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**Working Paper**

## The highs and the lows: Bank failures in Sweden through inflation and deflation, 1914-1926

QUCEH Working Paper Series, No. 23-03

**Provided in Cooperation with:**

Queen's University Centre for Economic History (QUCEH), Queen's University Belfast

*Suggested Citation:* Kenny, Sean; Ögren, Anders; Zhao, Liang (2023) : The highs and the lows: Bank failures in Sweden through inflation and deflation, 1914-1926, QUCEH Working Paper Series, No. 23-03, Queen's University Centre for Economic History (QUCEH), Belfast

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BANK FAILURES IN SWEDEN THROUGH INFLATION  
AND DEFLATION, 1914-1926

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Working Paper 23-03

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January 2023

# **The Highs and the Lows: Bank Failures in Sweden through Inflation and Deflation, 1914-1926**

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## **Abstract**

This paper revisits the Swedish banking crisis (1919-26) that materialized as post war deflation replaced wartime inflation (1914-18). Inspired by Fisher's 'debt deflation theory', we employ survival analysis to 'predict' which banks would fail, given certain ex-ante bank characteristics. Our tests support the theory; maturity structures mattered most in a regime of falling prices, with vulnerable shorter-term customer loans and bank liabilities representing the most consistent cause of bank distress in the crisis. Similarly, stronger growth in i) leverage, ii) weaker collateral loans and iii) foreign borrowing during the boom were all associated with bank failure in post-war Sweden (1919-26).

**Keywords:** banking crisis; survival analysis; early warning indicators; debt deflation; maturity mismatch; Sweden.

**JEL Classification:** E58; G01; G21; G28; N24.

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## Introduction

In the aftermaths of the Great Financial Crisis of 2008 and the Covid-19 pandemic of 2020, a coordinated international policy response has been credited with preventing a repetition of the worst effects of the Great Depression (Eichengreen and O'Rourke 2010; de Grauwe and Ji 2020). Whereas expansionary monetary and fiscal policy during the Covid-19 pandemic were employed in a largely deflationary context in terms of consumer prices (CPI), asset prices recovered rapidly in contrast, reaching heights which actually exceeded pre-pandemic levels. Presently, this situation has begun to reverse. Supply chain bottlenecks and scarcities exacerbated by the war in Ukraine have led to increasing consumer prices, accompanied by falling asset prices. The monetary tightening, which such inflation has provoked, has placed further downward pressure on asset prices. While inflation targeting now takes the most prominent role in most central bank mandates, global interest rate rises can place considerable pressure on vulnerable financial systems as evidenced by the emerging market crises of the 1980s and the 1990s.

With this setting in mind, the rationale for this paper is to study the issue of how such a reversal – from an inflationary to a deflationary monetary regime- can affect the banking system through the balance sheet choices of commercial bank. To address this question, we study the extreme experience through which the Swedish banking system maneuvered over the period 1919-26, as it navigated a 65 percentage point increase in real interest rates between 1918 and 1921. This extreme monetary reversal left much of the banking system in such a dire state, that a bank Reconstruction Company using the “bad bank” concept (*Kreditkassan*) was required to rescue it from collapse. The banking crisis, which materialized was the most severe the country had experienced in 150 years before 1992.

To date, this event has received only limited academic attention (Schön, 2010; Hagberg and Jonung, 2009; Lönnborg, Ögren and Rafferty, 2011) and has not been subject to a systematic quantitative analysis. Armed with a new appendix (1) providing the short biographies of 75 commercial bank exits over the period of analysis and an array of financial ratios constructed from underlying balance sheets, this paper intends to fill this gap.

A common thread in the voluminous literature on banking crises is that crises are the result of some macroeconomic shock that ends a classic boom period (c.f Reinhart and Rogoff, 2009, c.10). “Capital flow bonanzas”, asset bubbles and their sudden reversal, combined with financial liberalization are given prominence as leading culprits according to this interpretation.

In recent work, Quinn and Turner (2020) describe a bubble triangle in terms of the three core elements of fire- money/credit (fuel), speculation (heat) and asset marketability (oxygen) – which, when combined with an external shock (spark) such as politics/technology, will inevitably lead to financial bubbles. All of these pre-crisis characteristics focus on the compliance of the banking sector to varying degrees during boom periods at the aggregate level. In this vein, they trace their origins to the traditional theories on causes of banking crises as formulated by Fisher (1933) and the growth of debt. More recent work has confirmed this view and demonstrated that the aggregate size of the leverage during the boom period is linked to the magnitude of the post-crisis recession (Schularick and Taylor, 2012; Jordà et al., 2013). Claessen et al. (2014) list asset price bubbles, credit booms, marginal loans, increased systemic risks (deteriorating lending standards) and poor regulations as key factors in increasing vulnerability to banking crises. The emphasis of this set of theories is on the asset side of banks' balance sheets (Goldstein and Razin, 2013; Allen and Gale, 2000).

More specifically, Calomiris' (2007) "fundamentals" view sees bank failures as the result of an observable deterioration in the economic condition of banks, due to either poor credit allocation or shocks leading to declines in the value of bank loans and asset portfolios (see also Calomiris and Mason, 2003). Such theories are an appropriate starting point for this paper, given the nature of the monetary/trade shock which was visited upon the Swedish banking sector over the period 1919-26. On the other hand, the "bank run" view concerns itself with self-fulfilling panics that often occur during the bust period, as solvent banks become insolvent through contagion effects (Carlson 2005, Diamond and Dybvig 1983, Gorton & Tallman 2018). The bank run approach is conversely concerned with the liabilities of the financial system being vulnerable to panics (Diamond and Dybvig 1983, Shin, 2009) and the growing fragility of banks' funding and maturity structures (Minsky 1970, 1980, and 1986; Hahm, Shin and Shin, 2013). Not every panic is preceded by an economic downturn (Jalil, 2015; Kenny et al, 2021), but bank runs can threaten an entire banking system which may be suffering from temporary liquidity constraints rather than insolvency concerns. For the crisis of the 1920s, we find no narrative evidence of physical bank runs, though distress did materialise as a direct result of maturity mismatches and foreign currency liabilities, lending a degree of support to this view of banking crises.

Poor credit allocation and vulnerable funding structures are themselves a function of bank management, corporate governance cultures and the individual history of each bank. Therefore,

another view of banking crises has offered additional “institutional” explanations (Colvin, 2018; Hickson and Turner, 2004; Briones and Rockoff, 2005; Wheelock and Wilson, 2000). To address this angle, we employ testing on bank age and shareholder liability regimes, as well as assessing the frequency of every bank’s acquisition over the period and considering previous restructuring events after the prior crisis of 1907.

Drawing on these theories, this paper examines pre-crisis balance sheet structures and institutional factors to reveal the choices that led to bank survival and failure during a deflationary shock after a period of sustained inflation. Our inspiration comes from earlier bank level studies of banking crises (c.f. Colvin et al., 2015, Grodecka-Messi et al., 2021, Postel-Vinay, 2016).

We collect monthly balance sheet data for the full population of Swedish commercial banks over the period 1914–26. These are gathered from Statistics Sweden (1913–26) *Statistiska meddelanden: Uppgifter om bankerna* [Statistical messages: Information about the banks]. Our choice of starting period is motivated by two considerations. First, the outbreak of World War 1 represented a massive monetary shock to the Swedish financial system, as the gold standard was abandoned, inflation and asset prices soared, and the country, as a neutral, became the destination of unprecedented gold flows. As these flows could not be used to purchase physical goods and services, they resulted in a massive expansion in central bank reserves. Relatedly, the Scandinavian monetary union, never fully recovered from the shock of the War, not least due to the tension these gold flows created (Ögren and Trautwein 2022).

Second, the same period was characterized by a dramatic consolidation of the Swedish commercial banking sector, exemplified by a frenzy of merger operations, which raised major concerns amongst contemporaries. Mirroring a biographical approach recently employed elsewhere (Kenny and Turner 2020), we draw on a range of primary sources to examine, classify and document the nature of seventy-five bank exits from the population over our period of interest, which is detailed in Appendix 1. The appendix forms the basis of much of the analysis conducted in this paper and we believe it will provide a useful historiography for future researchers and bank historians. Not only does the Appendix trace each bank exit, but it also records other evidence useful for testing (age, number of takeovers, prior record of distress etc). The biographies provided in Appendix 1 also enable us to improve our dating of the banking crisis. While traditional studies have emphasized 1921 and 1922 in line with the economic contraction (c.f. Schön 2010), our work shows that the majority of distress events

occurred in 1923 and that distress continued to plague the banking system until 1926. In addition, we draw on the appendix to guide and validate our testing and results, as many contemporary commentators recorded their opinions about why certain banks failed. Where banks are referenced by code such as “[Ref ##]”, the appropriate biography can be found under that number ## in Appendix 1. We show that over one third of all mergers, acquisitions and closures in the entire period were preceded by distress.

We employ logit regressions (survival analysis) to “predict” subsequent bank distress and find that shorter maturities on both assets and liabilities were the most prominent predictors of distress. Furthermore, higher shares of “unsafe loans” (Fisher, 1933) against signature only, were a prominent culprit for determining bank failure. When real interest rates rose on this loan category, a wave of defaults followed on those banks, which had more of this weaker collateral “name security” class of lending. In this sense, we find evidence for both the “fundamental” and “bank run” views of banking crises.

At the aggregate level, we observe that stronger increases in portfolio risk (loans/assets) over the wartime period were associated with sharper subsequent contractions in lending as these banks “stampeded to liquidate” their loans during the deflation (c.f. Fisher 1933). Similarly, the wartime boom saw a rise in banks’ share of non-core-liabilities of up to 50 per cent, conveying the “less defensive” liability structure that so concerned Minsky (1970). Banks with higher maturity mismatch ratios (shorter-term deposits to longer-term loans) were more likely to succumb to distress as deposits were withdrawn during the crisis. Banks with higher shares of lending against property weathered the storm better, as it was longer-term, rather than shorter term, liquidity of those customers that was the relevant factor. When economic activity began to recover after 1921, future prospects concerning the schedule of repayments on those loans tended to improve.

Our results also offer tentative support to the notion that those banks that were comparatively aggressive in takeovers (1914-18) were more likely to succumb to distress in the 1920s crisis that followed, and that younger banks were more prone to failure. This result therefore provides some, admittedly weaker, support to the institutional view of banking crises.

Finally, our paper also considers an overlooked dimension of the crisis of the Swedish banking system in the 1920s. Few historiographies have emphasized the role of the Swedish krona (SEK), which had appreciated substantially during the war period against the currencies of its

partners in the Scandinavian Monetary Union, Denmark and Norway. As a neutral, Sweden's currency also strengthened against those of its key trading (belligerent) partners, Britain and Germany. This would have encouraged borrowing abroad in foreign currency (another non-core liability) as deposits (core liabilities) declined. With this in mind, our tests reveal that those banks that had engaged in more foreign borrowing during wartime were more likely to succumb to distress in the 1920s, as foreign currencies began recovering against the SEK and the value of Swedish bank debt abroad rose considerably. In this sense, our paper draws support from the literature emphasising the role of foreign debt and short-term liabilities in creating vulnerability (c.f. Bordo et al (2010); Bordo (2008)). This debate has returned in the current context of rising rates and foreign currency debts in emerging markets.

The rest of the paper is structured as follows. First, we provide short descriptions of the prominent banking theories in the modern literature (fundamentals, bank run, and institutional). In order to aid us in our explanations under these headings, we draw on the contemporary debt deflation theory of Irving Fisher (1933) and the 'financial instability hypothesis' of Hyman Minsky (1970, 1986). We then set out the background to our study, drawing upon our new data to describe the wartime "disturbance" (Fisher, 1933) to monetary conditions and the bank merger boom, placing the 1920s crisis in its context. We then document and motivate our data construction and choice of variables. Finally, we present the analysis and results before concluding.

## **Theory**

**The 'fundamentals view' of banking crises** focuses on the deterioration of bank assets and emphasizes the quality of collateral against loans as the preeminent cause of bank distress (Calomiris and Mason, 2003; Goldstein and Razin, 2013; Allen and Gale, 2000). The negative external shock, which incites this deterioration or exposes the poor lending choices of banks, represents the crisis trigger. While the quality of collateral is paramount in this view, Fisher's (1933) debt deflation theory additionally focuses on the structure of loan maturities at the bank level, emphasising shorter maturity loans, or "the quickest liabilities", as problematic in a deflationary setting. This process will particularly affect those banks that have "over-extended" during the boom phase, after the initial "disturbance" (Calomiris 2007). Following this "fundamental" set of theories, we analyse the link between bank distress and credit creation through increased leverage and the quality of bank loans, in terms of a variety of collaterals, for which data exist.



Under the broad umbrella of the modern “fundamentals” view of banking crises, Fisher’s (1933) debt deflation theory offers a useful mental model, written only a decade after the Swedish deflationary crisis of the 1920s in the midst of the Great Depression in the US in the early 1930s. It was a theory of its time, which considered the problem of appropriate price adjustments on the gold standard centre stage. It focused primarily on the growth of debt/ bank assets (after some exogenous “disturbance”) and inflation prior to a crisis and attempted to understand the interaction of the subsequent contraction of that debt with deflation, in the post crisis period. The force of debt deflation meant that borrowers suffered as the real value of their debts rose as many agents in the economy attempted to liquidate their debts simultaneously.

Fisher (1933) also placed added emphasis on a growing proportion of poorer quality loans, such as “call loans”, finding later echoes in Claessen et al’s (2014) “marginal loans” or as “risk shifting” according to Turner (2014). If, in line with the fundamental view, the answer is to be found on the asset side of bank balance sheet, we should expect higher proportions of such loans amongst the failing banks. Indeed, we find evidence amongst contemporary accounts that various banks were deemed to have failed due “to poor allocation of credits”[Ref 55], “undue care in monitoring loans” [Ref. 73] and concentrating “doubtful credits” towards individual firms such as a “failed shoe company” or “large diesel company” [Ref. 53]. A core plank of Fisher’s (1933) piece was that money interest on *unsafe* loans rises making them the most vulnerable assets in any deflationary downturn. As deflation sets in, real interest rates would tend to rise and hurt borrowers who would subsequently default on their banks. In this environment, “*the more debtors pay, the more they owe*” as the real value of debt rises when “*the mass effect of the stampede to liquidate swells each dollar owed.*”

We also draw on existing theories of the nature of the Swedish crisis of the 1920s. Schön’s (2010, p. 252-3) proposed that the “loser” firms were those that went into the 1920s “deflationary crisis” with debt, as “*markets disappeared, the real value of their debts rose and additional credit became unavailable*” (Schön 2010, p. 253). If additional credit is withheld, rolling over debt (maintaining bank loans) with short-term maturities will present difficulties for customers and their banks, alike. In this vein, “*the distribution in time of the sums coming due*” plays a key role in the survival outcome in a period of debt deflation (Fisher, 1933). The analysis of banks’ assets with referent to the debt deflation theory is particularly useful, as these assets reflect the liabilities of borrowing customers. Such a vantage point will present us with evidence upon whether the effects of debt deflation were felt by the commercial

community at large, or whether they were restricted to banks that had “over extended” (Fisher, 1933). Indeed, Smålands Enskilda bank’s [Ref. 73] failure was attributed to exposure to firms affected by the depression and “the acute fall in timber prices which the bank [through its customers] was totally unprepared for”.

**The “bank run” view** of banking crises posits that runs may be triggered by external shocks and allows that solvent banks in a panic can experience sudden large withdrawals of deposits leading to a general banking crisis (Calomiris 2007, Diamond and Dybvig 1983, Gorton & Tallman 2018). According to this theory, the bank’s ability to withstand bank runs is pivotal, implying that banks’ liability management, maturity structures and liquid reserves are of paramount importance in understanding banking crises. Since the Great Financial Crisis of 2008, the destabilising role of so-called ‘non-core liabilities’, i.e. all liabilities *not* in the form of equity or deposits- have emerged within this school (Hahm, Shin and Shin, 2013; Shin, 2009; Laeven and Valencia, 2013). These have emphasised the build-up of fragility in bank liabilities, taking their inspiration from Minsky (1986).

In the framework of the “bank run” view of crises, Minsky’s financial instability hypothesis (1970, 1980, 1986) offers a useful theoretical guide to understanding the increasing fragility in bank liabilities during a boom period. The most prominent idea of the hypothesis is that the stage of a financial cycle may be judged on how prevalent hedging, speculative or Ponzi units are in the total mix of firms. While hedging firms can make principal and interest payments out of current income, speculative firms can only make the latter, while Ponzi units rely on continuous upward valuations of their assets in order to refinance to make both. The latter’s liquidity is therefore unsustainable.

Both historically and in contemporary times, the importance of bank liquidity (ability to pay cash against liabilities) persists in the banking crisis literature (Acharya et al., 2011; Wheelock and Wilson, 1995; Wheelock and Wilson, 2000). Temporary liquidity shortages may force banks to conduct fire sales of their assets leading to a de facto deterioration in the value of these assets in solvent banks (Diamond and Rajan 2005; Brunnermeier and Pedersen 2009) culminating in a self-fulfilling banking crisis. Recognizing its significance, policy makers and bank supervisors (BIS, 2013) have added a liquidity ratio to the latest round of Basel accords. Carlson, Mitchener and Richardson (2011) have demonstrated that liquidity provision is an important way to avoid such generalised banking crises.

Inspired by this set of theories, we study the importance of liability management with respect to demand liabilities, non-core liabilities, maturity mismatches and reserves as possible determinants of bank survival or distress. We expect that the “quickest liability” (shorter-term bank liabilities and even short term loans) will prove the most insecure if the theory of debt deflation explains developments during the 1920s crisis in Sweden. During wartime inflation, bank deposits were not the preferred destination of Swedish savings, as deposit interest rates remained low and funds were deployed to higher yielding assets such as equities, securities and property. Anecdotally, contemporary commentary on the failure of Svenska Lantmännens Bank [Ref. 63] acknowledged that “further extensive write-offs of share values against which the bank had lent were expected”, while “falling values of equity” were credited with the demise of Örebro Läns Bank [Ref. 55].

Combining the fundamental and bank run theories of banking crises, we analyse bank level balance sheets to examine how individual banks financed the credit expansion during the boom period and consider the consequences for each bank during the crisis. In addition, we utilise the information in Appendix 1 to draw on the institutional view of banking crises and consider other variables not captured in the balance sheet of banks, such as shareholder liability, the age of the bank, previous history of distress, board controls and merger appetite (measured by the amount of takeovers that each bank engaged in during the boom). While it is difficult to account directly for matters like the fraud which befell the Sydsvenska Kreditbank [Ref. 59] where, it was claimed “the leadership of the bank, until the very last moment, did everything to bluff”, the tests we were able to conduct were enabled by the data derived from the biographies of 75 banks in Appendix 1.

## **Background**

### **The Wartime “Disturbance”**

Sweden abandoned the gold standard in August 1914 as a consequence of the outbreak of World War 1. However, unlike the belligerent economies, Sweden, as a neutral, experienced a massive export boom during hostilities and could not offset the unprecedented volume of exports with home demand for foreign imports. In theory, the floating exchange rate would see the currency appreciate in value, dampening foreign demand for Swedish goods, while simultaneously increasing Swedish demand for foreign goods, thereby reducing the current account surplus. In this scenario, the exchange rate, rather than prices, would form the principal means of adjusting the trade balance. Even though the Swedish krona appreciated considerably

against its European peer group, prices trebled during the War, as the neutral experienced even higher inflation rates than belligerents such as the UK during the period. The inflow of gold was of such magnitude that the Swedish authorities unsuccessfully attempted to make the belligerents pay for their imports of Swedish goods with their own goods, enforcing a kind of ‘no gold clause’ (Lennard and Ögren 2014). These extraordinary gold flows and the accumulation of reserves that they engendered had distortionary effects on Sweden’s economy. In Fisher’s (1933) theory, “the gold supply, which is especially important” was always linked with “over indebtedness”. Figure 1 presents the accumulation of foreign exchange reserves over the period, which trebled.

<<FIGURE 1 HERE>>

During the boom period, asset prices soared in nominal terms, in line with the demand for credit. An increasing gap between deposits (core-liabilities) and lending emerged in some periods showing that this increased lending was not directly linked to increased deposits. Evidently, the commercial banks were able to find alternative funding sources to deposits for their lending. For instance, the cause of the failure of Jämtlandsbanken [Ref. 62] was “excesses of liberally granted credit far beyond the amount expected of a little bank.” As stated above, recent research has considered the importance of the size of the share of non-core liabilities in banks’ balance sheets as an indicator of increasing systemic fragility. This literature can trace its roots to Minsky’s increasingly vulnerable liability structures (Shin, 2011; Hahm, Shin and Shin. 2013). Indeed, Figure 2 shows that the share of non-core liabilities in Swedish banks increased by almost 50 per cent through the war period until 1919 (8.4 per cent to 12.4 per cent of liabilities). There appears to be little difference between the distressed banks and the full population in terms of debt composition, though a clear trend reveals that less traditional means of liabilities were indeed sought and obtained.

<<FIGURE 2 HERE>>

Contemporary evidence was obtained in Appendix 1 on how the war affected individual Swedish banks. Some, such as AB Industribanken [Ref. 48], appeared on allied “black lists” due to their links with Germany after the war, which affected their operating capacity. Other banks, such as Nya Banken [Ref. 52], were vulnerable and ultimately failed due to their exposure to wartime and post-war exchange fluctuations against Russian roubles and German

marks. Similarly, the demise of Svenska Lantmännens Bank [Ref. 63] was attributed to the “exchange rates which continue to fluctuate as violently as last year [1922]”.

### **Developments in Swedish Banking, 1911-1921**

The 1911 Banking Act that emerged in the wake of the 1907 crisis encouraged consolidation, as it stipulated that banks with larger equity bases were permitted to operate with lower reserve requirements (Jungerheim and Larsson, 2013; Ögren, 2021). This legislation marked the beginning of the nationwide branch-based banking system.

In the academic literature, the move away from smaller banking units towards larger banks is often viewed as a positive development in financial history (Turner, 2014; Kenny and Turner, 2020). For instance, in the UK, the move from partnerships towards joint stock banks resulted in larger capital buffers and increased diversity in both ownership and portfolio allocations (Turner, 2014). Relatedly, the historical stability of the Canadian banking system contrasted starkly with the US experience, as the latter consisted of smaller state chartered banks, while the former was characterised by larger, diversified, nationwide branch networks with federal charters (Bordo, Redish and Rockoff, 2015). Indeed, larger bank size has been associated with greater financial resilience during the Great Depression (Grossman, 1994).

However, the Bank of International Settlements have highlighted the potential risks associated with bank mergers (Carletti et al, 2002). They propose that mergers between large banks, leading to a "polarization" of the banking system, are more likely to lead to higher aggregate liquidity needs than mergers involving small banks, since they increase the asymmetry in banks' balance sheets. Second, mergers are more likely, *ceteris paribus*, to increase aggregate liquidity needs since they induce lower individual reserve holdings in less efficient markets, where banks face higher refinancing costs. Finally, mergers during upturns may affect reserves and private aggregate liquidity more negatively in the short run.

Swedish contemporaries voiced similar concerns after WW1. They fretted about the effects of the merger wave, particularly in smaller towns. One newspaper described forthcoming legislation which obliged all banks desiring future mergers to seek official approval: “The banking system’s strong concentration is already a danger to economic equilibrium...the banking council now deem it essential that they shall be able to question whether normal relations between those factors that support commercial activity, have been disturbed by the

banking systems rapid and powerful concentration of late” (*Svenska Dagbladet*, 23 May 1919, p. 6). The law stipulated, “only those mergers which are deemed beneficial to society shall be approved and those that are detrimental prevented” (*Dagens Nyheter*, 6 March 1919, p. 8). Hostility towards the acquisition of Värmlands Folkbank [Ref. 49] for instance, was expressed in a cynical broadsheet article that claimed the bank was one “that had been started as recently as two years ago” with “little else to motivate its establishment other than being absorbed into a larger bank at a higher price at the first opportunity” (*Dagens Nyheter*, 14 May 1919, p. 12).

However, by 1919, almost fifty mergers had already occurred since the outbreak of the War (Appendix 1). The wave of bank mergers that occurred after 1907 led to a pronounced decline in the number of banks (Figure 3), though financial access and branch networks continued to grow until the end of WWI. The merger wave led to a smaller population of larger commercial banks. To date, no study has attempted to test whether this merger wave was associated with the demise of commercial banks during the subsequent crisis in line with contemporary viewpoints.

<<FIGURE 3 HERE>>

## The 1920s Crisis

<<FIGURE 4 HERE>>

Figure 4 traces the course of real GDP five years prior to, and following, each major financial crisis since the 1850s. What immediately distinguishes the 1920s crisis is that the economic depression that began in 1917 was so severe that, despite meagre growth over the years 1919 and 1920, real output had not yet recovered to 1916 levels, as late as 1921. Effectively, the Swedish banking system limped into the 1920s crisis at the end of a series of bad years and distress events that began at the end of WWI. The second economic contraction occurred in 1921, as GDP contracted by over 4 per cent (the largest decline in output of all crises at  $T=0$ ) and it was subsequently followed by a second wave of distress exits over the subsequent four years (Figure 5). Nonetheless, the economic recovery from the 1920s crisis was sustained, despite the unravelling of the monetary union in 1924, bank problems that continued into 1926 and the severe deflation that occurred prior to the return to the gold standard. Unlike the crises

of 1877 and 1907 where GDP continued to contract in the second year, by 1922 the recovery was already under way and real GDP had exceeded its 1916 level.

In April 1922 AB Kreditkassan was established to respond to the failure of the largest Swedish commercial bank, Sydsvenska Kreditaktiebolaget (Ref. 59), though it proved “difficult to predict in the middle of 1922 how serious the [financial] crisis would subsequently become” (Hagberg, 2007, p. 190). This organisation was a version of a toxic asset fund, which by 1923 effectively operated “to ensure that no Swedish commercial bank would be forced to close in the aftermath of the crisis” (Hagberg, 2007, p. 190). By January 1923, it was evident that more banks did require assistance, as a new wave of banks approached Kreditkassan for funds. In the end, the scale of intervention dwarfed anything the Riksbank could have provided under statute, as Kreditkassan advanced SEK 83 million to banks and SEK 77 million to industries that formed part of bank portfolios. Though its board was comprised of commercial bankers, only SEK 5 million was provided by commercial banks and all profits and losses were absorbed by the treasury (Ögren, 2018, pp. 63-66).

Up to the establishment of Kreditkassan, the Riksbank could only act within the constraints of legislation to fill its LOLR functions in a temporary manner (Hagberg, 2007, p. 189; *Sveriges Riksbank Law*, 1897, §41). The establishment of AB Kreditkassan represented a *de facto* regime change in which the Riksbank’s already minimal role was marginalised (Hagberg, 2007, p. 191) and dwarfed by Kreditkassan’s dominance as an actor in crisis management. The latter was viewed, by the bankers and the treasury, as an organ of state (Hagberg, 2007, p. 191) with a fundamentally different purpose to the Riksbank’s; namely, one of conducting bank rescues and reconstructions. This offered a new “outside option”, representing a regime change, to all banks in the “late distress period” and motivates our choice of splitting the sample into “early distress” and “late distress”.

The view is widely shared that the crash of the 1920s was triggered by international factors (Hagberg and Jonung, 2009; Lönnborg, Ögren and Rafferty, 2011). After WWI, international demand for Swedish exports contracted, turning domestic firm profits into losses and the subsequent international post-war depression aggravated this decline in trade. In addition to these difficulties, from 1919 the Swedish authorities pursued restrictive monetary policy with the declared aim of returning to the gold standard at pre-war parity in 1924 (Lönnborg, Ögren & Rafferty, 2011). The extent and effects of the deflationary policies can be judged by the fact that the krona reached its pre-war parity as early as 1922.

Table 1 conveys the extent of the real interest rate shocks that hit the Swedish financial system during WWI (characterised by high inflation) and the post war period (notable for its pronounced deflation). At the conclusion of the War, real interest rates stood at minus 40 per cent, rising within only three years by 65 percentage points to reach 25 per cent.

<<<TABLE 1 HERE>>>

The extremity of the swing from high to low prices offers a useful case to test the theories outlined above, as it represents a unique external shock of such importance to the fundamental view of banking crises. Both Fisher and Minsky emphasized the vulnerability of maturity structures to such shocks. Banks are a particularly useful unit through which to view the theory, as not only do their own liability structures form a source of vulnerability, but the “distribution in time of sums coming due” on their assets offer insight on whether the same mechanism affected their customers and society at large. In what follows, we document the construction of the data in a way that enables us to consider our hypotheses.

### **Data and Analysis**

Our study draws on two types of complementary data. The first category is largely historical in nature (e.g. dates of bank closures, contemporary accounts, subsequent historical research etc.) and the second category is financial data that is a core staple of studies such as these (Colvin et al, 2015; Postel-Vinay. 2016; Grodecka et al, 2021).

Beginning with the first category, our analysis requires information concerning the number of distressed banks that were either liquidated outright, involved in some form of takeover, or continued as going concerns because of officially sanctioned capital injections. Furthermore, we are interested in documenting the takeover strategies of banks, to discern potential links with subsequent distress during the 1920s crisis. Appendix 1 was developed in order to tackle these issues. We constructed short biographies of all seventy-five [Refs. 1-75] bank exits (mergers, closures, reconstructions) from the population in our period of investigation, 1914-26. The appendix, in each case, documents and justifies our choices of the nature of each bank exit during the sample period.

Our starting primary source is *Uppgifter om banker*, an official monthly publication of banking activities, from which one can observe bank exits, either through omission or through abbreviated footnotes explaining their cessation of operations. We then crosschecked the



information contained therein with other banking histories such as those by Ernst Söderlund (1978) and Oscar Broberg (2003), as well as reviewing the material left by a contemporary bank inspectorate (Benckert, 1976). While these provided useful historical summaries, the basis of our classification of each exit/merger/closure was ultimately formed through our research in the historical newspaper archives of the two major broadsheet publications of the time, *Dagens Nyheter* and *Svenska Dagbladet*. This exercise was undertaken to establish whether each takeover or closure represented a distress event, or whether it was the result of a strategic decision. The approach mirrors other documentary appendices recently applied in financial history (Kenny and Turner, 2020; Grodecka et al, 2021). Newspaper accounts have the added benefit of reporting information in “real time” ahead of the official register updates that occasionally take many more months to reflect the change in population.

Mergers and acquisitions often led to name changes, and it is the latest extant bank name that we record in this paper. In total, we include 49 banks (Appendix 2) in our statistical analysis that were in existence at the conclusion of the War - November 1918. Of these, we identify 19 distressed banks in our restricted sample. Five (subsequently distressed) banks were established after November 1918 and are not considered relevant for testing for our purposes, as they had no wartime record to consider. These are described in Appendix 1 [Ref. 44, 51, 66, 71, 74]. We find that twenty-seven (36 per cent) out of seventy-five exits over the entire period (1914-26) can be characterised as distress events.

As previously discussed, the crisis sample is split into “early” and “late” distress periods. 1922 represents the final year of the early distress period and matches the traditional dating of the crisis (Hagberg and Jonung, 2009; Lönnberg et al, 2011; Schön, 2010). As the establishment of *AB Kreditkassan* fundamentally altered crisis conditions, representing a de facto regime change, every distressed bank after *Sydsvenska Kreditaktiebolaget* [Ref. 59] falls into the “late distress” period, beginning in January 1923. Despite previous emphasis on the wave of failures occurring in 1920 and 1921, the highest number of distress events occurred in 1923 and distress formed the sole reason for every bank exit from then until 1926 (Figure 5). The new data suggests that the banking element of the Swedish crisis of the 1920s persisted longer than previously acknowledged.

<<FIGURE 5 HERE>>

The second category of data concerned financial information with respect to each bank. Again, *Uppgifter om Bankerna* (1913-26) represent the principal primary source. These summarised the monthly balance sheets of every Swedish commercial bank for scrutiny by the acting supervisory authority, *Bankinspektionen* (The Bank Inspectorate). Having crosschecked the totals of the balance sheets with our inputs, we subsequently generate the appropriate balance sheet ratios at the level of individual banks. Additionally, at the end of each calendar year, a *Bokslut* (year-end) was appended to *Uppgifter om Bankerna*, which provided supplementary information relating to profit and loss items for each commercial bank. From these, performance ratios for each bank in the sample were calculated, including measures of profitability, efficiency and shareholder/corporate governance items.

Table 2 presents a simple difference in means test between non-distressed and distressed banks using the average of the last 12 months of World War 1 (December 1917- November 1918).<sup>1</sup> We group the ratios according to asset composition, liquidity/maturity profiles and balance sheet risk. The choice of variables is motivated by the theories outlined above. The t-values on the right-hand side report whether the differences are statistically significant.

<<TABLE 2 HERE>>

Before moving towards formal testing, it is useful to observe the summary statistics in light of our previous theoretical discussions. It is evident from Table 2 that a number of ratios point to significant differences in the characteristics of distressed and non-distress banks. In the first place, maturity profile differences are apparent. Distressed banks tended to have higher shares of short-term deposits, both against long-term loans and as a share of total deposits, conveying a preference for the “quickest liabilities” (Fisher, 1933). As we have already noted, the increasing gap between assets and deposits was furnished from other non-core liabilities, such as foreign borrowing, which shows up significantly for distressed banks. Table 2 also reveals that non-distress banks had lent comparatively greater amounts against longer-term loans, exemplified by property (mortgages).

Table 3 reports *the changes* that occurred over the war period in selected ratios. Perhaps unsurprisingly, distressed banks tended to increase their leverage (loans/equity) by a larger order of magnitude than non-distressed banks during the war. They also tended to grow their lower quality collateral loans (“against signature”) at a faster rate than non-distressed banks

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<sup>1</sup> Unless otherwise stated, this periodization is that used for the stationary variables in our testing.

through the conflict, suggesting growing concentration in a falling number of productive investment opportunities or “marginal lending” (Claessen et al. 2014). Such “poor lending decisions” were a feature of Örebro Läns Bank’s [Ref. 55] failure. Higher volumes of lending against commercial bills, which made banks vulnerable to downturns in pricing and international trading conditions (Hagberg and Jonung, 2009), was also a feature of distressed banks.

<<TABLE 3 HERE>>

Both tables are consistent with the view that maturity profiles of bank liabilities and customer loans were important to the story. Both shorter-term bank liabilities and shorter term lending (customer loans) were more prominent among the distressed banks. Lender and borrower alike fell victim to “the quickest liability” according to the summary statistics.

If those banks that had over-extended in the boom were the same banks with higher shares of short-term liabilities, we might expect to observe “the stampede to liquidate” among those banks- they would tend to sell more of their assets (and contract lending) in order to meet the demands of their short term creditors. In Figure 6, we scatter plot the relationship between the growth of lending assets in the pre-crisis period (December 1913-November 1918) against the growth of the same ratio during the subsequent period (December 1918-December 1923). The relationship is consistent with Fisher’s (1933) picture of banks that had overextended during the boom years (x-axis) “stampeding” to liquidate during the post war slump (y axis).<sup>2</sup> Neither table 2 or 3 reveals a significant result for the predominance of shares in bank portfolios as other studies have emphasised (Lönnberg et al, 2011). In the next section, we present our model and discuss the results before concluding.

<<FIGURE 6 HERE>>

## Results

In our analysis, we take a forward-looking approach, following recent research, and test whether Swedish banks' distress in the 1920s could have been predicted by pre-crisis balance sheet characteristics, in addition to other institutional characteristics, which are discussed shortly (Grodecka et al., 2021; Postel-Vinay, 2016; Colvin et al., 2015). Specifically, we apply

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<sup>2</sup> The relationship is statistically significant ( $p=0.10$ ) with a coefficient of -0.48 when we exclude the small and large banks.

a set of variables that would be best suited for that purpose drawing on the principal theories outlined above, as well as more recent work on the fragility of the debt structures of banks.

We estimate the following logistic regression:

$$\ln \frac{\pi_i (Distress)}{1 - \pi_i (Distress)} = \alpha + x_i' \beta$$

where  $\alpha$  is a constant and  $x$  is a vector of bank-specific variables. The coefficients  $\beta$  represent the contributions of chosen bank-specific variables to the probability of bank distress. Negative coefficients imply that a lower value of the chosen variable increases the probability of distress, while positive coefficients indicate that higher values will increase the likelihood of bank distress.

We employ the logistic regression in order to test which groups of variables observed over the war period are most associated with subsequent bank distress. We split the entire distress period into two sub-periods (1919-22 and 1923-26) to allow for potentially alternative explanations to the two phases of distress events presented in Section 4 (Figure 5). We are particularly interested in balance sheet choices that may be particularly vulnerable to sudden changes in monetary conditions.

Drawing on the results of the difference-in-means tests in the previous section, we also test whether the “distribution in time of sums coming due” (Fisher, 1933) in such a deflation or the “willingness to assume liability structures that are less defensive” (Minsky, 1970) are statistically significant in predicting individual bank failures. This approach considers whether the bank run view has a role in explaining bank distress in the crisis. At the crossroads of the two schools, we seek to ascertain whether banks’ customers were vulnerable in a similar manner on the maturity of their own liabilities/short term bank loans, given the prevalent deflationary environment. We wish to test the idea that customers who had borrowed against longer-term collateral, such as property, would not suffer the immediate liquidity requirements familiar to those customers who had borrowed against shorter-term commercial bills or took call loans “on name”.

Table 4 presents the ratios we construct for the logistic regression from the balance sheets of 49 Swedish commercial banks in our sample (see Appendix 2). Table 5 reports the results of our primary exercise. Our logistic regressions largely corroborate what the summary statistics

conveyed based upon our *a priori* suspicions regarding debt deflation, growth in non-core liabilities and shortening of maturity profiles. In addition, our testing reaffirms our hypothesis that despite wartime inflation, a strengthening krona encouraged borrowing abroad in foreign currency, leaving a multitude of banks vulnerable to any post war reversal in the foreign exchange market rates.

<<TABLE 4 HERE>>

<<TABLE 5 HERE>>

As mentioned earlier, Schön (2010, pp. 252-3) provides an elegant description of the characteristics of “winners” and “losers” of the crisis of the 1920s. While his discussion related to firms rather than banks, his conclusions offer us a potentially useful paradigm for viewing the fate of distress and non-distress banks during the period. According to the argument, the winners of the crisis were those that “in the final stage of the inflation cycle, had remained liquid” (Schön, 2010, p. 252). Indeed, while lower cash ratios were not a significant determinant of distress, banks with higher mismatch maturities were more likely to fail, suggesting that indirect liquidity constraints were important.

Banks that had increased leverage with respect to their peer group, were more likely to fail upon the downturn. This was evident from contemporary accounts such as that of the failure of Smålands Enskilda Bank [Ref. 73] which was due to “the bank’s rapid expansion during the war leading to undue care in monitoring loans.” In stark contrast to remaining liquid, these banks shortened their maturity profiles (liabilities) in order to extend their investments (assets). The “losers” according to Schön (2010, p. 252) were those who saw the value of their savings eroded during wartime and went into the 1920s with debt following the inflation cycle. During the “deflationary crisis”, as “markets disappeared, the real value of their debts rose and additional credit became unavailable” (Schön, 2010, p. 252).

Maturity mismatch explanations of bank distress also lend support to the bank run view of banking crises. However, in the severe deflation that followed the War, even bank *assets* with shorter maturity profiles (normally viewed as more liquid/secure) were more problematic as customers experienced the same vulnerability as their banks and defaulted on their own liabilities (bank loans). Such was the fate of Smålands Enskilda Bank [Ref. 73] which had exposed itself to the local lumber trade which, after “the acute fall in timber prices which the

bank was totally unprepared for”, defaulted on their bank loans. Elsewhere, downright incompetence was observed, such as in the case of Mälareprovisernas Bank [Ref. 61]. The board of management was accused of being “guilty of a great deal of stupidity and cannot blame the ongoing crisis...more than 24 million SEK has gone to two goulash firms...and an arrogant madman, has squandered the money has been supported by the board (*Svenska Dagbladet*, 18 March 1922, p. 11).

Those banks who had lent against property with longer maturities were much less likely to suffer distress. To re-emphasize Fisher (1933), “debts due at once are more embarrassing than debts due years hence”. In line with these observations, our results suggest that shorter maturities on (both bank and customer) liabilities were a consistent determinant of bank distress during the period. This dual result on bank asset and liabilities suggest that the negative effects of debt deflation were pervasive at a societal level and were not restricted to affecting the banking sector alone. Those banks that had refrained from shortening maturity structures to finance their expansion were not as exposed, having avoided falling victim to the liability structures synonymous with the culminating phase of Minsky’s (1986) instability hypothesis. Though these survivor banks had to adopt restrictive practices for a certain period, their long-term positions strengthened (Schön, 2010, p. 253). Indeed, recent research has found that over the period 1921 to 1927, efficiency in the Swedish banking sector reached a highpoint over the period 1912-1938 (Karlsson et al., 2020).

In addition to the maturity profiles, exchange rate risk was very real over the period 1914-19 as the gold standard was abandoned during the First World War. Swedish commercial banks had never experienced a floating currency arrangement with their major trading partners and this element of the 1920s crisis has been largely overlooked. Despite Sweden’s wartime inflation exceeding that of the U.K.’s, the krona appreciated against most of its major trading partners (Figure 7).

<<FIGURE 7 HERE>>

However, this situation reversed after the War when belligerents prepared to restore convertibility. It is evident from the chart that there are two distinctive phases of the krona’s post war depreciation. The strengthening of the British pound and U.S. dollar represents the first phase. Even the German mark recovered a great deal at the beginning of 1918 with the promise of the spring offensive. The second phase of the weakening of the krona occurred after

the abortive attempt to return to the Scandinavian monetary union, as Denmark and Norway's currencies strengthened considerably against the Swedish krona after 1924. Indeed, the "violent" exchange rate fluctuations were cited as the main cause of failure for some banks in the biographical evidence [Ref. 63., 52].

Table 6 reports the magnitude of the swings and their periodization between peaks and troughs. While during the war, the Swedish exchange had strengthened by 34 per cent against its prewar rate with the British pound, over the course of the following two years it had fallen by 53 per cent from its peak value in 1917. In the space of six months, the German mark had strengthened by 61 per cent against its lowest trough in October 1917. The Norwegian krona's value had grown 93 per cent from its 1924 trough by the end of 1927. Any such swings, occurring in a relatively short period would have placed significant strain on banks that had borrowed heavily in foreign exchange during the wartime heyday of the Swedish krona. Our tests show that this feature was a predictor of distress over the whole and later sample of distress.

<<TABLE 6 HERE>>

Finally, we test whether other institutional culprits may have played a role in the demise of the distressed banks. First, using the biographical data we gathered from the construction of Appendix 1, we wish to test whether banks, which were involved in any reconstructions during the 1907, were more likely to experience subsequent distress in the 1920s crisis. We also test whether the contemporary backlash against mergers had some validity. Namely, we examine whether a bank's takeover behaviour played a role in subsequent demise, by considering the number of takeovers each bank engaged in prior to the crisis (1914-18).

We also consider banks' city of headquarters to gauge whether regional factors had explanatory power and we seek to model the geographical scope of banks' business as a potential determinant of distress. We are guided in this approach by anecdotal evidence from Appendix 1 where it was suggested that "the bulk of the troubled loans [Värmlands Enskilda Bank; Ref. 72] represented loans against shares as collateral to industries situated outside of Värmland's region" (*Dagens Nyheter*, 29 November 1922, p. 1). We also wish to consider the dramatic changes in the nature of banking that had transpired over the previous 15 years. In contrast to the scene in 1907, by the 1920s there were small banks with national business and large banks,

which restricted themselves to local business. Finally, we take the age of the bank into account as a possible explanatory variable.<sup>3</sup> Table 7 reports the results.

<<TABLE 7 HERE>>

There is limited evidence that younger banks tended to fail over the period as a whole and that the number of takeovers that a bank engaged in was positively related to its likelihood of experiencing subsequent distress (using 90 per cent confidence intervals). While these results do not share the statistical significance of the “financials” tested above, they do offer tentative support to contemporary concerns that the merger movement was reducing efficiency in banking and may have diluted local loan quality monitoring. Given that younger banks were more likely to fail, a lack of banking experience may have compounded this problem.

## **Conclusion**

In this paper, we have exploited a unique monetary disruption in economic history to add to the extensive early warning signal literature on banking crises (Demirgüç-Kunt, A., Detragiache, E 1998; Colvin et al., 2015; Postel Vinay, 2016; Grodecka et al., 2021). We draw on an exogenous shock to the Swedish banking system (1914-26) to uncover balance sheet weaknesses that made banks more vulnerable to demise when the monetary regime swung from double digit inflation to double digit deflation in a four-year interval. Our tests with respect to commercial bank assets investigate the fundamental view of banking crises, while our emphasis on maturity mismatches and liabilities consider the bank run theory of financial crises. The bank biographies presented in the Appendix [Ref. 1-75] allow us to consider additional institutional theories on the causes of banking crises.

In addition to developing an original series of distressed banks over the entire period using a biographical approach (Appendix 1), we have collected the relevant balance sheet data for the full universe of Swedish banks in order to distinguish the financial characteristics of survivor banks from distressed banks. In a recent survey of the literature, it was observed that banking crises are often preceded by prolonged periods of high credit growth and are often associated with large imbalances in balance sheets, such as maturity mismatches or exchange rate risk, that ultimately translate into credit risk for the banking sector (Laeven and Valencia, 2013). While the observation was related to 2007-9, it could equally have described the crisis of the

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<sup>3</sup> Tests were conducted on form of shareholder liability, but they showed no significance/zero predictive power.



1920s, despite the comparatively extreme changes in monetary conditions that characterized the latter event.

Over the period of interest (1914-26), wartime inflation was followed by an era of sustained deflation, which placed a considerable strain on both the Swedish banking system and the wider economy. The contractionary policy pursued by the Swedish authorities resulted in the krona reaching its pre-war parity to gold as early as 1922, two years before it officially re-adopted the gold standard in April 1924. Our question considers the extent to which individual banks that took advantage of the inflationary ‘boom’ during wartime were able to weather the change in monetary policy and trade conditions in the period after 1918. Which balance sheet characteristics *ex ante* determined the survival of extant banks to this external shock? While all banks experienced the highs and the lows of inflation and deflation, some survived while others failed. To answer this question, we use logit regressions (survival analysis) drawing on the aforementioned data.

Our findings suggest that in the deflationary environment of the immediate post war years, maturity mattered most. We observe that throughout the war, bank lending was increasingly funded from non-depositor sources with shortening maturities, including both domestic and foreign borrowing. At the end of the war, shorter maturity liabilities were especially vulnerable to deflation, as banks with higher shares of these had less time to adjust to creditor demands. While the role of non-core liabilities was not a significant factor behind individual bank’s distress, it represented a broader systematic problem of fragility (Minsky, 1986; Shin, 2011).

Likewise, bank *customers* who had borrowed on short maturities were vulnerable to falling prices as the real value of their debts rose in the short term, as described by Schön (2010). Consequently, shorter maturity bank assets, which in normal times are the more liquid variety of lending, evaporated as customer defaults materialised. This was not the case for loans with longer maturities, exemplified by survivor banks holding larger volumes of assets backed by real estate collateral. Such lending proved more resilient, despite interest rate rises in the shorter term. The dual finding of defaults on shorter term borrowing by both the public and the banks suggests that debt deflation was a pervasive feature of the entire Swedish economy and not limited to explaining the failures of the banking system alone. Even those banks that had more concentrated real estate lending, were more vulnerable to failure if their *liabilities* were concentrated in short maturities, as our tests convey.

The data we construct allow us to distinguish between various loan types. The lowest quality of loan collateral was “against name” (the borrower’s signature alone). Such “marginal lending” (Claessens et al. 2014) or “risk shifting” (Turner, 2014) was troubling to Irving Fisher (1933) as he anticipated that it was upon such “unsafe” loans that real interest rates would rise the sharpest. In turn, these would be amongst the most prominent culprit for causing bank demise in a period of debt deflation. Our testing corroborates this view. While the share of poorer quality loans increased, they did so as a growing wave of lending climbed ever higher. A key predictor of bank distress through the period was the magnitude by which banks had expanded their leverage (loans/equity) during the inflationary wartime boom (Schularick and Taylor, 2012). We observe the trend predicted by Fisher (1933) that these banks were more inclined to liquidate more aggressively in the “stampede” than their competitors did during the deflationary period and were subsequently more likely to fail.

Our study also exploits the uniqueness of Sweden’s monetary experience during the period of both an appreciating currency and a threefold rise in wartime prices. Our observation that non-core liabilities increased during the war (as a share of total bank liabilities) meant that banks borrowed from less traditional sources. The balance sheet data we construct allow us to isolate foreign borrowing in our tests. Wartime appreciation of the krona implied that it was initially cheaper to borrow in foreign currency. When Sweden’s trading partners began pursuing post war contractionary monetary policies to return their currencies to the gold standard, the value of Swedish bank debt abroad began increasing. We are able to observe contemporary evidence of this, as we report in the Appendix [c.f. Ref. 52]. Our tests give foreign borrowing a prominent role in explaining the bank failures of the 1920s, as subsequent research on the cause of financial crises have emphasized (Bordo, 2008; Bordo et al., 2010). Indeed, in our new dating of the financial crisis (1919-1926), we account for the two distinctive depreciations of the Swedish krona in the post war decade. More significantly, we find that the Swedish banking crisis of the 1920s was not as short lived as previously thought, but lingered on until 1926 following the dislocations of the international currency market and the unravelling of the Scandinavian monetary union.

Finally, we present tentative evidence that suggests that younger banks and those that engaged in more aggressive takeover strategies during the boom phase were more likely to succumb to failure during the crisis, lending credibility to the concerns of vocal contemporaries and some latter day policy makers (Carletti et al, 2002). Such intense competition for larger size in the

Swedish market, over a relatively short period of time, meant that internal controls such as auditing of loan quality and company valuations, likely suffered.

## Bibliography

- Acharya, V.V. and Viswanathan, S. (2011) "Leverage, Moral Hazard, and Liquidity" *Journal of Finance* Vol. 66, No 1, pp. 99-138
- Allen, F. and Gale, D. (2000) "Financial Contagion" *Journal of Political Economy* Vol. 108, No. 1 (February 2000), pp. 1-33 (33 pages)
- Benckert, R. (1976), *Benckerts Testamente. Konfidentiella Anteckningar Angående Bankinspektionens Verksamhet*
- BIS (2013), 'Basel III: The Liquidity Coverage Ratio and the liquidity risk monitoring tools', *Basel Committee on Banking Supervision: Bank of International Settlements*.
- Bohlin, J. (2010), 'From appreciation to depreciation – the exchange rate of the Swedish krona, 1913–2008', in *Historical Monetary and Financial Statistics for Sweden, Volume I: Exchange rates, prices, and wages, 1277–2008* (eds. Rodney Edvinsson, Tor Jacobson and Daniel Waldenström) Sveriges Riksbank and Ekerlids.
- Bordo, M.D. (2008) "Growing up to Financial Stability," *Economics - The Open-Access, Open-Assessment E-Journal*, Kiel Institute for the World Economy (IfW), vol. 2, pages 1-17.
- Bordo, M.D., Meissner, C.M. & Stuckler, D. (2010). "Foreign currency debt, financial crises and economic growth: A long-run view," *Journal of International Money and Finance*, Elsevier, vol. 29(4), pages 642-665
- Bordo, M.D., Redish, A. and Rockoff, H. (2015), Why Didn't Canada Have a Banking Crisis? *The Economic History Review*, 68: 218-243.
- Briones, I., & Rockoff, H.J. (2005). Do Economists Reach a Conclusion on Free-Banking Episodes? *Econ Journal Watch*, 2, 279-324.
- Broberg, O. (2006) *Konsten att skapa pengar. Aktiebolagens genombrott och finansiell modernisering kring sekelskiftet*. [The art of making money. The breakthrough of limited liability corporations and financial modernisation around the beginning of the 20<sup>th</sup> century] Dissertation. Meddelanden från Ekonomisk-historiska institutionen 95 Gothenburg University.
- Brunnermeier, M.K. and Pedersen, L.H. (2009) "Market Liquidity and Funding Liquidity" *The Review of Financial Studies*, Volume 22, No 6, pp. 2201–2238, <https://doi.org/10.1093/rfs/hhn098>
- Calomiris, C.W. (2007), 'Bank Failures in Theory and History: The Great Depression and other 'Contagious' Events, NBER Working Paper Series No. 13597.

- Calomiris, C.W., Mason, J.R., (2003). 'Fundamentals, panics, and bank distress during the depression.' *American Economic Review* 93 (5), 1615–1647.
- Carletti, E., Hartmann, P. and Spagnolo, G. (2002) "Implications of the Bank Merger Wave for Competition and Stability." Third Joint Central Bank Research Conference on Risk Measurement and Systemic Risk, Bank of International Settlements, March 7-8.
- Carlson, Mark (2005) "Causes of bank suspensions in the panic of 1893" *Explorations in Economic History* 42 pp. 56–80
- Carlson, Mark, Kris James Mitchener and Gary Richardson (2011) "Arresting Banking Panics: Federal Reserve Liquidity Provision and the Forgotten Panic of 1929" *Journal of Political Economy*, vol. 119, no. 5, pp. 889-924
- Claessens, Stijn, M. Ayhan Kose, Luc Laeven and Fabián Valencia Eds. (2014) *Financial Crises: Causes, Consequences, and Policy Responses*. IMF publications
- Colvin, C. L. (2018) "Organisational Determinants of Bank Resilience: Explaining the Performance of SME Banks in the Dutch Financial Crisis of the 1920s," *Business History Review* 92, no. 4: 661–90.
- Colvin, C. L., de Jong, A. & Fliers P. T. (2015) "Predicting the Past: Understanding the Causes of Bank Distress in the Netherlands in the 1920s," *Explorations in Economic History*, Vol 55. pp 97-121
- de Grauwe, P., Ji, Y. (2020), 'A tale of three depressions', VoxEU.org, 24 September.
- Demirgüç-Kunt, A., Detragiache, E., (1998), "The Determinants of Banking Crises in Developing and Developed Countries" *IMF Economic Review* 45, pp. 81-109
- Diamond, D.W & Dybvig, P.H. (1983) 'Bank Runs, Deposit Insurance, and Liquidity', *Journal of Political Economy*, vol. 91(3), pages 401-419, June
- Diamond, D.D. and Rajan, R.G. (2005) "Liquidity Shortages and Banking Crises" *Journal of Finance* Vol. 60, No 2, pp. 615-647
- Edvinsson, R. & Söderberg, J. (2010) "The evolution of Swedish consumer prices 1290-2008" in Edvinsson, Jacobson & Waldenström (Eds.) *Historical Monetary and Financial Statistics for Sweden. Exchange Rates, Prices, and Wages, 1277 – 2008* Ekerlids Förlag, Sveriges Riksbank. pp.412-452
- Eichengreen, B and K O'Rourke (2010), 'A tale of two depressions: What do the new data tell us? February 2010 update', VoxEU.org, 8 March.
- Fisher, I. (1933), 'The Debt Deflation Theory of Great Depressions' *Econometrica*, Vol. 1, No. 4, pp. 337-357
- Goldstein, I. and Razin, A. (2013) "Three Branches of Theories of Financial Crises" NBER WP No W18670
- Gorton, Gary B. and Ellis W. Tallman (2018), *Fighting Financial Crises Learning from the Past* University of Chicago Press.

- Grodecka, A., Kenny, S. and Ögren, A. (2021) “Predictors of bank distress: The 1907 crisis in Sweden” *Explorations in Economic History* 80.
- Grossman, R. (1994). The Shoe That Didn't Drop: Explaining Banking Stability During the Great Depression. *The Journal of Economic History*, 54(3), 654-682.
- Hahm, J.-H., Shin, H.S. and Shin, K. (2013), ‘Noncore Bank Liabilities and Financial Vulnerability.’ *Journal of Money, Credit and Banking*, 45: 3-36. <https://doi.org/10.1111/jmcb.12035>
- Hagberg, A. (2007), *Bankkrishanter: Aktörer, marknad och stat*. Akademisk avhandling, Handelshögskolan, Stockholm.
- Hagberg, A. and Jonung, L. (2009) How costly was the crisis in Finland and Sweden in Jonung, Kiander, & Vartia (Eds.) *The Great Financial Crisis in Finland and Sweden: The Nordic Experience of Financial Liberalization* Edward Elgar Publishing pp. 158-180
- Hickson, C. R., & Turner, J. D. (2004). Free banking and the stability of early joint-stock banking. *Cambridge Journal of Economics*, 28(6), 903–919
- Jalil, A. (2015), ‘A New History of Banking Panics in the United States, 1825-1929: Construction and Implications.’ *American Economic Journal: Macroeconomics*, 7 (3): pp. 295-330.
- Jorda, Ò., Schularick, M. and Taylor, A.M. (2013), When Credit Bites Back. *Journal of Money, Credit and Banking*, 45: 3-28. <https://doi.org/10.1111/jmcb.12069>
- Jungerhem, S. & Larsson, M. (2013). “Bank mergers in Sweden” In Andersson, H., Havila, V. & Nilsson, F. (Eds.) *Mergers and Acquisition. The Critical Role of Stakeholders*. Basingstoke, United Kingdom: Palgrave Macmillan
- Karlsson, L., Häggqvist, H. & Hedberg, P. (2020) “Market structure and efficiency in Swedish commercial banking, 1912–1938” *Scandinavian Economic History Review*. Online 3 June <https://doi.org/10.1080/03585522.2020.1772359>
- Kenny, S. and Ögren, A. (2021), ‘Unlimiting Unlimited Liability: Legal Equality for Swedish Banks with Alternative Shareholder Liability Regimes, 1897-1903’ in *Business History Review*, 95 (2), pp. 193-218
- Kenny, S and Turner, J.D., (2020) ‘Wildcat Bankers or Political Failure? The Irish Financial Pantomime, 1797-1826’, *European Review of Economic History* 24 (3), pp. 522-577
- Kenny, S., Lennard, J., Turner, J.D., (2020), ‘The macroeconomic effects of banking crises: evidence from the United Kingdom, 1750–1938’ , *Explorations in Economic History* (forthcoming), <https://doi.org/10.1016/j.eeh.2020.101357>
- Laeven, L. and Valencia, F. (2013), ‘Resolution of Banking Crises’ in *Handbook of Safeguarding Global Financial Stability: Political, Social, Cultural, and Economic Theories and Models* edited by Caprio, G, pp 231-258. Elsevier. New York.

- Lennard & Ögren (2014) “The Central Banks of a Belligerent and Neutral: The Bank of England and the Swedish Riksbank during the Great War” Unpublished paper presented at Banque de France 13 November 2014
- Lönnborg, Ögren & Rafferty (2011) “Banks and Swedish financial crises in the 1920s and 1930s” *Business History* 53 pp. 230-248
- Minsky, H. (1986) *Stabilizing an Unstable Economy*, Yale University Press, Connecticut.
- Minsky, H. (1980), ‘Finance and Profits: The Changing Nature of American Business Cycles’ reprinted in *Can ‘It’ Happen Again? Essays on Instability and Finance*. Sharpe Inc. New York [1982].
- Minsky, H. (1970), ‘Financial Instability Revisited: The Economics of Disaster’ reprinted in *Can ‘It’ Happen Again? Essays on Instability and Finance*. Sharpe Inc. New York [1982].
- Ögren, A. (2018) Banking Crises and Lender of Last Resort in Theory and Practice in Swedish History, 1850–2010 in Rockoff, H. & Suto, I. (Eds.) *Coping with Financial Crises* Springer Nature Singapore, pp. 47-76
- Ögren, A. (2021) “The political economy of banking regulation: interest groups and rational choice in the forming of the Swedish banking system, 1822 – 1921” *Business History* **63:2** pp. 271-291 <https://doi.org/10.1080/00076791.2018.1564281>
- Ögren, A. & Trautwein, H-M. (2022) “Central Bank Cooperation and Lending of Last Resort in the Scandinavian Monetary Union” *Economic History Yearbook/Jahrb. f. Wirtschaftsg.* **63:2**, pp. 433–494 <https://doi.org/10.1515/jbwg-2022-0016>
- Postel-Vinay, N., 2016. ‘What caused Chicago bank failures in the Great Depression? A look at the 1920s. *Journal of Economic History* 76 (02), 478–519
- Quinn, W. and Turner, J.D. (2020) *Boom and Bust: A Global History of Financial Bubbles*. Cambridge University Press.
- Reinhart, C. and Rogoff, K. (2009), *This Time is Different: Eight Centuries of Financial Folly*: Princeton University Press.
- Uppgifter om Bankerna* (1913-27)
- Schön, L. (2010), *Sweden’s Road to Modernity: An Economic History*: SNS Förlag, Stockholm
- Schön, L. & O. Krantz (2015), "New Swedish Historical National Accounts since the 16th Century in Constant and Current Prices." *Lund Papers in Economic History* 140, Lund University
- Schularick, M. & Taylor, M.A. (2012) “Credit Booms Gone Bust: Monetary Policy, Leverage Cycles, and Financial Crises, 1870-2008” *American Economic Review* Vol 102, No2, pp. 1029-61
- SFS (Swedish legal codes) 1911:74, 1917:199, SFS 1920:210;

- Shin, H.S. (2011), 'Macroprudential Policies beyond Basel III', Bank of International Settlements (BIS Papers No. 60).
- Shin, H.S. (2009) "Reflections on Northern Rock: The Bank Run That Heralded the Global Financial Crisis." *Journal of Economic Perspectives*, 23 (1): 101-19.
- Söderlund, E. (1978). *Skandinaviska banken i det svenska bankväsendets historia 1914–1939* [The Scandinavian bank within the history of the Swedish bank market 1914–1939]. Uppsala: Norstedt.
- Statistics Sweden. (1913–26). *Statistiska meddelanden: Uppgifter om bankerna* [Statistical messages: Information about the banks]. Stockholm: Statistics Sweden.
- Sveriges Riksbank (1931) "Statistiska tabeller" [Statistical tables] in *Sveriges Riksbank 1668-1924. Bankens tillkomst och verksamhet. Part V*. Norstedts. Stockholm, Sweden.
- Turner, J.D. (2014), *Banking in Crisis: The Rise and Fall of British Banking Stability, 1800 to the Present*. Cambridge University Press, Cambridge.
- Wheelock, D.C. and Wilson, P.W. (1995) Explaining Bank Failures: Deposit Insurance, Regulation, and Efficiency *The Review of Economics and Statistics* Vol. 77, No 4, pp. 689-700
- Wheelock, D.C. and Wilson, P.W. (2000) Why Do Banks Disappear? The Determinants of U.S. Bank Failures and Acquisitions *The Review of Economics and Statistics* Vol. 82, No 1, pp. 127-138

*Table 1: Real Interest Rates in Sweden, 1913-26*

<i>Period</i>	<i>Discount rate (annual average)</i>	<i>Inflation Rate</i>	<i>Real Discount Rate</i>
1913	5.5	1.1	4.4
1914	4.2	1.3	2.9
1915	5.5	14.9	-9.4
1916	5.2	13.0	-7.8
1917	5.7	26.1	-20.5
1918	6.9	46.9	-40.0
1919	6.3	10.4	-4.0
1920	6.9	1.9	5.0
1921	6.5	-18.4	24.9
1922	4.9	-16.7	21.6
1923	4.6	-5.4	10.0
1924	5.5	0	5.5
1925	5.1	1.7	3.4
1926	4.5	-3.4	7.9

*Sources: Inflation rate is from Edvinsson and Söderberg (2012); Discount rate is calculated as the annual average for the Riksbank's discounting of bills of exchange up to three months and is from Sveriges Riksbank (1931) pp. 137-138 and Sammandrag af Bankernas Uppgifter 1924 – 1926. Rounding may affect some figures.*



Table 2: Summary Statistics (average ratios between Non-Distressed and Distressed Banks)

	Non-distressed banks N=30			Distressed banks N=19			Test of differences in means t-value
Variables	Medium	Mean	St. dev.	Medium	Mean	St. dev.	
Asset composition							
Total asset (log)	16.70	17.06	1.66	17.90	17.78	1.84	-1.40
Total loan to total asset %	112.03	113.76	14.07	109.30	113.15	17.30	0.15
Capital to Asset ratio %	19.15	21.47	10.20	16.16	25.31	17.40	-1.00
Liquidity and Maturity (all in %)							
Cash ratio	1.42	1.44	0.66	1.56	1.79	1.04	-1.45
Liquidity ratio	1.71	1.95	1.12	1.93	2.61	1.58	-1.7*
Maturity Matching	20.92	22.87	9.84	37.94	37.80	24.16	-3.05***
Reserve and Disposition Fund ratio	33.67	30.43	17.84	32.25	29.11	23.04	0.20
Long-term Loan ratio	301.29	294.65	89.42	318.57	266.49	117.73	0.95
Short-term Loan ratio	260.85	254.04	104.16	294.35	271.18	118.68	-0.55
Risks (all in %)							
Loan on name ratio	18.52	18.49	8.12	20.91	23.98	14.47	-1.7*
Foreign Asset ratio	0.27	3.10	5.59	5.75	5.89	6.31	-1.60
Foreign liability ratio	0.00	0.42	1.31	0.17	1.70	3.03	-2.05**
Shares and share-backed loans to total asset	23.00	25.06	11.55	20.16	23.38	10.12	0.50
Property-backed loans to total loans	11.80	14.16	14.43	8.16	8.25	5.25	1.7*
Property-backed loans to total assets	12.46	15.35	12.24	8.36	9.21	6.37	2**
Commercial bills to total loans	22.33	20.64	6.98	21.50	21.84	8.35	-0.55
Commercial bills to total assets	25.81	24.39	10.44	23.63	26.10	13.84	-0.50
Liability structure (all in %)							
Deposits to total liabilities	91.24	88.01	12.73	86.70	85.67	7.71	0.70
Short-term deposits to total deposits	17.99	20.69	10.38	30.22	29.30	14.23	-2.45**
Short-term deposits to total liabilities	15.16	17.94	9.33	23.33	24.88	12.38	-2.25**
Long-term deposits to total deposits	82.01	79.31	10.38	69.78	70.70	14.23	2.45**
Long-term deposits to total liabilities	73.31	70.06	14.78	60.88	60.79	15.44	2.1**
Short-term borrowings to total liabilities	0.97	1.96	2.63	1.05	2.51	3.56	-0.60
Long-term borrowings to total liabilities	1.28	4.65	12.78	4.20	3.55	3.25	0.35

Note: Significance levels for the two-tailed t-statistics are indicated as follows: \*  $p < 0.10$ , \*\*  $p < 0.05$ ,

\*\*\*  $p < 0.01$ . Source: See Text.

*Table 3: Summary Statistics (Changes in Ratios between Non-Distressed and Distressed Banks between 1914 and Nov.1918)*

Variables	Non-distressed banks N=21			Distressed banks N=6			Test of differences in means t-value
	Medium	Mean	St. dev.	Medium	Mean	St. dev.	
Total loan to total asset	-6.09	-6.89	7.21	-0.47	-0.03	6.70	-2.1**
Capital to Asset ratio	-2.95	-4.34	5.55	-4.72	-4.24	5.39	-0.05
Total loan to total equity	97.83	79.06	144.43	22.24	41.68	56.52	-1.75*
Cash ratio	0.03	-0.01	0.43	0.08	0.08	0.52	-0.45
Liquidity ratio	-0.03	-0.11	0.57	0.07	-0.04	0.60	-0.25
Maturity Matching	6.91	8.83	9.86	13.63	19.91	17.83	-2*
Reserve and Disposition Fund ratio	5.24	5.45	4.11	5.97	4.63	5.67	0.40
Long-term Loan ratio	76.25	64.69	73.61	38.41	29.88	102.78	0.95
Short-term Loan ratio	6.71	2.68	92.91	86.44	141.00	141.39	-2.85***
Loan on name ratio	-2.87	-4.58	8.49	2.65	1.70	2.84	-1.75*
Foreign Asset ratio	0.00	1.83	4.24	2.43	5.96	9.94	-1.55
Foreign liability ratio	0.00	-0.15	1.20	0.00	0.26	3.62	-0.45
Shares and share-backed loans to total asset	7.32	9.07	10.24	4.57	4.68	11.05	0.90
Property-backed loans to total loans	-7.40	-8.17	4.62	-16.80	-17.69	5.39	4.3***
Property-backed loans to total assets	-11.19	-11.00	5.91	-18.76	-19.68	5.52	3.2***
Commercial bills to total loans	-2.44	-3.12	3.81	1.67	2.91	2.90	-3.6***
Commercial bills to total assets	-2.95	-5.37	6.34	1.76	3.48	4.43	-3.2***
Deposits to total liabilities	-0.32	2.40	12.65	-2.92	-4.93	9.94	1.30
Short-term deposits to total deposits	6.94	7.16	7.40	7.08	12.47	11.41	-1.35
Short-term deposits to total liabilities	6.48	6.32	6.15	7.35	9.95	8.15	-1.20
Long-term deposits to total deposits	-6.94	-7.16	7.40	-7.08	-12.47	11.41	1.35
Long-term deposits to total liabilities	-4.95	-3.92	13.14	-6.94	-14.88	16.03	1.7*
Short-term borrowings to total liabilities	0.00	-2.34	10.84	0.00	0.01	4.06	-0.50
Long-term borrowings to total liabilities	-1.67	-2.45	4.74	0.00	0.49	4.81	-1.35

Note: 1. Significance levels for the two-tailed t-statistics are indicated as follows: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

2. We exclude the banks that acquired other banks between 1914 and Nov. 1918

Table 4: Variables Used in Logistic Regressions

Variables	Unit	Description
<b><i>Asset Composition</i></b>		
Capital to asset ratio	%	Paid up capital and reserves/total assets
Total Loans/Total Assets	%	Portfolio Risk (Share of Lending in Assets)
Cash ratio	%	Cash reserves/total assets
Maturity matching	%	Short-term deposits/long-term loans
<b><i>Risks</i></b>		
Loan on name ratio	%	Loan against name collateral/total assets
Foreign Liability Ratio	%	Deposits and Borrowing in Foreign Currency/Liabilities
Share ratio	%	Shares and share-backed loans/total assets
<b><i>Changes of ratios</i></b>		
Changes of loan-to-equity		Changes of loan-to-equity between Jan.1914 and Nov.1918
Changes of Loan on name ratio		Changes of Loan on name ratio between Jan.1914 and Nov.1918
Changes of Property loan ratio		Changes of Property-backed loans as a share of total loans between Jan.1914 and Nov.1918

Source: *Uppgifter om bankerna*. Note: Liabilities net of equity.

Table 5: Logistic Regression Outcomes (Financials)

Variable	Asset and Liquidity			Risks			Changes between Jan.1914 and Nov.1918		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Whole period distress	Early distress	Late distress	Whole period distress	Early distress	Late distress	Whole period distress	Early distress	Late distress
Total loans to total assets	-0.002 (0.02)	-0.024 (0.03)	0.026 (0.04)						
Capital to Asset ratio	0.02 (0.02)	0.022 (0.02)	0.027 (0.03)						
Cash ratio	0.15 (0.42)	0.095 (0.44)	0.062 (0.74)						
Maturity Matching	0.056* (0.03)	0.028 (0.02)	0.115** (0.05)						
Loan on name ratio				0.069* (0.04)	-0.027 (0.04)	0.168** (0.08)			
Foreign liability ratio				0.379** (0.19)	0.072 (0.15)	0.466** (0.21)			
Share ratio				0.023 (0.03)	0.013 (0.03)	0.062 (0.07)			
Change of Loan-to-equity							0.006* (0.00)	0.001 (0.00)	0.013* (0.01)
Change of Loan on name ratio							0.181* (0.09)	0.13 (0.10)	0.252 (0.16)
Change of Property loan ratio							-0.252** (0.13)	-0.356** (0.15)	-0.296 (0.26)
Constant	-2.556 (-0.92)	0.363 (0.12)	0.363 (0.12)	-2.848* (-1.88)	-1.108 (-0.75)	-7.489** (-2.06)	-4.471** (1.84)	-5.944*** (2.18)	-7.511* (4.19)
pseudo-R squared	0.1419	0.0464	0.3556	0.1309	0.0242	0.3765	0.3469	0.3595	0.4000
aic	66.15	59.77	35.21	64.87	58.92	32.39	38.96	31.25	24.43
N	49	49	38	49	49	38	38	38	31

Note: \* p<0.10, \*\* p<0.05, \*\*\* p<0.01. Standard error in parentheses; Distress in the whole period means distress between Dec.1918 and Dec.1927; Early distress is distress between Dec. 1918 and Dec. 1922; Late distress is distress between Jan. 1923 and Dec.1927; Changes refer to absolute growth in variables since 1914.

*Table 6: Absolute changes in the Swedish exchange rate against Trading Partners (1913-27)*

	USD	GBP	GER	NOR	DEN
SEK Appreciation	+32%	+34%	+58%	+49%	+40%
Period	(Jan 1913-Nov 1917)	(Jan 1913-Nov 1917)	(Jan 1913-Oct 1917)	(Jan 1913-Feb 1924)	(Jan 1913-Mar 1924)
SEK Depreciation	-113%	-53%	-61%	-93%	-67%
Period	(Nov 1917-Feb 1920)	(Nov 1917-Feb 1920)	(Oct 1917-Mar 1918)	(Feb 1924-Feb 1927)	(Mar 1924-Aug 1927)

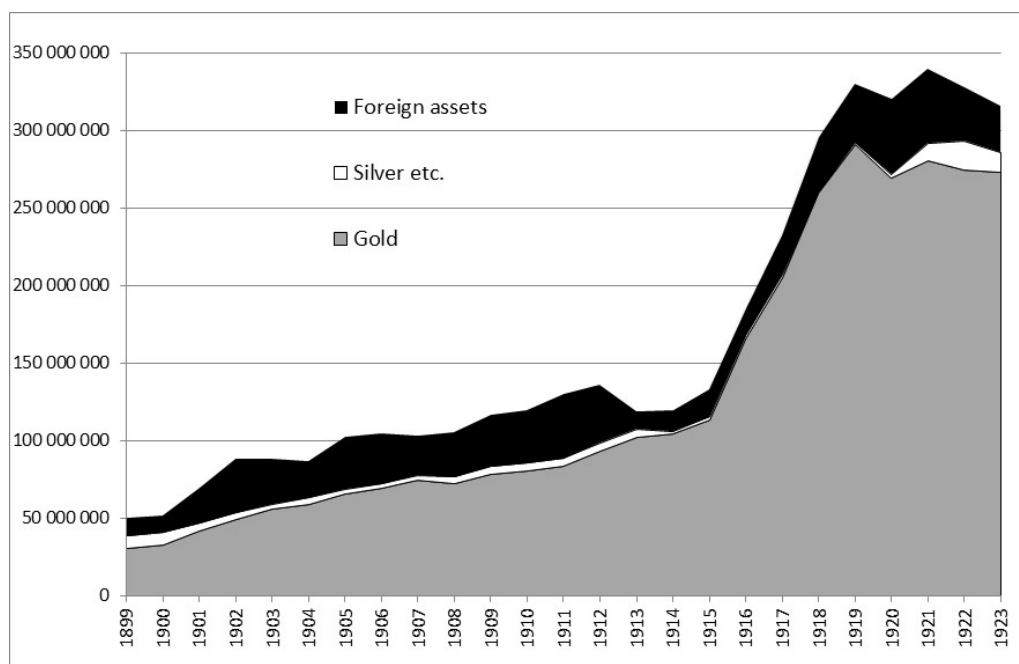
*Source: Bohlin (2010). Notes: Germany not considered after March 1918 due to hyperinflation. Authors' calculations.*

Table 7: Tests for Institutional Explanations of Distress (1913-26)

Variable	Whole period distress	Early distress	Late distress
	(10)	(11)	(12)
Business scope	0.298 (0.85)	0.899 (1.20)	-0.225 (1.09)
City of headquarter	1.015 (0.79)	1.471 (0.91)	0.451 (1.17)
Number of take-over (1914-Nov.1918)	0.853*	0.244	1.208*
	(0.47)	(0.36)	(0.64)
ln(age)	-0.426* (0.22)	-0.3 (0.23)	-0.509* (0.29)
Links to 1907 crisis	1.544 (1.22)	1.399 (1.42)	1.132 (1.57)
Constant	0.421 (1.16)	-1.491 -1.44	0.384 (1.43)
pseudo-R squared	0.1941	0.1600	0.1879
aic	64.73942	55.8385	43.76313
N	49	49	38

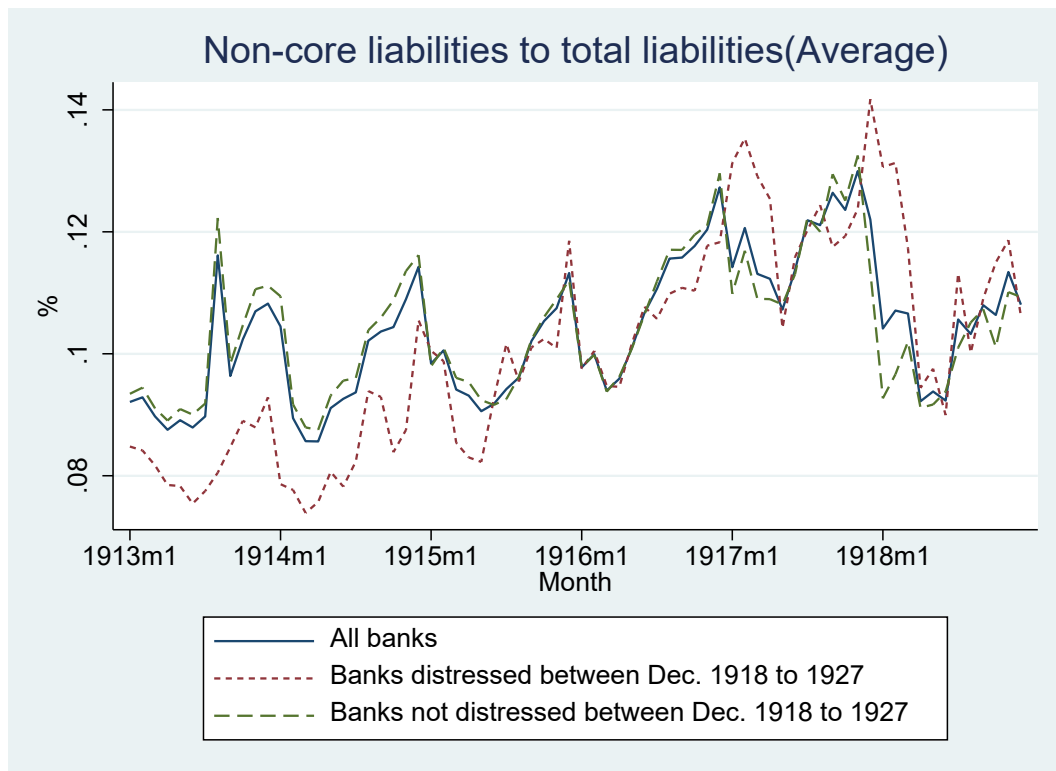
Note: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Standard error in parentheses;  
Business Scope: 1 "Large regional/national bank" 0 "small local bank";  
City of headquarter (HQ): 1 "HQ in Stockholm/Gothenburg/Malmö" 0 "HQ in small city";  
Links to 1907 crisis: 1 "Involved in 1907 crisis" 0 "not involved in 1907 crisis".

*Figure 1: The Swedish Central Bank (the Riksbank) Foreign Exchange Reserves, 1899 – 1923. Million SEK.*



Source: Sveriges Riksbank (1931), pp. 54 – 71

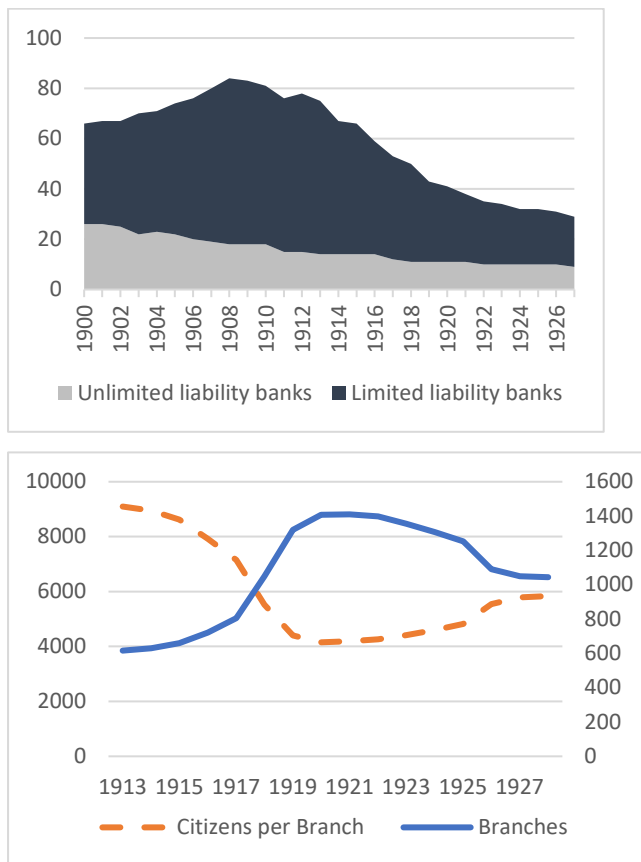
Figure 2: The Share of Non-Core Liabilities During World War I



Source: Uppgifter om Bankerna 1913-1919. Note: Authors' Calculations. Total Liabilities minus equity minus deposits.

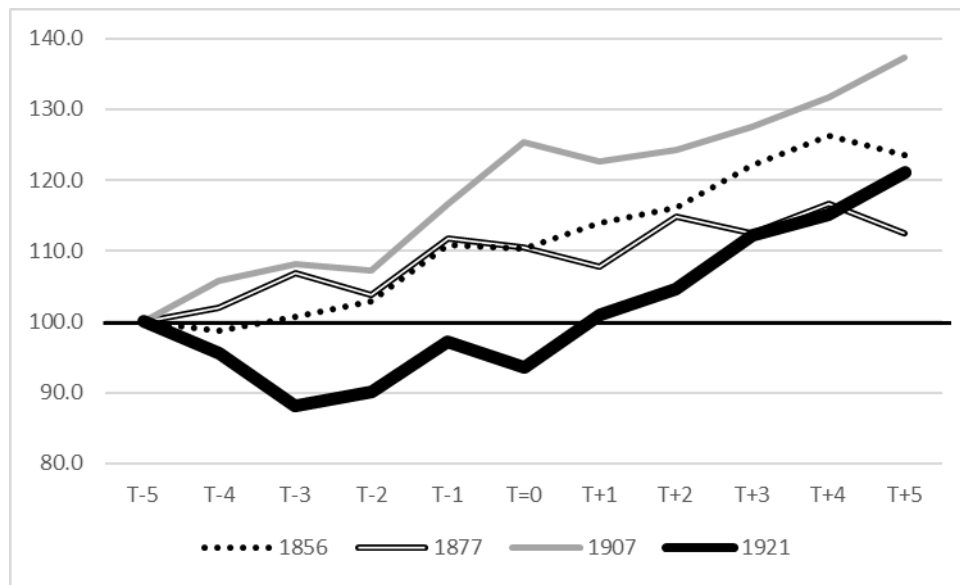


Figure 3: The Swedish Commercial Bank Population (LHS), Branches and Financial Access (RHS)



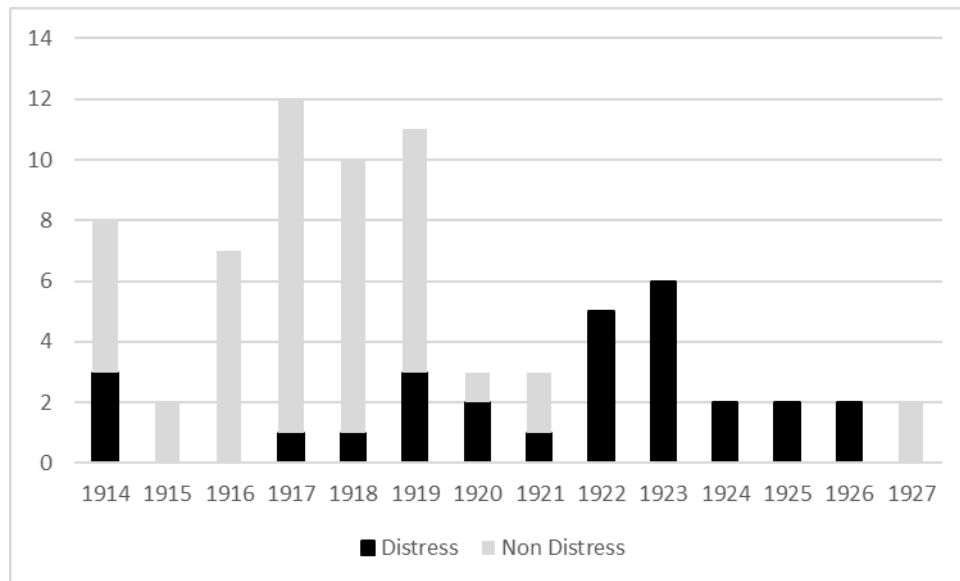
Source: *Sammandrag av bankernas uppgifter; Uppgifter om banker*. Note: Branches (rhs) and Citizens per Branch (lhs) in graph ii.

Figure 4: Real GDP during four major crises



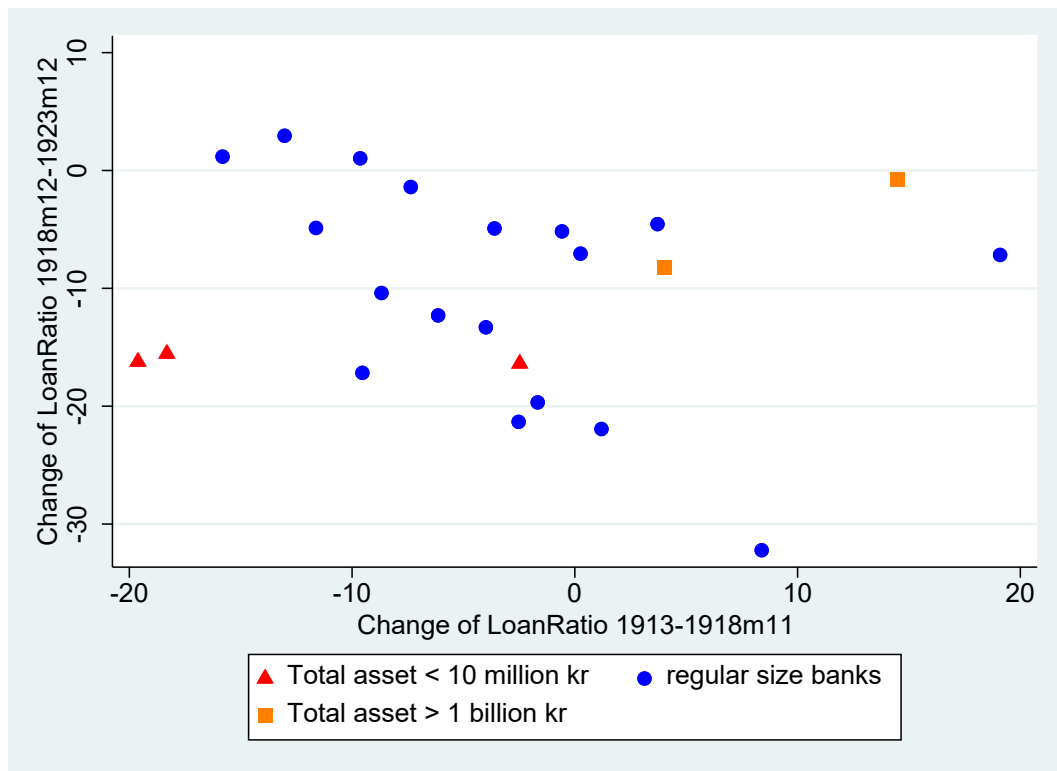
Source: Schön and Krantz (2015). Note; T=0 refers to the year of financial crisis. Real GDP indexed by authors.

*Figure 5: Classification of Swedish Commercial Bank Exits (1914-27)*



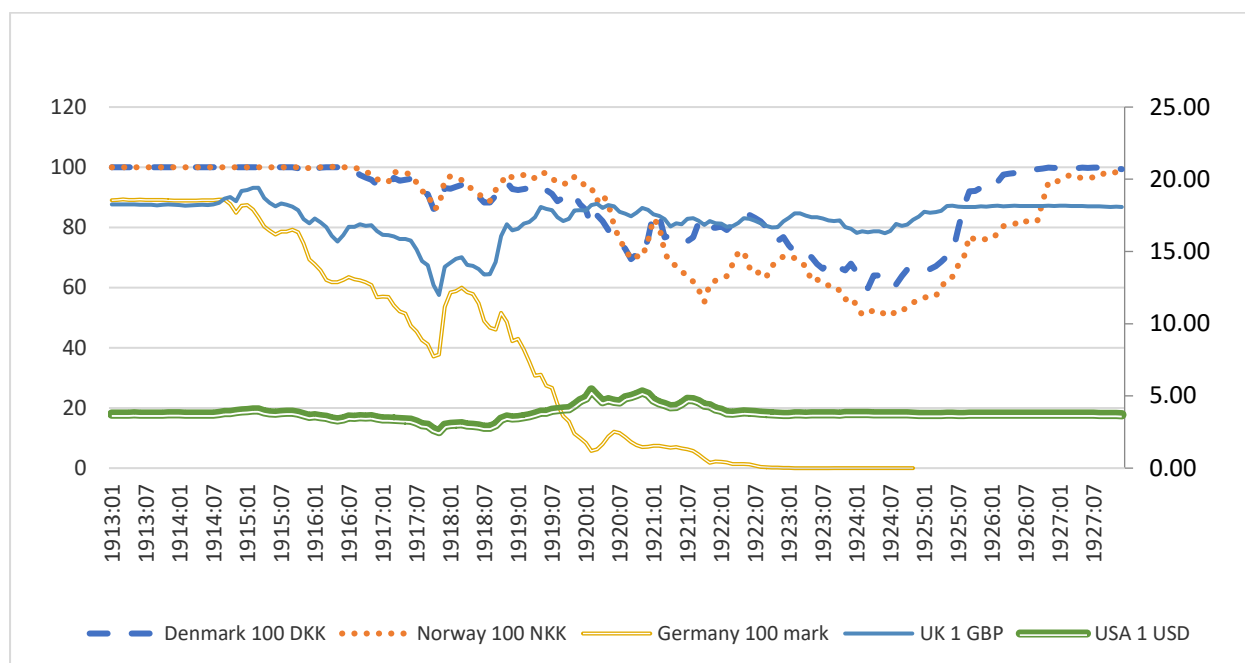
Source: Appendix 1.

Figure 6: 'The Stampede to Liquidate' - Growth in lending/assets 1913-18 v 1919-1923



Source: Uppgifter om Bankerna. Note: Authors' Calculations. Sample includes only those banks that existed during entire interval.

Figure 7: Exchange Rates in SEK, 1913-27



Source: Bohlin (2010). Note: GBP and USD on right axis.

## **Appendix 1: Swedish Bank Exits, 1914-26**

This appendix presents short biographies of the 75 Swedish commercial banks that exit the bank population over the period 1914-26.

Mirroring the approaches adopted by Kenny and Turner (2020), Grodecka et al (2021) and Kenny et al (2021), we are concerned with determining the nature of exit of each commercial bank in the sample period. This is especially important in the first three decades of the twentieth century in Sweden, as its banking system was characterised by a wave of merger activity. Mergers and acquisitions will reduce the number of banks in existence, but if they are motivated by crisis considerations, they ought to be accounted for as distressed exits. Similarly, if a bank simply closes and disappears from official registers without note, we wish to account for the reasons behind the cessation of its activity.

To do this, we employ an array of primary and secondary sources to investigate the underlying causes of bank exits. Our point of departure is the official registry of banks, *Uppgifter om Banker*. On occasion, when banks on the previous year's list disappeared, their name would remain on the record for some months with a footnote explaining whether they were in liquidation or taken over by another existing bank. While this information, when recorded, was useful, for our purposes it offered little more than pinpointing the month in which the relevant bank ceased activity. No reasons were ever provided for acquisitions. However, in the wake of the 1920s crisis and the subsequent establishment of *Kreditkassan*, reference was made to bank law codes §91/§92 and §208/§209 (1911 Bank Act) which stipulated that when limited and unlimited liability banks' capital declined by more than 10 per cent, they were to notify auditors and call an extraordinary shareholder meeting immediately. If the actions agreed upon to restore the deficit had not been undertaken within a period of three months, the bank in question would be legally obliged to liquidate.

In addition, we drew upon subsequent bank histories such as those produced by Ernst Söderlund (1964; 1978) and Oskar Broberg (2003). In most cases however, we drew upon the national broadsheet newspapers as the most helpful guides. The newspaper archives of *Dagens Nyheter* and *Svenska Dagbladet* were used not only to crosscheck official entries but contained important real-time information on the reasons banks were considering mergers as well as the causes of bank closures and failures. They were also a useful guide to gaging the sentiment of authorities to the merger movement and the public at large, particularly in those communities with smaller local banks that were submerged into larger national banking units.

Once this work was completed, the banks were grouped into distress (D) and non-distress (ND) exits for the data analysis in the main text. While only those banks that failed after WW1 are considered for the crisis period, the exercise provided us with important comparative information on those banks that expanded relatively aggressively with respect to mergers and takeovers during the boom period, as well as revealing the ages of the banks in the study. We were also able to identify whether those banks that were distressed in the post war crisis had previous difficulties during the 1907 crisis through the work of Grodecka et al (2021) and by examining the record of the Bank Inspectorate at that time (Benckert, 1976).

The result of our efforts is presented in the following pages and the banks are coded with reference to table A2:1. These appear in the order that they are listed in the official registry (exit date). Banks 70 to 76 were those that continued operating as a result of capital injections from kreditkassan and continued to appear in *Uppgifter om Banker*.

**Table A:1 Bank Exits 1914-26**

Bank ID	Name	Est	Exit	D/ND	Acquired by	Note
1	Aktiebolaget Gäfleborgs handelsbank	06/1905	04/1914	D	Norrlandsbanken	
2	Aktiebolaget Ljusdals folkbank	01/1899	04/1914	ND	Sundsvalls Enskilda Bank	
3	Aktiebolaget Avesta folkbank	02/1904	05/1914	ND	Upplands Enskilda Bank	
4	Aktiebolaget Eksjö folkbank	12/1898	05/1914	D	Göteborgs Handelsbank	
5	Aktiebolaget Filipstads bank	11/1902	05/1914	ND	Sydsvenska Kredit AB	
6	Aktiebolaget föreningsbanken i Stockholm	04/1897	08/1914	ND	Mälareprovisernas Bank	
7	Bankaktiebolaget norra Sverige	09/1908	09/1914	ND	Stockholms Handelsbank	
8	Aktiebolaget Stockholms folkbank	09/1906	11/1914	D		Liquidated
9	Aktiebolaget Hammerdals folkbank	09/1908	02/1915	ND	Sundsvalls Handelsbank	
10	Aktiebolaget Söderhamns folkbank	10/1899	06/1915	ND	Norrlandsbanken	
11	Aktiebolaget Bergsjö folkbank	06/1902	03/1916	ND	Sundsvalls Handelsbank	
12	Aktiebolaget Bergslagsbanken	09/1896	05/1916	ND	Mälareprovisernas Bank	
13	Aktiebolaget Herrljunga lantmannabank	07/1909	05/1916	ND	Borås Enskilda Bank	
14	Aktiebolaget Varbergs bank	01/1907	05/1916	ND	Smålands Enskilda Bank	
15	Mellersta Hallands bankaktiebolag	07/1900	06/1916	ND	Smålands Enskilda Bank	
16	Aktiebolaget Jämtlands kreditbank	06/1900	07/1916	ND	Stockholms Handelsbank	
17	Aktiebolaget Kristdala folkbank	08/1906	11/1916	ND		Closed
18	Aktiebolaget Hudiksvalls bank	05/1889	04/1917	ND	Sundsvalls Enskilda Bank	
19	Aktiebolaget Arbrå folkbank	09/1908	05/1917	D	Stockholms Handelsbank	
20	Aktiebolaget Sundsvall handelsbank	06/1874	05/1917	ND	Upplands Enskilda Bank	
21	Borås enskilda bank	11/1865	05/1917	ND	Bank AB Södra Sverige	
22	Hälsinglands Enskilda Bank	05/1873	05/1917	ND	Mälareprovisernas Bank	
23	Aktiebolaget Marks bank	01/1915	06/1917	ND	Göteborgs Bank	
24	Aktiebolaget Stockholms diskontobank	11/1898	06/1917	ND	Göteborgs Bank	
25	Aktiebolaget Hallsbergs folkbank	11/1907	08/1917	ND	Mälareprovisernas Bank	
26	Aktiebolaget Östersunds Diskontbank	08/1900	09/1917	ND	Norrlandsbanken	
27	Aktiebolaget Norrlandsbanken	06/1911	10/1917	ND	Stockholms Handelsbank	
28	Aktiebolaget Nordiska Kreditbanken	05/1896	11/1917	ND	Sveriges Privata Centralbank	
29	Aktiebolaget Sveriges privata centralbank	09/1912	11/1917	ND	Skandinaviska Banken	
30	Aktiebolaget arbetareringens bank	10/1883	03/1918	ND	Köpmannabanken	Conversion
31	Aktiebolaget Malmö folkbank	05/1905	04/1918	ND	Industribanken	
32	Aktiebolaget Roslagens folkbank	10/1909	04/1918	ND	Industribanken	
33	Bankaktiebolaget Kullen	10/1907	04/1918	ND	Industribanken	
34	Aktiebolaget Blekinge bank	09/1872	05/1918	ND	Svenska Lantmännens Bank	
35	Aktiebolaget Halmstads folkbank	01/1906	05/1918	ND	Svenska Lantmännens Bank	
36	Örebro enskilda bank	04/1837	05/1918	ND	Skandinaviska Banken	
37	Aktiebolaget tjänstemannabanken	11/1899	08/1918	ND	Kopparbergs Banken	
38	Aktiebolaget Vara bank	01/1908	10/1918	ND	Enskilda Banken i Vänersborg	
39	Aktiebolaget Privatbanken	01/1913	01/1919	D		Liquidated
40	Aktiebolaget Gävleborgs folkbank	10/1905	07/1919	ND	Upplands Enskilda Bank	



41	Aktiebolaget Dalarnes Folkbank	12/1903	08/1919	ND	Mälareprovisernas Bank	
	Aktiebolaget Medelpads					
42	Lantmannabank	03/1906	08/1919	ND	Mälareprovisernas Bank	
	Aktiebolaget Skånska					
43	Handelsbanken	03/1896	09/1919	ND	Skandinaviska Banken	
44	Aktiebolaget Provinsbanken	07/1919	10/1919	D	Mälareprovisernas Bank	
45	Bankaktiebolaget södra Sverige	12/1901	10/1919	ND	Stockholms Handelsbank	
46	Stockholms Handelsbanken	05/1871	10/1919	ND	Svenska Handelsbanken Enskilda Banken i	Conversion
					Vänersborg	
47	Aktiebolaget Borås folkbank	04/1907	11/1919	ND	Vänersborg	
48	Aktiebolaget Industribanken	06/1917	11/1919	D	Göteborgs Handelsbank Enskilda Banken i	
					Vänersborg	
49	Aktiebolaget Värmlands folkbank	05/1917	11/1919	ND	Vänersborg	
	Aktiebolaget Hudiksvalls					
50	kreditbank	07/1910	04/1920	ND	Upplands Enskilda Bank	
51	Bankaktiebolaget mellersta Sverige	12/1918	05/1918	D	Östergötlands Enskilda Bank	
52	Aktiebolaget Nya Banken	10/1912	05/1920	D	Bank AB Norden	Reconstructed
53	Aktiebolaget Köpmannabanken	03/1918	12/1920	D		Liquidated
54	Aktiebolaget Nylands folkbank	04/1903	04/1921	ND	Sundsvalls Enskilda Bank	
55	Aktiebolaget Örebroläns bank	04/1918	06/1921	D	Göteborgs Bank	
	Aktiebolaget Ångermanlands					
56	Folkbank	01/1912	08/1921	ND	Svenska Handelsbanken	
57	Aktiebolaget Affärsbanken	11/1917	02/1922	D	Södermanlands Enskilda Bank	
58	Kopparbergs Enskilda Bank	11/1835	06/1922	D	Göteborgs Bank	
59	Sydsvenska Kreditaktiebolaget	08/1896	06/1922	D	Kreditkassan	Reconstructed
60	Aktiebolaget Bollnäs folkbank	10/1894	11/1922	D	Sundsvalls Enskilda Bank	
	Aktiebolaget Mälareprovinsernas					
61	bank	01/1847	12/1922	D	Mälarebanken	Reconstructed
62	Aktiebolaget Jämtlandsbanken	11/1917	03/1923	D	Jämtlands Folkbank	
	Aktiebolaget Svenska lantmännens					
63	bank	05/1917	03/1923	D	Kreditkassan	Liquidated
	Aktiebolaget Hallands					
64	lantmannabank	05/1917	01/1924	D	Nordiska Handelsbanken	
	Aktiebolaget Övre Västerdalarnes					
65	bank	05/1918	11/1924	D	Göteborgs Bank	
	Aktiebolaget Nordiska					
66	handelsbanken	12/1919	12/1925	D	Kreditkassan	Reconstructed
67	Aktiebolaget Mälarebanken	12/1922	04/1926	D	Svenska Handelsbanken	
68	Bankaktiebolaget Norden	05/1920	04/1927	ND	Södermanlands Enskilda Bank	
69	Norrköpings Enskilda Bank	09/1856	03/1927	ND	Östergötlands Enskilda Bank	
70	Aktiebolaget Jämtlands folkbank	01/1874	02/1926	D	Kreditkassan	Reconstructed
	Aktiebolaget Svenska					
71	handelsbanken	10/1919	01/1923	D	Kreditkassan	Reconstructed
72	Värmlands Enskilda Bank	05/1832	01/1923	D	Kreditkassan	Reconstructed
73	Smålands Enskilda Bank	05/1837	01/1923	D	Kreditkassan	Reconstructed
74	Aktiebolaget Bohusbanken	03/1919	01/1923	D	Kreditkassan	Reconstructed
75	Skandinaviska Kreditaktiebolaget	11/1863	03/1925	D	Kreditkassan	Reconstructed

### 1. AB Gäfleborgs handelsbank

Classification	Distress
Date of Establishment	June 1905
Date of Acquisition	April 1914
Acquiring Bank	Norrlandsbanken

This bank was established in 1905 [Gävle handelsbank] and was large enough to extend a branch network outside its county of origin. It “did not succeed in sustaining profitability” (Söderlund 1978, p. 62) over the ten year period before it was absorbed by Norrlandsbanken in May 1914 (*Uppgifter om bankerna*). However, the bank did undergo some alterations as Gävle Handelsbank and was reconstructed during the period 1908-10, during which it experienced distress and was “quickly moving towards failure” (Benckert 1976, p. 71). It was linked with one other distressed bank at the time, known as Sundsvallsköpmans bank. It was reconstructed into Gäfleborgs Handelsbank, though it continued to “suffer from cooperation with Sjöberg [a ‘questionable and corrupt’ director]” according to Benckert 1976, pp. 47-57). It belonged to the category of bank that “which had become involved in such high risk activity or loss making investments, that their continuation as a going concern depended on luck or at least required large writeoffs” (Söderlund 1964, p. 308). When the bank was acquired by Norrlandsbanken in April 1914, 5,000 SEK was written off the book value of its property and the takeover had been delayed five months due to “official formalities not being observed” (*Svenska Dagbladet*, 22 March 1914, p. 12). The bank’s assets were written down by 103,000 SEK (*Svenska Dagbladet*, 7 March 1914, p. 11). We classify this as a distress takeover.

### 2. Ljusdals Folkbank

Classification	Non Distress
Date of Establishment	January 1899
Date of Acquisition	April 1914
Acquiring Bank	Sundsvalls Enskilda Bank

This bank was a small entity and was not covered in the subsequent histories of Söderlund (1964; 1978). At a meeting on 3 December 1913, the board of Ljusdals Folkbank had reached an agreement with the board of Sundsvalls Enskilda bank in which the latter would absorb the former (*Svenska Dagbladet*, 7 March 1914, p. 11). The bank still appears in official statistics until April 1914 as an entity as the agreement specified the absorption date as 1 May 1914 (*Uppgifter om bankerna*). The obituary concerning the death of its first director in September 1914 praised Mr Israelsson as a “highly trustworthy man” (*Dagens Nyheter*, 14 September 1914, p. 11). The takeover was reported in February

1914 after a dividend of 8 per cent was declared (*Dagens Nyheter*, 26 February 1914, p. 11). No evidence of distress emerged.

### 3. AB Avesta Folkbank

Classification	Non Distress
Year of Establishment	February 1904
Date of Acquisition	May 1914
Acquiring Bank	Upplands Enskilda Bank

According to Söderlund (1978, p. 76), Avesta Folkbank, through poor lending decisions, ended up in the so-called “metallic entanglement” [excessive exposure to the metallurgical sector]. It was amongst the small rural banks featured by Söderlund whose poor balance sheet status scarcely warranted “a reason or possibility to continue as a going concern.” The takeover decision was made by Upplands Enskilda Bank on 16 March 1914 (*Svenska Dagbladet*, 17 March 1914, p. 12). While Söderlund’s criticisms may have been justified, in 1913 the bank reported a small profit and paid 8 per cent in dividend (*Svenska Dagbladet*, 27 January 1914, p. 12). No evidence that the bank was in difficulty emerged from accounts of the takeover and it appears that limited opportunities to grow represented the prime reason for the merger.

### 4. AB Eksjö Folkbank

Classification	Distress
Year of Establishment	December 1898
Date of Acquisition	May 1914
Acquiring Bank	Liquidated: Göteborgs Handelsbank

Despite suffering substantial losses, many banks over the period 1907-15 could be rescued through reconstructions and mergers. However, AB Eksjö Folkbank proved a “difficult exception” (Söderlund 1978, p. 74) to this pattern and it accordingly went into liquidation on 4 June 1914 (*Uppgifter om bankerna*). The surviving assets and liabilities were subsequently transferred to Göteborgs handelsbank (*Svenska Dagbladet*, 6 June 1914, p. 12).

### 5. AB Filipstads Bank

Classification	Non Distress
Year of Establishment	November 1902
Date of Acquisition	May 1914
Acquiring Bank	Sydsvenska Kredit AB

This bank was established in November 1902 as a limited company, though Söderlund (1978, p. 77) shows it opening in 1903. According to Söderlund (1964, p. 308), this bank was a “weak provincial bank with relatively little activity”. Sydsvenska Kredit AB acquired it in June 1914 (*Uppgifter om bankerna*). The bank had reported a profit of SEK 75,000 in 1912, paid a dividend of 6 per cent and capitalised 14,000 in retained earnings (*Svenska Dagbladet*, 23 January 1913, p. 9). The following year that profit grew to SEK 88,000 and the dividend was maintained at 6 per cent (*Svenska Dagbladet*, 21 January 1914, p. 12).

The subsequent merger with Sydsvenska Kreditbolaget involved “an active and quite unscrupulous part in the preparatory work” of both banks in the merger (Söderlund, 1978, p. 78). The merger was reported as “definitive” after a shareholder meeting of AB Filipstads Bank held on the 25 May 1914 (*Svenska Dagbladet*, 6 June 1914, p. 12).

#### **6. AB Föreningsbanken i Stockholm**

Classification	Non distress
Date of Establishment	April 1897
Date of Acquisition	August 1914
Acquiring Bank	Mälareprovisernas Bank

Established in 1897, this was the last of the banks founded in the recent “establishment-fever which gripped the capital” (Söderlund 1964, p. 192). The bank was taken over by Mälarebanken in October 1913 (*Svenska Dagbladet*, 22 October 1913, p. 12). However, the bank remains as an entity in official statistics until August 1914 (*Uppgifter om bankerna*). In 1913, the bank reported profits of SEK 284,000 and paid an 8 per cent dividend to shareholders and a meeting of ordinary shareholders was called with the mention of a possible merger with Mälareprovisernas bank for 21 March 1914 (*Svenska Dagbladet*, 10 March 1914, p. 12). The bank was not distressed prior to takeover.

#### **7. Bank AB Norra Sverige**

Classification	Non distress
Date of Establishment	September 1908
Date of Acquisition	October 1914
Acquiring Bank	Stockholms Handelsbank

This bank was established as a reconstructed form of Härnösands Enskilda bank out of the wreckage of the 1907 crisis (Grodecka et al., 2021). It was acquired by AB Stockholms Handelsbank in October

1914 (*Uppgifter om bankerna*). According to Söderlund, this occurred as part of the consolidation of banks which culminated in the Central Private Bank of Sweden- “The weakest link in the chain was Bankaktiebolaget Norra Sverige from the beginning...which at the start of 1914 had numerous weaknesses in its portfolio and the reserve fund comprised only 13 per cent of equity capital” (Söderlund, 1978, p. 85). Its strength lay in the fact that it had the most extensive branch network in the country and it was taken over by Stockholms Handelsbanken in March 1914, though the official statistics maintain it as an independent entity until September (*Uppgifter om bankerna*)

However, during the period leading up to the takeover, Norra Sveriges share price increased from SEK 283 to SEK 301 in a matter of weeks with a similar trend being observed in Stockholm Handelsbanken’s equity price (*Svenska Dagbladet*, 6 March 1914, p. 12). Norra Sveriges portfolio was described as “especially good” with very good customers including the most prominent timber exporter in the country (*Svenska Dagbladet*, 6 March 1914, p. 12). While Söderlund’s account stresses its relative weakness, the bank did not appear to be in distress prior to the merger.

#### **8. Aktiebolaget Stockholms folkbank**

Classification	Distress
Date of Establishment	September 1906
Date of Acquisition	November 1914
Acquiring Bank	Liquidated

This bank was founded shortly before the Swedish banking crisis of 1907. When it wound up, it was not acquired, but liquidated on 12 November 1914. The bank according to Söderlund (1978, p. 73,76) belonged to a category which led by Stockholm businessmen without banking competences, who were attracted by the lower capital requirements. It was eventually liquidated as it was not possible “as a result of continuous losses” to continue as a going concern (Söderlund, 1978, p. 73,76).

In late 1914, a harsh criticism of the bank appeared in a national broadsheet (*Svenska Dagbladet*, 03 October 1914, p. 11). The piece took aim at the bank’s reckless manner in conducting its affairs and remarked that its “abnormal lending” did not warrant it being called a folkbank. The article cites a bank run and a subsequent payment suspension in 1912, continuing that confidence only slowly returned in 1914 when its lending declined.

Its “failure” was noted in the press, but its director Helmer Andersson Sjöberg did not specify the causes, as it went into “liquidation” (*Svenska Dagbladet*, 25 September 1914, p. 8). This director was previously president of AB Sundsvalls köpmansbank which went into liquidation in 1910 and his business principles were questioned heavily by the bank inspectorate (Benckert, 1976, pp. 47-57).

#### **9. AB Hammerdals Folkbank**

Classification	Non Distress
Date of Establishment	September 1908
Date of Acquisition	February 1915
Acquiring Bank	Sundsvalls Handelsbank

The agreement in relation to the takeover of this bank had already taken place prior to the boom period (Söderlund, 1978, p. 87). It was taken over by AB Sundsvalls Handelsbank in March 1915 (*Uppgifter om bankerna*). The bank's owners were informed of the offer from Sundsvalls Handelsbank in October 1914 and called to a meeting on 13 November 1914 (*Svenska Dagbladet*, 26 October 1914, p. 8). It represented a small enterprise in the sample and no record of distress could be unveiled prior to the takeover.

#### 10. AB Söderhamns Folkbank

Classification	Non Distress
Date of Establishment	October 1899
Date of Acquisition	June 1915
Acquiring Bank	Norrbankens

This bank was acquired by AB Norrbankens in July 1915 (*Uppgifterna om Banker*). The bank was established in on 6 October 1899 with paid up capital of SEK 400,000, which had grown to SEK 600,000 by 1909 (*Bankmatrikeln* 1911, p. 446 no. 25).

No evidence could be found of distress, prior to the takeover. Indeed, it paid a 7.5 per cent dividend for the accounting year end 1913 (*Svenska Dagbladet*, 29 March 1915, p. 11). In 1914, it earned SEK 71,477 in profits, of which 48,000 was paid to shareholders (*Svenska Dagbladet*, 10 March 1915, p. 9). The takeover was approved by 5,663 votes against 303 (*Svenska Dagbladet* 1 April 1915, p. 12). Evidently, no distress preceded the takeover.

#### 11. Aktiebolaget Bergsjö folkbank

Classification	Non distress
Date of Establishment	June 1902
Date of Acquisition	March 1916
Acquiring Bank	Sundsvalls Handelsbank

The board of this bank had received such strong criticism for “weaknesses in governance” from the Bank Inspectorate, that it was expected that a regime change was to occur prior to its acquisition by

Sundsvalls Handelsbank. According to Söderlund (1978, p. 563), the concern had been in financial decline. However, the shareholders of the bank received SEK 150 per share of nominal value SEK 100 from their buyout, which does not suggest distressed assets (*Dagens Nyheter*, 11 March 1916, p. 7). There is no other evidence in the press to suggest that distress preceded takeover. The bank's last appearance in *Uppgifter om bankerna* is for March 1916.

## 12. AB Bergslagsbanken

Classification	Non Distress
Date of Establishment	September 1896
Date of Acquisition	May 1915
Acquiring Bank	Mälareprovisernas Bank

This fusion was largely the result of a recent trend of “expansionary policy” among the larger banks. Mälareproviserna's Bank gained new branch networks through this acquisition in Västmanland and Dalarna with strong deposit bases (Söderlund 1978, pp. 87-8). The takeover was preceded by a change in the leadership of Mälareproviserna's Bank. While the bank last appears in official statistics in May 1916, the public was aware of the merger in March 1915 and the terms allowed that the same leadership of Bergslagsbanken should remain (*Svenska Dagbladet*, 8 March 1915, p. 10). Indeed, it was accepted upon the merger that Bergslagsbanken's business conducted since 1 January 1915 was to be accepted as having been done as a part of Mälareprovisernas bank and it had paid a dividend of 7 per cent in 1914 (*Dagens Nyheter*, 8 March 1915, p. 7).

## 13. AB Herrljunga Lantmannabank

Classification	Non distress
Date of Establishment	July 1909
Date of Acquisition	May 1916
Acquiring Bank	Borås Enskilda bank

As Söderlund (1978, p. 87) describes, through the Banking Law of 1911, the minimum capital requirement was raised from 200,000 SEK to 500,000 SEK, which would apply at the conclusion of each bank's charter, but not before 1916. For Herrljunga's Lantmannabank, it was apparent that it would be difficult both to raise and employ the extra 300,000 SEK capital in an area in which lending possibilities would be “very limited” (Söderlund, 1978, p. 87). It was because of this realisation that talks began in 1914 with Borås Enskilda bank, resulting in the eventual merger. Herrljunga Lantmannabank ceased operations on 19 April 1916 as an extraordinary meeting of shareholders was called to

confirm the liquidation and acquisition (*Svenska Dagbladet*, 19 April 1916, p. 11) the following month. It remained profitable for both years prior to the takeover (*Svenska Dagbladet*, 18 January 1916, p. 13).

#### 14. AB Varbergs Bank

Classification	Non distress
Date of Establishment	May 1906
Date of Acquisition	May 1916
Acquiring Bank	Smålands Enskilda Bank

Varbergs bank reported profits of 74,000 SEK and SEK 70,000 in 1914 and 1913 respectively and paid a dividend to shareholders of 6 per cent (*Svenska Dagbladet*, 12 January 1915, p. 9). This fusion was largely the result of a recent trend of “expansionary policy” among the larger banks. Småland’s Bank gained new branch networks in Halland and throughout the province, as part of an expansion that began in 1915 and proceeded rapidly (Söderlund 1978, p. 88). However, the takeover met strong resistance from a minority in the bank (*Dagens Nyheter*, 5 May 1916, p. 11).

#### 15. AB Mellersta Hallands Bank

Classification	Non distress
Date of Establishment	July 1900
Date of Acquisition	June 1916
Acquiring Bank	Smålands Enskilda Bank

In 1915, Mellersta Hallands Bank reported profits of SEK 45,000 and paid 5 per cent in dividends to shareholders (*Dagens Nyheter*, 27 April 1916, p. 6). This fusion was largely the result of a recent trend of “expansionary policy” among the larger banks. At a shareholder meeting with a “lively discussion” 2,345 votes were cast in favour of the takeover by Smålands Bank and 884 opposed it (*Dagens Nyheter*, 27 April 1916, p. 6). Småland’s Bank gained new branch networks in Halland and throughout the province, as part of an expansion that began in 1915 and proceeded rapidly (Söderlund 1978, p. 88). The expansionary policy was preceded by a change in the leadership of Smålands Enskilda Bank. The bank took over a number of offices and local concerns in the region within trade and industry (Söderlund 1978, p. 88). No evidence was found to suggest distress.

#### 16. Jämtlands Kreditbank

Classification	Non distress
Date of Establishment	June 1900
Date of Acquisition	April 1916



Acquiring Bank	Stockholms Handelsbank
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Discussions regarding this merger were public knowledge in February 1916 when it was proclaimed that shareholders of Jämtlands Kreditbank would trade two of their shares for one of Handelsbanken's (*Dagens Nyheter*, 28 February 1916, p. 8). The bank had shareholder capital of over SEK 1 million with a reserve fund of SEK 500,000 and had been paying 10 per cent dividends in the years before the merger (*Dagens Nyheter*, 28 February 1916, p. 8). This comprises one of the mergers that had expansionary policy within the larger bank (Stockholm Handelsbank) as its root motivation (Söderlund 1978, p. 88). The operations of the bank ceased on 2 April prior to the absorption (*Svenska Dagbladet*, 2 April 1916, p. 7). It had operated since establishment purely as a "local bank" (Söderlund 1964, p. 193). Stockholm Handelsbank through its purchase, gained access to a branch network in Jämtland "where it had previously not been represented" (Söderlund 1978, p. 88). No evidence could be uncovered of distress preceded the merger.

#### 17. **Kristdala Folbank**

Classification	Non distress
Date of Establishment	August 1906
Date of Acquisition	November 1916
Acquiring Bank	Unknown

This bank was a minor player in Swedish commercial banking. During 1915, this bank reported profits of SEK 17,000, paid a dividend of 7 per cent and reserved 4,700 in retained earnings (*Svenska Dagbladet*, 16 March 1916, p. 11). In an external official report on Swedish banking, it was remarked that "Kristdala Folkbank has disappeared" (U.S. Commerce Reports, Vol 4, Q4 1917, p. 630). Evidence of the bank's fate could not be discerned from the newspaper or official accounts. It is likely that this bank's ten-year charter had expired and the extent of its operations so limited that it was wound down.

#### 18. **Hudiksvalls Bank**

Classification	Non distress
Date of Establishment	May 1889
Date of Acquisition	April 1917
Acquiring Bank	Sundsvalls Enskilda Bank

News of this approaching merger was widely available in February 1917. Invitations for the subscriptions of new shares in the acquiring bank subsequent to the preliminary merger agreement

(*Svenska Dagbladet*, 1 February 1917, p. 17; *Dagens Nyheter*, 21 February 1917, p. 3). This small bank in Hudiksvall had the choice of either increasing its capital to be granted a new charter, or merging with a larger bank as an “alternative advantageous option” (Söderlund 1978, p 93). It had not yet “taken advantage of the potential development the locality offered and represented an attractive merger proposition” for Sundsvalls Enskilda Bank (Söderlund 1978, p 93). No evidence of distress could be uncovered before the takeover.

#### 19. Arbrå folkbank

Classification	Distress
Date of Establishment	September 1908
Date of Acquisition	May 1917
Acquiring Bank	Stockholms Handelsbank

This small bank was established with capital of SEK 200,000 (Söderlund 1978, p. 80). In March 1917, the public was aware that the bank was in some distress. Despite declaring a 6 per cent dividend the previous year “no distribution could occur due to losses incurred by fraud” (*Svenska Dagbladet*, 8 March 1917, p. 18). On 8 March, the board of shareholders made the decision to sell the bank to Stockholms Handelsbank, which would open its first branch in the town on 1 April and gain some more in Hälsingland’s locality (*Dagens Nyheter*, 8 March 1917, p. 11).

#### 20. Sundsvalls handelsbank

Classification	Non distress
Date of Establishment	June 1874
Date of Acquisition	March 1917
Acquiring Bank	Upplands Enskilda Bank

Sundsvalls handelsbank had already acquired Bergsjö folkbank which, according to Söderlund (1978, p. 87) suffered from serious governance issues, the result of which was an unavoidable merger. However, its acquisition by Upplands Enskilda bank represented “in the favourable prevailing market conditions, a considerable strengthening of the acquired banks” (Söderlund 1978, p. 92). Indeed, newspaper reports at the time confirm this view citing the Sundsvall’s profits of SEK 836,145 in 1916 (*Svenska Dagbladet*, 30 March 1917, p. 11). For the financial year 1916, it had “doubled its net profits and raised dividends” (*Svenska Dagbladet*, 10 March 1917, p. 10). With the available evidence, we classify this takeover as a non-distress merger.

#### 21. Borås Enskilda Bank

Classification	Non distress
Date of Establishment	November 1865
Date of Acquisition	January 1917
Acquiring Bank	Bank AB Södra Sverige

At the beginning of 1917, news reports were generally very positive about this bank's progress. It was noted that the previous year's profits had increased to SEK 636, 880 (*Svenska Dagbladet*, 20 January 1917, p. 10). The same article reported that during that day, 2,849 shareholders of the bank would vote in favour of the acquisition of the bank by Bank AB Södra Sverige (*Svenska Dagbladet*, 20 January 1917, p. 10). No evidence suggests that the bank was in distress. Instead, "a similar merger (share exchange) had already been forwarded by Borås Enskilda Bank, whose resources were not sufficient to meet the credit demands of local industry" (Söderlund, 1978, p. 89).

## 22. Helsinglands Enskilda Bank

Classification	Non distress
Date of Establishment	May 1873
Date of Acquisition	May 1917
Acquiring Bank	Mälareprovisernas Bank

In the summer of 1916, Helsinglands Enskilda Bank received a merger offer from both Mälareprovisernas Bank and Norrlandsbanken, in the form of an outright share purchase. Indeed, the board's initial reply showed a self-confidence in Helsingland's prospects, as the price commanded was "unacceptable...and too high" according to the acquiring banks (Söderlund 1978, p. 89).

As the year 1916 drew to a close, the stock of Helsinglands Enskilda bank continued to rise (*Svenska Dagbladet*, 1 November 1916, p. 12). At the end of 1916, shareholders of the bank received a dividend of 12 per cent after the bank's profits were reported in the knowledge that the following year the bank would be absorbed by Mälarebanken (*Dagens Nyheter*, 4 March 1917, p. 11). The takeover transaction was to be completed on 1 June 1917 (*Svenska Dagbladet*, 24 May 1917, p. 2). There is no evidence of distress.

## 23. Marks Bank

Classification	Non distress
Date of Establishment	1915
Date of Acquisition	June 1917
Acquiring Bank	Göteborgs Bank

The preparations for the establishment of this bank were completed before the outbreak of World War 1, though it did not commence trading until 1915. Marks bank was a very marginal establishment, the turnover of which was 1 per cent of its acquiring bank. Göteborgs bank made the purchase as part of expanding its own operations, in the knowledge that it would gain representation in the area around Borås (Söderlund 1978, p. 92). The acquisition was public knowledge in March 1917 and the merger was deemed to have occurred on 1 January 1917 (*Svenska Dagbladet*, 27 March 1917, p. 10), despite remaining in *Uppgifter om bankerna* until June. No newspaper or subsequent evidence emerges suggesting distress prior to takeover.

#### 24. Stockholms Diskontobank

Classification	Non distress
Date of Establishment	November 1898
Date of Acquisition	January 1917
Acquiring Bank	Göteborgs Bank

Prior to the acquisition of Stockholms Diskonto bank, Göteborgs bank had determined to increase its Stockholm banking activities and through this merger could “rest assured that the board of the Discount Bank will remain in charge of Stockholm operations” (*Svenska Dagbladet*, 23 February 1917, p. 11). The acquisition was clearly marked by confidence in the latter’s ability. The purchase marked the beginning of an aggressive expansionary policy on the part of Göteborgs bank and represented a 25 per cent increase in its size, as well as a strong development of its Stockholm customer base (Söderlund 1978, pp. 91-2). Stockholms diskontobank was thus an attractive prospect. The profits of the year 1916 had exceeded the previous year at SEK 1,196,739 with an accompanying dividend payment of 8.5 per cent (*Svenska Dagbladet*, 12 January 1917, p. 10). No evidence of distress could be uncovered and the merger was deemed to have occurred retrospectively on 1 January 1917 (*Svenska Dagbladet*, 23 February 1917, p. 11).

#### 25. Hallsbergs Folkbank

Classification	Non distress
Date of Establishment	November 1907
Date of Acquisition	August 1917
Acquiring Bank	Mälareprovisernas Bank

This marginal bank represented an increase of only 2 per cent in the business of its acquiring bank (Söderlund, 1978, p. 92). Nonetheless, the year before its acquisition by Mälarebanken, substantial

write downs on its assets occurred and its accountants showed hesitation about the declared dividend payment (*Dagens Nyheter*, 5 March 1916, p. 12). At an extraordinary shareholder meeting on 29 December 1916 it was agreed by the bank's owners that it should be absorbed into Mälarebanken at the outset of the following year pending full shareholder approval (*Svenska Dagbladet*, 31 December 1916, p. 11). This was granted in March 1917 and it was observed that less write-downs were required in 1916 and a profit of SEK 40,000 was reported with a 7.5 per cent dividend forthcoming (*Svenska Dagbladet*, 4 March 1917, p. 12). It no longer appears in official accounts from August (*Uppgifter om bankerna*). We classify this as a non-distress merger.

#### 26. Östersunds Diskontobank

Classification	Non distress
Date of Establishment	August 1900
Date of Acquisition	September 1917
Acquiring Bank	Norrlandsbanken

While this bank remained in the official statistics separately (*Uppgifter om bankerna*) until September 1917, the merger was public knowledge at the conclusion of 1916 to be confirmed at a board meeting on 20 January 1917 (*Svenska Dagbladet*, 24 December, p. 8). Its profits for the year reached SEK 179, 730 and the bank was described as “liquid” (*Dagens Nyheter*, 9 March 1917, p. 1). There is no evidence of any distress prior to the merger in the primary sources.

#### 27. Norrlandsbanken

Classification	Non distress
Date of Establishment	June 1911
Date of Acquisition	October 1917
Acquiring Bank	Stockholms Handelsbank

This bank originated as a reconstructed form of Bank AB Stockholm Öfre Norrland in June 1911, as the latter failed during the crisis of 1907-08 (Grodecka et al 2021). It no longer appeared in official accounts from October 1917 (*Uppgifter om bankerna*). However, the merger was concluded and the terms of agreement were published on 8 March 1917 (Söderlund 1978, p. 91) as Handelsbanken was on the path to build up “a dominant position within Norrland”. This was merely a continuance of the expansionary policy of Handelsbanken and was a strategic choice. Through the purchase, Handelsbanken “gained a valuable complement” to its own activities, via “Norrlandsbanken’s well developed filial bank network and strong credits in Norrland” (*Dagens Nyheter*, 9 March 2017, p. 1). There was evidently no distress in Norrlandsbanken. As it was approximately half the size of Handelsbanken (*Uppgifter om bankerna*)

and given that the merger made front page news, it is unlikely that potential difficulties would have been overlooked by the media.

#### 28. Nordiska Kreditbanken

Classification	Non Distress
Date of Establishment	May 1896
Date of Acquisition	November 1917
Acquiring Bank	Sverige Privata Centralbank

This bank was a mid-sized Stockholm bank and the agreement on the merger was finalised as early as November 1916 (Söderlund, 1978, p. 90). There is no sign of distress and this merger was another element of the Central bank group merger phase of the period. The merger made front-page news and it was affirmed that all of Nordiska Kreditbanken's staff would remain under the new umbrella of Sverige Privata Central Bank (*Svenska Dagbladet*, 14 November 1916, p. 3). Three shares of Nordiska were swapped for one share in the Privata Centralbank and the former's share price remained well above its nominal price SEK 500 at SEK 850 prior to news of the takeover (*Dagens Nyheter*, 14 November, p. 1). Evidently, no distress preceded this takeover.

#### 29. Sveriges Privata Centralbank

Classification	Non-Distress
Date of Establishment	September 1912
Date of Acquisition	November 1917
Acquiring Bank	Skandinaviska Banken

This merger was judged by Söderlund (1978, p. 91) to be the result of the growing competition between Skandinaviska Banken and Stockholms Handelsbanken in terms of size and customer base. As many rural banks owned Centralbanken's shares, they would become large stakeholders in Skandinaviska Banken (Söderlund 1978, p. 91) making the offer mutually advantageous. Centralbank's capital exceeded SEK 30 million at the point of takeover, with a reserve fund (retained earnings) of over SEK 17 million (*Svenska Dagbladet*, 4 March 1917, p. 3). While the bank remained in official statistics until November 1917 (*Uppgifter om bankerna*), the merger was agreed in March that year. There is no evidence of any distress prior to the consolidation.

#### 30. Arbetarerings Bank

Classification	Non distress
Date of Establishment	October 1883

Date of Acquisition	March 1918
Acquiring Bank	Köpmannabanken

This event was effectively a conversion, as Köpmannabanken's activities had commenced in January 1918 and this was merely "a continuation of Arbetareringens Bank" (Söderlund 1978, p. 104). Indeed, details of the first reported turnover which included the acquisition, shows that Arbetareringens Bank comprised three quarters of the total (*Uppgifter om Banker*) before March 1918. This is because the conversion into Köpmannabanken merely involved the addition of a small number of new investors and was described as a "minor agreement" (*Svenska Dagbladet*, 25 October 1917, p. 4). The shareholder meeting was called for 8 November 1917 and the details of the conversion were published in the press: to "extend the bank's activities" by "constructing a new bank" with "leading people in the national federation" (*Svenska Dagbladet*, 25 October 1917, p. 4). There is no evidence of distress prior to the conversion.

### 31. **Malmö Folkbank**

Classification	Non distress
Date of Establishment	March 1905
Date of Acquisition	April 1918
Acquiring Bank	Industribanken

The year prior to its takeover by Industribanken, Malmö folkbank reported profits of SEK 2.4 million (*Svenska Dagbladet*, 23 January 1918, p. 11). The acquiring bank was a newly founded entity in 1917 and represented part of the "expansionary tendency now prevailing in banking policy as a result of the boom" (Söderlund 1978, p. 97). The mergers, which it undertook at this time, led to a "build up of a nationwide office and branch network included in their strategic plans" (Söderlund 1978, p. 97). *Dagens Nyheter* (20 April 1917, p. 4) stressed the good condition of Malmö Folkbank stating that there had been a dividend payment of 8 per cent and that it would continue operations as normal, under the umbrella bank. There was no evidence that Malmö folkbank was in distress prior to the former acquiring it.

### 32. **Roslagens Folkbank**

Classification	Non distress
Date of Establishment	October 1909
Date of Acquisition	April 1918
Acquiring Bank	Industribanken

While this bank appeared on the official statistics (*Uppgifter om bankerna*) until April 1918, the takeover by Industribanken was public knowledge at least by February 1918 as the board agreed terms that had been established at a previous meeting (*Svenska Dagbladet*, 8 February 1918, p. 10). There was no evidence that Roslagens Folkbank was in distress prior to Industribank's acquisition of it and it was able to raise fresh capital in January 1917 in order to increase its equity base (*Svenska Dagbladet*, 31 January 1917, p. 8). Later in 1917, it successfully renewed its charter until 1928 (*Svenska Dagbladet*, 18 March 1917, p. 10). There is no evidence of prior distress surrounding the takeover.

### 33. **Bank AB Kullen**

Classification	Non distress
Date of Establishment	October 1907
Date of Acquisition	April 1918
Acquiring Bank	Industribanken

This small bank reported profits in 1917 of SEK 40,000 (*Svenska Dagbladet*, 12 March 1918, p. 10). There was no evidence that Bank AB Kullen was in distress prior to Industribanken's acquisition of it. It is listed in official sources as having been absorbed in 1916 (*Undersökningsberättelser rörande upphörda affärsbanker*, ref 22) and this accords with the takeover terms which specified that it was deemed to have taken place on 1 January 1918 (*Svenska Dagbladet*, 12 March 1918, p. 10).

### 34. **Bank AB Blekinge Bank**

Classification	Non distress
Date of Establishment	September 1872
Date of Acquisition	May 1918
Acquiring Bank	Svenska Lantmännens Bank

This older bank had survived the crises of 1877-8 and 1907 unscathed. It's acquiring bank, Lantmännens Bank was newly founded and represented part of the "expansionary tendency now prevailing in banking policy as a result of the boom" (Söderlund 1978, p. 97). The merger and subscription offers were publicised in the spring of 1918 (*Svenska Dagbladet*, 23 April 1918, p. 2). The public offering for shares in the new entity was oversubscribed (*Svenska Dagbladet*, 26 May 1918, p. 12) suggesting little hesitation on the part of the public. The bank continued to report profits prior to takeover (*Uppgifter om bankerna*). The merger also included Halmstads Folkbank. There was no evidence that Blekinge Bank was in distress prior to the merger.

### 35. **Halmstads folkbank**



Classification	Non distress
Date of Establishment	January 1906
Date of Acquisition	May 1918
Acquiring Bank	Svenska Lantmännens Bank

There was no evidence that Halmstads Folkbank was in distress prior to Lantmännen's bank acquisition of it. In January 1918, there was evidence of overlapping business between three local banks as members of the public were invited to subscribe SEK 4 million at the offices of a local property developer for the merger of three separate banks (*Svenska Dagbladet*, 7 January 1918, p. 2). It was affirmed that Halmstads Folkbank and Blekinge Bank would merge into the rapidly expanding Lantmännens bank (*Dagens Nyheter*, 14 February 1918, p. 12). This bank fusion represents a consolidation of local business.

### 36. Örebro Enskilda Bank

Classification	Non Distress
Date of Establishment	April 1837
Date of Acquisition	May 1918
Acquiring Bank	Skandinaviska Banken

The preparatory work for this merger had begun in the spring of 1917 (Söderlund 1978, p. 97). It was one of the oldest banks in Sweden when it merged with Skandinaviska banken. The latter was mentioned with Lantmännens Bank and Industribank as representing part of the "expansionary tendency now prevailing in banking policy as a result of the boom" (Söderlund 1978, p. 97). The takeover was desired by Skandinaviska banken to "consolidate its activity in the Bergslagen" region (*Svenska Dagbladet*, 30 March 1918, p. 11). There was no evidence that Örebro Enskilda Bank was in distress prior to the former acquiring it and the takeover was deemed to have occurred retroactively on 1 January 1918 (*Svenska Dagbladet*, 30 March 1918, p. 11). It had however remained in official accounts until May 1918 (*Uppgifter om bankerna*).

### 37. Tjänstemannabanken

Classification	Non Distress
Date of Establishment	November 1899
Date of Acquisition	August 1918
Acquiring Bank	Kopparbergs Banken

Unlike the other mergers which dominated 1918, no preparatory work was undertaken for this fusion with Kopparbergs bank in 1917 (Söderlund 1978, p. 97). The acquiring bank however was named as one of the most “solvent” and “conservative” banks of the time (Söderlund 1978, p. 104). The merger was intended so that Tjänstemannabanken would effectively function as Kopparberg’s Stockholm office and the former was encouraged to “hold to its old traditions as well as inviting new larger customers” (*Dagens Nyheter*, 18 March 1918, p. 11). The takeover represented an intention by Kopparbergs Banken to extend its national operations. No evidence of distress preceding the takeover was uncovered.

### 38. **AB Vara Bank**

Classification	Non-Distress
Date of Establishment	January 1908
Date of Acquisition	November 1918
Acquiring Bank	Enskilda Banken i Vänersborg

Like many other smaller banks at the time, a merger for Vara bank was seen as improving its portfolio possibilities and escaping local and financial limitations. “Vara bank had difficulty to invest its rapidly growing deposits within its organisational form” (Söderlund 1978, p. 97). Discussions had begun to merge with Enskilda Banken i Vänersborg as early as March 1918 (*Svenska Dagbladet*, 8 March, p.10). There is no evidence of any distress in contemporary accounts or subsequent scholarship. The takeover was compared to the expansionary policy pursued by competitors such as Upplands Enskilda Bank and Mälareprovisernas Bank during 1918, which involved taking over smaller local rural banks (Söderlund 1978, p. 99).

### 39. **AB Privatbanken**

Classification	Distress
Date of Establishment	January 1913
Date of Acquisition	January 1919
Acquiring Bank	Liquidated

This bank last appeared in the official accounts in February 1919 (*Uppgifter om Banker*). What is clear from contemporary accounts is that this bank was in distress. The “sensational announcement that Privatbanken would suspend payments” came in December 1918 (*Dagens Nyheter*, 24 December 1918, p. 1). Arrests were made on account of fraud and the bank’s director Nils Österman stood accused of manipulation of the company finances to the police (*Svenska Dagbladet*, 20 February 1919, p. 7). Evidently, the bank had endorsed bills that were not reviewed by management and speculation in the stock market had been ruled out as a cause of failure (*Dagens Nyheter*, 24 December 1918, p. 1). The

bank was described as “insolvent” and the acute nature of the bank’s difficulties had been apparent internally since November 1918 (*Svenska Dagbladet*, 20 February 1919, p. 7). Österman’s version of the events leading to the failure of the bank continuously changed, of which the press provided detailed accounts (*Svenska Dagbladet*, 20 February 1919, p. 7). This bank was liquidated in January 1919 and as such represents a distressed exit from the banking population.

#### 40. **Gäffleborgs Folkbank**

Classification	Non distress
Date of Establishment	October 1905
Date of Acquisition	July 1919
Acquiring Bank	Upplands Enskilda Bank

The bank was reporting profits of SEK 91,000 and paid a dividend of 8 per cent prior to the takeover (*Svenska Dagbladet*, 3 March 1919, p. 11). Upland Enskilda Bank’s takeover of Gäffleborgs Folkbank “represented nothing new...it had been expanding for many years through the acquisition of smaller rural banks” (Söderlund 1978, p. 99). Folkbanken’s newly issued capital of SEK 500,000 would be taken over by Upplands in an agreement between the boards of directors in a 6 for 1 (Upplands) share swap (*Svenska Dagbladet*, 10 October 1918, p. 19). Gäffleborgs Enskilda Bank’s recent public offering had been over subscribed as during “the last years it has shown strong potential” (*Svenska Dagbladet*, 10 October 1918, p. 19). There is no evidence of distress around this takeover.

#### 41. **Dalarnes Folkbank**

Classification	Non distress
Date of Establishment	December 1903
Date of Acquisition	August 1919
Acquiring Bank	Mälareprovisernas Bank

This bank had previously changed its name from Mora folkbank (*Svenska Dagbladet*, 23 January 1918, p. 11) which had established in December 1903. When proceedings first began on the merger in July 1918, the bank’s shares were trading higher than the acquiring bank (*Svenska Dagbladet*, 12 July 1918, p. 11). In January 1919, headings like “strong performance for Dalarnes folkbank” were typical as it reported net profits of SEK 150,000 for 1918 (*Svenska Dagbladet*, 26 January 1919, p. 12). It is classified accordingly as a non-distress event.

#### 42. **Medelpads Lantmannabank**

Classification	Non distress
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Date of Establishment	June 1906
Date of Acquisition	August 1919
Acquiring Bank	Mälareprovisernas Bank

In January 1919, the company reported profits of SEK 150,000 and paid dividends of 10 per cent (*Svenska Dagbladet*, 27 January 1918, p. 10). Mälareprovisernas Bank's takeover of Medelpads Landtmannabank "represented nothing new...it had been expanding for many years through the acquisition of smaller rural banks" (Söderlund 1978, p. 99). The acquisition was described by the press as an "extension of Mälarebankens activities" into Sundsvall, Sättna and Indalsliden and customers of Medelpads bank were assured that no change to business will occur (*Svenska Dagbladet*, 14 May 1919, p. 11). Appropriately, this is classified as a non distress acquisition.

#### 43. Skånska Handelsbanken

Classification	Non distress
Date of Establishment	March 1896
Date of Acquisition	August 1919
Acquiring Bank	Skandinaviska Banken

Söderlund (1978, pp. 97-100) documents how Skandinaviska Banken's merger with Skånska Handelsbanken was of interest as these two banks, which had preceded the earlier merger era of the early twentieth century, now ceased to exist as independent businesses. "This [merger] occurred before the magnitude of risk taken by this pioneering operation began to emerge subsequently" (Söderlund, 1978, p. 100). In a critical article directed at the merger process on a national level, the motivations of Skandinaviska banken were "clearly weak" (*Svenska Dagbladet*, 23 May 1919, p. 6). The latter offered "questionable claims" that due to its larger size it could distinguish the quality of assets in a more efficient manner via the takeover (23 May 1919, p. 6). The merger was however seen as significant for Skandinaviska Banken as it gave them a more homogenous bank network and strengthened their reputation as an intra regional bank (*Dagens Nyheter*, 18 January 1919, p. 4). As the fusion occurred, no distress was evident on the part of either bank.

#### 44. AB Provinsbanken

Classification	Distress
Date of Establishment	July 1919
Date of Acquisition	October 1919
Acquiring Bank	Liquidated/Taken over by Mälareprovisernas Bank

This short lived bank disappeared from the *Uppgifter om bankerna* in October 1919 without mention, having made its first appearance only four months earlier. Söderlund (1978, p. 96) lists the bank as “liquidated” and subsequently describes a takeover by Mälareprovisernas Bank as a “rescue operation” (1978, p. 100). The fact that Provinsbanken had “suspended payments” due to its “untenable position” was widely known and as it was one of Mälareproviserna Banken’s largest customers, the latter attempted to “save the remainder” (Söderlund 1978, p. 100-1). Indeed, it was Provinsbanken that took the initiative to approach Mälareprovisernas bank and omitted a number of financial details from its financial report for which it received criticism (*Svenska Dagbladet*, 28 October 1919, p. 3). This takeover was preceded by a distress event.

#### 45. **Bank AB Södra Sverige**

Classification	Non Distress
Date of Establishment	December 1901
Date of Acquisition	October 1919
Acquiring Bank	Stockholm/Svenska Handelsbank

This bank disappears from *Uppgifter om bankerna* in October 1919, though negotiations started in 1918. It was acquired by Stockholms Handelsbank which re-established itself with a new name at the same time (Svenska Handelsbanken) to reflect its newfound geographical spread as a result of this acquisition of the “Bank of the Southern Sweden”. The acquiring bank had emerged as one of the “most expansive banks in the country” and “it now gained branches in the south where it had not been previously represented” (Söderlund 1978, p. 100). There is no evidence of distress and this takeover was a strategic decision. On the contrary, there was a reluctance on the part of the leadership of the Bank AB Södra Sverige to sell and the initiative was solely Handelsbanken’s (*Dagens Nyheter*, 15 October 1918, p. 5). Through the acquisition, it would gain 255 bank branches and to incentivize the agreement, Bank AB Södra Sverige was encouraged to remain with the same leadership in Helsingborg, which would now serve as the bank’s head office (*Dagens Nyheter*, 15 October 1918, p. 5). Evidently, no distress preceded this takeover.

#### 46. **Stockholms Handelsbanken**

Classification	Non Distress
Date of Establishment	May 1871
Date of Acquisition	October 1919
Acquiring Bank	Svenska Handelsbanken

This bank disappears from *Uppgifter om bankerna* in October 1919 without mention. It had been established in 1871. However, following legislative changes and a merger in which it was involved, it changed its name and established itself as Svenska Handelsbanken with a head office in Helsingborg (Söderlund 1978, p. 100). This bank exit represents a name change rather than a merger or acquisition.

47. **Borås Folkbank**

Classification	Non distress
Date of Establishment	April 1907
Date of Acquisition	November 1919
Acquiring Bank	Enskilda Banken i Vänersborg

This small bank comprised one-tenth the size of its takeover bank in 1919. This takeover was “no different in principal to those which had occurred previously under similar circumstances” (Söderlund 1978, pp. 97-8.). Newspaper evidence, as well as official accounts (*Uppgifter om bankerna*) show that Borås Folkbank was experiencing growth in profits in 1918, when it declared a dividend of 6 per cent (*Svenska Dagbladet*, 30 January 1918, p. 11). One year later, it increased its dividend to 7 per cent and increased profits by almost 50 per cent (*Dagens Nyheter*, 6 February 1919, p. 11). In March 1919, the takeover agreement was verified at a shareholder meeting in which five Borås Folkbank shares were exchanged for one in the acquiring bank. The bank ceased to exist from November 1919 (*Uppgifter om bankerna*) and was deemed retroactively to have been taken over from 1 January 1919 (*Dagens Nyheter*, 6 February 1919, p. 11).

48. **AB Industribanken**

Classification	Distress
Date of Establishment	June 1917
Date of Acquisition	November 1919
Acquiring Bank	Göteborgs Handelsbank/ Becomes Nordiska Handelsbank

This merger was a “rescue operation of the type that would come to dominate the bank fusion culture of 1921. Industribank’s “turnover was weak for 1918 and it was heavily concentrated in illiquid investments....high proportion of lending against shares was also suspected as a reason for demise” (Söderlund 1978, p. 100). The board of the bank was forced to deny rumours that the bank was in difficulty at the beginning of 1919 (*Dagens Nyheter*, 9 January 1919, p. 10). The bank had been placed on an allied ‘Black List’ due to its German ties (*Svenska Dagbladet*, 5 January 1919, p. 11). Subsequent research confirmed the nature of the bank’s “risky growth” and showed that while average commercial bank lending against shares had comprised 46 per cent, in the case of Industribanken, the equivalent

share was 85 per cent (Broberg, 2003, p. 68, 71). The merger ended the cautious policy of Göteborgs Handelsbanken as it drew in the “increasingly unstable” and “weakened” Industribanken- the question remained as to how much awareness there was amongst the board of the takeover bank (Broberg, 2003, p. 76). A subsequent interpretation is that the bank’s leadership hid the “shaky state” of its position and thereby enabled a merger (Broberg, 2003, p. 76). Whether the acquiring bank were aware of the full extent of problems, it is unlikely that Industribanken could have continued and the event is therefore classified as a distressed exit. From this point on, the name of Göteborgs Handelsbank no longer applied, until after Nordiska Handelsbank was reconstructed by Kreditkassan in 1925 [See 66].

#### 49. **AB Värmlands Folkbank**

Classification	Non Distress
Date of Establishment	May 1917
Date of Acquisition	November 1919
Acquiring Bank	Enskilda Banken i Vänersborg

This merger was a continuance of Enskilda Banken i Vänersborg’s expansionary policy, as it took over Vara Bank in 1918 and at the conclusion of 1919 “had even extended as far as Värmland county, where it gained eleven offices through its takeover of Värmlands Folkbank” (Söderlund, 1978). Newspaper accounts show that there was large opposition in the local (Karlstad) chamber of commerce to the takeover. It was classified as one of those banks that had been started “as recently as two years ago” with “little else to motivate its establishment other than being absorbed into a larger bank at a higher price at the first opportunity” (*Dagens Nyheter*, 14 May 1919, p. 12). Nonetheless, the bank was not in difficulty and the merger was non-distress in its nature.

#### 50. **Hudiksvalls Kreditbank**

Classification	Non-Distress
Date of Establishment	July 1910
Date of Acquisition	April 1920
Acquiring Bank	Upplands Enskilda Bank

The turnover of Hudiksvalls Kreditbank represented only 2 per cent of Upplands Enskilda Bank at the point of takeover. The bank had previously experienced distress during the 1907 crisis as Hudiksvalls Folkbank and was reconstructed as the Kreditbank subsequently. During the last years of the War, turnover “grew rapidly, largely as a result of liberal lending against shares, funded by borrowing from Mälareprovisernas bank”, prompting the Bank Inspectorate to threaten a cancellation of the renewal of its charter due (Söderlund 1978, p. 101). However, no sign of distress could be found, upon the takeover.

It reported profits of SEK 75,000 in 1918 (*Svenska Dagbladet*, 8 February 1919, p. 10). Indeed it was a mystery why Upplands Enskilda Bank “paid such a high price”, but was probably the result of a desire to keep Mälareprovisernas Bank out of the area (Söderlund 1978, p. 101). Hudiksvalls Kreditbank paid a dividend of 10 per cent prior to being absorbed and the merger agreement was public knowledge in October 1919 (*Dagens Nyheter*, 26 October 1919, p. 11). This takeover was a non-distress event and it ceased to exist as a separate entity from April 1920 in official statistics (*Uppgifter om Banker*).

#### 51. **Bank AB Mellersta Sverige**

Classification	Distress
Date of Establishment	December 1918
Date of Acquisition	May 1920
Acquiring Bank	Östergötlands Enskilda Bank

This bank had commenced its activity as late as December 1918, one month after the end of World War 1. According to Söderlund (1978 p. 101), in the adverse post war economic conditions, it suffered immediate losses, which while manageable, convinced the majority ownership, AB Aronwitschs Intresser, to “liquidate instead of continuing as a going concern” (Söderlund 1978, p. 101). The negotiations had begun as early as September 1919 with Östergötlands Enskilda Bank, which acquired Bank AB Mellersta Sverige, in May 1920. The takeover was public knowledge and received government approval in February 1920 (*Dagens Nyheter*, 28 February 1920, p. 10). The bank’s assets were “purchased” by Östergötlands bank which was to offload Mellersta bank’s troubled assets by 1925 (*Svenska Dagbladet*, 28 February 1920, p. 10). Evidently, this bank experienced distress prior to absorption into Östergötlands Enskilda Bank.

#### 52. **AB Nya Banken**

Classification	Distress
Date of Establishment	October 1912
Date of Acquisition	May 1920
Acquiring Bank	Reconstructed as Bank AB Norden

Nya Banken was founded in 1912 and was compelled to undergo “reconstruction” in 1920 as Bank AB Norden. This was “only possible as a result of a capital injection from the shipping entrepreneur J. Ingmansson, who acquired majority ownership in the firm until his death in 1926” (Söderlund, 1978, p. 97, 105). It is for that reason that it is not listed as a “merger” by Söderlund (1978, p. 97, 105). However, *Uppgifter om bankerna* does list it as a merger in the balance sheets, in which it no longer exists from May 1920. Göteborgs bank did acquire some of its offices in Hälsingborg, Karlstad, Laxå, Västerås and



Södertälje and there is evidence that other banks acquired many of its branches elsewhere (*Svenska Dagbladet*, 7 April 1920, p. 11).

The bank's failure received widespread coverage. A "stormy meeting" which "concluded the liquidation" was reported in April 1920 (*Dagens Nyheter*, 28 April 1920, p. 5). The bank's Director, Mr. Aschberg received harsh criticism for the conduct of its banking business, in particular on account of failing to provide for sufficient losses at an earlier point in time (*Dagens Nyheter*, 28 April 1920, p. 5). It is apparent that the bank had many investments tied up in German marks and Russian roubles and the decline in both exchanges after the war was offered as the main cause of the bank's failure by Mr Aschberg in his statement of defence (*Dagens Nyheter*, 28 April 1920, p. 5).

### 53. AB Köpmannabanken

Classification	Distressed
Date of Establishment	Conversion in April 1918; Original Bank October 1883
Date of Acquisition	January 1921
Acquiring Bank	Södermanlands Enskilda Bank, Uplands Enskilda Bank, Värmlands Enskilda Bank, Skånska Banken, Skandinaviska Banken and Svenska Handelsbanken

The bank had originally converted or changed its name from Aktiebolaget arbetareringens bank, established in 1883 [See 30]. It was no longer listed in *Uppgifter om bankerna* from December 1920 and no notes pertaining to its fate were provided in that source. However, this bank's distressed assets and liabilities were split between six banks as it was liquidated (Söderlund 1978, p. 321). These were Södermanlands Enskilda Bank, Upplands Enskilda Bank, Värmlands Enskilda Bank, Skånska Banken, Skandinaviska Banken and Svenska Handelsbanken. The liquidation was completed in early 1921. The bank's director admitted in November 1920 that its liquidity was exhausted and it was widely acknowledged that due to the extent of the bank's problems "reconstruction or merger in the normal way was unthinkable" (*Svenska Dagbladet*, 19 November 1920, p. 7). The acquiring banks purchased only the salvageable assets, while the bank's "dead capital" (insolvency) was blamed on a number of "insecure claims" (on assets). These included doubtful credits of SEK 1.2 million, exposure to a failed shoe company to the value of SEK 2 million, concentration of lending to a large diesel company and share investments originally worth SEK 700,000 (book value), the market value of which had deteriorated (*Svenska Dagbladet*, 19 November 1920, p. 7). There is little doubt in contemporary sources are amongst subsequent historians that the bank experienced distress, compelling it to undergo liquidation.

### 54. Nylands Folkbank

Classification	Non- Distress
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Date of Establishment	April 1903
Date of Acquisition	April 1921
Acquiring Bank	Sundsvalls Enskilda Bank

This bank is listed amongst Söderlund's (1978, pp. 102-3) "rescue operations". It had been strained for some years and was described as early as 1909 as "one of the worst run banks in the country" (Söderlund 1978, pp. 104). It was taken over by Sundsvalls Enskilda Bank and no longer appears in the *Uppgifter om bankerna* from April 1921. It emerges from reporting that this merger was linked with expiring charters rather than distress, despite Söderlund's criticisms (*Svenska Dagbladet*, 9 November 1920, p. 11). The bank had four branches, which Sundsvall's bank was obliged to continue operating by Bank Inspektionen so that the takeover would not be detrimental to local banking facilities (*Dagens Nyheter*, 26 April 1921, p. 10). It had continued as a going concern up to the point of takeover and it reported profits of SEK 130,000 and declared a dividend of 9 per cent, while the merger was still under discussion (*Svenska Dagbladet*, 19 March 1920, p. 12). Weighing the sum of evidence, we lean on the side of caution and deem this takeover to be a non-distress exit from the banking population.

#### 55. Örebro Läns bank

Classification	Distressed
Date of Establishment	April 1918
Date of Acquisition	June 1921
Acquiring Bank	Göteborgs Bank

This bank was listed amongst Söderlund's (1978, pp. 102-3) "rescue operations" which occurred because of the "deflationary crisis and subsequent depression". Örebro Läns Bank was established in the last year of World War 1 and it was expected to develop into a "provincial bank" in the last years of revolt against the bank concentration trend of the 1910s. "As quickly as Örebro Enskilda Bank was acquired by Skandinaviska Kreditbanken, Örebro Läns bank was established to accommodate purely local interest" (*Dagens Nyheter*, 18 February 1921, p. 11). However, the demands for their local banking services was insufficient and it never provided "any essential service" for the local county (Söderlund 1978, pp. 102-3).

The earlier newspaper evidence does not entirely concur. For instance, *Dagens Nyheter* (18 February 1921, p. 11) reported that the acquisition, for Göteborgs bank, represented a "consistent and natural widening of its branch network". The same article reported that while Örebro bank's return on capital was "too low" (at 8-9 per cent) when compared with Göteborgsbanken's (13-14 per cent), a motivating force of the acquisition was an increase in this ratio (*Dagens Nyheter*, 18 February 1921, p. 11).

However, it became apparent upon the publication of its 1920 financial accounts, that many problems demanded attention before the final takeover terms were agreed. Auditors reported that due to poor allocation of credits, falling values of equity and poor lending decisions, the acquisition by Göteborg's bank was deemed "necessary" to continue as a going concern (*Svenska Dagbladet*, 10 March 1921, p. 11). Göteborgs bank acquired SEK10 million nominal shares for the price of SEK4 million of its own. As corroborated by (Söderlund 1978, pp. 103), it was a bank which could no longer maintain losses and could not be reconstructed- "the owners preferred mergers, and the write off of assets was achieved in that manner." The exit of this bank is therefore classified as a distress event.

#### 56. Ångermanlands Folkbank

Classification	Non-Distress
Date of Establishment	January 1912
Date of Acquisition	August 1921
Acquiring Bank	Svenska Handelsbanken

This bank had previously resisted pressure to merge with Norrlandsbanken. After an initial agreement with Norrlandsbank, growing opposition to the merger among notable Ångermanland owners culminated in fresh demands of a "significantly higher share price" than previously discussed (*Svenska Dagbladet*, 24 December 1916, p. 8). The Bank Inspectorate accepted the takeover by Svenska Handelsbanken, as the latter had already acquired Norrlandsbanken. In other words, the absorption of Ångermanlands Bank was a merger unlikely to negatively affect local credit conditions. By early 1919, Handelsbanken, through a subsidiary Handion, held 19,300 of total 20,000 of the shares in this Folkbank. However, in the first quarter of 1921 the merger was public knowledge (*Dagens Nyheter*, 24 March 1921, p. 12). Shortly afterwards, Handelsbanken itself experienced subsequent distress. No evidence could be found to suggest that Ångermanlands Folkbank experienced distress prior to takeover. The note in *Uppgifter om bankerna* merely reports that it has ceased activity and has been taken over by Handelsbanken (September 1921).

#### 57. AB Affärsbanken

Classification	Distressed
Date of Establishment	November 1917
Date of Acquisition	February 1922
Acquiring Bank	Södermanlands Enskilda Bank

This bank was liquidated in a similar manner to Köppmanabanken's, where the acquirers chose which assets they wished to take on, leaving the irrecoverable assets with the original bank as it went into liquidation (Söderlund 1978, pp. 104-5). Södermanlandsbanken was keen to announce that it acquired only a fraction of the assets as part of the agreement (*Dagens Nyheter*, 19 February 1922, p. 11). The motivation for the bank merger was cited as due to “general economic conditions, not least for the minor banks, in a particularly uncertain future” agreement (*Dagens Nyheter*, 19 February 1922, p. 11). The voluntary liquidation was agreed prior to the takeover on 17 March 1922 (*Svenska Dagbladet*, 18 March 1922, p. 11).

#### **58. Kopparbergs Enskilda Bank**

Classification	Distressed
Date of Establishment	November 1835
Date of Acquisition	June 1922
Acquiring Bank	Göteborgs Bank

Prior to its acquisition of Tjänstemannabanken, Kopparbergs Enskilda Bank was regarded as one of the most solvent and “conservatively managed banks” in Sweden (Söderlund 1978, p. 104). When it was acquired less than four years later, it had “suspended payments” (Söderlund 1978, p. 360) and was operating at a “total loss” (Söderlund 1978, p. 104). Shareholders of the bank received only one quarter of their nominal holdings in the exchange, which was fiercely resisted by locals in Dalarne. They instead wanted to restructure the bank, but it was reported that the recovery of many of the bank's assets was uncertain (*Dagens Nyheter*, 4 March 1922, p. 1). The Bank Inspector, von Krusenstjerna, received subsequent criticism for entirely underestimating the “high degree of damage” that would befall Göteborgs Bank, as a result of its acquisition of the “deteriorated” assets of Kopparbergs Enskilda Bank (Söderlund 1978, p. 347). The exit of this bank is therefore classified as a distress event.

#### **59. Sydsvenska Kreditaktiebolag**

Classification	Distressed
Date of Establishment	August 1896
Date of Acquisition	Liquidated June 1922
Acquiring Bank	N/A

This bank was one of the largest well-known banks to experience distress during the 1920s crisis. Its losses were so large (60 million SEK) that it could only be reconstructed with the help of other commercial bank investments. As these banks' liquidity was already “strained” (Söderlund 1978, pp. 360-1), the Kreditkassan AB fund was established in April 1922 with a view to unwinding this one bank

(Ögren 2018), though eventually it was required to support other banking entities. The shareholders bore the losses (Söderlund 1978, p. 360) and an angry letter from one such shareholder appeared in *Dagens Nyheter* on (24 May 1922 p. 1) which summarised the major grievances: “the general depression is not a sufficient excuse for the catastrophe which befell the bank....the leadership of the bank, until the very last moment, did everything to bluff...there are many of us who for that reason, are now ruined”. The same article continued that the Director of the Bank, Mr. Qvitslund, blamed the initial fall of the bank’s share price on the general depression admitting that the bank had “naturally occurred some losses and rejecting that confidence was lost in the bank.” With this in mind, an attempt was made to “conjure” a profit and declare a dividend for 1921 which the Bank Inspectorate rejected. With these details, we are able to classify this bank as a distressed exit from the bank population.

#### 60. Bollnäs Folkbank

Classification	Distressed
Date of Establishment	October 1894
Date of Acquisition	November 1922
Acquiring Bank	Sundsvalls Enskilda Bank

This bank had been in a weakened state for some years. During the war years, it lost its reputation as one of the most solvent folkbanks through engaging in increasingly “speculative” wartime enterprise (Söderlund 1978, p. 104). It engaged in heavy competition with other banks in Bollnäs, through financing speculation in shares and ultimately invested in more loss making enterprises than it could bear (Söderlund 1978, p. 104). The bank had losses of SEK 3.28 million and an extra ordinary meeting of shareholders was held in November 1922 to rescue the shareholders from further losses and to protect depositors (*Svenska Dagbladet*, 23 November 1922, p. 15). The matter to be decided was whether to fully liquidate or seek the offer from Sundsvalls bank which many shareholders considered a “scrap value price” at 15 per cent of nominal value. The bank had made headlines days previously as it had resisted independent attempts by auditors to value the firm forcing one to resign (*Dagens Nyheter*, 16 November 1922, p. 10). The evidence clearly suggests that the bank merger was motivated and preceded by distress.

#### 61. Mälareprovisernas Bank

Classification	Distressed
Date of Establishment	January 1847 (as Enskilda bank)
Date of Acquisition	December 1922
Acquiring Bank	Reconstructed as ‘Mälarebanken’

Mälareprovisernas Bank had an established reputation in Swedish banking. It had taken over three banks in the consolidation that followed World War 1 (Dalarnes Folkbank, Medelpads Lantmannabank and Provinsbanken). However, this bank “suspended payments” (Söderlund 1978, p. 360) and was reconstructed during the crisis as ‘Mälarebanken’ [see 67], with the liquidation concluding by August 1922 (Söderlund 1978, p. 105). The board of management was accused of being “guilty of a great deal of stupidity and cannot blame the ongoing crisis...more than 24 million SEK has gone to two goulash firms...and an arrogant madman, has squandered the money has been supported by the board...one also has to ask, where were the eyes of the Bank Inspectorate in all this!” (*Svenska Dagbladet*, 18 March 1922, p. 11). Evidently, this bank fell into distress and was subsequently restructured. The reconstruction of the “previously liquidated Mälareprovisernas bank” was delayed due to disagreement amongst the leadership of the bank but was initiated as early as March 1922 (*Svenska Dagbladet*, 8 June 1922, p. 3). As well as realised losses, the bank made provisions for another SEK 60 million of future losses, which subsequently proved to be an underestimate ([see 67]; Söderlund 1978, p. 105).

## 62. Jämtlandsbanken

Classification	Distressed
Date of Establishment	November 1917
Date of Acquisition	March 1923
Acquiring Bank	Jämtlands Folkbank

Apparently, the demands for local banking services was totally insufficient for this bank as Söderlund stressed and it never provided “any essential service” for the local county; its subsequent merger has been described amongst the “rescue operations” (Söderlund 1978, pp. 102-3). It merged with Jämtlands Folkbank in 1923 and was purchased (SEK 2.3 million nominal) for only SEK 0.8 million by the latter. This was classified as a bank which could no longer maintain losses and could not be reconstructed- “the owners preferred mergers, and the write off of assets was achieved in that manner” (Söderlund 1978, pp. 103). The auditors announced that the “depression alone could not be offered as an explanation for the excessive losses” and blamed the “excesses of liberally granted credit far beyond the amount expected of a little bank” which had “placed too much lending in too few hands” (*Svenska Dagbladet*, 29 March 1923, p. 18). Evidently, this bank was distressed prior to the merger.

## 63. Svenska Lantmännens Bank

Classification	Distressed
Date of Establishment	May 1917
Date of Acquisition	March 1923
Acquiring Bank	Reconstructed (Kreditkassan)

Lantmännens Bank began acquiring other banks almost immediately after it formed, such as Halmstads Folkbank and Blekinge Bank. These mergers led to a “build up of a nationwide office and branch network included in their strategic plans” (Söderlund 1978, p. 97). As early as 1920, its profit and loss account showed its “distressed position” and all proposed dividend payments were stopped, with the profits withheld to absorb the year’s losses (Söderlund 1978, p. 364). By the end of 1921, despite suggestions of 4 per cent dividend payments, even a “reasonable valuation of assets would have revealed that at least 10 per cent of the bank’s equity had been wiped out” (Söderlund 1978, p. 364). Over the year 1922, as it was on the “brink of suspending payments” it was compelled to approach Kreditkassan AB and was wound up in 1923 (Söderlund 1978, pp 364-6). The “collapse” of the bank was a “sensational affair” which reached the front page of *Dagens Nyheter* (16 March 1923, p. 1) when parliament discussed how the bank should be rescued, as it nursed losses of SEK 1.1 million. Many politicians expressed “shock” at the extent of the support the bank was to receive. The board of directors’ report cited their interpretation of the causes: “exchange rates continue to fluctuate as violently as last year, prices have fallen” and further extensive write-offs of share values against which the bank had lent were expected (*Dagens Nyheter*, 16 March 1923, p. 1). It was widely acknowledged that this bank succumbed to distress during the crisis.

#### **64. Hallands Lantmännens Bank**

Classification	Distressed
Date of Establishment	May 1917
Date of Acquisition	January 1924
Acquiring Bank	Nordiska Handelsbanken

According to Söderlund (1978, p. 103), the only class of lending this category of bank was involved with was of a riskier type “which translated into losses and large write-offs on asset values”. Indeed, Hallands Lantmännens bank was listed amongst the “rescue operations” covered in that history (Söderlund 1978, pp. 102-3). While initially, some reports suggested that Göteborgs Bank was interested in purchasing it, it transpired that the bank expected losses of SEK 246,320, which reduced the reserve capital to only SEK 25,000 (*Svenska Dagbladet*, 13 June 1923, p. 3). By October 1932, as the expected merger had not transpired, a charter was sought for a reconstruction of the bank, “the intention of which was to reduce Hallands Lantmannabank’s assets to a more realistic value, given prevailing conditions” (*Dagens Nyheter*, 3 October 1923. p. 13). The windup of the bank concluded in January 1924, when it was liquidated and its assets were absorbed into Nordiska Handelsbanken (*Svenska Dagbladet*, 13 March 1924, p. 15). The saga of the bank’s increasingly transparent distress was public knowledge during its last twelve months of existence.

#### **65. Aktiebolaget Övre Västerdalarnes Bank**

Classification	Distressed
Date of Establishment	May 1918
Date of Acquisition	November 1924
Acquiring Bank	Göteborgs Bank

In its financial year-end 1922, this bank had shed the bulk of its liquid resources with the exception of its share capital to provide for losses, with only SEK 2,000 remaining in its reserve fund (Söderlund 1978, p. 104). Write-offs of SEK 281,000 were reported at the beginning of 1923, which accompanied a loss of SEK 167,341 (*Svenska Dagbladet*, 17 March 1923, p. 17). The situation deteriorated even further during the year, when it was discovered that its legal liquidity (cash reserve) requirements had not been met for some months (Söderlund 1978, p. 104). The bank withheld dividend payments (*Dagens Nyheter*, 8 March 1924, p. 13) and later suffered from “note forgeries” to add to its difficulties (*Svenska Dagbladet*, 8 March 1924, p. 13). The bank’s assets were acquired by Göteborgs bank after it entered “liquidation” in November 1924 (*Dagens Nyheter*, 22 July 1925, p. 10).

#### **66. Nordiska Handelsbanken**

Classification	Distressed
Date of Establishment	December 1919
Date of Acquisition	December 1925
Acquiring Bank	Reconstructed (Kreditkassan)

The agreement which restructured Nordiska Handelsbanken made the front page of *Dagens Nyheter* (12 September 1925, p. 1), such was its significance. A new bank, with the old name of Göteborgs Handelsbank, was to be constructed in which Kreditkassan would provide SEK 30 million. Nordiska Handelsbanken attempted to tackle the deterioration of its balance sheet at an early stage, accepting write-downs so large that “it seemed that the board had accepted to face all of the loan losses, realised and provided for, at the same time and up front” (Söderlund 1978, p. 367). However, the following year, losses consumed a quarter of all the bank’s equity capital- wiping out all of the reserve fund and a tenth of the initial share capital by August 1925 (Söderlund 1978, p. 367). As part of the restructuring agreement with Kreditkassan, the bank’s operations in Stockholm and Uppland were to be entirely liquidated (*Dagens Nyheter*, 12 September 1925, p. 1). This was intended to re-establish the bank’s operating capacity in its initial region whilst reducing costs considerably. As is accepted by both contemporary accounts and subsequent scholars, this large bank was wound up in distress.

#### **67. AB Mälarebanken**



Classification	Distressed
Date of Establishment	December 1922; Original Bank January 1847
Date of Acquisition	April 1926
Acquiring Bank	Svenska Handelsbanken

This bank was a poorly reconstructed version of Mälareprovisernas Bank. The shortfall of capital (one tenth of the initial) which continued to plague the newly reconstructed bank could not be raised amongst existing owners and the only alternative to bankruptcy was acquisition by another bank. This occurred when Svenska Handelsbanken absorbed it in 1926 when it exchanged a mere SEK 14.4 million for a book value of SEK 34 million of Mälarebanken's assets (Söderlund 1978, p. 105; *Svenska Dagbladet*, 30 September 1925, p. 22). Newspaper reports in late 1925 confirmed that Mälarebanken "continues to suffer from burdensome loans" and that as a result, its profits and liquidity had been "dragged down" (*Dagens Nyheter*, 20 October 1925, p. 13). While the coming merger was public knowledge that year, details had yet to be finalised. The benefits of the acquisition by Handelsbanken were listed: as well as achieving a steep discount on the purchase, it was hoped that in time "some of the significant write-downs on assets and the substantial amount of frozen credit may be recovered" (*Svenska Dagbladet*, 30 September 1925, p. 22). At the end of May, "the name of Mälarebanken officially disappears" (*Dagens Nyheter*, 26 May 1926, p. 13) and the bank ceased to appear in the official accounts from April (*Uppgifter om bankerna*).

#### **68. Bank AB Norden**

Classification	Non distress
Date of Establishment	May 1920; Original Bank was Nya Banken (October 1912)
Date of Acquisition	April 1927
Acquiring Bank	Södermanlands Enskilda Bank

This bank was a reconstructed version of AB Nya Banken [see 52] in 1920. While Söderlund emphasises the death of its majority owner in 1926 as a leading cause of the merger, newspaper reports paint a different picture. *Dagens Nyheter* (15 January 1927, p. 13) cites the motivation for the bank merger: "the smaller bank has discovered that it is too small to operate profitably and the larger bank has found a tempting opportunity to spread its activities." Nonetheless, Södermanland's bank refused to take on all of the assets of Bank AB Norden. This was due to the terms of the merger, which stated that Södermanlands Bank could "choose a certain part of the assets" which it "after due consideration, deemed secure" and would "pay any difference between the purchased assets and liabilities in cash" (*Dagens Nyheter*, 15 January 1927, p. 13). The remaining assets were divided amongst the previous shareholders (Söderlund 1978, p. 105). While it appears that this bank had some credits, which were not

desired by Södermanlands bank, no evidence could be uncovered to suggest that those credits were irrecoverable or that the bank was in distress prior to being absorbed.

#### **69. Norrköpings Enskilda Bank**

Classification	Non distress
Date of Establishment	September 1856
Date of Acquisition	March 1927
Acquiring Bank	Östergötlands Enskilda Bank

The two principal banks in the region of Östergötland (Norrköpings Enskilda Bank and Östergötlands Enskilda Bank) were about the same size and their activities were very similar (Söderlund 1978, p. 105). Norrköpings Enskilda bank was one of the most liquid of all Swedish banks, with a resilient portfolio (Söderlund 1978, p. 105). It merged with Östergötlands Enskilda Bank in April 1927 at a discount as the latter bank required “a certain amount of” debt writedowns that were accounted for in the merger. Norrköpings Enskilda Bank no longer appears in the list (*Uppgifter om bankerna*) from March and the merger represented a name change to Östergötlands Enskilda Bank. According to Söderlund (1978, p. 105), the operation was a “rationalisation action”. Newspapers reported similarly: “the merger occurred for practical reasons...due to the fact that both banks held branches in the same locality, savings could be achieved by joining up” (*Svenska Dagbladet*, 9 December 1926, p. 3). Evidently, neither bank was in distress prior to the merger.

#### **70. Jämtlands Folkbank**

Classification	Distressed
Date of Establishment	January 1874
Date of Acquisition	February 1926
Acquiring Bank	Reconstructed (Kreditkassan)

Following the banking crisis of 1907, Jämtland’s Folkbank had acquired the remains of Ströms Folkbank, which had to be wound up because of large writeoffs (Grodecka et al, 2021). Söderlund (1978, p. 368) describes the cause of this bank’s difficulties as “part embezzlement of over SEK 2 million and part credit losses, specifically in the timber industry.” During the 1920s crisis, it acquired Jämtlandsbanken (*Svenska Dagbladet*, 11 December 1922, p. 18), despite experiencing its own difficulties as early as 1922 (Söderlund, 1978, p. 367). Indeed, official accounts showed that the board made provisions for “embezzlement” that it had uncovered (*Uppgifter om bankerna*). That takeover, along with many other engagements meant that “the bank’s position has been very weak over the previous four years and no dividend payments have been made. The older loans continue to weigh

‘heavily on the bank’ (*Svenska Dagbladet*, 3 February 1926, p. 12). Such large write-offs of loans were made in 1921 that it was believed then that they covered the damage, reducing the equity capital considerably (Söderlund, 1978, p. 367). The Bank Inspectorate had warned prior to the takeover of Jämtlandsbanken that the Folkbank’s liquidity was already insufficient and that the takeover would likely lead to a deterioration in that position’ (*Svenska Dagbladet*, 3 February 1926, p. 12). In March, SEK 3 million of capital was injected in the reconstruction of the bank according to legal code 92§ (*Uppgifter om bankerna*). This bank’s exit from the population (as a reconstruction under Kreditkassan) is deemed as a distress event.

#### **71. Svenska Handelsbanken**

Classification	Distressed
Date of Establishment	May 1871; October 1919 (name change)
Date of Acquisition	January 1923
Acquiring Bank	Reconstructed (Kreditkassan)

The fate of Svenska Handelsbanken, originally Stockholms Handelsbanken, was widely reported by contemporary newspaper due to its size and the number of stakeholders affected. The fact that Kreditkassan was involved in restructuring the bank points to acute difficulties. In an exhaustive article on how the bank should be consolidated, Marcus Wallenberg published a letter in *Svenska Dagbladet* (22 February 1922, p. 5) in which he estimated that over SEK 95 million would need to be written off “immediately”. At the end of 1922, the bank had written off SEK 100 million and a large part of those losses were linked to the bank’s ties with a utility company (*Dagens Nyheter*, 8 November 1922, p. 1). Kreditkassan’s consolidation plan was drafted in November 1922 when the bank’s board recognised that losses were significantly larger than previously thought (*Dagens Nyheter*, 28 February 1923, p. 8). The restructuring initiative was approved by the bank’s board four months later, as no alternative plan was devised in the interim (*Dagens Nyheter*, 28 February 1923, p. 8). The exit represents a distressed event and was reported as such in January 1923 by official sources (*Uppgifter om bankerna*).

#### **72. Värmlands Enskilda Bank**

Classification	Distressed
Date of Establishment	May 1832
Date of Acquisition	January 1923
Acquiring Bank	Reconstructed (Kreditkassan)

Värmlands Enskilda Bank was one of the oldest banks in the Swedish commercial banking system. Following the banking crisis of 1907, it acquired the remains of Kristinehamns Enskilda bank in 1911

at a discount as it inherited the bad debts of the latter (Benckert, 1976, pp. 21-2). In November 1922, reports emerged that the bank was required to write off SEK 50 million in loans as only 15 per cent of the original equity remained after sustained losses (*Dagens Nyheter*, 29 November 1922, p. 1). The bulk of the troubled loans represented loans against shares as collateral to industries situated outside of Värmland's region (*Dagens Nyheter*, 29 November 1922, p. 1). Kreditkassan became involved in the recapitalisation process and Värmlands Enskilda Bank received a capital injection to the value of SEK 18.9 million in January 1923 under the Legal Code §209 (*Uppgifter om bankerna*). Subsequent historians (Söderlund 1978) and voluminous contemporary newspaper accounts verify that this bank was in distress.

### **73. Smålands Enskilda Bank**

Classification	Distress
Date of Establishment	May 1837
Date of Acquisition	January 1923
Acquiring Bank	Reconstructed (Kreditkassan)

In the autumn of 1922, Smålandsbanken's problems became public information. One headline stated the difficulties bluntly: "Småland has lost over SEK 11 million" and the article continued that the Bank's Director, Mr. Cassel expressed some hope that a reconstruction could set the bank on a sound footing again (*Dagens Nyheter*, 23 September 1922, p. 9). In the period prior to the reconstruction, it was subsequently reported that SEK 21.5 million was required in write-offs (*Svenska Dagbladet*, 28 February 1923, p. 15). The prime causes of the distress were listed: general depression, the bank's rapid expansion during the war leading to undue care in monitoring loans, and the acute fall in timber prices which the bank was totally unprepared for (*Svenska Dagbladet*, 28 February 1923, p. 15). Kreditkassan did become involved and In the official statistics, Smålands Enskilda Bank received a capital injection to the value of SEK 11.3 million in January 1923 under the Legal Code §209 (*Uppgifter om bankerna*).

### **74. AB Bohusbanken**

Classification	Distress
Date of Establishment	March 1919
Date of Acquisition	January 1923
Acquiring Bank	Reconstructed (Kreditkassan)

Though the official statistics report that Bohusbanken received a capital injection to the value of SEK 216,000 in January 1923 under the Legal Code §92 (*Uppgifter om bankerna*), the recapitalisation was reported in early December 1922 (*Svenska Dagbladet*, 7 December 1922, p. 15). In 1924, the amount

was increased to SEK 800,000 (*Uppgifter om bankerna*). According to the Law (§92), any bank which had lost more than 1/10 of its equity capital must approach the authorities to liquidate in order to benefit from a recapitalisation via Kreditkassan, which Bohusbanken promptly did (*Dagens Nyheter*, 1 December 1922, p. 18). The small bank continued to appear in the official statistics after both recapitalisations (*Uppgifter om bankerna*). Subsequent reports on the bank's performance suggest that the reconstruction was too expensive for their earlier shareholders (*Dagens Nyheter*, 26 March 1923, p. 15). The fact that the bank required two recapitalisations from Kreditkassan leads us to conclude that it was distressed during the crisis.

#### **75. Skandinaviska Banken/ Kreditaktiebankbolaget**

Classification	Distress
Date of Establishment	November 1863
Date of Acquisition	March 1925
Acquiring Bank	Reconstructed (Kreditkassan)

This bank was one of the very first limited liability banks established in Sweden, founded in November 1863. The bank weathered the storm of 1907 and had merged for strategic reasons with Industrikredit AB i Stockholm (Grodecka et al, 2021). The biographer of the bank, Ernst Söderlund (1978, p. 397) described the years 1923-4 as the most difficult in its history, as its assets comprised a large volume of “frozen credits”. While some of the bank's customers had “recovered from their reliance on bank credit” other large customers such as TGO suffered acutely due to the Ruhr occupation by allied troops, as the sale of ore collapsed by one half (Söderlund, 1978, p. 397). By mid-1923, the bank's difficulties were public knowledge as *Dagens Nyheter* (21 June 1923, p. 8) reported on another large customer's (Baltic AB) losses, irrecoverable loans and assets, some of which were based in Petrograd- the bank was owed SEK 26 million. By the end of 1924, the bank's position had become “so strained that a capital injection or some other means of support, was unavoidable” (Söderlund, 1978, pp. 402-3). In March 1925, the official accounts register that the bank received such support as it acquired SEK 39.8 million in a subordinated loan (*Uppgifter om bankerna*) and the loan was to be repaid in full after 15 years at a rate of interest of 5.5 per cent (Söderlund, 1978, p. 405).

## Bibliography

- Bankmatrikel, S. (1911), Utarbetad af C.H. Sjöstedt, Wretmans Boktryckeri, Uppsala.
- Benckert, R. , (1976) Benckerts Testamente. Konfidentiella Anteckningar Angående Bankinspektionens Verksamhet. Norstedts Tryckeri, Stockholm.
- Broberg, O. (2003) *Svenska värden. En studie av riskkapital och industriell omvandling 1916-25* Licentiatsavhandling: Göteborgs Universitet.
- Dagens Nyheter*; Daily newspaper (various issues)
- Grodecka, A., Kenny, S. and Ögren, A. (2021) “Predictors of bank distress: The 1907 crisis in Sweden” *Explorations in Economic History* 80.
- Kenny, S., Lennard, J. and Turner, J.D. (2021), ‘The Macroeconomic Effects of Banking Crises: Evidence from the United Kingdom, 1750-1938’ (with Jason Lennard & John D. Turner). *Explorations in Economic History* (79) <https://doi.org/10.1016/j.eeh.2020.101357>
- Kenny, S. and Turner, J.D. (2020) ‘Wildcat Bankers or Political Failure? The Irish Financial Pantomime, 1797-1826’. *European Review of Economic History* 24 (3), pp. 522-577 <https://academic.oup.com/ereh/article/24/3/522/5669868>
- Ögren, A. (2018) Banking Crises and Lender of Last Resort in Theory and Practice in Swedish History, 1850–2010 in Rockoff, H. & Suto, I. (Eds.) *Coping with Financial Crises* Springer Nature Singapore, pp. 47-76
- Söderlund, E. , (1964) *Skandinaviska Banken i det Svenska Bankväsendets Historia 1864–1914*. Esselte AB, Stockholm.
- Söderlund, E. (1978) *Skandinaviska Banken i det Svenska Bankväsendets Historia 1914–1939*. Almqvist&Wiksell, Uppsala. *Svenska Dagbladet*; Daily newspaper (various issues)
- Svenska Dagbladet*
- Undersökningsberättelser rörande upphörda affärsbanker* , 1908-38 (Riksarkivet; 22)
- Uppgifter om Bankerna*: Statistics Sweden. (1913–26). Statistiska meddelanden: Uppgifter om bankerna [Statistical messages: Information about the banks]. Stockholm: Statistics Sweden.
- U.S. Commerce Reports [Development of Swedish Banks]* Vol 4, Q4 1917

## Appendix 2: Sample Banks

Name of Bank	Established	Exit	Distress/Non-Distress
<i>Östergötlands enskilda bank</i>	02/1837		-
<i>Aktiebolaget Luleå folkbank</i>	07/1899		-
<i>Stockholms enskilda bank</i>	07/1856		-
<i>Upplands enskilda bank</i>	09/1864		-
<i>Sundsvalls enskilda bank</i>	06/1864		-
<i>Aktiebolaget Örebro folkbank</i>	04/1905		-
<i>Södermanlands enskilda bank</i>	01/1867		-
<i>Stockholms inteckningsgarantiaktiebolag</i>	04/1869		-
<i>Aktiebolaget Göteborgs folkbank</i>	02/1871		-
<i>Aktiebolaget Göteborgs bank</i>	01/1858		-
<i>Enskilda banken i Vänersborg</i>	09/1864		-
<i>Aktiebolaget Medelpads lantmannabank</i>	03/1906		-
<i>Aktiebolaget Hjo bank</i>	03/1907		-
<i>Aktiebolaget Gotlands bank</i>	01/1908		-
<i>Aktiebolaget Sundsvalls kreditbank</i>	07/1910		-
<i>Skaraborgs enskilda bank</i>	06/1911		-
<i>Aktiebolaget Norrköpings folkbank</i>	01/1912		-
<i>Aktiebolaget Dalslands bank</i>	06/1918		-
<i>Aktiebolaget Borås bank</i>	10/1918		-
<i>Aktiebolaget privatbanken</i>	01/1913	01/1919	D
<i>Aktiebolaget industribanken</i>	06/1917	11/1919	D
<i>Aktiebolaget nya banken</i>	10/1912	05/1920	D
<i>Aktiebolaget köpmannabanken</i>	04/1918*	01/1921	D
<i>Aktiebolaget Örebro läns bank</i>	04/1918	06/1921	D
<i>Aktiebolaget Affärsbanken</i>	11/1917	02/1922	D
<i>Kopparbergs enskilda bank</i>	11/1835	06/1922	D
<i>Sydsvenska kreditaktiebolaget</i>	08/1896	06/1922	D
<i>Aktiebolaget Bollnäs folkbank</i>	10/1894	11/1922	D
<i>Aktiebolaget Mälareprovinsernas bank</i>	01/1847	12/1922	D
<i>Aktiebolaget Jämtlands banken</i>	11/1917	03/1923	D
<i>Aktiebolaget Svenska lantmännens bank</i>	05/1917	03/1923	D
<i>Aktiebolaget Hallands lantmannabank</i>	05/1917	01/1924	D
<i>Aktiebolaget Övre Västerdalarnes bank</i>	05/1918	11/1924	D
<i>Aktiebolaget Jämtlands folkbank</i>	01/1874	02/1922	D
<i>Aktiebolaget Svenska handelsbanken</i>	05/1871	01/1923	D
<i>Värmlands enskilda bank</i>	05/1832	01/1923	D
<i>Smålands enskilda bank</i>	05/1837	01/1923	D
<i>Skandinaviska kreditaktiebolaget</i>	11/1863	03/1925	D
<i>Aktiebolaget Gävleborgs folkbank</i>	10/1905	07/1919	ND
<i>Aktiebolaget Dalarnes folkbank</i>	12/1903	08/1919	ND
<i>Aktiebolaget Medelpads landtmannabank</i>	03/1906	08/1919	ND
<i>Aktiebolaget skånska handelsbanken</i>	03/1896	09/1919	ND
<i>Bankaktiebolaget södra Sverige</i>	12/1901	10/1919	ND

<i>Aktiebolaget Borås folkbank</i>	04/1907	11/1919	ND
<i>Aktiebolaget Värmlands folkbank</i>	05/1917	11/1919	ND
<i>Aktiebolaget Hudiksvalls kreditbank</i>	07/1910	04/1920	ND
<i>Aktiebolaget Nylands folkbank</i>	04/1903	04/1921	ND
<i>Aktiebolaget Ångermanlands folkbank</i>	01/1912	08/1921	ND
<i>Norrköpings enskilda bank</i>	09/1856	03/1927	ND

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Source: See Text