the ANB. With the universal banks owning much of Austrian industry, letting only one fail could have started a chain of bankruptcies leading to liquidations, unemployment, disgruntled trade unions, and what the political class feared the most, political unrest. The universal banks thus enjoyed the support of the authorities and they could delay the confrontation with their true profitability.

However, by avoiding liquidations, authorities and the universal banks could only procrastinate the collapse. Chapter 2 has shown that allowing the Unionbank's Konzern to survive within a new bank after each successive merger, contributed to the deterioration of good banks' assets and led to the eventual collapse of the Credit-Anstalt. Authorities and universal banks' unwillingness to face losses early on led to a crisis of a much bigger magnitude than what they would have had to tackle had they acknowledged losses earlier. At the same time, the political class simply had no financial and political capital to carry out a bailout early on in the decade. They did not have the credibility to borrow to finance such a transaction and they could have crumbled their delicate political support in the ensuing social and political upheaval. It was thus in the interest of both bankers and politicians to go with the flow, continue to choose the cheaper and less risky short-term solution, and avoid the moment of truth as long as possible.

HUNGARY: COMMITMENT TO AGRICULTURE

The Hungarian case is similar to the Austrian story with one obvious exception: instead of industry the state here was committed to supporting agriculture.

Hungary had historically been an agricultural country and within the economic union of the Habsburg Empire, it was the main supplier of agricultural products to the regions of the Austro-Hungarian Monarchy. However, the integrated market of the Empire was disrupted by WWI and agricultural Hungary lost what had formerly been its natural markets. The region was broken up by the Peace Treaties, the customs and currency union was dissolved, and the newly created successor states of the former Empire aimed at establishing economic independence and self-sufficiency (Berend and Ránki 2002; Butschek 1994; Hertz 1933). Protectionist measures were introduced and quantitative and non-quantitative tariff walls were erected across the new borders of the former union. It further aggravated the situation that Hungary's agricultural producers were inefficient compared to other players. The customs union had protected domestic farmers from competition and ensured reliable market demand for their products prior to WWI. All this had dis-incentivized them from improving their methods of production. When the breakup of the Empire forced Hungary's agricultural producers to compete in a global market against other, more efficient primary producers, they did not fare well in comparison. The loss of old markets and tight competition entailing subdued commodity prices were a constant threat to the livelihood of the country's large agricultural population during the interwar period (Berend 1985; Radice 1985).

[25] BoEA, file OV28/75, Cross deposits, 18 April 1932; Weber (1991b) puts this figure at USD 14-15 million but I have found no evidence for that.

The disarray and poverty that the war had left behind, the disillusionment with the political and economic elite, and the challenges faced by primary producers due to new global agricultural market circumstances all contributed to a very unstable political situation in Hungary right after the war. Much of the large agricultural population lived in poverty (Radice 1985; Ungváry 2013). The social upheaval was aggravated by a short-lived communist takeover in 1919. When the former imperial political elite eventually re-instated its position by 1921, it was clear that the political status quo could only be sustained if the country's agricultural sector, which employed 58% of the workforce, remained afloat.[26] This goal came naturally to the political class, since most of their members, including Prime Minister Bethlen, and their voters were large agricultural landowners (Romsics 1991).

However, the state did not have the means and resources to improve the welfare of the agricultural sector. As in Austria, when Hungarian authorities agreed to the implementation of the fixed exchange rate and free capital flows, they also allowed their hand to be tied by the economic trilemma. Thus from the stabilization program of the League of Nations in 1924, the state could not pursue an independent fiscal and monetary policy and could hence not freely spend and borrow. This is why the financial system, which was not bound by such circumstances, gained increasing significance in the extension of political goals.

The interests of the various players of the Hungarian financial system were complex but it so happened in the early 1920s that they could easily be directed towards a dedicated support of agriculture. The financial system had two important players: savings banks (Sparkassen) and issue banks. Sparkassen contributed app. 18-20% to the whole sector's total assets and their main purpose had historically been agricultural lending.[27] In this regard, their primary objective coincided with that of the Hungarian state: to provide financing to agriculture. They were thus the natural intermediaries through which state intervention could support the landowning class. Issue banks, on the other hand, which made up app. 65% of the sector's total assets, had more complex goals. Some of these banks had historically been agricultural financiers, just like Sparkassen. The Magyar Földhitelintézet, the Magyar Földhitelintézetek Országos Szövetsége, the Kisbirtokosok Országos Földhitelintézete, and the Földhitelbank részvénytársaság for example, were all issue banks dedicated to agriculture and they generated app. 46% of the total assets of all issue banks.[28] Their incentives were similar to those of Sparkassen and the Hungarian state. At the same time, there were other issue banks such and the Magyar Általános Hitelbank, the Pesti Magyar Kereskedelmi Bank, the Magyar Leszámítoló és Pénzváltó Bank, and the Hazai Bank which were universal banks and were predominantly industrial financiers just like their Austrian counterparts.[29] They were the largest players of the financial system generating app. 56% of the total assets of all

[26] The author's own calculations based on the League of Nations Statistical Yearbooks, various years.
[27] The author's own calculations based on *Nagy Magyar Compass*, various years; *Magyar Pénzügy*, 9 July 1930; *Budapesti Hírlap*, 17 May 1931
[28] Magyar Földhitelintézet in English: Hungarian Land Credit Institution, founded in 1863 (*Nagy Magyar Compass*, 1912/13, p. 130; 1925/26, p. 103); Magyar Földhitelintézetek Országos Szövetsége in English: National Association of Hungarian Land Credit Institutions, founded in 1911, state-owned (*Nagy Magyar Compass*, 1912/13, p. 213, 1925/26, p. 161); Kisbirtokosok Országos Földhitelintézete in English: National Land Credit Institution for Small Landowners, founded in 1869, (*Nagy Magyar Compass*, 1912/13, p. 170, 1925/26, p. 131); Földhitelbank részvénytársaság in English: Land Credit Bank, founded in 1911, (*Nagy Magyar Compass*, 1912/13, p. 211, 1925/26, p. 159)
[29] Magyar Általános Hitelbank (*Nagy Magyar Compass* 1912/13, p. 140-42, 1925/26, p. 107, 109-114); Pesti Magyar Kereskedelmi Bank (*Nagy Magyar Compass*, 1912/13, p. 113-15, 1925/26, p. 93); Magyar Leszámítoló és Pénzváltó Bank in English: Hungarian Discount and Exchange Bank (*Nagy Magyar Compass*, 1912/13, p. 159-60, 1925/26, p. 124-26); Hazai Bank in English: Domestic Bank, (*Nagy Magyar Compass*, 1912/13, p. 199-200, 1925/26, p. 148-49)

issue banks. Based on their business interests, they should naturally have been more committed to sectors of industry rather than agriculture. Nonetheless, this had changed in the early 1920s and their goals could also be aligned with those of the state.

Prior to WWI, the industry-focused universal banks had had industrial connections not only within the country's post-war borders but also in what later became the Successor States. Post-war animosity with Hungary's neighbors had, however, led to the confiscation or dissolution of these assets (Ránki and Tomaszewski 1985) and Hungarian universal banks also rid themselves of the main part of their shareholdings in domestic industrial enterprises (Szádeczky-Kardoss 1928, Weber 1991, p. 19-25). Further, these banks were also inhibited in increasing their industrial network because they lost their natural financing channel: their formerly close connection to the Viennese financial market loosened after the war. Since the customs and currency union was dissolved and the Austrian economy itself was severely damaged and trying to get back on its feet, the Viennese market could not re-attain its pre-war central role at the regional level (Ránki 1983). These Hungarian issue banks had to find new international connections to rebuild their access to large financial markets. Therefore, in the years after the war, these institutions were in an uncertain business environment in which they were seeking to re-define their purpose. A revealing example of this uncertainty is the fact that the Magyar Általános Hitelbank's appointment as the state's banker, renewed every single year between 1873 and 1918, was after the war not re-instated until 1927.[30] Hungarian industrial issue banks hence found themselves in a vacuum in the years right after the war. This vacuum eventually came to be filled with a focus on agricultural lending.

Dedication to agriculture was hence the basis of the interwar bargain between Hungarian politicians and the financial system. Sparkassen and agricultural issue banks had already invested their resources into this sector. Industrial issue banks, which came later to the business, started to expand their agricultural lending after the League reconstruction. Financial institutions were thus increasingly exposing themselves to a highly inefficient and non-competitive sector of the Hungarian economy. Moreover, they did this in spite of the fact that the land that they received as collateral for their loans was not freely tradeable and foreclosures were conditional on government permission.[31] They were willing to carry on with this highly risky business because they received very strong incentives from authorities to follow this path.

Support to Sparkassen

The main challenge that the Hungarian Sparkassen were facing during the interwar period was the lack of financing. Access to capital for agricultural lending outside of Budapest, the capital, was limited. Domestic capital generation was weak and Sparkassen hence could not raise sufficient resources through deposit-collection.[32] Further, there was increasing competition from issue banks which were also seeking to establish strong market positions in agricultural lending.[33] Had it not been for the Hungarian National Bank's (HNB) general support, Sparkassen may not have survived the 1920s.

Figure 1 shows the equity and liability side of Hungarian Sparkassen's aggregate balance sheet. Deposits collected from the public made up app. 40% of these financial institutions' financing resources. By way of comparison, as shown in Chapter 2, the same figure for Austrian

[30] HNA, file Z51, bond 56, item 832

[31] *Magyar Pénzügy*, 6 Aug 1930 and 29 Apr 1931; HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 27 Mar 1931

[32] HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 23 Feb 1927, 28 Sep 1927, 28 Mar 1928

[33] *Magyar Pénzügy*, 14 May 1930

Sparkassen was over 80%. Hungarian savings banks were hence truly facing difficulties collecting deposits. They were, however, supported by the HNB. Figure 1 shows that the HNB rediscount facility provided app. a quarter of Sparkassen's capital. In addition to that, Sparkassen could also rediscount their bills at affiliated large issue banks which accounted for an additional 25% of their financing. Those Sparkassen which had no affiliation with any of the issue banks, were struggling to obtain access to this financing source.[34] Sparkassen were thus heavily dependent on rediscount from the HNB and from their issue bank connections.

Figure 1
The equity and liability side of Sparkassen's aggregate balance sheet

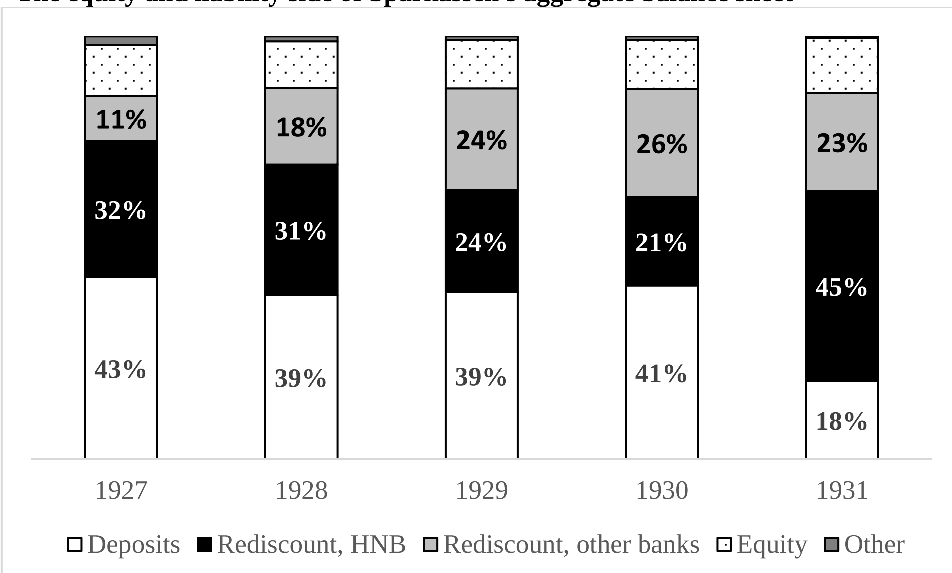


Figure 2 analyzes the rediscount policies of the HNB and provides evidence on the HNB's dedication to supporting Sparkassen. The values indicate the total rediscount provided by the Austrian and Hungarian central banks as a percentage of the total assets of their respective financial sector. What is striking in the diagram is that the rediscount provided by the HNB was significantly higher than that of the ANB in all years except 1931. The reason behind this was the HNB's dedication to supporting Sparkassen. When one removes Sparkassen financing from the HNB's total rediscount then the remaining volume is much more comparable to that of the ANB. Removing financing dedicated to the key agricultural lenders of the economy shaves off 50-60% of the rediscount of the HNB.

The fact that a significant portion of the HNB's rediscount went towards Sparkassen may be interpreted with relative differences in the financing needs of the various sectors of the Hungarian economy: agriculture was more in need of liquidity than the non-agricultural parts of the economy and thus the HNB naturally provided more rediscount to the former. The HNB's actions were, however, driven not only by this but also by a clear bias towards supporting the agricultural sector. The evidence that underscores this is the HNB's response to Hungary's currency crisis in 1928. As Chapter 1 has explained, Hungary experienced a balance-of-payments crisis in late 1928 and in order to protect the stability of the fixed exchange rate, the central bank restricted and restructured its discount window. Figure 3 depicts the HNB's discount practices

[34] *Magyar Pénzügy*, 29 Jan 1930

following the crisis. Even though the total volume of rediscount substantially declined following the 1928 episode, the volume of agricultural rediscount stayed at the same level. The board minutes of the national bank around the period of the decision on the rediscount restriction reveal general anxiety about the performance of agriculture. Board members often emphasized that institutions outside of Budapest, i.e. key agricultural financiers, were in great need of central bank liquidity. Such comments appear more frequently after the management introduced restrictions on the liquidity window. There were no similar concerns expressed in connection with non-agricultural sectors that actually came to bear the burden of the restriction.[35]

Figure 2
Central bank rediscount in Hungary and Austria (% of banking system's total assets)

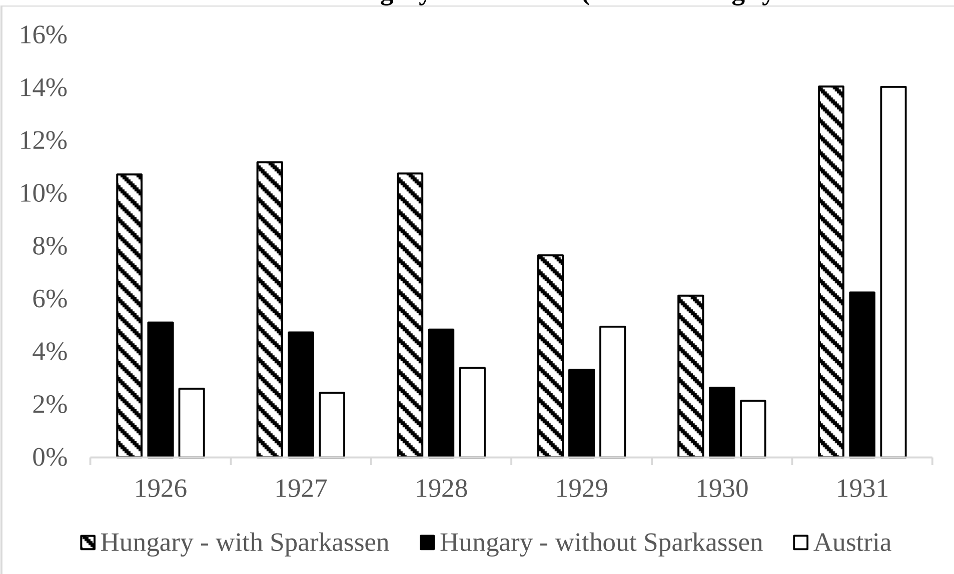
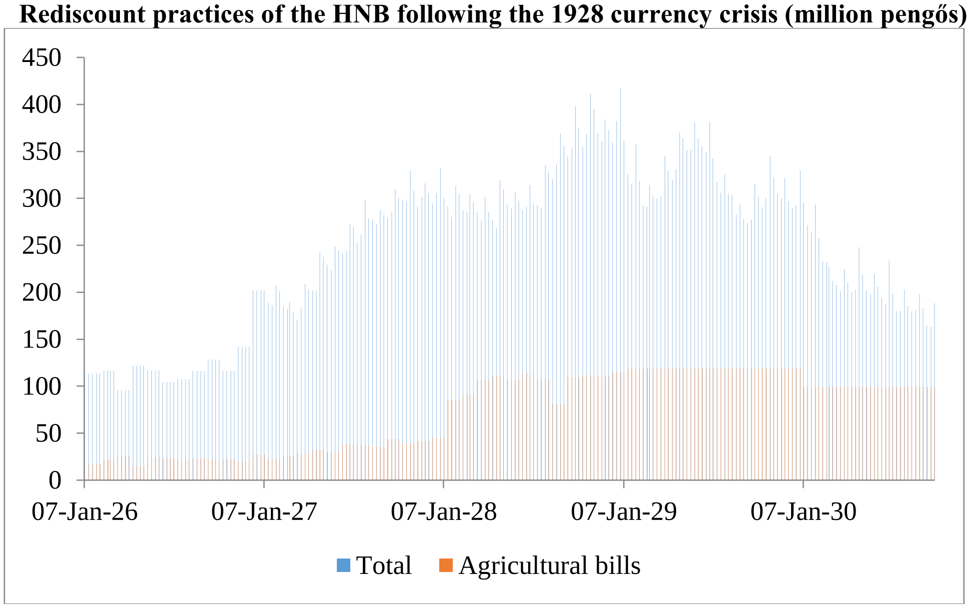


Figure 3
Rediscount practices of the HNB following the 1928 currency crisis (million pengős)



[35] HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 22 Mar 1929, 30 Aug 1929

Support to large issue banks

While the HNB provided incentives to Sparkassen to ensure continuous lending to agriculture, the government was using a number of other means to achieve the same goal through large issue banks. On the one hand, it used its own resources to stimulate the flow of funds towards the agricultural sector. This, however, must naturally have been limited since the state's spending and borrowing were closely monitored by the League of Nations and international financial markets. Much more importantly, it provided incentives to large issue banks to boost their lending towards agriculture. This was the mechanism that caused large banks to substantially increase their exposure to the primary sector.

The boletta was the government support scheme for agriculture in the period which is cited by most economic historians (e.g. James 2002, Berend and Ránki 1966). The mechanism was, however, only introduced in 1930 and its financial impact was minor. The boletta was the draft issued by the government and used in the payment for cereal. The system came into effect on 1 July 1930 according to a 1930 legislation based on which the government fixed the price at which grain had to be purchased from agricultural producers and the fixed price was higher than the actual market price. The boletta draft could be utilized for tax payments or could be cashed. The system hence compensated agricultural producers for their inefficiency and put cash into their pockets. The impact of the system was negligible since it did not increase the government's budget deficit to over 1% of the GDP, suggesting that spending on this mechanism was no more than 50-100 million pengős, that is, less than 2% of the total assets of the financial system in 1930.[36] Further, it was only introduced in 1930 when the agricultural crisis was already well under way.[37]

The Hungarian government actually had a number of much more powerful and earlier measures to support agriculture and these all assigned a role to the large issue banks. Already from 1925 the government was closely working together with large issue banks with the purpose of increasing lending to the sector. The Ministry of Finance endowed some of the large banks with the right to issue debentures, a security used in agricultural financing.[38] Additionally, the state itself already owned or in the early 1920s came to establish a number of institutions which had the same privileges and goals. For example, the Magyar Mezőgazdasági Hitelintézet was established in 1922 with the purpose of lending to agriculture through debentures.[39] The Ministry was also actively involved in the process of debentures issues. The Minister of Finance was trying to induce the large banks to establish a "National Mortgage Bank" or a "Central Mortgage Institute" and use this entity as a vehicle for raising capital for agricultural loans in international markets.[40] The Ministry was of the view that a centralized association of the largest Hungarian issue banks would be in a better position to raise capital abroad than would individual banks themselves. Already from 1925, the Ministry promoted this initiative and took an active part in organizing it. Further, the government also offered financing from its own resources to the association of issue banks for the placement of debentures. As a result of all this government action, app. 421.5 million pengős of agricultural

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[36] The author's own calculations. Government budget data based on *Statisztikai Szemle*, 1938, 4.sz.; GDP data based on Eckstein (1956); financial system data based on *Nagy Magyar Compass* (1925/6 – 1934/5)

[37] HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 28 May 1930, 18 Jun 1930

[38] HNA, file Z51, bond 15, item 224

[39] Magyar mezőgazdasági hitelintézet in English: Hungarian Agricultural Creditbank (*Nagy Magyar Compass* 1930/31, p. 172)

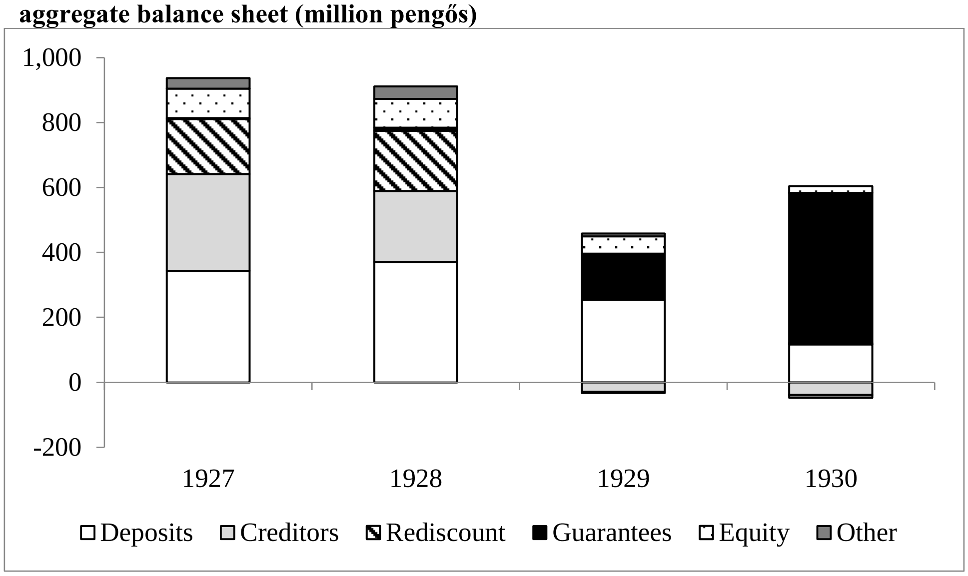
[40] HNA, file Z51, bond 15, item 224, Memorandum regarding Hungarian agricultural financing and various other files

lending was placed into the economy by 1929 through the debentures channel. This accounted for app. 30% of the total stock of agricultural lending in 1929.[41]

While debentures were already a substantial enhancement to agricultural lending, the most important support from the Hungarian government came through guarantees. From 1929, the state started providing off-balance sheet guarantees to the issue banks of the financial system in order to support their ability to raise capital. Whereas in 1928 such guarantees did not yet exist, by 1929 their volume reached app. 158 million pengős and in 1930 621 million pengős. In 1929 there was only one recipient of these state guarantees: Magyar Földhitelintézetek Országos Szövetsége, the state-owned agricultural financier. Afterwards, the scheme seems to have spread to private institutions whose guarantees closely resemble that of Magyar Földhitelintézetek Országos Szövetsége. By 1930, a number of private institutions, the majority of the issue banks had noted guarantees on their balance sheets.[42] From the perspective of the financial system, these state guarantees were not only useful because they helped the banks raise more funding, but they were also essential because the loans that were financed from the capital raised through the guarantees were the financial responsibility of the state. If these loans defaulted, that was a loss to the state, not to the financial institutions.

Figure 4 illustrates the magnitude and the importance of these state guarantees. The first diagram shows the annual change in the various items of the equity and liability side of financial institutions' aggregate balance sheets. The figures depict the increasing importance of state-guarantees. In 1929 app. 30 percent, in 1930 over 80 percent of new financing resources of the financial system arose through state guarantees.

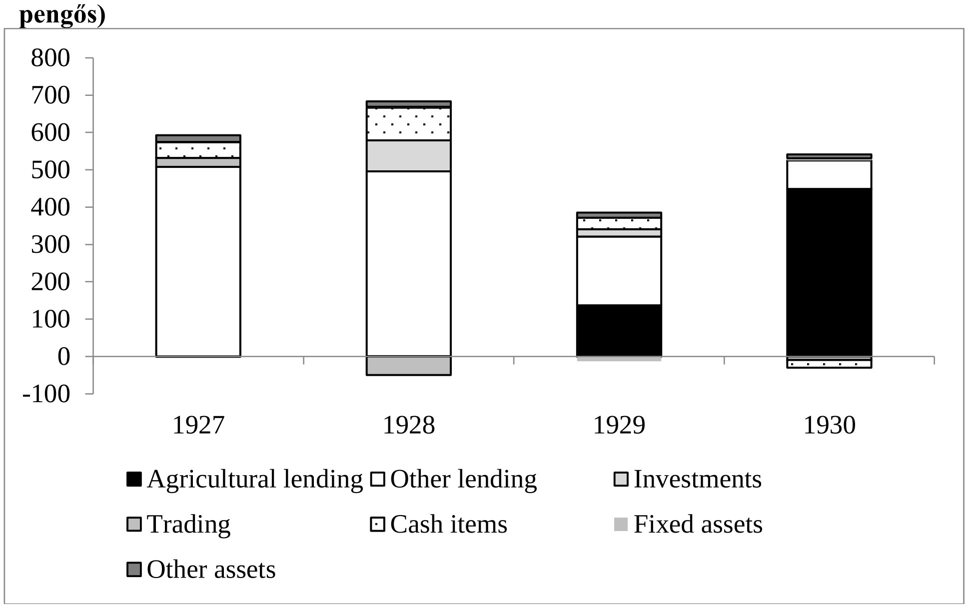
Figure 4
The change in the various items of the equity and liability side of the financial system's aggregate balance sheet (million pengős)



[41] The author's own calculations based on HNA, file Z51, bond 15, item 224, A budapesti jelzálogbankok zálogleveles kölcsönállománya 1929. december 31-én and *Nagy Magyar Compass* (1925/6 – 1934/5)
[42] The author's own calculations based on *Nagy Magyar Compass* (1925/6 – 1934/5)

Critically important is the fact that the state attached a condition to these guarantees: the money raised through this channel could only be spent in the agricultural sector.[43] Figure 5 shows the impact of this condition. The diagram depicts the annual change in the various items on the asset side of financial institutions' aggregate balance sheet. The figures reveal that already in 1929 much of the lending went to agriculture but in 1930 over 80 percent of new lending was flowing to this sector. As Chapter 1 has explained, had there been no such guarantee in place, the financial system would have started withdrawing capital from the economy from 1929. Thanks to this generous state support which guaranteed app. 45% of banks' total agricultural loans, lending continued. By the end of 1930, even the historically industry-focused issue banks had app. 68 percent of their lending towards the agricultural sector.[44]

Figure 5
The change in the various items of the asset side of the financial system's aggregate balance sheet (million pengős)



The problem was that, as Chapter 1 explained, the country fell into a recession which was driven primarily by an agricultural downturn. Already from October 1928, agricultural producers started to introduce delays in servicing their loans or defaulted.[45] In mid-1929, a large issue bank, an agricultural financier, the Földhitelbank failed and was liquidated in mid-1930.[46] By early 1930, 70-75% of the debenture-based agricultural lending was in default.[47] By mid-1930, issue banks could not extend agricultural loans because producers were unwilling to take them over fearing that just as they could not service their existing loans, they would default on the new ones as well.[48] Chapter 1 has calculated that by the end of 1930, the financial system had lost at least 57% of its capital through non-performing loans.

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[43] Based on *Nagy Magyar Compass* (1931/32), p. 115 and the notes of the various recipient banks in the *Nagy Magyar Compass* (1925/6 – 1934/5)
[44] The author's own calculations based on *Nagy Magyar Compass* (1925/6 – 1934/5)
[45] HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 30 Oct 1928
[46] HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 26 Jun 1929; *Nagy Magyar Compass* (1930-31), p. 168
[47] HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 8 Jan 1930
[48] HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 18 Jun 1930, 12 Nov 1930

Despite all the efforts of the state and financial institutions, no more liquidity could be channeled into agriculture. From January 1931, agricultural producers started demanding that the state step in and restructure their debt.[49] At that point, the state's off-balance sheet liability through the guarantees amounted to app. two thirds of the state's annual revenues and close to 10% of the nominal GDP for 1930. The agricultural non-performing loans thus froze the banking system, turned financial institutions into zombie banks and the off-balance sheet liability buried the state under itself.

CONCLUSION

What if Austrian authorities had not turned a blind eye to universal banks' accounting fraud? And what is they had not helped the Boden-Credit-Anstalt and had not forced the Credit-Anstalt to absorb its competitor? In such a case, it is very likely that the Unionbank, the Verkehrsbank and the BCA would have gone under and the CA would have remained a much healthier bank than it had become after its merger with the BCA. It is also possible that the CA would not have collapsed in 1931. Further, what if the Hungarian authorities had not decided on assuming a large off-balance sheet burden by supplying guarantees to the financial system? It is likely that banks would have made more prudent lending decisions, would have lent less to agriculture, and would not have been buried under non-performing loans by the end of 1930. Authorities' meddling with the incentives of the financial system greatly contributed to banks' vulnerability and eventually to the events of 1931.

However, the path which led Austria and Hungary to the crisis of 1931 was not for their policy-makers to choose; they simply had no alternatives. Desperate to hold on to their power in an increasingly hostile political environment, but hands tied by the economic trilemma, policy-makers' only feasible path towards stimulating the economy led through the financial system. This was their only option if they wanted to stay in power. Banks went along because the incentives set by policy-makers had made financing industry in Austria and lending to agriculture in Hungary the rational choice.

The unfortunate outcome was that this turned much of the banking system into a network of large zombie banks sitting over failing industrial enterprises and defaulted agricultural loans. When the house of cards built from non-performing loans collapsed in 1931, Austrian and Hungarian authorities broke out of the macroeconomic trilemma by introducing capital controls.

[49] *Magyar Pénzügy*, 14 Jan 1931; HNA, file Z6, box 2, Minutes of the Board of Governors of the Hungarian National Bank, 25 Feb 1931, 27 Mar 1930

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