

Sovereign Debt Issuance and the Transformation of the Monetary Architecture in Prussia and the German Empire, 1740–1914

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Executive Summary

This paper traces the transformation of the monetary architecture and concomitant sovereign debt issuance practices in Prussia and the German Empire from 1740 to 1914 in order to reflect on contemporary ideas regarding the appropriate relation between states' treasuries, central banks, and the private banking system in matters of sovereign debt issuance. It discusses three institutions as "protagonists" — the *Königlich Preußische Bank*, the *Seehandlung*, and the *Disconto-Gesellschaft* — and follows them through four phases of Prussian and German history: feudal Prussia from Friedrich II to the defeat against Napoleon (1740–1806); from the Stein-Hardenberg reforms to the March Revolution (1807–1848); post-revolutionary Prussia, including the rise of Bismarck, his three wars, and the foundation of the German Empire (1849–1871); and Prussia in the German Empire during the first era of globalization (1871–1914). Adopting the Monetary Architecture framework as a conceptual lens, the analysis yields three main findings. First, off-balance-sheet fiscal agencies (OBFAs) have played a key role in the issuance and management of sovereign debt, even before central banks and treasuries in the modern sense had formed. This is highlighted in the institutional role of the *Seehandlung*, which kick-started Prussian sovereign debt issuance during the Napoleonic Wars. Second, central banking institutions have historically shifted within the public-private spectrum. The state-owned *Königlich Preußische Bank* became more functional and accountable after it was converted into the hybrid *Preußische Bank*. When it was transformed into the Reichsbank in 1875, a fully private ownership structure was chosen. Third, the economic liberalization after 1848 and the increased need to harness private funding for war finance led to the emergence of syndicated sovereign bond issuance. The *Disconto-Gesellschaft*, which played a leading role in the Prussia Consortium and the Imperial Bond Consortium, was at the forefront of establishing a new relationship between private finance and the state.

#FISCAL POLICY

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1. Introduction

Today's macro-financial regime for the issuance and management of sovereign debt in Germany and Europe is predicated on a fundamental conception of the correct relationship between treasuries, central banks, and the private banking system: Sovereign debt issuance should not happen with the central bank balance sheet as the direct counterparty as this would constitute illicit "monetary financing". Rather, sovereign debt issuance should be "disciplined" by market forces as the politicians in charge of treasuries' balance sheets are otherwise prone to over-issuing sovereign debt. Hence, only private financial institutions should be the legitimate direct counterparties for sovereign debt issuance.

This economic idea — most prominently codified in European Law, cf. Art. 123 (1) of the Treaty on the Functioning of the European Union (TFEU), but also reproduced through lore for generations — is purportedly a key lesson from Germany's turbulent political, economic, and financial history. Germany has indeed had an illustrious track-record of financial innovation, creative macro-financial management, spiking debt issuance, and devastating sovereign defaults connected to two lost world wars. Curiously enough, German sovereign bonds today have the status of the European safe asset and the German government consequently counts as Europe's most trustworthy sovereign borrower, even though the German state had four sovereign defaults in 21 years, counting from the Weimar hyperinflation 1923 over the Dawes and Young Plan to the dissolution of the German Empire in 1945 (Reiter 1967).

Even though today's macro-financial regime is often said to be the result of Germany's historical experiences, it is doubtful whether there can be such a thing as an "objective history" which clearly suggests that some conclusions are correct whereas others are obviously wrong. For instance, there is a confirmed tendency of "misremembering Weimar", i.e. having erroneous conclusions about which economic turbulences led to the rise of fascism in 1933 (Haffert, Redeker, and Rommel 2021). The 1923 hyperinflation in the early years of the Weimar Republic (Holtfrerich 1980) remains most prominent in the collective memory and is said to be the cause of the strong anti-inflationary stance in both German policy circles and the German population. However, this is an erroneous understanding in so far as in fact the *deflationary* tendencies during the Great Depression (Kindleberger 1984) were the immediate reasons that brought the Nazis to power (Straumann 2019).

While debates on historical learnings usually focus on the time of the world wars and the Weimar Republic, this paper goes further back in time and revisits the German macro-financial experience prior to World War I. It traces the evolution of German sovereign debt issuance practices from their early origins in 18th century Prussia over the foundation of the German Empire in 1871 up until 1914 with the abrupt termination of the first era of globalization.

To this end, the paper adopts the Monetary Architecture framework (Murau 2020), which conceptualizes the monetary and financial system as a web of institutions thought of as balance sheets that have a hierarchical relationship with each other and interlock through different credit instruments. The key institutions can be characterized according to different segments which they belong to: central banking, commercial banking, non-bank financial institutions or shadow banks, as well as a fiscal ecosystem which is made up of the state's treasury and off-balance-sheet fiscal agencies (OBFAs) — public-private entities whose operations comprise aspects of monetary and fiscal policy. The actual setup of such a 'monetary architecture' is historically specific and subject to a permanent process of institutional evolution and adaptation. Institutions and instruments emerge in specific historical situations, interact with other institutions, fulfil certain functions for some time, and can then transform or even disappear due to different political, economic, or financial factors.

A key feature of the monetary architecture is how the relationship between different institutions is organized, notably the central bank, banks, the treasury, and OBFAs. These institutions issue different debt instruments as their liabilities. Some debts of the central bank and banks are typically understood as credit money, notably notes, reserves, and deposits, which historically existed alongside various forms of commodity money. The treasury and OBFAs issue their own forms of debt, which are used for government financing and can be purchased and held by central banks, banks, or other entities, including firms and private households. For analytical purposes, it is of interest which forms of debt are issued, by whom, with which counterparties, and in what volume. Moreover, it matters what volumes of debt issuance are seen as legitimate and how this is supported or prohibited.

Overall, the Monetary Architecture framework perceives the modern credit money system historically as developing in co-evolution with sovereign debt issuance practices. Both money creation and sovereign debt issuance have an inherent public-private hybridity which has manifested itself differently across multiple periods. To trace this process in the context of Prussia and the German Empire, the paper proceeds chronologically and studies four eminent phases of Prussian and German history: feudal Prussia under Friedrich II to the defeat against Napoleon (1740–1806); from the Stein-Hardenberg reforms to the March Revolution (1807-48); post-revolutionary Prussia, including the rise of Bismarck, his three Wars of German Unification, and the foundation of the German Empire (1849-71); and Prussia in the German Empire during the first era of globalization (1871-1914).

To tell story of the transforming monetary architecture throughout various political-economic settings — including wars, revolutions, and different constitutional orders — the paper chooses three eminent financial institutions as its “protagonists” and follows them throughout the four phases. The protagonists are taken from the central banking, fiscal, and banking segments of the Prussian and later German monetary architecture. The analysis yields three main findings which offer a novel angle to reflect upon the inherited wisdom about the organisation of sovereign debt issuance and the appropriate roles of the treasury and central bank in the process.

First, central banking institutions for most of the time played a subordinate role in Prussian sovereign debt issuance practices. Even though Prussia obtained its first central bank as early as 1765, the fully state-owned *Königlich Preußische Bank*, it remained rather dysfunctional and hardly able to fulfil its purpose. In 1846, it was converted into the private-public *Preußische Bank*. In 1875, Prussia sold it to the newly founded German Empire, which made it the *Reichsbank*, and placed its ownership entirely in private hands while maintaining some organized political influence. While the Reichsbank was more involved in sovereign debt issuance than its predecessors, it was never at the forefront of issuing and funding the sovereign debt of Prussia and the German Empire prior to 1914.

Second, OBFAs played an important and largely underappreciated role for Prussian sovereign debt issuance even before the treasury and the central bank in a modern sense were established. Typical examples for OBFAs today would be national development banks, government-sponsored enterprises, and other special-purpose funds (cf. [Guter-Sandu and Murau 2022](#)). The key institution for Prussia was the *Seehandlung*. Founded in 1772 as a public-private mercantilist corporation, its development into Prussia’s state bank was accelerated during the war against Napoleon. By issuing debt on behalf of the Prussian state, it was a convenient vehicle for floating government debt that proved particularly useful between 1820 and 1848 during Prussia’s self-imposed debt brake.

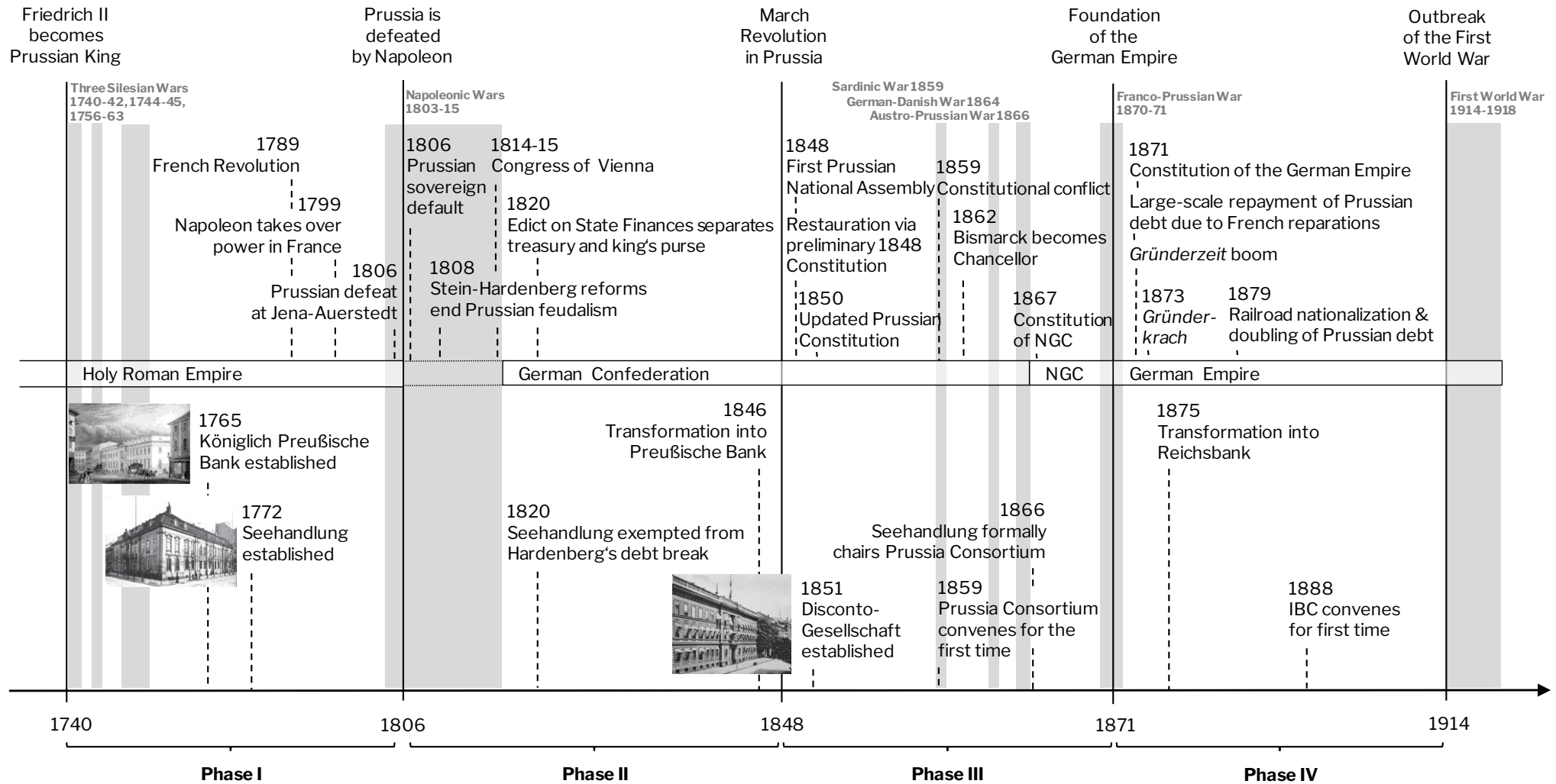
Third, the ability of the Prussian state to fund large volumes of sovereign debt only emerged in co-evolution with the private banking system in Berlin. In this regard, the *Disconto-Gesellschaft* was of paramount importance. Founded in 1851 by David Hansemann, previously Prussia’s minister of finance and director of *Preußische Bank*, the *Disconto-Gesellschaft* set up the *Prussia Consortium*

(*Preußenkonsortium*) in 1859 to facilitate war finance activities for the Prussian government. It introduced syndicated bonds as a new mechanism for the issuance of sovereign debt which helped crowd in more members of the monetary architecture. Even though the Seehandlung formally presided over the Prussia Consortium from 1866 onwards, the Disconto-Gesellschaft remained its de facto leader. It was also the most influential bank of the *Imperial Bond Consortium* (*Reichsanleihekonsortium*), which existed in parallel to the Prussia Consortium from 1888 and was formally chaired by the Reichsbank.

The timeline in [Figure 1](#) visualizes the key events connected to these three institutions and relates them to the four historical phases under scrutiny here. The figure also indicates the major wars, political events, as well as the different manifestations of a superordinate “German” state.

To develop these arguments, the paper draws on several key sources — most of them in German language — which provide insights into the workings of the monetary and financial system at the time and allow for the reconstruction of the evolution of Prussia’s sovereign debt issuing practices through the prism of the Monetary Architecture framework: Niebuhr (1854) is a history of Königlich Preußische Bank written after its transformation into the Preußische Bank in 1847. Baumgart (1915) and Parchmann (1933) address the early years of the Reichsbank, next to an anniversary edition published by the institution itself (*Reichsbank 1926*). Hellwig (1922) is a report written for the 150-year anniversary of the Seehandlung, which also makes use of a PhD thesis published only little earlier (*Schleutker 1920*). Münch (1932) and Däbritz (1954) are largely biographical books about David Hansemann and his son Adolph who succeeded him as leader of the Disconto-Gesellschaft. Reiter (1967) is a PhD dissertation about the institutional history of syndicated bond issuance in Germany. Stuebel (1935) is a treatise that investigates the link of states and banks in Prussian sovereign bond issuance. Stern (1977) traces the relationship between Bismarck and the banker Gerson Bleichröder. These sources are complemented by larger compilations on monetary and banking history (*Born 1977*; *Poschinger 1878*; *1879*) and publications of the US National Monetary Commission (NMC), which investigated various banking systems from 1908 in preparation for the creation of the US Federal Reserve (*NMC 1910*).

The remainder of this paper is organized as follows. [Section 2](#) looks at feudal Prussia from Friedrich II to the defeat against Napoleon (1740-1806) when sovereign debt issuance was dominated by the Seehandlung. [Section 3](#) discusses sovereign debt issuance in Prussia from the Stein-Hardenberg reforms to the March Revolution (1807-48). [Section 4](#) addresses post-revolutionary Prussia through the rise of Bismarck until the foundation of the German Empire (1849-71), a period that witnessed the ascent of the Disconto-Gesellschaft and syndicated sovereign bond issuance. [Section 5](#) addresses Prussia in the German Empire until the outbreak of the First World War (1871-1914). [Section 6](#) concludes.



Abbreviations: IBC: Imperial Bond Consortium; NGC: North German Confederation

Figure 1: Overview on the three protagonists in the four historical phases from 1740 to 1914; **Source:** own visualization

2. Feudal Prussia: From Friedrich II to the defeat against Napoleon, 1740-1806

Friedrich II, later called “the Great” (“*der Große*”), was the monarch of the Hohenzollern dynasty who ruled Prussia from 1740 to 1786. Under his reign, Prussia acceded to great power status in Europe, especially due to the three Silesian Wars, which Prussia fought successfully between 1740 and 1763 against Habsburg Austria under Archduchess Maria Theresia. Those wars were the opening chapters of the ensuing Austro-Prussian struggle for the hegemony over the German-speaking peoples where Prussia was the leading power of Protestantism and Austria of Catholicism (Kunisch 2004).

At the time of the Silesian Wars, Prussia’s monetary architecture was financially underdeveloped, in particular compared to other European states such as England or the Netherlands (Ziegler 1993). In absolutist fashion, the public treasury existed in personal union with the king’s purse. The monetary system was largely based on commodity money, in the form of various coins circulating (Vilar 1969). Private banking was poorly developed, attempts to found private banking institutions regularly failed, and the availability of money and credit was chronically short (Poschinger 1878, Ch. 3). When Friedrich II wanted to raise additional money to carry out his wars, he did this mainly through coin debasement (Kindleberger 1984, 118), an essentially non-financial technique that involves reducing the amount of precious metal in a coin while letting it circulate further at face value.

After victory in the Silesian Wars had led to a territorial consolidation of Prussia, Friedrich II worked towards developing his pre-industrial country in line with the dominant mercantilist doctrines. He founded the Königlich Preußische Bank and the Seehandlung to modernise the Prussian financial system. These reforms provided an important update to the Prussian monetary architecture and called two institutions into being which would crucially shape Prussia’s political and financial history.

The **Königlich Preußische Bank** — also known as **Königliche Giro- und Lehnbank** — was a note-issuing bank (*Zettelbank*) with the right to issue bank notes (*Zettel*). Established on 17 June 1765, it was the first bank in German countries to receive this privilege. At the time, these circulating papers were not understood as actual money but as a mere promises to pay commodity money, i.e. money substitutes which may also be called “shadow money” in the Monetary Architecture framework (Murau 2017). The Bank remained fully dependent on the king who routinely took out surpluses whenever the Bank made any. As much depended on the king’s oral orders, little is known about the Bank’s every-day operations. Even though the law which created it stipulated that the Bank was supposed to receive 8 million Reichsthaler (Rthlr) as starting capital, it never received this. Instead, Friedrich II preferred to keep the Prussian state treasure in barrels stored in the cellar of his castle and in Spandau Fortress. The Bank only received 400,000 Rthlr to manage its everyday payments which were only paid out as an advance, not as equity. Throughout its first few years, the Bank only made losses. When the Bank was supposed to redeem the first issuance of its bank notes on 1 January 1768, it was so short on commodity money that it had to ask for a loan from other government coffers. When it received more cash later, it did not know how to make good use of it and engaged in barely profitable long-term operations, which kept its assets illiquid (Niebuhr 1854, 4–6; Born 1977, 16, 29).

The **Seehandlung** — established on 14 October 1772, seven years after the Bank — was a mercantilist export corporation. Following French blueprints, the explicitly stated purpose of the Seehandlung was that ships under the Prussian flag should engage in import and export activities with Spain and other countries. To all extent and purposes, the Seehandlung was an OBFA of the Prussian state that had a government backstop and carried out activities on behalf of the government but remained under independent private leadership. The Seehandlung’s basic capital was 1.2 million Rthlr. It consisted of 2,400 shares of which 2,100 belonged to the king and 300 were made available to private shareholders. Hence, unlike the bank, the Seehandlung from its early inception was an independent legal entity with some private interest involved, even though the state had a dominant influence. The profits it would make were for the largest part

profits of the king whose private purse at the time was largely identical with that of the state. At the same time, since its early origins, the Seehandlung found itself in an ongoing institutional struggle with the Königlich Preußische Bank (Schleutker 1920, 4–24; Hellwig 1922, 7–10).

2.1 Sovereign debt issuance via the Seehandlung from 1772 to the Napoleonic Wars

Part of the original rationale to establish the Seehandlung was to make Prussia competitive with harbour cities in the Baltics, foremost Gdansk which defied Prussian influence. From 1773, the Seehandlung received a monopoly for the trade in salt, one of the key commodities at the time, needed for the preservation of foodstuff. For this reason, it was a thorn in the eye of merchant associations. Yet, it was highly profitable and generated a steady income to the king's purse. He gladly used the Seehandlung for his own financial purposes. He borrowed deposits from it and used them for military expenditures or imports of raw materials (Hellwig 1922, 7–10).

In a prototypical dynamic of financialization, the Seehandlung transformed over time from a trading society to a **financing and banking institution for the government**. This was particularly accelerated by the Napoleonic Wars that followed the 1789 French Revolution. As the wars made the salt business and any form of maritime trade very difficult, the Seehandlung increasingly used its capital for the credit business. In 1794, the Seehandlung's privilege — originally granted for only 20 years — was extended until the year 1808 and its legal structure was changed. Shares were swapped, dividend payments were reduced, and a royal guarantee of the capital contributions was added. The privilege for salt trade was re-affirmed. In exchange, it had to pay 45,000 thaler every year to the state. The extension of mercantilist privileges improved the Seehandlung's financial standing and enabled it to further engage in the business of money and credit (Hellwig 1922, 19–22). This allowed the Seehandlung to carry out OBFA-financing schemes on behalf of the state. However, these activities — like all financial matters of the king — were notoriously kept secret.

Endowed with an explicit treasury backstop, the Seehandlung entered into the Lombard business, i.e., it granted credit against pledged securities and discounted bills of exchange. Since the Seehandlung had a good financial standing, private capitalists were interested in investing their money in the Seehandlung. It offered 2.5% deposits repayable on demand at any time as well as 4% debt instruments that were redeemable with six-month notice. As lenders could obtain a better interest rate at the Seehandlung than at the Königlich Preußische Bank, which gave only 2-3%, the conflict between both institutions intensified and the king's attempts to settle the dispute never succeeded for long (Hellwig 1922, 22–23).

As Prussia's role in the coalition against Napoleon required large sums of money, the Prussian state for the first time in its history was forced into significant debt. While Friedrich II had accumulated some surpluses in his public budget, his war chest was used up rapidly. His successor, Friedrich Wilhelm II, started using the Seehandlung to issue bonds on behalf of the state. However, it was not easy to place them. Due to the limited financial power within Prussia, it was necessary to get access to capital abroad, notably in Leipzig, Frankfurt, and Amsterdam. The Seehandlung played a leading role to facilitate this. Originally, the bonds were issued in the name of the Prussian state and executed by the king. When the credibility of Seehandlung increased, this became unnecessary. The Seehandlung was now able to issue its own bonds and then transfer the proceeds to the king. The Prussian state made excessive use of this option. The volume of Seehandlung's bonds on the market was 9-10 million thaler in 1800; 21 million thaler at the end of 1804; and 17.8 million thaler in 1806. As the Seehandlung's bonds became more widely known, it was able to reduce the interest rate it offered to 3%. This was also in the interest of the Königlich Preußische Bank, which itself faced problems of refinancing due to the high interest rate offered by the Seehandlung (Hellwig 1922, 23–24).

2.2 Sovereign default after the Prussian state collapse in 1806

The idiosyncratic role that the Seehandlung had attained as a de facto sovereign-debt-issuing OBFA in the monetary architecture of absolutist Prussia was largely due to its director Karl August Struensee who had been in office since 1782. In addition to his role as the head of the Seehandlung, he presided over the general salt administration and was a minister in charge of factories and indirect taxes. When Struensee died in 1804, different proposals were circulated about the Seehandlung's institutional organisation vis-à-vis the treasury and the Königlich Preußische Bank (Hellwig 1922, 26–27).

In 1806, King Friedrich Wilhelm III tasked Freiherr Heinrich Friedrich vom und zum Stein with reorganizing Prussia's economic and financial institutions. Freiherr vom Stein separated the Seehandlung from the general salt administration and put it in charge of purchasing salt internationally but no longer for selling it. Instead, he strengthened its role as a financial institution that administered the sovereign debt and discounted bills of exchange. He found the business conduct of Königlich Preußische Bank deeply unsatisfactory because it had mainly given loans to the state and big landowners rather than using its right to issue promissory notes and supporting trade through advances. Therefore, he briefly considered merging it with Seehandlung but then proposed to create a personal union among some of their leadership to more closely connect their operations (Hellwig 1922, 27–29).

Freiherr vom Stein's proposal, however, did not materialize because Prussia's army was defeated by Napoleon in the Battle of Jena-Auerstedt on 14 October 1806. Napoleon entered into Berlin on 27 October 1806. In the meantime, King Friedrich Wilhelm III fled to Königsberg and Memel in East Prussia, taking much of his government and administration with him. Stein managed to save 900,000 thaler of the Seehandlung and also ship them to East Prussia. Due to the military defeat, Prussia lost half of its territory and had to pay huge reparations to France while Napoleon continued marching towards Russia (Wehler 2007).

The Prussian defeat amounted to nothing less but a state collapse, which coincided with a **sovereign default**: Prussia was no longer able to fulfil its promises to pay. The debt of the Prussian state to the Seehandlung had increased over the years. In 1804, the Prussian state owed 12.9 million thaler to the Seehandlung, which corresponded to half of the entire Prussian sovereign debt at the time of 24.8 million thaler. This was roughly equivalent to all bonds of the Seehandlung in circulation, which amounted to more than 21 million thaler. As the Prussian state was no longer able to pay back its debts to the Seehandlung while the French confiscated all the Seehandlung's properties that they could get, the Seehandlung had to default on its bond payments on 20 October 1806 (Hellwig 1922, 29-31).

When the Seehandlung stopped its payments in 1806, the prices of its obligations dropped, though by only a few percentage points as the French authorities initially accepted them for the payment of reparations. However, when the French authorities refused to accept the bonds for payment, their price plummeted further. In June 1808, they dropped to their lowest value of 27% of their nominal price. They even dropped further than the bonds of the Königlich Preußische Bank — primarily because the main debtor of Seehandlung was the Prussian state (Hellwig 1922, 37–40).

Prussia's sovereign bankruptcy, together with military defeat, called time on the old feudal order and led to gradual social, economic, and financial innovations that put Prussia on the path towards transforming into an industrial society. This also affected the organization of its monetary architecture and implied various reforms of sovereign debt issuing practices.

3. From the Stein-Hardenberg reforms to the March Revolution, 1807-48

In order to regain the status of a great power after the defeat against Napoleon, King Wilhelm III felt compelled to modernize the Prussian state, which would eventually have a major impact on Prussia's monetary architecture. The masterminds behind the Prussian reforms were Freiherr vom Stein and Karl August von Hardenberg. Between 1807 and 1811, they contributed significantly to the modernization of the administration and sought to implement some of the ideas of the Enlightenment into politics. With the October Edict of 1808, the Stein-Hardenberg reforms abolished peasant serfdom and allowed all men to choose their occupation freely. This effectively ended feudalism and gave rise to an industrial society in the spirit of Adam Smith. The army reform introduced general conscription. The municipal reform gave cities the right to self-government. Cabinet reform modernized state administration and established ministers for various areas of domestic and foreign policy. Better moral and intellectual education was provided by the educational reform of Wilhelm von Humboldt, which created the humanistic grammar schools (*humanistisches Gymnasium*). The economic reform abolished the guild system, thus creating the basis for the development of freedom of trade (Wehler 2007).

Yet, the modernization of Prussia only went so far and did not establish a democratic order in the modern sense. After Napoleon's Russian campaign failed in 1812, the Congress of Vienna (1814-15) sought to restore the old power structures and re-organize European politics. The Congress's agreement was signed nine days before Napoleon's terminal defeat in the battle of Waterloo on 18 June 1815 against the British-Prussian coalition army. In the context of territorial reshuffling, Prussia received new territories in the Rhineland, which was pushed for particularly by the British in order to form a strong military bulwark against France (Duchhardt 2013).

As a result of the negotiations chaired by Austrian statesman Klemens von Metternich, the Congress of Vienna decided on the foundation of the German Confederation (*Deutscher Bund*), an association of 39 states to replace the former Holy Roman Empire, which had been dissolved in 1806. Bavaria and Württemberg only agreed to the plan after Napoleon's temporary return to power. The Confederation had one organ, the Federal Convention or Confederate Diet (*Bundestag*) located in Frankfurt am Main. Each member state sent one representative. While the German Confederation was not a state, the decisions of the Confederate Diet were binding. Austria became the hegemonic state, Prussia was placed second with some distance, followed by all other medium-sized, small, and city states (Huber 1967).

An implication of founding the German Confederation was a consolidation of the units of account in use. Originally, the German Confederation comprised nine different currency units: Prussian thalers, imperial thalers, Theresian thalers, crown thalers, Rhenish florins, Frankish florins, Austrian florins, Hamburg marks, and Lübian marks. With the creation of the German Customs Union (*Zollverein*) on 22 March 1833, the member states agreed on a process of monetary integration. The Dresden Mint Treaty of 1838 would later divide the Zollverein into two currency areas: the North German thaler area and the South German florin area (Born 1977, 11).

In this setting, Prussia's monetary architecture transformed in multiple respects. The status of the Seehandlung as an OBFA changed several times, the Königlich Preußische Bank received a complete overhaul, and the Prussian treasury became independent of the king's purse.

3.1 Rebuilding the public financial system after the 1806 defeat

Prussian defeat and its ensuing bankruptcy triggered a series of institutional restructurings. Through the law of 16 December 1808 prepared by Freiherr vom Stein, the Seehandlung and the Königlich Preußische Bank were subordinated to the Prussian treasury, which was then led by Finance Minister Altenstein. In 1810, Altenstein was replaced by Hardenberg who divided up the treasury into two divisions; one of them was the public treasury, to which the Bank and the Seehandlung both belonged.

Hardenberg's edict on State Finances of 27 October 1810 saw the Seehandlung **lose its formal status as an independent legal entity** altogether and initiated the process of its merger with the treasury. The Seehandlung's debts were taken over by the state; creditors of the Seehandlung became direct creditors of the Prussian state. Different solutions for interest payments were negotiated, all in the context of Prussia's required reparation payments to France. Some more institutional reshuffling followed through which the Seehandlung and the Königlich Preußische Bank were shifted around within the structures of the treasury (Hellwig 1922, 31–34).

Yet, even at that time, the Seehandlung's status as an OBFA was kept ambiguous. In 1809, for instance, it was possible to frame the Seehandlung as a private institution and rescue some of its properties from confiscation by the French. This position was confirmed by the Prussian government, which kept the Seehandlung's budget separate from that of the state. Even though this was formally changed in 1810, this did not always happen in practice. By 1812, it still remained common practice to list the Seehandlung's liabilities independently of those of the treasury. In 1815, the Prussian minister of finance insisted that the internal book-keeping should stop referring to advances and claims between the treasury and the Seehandlung as both are supposed to be the same entity (Hellwig 1922, 34–35).

In the years after Prussia's defeat, the volume of **sovereign debt skyrocketed**. At the end of 1806, the Prussian debt had been 53.5 million thaler. By 1820, it amounted to 180 million thaler of interest-bearing bonds. In addition, there were 11.2 million thaler of paper money and 25.9 million thaler of provincial debt that had been taken over by the Prussian state. In total, the debt was 217.2 million thaler, which corresponded to 4.25 years of public revenue. Partly, this sum comprised debt issued by the various territories and entities returned to Prussia after the Congress of Vienna. Many of the defeated territories had issued their own debt instruments to raise funds in order to pay reparations. At the same time, it included debt issued by states under French control — for instance that of the Kingdom of Westphalia, which existed from 1807 to 1815 on Prussia's Western territories with the city of Kassel as its capital, and was ruled by King Jérôme Bonaparte, Napoleon's youngest brother (Treitschke 1885, 71–73).

That said, the rising debt volumes were not only a war time inheritance. The Prussian government itself also started taking on new debt. By 1817, Prussia had public debts in the sum of 20 million thaler that needed immediate payment while another 15 million thalers were urgently needed for defence and reconstruction after the war. For the year 1818, a deficit of 8 million thalers was envisioned. The Prussian state was on the verge of bankruptcy, and there was even a risk that the government would not be able to pay the wages of soldiers or civil servants. After negotiating in vain with a number of Berlin banking houses for arranging a government bond, a **large foreign loan** seemed the only salvation from this dangerous situation. The Seehandlung reached out to Nathan Rothschild in London who succeeded in securing a 5% bond of £ 5 million at 72% of the nominal value. The conditions of the bond were rather favourable as at that time, Prussian treasury bonds traded on the Berlin Stock Exchange at levels between 71% and 73% of their nominal price. This was also the first large foreign bond brokered by the Rothschild banking house and stressed the importance of the Pound Sterling as an international

currency (Henderson 1956, 528–29).

After its 1806 default, the Seehandlung was able to return to business in 1809. During 1810, it paid its missing interest which caused the prices of its outstanding bonds to rise again to 60%. The salt business continued at the time. It even increased in importance because Prussia had lost many of its domestic salt mines and salt had to now be imported from abroad. From 1813, as the salt trade made it possible for the Seehandlung to return to profitability, it was now easily able to meet its payment obligations. In 1813, the Seehandlung was tasked with issuing new debt. From December 1814 onwards, it was allowed to accept deposits against bonds at a 4% interest rate with one-year maturity. This was yet another turning point for the Seehandlung — it could reactivate its banking business (Hellwig 1922, 37–46).

The Königlich Preußische Bank had suffered massively through the war. Most of its assets had been illiquid long-term loans to Polish landowners whose properties got confiscated. This made the Bank lose 10 million thalers, 40% of its asset book, and impoverished countless creditors. It was unable to pay interest for years, and still had to pay advances to the state. By 1817, its official books listed a surplus of 920,000 thaler, even though in reality it had an estimated deficit of 7.2 million thaler. It had claims of 27 million thaler of which 8 million turned out worthless. The Bank was, in fact, insolvent. Still, the decision was not to close it but to maintain it under treasury administration. Its business activity was shifted towards short-term lending, but it had to continue operating without any share capital. Due to the lack of basic funding, the Bank was not able to carry out basic central banking operations such as backstopping the discount market, which made the Berlin discount rate one of the most volatile ones in Europe (Treitschke 1885, 80–83).

All this information about the financial positions of the Prussian state, the Seehandlung and the Bank was guarded like a state secret and was not allowed to see the light of day until 1834 when some information was allowed to be published (Hellwig 1922, 50).

3.2 The Seehandlung and Hardenberg's Edict on State Finances of 1820

The Prussian monetary architecture took another U-turn when Hardenberg — now an experienced statesman at the end of his career who had outlived all his competitors — issued the **Edict on State Finances of 17 January 1820 (Hardenbergsches Staatsschuldenedikt)**, a quasi-dictatorial act to which the king approved after Hardenberg had used his supreme standing to lobby the monarch who may not have fully understood the implications of the Edict. The Edict had four key elements:

First, it established a new independent debt management agency. In the run-up to the Edict, Hardenberg had tasked a government commission to gather a full overview of all the various types of sovereign debt outstanding that the Prussian state was liable for, a process which took several years. The king insisted that all debt should be accepted at face value and rejected demands for a unilateral haircut as he wanted to maintain the creditworthiness of his government, thus the Edict stipulated that all Prussian debt should be repaid in full, which was supposed to be facilitated by the new agency (Hellwig 1922, 51).

Second, in the third article of the Edict, after the provision that the state would guarantee the debt with all its domains (*Domänen*), there was the inconspicuous addition 'with the exception of the domains, which are necessary to meet the annual requirement of 2.5 million thaler for the maintenance of the royal family'.

This incidental sentence caused a momentous change in Prussian state law: the king now received an annual minimum income, which by comparison was not even very high, effectively representing a shift from an absolutist monarchy to a constitutional monarchy in all but name (Treitschke 1885, 76–77). While it excluded the king from liability for Prussian debt, it de facto created a **legal separation of the king's purse from the state treasury** in the monetary architecture.

Third, the Edict foresaw that no new sovereign debt was supposed to be issued unless there was a consent of Prussia's estates (*Reichsstände*) achieved after consultation in a representative assembly of all estates (*reichsständische Versammlung*). In the Constitution of the German Confederation (*Deutsche Bundesakte*) signed at the end of the Congress of Vienna, all member states had committed to introduce such an assembly, but the Prussian king had hitherto not complied. Therefore, once signed into law, the Edict was tantamount to an outright sovereign debt brake. Hardenberg's intention was to create the necessity for the king to deliver on his promise and pass a constitution for Prussia with a representative assembly. Hardenberg expected that this would happen within a year. The king, however, did not follow suit, and the **debt brake remained indefinitely** (Treitschke 1885, 77–78).

Finally, the Edict introduced one important **exception to the debt brake** — bonds issued by the Seehandlung, which was re-established as an independent institution outside of government control that would act as the banker for the government. As stated in an appendix to the Edict, written by Christian von Rother, the Seehandlung was supposed to,

'form an essential and organic complement to the institutions by which the finances and the public debt system were ordered; it should become, not only temporarily until the introduction of the general estates, but even later after the introduction of the general estates, a ready and powerful instrument for the execution of the monetary transactions and credit operations of the administrative authorities, in order to secure for the cases of extraordinary but temporary monetary needs the elasticity and freedom of action which is gained in other states by the power of the administration to issue interest-bearing central treasury bills, treasury bills and other aids to a pending administrative debt; finally, if in the future it should be necessary to proceed to real government bonds, it should mediate and facilitate the same by its cooperation. While the state would provide it with credit through its guarantee, it would in turn support the credit of the state through its lively trade connections, through the commercial handling of its monetary transactions and through the punctual fulfilment of the obligations entered into before it. In order to fulfil this task and prevent possible abuses, it could not be subordinated to the state administrative authorities, but had to exist alongside them with a separate administration and its own assets. From this point of view, the Royal Cabinet Order of January 17, 1820, declared the Seehandlung to be a monetary and commercial institution of the state in its own right, independent of the Ministry of the Treasury. It was thus appointed, as it were, as the state and court banker, to handle not only abroad but also domestically all such transactions in which commercial involvement is desirable and necessary — whether they involve the payment or collection of funds, the purchase or sale of papers and securities, or other mercantile transactions — for the account of the state and its authorities in return for an ordinary commercial commission' (cited after Hellwig 1922, 52–53).

The Seehandlung had received back its original role as an OBFA and would subsequently operate under the leadership of Rother himself, who played a key role in re-attributing to it this status.

3.3 Off-balance-sheet financing and the foundation of Preußische Bank

Although a de facto debt brake was in place after the 1820 Edict, the Prussian state continued running a deficit which required financing. Hence, the Seehandlung extensively used the loophole that had been

created and provided off-balance-sheet government financing. In 1820, it organized an award lottery (*Prämienlotterie*) with some banking houses; this allowed issuing sovereign bonds amounting to 27 million thaler under favourable conditions. Placing them directly on the market would have led to too great a price drop. In 1822, the Seehandlung arranged a second 5% London bond of £ 3.5 million with the help of Nathan Rothschild's mediation. The general improvement in Prussia's economic situation is reflected in the price of this bond (84%). As collateral, the Seehandlung used 24.5 million thalers of Prussian sovereign bonds which it had previously bought on the open market at 66.66%. About 20% of the bond's proceeds were retained by the Seehandlung to finance road construction and industrial ventures (Hellwig 1922, 61; Henderson 1956, 528–30; Treitschke 1885, 75).

With the help of the second London bond, state finances improved all the while the government introduced harsh austerity measures in the public sector to cut expenses. In 1828, sovereign bonds traded again at par value which the Seehandlung used as an occasion for a triumphant report to the king that the time of hardship had been overcome (Treitschke 1885, 75). The Seehandlung expanded its business activities substantially. In 1825, it supported the construction of public highways (*Chausseen*) after private companies had not been willing to build them and received claims against the Prussian state in return. In 1832, it carried out an option business (*Prämiengeschäft*) of 12 million thalers on behalf of the state, which decided to invest the proceeds in military armament due to an uprising in Poland, a revolution in Paris, and a war between Belgium and Holland which the Prussian government expected to spill over to Prussia. The Seehandlung continued its business of discounting bills, which remained highly profitable. It also issued non-interest-bearing bills (*unverzinsliche Seehandlungskassenscheine*), which were a form of paper money but had to be withdrawn from circulation in 1837 (Hellwig 1922, 62–64).

As a result of a secret cabinet order from 3 May 1821, the Seehandlung was able to retain its profits. In 1829, the Seehandlung was therefore able to pay back the capital of 1.0 million thaler, which it had received from the Prussian state, with an interest of 339,000 thaler. This helped substantiate its claim that it was independent from the state and that it only made profits due to its own business skills. In a report to the king of 30 November 1844, the Seehandlung calculated its total revenue from 1820 to 1843 as 2.076 billion thaler. It had become the biggest business organization of the state. Its extensive business and industrial activities, however, had not been foreseen by the Edict of 1820. Attacks on the Seehandlung from merchant and trading associations intensified, in particular as the ideals of Manchester capitalism spread, which wanted to see the state entirely removed from all business activities (Hellwig 1922, 69–71, 78–81).

The Königlich Preußische Bank, which had also gained independence through the 1820 Edict, expanded its business volumes as well (Niebuhr 1854, 7–8). Yet, criticism from the bourgeoisie and emerging industrialists were widespread, especially in the Western provinces which were industrializing most rapidly and suffered from Prussia's underdeveloped credit system. After the Bank laid down very strict rules for its operations in 1829, the Cologne Chamber of Commerce lamented that its principles are so strict that almost no one did business with the Bank. With the expansion of railroad construction, the Prussian monetary system became increasingly out of sync with the demands of the time. Still, the government was not ready to carry out financial reforms. Instead, it curbed the industrial-capitalist development in the 1830s to stabilize the monetary sector and blocked rather than facilitated the creation of private *Zettelbanken* capable of issuing private bank notes, which was emphatically demanded by the industrialists. During a stock market crash in 1844, the government prohibited forward transactions in domestic bonds and all trade in foreign bonds because it blamed them for crowding out the trade in sovereign bonds the market prices of which had dropped sharply. This measure caused the capital market to collapse and tightened the supply of money and credit even further. To protect itself from losses, the Königlich Preußische Bank raised its discount rate for the first time since 1836, and

when this measure was still unable to protect the bank's funds, it tried credit rationing in the fall of 1845 (Ziegler 1993, 487–90).

Under the impression of this crisis, the government opted for a policy change and **founded the Preußische Bank**. With the Banking Act of 5 October 1846, it transformed the Königlich Preußische Bank: the newly created Preußische Bank would receive a private equity base and be placed on a new footing. However, it was not transformed into a joint-stock company but remained a public-law institution. While private investors were allowed to provide most of the capital, their representatives were involved in the management only in an advisory capacity. The investment was made palatable to them through a state guarantee for an annual dividend of 3.5% (later 4.5%) and the prospect of a superdividend if the company made a corresponding net profit. Similar to the 1844 Bank Charter Act in England, it provided a limit for note issuance, which was fixed at 15 million thalers that had to be covered with specie by one third and 6 million thaler covered by sovereign debt (Ziegler 1993, 490–93).

However, by 1847, the money shortage had not improved because the Preußische Bank did not make use of the note issuing elasticity it was granted. For example, when a credit crunch happened later in the year, the Bank acted procyclically and restricted its credit supply instead of acting as lender of last resort (Ziegler 1993, 493). This was the situation when the March Revolution of 1848 erupted.

4. Post-revolutionary Prussia: The rise of Bismarck and the German Empire, 1849-71

The revolutionary year of 1848 would create new dynamics for the transformation of Prussia's monetary architecture and lift the political and institutional deadlock of Prussia's state finances after the de facto debt brake created by Hardenberg's 1820 Edict.

Uprisings first began in Sicily in January 1848 and reached Paris in February. On 24 February 1848, the French King Louis Philippe I abdicated. On 13 March, Chancellor Metternich stepped down in Vienna. As a result, the revolutionary movement spilled over into Prussia. The call for parliamentary participation in politics, freedom of the press, freedom of assembly, and freedom of conscience was supported by a large part of the population since the government had lost much of its trust during the preceding economic crisis. After oppositional popular assemblies in Berlin demanded liberties from the Prussian monarchy, military action escalated into barricade fighting on 18 and 19 March which claimed several hundred lives. King Friedrich Wilhelm IV was finally forced to withdraw the military from Berlin and make political concessions ([Hachtmann 1997](#)).

On 21 March, Friedrich Wilhelm IV rode through the city wearing a black-red-gold armband and had a civilian-dressed officer carry a black-red-gold flag ahead, symbolically placing himself at the forefront of the German national movement. In his proclamation “To My People and to the German Nation”, he expressed his desire to create an all-German assembly of estates and to introduce a true constitution — precisely the type of institutional innovation the absence of which had been the reason for the de facto debt brake. Prussia should, according to the core statement of the declaration, “merge into Germany”. With the so-called *Märzerrungenschaften* (freedom of the press and assembly and the promise of a constitutional monarchy and German unity), all the demands of the moderate liberals had been met.

On 29 March 1848, Friedrich Wilhelm IV established a new government. The king appointed two bankers from the Rhineland, Ludolf Camphausen and David Hansemann, as Prussian prime minister and finance minister, respectively. They were the first people in the Prussian government that were not descendants of the nobility, complying with demands to grant participation to economic and financial elites from the bourgeoisie. On 2 April, the new government presented a draft election law on the basis of which a constituent Prussian National Assembly (*Preußische Nationalversammlung*) was to emerge. On 1 May 1848, the first free election in Prussia took place. Liberal and left-liberal forces received a majority, while the conservatives suffered a resounding defeat, to the dismay of the king. At the same time, Prussian deputies were also elected to the all-German Frankfurt National Assembly ([Herre 2007](#)).

Tasked to draft a constitution, the Prussian National Assembly started meeting in Berlin from 22 May. On 9 November, however, the government ordered the expulsion of the National Assembly to Brandenburg an der Havel and dissolved it by royal decree on 5 December when Friedrich Wilhelm IV unilaterally enacted a constitution for Prussia. The king's 1848 Constitution comprised many liberal demands such as a catalogue of fundamental rights, including jury trials, freedom of speech, the press and assembly, as well as a parliament consisting of two elected chambers. Yet, the 1848 Constitution had ministers responsible to the king, not the Parliament; and the king had veto power over legislation and could dissolve Parliament at any time, which left him firmly in a position of power in spite of the Constitution's liberal elements ([Hein 2019](#)).

The final article of the 1848 Constitution stated that it shall be subjected to revision immediately after the first session of the chambers. When the new parliament (*Landtag*) met for the first time on 26 February 1849, it formally accepted the Constitution imposed by Friedrich Wilhelm IV and then began work on its revision. On 31 January 1850, the king promulgated the revision. The new 1850 Constitution introduced the Prussian three-class franchise for elections to the second (lower) chamber (*Abgeordnetenhaus*). The system weighted votes depending on the amount of taxes paid and thus gave considerably more power to the wealthy. The second chamber received budget authority: Draft finance laws and state budgets, including plans for sovereign bond issuance, had to be agreed upon by the second chamber and the king. The first chamber (*Herrenhaus*), comprising the nobility, then could only approve or reject them in their entirety. With the 1850 Constitution, Hardenberg's vision from the 1820 Edict had effectively been fulfilled. Prussia's monetary architecture subsequently no longer had a formal debt brake.

4.1 The *Disconto-Gesellschaft* and the rise of the Prussia Consortium

The gradual economic and political liberalization in the aftermath of the March Revolution led to a strengthening of private finance, in particular the foundation of new banking institutions. The most important one was the *Disconto-Gesellschaft*, established in 1851. The founder was none other than David Hansemann who had been finance minister for the liberal party from March 1848. When the reactionary forces regained power in September 1848, he was removed from office and made president of Preußische Bank. This position was fitting insofar as he had previously worked in the trading and banking business. A staunch advocate of financial liberalization, he had attempted to found a *Zettelbank* in the Rhineland in 1846, which did not get approved at the time. As the head of Preußische Bank, he sought to foster his liberal agenda but was ousted in April 1851 after ongoing conflicts with the bank's other directors. Subsequently, he established the *Disconto-Gesellschaft*. Following the role model of the Belgian *Union du Crédit*, it was designed as a credit cooperative — a business structure that found the approval of the Prussian authorities. In June 1851, the *Disconto-Gesellschaft* became operational (Däbritz 1954, 4–24).

The events of spring 1848 also had a profound effect on the *Seehandlung*. Based on a cabinet order of 17 April 1848, the government of Camphausen and Hansemann re-integrated the *Seehandlung* into the Prussian treasury. From 1848 onwards, there were attacks from parliament against the *Seehandlung*'s very existence. In the first session of the second chamber on 28 January 1850, some voices demanded that it should be removed. The argument was that the state could only issue bonds and guarantees with the consent of both chambers, but that the *Seehandlung* — given its structure as a public-private institution — offered the potential for the government to carry out illegal operations. As an example, they mentioned the *Prämienanleihe* of 1832. The majority in the session, however, perceived the *Seehandlung* as useful and thought that it should be possible to fit it into the new constitutional structures. They stressed that the function of the *Seehandlung* had already changed and that it was subordinated to the finance minister. In 1850, the *Landtag* requested that the *Seehandlung* should sell its trading and industrial businesses and reduce its activities to the scope of the 1820 Edict. Moreover, it requested that the *Seehandlung* submit reports to the central budget committee. Both demands were later implemented (Hellwig 1922, 91-99).

In 1854, the *Seehandlung* helped the state government raise a loan of 30 million thaler on the occasion of the war in Crimea between Russia and the Ottoman Empire. 15 million thaler were raised by issuing

a bond with 4.5% interest. The other half was raised via a premium bond (*Prämienanleihe*). The placements of both happened exclusively through the *Seehandlung* (Hellwig 1922, 107–8).

With worsening health, Friedrich Wilhelm IV handed over power in 1858 to his brother Wilhelm who thenceforth became prince regent and in 1861, after Friedrich Wilhelm's passing, was crowned as King Wilhelm I. With his mind and personality shaped by the ethos of the Prussian army, military reform was his supreme objective. This was the situation when on 26 April 1859 war broke out — later called the Second Italian War of Independence — between Austria, Prussia's ally in the German Confederation, and the Kingdom of Sardinia, which was supported by France. The Prussians suspected that the war had been facilitated in the background by the French king Napoleon III. Rumours emerged about a French-Russian alliance, and prince regent Wilhelm already feared as early as February 1859 that a two-front war could emerge with France as enemy in the West and Russia in the East, and by March, Russian soldiers had mobilized at the Prussian border (Stern 1977, 20–21; Düffer, Kröger, and Wippich 1997, 31–35).

In this situation, the Prussian government decided to issue a new bond to finance the mobilization of its army. However, the economic situation was not favourable to a new issuance since Prussia's existing bonds traded below par in the secondary markets. While 4.5% Prussian sovereign bonds still stood at 100% on 31 March 1859, they had dropped to 88.5% by 30 April 1859. Searching for a remedy, the Prussian minister of finance von Patow reached out to David Hansemann — one of his predecessors in office who now presided over the *Disconto-Gesellschaft*, Berlin's most flourishing private banking institution, which had in the meantime been converted into a limited liability company to expand its capital market business — and asked him for help (Däbritz 1954, 47–48; Stuebel 1935, 9–10).

Hansemann responded positively to the request and assembled a consortium of seven Berlin banks that purchased a part of the bonds themselves and placed the rest with investors (see Figure 2). By July 1859, the consortium placed 30 million thaler of Prussian sovereign bonds at 95%. It was the first big success for the *Disconto-Gesellschaft* in the field of sovereign debt issuance (Däbritz 1954, 47). This syndicated issuance would later be referred to as the origin of the **Prussia Consortium (*Preußenkonsortium*)** — a name that formally emerged only in 1866. The *Disconto-Gesellschaft* became the de facto leader of the consortium (Reiter 1967, 96).

- Disconto-Gesellschaft
- Berliner Handels-Gesellschaft (then also: Breest & Gelpcke)
- S. Bleichröder
- F. M. Magnus
- Mendelssohn & Co.
- Gebr. Schickler
- R. Warschauer & Co.

Figure 2: The original Prussia Consortium of 1859; **Source:** Reiter (1967, 97)

The distinctive feature of the syndicate in 1859 was that it was comprised of neither the Seehandlung nor the Rothschilds — even though Gerson Bleichröder was one of the Rothschild's close confidants (*Stern* 1977). Prussia had now created its own Berlin-based government financiers. The consortium banks soon used their reputation to facilitate further bond issuance for railroad construction, both for domestic companies as for foreign powers, notably the Russian Empire (*Däbritz* 1954, 47–48).

4.2 From the constitutional conflict to Bismarck's fratricidal war of 1866

The reign of King Wilhelm I became shaped by a **constitutional conflict** between him and the lower chamber of the Prussian parliament which lasted from 1859 to 1866. Under the impression of the Second Italian War of Independence, Wilhelm I wanted to carry out far-reaching military reforms, including an increase of the number of recruits and an extension of military service. In 1860, the lower chamber passed the military reform bill but used its budget authority — granted to it by the 1850 Constitution — to significantly scale down the funding. In March 1862, the newly elected parliament decided to block the military reform altogether. In response, the king dissolved the parliament and decreed a new election. Yet, the new parliament, elected in 1862, again had a majority against the military reform. The stalemate thus continued (*Stern* 1977, 20–23).

In this situation, the king appointed **Otto von Bismarck** as chancellor. Bismarck had previously been a conservative member of parliament and worked as a Prussian diplomat at the German Confederation in Frankfurt, in Russia, and in France between 1851 and 1862. Bismarck's appointment was due to his promise to the king that he would carry out the desired military reforms — if necessary, against the parliamentary majority. Hence, from the start of his chancellorship, Bismarck operated with government finances outside of the constitutional order and with the Prussian state unable to issue new sovereign debt in a legal manner. To legitimize his government policy, he postulated a “gap theory” (*Lückentheorie*), according to which in case of a deadlock between king and parliament — a situation not defined by the 1850 Constitution — the king had the final say. This doctrine essentially disempowered parliament, and was also found highly suspicious by the other states in the German Confederation (*Görtemaker* 1996). Bismarck's approach to the situation was a strategy of “blood and iron”. Before assuming office, he purportedly told British statesman Benjamin Disraeli: “I shall seize the first best pretext to declare war against Austria, dissolve the Confederate Diet, subdue the minor States, and give national unity under Prussian leadership” (cited in *Stern* 1977, 24). His time in office seemed to follow precisely along these lines.

In 1863, a confrontation was looming between Denmark and the German Confederation over the territories of Schleswig and Holstein, which Denmark wanted to incorporate in view of forming a unified state. In November 1863, Danish King Christian IX passed a new constitution which declared Schleswig part of the Danish state. The German Confederation, led by Prussia and Austria, prepared for war. Even though Prussia had a war chest of 21 million thaler, Bismarck applied for a loan of 12 million thaler from parliament in December 1863, which were rejected in January 1864. Searching for alternative financing options, Bismarck received an offer of 15 million thaler from a South German consortium, headed by Frankfurt banker Raphael von Erlanger, despite the inherent danger that such bonds would not be honoured if issued without parliamentary authorisation. An alternative option contemplated was the sale of government property such as the coal mines in the Saar area to a private company to free up funds for war finance (*Stern* 1977, 34–41).

Without a clear financing concept, Bismarck launched an Austro-Prussian invasion of Schleswig on 1 February 1864 — later called the **First War of German Unification**. Bismarck had persuaded the

Austrians to join this two-pronged attack against the Danes with the goal of incorporating the territory, rather than keeping it as an independent state, which was preferred by the other members of the German Confederation. While the *Seehandlung* was still negotiating with Erlanger about a secret financing agreement in March, the Austrian and Prussian troops gained a military victory on 18 April, which pre-decided the war, even though a formal peace deal was only struck in October 1864. The conquered territories were divided between Prussia and Austria, but they agreed on 'joint sovereignty' in the Gastein Convention ([Stern 1977, 41–46](#)). Bismarck had managed to finance the war merely with budget surpluses, even though he had been willing to resort to unauthorized loans or an illegal sale of government property ([Stuebel 1935, 10](#)).

The German-Danish war was only a prelude to the “fratricidal” Austro-Prussian War of 1866 — also called the German-German war or **Second War of German Unification**. The main occasion for the war was a dispute over the administration of the conquered territories in Schleswig and Holstein. Bismarck strived for full control whereas Austria had little use for them. The deeper roots were the struggle over hegemony within the German Confederation and Bismarck's desire to exploit Austria's political and financial weakness at the time while ending the constitutional conflict at home.

In the prelude to the fratricidal war, Bismarck — still unable to issue government bonds in a legal way — filled the government coffers through a deal facilitated by the banker Gerson Bleichröder. On 18 July 1865, the Prussian government renounced its right to purchase the stock of the Cologne-Minden Railroad for 13 million thaler and was able to free up money by liquidating a guarantee fund it was obligated to maintain for the railroad. This deal violated the constitution and was harshly criticized by parliament. It provided the financial basis for the upcoming war with Austria, which at the time was approaching bankruptcy ([Stern 1977, 62–69](#)).

The dynamic leading to the war unfolded in January 1866 when Prussia protested the Austrian decision to form a united assembly in Holstein, declaring it a breach of the principle of joint sovereignty. Both sides mobilized their military. On 1 June, Austria brought the dispute before the Confederate Diet and allowed the assembly in Holstein to convene. Prussia declared the Gastein Convention nullified and invaded Holstein on 9 June. On 14 June, the Confederate Diet voted for a partial mobilization against Prussia. The following day, Bismarck claimed that the German Confederation had ended and invaded Hanover, Saxony, and Hesse. While the Austrian army was mobilizing for an invasion of Silesia, the Prussian army confronted it in Bohemia on 3 July 1866. In the Battle of Königgrätz, Prussia defeated Austria decisively ([Bond 1966](#)).

The mobilization for the fratricidal war was hugely unpopular *ex ante* and triggered a financial crisis in Prussia in May 1866. The government decreed to found public credit institutes (*Darlehnskassen*) which issued notes (*Darlehnskassenscheine*) amounting to 6 million thaler as emergency money ([Bergius 1870, 255](#); [Stern 1977, 79](#)). Seeking financial support, the new finance minister von der Heydt reached out to Adolph Hansemann, who had taken over leadership of the Disconto-Gesellschaft from his father David. Adolph Hansemann called the representatives of the leading Berlin banks to support the war effort by taking over additional Cologne-Minden railroad stock. Against the advice of Hansemann and Bleichröder, the banks — expecting a Prussian defeat — offered only to pay much less than the daily price, which was rejected by the minister. Hansemann proactively offered all the funds he could liquidate to support Bismarck's war effort and forwarded them to the *Seehandlung* ([Däbritz 1954, 68–69](#)). Subsequently, a consortium of Disconto-Gesellschaft, Bleichröder, and J. Kahn, Bonn, took over a small sum of stock of Bergisch-Märkische Railroad. After the Prussian victory at Königgrätz, the mood changed. The *Seehandlung* was able to sell the bonds of the Cologne-Minden railroad without help of the banks ([Stuebel 1935, 11](#)).

Hoping to prevent feelings of revenge, Bismarck pushed for a face-saving peace agreement with Austria, without claiming any of Austria's territory. The Peace of Prague, concluded on 23 August 1866, formally dissolved the German Confederation. While the Austrian Empire lost all influence over the former German Confederation and subsequently formed the dual monarchy of Austro-Hungary, Prussia annexed Schleswig-Holstein, Hanover, and Hesse-Nassau as its provinces and formed the Northern German Confederation (*Norddeutscher Bund*), which encompassed all German territories North of the river Main. Through its Constitution effective from 1 July 1867, the Northern German Confederation became a federal state under Prussian leadership with Berlin as its capital and the Prussian king as head of state. The *Bundesrat* (federal council) became an assembly of representatives of the state governments and the Reichstag a representation of the people (Jahr 2020).

The victory in the fratricidal war made it possible to put the constitutional conflict to an end. In September 1866, Bismarck introduced an indemnity bill (*Indemnitätsgesetz*) to parliament which retroactively approved the government budgets of the previous years. Moreover, he introduced a law in November 1866 permitting the government to cover extraordinary expenses for military purposes via treasury bills (*Schatzanweisungen*). The end of the constitutional conflict led to an economic and financial boom, particularly manifested in the form of railroad construction. The Prussian government was able to now issue bonds to pay off war debts, finance railroads, and compensate dethroned German princes (Stuebel 1935, 11, 85). These bond issuances were taken over by the **Prussia Consortium**, now under the formal leadership of the Seehandlung (Hellwig 1922, 108). The Disconto-Gesellschaft remained the largest private bank and had a supreme relationship with the government due to its cooperation at the beginning of the German-German war. Other private banks joined and left the Consortium for different bond issuances. Figure 3 provides an example for the composition of the Prussia Consortium at the time (Reiter 1967, 97).

Preußische Staatsbank (Seehandlung)
Preußische Bank
Disconto-Gesellschaft
S. Bleichröder
Berliner Handels-Gesellschaft
F. M. Magnus
Mendelssohn & Co.
Gebr. Schickler
R. Warschauer & Cie.
H. C. Plaut
M. A. v. Rothschild & Söhne
Sal. Oppenheim jr. & Söhne

Figure 3: The Prussia Consortium led by the Seehandlung after the Austro-Prussian War;
Source: Reiter (1967, 97)

4.3 Financing the Franco-Prussian war

With the successful 1866 war and after the foundation of the Northern German Confederation had established Prussia as the uncontested hegemon over the German states, a new symbiotic relationship had emerged between the Prussian treasury, the Seehandlung, and the Preußische Bank on the one hand, and private Berlin-based banks on the other hand. The firm establishment of the Prussia Consortium strengthened the private aspects of Prussia's hybrid monetary architecture. While the Prussian government had still been cautious about private finance in the 1850s, it now embraced the rising power of banks in Berlin, which increased in importance as a financial centre due to Prussia's strengthened geopolitical role (Stuebel 1935, 12–13).

The most trusted private financier was Adolph Hanseemann whom the government tasked in 1868 with developing a proposal for converting Prussian sovereign debt into consols — eternal bonds without maturity (*ewige Rentenschuld*) — following the British and French role model. Adolph Hanseemann suggested a cautious approach by converting only Prussian 4.5% bonds — a suggestion that was implemented shortly afterwards (Däbritz 1954, 70).

At the same time, the status of the Seehandlung as an OBFA was reconfirmed. During the time of the constitutional conflict, the lower chamber of parliament had launched heavy attacks against the Seehandlung — arguing that an institution that could take out very significant loans in the name and on behalf of the state made a mockery of the tax and public debt approval rights of the people's representation. After the 1866 war, the tensions about the Seehandlung's constitutional status eased, also because it agreed to disclose more of its business operations to parliament (Hellwig 1922, 109–115). The importance of the Seehandlung was boosted again in the upcoming Franco-Prussian War — the **Third War of German Unification** — when it obtained the role of the war financing bank of the Northern German Confederation (*Kriegsbank des Norddeutschen Bundes*).

The Franco-Prussian War was the result of escalating tensions over the succession to the Spanish throne after the Spanish military had ousted Queen Isabella II in September 1868. The leaders of the coup searched for a new ruler among the European royal families and chose prince Leopold von Hohenzollern, a relative of the Prussian king, in February 1870. This choice was supposed to remain secret until the official announcement but was leaked prematurely in June 1870. France vehemently protested the choice for fear of getting encircled by two states ruled by the same dynasty. On 7 July 1870, the French ambassador in Prussia asked King Wilhelm I to convince Leopold to withdraw the candidacy for the Spanish throne. Wilhelm I agreed and acted accordingly. Despite the diplomatic success, France's foreign minister insisted on a public apology from Prussia and a binding commitment not to support any Spanish Hohenzollern candidacy in the future. After Wilhelm I rejected this request, Bismarck launched a press statement on 13 July called Ems Dispatch (*Emser Depesche*), which portrayed the French demands as excessive and sparked nationalist outrage in both France and the German states. On 14 July 1870, thousands of people went to the streets of Paris demanding war against Prussia. On 15 July, the French parliament voted to take on war loans. On 19 July, France formally declared war against Prussia, arguing that Prussia's project to install a Hohenzollern prince on the Spanish throne was directed against France's territorial integrity (Bremm 2019).

If it was Bismarck's intention to provoke the French to declare war (Becker 1971), he had been successful. France stood isolated as the aggressor. In the eyes of world public opinion, the cause of the war was null and void. The Southern German states Bavaria, Württemberg, Baden, and Hesse-Darmstadt decided to support the North German Confederation in the war against France. While they had been outraged about Bismarck's waging of the fratricidal war and previously stood with Austria, their

mood towards Prussia changed after the French declaration of war. They now agreed to put their armies under Prussian command (Bremm 2019).

To raise money for the war, the Prussian minister of finance von Camphausen decided to issue a 5% bond of 100 million thaler on 3-4 August 1870. Against the advice of Adolph Hansemann, the government did not opt for a syndicated issuance. The issuance turned out as a failure: only 68.3 million thaler were placed. The Seehandlung took over 11 million thaler. Effectively, the government only managed to raise 60 million thalers to finance the war. Therefore, a second round of issuance took place in October 1870. This time, the Prussia Consortium stepped in again. The syndicated issuance allowed successful placement of bonds amounting to 80 million thaler. The Disconto-Gesellschaft took over 21%, Seehandlung and Preußische Bank 14%, Rothschild and Bleichröder each 15%, and the Berliner Handels-Gesellschaft and Norddeutsche Bank 5%. Several new bond issuances followed. Based on a law of 29 November 1870, the North German Confederation issued 5% treasury bills (*Schatzanweisungen*). The Prussia Consortium took over 34 million thaler at 92.5%. In the context of this issuance, a structure for dividing up shares emerged, which was kept for the following years (cf. Figure 4). The Prussia Consortium also received an option for another 17 million thaler of bonds, which they would only exercise if they could find buyers abroad. The only option was to issue these bonds on the London capital market. Adolph Hansemann convinced the London Joint Stock Bank to set up treasury bills of 3 million Pound Sterling — approximately 20.4 million thaler — on behalf of Preußische Bank and the Seehandlung (Hellwig 1922, 109–10; Reiter 1967, 98–99; Däbritz 1954, 72–75).

Institution	Sum (in million thaler)	Share
Preußische Staatsbank (Seehandlung)	7.7	22.7 %
Preußische Bank	1.0	2.9 %
Disconto-Gesellschaft	7.2	21.2 %
S. Bleichröder	5.0	14.7 %
Berliner Handels-Gesellschaft	2.0	5.9 %
Norddeutsche Bank	1.6	4.7 %
F. M. Magnus	1.5	4.4 %
Mendelssohn & Co.	1.5	4.4 %
H. C. Plaut	1.5	4.4 %
Sal. Oppenheim jr. & Cie.	1.5	4.4 %
R. Warschauer & Cie.	1.5	4.4 %
Gebr. Schickler	1.0	2.9 %
Preußische Central-Bodenkredit-AG	1.0	2.9 %
	34.0	100%

Figure 4: The Prussia Consortium for financing the Franco-Prussian War, 1870; **Source:** Reiter (1967, 99)

The placement of war bonds became smoother as the war effort developed favourably for Prussia and its allies. Fighting began on 2 August with French advances toward Saarbrücken. In the battles of Spichern, Weißenburg, and Wörth, the Prussian army defeated the French. It became apparent that France was to become the main theatre of war. Subsequently, Prussia won the major battles in Vionville on 16 August, Gravelotte on 18 August, and in Sedan on 2 September. Emperor Napoleon III, who had rushed to the French troops by rail to boost their morale, fell into German captivity. On 4 September, the French monarchy collapsed, and the Third French Republic was proclaimed. When peace negotiations between Bismarck and the new French foreign minister Jules Favre failed, the French republican

government attempted to find new recruits and rebuild its army. The Prussian general staff attempted to conclude the war by advancing on Paris and managed to encircle the French capital on 19 September. French attempts to break the encirclement failed in the ensuing months. Paris capitulated after heavy shelling on 28 January 1871, and an armistice was signed the same day (Bremm 2019).

Already during the war, Bismarck worked towards founding a German Empire (*Deutsches Kaiserreich*). In his mind, the only option to prevent French revanchism was to convince the Southern German states to join the North German Confederation. In the so-called “November Treaties”, the four Southern German states agreed with Bismarck on the terms to join the confederation. On 10 December 1870, the Reichstag voted on a new constitution in which the president of the confederation should receive the title “Emperor”. Formally, the constitution became effective on 1 January 1871. Symbolically, the founding of the empire was confirmed on 18 January 1871 by the proclamation of Wilhelm I as German Emperor in the Hall of Mirrors at the Palace of Versailles (Winkler 2000).

A particular challenge was to manufacture consent of the Bavarians to submit to the Prussian rule and give up their long-standing orientation towards Austria. Bismarck was able to use Prussia’s newly developed financial strength to literally bribe Bavaria’s King Ludwig II into joining the German Empire by exploiting his financial calamities, as Bavaria’s public finances had been severely overstrained due to the king’s architectural pet projects. In July 1870, at the very beginning of the war, Ludwig II asked Bismarck for financial support to deploy the Bavarian army. Bismarck followed suit and sent a heavily guarded train with silver bars amounting to 3 million gulden (1.7 million thaler) from Berlin to Munich. In November 1870, Bismarck offered Ludwig II an annual gift of 100,000 thaler if he accepted Prussian King Wilhelm I as future German Emperor. The allowance was to be paid out of the *Welfenfonds* — a slush fund made up of the property of the Royal House of Hanover, which Prussia had confiscated as the result of its annexation of Hanover in the 1866 war. In exchange, Ludwig II sent an “Imperial Letter” (*Kaiserbrief*) — signed by himself and Bismarck — to the Prussian king, confirming Bavaria’s accession to the North German Confederation and accepting Wilhelm’s future status as German Emperor (Stern 1977, 133).

5. The First Era of Globalization: Prussia in the German Empire, 1871 to 1914

The foundation of the German Empire had not only major implications for the political and economic setup of Prussia but also for its monetary architecture and sovereign debt issuance.

On 16 April 1871, after the first election to the Reichstag, the **Constitution of the German Empire** (*Bismarcksche Reichsverfassung*) was passed and became effective on 4 May 1871. It gave the German Empire a double structure of member states and the newly created hierarchically higher “imperial” political level. Formally, the Empire was a confederation of princes, which is why the *Bundesrat* — the representative body of the constituent states — was its highest state organ. The Bundesrat had a total of 58 votes. Prussia was the largest state with 17 votes. Bavaria had six, Sachsen and Württemberg four, Baden and Hessen three, all others two or one (Art. 8). De facto, however, the main powers were vested in the Presidium of the Confederation, which was held by the King of Prussia under the title of “German Emperor”. The emperor appointed the Imperial Chancellor, who presided over the Bundesrat, directed its business, and was the sole responsible minister of the Empire. The chancellor became an authoritative figure of the political system both behind the scenes and in public perception. Laws of the Empire required the approval of two bodies, the Bundesrat and additionally the Reichstag. The Reichstag was elected every three years and, from 1885, every five years, according to universal suffrage for men. Still, the parliament remained subordinate to the Emperor who was allowed to open, postpone, or dissolve both the Bundesrat and the Reichstag at his discretion (Ullmann 2005).

The foundation of the German Empire gave rise to some years of extraordinary economic, industrial, and financial advancements. The period from 1871 to 1873 was later called the “Age of Founders” (*Gründerzeit*). It soon gave way to the “Founders’ Crash” (*Gründerkrach*), a phase of depression that lasted until the end of the 1870s and saw many of the newly founded organizations go bankrupt. The comparatively liberal phase came to an end in 1878. The foundation of the Empire had accelerated the transformation towards an industrial society, concomitant with a sharpening class antagonism and increasing demands for an overthrow of the capitalist system. In reaction, Bismarck introduced the Socialist Act (*Sozialistengesetz*), banning all social-democratic, socialist, and communist organizations, which started a historical period sometimes referred to as that of a *Kulturkampf*. Moreover, Bismarck introduced protectionist tariffs and, in the 1880s, would lead the Empire into the “Scramble for Africa”, the intensifying colonialist and imperialist policies of the European powers. In March 1888, Emperor Wilhelm I died. As his successor Friedrich III passed away after only 99 days in office, it became the “Year of the Three Emperors” (*Dreikaiserjahr*), with Wilhelm II assuming the throne on 15 June. As the young Wilhelm II increasingly challenged Bismarck’s authority and finally ousted him in March 1889, his reign became known as the Wilhelmine Period. Wilhelm II broke with Bismarck’s mitigating foreign policy aimed at a balance of power and nurtured claims towards an increasingly global dominance of the German Empire, which would eventually lead to the outbreak of the First World War in 1914 (Nonn 2017).

At the beginning of those events stood a reform of the coinage system, which completed decades of monetary integration in between the German states. When the Empire was founded, it still had six different coinage systems: the thaler in most of Northern and Central Germany; gulden in the South; francs in the territories received after the Franco-Prussian War; as well as alternative coinage systems in the free cities of Hamburg, Lübeck, and Bremen (Parchmann 1933, 10–11).

The first Imperial Coinage Law (*Reichsmünzgesetz*) of 4 December 1871 consolidated the coinage system and introduced a new unit of account for the entire Empire: the Mark (*ℳ*). With the coinage law, the German Empire made a widely debated shift from the silver currency to gold currency. 1 *ℳ* was defined as 0.358423 grams of fine gold. One reason for the shift was an ongoing devaluation of silver outside of the Empire’s borders, which led to a fear of monetary isolation if the German Empire remained

with the silver currency. On the other hand, there were increasing trade and financial relationships with England, which already had a gold currency and was running the international gold standard, which the Empire then effectively joined (Parchmann 1933, 13). This step effectively kickstarted the “first era of financial globalization”.

Under those circumstances, Prussia’s monetary architecture and its sovereign debt issuance practices – now inextricably intertwined with the monetary and financial institutions of the Empire – transformed profoundly again.

5.1 French Reparations, sovereign debt reduction, and the *Seehandlung* in the *Gründerzeit*

The victory over France led to a significant inflow of **reparation payments** to Prussia and the German Empire. In the preliminary peace agreement signed on 26 February 1871 in Versailles, the sum of reparations was listed at 5 billion francs, payable within three years. The successive withdrawal of German troops was connected to the payment of the agreed sum. The final Peace Agreement of Frankfurt, signed on 10 May 1871, stipulated that 500 million francs be paid 30 days after restoration of French government authority given that in Paris an uprising was still ongoing. The next instalment of 1 billion francs had to be paid by the end of 1871, even though 325 million francs were reduced as France passed on ownership of the railroads in Alsace-Lorraine. 500 million francs had to be paid on 1 May 1872, while the remaining sum of 3 billion francs was supposed to be paid on 2 March 1874 with a 5% annual interest (Nonn 2017; Bamberger 1873).

Moreover, the Peace Agreement of Frankfurt stipulated that French reparations could be paid in gold, silver, first-class bills of exchange, or bank notes issued by the Bank of England, Preußische Bank, Nederlandsche Bank, and the Banque Nationale de Belgique. This stood in sharp contrast to the peace agreement with Austria in 1866 which accepted only “cash”, defined as coins and bullion made up of gold and silver (Born 1977, 32-33). Hence, **bank notes** received an upgrade in their relevance as monetary instrument, even though they still did not have the status of legal tender at the time.

To raise the funds, the French government carried out two sovereign bond issuances. For the first issuance in June 1871, it collaborated with the Paris branch of the Rothschild family bank who helped distribute the bonds all across Europe. The 2 billion francs consol was significantly oversubscribed at 4.8 billion francs. The second issuance of July 1872 was even more successful. Instead of the advertised 3 billion francs, the subscription amounted to 43 billion francs, 26 billion of which came from abroad, with Belgium and England accounting for the largest shares with 9 and 7 billion, respectively. All subscribers were allocated consols in line with the oversubscription rate. Having raised the required money, France made use of the possibility of an early payment of the reparations to make the German troops withdraw and re-establish national sovereignty (Buhr 1999).

On the side of the German Empire, 75% of the funds were supposed to be distributed among the member states according to their military involvement in the war and 25% according to their population. The 5 billion francs of reparations were mainly paid in bills of exchange. In addition, the Empire paid around 270 million francs in the form of gold coins (Buhr 1999, 7-9). As a large part of the sum was used to repay sovereign debt, the Empire and its member states were able to decrease their aggregate debt burden in the *Gründerzeit*. By 1 January 1870, the Prussian debt amounted to 1.27 billion \mathcal{M} . This included the taking-over of debts from the annexed territories of 1866 and the war bonds of 1870. In 1872 and 1874, 254.5 million \mathcal{M} were used for debt repayment. Hence, the public debt was reduced to 889 million \mathcal{M} by 1 January 1876 (Stuebel 1935, 24).

The main institution tasked to process the French reparations was the Seehandlung. In the second half of 1871, it received 202 million thaler of bills (*Kontributionswechsel*) on domestic and foreign exchanges. It used the proceeds to repurchase 5% *Bundesschatzanweisungen* of the first and second issue of the North German Confederation as well as 5% bonds of the North German Confederation. Moreover, it transferred £ 1.35 million to a London bank to redeem its 5% *Bundesschatzanweisungen*, and collected gold in sovereigns, 20 francs coins, and gold bullion. In 1873, the Seehandlung's businesses amounted to 424 million thaler (Hellwig 1922, 111-12).

Overall, the *Gründerzeit* was a period of easy money and speculation. In 1872, 479 companies were founded, mainly for railroad and building construction. Moreover, new banks were founded: 48 in 1871 and 50 in 1872. While Berlin had 9 banks (including Preußische Bank) in 1870, this number increased to 52 in 1873 (Stuebel 1935, 22). At the same time, stock market prices skyrocketed. French reparation payments contributed to this exuberance primarily because they allowed the repayment of sovereign debt. The proceeds were re-invested in the stock market, fuelling a bubble which burst with the 1873 *Gründerkrach* (Nonn 2017). In the year 1873 alone, 73 out of 139 banks had to be liquidated (Stuebel 1935, 23).

To counteract the ensuing monetary crisis, the main public institution to intervene was the Seehandlung. Through its support of the market, the Seehandlung was able to prevent worse consequences (Hellwig 1922, 119). The Seehandlung's relevance was significantly reduced, however, as the foundation of an imperial central bank progressed.

5.2 The creation of the Reichsbank

When the Empire was founded, a multitude of different paper notes were circulating – issued by 21 different state banks and 31 private *Zettelbanken*, 14 of which were from Prussia. The original idea was that the Preußische Bank should be the main central bank – as an institution of the largest state but not of the Empire. The reform proposal for note issuance foresaw that the Southern German state banks should gradually cease issuing paper money and that their notes should be replaced by *Reichskassenscheine* – paper money issued by the treasury of the Empire. This blueprint would not have comprised a separate imperial central bank (Parchmann 1933, 10-13).

In 1872, the chancellery discussed the alternative proposal to convert the Preußische Bank into a central bank of the Empire. However, the Prussian minister of finance rejected the plan. Instead, the government provided a proposal that comprehensively regulated “private note-issuing banks” – a term which comprised both states' note issuing banks and *Zettelbanken* – but did not include an imperial central bank. This proposal – even though harshly criticized both by academics and practitioners – was introduced to the Reichstag on 16 November 1874. Instead of accepting the bill, the Reichstag called for a committee to be formed that was supposed to revisit the proposal and consider developing a plan for the creation of an imperial central bank. The committee was formed and revisited the plan to convert the Preußische Bank into such imperial central bank. This proposal was endorsed by the Southern German states, which hoped to be able to have an influence on policymaking if the central bank was located at the imperial level (James 1997, 14). The Committee reintroduced the bill into the Reichstag where it was accepted without major changes. After the Bundesrat confirmed the proposal, a law was published on 14 March 1875 proclaiming the establishment of the **Reichsbank** effective on 1 January 1876 (Baumgart 1915, 16-17).

As the *Bankgesetz* stipulated, the Reichsbank was determined to be a legal entity under the supervision and guidance of the Empire but the bank's capital was supposed to be exclusively contributed by private

individuals (Parchmann 1933, 15-17). A contract of 17-18 May 1875 organized the transfer of Preußische Bank to the Empire. Accordingly, Prussia withdrew its capital and its share of the reserve fund of 9 million \mathcal{M} effective for 1 January 1876, and simultaneously ceded the Prussian Bank to the Empire. In reverse, the Prussian state would receive 15 million \mathcal{M} . The Reichsbank would take over the obligation of Preußische Bank to pay an annual sum of 1.8 million \mathcal{M} to Prussia. The shareholders of Preußische Bank received the right to convert their shares into shares of Reichsbank. Most of them followed the offer. The few shares that were not converted were offered on the open market. Afterwards, the head of Preußische Bank instructed in writing that its assets should henceforth be managed by the Reichsbank (Baumgart 1915, 17-18).

One third of the Reichsbank's note issuance had to be covered by coins, *Reichskassenscheine*, gold bullion, or foreign currency; two thirds had to be made up of discounted bills of exchange with a maximum maturity of three months. The Reichsbank committed to convert its notes into gold bullion at a fixed rate: 1 kilo of gold against 2,784 Mark. All other note-issuing banks in the Empire were allowed to keep their note-issuing right. However, the validity of notes outside of their state was tied to certain stipulations that concerned, for instance, the coverage of banknotes. Moreover, all private note-issuing banks had to maintain redemption points in Berlin or Frankfurt am Main and had to accept all other bank notes. The consequence of the law was that the majority of private note-issuing banks voluntarily revoked their right to issue notes. The number of private note-issuing banks was reduced from 32 in 1875 to four in 1906 (Parchmann 1933, 17-20). While the Reichsbank's notes were universally accepted as means of payment in the Empire, they would not become legal tender until 1905 (Born 1977, 36).

The creation of the Reichsbank also facilitated the evolution of an Empire-wide interbank payment system. As to the *Bankgesetz*, the Reichsbank took over the function of the hierarchically highest clearing and settlement institution and enabled any bank customer to transfer funds to the account of another bank's customer without any movement of physical instruments. To facilitate this, the Reichsbank introduced *Abrechnungshäuser* – modelled after the English and US clearing houses – at 27 places in the Empire where banks could meet and net out bills of exchange, checks, and other credit instruments. Banks could then record payment surpluses and deficits as claims and obligations to the Reichsbank, and thus process payments without any cash. In its first annual report, the Reichsbank prided itself for having turned the German Empire into a single *Giroplatz* (Baumgart 1915, 43-44).

5.3 The evolution of sovereign bond issuance towards the Imperial Bond Consortium

In the early years of the Empire, sovereign bond issuance played a subordinate role. In the Panic of 1873 (*Gründerkrach*), the government purchased several private railroad companies which had collapsed. To this end, the parliament approved large loans in 1873 and 1874. However, due to the large budget surpluses, the government did not actually issue those bonds. Only in late 1875, the Seehandlung issued and gradually sold 50 million \mathcal{M} of 4.5% consols (Stuebel 1935, 27).

This situation started to change in 1876. As the sale of consols proceeded too slowly, the government decided to issue a bond of 100 million \mathcal{M} through a syndicate. The plan was met with harsh criticism. The liberals opposed it because they perceived it as a violation of the principle of free competition. The conservatives opposed it for antisemitic reasons because they saw an illicit relation of finance minister Camphausen with the Jewish *haute finance*. As an alternative, the government contemplated the introduction of the English tender system, which was supposed to avoid giving preferential treatment to one specific banking group but dropped the idea again. Instead, the finance minister followed an offer of the **Prussia Consortium**. The issuance was unsuccessful. The market rejected it because the interest rate was set too low upon the wish of the minister. Therefore, only 25% of the bonds were signed. Still,

the failure of the underwriting turned out as an advantage for the consortium, as the government had once again been vividly shown the risk involved in a public underwriting and how advantageous it was when an efficient consortium took this risk away from the financial administration. Although the attacks against the consortium continued in the press and parliament, the government stuck to issuing the bonds to the Prussia Consortium in the following years (Stuebel 1935, 27-29).

The structure of the Prussia Consortium only marginally shifted compared to its setup before the foundation of the Empire. Most importantly, the Preußische Bank had dropped out due to its conversion into the Reichsbank. The Disconto-Gesellschaft remained the most influential member. Its quota was first at 23%, later at 18%. As it was also allowed to represent Norddeutsche Bank, M.A. Rothschild, and Sal. Oppenheim jr & Söhne, it commanded one third of the votes. The second largest bank was S. Bleichröder, whose quota was first 15%, later 12%. If the consortium offered to take over a bond, it would inform the Seehandlung which would pass on the offer to the minister for approval. The Seehandlung chaired the committee, which carried out the operations, and was allowed to participate with a share between 5% and 8%. However, as each offer of the syndicate specified the underwriting price and the bond acceptance date, as well as the underwriters' share, the ability of the Seehandlung to influence the Prussia Consortium was de facto very small (Stuebel 1935, 30-31).

The consortium was not a loose association but in fact a rather closed group of companies which tried to resist against any outsiders who attempted to become a part of it. In 1877, Deutsche Bank – which had only been founded in 1870 and was led by the ambitious Georg von Siemens – asked to be admitted to the consortium when the Prussian state wanted to issue a bond of 50 million \mathcal{M} . When the request was denied, Deutsche Bank directly approached the president of the Seehandlung and offered to take over the entire issuance at a more favourable rate. Instead of accepting the offer outright, the president initiated negotiations with the consortium which then eventually allowed the Deutsche Bank to participate in the syndicated issuance with a low share (Stuebel 1935, 31).

From 1879, Prussian debt issuance increased sharply as Bismarck started nationalizing private railroads. He had advocated the nationalization of railroads under the structure of the Empire since 1873 but his attempts had consistently been blocked by other member states. Therefore, he decided to focus on railroad nationalization solely in Prussia. Via a law of 20 December 1879, the Prussian government bought four lines of the Prussian railroad system. The nationalization was organized in such a way that the state took over the stock from private shareholders and replaced it with Prussian sovereign debt in the form of consols. The new sovereign debt created for this purpose amounted to 1.17 billion \mathcal{M} . As Prussia's sovereign debt amounted to 1.32 billion \mathcal{M} on 1 April 1879, the railroad nationalization law almost **doubled Prussia's debt burden** (Stuebel 1935, 33-34).

To prevent the new Prussian sovereign issuances from flooding the domestic financial market and leading to price distortions, the Prussia Consortium advocated to also organize issuances abroad, notably in England and the Netherlands. The Seehandlung and the Reichsbank rejected the proposal, arguing that it would lead to exchange rate risks, make Prussia dependent on foreign borrowers, was against the Prussian tradition, and would be a sign of weakness. Instead, the Prussian government suggested to also tap Southern German financial markets and pushed for an extension of the Prussia Consortium to comprise Southern German banks (cf. Figure 5). This was also an elegant way to reduce the dependence on the established banks of the syndicate (Stuebel 1935, 34-38).

Institution	Share
Preußische Staatsbank (Seehandlung)	7.7 %
Disconto-Gesellschaft	17.8 %
S. Bleichröder	11.5 %

Bank für Handel und Industrie	7.0 %
Berliner Handelsgesellschaft	7.0 %
Deutsche Bank	7.0 %
Mendelssohn & Co.	4.4 %
Robert Warschauer & Co.	4.4 %
Gebr. Schickler	2.9 %
H. C. Plaut	1.2 %
Delbrück, Leo & Co.	1.0 %
M. A. Rothschild & Söhne	7.5 %
Sal. Oppenheim jr. & Söhne	3.0 %
Norddeutsche Bank	5.0 %
L. Behrens & Söhne	4.0 %
A.-G. für Boden- und Kommunalkredit Straßburg i. E.	1.3 %
Württembergische Vereinsbank, Stuttgart	1.3 %
Bayrische Hypotheken- und Wechselbank München	1.3 %
Kgl. Bayrische Bank Nürnberg	1.3 %
Leipziger Bank Leipzig	1.2 %
Allgemeine Deutsche Kreditanstalt Leipzig	1.2 %
Köster & Co., Frankfurt am Main	1.0 %
	100%

Figure 5: The extended Prussia Consortium as of 15 March 1880; **Source:** Stuebel (1935, 39)

Later in 1880, the Prussian government experimented with abandoning syndicated bond issuance and focused on **over-the-counter sales (*Schalterverkauf*)**. Smaller sums of up to 5 million \mathcal{M} were placed on exchanges by the *Seehandlung*. Larger sums were sold to banks individually. While this new technique worked well for the government in the first few years, the Prussia Consortium did not welcome those changes at all. They now became dependent on the decisions of the *Seehandlung*, which approached banks individually and could dictate the terms. As banks were not aware of the volume of bonds taken over by others, they often found that they could not achieve substantial secondary market prices because other banks also simultaneously offered consols. While the banks perceived this as a damaging competition that destabilized the price and marketability of the consols, public opinion was very positive and found that the over-the-counter sales removed the illicit monopoly of the large banks. In the meantime, the market price for Prussian consols increased throughout the 1880s and reached its peak in 1889 (Stuebel 1935, 46-48).

A major change in bond issuance techniques occurred in 1888. After a stock market crash in 1887, financial conditions tightened and it became more difficult to place sovereign bonds. The financial crisis had a global dimension and peaked in 1890 when the bank Baring Brothers in London had to close down due to the sovereign default in Argentina. While the *Seehandlung* was determined that the Prussian government would not return to syndicated issuance, the Empire – which since 1881 had also shifted to over-the-counter sales – decided to deviate and for the first time issued a subscription bond via a consortium that was led by the *Reichsbank*. This time, the consortium members were divided up into groups according to their ability of placing bonds and had quotas of 10%, 7.5%, 5%, or 3%. While the participating banks were mostly the same ones as in the Prussia Consortium, the new syndicate was now renamed into **Imperial Bond Consortium (*Reichsanleihekonsortium*)** to reflect the *Reichsbank*'s

leadership (Stuebel 1935, 50-52; Reiter 1967, 104-107).

5.4 The double structure of Prussia and Imperial Bond Consortium in the *Wilhelmine Era*

The double structure of the Prussia Consortium and the Imperial Bond Consortium existed from the *Dreikaiserjahr* 1888 onwards throughout the *Wilhelmine Period*. In the monetary architecture of Prussia and the German Empire, it came along with a declining role of the *Seehandlung* vis-à-vis the *Reichsbank* and the *Disconto-Gesellschaft's* passing of the zenith as the main government financier.

In 1890, the financial administrations of Prussia and the Empire decided to coordinate their sovereign bond issuance to avoid competing against each other on the financial market. They attempted to issue a 235 million \mathcal{M} bond, which ultimately failed. They reached out to the banks of the former Prussia Consortium and proposed conditions for a new syndicated bond issuance. The banks, however, colluded to dictate the terms. Nevertheless, the finance minister gave them their will. In October 1890, Imperial bonds and Prussian consols were issued in parallel with the help of the consortium. Even though the issuances were oversubscribed, they turned out a failure because speculators (*Konzertzeichner*) purchased the securities without an intention to hold on to them; instead, they sold the bonds quickly, which led to the market price dropping below the emission price. This problem was to ensue for many of further future bond issuances (Stuebel 1935, 58-60).

In February 1891, the Empire and Prussia worked again with the consortium in order to issue 250 million \mathcal{M} of Prussian 3% consols and 200 million \mathcal{M} of 3% imperial bonds. They took several joint measures to ensure the success of the issuance. Various branches of the *Reichsbank* and of the Prussian administration were used to circumvent speculators and reach private investors. The banks launched a coordinated advertisement campaign and also offered bonds via their branches in London, Amsterdam, and Brussels. By ministerial decree, savings banks (*Sparkassen*), professional associations (*Berufsgenossenschaften*), and insurers were ordered to increase the volume of Prussian and Imperial bonds in their asset books. These measures turned out very successful – the Prussian consol was 30 times oversubscribed, the imperial bond 46.5 times (Stuebel 1935, 61-62).

From 1895, the financial cycle entered an expansionary phase again, largely connected to the spread of electrification. It was interrupted by a crisis in 1900, but as the *Reichsbank* proved its capability as lender of last resort in Bagehot's sense (Reichsbank 1926, 9), the growth of trade and industrial production increased in the German Empire. Politically, the German Empire entered into conflict with England and Russia over their influence in Turkey, and with France over Morocco. In this context, the **need for sovereign debt issuance** of Prussia and the German Empire increased further for a variety of reasons. First, the increased international tensions led to a military arms race and increased investments in the army and the navy. Second, the nationalized railroad network was not able to cope with the volume of goods transported. It required new investment and the state looked into complementing it with canals. Third, as the size of the cities expanded rapidly, investment in schools, infrastructure, and public health were necessary (Stuebel 1935, 52, 70-75).

While parliament had persistently objected to increasing Prussia's sovereign indebtedness in the 1890s and reintroduced the statutory redemption obligation (*gesetzliche Tilgungspflicht*) in 1897, this attitude changed in the early 1900s. Instead, the parliament pushed the minister of finance to issue more bonds

to carry out the necessary investments. He initially resisted, fearing that one day the point would be reached where the state would no longer be able to place its bonds, but eventually gave in. Overall, the volume of Prussian sovereign debt increased from 6.6 billion \mathcal{M} on 1 April 1900 to 10.4 billion \mathcal{M} on 1 April 1914 (Stuebel 1935, 52, 75-76).

However, Prussia and the Empire faced increasing **difficulties placing their bonds** on the financial markets. Due to a general saturation of demand, the market prices of Prussian bonds had a continuous downward tendency, which forced the Seehandlung occasionally to intervene and stabilize the prices through bond purchases. In 1900-01, the Prussian government continued its attempts to sell its bonds over-the-counter, but from 1902 it shifted again to syndicated issuance as it was unable to satisfy its enormous financing need without the help of the large banking corporations. It continued issuing consols, mostly in coordination with the Empire. While the first syndicated issuances were still very successful, a series of bond issuances failed from 1909 to 1913. On several occasions, the banks in the syndicate were unable to place significant parts of the consols they had guaranteed to take over and were forced to face large losses (Stuebel 1935, 74, 80-84).

In addition, Prussia's government increasingly shifted to issuing treasury bills (*Schatzanweisungen*), which did not require approval from parliament and were primarily used by large banks to manage their short-term liquidity needs. On the one hand, from 1904 to 1913, Prussia issued 745 million \mathcal{M} of interest-bearing treasury bills in four rounds at 3.5% and 4% with a 4- and 5-year maturity. On the other hand, from 1905 to 1913, it issued around 1.7 billion \mathcal{M} of non-interest-bearing short-term treasury bills, which had maturities from one month to one year and were remunerated according to the Reichsbank's discount rate. The government first used this technique in 1904 to avoid having to increase the interest rate paid on consols under unfavourable market conditions. Later, it used the treasury bills to tap demand in the short-term money market. Moreover, it was seen as less problematic to sell short-term treasury bills on foreign market places – a precedent for this had been created as early as 1900 when the Disconto-Gesellschaft sold 80 million \mathcal{M} of treasury bills in New York via the help of Kuhn, Loeb & Co – while there was staunch opposition from the government, the Seehandlung, and the Reichsbank to issue long-term bonds abroad. Originally, the Seehandlung carried out the issuance and rolling over of the treasury bills, but when problems emerged in 1912, those activities were increasingly taken over by the Prussia Consortium (Stuebel 1935, 85-87).

Within the Prussia and Imperial Bond Consortium, the **competition between the Disconto-Gesellschaft and Deutsche Bank** intensified. In January 1899, for instance, Prussia and the Empire wanted to issue bonds of 200 million \mathcal{M} and were in negotiations with the 'old club' of Disconto-Gesellschaft, Bleichröder, and Mendelsohn about a syndicated issuance, when Deutsche Bank under Georg von Siemens made a counteroffer and took over the entire volume itself. The issuance was 20 times oversubscribed and turned out to be a big success. It not only was an advantage for the state which could reduce its dependence on the Prussia Consortium but also proved the new strength of Deutsche Bank (Stuebel 1935, 64-65). The competition between both companies culminated in the early 20th century. During a fundamental transformation in the banking sector, five large banking conglomerates emerged. By the end of 1911, Deutsche Bank held the firm leadership position with a capital of 929 million \mathcal{M} and relegated the incumbent Disconto-Gesellschaft to second place with a capital of 662 million \mathcal{M} , followed by Dresdner Bank (321 million \mathcal{M}), Darmstädter Bank (260 million \mathcal{M}), and A Schaaffhausenscher Bankverein (210 million \mathcal{M}) (Riesser 1912, 542).

The Seehandlung did not participate in this transformation. While it focused on managing the issuance of Prussian and Imperial bonds and managing the budget surpluses, its banking business deteriorated.

Without any of its own branches, it was not able to reach new customers and missed out on the deposit business, which – with the evolution of the interbank payment system – played an ever-greater role. In 1910, the Prussian parliament discussed whether to expand the competences of the Seehandlung and give it branches to include it into the deposit business. Yet, the finance minister objected (Stuebel 1935, 71-72). Moreover, the Seehandlung frequently clashed with the Reichsbank, mostly over complaints that the Seehandlung disturbed the discount policy of the Reichsbank (Hellwig 1922, 127, 131). In general, the function and the operations of the Seehandlung were more sought after during the times of Königlich Preußische Bank and Preußische Bank which were not as well capitalized and financially active as the Reichsbank.

Upon the state's request, the Prussia and Imperial Bond Consortium began to accept more members from 1901 onwards which reduced individual quotas and profit opportunities due to the increased competition. For instance, the Dresdner Bank complained in 1902 that hardly any business opportunity was left after the consortium's increase to 28 members. In 1912, the size of the consortia was increased again, and the quotas were redistributed (see Figure 6) (Reiter 1967, 104-107).

Such was the situation of the monetary architecture in Prussia and the German Empire when the assassination of Austrian Archduke Franz Ferdinand on 28 June 1914 in Sarajevo triggered the chain of events which would lead to World War I and the end of the first era of globalization.

Institution	Share for issuing Imperial and Prussian bonds	Share for issuing only Prussian bonds
Group I		
Reichsbank	5.8 %	-
Preußische Staatsbank (Seehandlung)	5.8 %	6.6 %
Disconto-Gesellschaft	5.8 %	6.1 %
S. Bleichröder	5.8 %	6.1 %
Deutsche Bank	5.8 %	6.1 %
Berliner Handelsgesellschaft	5.8 %	6.1 %
Darmstädter Bank	5.8 %	6.1 %
Dresdner Bank	5.8 %	6.1 %
J. Mendelssohn & Co.	5.8 %	6.1 %
A. Schaafhausen'scher Bankverein	5.8 %	6.1 %
Group II		
Commerz- und Disconto Bank	3.0 %	3.3 %
Delbrück, Schickler & Co.	3.0 %	3.3 %
Mitteldeutsche Creditbank	3.0 %	3.3 %
Nationalbank für Deutschland	3.0 %	3.3 %
Group III		
Allgemeine Deutsche Credit-Anstalt	2.25 %	2.3 %
Königlich Bayerische Hauptbank, Nürnberg	2.25 %	2.3 %
F. W. Krause & Co., Berlin	2.25 %	2.3 %
Norddeutsche Bank, Hamburg	2.25 %	2.3 %
Rheinische Creditbank, Mannheim	2.25 %	2.3 %
M. M. Warburg & Co., Hamburg	2.25 %	2.3 %
Group IV		
Bayerische Hypotheken- und Wechselbank	1.5 %	1.6 %
Bayerische Vereinsbank	1.5 %	1.6 %
L. Behrens & Söhne, Hamburg	1.5 %	1.6 %
Sal. Oppenheim jr. & Söhne, Köln	1.5 %	1.6 %
Ostbank für Handel und Gewerbe, Posen	1.5 %	1.6 %
Gebr. Schickler, Berlin	1.5 %	1.6 %
Schlesischer Bankverein, Breslau	1.5 %	1.6 %
Lazard Speyer-Ellissen, Frankfurt am Main	1.5 %	1.6 %
Jakob S. H. Stern, Frankfurt am Main	1.5 %	1.6 %
Vereinsbank in Hamburg	1.5 %	1.6 %
Württembergische Vereinsbank, Stuttgart	1.5 %	1.6 %
	100 %	100 %

Figure 6: Redistribution of shares in the Prussia and Imperial Bond Consortium in 1912;
Source: Stuebel (1935, 92)

6. Conclusion

This paper has traced the transformation of the monetary architecture and concomitant sovereign debt issuance practices in Prussia and the German Empire from 1740 to 1914, while following three financial institutions that were quintessential at the time: the Königlich Preußische Bank (later turned Preußische Bank and Reichsbank), the Seehandlung, and the Disconto-Gesellschaft.

This institutionalist analysis through the prism of the Monetary Architecture framework provides food for thought to reflect on the economic idea that is conventionally taken as the key lesson from German history: that the issuance of sovereign debt should not be carried out with the central bank as counterparty and that market forces have to discipline treasuries that are inherently prone to overspending. These lessons are typically taken from the German experience during and in between the world wars. The analysis of the one and a half centuries before that – starting with financially underdeveloped feudal Prussia until the German Empire in the first era of globalization which in many respects shares parallels with today – yields a range of interesting insights.

First, Prussia's history of sovereign debt issuance shows that from its very beginning in feudal times there already existed an antagonism between the state treasury and OBFA's in the form of the Seehandlung. Under King Friedrich II, the Seehandlung had both issued its own debt instruments and passed on the proceeds to the state and facilitated the placement of the Prussian state's sovereign bonds on the market. This solution was never without its critics. Institutional reforms had repeatedly sought to curtail the activities of the Seehandlung and integrate it into the Prussian treasury. At the same time, it was able again and again to regain its independence and act as an OBFA that was able to find pragmatic fixes to the need of Prussia to raise funds, almost always connected to war finance. In feudal times, the Seehandlung's advantage was that as a public-private hybrid with a salt monopoly, it had a better standing as a borrower than institutions owned by the absolutist king. In the early 19th century, the Seehandlung was used to circumvent the sovereign debt brake, which Hardenberg had imposed on the Prussian monetary architecture. In fact, OBFA financing is older than the contemporary understanding of fiscal and monetary policy, which draw on an understanding of treasuries and central banks that has only developed in the late 19th and early 20th century.

Second, the creation of syndicated issuance was indeed an innovation that happened as the Prussian political and economic constitution liberalized and the monetary architecture developed stronger private institutions. However, the reason why syndicated issuance has prevailed as a solution within the Darwinian process of institutional selection and transformation is not that it would have disciplined sovereign debt issuance. On the contrary, the specific advantage of syndicated issuance was that it allowed the treasury to issue *more* sovereign debt at a better price because the private banks crowded in more private capital to fund the emissions. The existence of an oligopoly of banks that had the exclusive right to act as primary market counterparties has been contested since its origin, seen by some as an illegitimate source of profit. However, as experiments with alternative structures for sovereign debt issuance on the primary market led to less government revenue, the government resorted back to the oligopolistic structure. With the integration of the Seehandlung in the Prussia Consortium as its formal leader, the hybrid structure of sovereign debt issuance practices received a novel manifestation, which provided the grounds for the evolution of the ever-increasing structural indebtedness of the German Empire after 1871.

Finally, lessons about the relationship between central banks and treasuries in sovereign bond issuance should take into account how the hybrid nature of central banking institutions has changed throughout Prussian history. While the Königlich Preußische Bank was a fully public institution, it was largely dysfunctional for what today would be understood as its key tasks — from supporting government finance over the provision of means of payment to the provision of emergency liquidity in financial crises. The modernization of central banking in Prussia, chronically a latecomer in financial development, happened only with integrating private capital in the ownership structure — a process that was completed with the fully privately owned Reichsbank. The view that the inclusion of central banking institutions on the primary market leads by default to an over-issuance of sovereign debt seems unsupported. There were phases when the Seehandlung or the Reichsbank took over smaller portions of sovereign debt on the primary market that did not entail an excessive spiralling of sovereign debt. It is hard to understand how their activities as part of the banking consortia prior to the exceptional circumstances of world war finance from 1914 can justify today's outright rejection of allowing central banks to act as primary market counterparties for sovereign debt issuance. In sum, given the inherent hybridity in the evolution of sovereign debt issuance, a harsh dichotomy between "time inconsistent" public and "efficient" private institutions seems too simplistic.

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Conflict of interest

I have no conflict of interest to report.

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