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Central bank liquidity transformation and collateral frameworks: Lessons from 1682

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Central Bank Liquidity Transformation and Collateral Frameworks – Lessons from 1682

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Abstract:

Central bank collateral frameworks and the liquidity transformation they allow for play important roles for financing long term economic projects (and thereby economic growth) while preserving financial stability. To shed light on early central bank collateral frameworks, this note analyses a document of the Riksens ständers lånebank of 1682 which pledges real estate to serve as collateral for a loan of the Riksbank to the farmer Olof Olofsson. A transcription and translation are provided and the document is analyzed in the context of the 17th century operations, balance sheet, and mandate of the Riksens ständers lånebank and the related literature. We recall the role of central bank credit to private debtors in early central banking, and that, contrary to some prominent views, government financing was more the exception than the rule as key reason to establish and operate central banks before 1700. We also derive lessons for today's central bank collateral frameworks and their role in liquidity transformation.

Keywords: Central bank collateral, early central banking, central bank operations

JEL–Classification: E32, E5, N23

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Central Bank Liquidity Transformation and Collateral Frameworks – Lessons from 1682

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1. Introduction[1]

Central bank collateral frameworks and the liquidity transformation they allow for play important roles for financing long term economic projects (and thereby economic growth) while preserving financial stability (Singh, 2014; Nyborg, 2016, Bindseil et al. 2017). To shed light on early central bank collateral frameworks, this note analyses a previously unknown type of document of the Riksens ständers lånebank of 1682 which pledges real estate to serve as collateral for a loan of the bank to the farmer Olof Olofsson[2]. We undertake a thorough transcription (annex) and translation (see below) of the document. While the literature on the early history of the Swedish central bank discusses with quite some detail its asset operations (e.g. Heckscher, 1934, Wetterberg, 2009, Tarkka, 2009), no transcription, translation or more detailed analysis of such a document has yet been made available to the public. Section 2 provides a translation and analysis of the document. Section 3 discusses lessons for our understanding of early central banking. Section 4 concludes by deriving lessons for today.

[1] We would like to thank Fernando Monar and Olaf Rappe for helpful comments. This note reflects the views of the authors, and not necessarily the views of the Deutsche Bundesbank or the European Central Bank. The note had essentially been prepared in early 2020 but was only finalized for publication in May 2025.

[2] The paper was offered for sale in an auction for historical securities in January 2020. The accompanying text explained that the paper dated 23 September 1682 would be a "Confirmation of a loan with a piece of land as security… Although this security was not a government bond, the possibility was foreseen to transform this security into a government bond if the Bank would consider it opportune or necessary". We confirm the first statement but not the second. HWPH Historisches Wertpapierhaus AG, 54. Auktion, Nr. 183, 25 January 2020, https://www.hwph.de/historische-wertpapiere/losnr-auktnr-pa55-183.html. Accessed 9 July 2025.

2. Content of the document of 1682

The text on the main side of the document (figure 1; transcribed in annex) can be translated as follows:

> We, the undersigned, hereby let you know that, at the friendly request and demand of the farmer Olof Olofsson in Tickstad in the parish of Rö, we have undertaken to pledge his freeholding tax land Åkerby in Närtuna parish of six öres 4 örtug land at the Riksens Ständers lending bank in Stockholm. It is his (i.e., Olof Olofssons) landed property and pays the interest that the presented signed specification shows. In addition, (we let you know) that the same good is in no way mortgaged or should be mortgaged afterwards as long as it is pledged to the bank and this borrowed money is unpaid. In addition, (we let you know) that the sum of 43 Carolin, which he borrowed on the tax land, should be repaid in full with capital and interest at the specified time, unless he was granted an extension. If this is not the case, and if it should be judged differently, or even if the deposit is not sufficient to pay the bank in full, we undertake one for all and all for one in the strongest (way), without exception and excuse, strict, good−willed and inevitable or with immediate implementation, any resulting damage and inconvenience to the bank with the first as the last penny, as our own guilt, as the royal confirmation allows. For additional certainty and even better insurance, we have confirmed our signature and usual signs with our own hands.
>
> Given at Stockholm, September 23, 1682
>
> Joran Holm
>
> Louis Fledorph

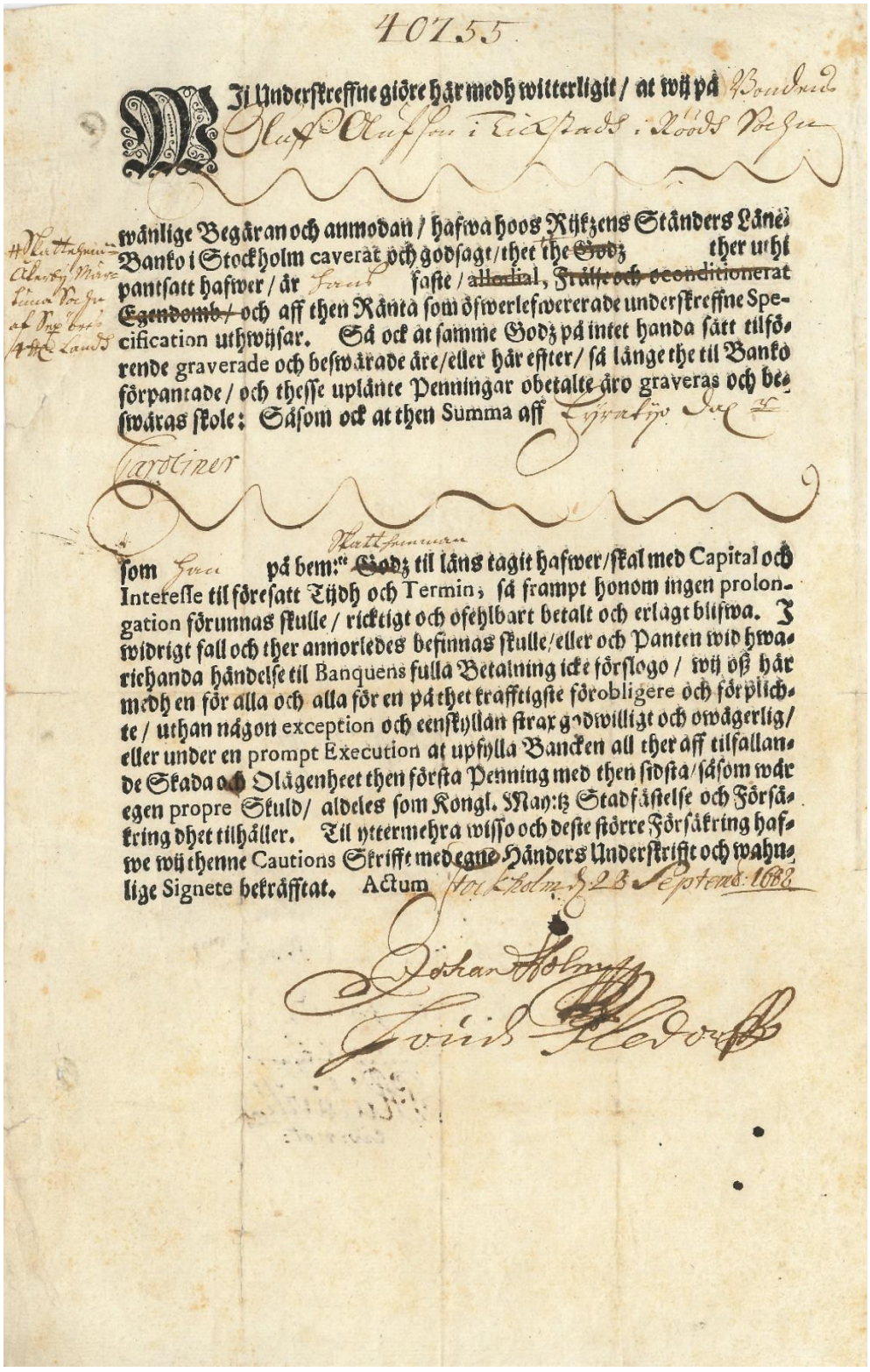

Figure 1: Riksens ständers lånebank, collateralised loan of 1682[3]

[3] Photographic reproduction by the authors.

The document is thus a pledge and guarantee regarding real estate to serve as collateral for a loan of the bank to the farmer Olof Olofsson from the parish of Rö, 50 kilometers north of Stockholm. The real estate is owned by Olof Olofsson, and the pledge is requested by him, but undertaken upon his request by two other persons, Johan Holm and Louis Fledorph. These two also guarantee, jointly and severally, the validity and sufficiency of the pledge in case of the borrower's default.

The reverse side of the document states that (Figure 2; transcript in annex):

> On November 7, 1703, this deposit and insurance letter from the Ständers Banco of the Royal Majesty was registered for legal security in the civic register, which is attested by notary P. Hulåvillius.

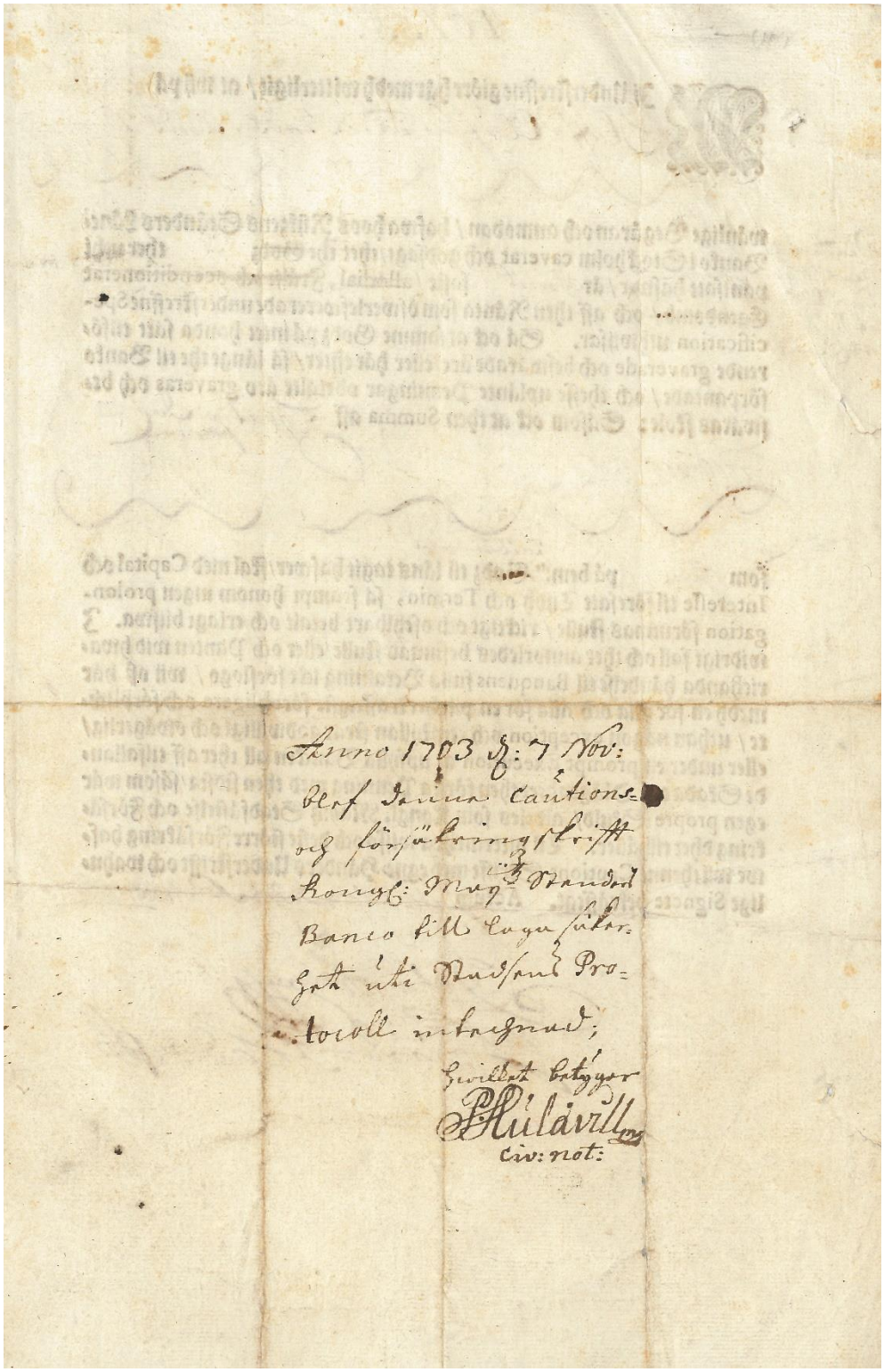

Figure 2: Riksens ständers lånebank, collateralised loan of 1682, text on reverse[4]

[4] Photographic reproduction by the authors.

Around 21 years after the granting of the loan, on 7 November 1703, the guarantee established by the document has thus been registered in a public register. Such registers improve legal certainty and allow preventing that one asset is pledged twice, or that one guarantor has provided guarantees to an extent that would question the credibility of these guarantees (credit registers still play this role today, see e.g. Mian, 2014). Registration of mortgages became mandatory in Sweden in 1730; however, the Bank had advocated for mandatory registration since its early years in the 1660s (Pihl, 2019).

Who were Johan Holm and Louis Fledorph, the persons signing off the pledge and guaranteeing personally its validity and sufficiency, and why did they do so? As Wetterberg (2009, 60–61) explains:

> Lending was not a simple matter. Security in most cases took the form of property, which was difficult for the Bank to assess. Neither was there a register to show the degree to which a property had been mortgaged; moreover, mortgaged estates were sometimes sold without informing the Bank … The Bank therefore required an assurance from a warrantor (kau–tionist) that the property was mortgageable. The confusion over mortgages led to more and more cases where the Bank held the warrantor liable, which made people reluctant to act as warrantors.

Two possibilities may be rejected on who the guarantors were in the case of our loan of 1682, and why they were ready to provide a guarantee.

First, they may have been officials of the Bank that were responsible for undertaking the relevant legal documentation of the pledge on the side of the Bank. That they provided a personal guarantee on the validity and sufficiency of the pledge to secure the loan in the case of a default of the borrower would have provided strong incentives for the officials to be prudent in validating the collateralization of loans. Their salary as employees of the bank would have contained a premium compensating for the risks associated with such personal guarantees. It may be noted that personal liability of employees of early central banks was not unusual (e.g. Bindseil, 2019b, Pihl, 2024a).

Second, Joahn Holm and Louis Fledorph may have been independent notaries with the qualification to check the validity and sufficiency of the pledge. They would have been compensated for providing the guarantee through the fees that they would impose on the collateral provider. However, in the Swedish case, this work was done by either a bank official or, when the property was located outside Stockholm, by members of the local court or other trusted members of the society, such as a parish priest. It seems more likely, instead, that they were individuals within Olofsson's social and/or economic network, people who had insight into Olofsson's economic situation and trusted that he would repay the loan (Pihl 2019). We know that Lovis

Fledorph was a merchant in Stockholm. When he died in 1689, he owned a house in Stockholm and parts in a ship.[5]

3. Public versus private exposures and the history of early central banking

Our brief analysis in Section 2 suggests that the description of the document of 1682 in the auction catalogue was not entirely correct. Complaining about the auction's catalogue mistaken reference to government debt could however be unfair in view of the long-lasting obsession, even amongst economic historians, on the close link between the establishment of central banking (including in the case of the Sweden), and Government financing. Consider two amongst many examples. Capie et al. (1994, 2-4) explained in their classic treatment of the history of central banking published at the occasion of the tri-centenary of the Bank of England that "Central banks have almost invariably … been designated as banker to the government. Governments have a natural preference for cheap finance from their own bank …"

Probably, Capie et al. (1994) have likely overweighted the example of the Bank of England in their interpretation of the early history of central banking as they wrote specifically for the tricentenary of the Bank of England. Also, they may have relied on earlier literature with similar tendencies (e.g. de Kock, 1939; see the discussion in Bindseil, 2019a, 11-16). As is well-known, the Bank of England was indeed established in 1694 in conjunction to a large-scale lending operation to the Crown and has ever since devoted a large share of its assets to exposures to the Government. Similarly, Bordo (2007, 1) notes that:

> The story of central banking goes back at least to the seventeenth century, to the founding of the first institution recognized as a central bank, the Swedish Riksbank. Established in 1668 as a joint stock bank, it was chartered to lend the government funds …

It seems difficult to reconcile either statement with the 1682 pledge and guarantee document, the 1668 charter and instructions of the Riksens ständers lånebank – which regulated private sector lending in the utmost detail-or with an analysis of the bank's balance sheet data from its first decades. Was the document of 1682 the illustration of an exceptional, marginal activity of the Bank? Not at all, as loans backed by real estate were the dominant asset type during the first decades of the Bank, and for the period covered by the pledge and guarantee document of 1682 (that the pledge was registered in 1703 in an official register presumably implies that the loan was still outstanding in 1703, i.e. 21 years after it was granted). As data made available by the Riksbank on its website and literature by more specialized economic historians (e.g. Heckscher, 1934, Wetterberg, 2009, Tarkka, 2009, Fregert, 2014, 2018, Roberds and Velde, 2014, 51-

[5] Stockholm stadsarkiv, Stockholms rådhusrätt 1:a avdelning (AB) F1A:43 (1691).

6, Edvinsson et al., 2014) confirm, loans to non–banks (mostly loans to individuals backed by real estate) had the largest share amongst all asset types over the first 35 years of the Bank. During this period, convertibility (i.e. price stability in terms of the liabilities of the bank being redeemed at par value in precious metal) was maintained, while subsequently the bank entered for around 70 years more troubled period with repeated episodes of inconvertibility. The first suspension of convertibility occurred in 1709, and suspensions were typically caused by insufficient metal reserves, mostly due to excessive government financing, but once also due to a combination of government financing and excessive lending to the private sector[6]. During the periods 1668–1673, and 1691–1701, the share of loans to the government in total assets was below 5% of the total balance sheet. The expansion of government financing was strongly connected to periods of warfare, like the war against Denmark in the 1670s. Figure 3 shows the share of the three main asset types: (i) loans to private persons; (ii) loans to the government, (iii) precious metal reserves for the first 50 years of the Riksbank.

Farmers, or peasants, like Olof Olofsson were a relatively small group of borrowers from the Bank. The largest sums were lent to the land–owning nobility, secured against allodial land. Other important groups that received loans from the Bank included ironworks owners and urban citizens. In the 1690s, 30 percent of the first group and between 15 and 20 percent of Stockholm's citizens had received loans from the Bank (Bredefeldt, 1994, 147; Pihl 2020, 199). The Bank did not lend only against real property; the greatest number of loans – though not the largest sums – were extended against chattels, mainly objects made of gold, silver, brass, or pewter (Brisman, 1918).

[6] The convertibility suspension in 1745 was partly due to the extensive lending to manufactories, partly to the extensive lending to the government during Sweden's involvement in the War of the Austrian Succession, and it depleted previous metal reserves (whereby loans to the public sector were also high; see e.g. Bindseil 2019a, 226–227).

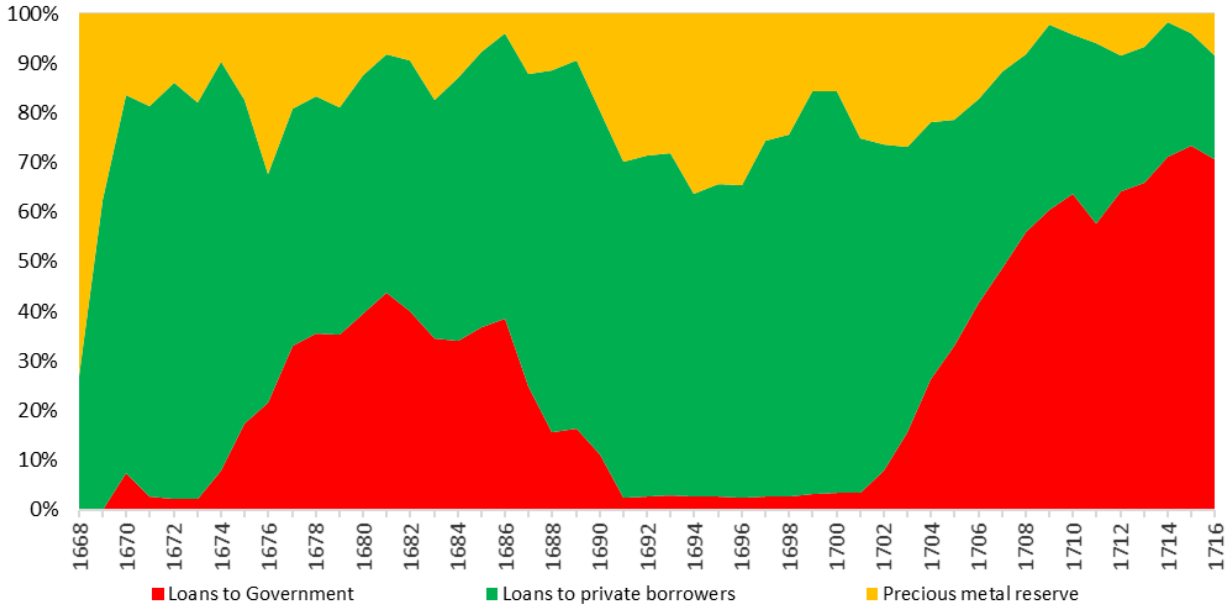

Figure 3: Asset side composition in percent, Riksens ständers lånebank, first 50 years[7]

The surprising duration of the loan documented by the pledge and guarantee paper of 1682 is supported by the literature, which confirms that the Bank provided loans of effectively indefinite maturity due to roll-over optionality, with agricultural land as main form of collateral (Brisman, 1918, 153–157; Heckscher, 1934, 175; Roberds and Velde, 2014, 52; Fregert, 2018, 97; Pihl 2020). The loan maturity was set in the charter of the Bank to be 18 months, with a prolongation option for the borrower (unless the Riksens Ständers Bank lacked deposits). Fregert (2018, 96, 98) notes that government financing was actually prohibited to the Bank according to the charter of 1668, which further contradicts the views of Capie et al. (1994) and Bordo (2007) quoted above. However, as shown by Pihl (2024b, 5-6) and supported by previous research (Brisman 1918; Heckscher 1934; Wetterberg 2009), Fregert bases his assertion on a misinterpretation of the bank charter.

Bindseil (2019a, chapter 4) provides further evidence and references to literature on early European central banks' assets in the form of claims towards the real economy, namely for example the Naples system of public banks (founded in the 1580), the Hamburger Bank (founded in 1619), or the Bank of Scotland (founded in 1695, but becoming more of a commercial bank after its first decades). As Tarkka (2009) noted, the charter of the Riksens ständers lånebank seems to have been inspired by the Hamburger Bank in

7 Data provided on website of Sveriges Riksbank: https://www.riksbank.se/en-gb/about-the-riksbank/the-tasks-of-the-riksbank/research/historical-monetary-statistics-of-sweden/volume-ii-house-prices-stock-returns-national-accounts-and-the-riksbank-balance-sheet-16202012/. Accessed 9 July 2025; see also Fregert, 2014.

terms of foreseeing explicitly collateralized lending to the private sector (while historians and contemporary authors have referred more to the Bank of Amsterdam as template, also since the Bank of Amsterdam was significantly larger than the Hamburger Bank in the 17th century). As shown by Pihl (2024b, 7–8), even in the earliest proposals for a Swedish bank in the first decades of the 1600s, the plan included a combination of lending to both the private sector and the government. In sum, it appears that there has been a long-lasting contradiction between popular generalist anglo-saxon economists and more specialized European authors with regards to the role of private and public assets in early central banking. While the former (de Kock, 1939: Capie et al., 1994, Bordo, 2007) consider lending to the Government to be clearly predominant, the latter provide a more differentiated picture and demonstrate based on data and documents that private assets were predominant for a significant part of early central banks, and in particular for the Riksens ständers lånebank in the 17th century. In the contemporary discussions, this was seen as both a way to legitimize a bank under the protection of the Estates and to raise capital that could be lent to the government and others (Pihl, 2024b).

4. Lessons for today

What can we learn from the document of 1682 for today, apart from being reminded of some persisting myths on early central banking in general, and on the Rikssens Ständers Bank in particular? Central banks of advanced economies are no longer in the business of lending directly to the real economy, but in continental Europe in particular, a tradition remained until today to preserve an important role for exposures to the private sector on the asset side of central bank balance sheets. Consider the following prominent examples:

- Until the 1990s, the Deutsche Bundesbank discounted "real" (i.e. no "financial") bills of exchange and argued that doing so would anchor monetary policy transmission more directly in the real economy. It revealed its appreciation for such loans by even offering them at a favorable rate (implying the need to limit the amounts of such credit provision, namely in the form of the Rediskontkontingente (see Deutsche Bundesbank, 1995, 100). Moreover, the Bundesbank generally preferred credit exposure to the private sector (although implemented via exposures to the banking system) in the form of collateralized credit.
- In 2006, the ECB decided to continue the acceptance of loans (or "credit claims") of banks to non-financial corporates (NFCs) in its single list of collateral (until end 2006, as a transition measure towards a single framework, different collateral sets were accepted across the NCBs of the Eurosystem; credit claims had been eligible only in DE, ES, FR, AT). From that date on, credit claims against NFCs were central bank eligible collateral in the entire euro area and have enjoyed

increasing use over the years. Deutsche Bundesbank (2006, 33) explains this decision in a similar way as done in Deutsche Bundesbank (1995) for the discounting of non-financial bills:

> From a monetary policy perspective, the inclusion of bank loans in the single list of eligible collateral will anchor central bank refinancing more firmly in the real economy. In keeping with the provisions of article 102 of the EC Treaty, this move will help to offset any privileged status of government debt instruments.

- *Marketable* forms of collateral issued by private issuers (in particular corporate bonds, covered bonds, ABS) have also been part of the single Eurosystem list of collateral since then and have enjoyed significant use (data in e.g. Bindseil et al., 2017, with quarterly updates on the ECB website).
- In 2011, the ECB Governing Council approved the additional credit claims (ACC) framework to allow Eurosystem national central banks (NCBs) to accept as collateral certain credit claims which were not compliant with all eligibility rules and/or credit quality standards. In particular, this allowed to preserve the role of credit claims as collateral in Eurosystem credit operations for countries which were subject to large credit rating downgrades in the context of the euro area sovereign debt crisis and thereby supported the liquidity buffer of banks during the crisis, and the origination of loans to NFCs, supporting thereby the financing of the real economy (see Tamura and Tabakis, 2013 and Bindseil et al., 2017).
- Last but not least, starting in 2014, the ECB launched the so-called targeted longer-term refinancing operations (TLTROs) that provide multi-year financing to credit institutions, with built-in provisions incentivizing banks to extend loans to NFCs. As explained by the ECB (on its website[8]),

> by offering banks long-term funding at attractive conditions, they preserve favorable borrowing conditions for banks and stimulate bank lending to the real economy. The TLTROs, therefore, reinforce the ECB's current accommodative monetary policy stance and strengthen the transmission of monetary policy by further incentivizing bank lending to the real economy … A first series of TLTROs was announced on 5 June 2014, a second series (TLTRO II) on 10 March 2016 and a third series (TLTRO III) on 7 March 2019… The more loans participating banks issue to non-financial corporations and households (except loans to households for house purchases), the more attractive the interest rate on their TLTRO III borrowings becomes.

The last operations announced so far matured in March 2024, i.e. around 10 years after the launch of the first TLTRO in September 2014.

[8] https://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.html. Accessed 9 July 2025.

The loan document of the Riksbank of 1682 recalls that this positive attitude of European central banks towards collateralized (long term) credit with some direct or indirect link to the real economy has a considerable tradition and is nothing new in central banking. A balanced mix between central bank exposures to the private sector and exposure to the government has been considered for a long time to be sound from a financial stability, convertibility, and, today, also from a monetary policy perspective, as illustrated by the practices of many central banks over the centuries. Looking forward, this should apply to the Eurosystem regardless of the conduct of non-standard measures. The Eurosystem is right to treat private and public assets similarly in its credit and outright monetary policy operations, avoiding ex ante discrimination against either asset class, and determining eligibility and risk control measures on the basis of a single approach.

The Riksens ständers lånebank document of 1682 also illustrates that central bank risk management of exposures to the private sector has been taken seriously for a long time. It reveals the strong incentives that were considered desirable to make sure that the administrators of the pledge checks its validity and sufficiency, achieved through the requirement of their personal guarantee. Today, the ECB's so-called General Documentation of the ECB's monetary policy and procedures (e.g. European Central Bank 2011) has around two thirds of its 100 pages about the collateral framework and related risk management measures, of which many relate to private assets. This is not surprising as privately issued assets take various forms (bank loans to NFCs, corporate bonds, covered bonds, ABS), entail risks of close links between counterparties and collateral issuers (which need to be excluded), and include a high number of issuer names. In contrast, sovereign debt is typically of a standard type and the number of issuers is more limited. The fact that risk management for private exposures is more challenging however does not mean that the eventual risks from such exposures will likely be higher than for sovereign exposures. The combination of prudent risk management and granularity of exposures limited losses throughout the centuries.

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Annex: Transcript of loan guarantee document

Note: underlined text is in handwriting in the original. Strike-out is as in the original.

Wij Underskrefne giöre här medh witterligit / at wij på Bondens Oluff Olufson i Tickstads[9] i Rööds Socken Wänlige Begäran och anmodan / hawa hoos Rijkzens Ständers Låne-Banko i Stockholm caverat och godsagt / thet the[10] ~~Godz~~ ther uthi pantsatt hafwer / är hans faste / ~~allodial, Frälse och conditionerat Egendomb /~~ och aff then Ränta som öfwerlefwererade underskreffne Specification uthwijsar. Så ock at samme Godz på intet handa sätt tilförende graverade och beswärade äre / eller här effter / så länge the til Banko förpantade / och thesse uplånte Penningar obetalte äro graveras och beswäras skole: Såsom ock at then Summa aff Fyratijo Tre Caroliner[11] som Han på bem(ärk)te Skattehemman ~~Godz~~ till låns tagit hafwer / skal med Capital och Interesse til föresatt Tijdh och Termin, så frampt honom ingen prolongation förunnas skulle / ricktigt och ofelbart betalt och erlagt blifwa. I widrigt fall och ther annorledes befinnas skulle / eller och Panten wid hwariehanda händelse til Banquens fulla betalning icke förslogo / wij oss här medh en för alla och alla för en på thet krafftigste förobligere och förplichte / uthan någon exception och eenskyllan strax godwilligt och owägerlig / eller under en prompt Execution at upfylla Bancken all ther aff tilfallande Skada och Olägenheet then första Penning med then sidsta / såsom wår egen propre Skuld / aldeles som Kongl. May:tz Stadfästelse och Försäkring dhet tilhåller. Til yttermehra wisso och deste större Försäkring hafwe wij thenne Cautions Skrifft med egne Händers Underskrifft och wahnlige Signete bekräfftat. Actum Stockholm d. 23. Septemb.(ris) 1682

Göran Holm

Sven Hedorff

Reverse side

Anno 1703 d(en) 7 Nov(embris) blef denna cautions- och försäkringsskrift Konungl (iga) May(este)tz Ständers Banco till laga säkerhet uti Stadsens Protocoll intecknad;

Hwilket betyger

P. Hulåvillius

Civ(itatis) not(arius)

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[9] Ticksta, Rö parish, Stockholms county.

[10] Handwritten in the margin: Skattehemman Åkerby i Närtuna Socken af Sex öres 4 örtugland.

[11] http://www.saob.se/artikel/?seek=Karoliner-mynt&pz=6#U_K439_172328. Accessed 9 July 2025.