

The Black Swan of the Golden Periphery: The Ottoman Empire during the Classical Gold Standard Era

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Abstract This study analyses the functioning of the “gold standard” in the Ottoman Empire during the pre-1914 gold standard era, with specific emphasis on the institutions regulating commodity money and fiat money. It explores the extent to which the Ottoman monetary system was an outlier with reference to the experiences of other peripheral countries. One of the findings reveals considerably limited circulation of notes in the Ottoman Empire even after adherence to the gold standard in 1880. By highlighting the anomalies of the Ottoman case, this paper concludes that the transition from commodity money to fiat money did not take place at the same rate across peripheries during the pre-1914 gold standard era. These differences may be explained by the relative autonomy of the central banks of issue from governments, and in turn may have implied changing degrees of monetary sovereignty and fiscal capacity across the members of the golden periphery.

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1 Introduction

The gold standard remained the dominant international monetary system from the 1870s to the First World War. Although many case studies have been written on the way that it emerged and functioned in the major core and peripheral countries, there are only few that examine its history in the Ottoman Empire. This paper aims to fill this gap by bringing together wide-ranging quantitative and qualitative evidence on the monetary activities of the Ottoman Empire from the 1870s to 1913. This scrutiny of the Ottoman monetary system is also relevant because of the important role played by the Ottoman Empire as one of the biggest capital importers in the international capital markets of the time.¹ Therefore, an analysis of the Ottoman gold standard is also helpful for revisiting the argument that the gold standard facilitated the access of peripheral countries to international capital markets.

Moreover, as this paper aims to show, from the viewpoint of the modern gold standard literature, the Ottoman monetary system can allow us to revisit some of the key issues. One of the findings is the fact that, from the mid-nineteenth century to World War I, despite the repeated attempts of the Ottoman government and monetary authorities, the circulation of “fiat money”² remained limited in the Ottoman lands. Hence, a significant part of the monetary base continued to rely on a combination of foreign and local silver coins even after the Ottoman government officially adhered to the gold standard.

This conclusion contradicts our general knowledge of the peripheries of the time, where the gold standard was characterised not by the scarcity but by the excessive issuance of notes. This historical phenomenon determined the direction of the literature, in which the

¹ The Ottoman Empire issued its first foreign loan in 1854 and declared a moratorium in 1876 on an outstanding debt of £200 million. Following the debt resettlement in 1881, the government abandoned a significant portion of its revenues to an international financial commission administered by foreign creditors. See Birdal (2010); Tunçer (2011).

² By fiat money we mean money which a government declares to be legal tender at its face value, in this context “paper money”. This is different from “fiduciary money”, which refers to exchangeable notes and coins into “commodity money”. In this regard, fiat money can be considered to be a form of fiduciary money, but not vice versa. See Fischer (1926, p.11); Redish (2000, p.25); Rollins (1907, p.161).

questions of ‘credible commitment’, ‘time inconsistency’ of monetary and fiscal policy and ‘fiscal dominance’ have occupied an important part of scholarly debate.³ The findings in relation to the Ottoman case, however, suggest that the pre-1914 international gold standard can be interpreted as the process of the emergence of fiat money, which did not take place at the same rate in the peripheries.

Although in the core countries it is possible to trace the origins of fiat money back to before the emergence of the gold standard as a worldwide monetary system, for most of the peripheries the classical gold standard era was marked by the efforts of governments to reinforce their fiat money through the creation of a certain set of ‘credible’ monetary institutions. At the focal point of these efforts were the central banks of issue,⁴ which held large gold reserves to ensure the credibility of their notes, given that adherence to a gold standard meant defining a currency in terms of a fixed weight of gold. Moreover, given that these banks mostly remained under the direct influence and/or control of their governments, a higher share of fiat currency, *ceteris paribus*, meant greater flexibility for them in determining the size and composition of the total money stock for the purposes of raising seigniorage revenue. Contrastingly, in countries where the circulation of fiat money remained limited, commodity money acted as a restricting factor on monetary sovereignty.⁵

This interpretation is in line with the extensive literature on the determinants of seigniorage and competitive seigniorage within monetary unions, where monetary sovereignty is usually approximated by the ability of a government to change the size and composition of its monetary base.⁶ In this context, a closer look at the commodity-fiat currency composition of the money stock as a representation of the changing degrees of

³ Aceña and Reis (2000); Blanchard (2004); Bordo and Rockoff (1996); Bordo and Schwartz (1997); Eichengreen and Flandreau (1997); Fratianni and Spinelli (2001); Gadea et al. (2008).

⁴ In this paper, the terms “central bank”, “central bank of issue” and “the bank of issue” are used interchangeably. These terms refer to the monopoly power of a bank to issue notes and are not linked to the modern meaning of the term “central bank”.

⁵ Redish (2000, p.244-246); Triffin (1964).

⁶ Bordo and Jonung (1999); Bordo and Redish (1993); Click (1998); Fischer (1982); Mankiw (1987); Mundell (2002).

monetary sovereignty across peripheral countries can provide an alternative framework for interpreting the gold standard experience of outlier countries like the Ottoman Empire. Hence, it may prove essential to deal with the question as to why the emergence of fiat money remained so limited in the Ottoman Empire.

Another lesson derived from the analysis of the Ottoman case is the difficulty in defining a country's monetary position as either "off-gold" or "on-gold": a dichotomy implied by the standard interpretations of the pre-1914 gold standard. According to this perspective, the major countries on gold were committed to following the "rules of the game", enabling the system to work "automatically" and ensuring the stability of prices and balance in international payments.⁷ However, this stereotype of the gold standard's functioning has long been questioned in the literature. For instance, as early as the 1960s, Bloomfield emphasised that the "structure of the pre-1914 gold standard was far from simple" and showed significant differences in the institutions and workings of the system between countries.⁸ To address these differences, given the relative ease of finding parallels in such core countries as Britain, Germany and France, revisionist scholars prefer to use the *ex post* term "periphery" for remaining/outlier countries, where different combinations of limping standard, gold-exchange standard, bimetallism, convertible and inconvertible paper standards and even silver standard prevailed from the 1870s to World War I. Major contributions in this line of the literature underline the asymmetry of the adjustment and its tendency to work pro-cyclically. Other characteristics such as different transition routes to the gold standard, policy instruments at the disposal of monetary authorities and the ability to access to international capital markets are also noted as distinguishing factors. Moreover, increasing numbers of case studies also point out that the peripheries of the gold standard showed a marked variation in their linkages with the core countries, in their openness and accessibility to international capital markets

⁷ The origin of this account can be extended back to the writings of David Hume. See Eichengreen (1992); Eichengreen and Flandreau (1997).

⁸ Bloomfield (1959); Bloomfield (1963).

and in other monetary aspects.⁹

In response to this growing empirical counter-evidence, some studies also underline the importance of transcending the core-periphery framework. For instance, Eichengreen and Flandreau discuss distinct transition routes to the gold standard before World War I, where several cores -London, Paris and Berlin- correspond to several *peripheries*.¹⁰ Recently, Flandreau and Jobst have proposed using the variation in the international circulation of national currencies as a criterion in mapping the geography of the international monetary order before 1914.¹¹ Our results imply that focusing on the wide variation among the patterns in the emergence of fiat money in the peripheries can also be a useful framework for interpreting the differences in the functioning of the gold standard in peripheral countries beyond the Ottoman Empire, of which this paper aims to provide a historical account.

The remainder of the paper is organised as follows. Section 2 provides a monetary history of the Ottoman Empire during the classical gold standard period, shifting the emphasis from the orthodox classifications of the Ottoman Empire as a “gold standard” country to the “unique” features of its monetary conditions. After a discussion of the role of the commodity and fiat monies in the Ottoman Empire, it concludes that from its beginning in 1880 to World War I, the Ottoman “gold standard” was characterised by a lack of gold coins and gold convertible notes in circulation. This was reinforced by the circulation of multiple currencies, territorial exchange rates, and the policies of the Imperial Ottoman Bank (IOB) and the government. Section 3, for the purpose of strengthening these insights, briefly compares the Ottoman case with the major peripheral countries of the time. After presenting a new dataset of the commodity-fiat money composition of the peripheries from 1880 to 1914, it puts forward the degree of

⁹ Aceña and Reis (2000); Bordo and Kydland (1995); Bordo and Rockoff (1996); Bordo and Schwartz (1997); Catao and Solomou (2003); Dimitrova et al. (2010); Eichengreen and Flandreau (1994); Eichengreen and Flandreau (1997); Esteves et al. (2009); Flandreau and Komlos (2002); Morys (2007); Morys (2012).

¹⁰ Eichengreen and Flandreau (1994, p.12).

¹¹ Flandreau and Jobst (2005).

independence of central banks of issue from governments as an important determinant of the commodity-fiat money composition of the monetary base. Finally, Section 4 summarises the main arguments and highlights their broader implications.

2 The Ottoman monetary system and its institutions

As the British Consul of Basra stated in 1891, the Ottoman monetary system is “a very difficult matter to deal with. It is hard enough to understand oneself on the spot and still harder to explain to others”.¹² In fact, this interpretation has dominated a significant part of the Ottoman historiography, in which “unique” aspects of the Ottoman monetary system have been interpreted as symptoms of “monetary chaos” and/or of the incapacity of the policymakers to enforce monetary reform.¹³ More recent contributions, on the other hand, view the monetary regime transformations during the nineteenth century as part of the greater effort of the Ottoman Empire to integrate in European financial markets.¹⁴ Both of these approaches are perhaps of equal relevance for the purposes of our discussion. In many ways, the nineteenth-century evolution of the Ottoman monetary institutions in fact followed that of the international monetary system, although the implementation of international rules and practices took place in a relatively distinct way. Therefore, the approach of this section is a combination of these two perspectives. By using the pre-1914 international monetary order as the background picture, our aim is to offer a framework for interpreting some of the “anomalies” of the Ottoman gold standard.

The chronology of the major monetary events and reforms during the period under study is summarised in Table 1. In a nutshell, as early as 1844, the Ottoman Empire established a new bimetallic system and abandoned debasements. During this period, in the absence of any private banks of issue, the government started experimenting with fiat money in the form of state notes. A turning point was the foundation of the IOB in 1863. The IOB was a private bank, funded by British and French capital, that was granted the

¹² FOGB (1880-1914), No.1142, 1892, p.12.

¹³ Eldem (1970); Eldem (2011); Kuyucak (1948); Toprak (1985); Young (1906).

¹⁴ Dimitrova et al. (2010); Pamuk (2000); Pamuk (2008).

privilege of issuing gold convertible banknotes in the Ottoman lands. During the Russo-Turkish War of 1877-78, the government suspended this privilege by issuing its own state notes in order to finance its budget deficits. In 1880, the privileges of the IOB were restored, and state notes were withdrawn from circulation with the help of foreign loans. Moreover, the government declared the gold *lira* to be the legal tender and closed down the minting of silver coinage, thus adopting a “limping standard”.

Below we look more closely at these major turning points in nineteenth-century Ottoman monetary history from the perspective of evolving monetary institutions or more specifically of currency-issuing authorities. The presentation first focuses on the coinage standard(s) and related regulations in the commercial and financial centre of the Empire, Istanbul, and its provinces. This is followed by a discussion of fiat money experiments, particularly those of the IOB.

2.1 Commodity money: from bimetallism to “limping standard”

Discussions of nineteenth-century monetary history of the Ottoman Empire commonly begin with the “coinage adjustment” reform (*tashih-i sikke*) of 1844. In this year, the Ottoman government formally announced the introduction of bimetallism with a fixed gold-silver ratio and the long history of raising revenues through debasements came to an end. The gold *lira*, the silver *kuruş* and the copper *para* were declared to be legal tender, freely convertible to each other at the fixed rate of 40 *para* for one *kuruş*, and 100 *kuruş* for one gold *lira*.¹⁵ This corresponded to a mint ratio between gold and silver of 15.09, which was slightly lower than the international gold-silver ratio at the time (see Figure 1). From the perspective of the government, a problem with the 1844 reform was the overvalued coinage, which had been introduced in 1834. Although the old gold coins were redeemed, the overvalued silver coins (*beşlik* and *altılık*) remained in circulation. These two silver coins circulated together on the market until 1914, despite repeated attempts by the government to bring this situation to an end.

¹⁵ It would be wrong to consider this monetary standard as trimetallism given that copper served only as a fiduciary currency it was not freely minted and its circulation was limited to only small denominations.

Although it was relatively easy to sustain the existing mint ratio until 1870s, as the depreciation of silver in the world markets accelerated, it became increasingly difficult and costly for the government to maintain the fixed relationship between gold and silver. These exchange rate differentials implied significant costs, which led to the creation of a separate item in the government budget during the late 1870s.¹⁶ In 1879, in order to prevent the inflow of cheap silver into the Empire, the government first closed down the Mint to foreign coins, and this was followed by the monetary law of 1880, which marked the official end of the bimetallic standard in the Ottoman Empire.

According to the new regulation, effective from March 1880 the monetary standard was declared to be the gold *lira* of 100 kuruş, and free minting of silver came to a halt. However, unlike a “full” gold standard, the new regulation allowed the Mint to accept unlimited amounts of silver at a reduced rate. The decree stated that in order to bring the value of silver equal to the value of gold, the value of *mecidiye* (20 *kuruş*-denominated silver coin) was reduced to 19 *kuruş*. Although it was not directly expressed, in practical terms, this last point meant that the state was fixing the effective rate of the gold *lira* at 105.26 *kuruş* in silver. Thus, the mint ratio, with a five per cent increase over the previous bimetallic ratio of 15.09, now stood at 15.88 (see Table 2).¹⁷

In other words, the Ottoman government moved towards a “limping standard” by recognising both gold and silver as legal tender but allowing free coinage of only gold.¹⁸ Given that the Mint implemented no upper limit on the amount to be exchanged, silver kept flowing in and its value with respect to gold kept increasing. This came to an end only with another monetary regulation in 1909, which aligned the legal rate of silver with the

¹⁶ This item (in Turkish, “meskukat-ı mağşe ve kambiyyolar fark ve iskontosu”) was reported to be around half a million *liras* on an annual basis. Güran (2003).

¹⁷ Kuyucak (1948); Schneider et al. (1994); Young (1906).

¹⁸ In the transition to the gold standard before 1914, the suspension of the free coinage of silver in order to keep the silver coins in circulation at par with gold was referred as a “limping standard” (*étalon boiteux*). This standard took its name from the fact that “silver limps along behind gold without being subject to free coinage”. Willis (1901, p.240), Einaudi (2001).

market rate, thus setting the exchange rate of one gold *lira* at 102.60 *kuruş*.¹⁹

It is possible to examine how the Ottoman “limping standard” performed by looking at the value of the *kuruş* with respect to the gold *lira* and other foreign currencies from 1880 to 1914. In Istanbul, the value of British gold sovereign mostly fluctuated within the range of 109 to 111 *kuruş*, whereas French Napoleon (20 franc-denominated gold coin) fluctuated between 86 and 89 *kuruş*. Throughout the period, the deviations from mint parity in both currencies did not exceed three per cent. These movements were due to small differences in market prices, which were determined by the gold-silver price ratio points and the seasonal fluctuations caused by the agricultural nature of the Ottoman economy (see Figure 2).²⁰

This picture of stability was, however, an exception. Although during this period the government ensured that the exchange rate between the two metals remained stable in Istanbul, the widespread circulation of foreign silver coins and provincial currency zones were major problems. In order to align provincial exchange rates with those in Istanbul, a circular letter from the government dated 25 January 1883, banned the circulation of foreign coins in most of the provinces. Later, on 14 February 1887, the importation of silver coins into the Empire was prohibited altogether and the scope of the ban was expanded to the provinces of Baghdad, Mosul, Benghazi, Tripoli, Hejaz and Yemen.²¹

However, it would be wrong to assume that these bans were effective. For example, in the northern province of Trabzon, bordered by Russia, it was common to see wide circulation of Russian roubles in daily transactions even as late as 1914. In Jerusalem and Beirut, because of the large number of foreign visitors, locals accepted French gold and silver francs. British pounds were the dominant coins in circulation in Antalya, Zonguldak and Inebolu, where strong export trade took place with Egypt. In Jeddah, pilgrims from

¹⁹ This was nothing more than accepting the *de facto* rate. Since the market value of *kuruş* was around 108 and *mecidiye* was accepted as 19 *kuruş* instead of 20, the state offices were accepting a gold *lira* at the rate of $108 * 19/20 = 102,6$. Kuyucak (1948, p.199); Toprak (1985, p.765).

²⁰ Tunçer (2011, p.84).

²¹ Eldem (1999, p.207); Young (1906, p.14).

India brought with them silver rupees, which became so dominant that the government was forced to accept them as legal tender for only this province. In Beirut and Izmir, silver *mecidiye* ruled, whereas in Syria and Palestine, the most widely circulated coins were the undervalued silver *beşlik* and *altılık*. Finally, in Basra, the Persian keran and in Hejaz and Yemen, the Austrian thaler (Maria Theresa Thaler) had replaced the Ottoman currency.²²

Similarly, in terms of the stability of the gold-*lira* exchange rates, the capital city was an exception rather than the rule. It could be argued that the premium for gold over silver usually increased with the distance from Istanbul, depending on transportation costs.²³ However, there were also extreme exchange rate differences between and within provinces, which are not easily attributable to distance alone.²⁴ In the absence of detailed statistical series for the provinces, this issue is relatively harder to address. As a first effort in this regard, Table 3 summarises the average market exchange rates between the silver *kuruş* and the gold *lira* from 1883 to 1914 for some of the Ottoman provinces. These figures are not comprehensive enough to conduct a formal analysis and/or to reach conclusive arguments regarding the determinants of the provincial exchange rates. Nevertheless, they provide a general picture of the prevailing situation in the provinces, and are strong enough to qualify the situation in Istanbul as an exception.

The Ottoman government and local authorities were aware of these extreme differences among provinces. Having recognised the wide circulation of imported silver coinage in certain provinces, the government offered a fixed exchange rate to convert them from the treasury offices for a limited period of time immediately after the 1880 regulation. However, this did not eliminate the problem, and so a different approach was adopted for each province. For instance, specifically for Baghdad in 1888, the Ottoman government devalued the coins in circulation by about one-third in order to boost the international trade. In August 1889, the Porte proposed implementing a similar devaluation in Basra. However, the local administration of this province refused to comply for fear of negatively

²² Eldem (1970); Ferid (1914); Kuyucak (1948, p.202); Tunçer (2011, p.101); Young (1906).

²³ Pamuk (2008, p.21).

²⁴ Young (1906, p.14).

impact local trade. The Porte generally admitted such exceptions to satisfy the local authorities, given that international trade opportunities and linkages varied across provinces. Furthermore, extreme exchange rate differentials were found within individual provinces. For instance the value of the *mecidiye* in the town of Köycğiz in Aydın province was around 22 *kuruş* and 20 *para*, corresponding 120 *kuruş* for one *lira*. In the towns of Kasaba and Kuşadası of the same province one *mecidiye* was equal 33 *kuruş* 12 *para*, corresponding 179 *kuruş* 20 *para* for one *lira*. Finally the exchange rates would differ depending on the commodity in question. For instance, in Izmir the value of the Ottoman *lira* varied between 102 and 178 *kuruş*, depending on the type of transaction. For the payment of taxes, salaries and other operations of the administration on *lira* accounted for 102 *kuruş*, whereas for bills of exchange it was 125 *kuruş* and finally on the spot market it was rated at 178 *kuruş*.²⁵

These exchange rate disparities were well known to contemporary policymakers. According to treasury reports, there existed 88 exchange rates for gold and silver across the Empire, which differed from region to region and depending on the commodity in question. Similarly, in 1882, the director of the Council of Administration of the Ottoman Public Debt complained about the “complication of currency”:

“The indirect contributions²⁶ can be paid in nineteen different kinds of money. The complication which this tenders unavoidable in our accounts must be seen to be appreciated ... As the value of each denomination fluctuates daily and is, often, at the same time widely different, in the different commercial centres of the Empire, it requires an elaborate calculation on the part of the tax-payer to ascertain how he can most advantageously discharge his liability to the administration without infringing the intricate regulations in force.”²⁷

²⁵ Ferid (1914, p.134), Young (1906, p.2), Tunçer (2011, p.100).

²⁶ These were some of the government revenues administered by the Ottoman Public Debt Administration on behalf of creditors and consisted of salt monopoly, silk tithe, and revenues from stamps, spirits and fisheries. Birdal (2010); Tunçer (2011).

²⁷ OPDA (1882-1914), Annual Report, 1882, No.1, p.18.

These different territorial currency zones and exchange rate idiosyncrasies were some of the “anomalies” of the Ottoman “gold standard”. To offer an explanation of their variation in full detail would be beyond the scope of this paper; however, it is possible to point out some broad observations by bringing together the limited amount of evidence. First, widespread counterfeiting activity affected the differences in exchange rates.²⁸ With the decline of the international silver price in 1870s, counterfeit *mecidiyes* minted abroad, especially in Britain, Austria and Switzerland, made their way into the Ottoman Empire via Beirut, Damascus and Aleppo. According to the contemporary sources, these “counterfeit” coins were so common that the locals labelled them “British *mecidiye*”. Despite the efforts of the government to eliminate these coins, they generally endured for most of the period.²⁹ Second, the scarcity of fractional coins and small change conditioned local demand for standard and sub-standard silver coins. In the province of the islands (*Cezayir-i Bahr-i Sefid*), the government was obliged to recognise the circulation of Greek copper coinage due to the lack of low-denomination coins. The major reason behind this shortage was the end of the legal tender status of copper coins with the regulation of 1880, which made low-denomination silver coins circulate at a premium, regardless of the international price of silver. Although the government attempted to increase the quantity of low-denomination silver coins in particular after 1895, the final solution to this problem came in 1909 with the introduction of the fiduciary nickel coinage (see Figure 3).

Third, the transactional network and path dependency of each province conditioned the demand for a specific currency. A typical example is the predominance of the Maria Theresa Thaler in Yemen and Hejaz. This coin had been pre-eminent for so long that even government efforts could not dislodge it. As a contemporary observer puts it, “the head of Maria Theresa impressed on the coin represents some sacred and mystic sign, conferring

²⁸ Ferid (1914); Pamuk (2008)ç

²⁹ Considering the fact that the punishment for counterfeiting was to be subjected to forced labour for ten years, this may not be attributed to a lack of regulation but perhaps to strong positive incentives to make significant profits. Ferid (1914, p.191).

special value on the silver stamped with it”.³⁰

To summarise, with the exception of Istanbul, the major characteristics of the Ottoman coinage system during this era were the lack of gold coins in circulation, the existence of multiple currency zones and territorial exchange rates, and the dominance of a set of foreign and domestic standard and sub-standard silver coins despite the repeated attempts of the government to control the situation. It may be argued that the Ottoman Empire was not unique in this regard. However, as elaborated in the next section, the failure to establish fiat money as a medium of exchange was the other side of this picture, and in this regard the Ottoman case was unique in the golden periphery.

2.2 Fiat money: from state notes to bank notes

The 1844 monetary reform, aside from marking the end of a long history of debasements, was also a turning point in the history of fiat money in the Ottoman Empire. After this regulation, the government unprecedentedly issued a state note known as a “*kaime*” to finance its budget deficits. The earliest examples of these notes were handwritten documents issued in denominations of 500 *kuruş* (circa £4.5). As they carried an interest rate and had a maturity term, they were not “fiat money” in the strict sense of the term but perhaps an instrument of domestic debt. However, the government repeatedly declared that they were issued only in order to facilitate commerce and that they were to be accepted as legal tender, exactly like gold and silver coins. It was also made clear that the Treasury in Istanbul and tax collectors in the provinces would accept these notes in payments to the state. Later, smaller denominations followed so as to increase their use in daily transactions and, with their limited volume, these notes performed reasonably well until 1852.³¹ From 1853 to 1862, however, the government issued large quantities of non-interest bearing and unbacked notes to finance extraordinary state expenditures, which eventually led to heavy depreciation and thus inflation. In order to solve this problem, the government decided in 1863 to withdraw all the state notes in circulation

³⁰ OPDA (1882-1914), *Special Report*, 1894, No.12, p.62-65. For a more detailed discussion of the Maria Theresa Thaler, see Kuroda (2007); Tschoegl (2001).

³¹ Akyıldız (1996); Pamuk (2000, p.209-210).

with the help of short-term loans from the IOB.

This was the beginning of a new era in the history of fiat money in the Ottoman Empire. Henceforward, the IOB would act as the “central bank of issue” in addition to performing its commercial operations.³² It handled most of the transactions of the Treasury and had to provide short-term advances to the state. In return, the IOB had the exclusive privilege of issuing gold-convertible banknotes, which were accepted as legal tender. Moreover, the government promised to maintain this exclusivity and to not issue any state notes. The decree foresaw that the payment for the IOB notes would be demandable only in Istanbul, the place of issue. With the approval the central office in Istanbul, the branches were also allowed to issue notes; however, these notes would still be redeemable only in the Istanbul branch. Another restriction related to the denominations of the banknotes, which were set at 200 *kuruş*, unless the Ministry of Finance agreed otherwise. Finally, similar to its many European counterparts, the IOB was also required to hold gold reserves in hand, equal in amount to at least one-third of its notes in circulation.³³

Once all state notes were withdrawn from circulation, however, the IOB could not easily increase the circulation of its own notes. Before 1876, the total notes issued never exceeded 350,000 *liras* and the cover ratio remained four to five times higher than the legal requirement. One reason for this low level of circulation was due to previous unsuccessful state note experiments, which discouraged the public from holding fiat money for daily transactions. Moreover, having transferred the monopoly of issue to a foreign commercial bank, the government found it difficult to implement “forced circulation”.³⁴ Given that the IOB was the major intermediary between international capital markets and the Ottoman government, the government’s unilateral suspension of privileges could lead to disruptions

³² It should be noted that, unlike several other core and peripheries of the time, there were no other private issue banks in the Empire before (and after) the foundation of the IOB.

³³ Autheman (2002); Eldem (1999, p.463-466); IOB (1875).

³⁴ Here we rely on the conceptual difference between legal tender (*cours légal*) and forced tender (*cours forcé*) as suggested by the contemporary literature. The former refers to the legal receivability of a currency for taxes and public dues, the latter to the forced circulation of irredeemable paper money. Rollins (1907).

in foreign capital flows.

The financial crisis of 1873 was a watershed, after which overseas lending declined. In 1876, similarly to a few other heavily indebted countries, the Ottoman government declared a moratorium on its outstanding debt. With the sudden collapse of Ottoman credit in the European financial markets and the effect of the war with Russia, the government abolished its previous engagement with the IOB on the issuing of its own notes. The new series of silver-backed state notes bore the seals of both the Treasury and the IOB and could thus be easily differentiated from the gold-backed banknotes of the IOB.³⁵ Since it was already in default and on the point of war with Russia, the government could more easily take the risk of suspending the privileges of the IOB and issuing its own notes. From August 1876 to May 1878, the state notes in circulation reached a nominal value of 16 million *liras* and depreciated against all other exchanges. In February 1879, the government started negotiating a foreign loan to allow its notes to be withdrawn and promised to redeem them at one gold *lira* for 400 *kuruş* in *kaime*, as opposed to the initial rate of one gold *lira* for 100 *kuruş* in *kaime*.

The withdrawal of *kaimes* coincided with the monetary reform of 1880. As mentioned above, the reform not only marked the beginning of the “limping standard”, but also restored the monopoly of the IOB in issuing gold-backed banknotes. From this year, until 1914, the quantity of IOB notes in circulation increased steadily, and they remained the only legal tender fiat money, circulating together with the gold and silver coins. Although the cover ratio was still much above the required rate of 30 per cent, in 1893 the government imposed an upper limit of 1.5 million *liras* on the issue of banknotes. The following year the bank gradually increased the circulation of its notes, which reached 1.4 million *liras* by 1905. In 1908, the IOB was authorised to increase the issue to up to 2 million *liras*. However, the total value of notes in circulation stayed at around one million *liras* until August 1914. Perhaps more remarkably, throughout the period the cover ratio remained much above the officially required rate. There may be two explanations for this

³⁵ Akyıldız (1996, p.96-98); Eldem (1999, p.465).

phenomenon: either the bank could not increase the circulation of its notes even if it met all the legal requirements, or it was extremely cautious and preferred to hold large amounts of gold reserves. The evidence suggests that it was in fact the former which was the case, and that the bank was not able, and sometimes even unwilling, to increase the circulation of its notes due to the combination of a set of factors.

In order to provide a better understanding of this puzzle, it is worth exploring the underlying reasons for the limited circulation of banknotes further. First, the IOB was not a “national” but a commercial bank, established by foreign capital and afforded the privilege of issuing banknotes. As a commercial bank, its main activity was focused on acting as an intermediary between the Ottoman government and European financial markets.³⁶ Since the government abandoned its right to issue notes, it was no longer able to implement “forced circulation”; instead, all banknotes circulated on a “voluntary” basis and their volume was determined endogenously by the money demand. Moreover, given the legal tender status of commodity money, an increase in money/liquidity demand would not simply lead to a linear increase in note circulation in the absence of positive incentives to hold fiat money over commodity money. Second, the IOB started its operations under unfavourable conditions in this regard. The earlier fiat money issued by the government under the name of *kaime* had already lost its credibility, and this in turn held back the public’s preference for IOB notes.

The third reason was the demand for high-denomination banknotes, which contributed to their limited circulation. Although a small volume of two *lira* banknotes was issued in 1869, most of the IOB notes carried a nominal value of five *liras* (around £4.5), making them inconvenient for wide use except in large transactions. The underlying reason for this policy can be attributed to the economic conditions of the Empire. According to the statute of the bank, the IOB was not allowed to issue notes with denominations below two *liras* without the permission of the government. In order to issue smaller

³⁶ According to Flandreau et al. (2010) the Imperial Ottoman Bank was among the top three underwriters in the global primary bond market during 1845-1876 and in Paris during 1895-1914, together with Rothschild, Barings and BPPB.

denominations, the IOB applied to the government three times in 1880, 1890 and 1892, and it was granted permission to issue one *lira* denominated notes with a total value of 45,000 *liras*. However, this experiment failed since these notes were immediately returned to the cashiers of the bank, and converted into gold in a very short period of time. In fact, it had become clear by that time that there was demand for only high-denomination notes. In order to meet this demand, in 1909 the IOB replaced all one, two, and five *lira* notes with 50 and 100 *lira* notes.³⁷ This policy may be attributed to the perception that bank notes were mere representations of the commodity money. Therefore, from the holders' perspective keeping one *lira* in notes rather than coins held no advantage. However, if the denominations were higher, this could presumably reduce such costs in large transactions as transferring coinage from one place to another, and made the banknotes more attractive for potential holders.

The last and perhaps most important limitation on banknote circulation was the policy of the IOB to redeem and convert its notes into gold only in its Istanbul branch. This practice was laid down in the statute of the bank, and at first glance it seems like a restriction imposed by the government. On the contrary, however, it was the IOB that did not want to extend its privilege of issuing banknotes to the provinces of the Empire. The main reason behind this hesitation was the money-holding patterns in most of the provinces. Given the rural characteristics of most of the Ottoman provinces, the money demand increased on a seasonal basis, and holders of notes would immediately try to convert them into gold. In practice this meant that banknote holders would use them as bills of exchange and send them to Istanbul to convert into cash. In order to prevent large inflows of banknotes to the Istanbul branch, the IOB even tried to extend the scope of banknote convertibility to its provincial branches. For instance, in 1889, the Hüdavendigâr and Aydın branches of the bank issued one *lira* banknotes. However, within a short period of time, all notes had been returned to the bank and converted into gold. Although the total reserves of the bank were high enough to meet this demand, the

³⁷ Ferid (1914, p.85).

transportation of the coinage from the central branch to the provinces on a regular basis would, in the absence of an extensive railway network, be time-consuming, costly and unsafe. When these conditions started changing in 1913 with the construction of an extensive railway network connecting Istanbul to most of the provincial branches, the government even applied to the central London and Paris branches of the IOB to extend the coverage of issuance to the provinces. However, these requests were abandoned altogether with the start of the war.³⁸

In this context, the picture presented in Figure 4, in which the cover ratio of the IOB is calculated using the total reserves of the bank in the numerator and notes in circulation in the denominator, may seem misleading given that note convertibility was restricted to only the Istanbul branch. Although the reserves of the Istanbul branch are not reported separately in the IOB balance sheets for the whole period under study, available data (1864-75, and 1896-1913) suggests that from one-third to half of the total reserves of the bank was held at the Istanbul branch at all times. Thus, even when we take into account the reserves in Istanbul alone, the cover ratio never fell below 50 per cent and remained above 100 per cent on average for the period 1895-1914 (see Figure 5).

The beginning of World War I marked the end of the classical gold standard for most core and peripheral countries across the world, and the Ottoman Empire was no exception. During the first couple of months of the Great War, in order to finance the extraordinary military expenditures, the government first increased the upper limit of issue of the IOB to 4 million *liras*. Later, in April 1915, the Ottoman government suspended the IOB's exclusive privilege to issue notes and authorised the Ministry of Finance to issue 6.5 million *liras* of paper money, under the name of *evrak-ı nakdiye*.

Overall, it would not be wrong to argue that the Ottoman gold standard functioned truly only in Istanbul. In the rest of the Empire, as the monetary base of the country continued to rely on silver rather than gold or gold-convertible bank notes, the silver currency

³⁸ Ferid (1914, p.95).

served as fiduciary money, with only a limited connection to its intrinsic value. From the government's perspective, this monetary system, despite enforcement problems and its costs, can be characterised by its flexibility. As one contemporary observer puts it, the Ottoman monetary regime represented "an object-lesson of a silver-using country on a gold basis".³⁹

3 The Ottoman Empire and the golden periphery

From 1880 to 1914, the Ottoman Empire allegedly adopted the gold standard and the monetary authority sustained the full convertibility of its gold-backed banknotes. However, closer scrutiny of the prevailing monetary activities and regulations reveals some unusual characteristics in the functioning of this monetary standard. As regards commodity money, the domestic circulation of gold coins was considerably limited. In fact, although the mint output of gold was fairly high, according to contemporaries, gold never circulated. For instance, in the words of E. V. Caillard, the Director of and British representative to the Ottoman Public Debt Administration:

"There is never really what is called 'an abundance of money' in the market; the money market is almost always stringent; when you hear at Constantinople that 'there is plenty of money' it only means that there is less stringency than usual. At times, the Ottoman Bank has been forced to import considerable quantities of gold at a loss to itself in order to ease the situation and be able to meet its own or Government engagements. But the gold so brought in, or at any rate that part of it not converted into Turkish pounds, rapidly disappears from the country again."⁴⁰

Although it is not possible to give a full account of this phenomenon within the scope of this paper, it seems that the gold entering the country in the form of foreign currency via exports or capital inflows, would first be taken to the Mint by the holders to be converted

³⁹ OPDA (1882-1914), *Annual Report*, (1894, p.62-65).

⁴⁰ OPDA (1888-1914), *Quinquennial Report*, (1888, p.33).

into Turkish *liras* and would then, in accordance with “Gresham’s law”, be hoarded, as the Turkish *lira* still maintained its reputation as a store of value.⁴¹ This fact was strengthened by the underdeveloped banking sector, which might otherwise have offered an alternative to hoarding to individuals and their savings. Although in Istanbul exchange rates were stable between the Ottoman currency and the currencies of other gold standard countries, territorial exchange rates and currency zones survived in the provinces throughout the period. Since many different types of silver coins were used in domestic transactions, the state had to accept unlimited amounts of silver in its operations. Most of the silver in circulation carried a high nominal value, which eventually led the fractional coinage to circulate at par, despite heavy depreciation in the international price of silver.⁴²

Regarding fiat money, the most distinguishing characteristic of the Ottoman monetary system was the limited circulation of gold-convertible banknotes. A closer look at the composition of the money stock for the period reveals that the share of gold-backed banknotes issued by the IOB accounted on average 1.8 per cent of the total monetary base. The first and foremost reason for this was the fact that issuing banknotes never became a primary activity of the bank, and it only constituted on average 3.7 per cent of the total liabilities from 1880 to 1914.⁴³ Second, given that the demand for high-denomination notes was higher, the circulation of fiat money remained limited to only large transactions. The third reason was the inability of the IOB to issue notes in the provinces mostly due to high transportation costs, and money-holding patterns. Finally, the relationship between the government and the IOB, characterised by the intermediary role of the IOB in international financial markets and its monopoly of issue in the domestic

⁴¹ Unfortunately it is not possible with our current level of knowledge to quantify reliably the extent of this hoarding. According to the few contemporary estimates available, the hoarded amount was around 2-3 billion *kuruş*, corresponding to almost half of the gold minted between 1844 and 1914. Biliotti (1909); Eldem (1970); Ferid (1914); Haupt (1886).

⁴² See Sargent and Velde (2002) for a technical discussion of this subject.

⁴³ It is perhaps important to mention that the discounting and re-discounting of bills was also a minor activity of the IOB, which did not have any official interest rate. The conditions changed depending on the credibility of the customer and in proportion to the guarantees of the operation. The overall share of the bills receivable and bills payable in the total balance sheet size was stable and remained around ten per cent from 1880 to 1914. IOB (1863-1914); Biliotti (1909, p. 209).

market, made it difficult for the government to make use of the IOB for the purposes of “forced circulation”. Thus, the IOB notes circulated mostly in Istanbul, forming only a fraction of the total monetary base, its liabilities and GDP (see Table 4).

To what extent was the Ottoman case an outlier in terms of the limited circulation of fiat money? During this period, the governments of some peripheral countries relied exclusively on a multitude of private banks of issue, while others monopolised this power. Some issue banks were state organisations and others were private banks. For some private banks, issuing notes was a minor activity, whereas others were designed primarily to do so. In many countries state notes and private banknotes circulated together. To shed light on some of these differences, it is possible to compare the Ottoman Empire with some of the well-known peripheral members of the pre-1914 gold standard in terms of the different weights of commodity and fiat monies. Considering the difficulties in constructing reliable estimates of the commodity money in circulation for even only one country, as discussed briefly above in relation to the Ottoman case, it is indeed a task beyond the scope of this study to do the same for a wide range of countries, where different monetary standards, institutions and practices prevailed. Therefore, the underlying purpose of the comparison below is much less ambitious and aims at providing evidence on how exceptional the Ottoman case was with regards to patterns in the emergence of fiat money. Nevertheless, despite its limitations, this comparison may well assist us in looking at the experiences of the peripheries from a different perspective.

For this purpose, Table 4 compares the Ottoman Empire with 12 other peripheral countries from 1880 to 1913: Argentina, Austria-Hungary, Belgium, Brazil, Denmark, Egypt, Greece, Italy, Norway, Portugal, Russia, Spain, and Sweden.⁴⁴ Although the peripheral status of some of these countries, such as Belgium, is debatable⁴⁵, they are nonetheless included in the comparison in order to show the variation. By contrast, some of the obvious core countries like Britain, France and Germany are excluded from this brief discussion given

⁴⁴ For a full list of sources see Table 4.

⁴⁵ See Morys (2012).

that the specific indicators we would like to explore, such as fiat-commodity money composition or monetisation level, would make less sense in these high-income countries where the development of the banking sector and bank money were well under way.

For a very similar reason, the share of fiat money as a percentage of the total monetary stock probably overestimates the commodity stock in some countries more than in others. Given that this measure does not take into account the role of deposit money or money created by the banking sector, a small number may not necessarily signal an inability to introduce fiat money as in the Ottoman case, but rather a relatively developed banking sector. However, combined with the other three measures (notes in circulation as a percentage of GDP, in terms of the total liabilities of the issue bank, and finally in per capita British pounds terms), it strengthens our hypothesis that the Ottoman case was indeed an outlier in terms of both the monetisation level of its economy and its fiat-commodity money composition. Moreover, it would not be wrong to assume that the countries with a higher share of fiat money is higher in the total money stock probably had greater flexibility in determining the size and composition of the monetary base.

Although some of the underlying reasons behind the limited circulation of notes have been explained in this paper for the Ottoman Empire, by relying on the literature it is possible to provide a complementary line of explanation for the cross-country differences: the regulatory framework within which the central banks of issue implemented their activities.⁴⁶ By focusing on a set of measures such as the legal status of the issue bank, the government's control over the appointment of its head and managing council, the bank's obligations to provide statutory advances to the government or statutory issues on government securities, and ownership of the bank's profits, it is possible to build up a broad picture of the autonomy of a particular central bank of issue from its corresponding government. (See Table 5) This evidence, when combined with the extent of fiat money in circulation, suggests that the governments that exerted extensive legal control over their central banks of issue enjoyed greater flexibility in exercising note issue during the times of

⁴⁶ Flandreau et al. (1998).

fiscal difficulties. In this regard, the IOB, while seemingly the most independent central bank of issue, was also the least reluctant bank to issue notes.

4 Conclusion

This study provides an analysis of how the gold standard functioned in the Ottoman Empire from 1880 to 1914. We show that during this period the domestic circulation of gold coins and bank notes was severely limited in the Ottoman Empire, despite it being on the gold standard. We also suggest a variety of reasons behind the limited circulation, such as the unique regulatory relationship between the government and the IOB; the scale, which may have contributed to the high transportation costs for the purpose of transferring necessary funds between the branches of the IOB, and finally the development level of the banking sector and the Ottoman economy. All these factors prevented the government from implementing “forced circulation” and discouraged the IOB from extending the scope of its note circulation. Consequently, a multitude of silver coins circulating with little connection to their intrinsic value, leading territorial exchange rates and currency zones filled the vacuum caused by the limited circulation of the fiat currency.

Our presentation challenges the conventional interpretation of the gold standard in the peripheries of the international monetary order. The evidence presented suggests that the transition from commodity money to fiat money did not take place at the same rate across peripheries during the pre-1914 gold standard era. Some countries relied relatively more heavily on commodity money, and others on fiat money. The results imply that this variation was correlated with the relative autonomy of the central banks of issue from their respective governments. Thus, the Ottoman gold standard was an exception in the golden periphery, owing not only to the limited circulation of its notes, but also to the high degree of independence of the IOB from the fiscal needs of the government. Overall the focus in this paper has been on explaining the reasons behind the variation in monetary sovereignty rather than on discussing its consequences. The links to fiscal capacity and sovereign risk as some of the potential consequences may be the subject of future research.

References

Primary Sources

FOGB (1880-1914). *Diplomatic and consular reports on trade and finance of Turkey, Foreign Office, Great Britain.* London.

GBRM (1880-1914). *Annual report of the deputy master and comptroller of the mint, Great Britain Royal Mint.*

IOB (1863-1914). *The Balance Sheets and Reports of the Ottoman Bank.* Guildhall Library, MS-23977.

— (1875). *The Concession: 'Reglement' and Statutes of the Imperial Ottoman Bank.* Guildhall Library, MS-23963.

LHEE (1880-1914). *The Levant Herald and Eastern Express.*

OPDA (1882-1914). *The annual report of the Council of Administration of the Ottoman Public Debt.*

— (1888-1914). *Quinquennial report on the revenues ceded by Turkey to the bondholders of the Ottoman public debt.* London.

USCC (1880-1914). *Annual report of the comptroller of the currency, US.* Washington, D.C.

UST (1880-1914). *Annual report of the Secretary of the Treasury on the state of the finances, US.*

Secondary Sources

Aceña, P.M. and J. Reis (2000). *Monetary standards in the periphery: paper, silver and gold, 1854-1933.* New York: Macmillan.

Akyıldız, A. (1996). *Osmanlı finans sisteminde dönüm noktası: kağıt para ve sosyo-ekonomik etkileri.* İstanbul: Eren.

- Autheman, A. (2002). *The Imperial Ottoman Bank*. Istanbul: Ottoman Bank Archives and Research Centre.
- Biliotti, A. (1909). *La Banque Imperiale Ottomane*. Paris.
- Birdal, M. (2010). *The political economy of Ottoman public debt*. London; New York: Tauris Academic Studies.
- Blanchard, O.J. (2004). "Fiscal dominance and inflation targeting: lessons from Brazil". In: *NBER Working Papers* 10389.
- Bloomfield, A. I. (1959). *Monetary policy under the international gold standard: 1880-1914*. New York: Federal Reserve Bank of New York.
- (1963). *Short-term capital movements under the pre-1914 gold standard*. Princeton, N.J.: International Finance Section, Dept. of Economics, Princeton University.
- Bordo, M.D. and L. Jonung (1999). "The future of EMU: what does the history of monetary unions tell us?" In: *NBER Working Papers* 7365.
- Bordo, M.D. and F.E. Kydland (1995). "The gold standard as a rule: an essay in exploration". In: *Explorations in Economic History* 32.4, pp. 423–464.
- Bordo, M.D. and A. Redish (1993). "Maximizing Seignorage Revenue during Temporary Suspensions of Convertibility: A Note". In: *Oxford Economic Papers* 45.1, pp. 157–68.
- Bordo, M.D. and H. Rockoff (1996). "The gold standard as a 'good housekeeping seal of approval'". In: *The Journal of Economic History* 56.02, pp. 389–428.
- Bordo, M.D. and A.J. Schwartz (1997). "The specie standard as a contingent rule: some evidence for core and peripheral countries, 1880-1990". In: *NBER Working Papers* 4860.
- Catao, L. and S. Solomou (2003). "Exchange rates in the Periphery and International Adjustment under the Gold Standard". In: *IMF Working Papers* 3.41, pp. 1–36.
- Click, R.W. (1998). "Seigniorage in a cross-section of countries". In: *Journal of Money, Credit and Banking*, pp. 154–171.

- Conant, C.A. (1915). *A history of modern banks of issue*. New York; London: G.P. Putnam's Sons.
- Dimitrova, K., L. Fantacci, and A.C. Tuncer (2010). "Monetary policy in Southeast Europe in transition from bimetallism to limping gold standard". In: *Monetary policy during economic crises: a comparative and historical perspective*. Ed. by Pamuk Ş., Görmez Y. and M.İ. Turhan. Türkiye Cumhuriyet Merkez Bankası, pp. 64–84.
- Eichengreen, B.J. (1992). *Golden fetters: the gold standard and the Great Depression, 1919-1939*. New York: Oxford University Press.
- Eichengreen, B.J. and M. Flandreau (1994). "The geography of the gold standard". In: *CEPR Discussion Papers*.
- (1997). *The gold standard in theory and history*. Psychology Press.
- Einaudi, L. (2001). *Money and politics: European monetary unification and the international gold standard (1865-1873)*. New York: Oxford University Press.
- Eldem, E. (1999). *A history of the Ottoman Bank*. Ottoman Bank Historical Research Center.
- (2011). "Chaos and half measures: the Ottoman monetary 'system' of the nineteenth century". In: *The economic development of South-Eastern Europe (1830-1914)*. Ed. by E. Eldem and S. Petmezas. Athens: Alpha Bank Historical Archives, pp. 251–305.
- Eldem, V. (1970). *Osmanlı İmparatorluğunun iktisadi şartları hakkında bir tetkik*. Ankara: Türkiye İş Bankası Kültür Yayınları.
- Esteves, R.P., J. Reis, and F. Ferramosca (2009). "Market integration in the golden periphery. The Lisbon/London exchange, 1854-1891". In: *Explorations in Economic History* 46.3, pp. 324–345.
- Ferid, Hasan (1914). *Nakid ve itibar-i mali*. İstanbul: Hukuk Matbaası.
- Fischer, I. (1926). *The purchasing power of money*. New York.
- Fischer, S. (1982). "Seigniorage and the case for a national money". In: *The Journal of Political Economy* 90.2, pp. 295–313.

- Flandreau, M. and C. Jobst (2005). "The ties that divide: a network analysis of the international monetary system, 1890-1910". In: *The Journal of Economic History* 65.04, pp. 977-1007.
- Flandreau, M. and J. Komlos (2002). "Core or periphery? The credibility of the Austro-Hungarian currency 1867-1913". In: *Journal of European Economic History* 31.2, pp. 293-320.
- Flandreau, M. and F. Zumer (2004). *The making of global finance 1880-1913*. Paris: Development Centre of the Organisation for Economic Co-operation and Development.
- Flandreau, M. et al. (1998). "Stability without a pact? Lessons from the European gold standard, 1880-1914". In: *Economic Policy* 13.26, pp. 117-162.
- Flandreau, M.D. et al. (2010). "The end of gatekeeping: underwriters and the quality of sovereign bond markets, 1815-2007". In: *NBER Working Papers*.
- François, G. (1896). *Les banques d'émission*. Paris: V. Giard et E. Briere.
- Fратиanni, M. and F. Spinelli (2001). "Fiscal dominance and money growth in Italy: the long record". In: *Explorations in Economic History* 38.2, pp. 252-272.
- Gadea, M.D., M. Sabate, and R. Escario (2008). "Beating fiscal dominance: the case of Spain, 1874-1998". In: *Documentos de Trabajo (Universidad de Zaragoza, Facultad de Ciencias Economicas y Empresariales)* 08.
- Güran, T. (2003). *Osmanlı mali istatistikleri: bütçeler (1841-1918)*. Ankara: T.C. Başbakanlık Devlet İstatistik Enstitüsü.
- Haupt, O. (1886). *Histoire monétaire de notre temps*. Paris.
- Kuroda, A. (2007). "The Maria Theresa dollar in the early twentieth-century Red Sea region: a complementary interface between multiple markets". In: *Financial History Review* 14.01, pp. 89-110.
- Kuyucak, H. A. (1948). *Para ve banka*. İstanbul: İsmail Akgün Matbaası.
- Levy, R. G. (1911). *Banques d'émission et tresors publics*. Paris: Hachette.

- Mankiw, N.G. (1987). "The optimal collection of seigniorage: theory and evidence". In: *Journal of Monetary Economics* 20.2, pp. 327–341.
- Morys, M. (2007). "Adjustment under the classical gold standard (1870s-1914): how costly did the external constraint come to the European periphery?" In: *The experience of exchange rate regimes in South-Eastern Europe in historical and comparative perspective*. Ed. by Austrian National Bank. Vienna, pp. 50–79.
- Morys, M. (2012). "Discount rate policy under the classical gold standard: core versus periphery (1870s-1914)". In: *Centre for Historical Economics and Related Research at York* 02.
- Mundell, R.A. (2002). "Monetary unions and the problem of sovereignty". In: *The Annals of the American Academy of Political and Social Science* 579.1, pp. 123–152.
- Officer, L. (2008). *The price of gold, 1257-2007*.
- Pamuk, Ş. (2000). *A monetary history of the Ottoman Empire*. Cambridge University Press.
- (2006). "Estimating economic growth in the Middle East since 1820". In: *The Journal of Economic History* 66.3.
- (2008). "From bimetallism to the 'limping gold standard': the Ottoman monetary system in the nineteenth century". In: *East meets West: banking, commerce and investment in the Ottoman Empire*. Ed. by P. Cotrell. Ashgate.
- Redish, A. (2000). *Bimetallism: an economic and historical analysis*. Cambridge: Cambridge University Press.
- Rollins, M. (1907). *Money and investments*. Boston: D. Estes Co.
- Sargent, T.J. and F.R. Velde (2002). *The big problem of small change*. Princeton, N.J.: Princeton University Press.
- Schneider, J., O. Schwarzer, and F. Zellfelder (1994). *Währungen der welt 8, Afrikanische und Levantinische devisenkurse im 19. und 20. jahrhundert*. Stuttgart: Steiner.

- Servais, E. (1911). *Banques d'emission : banques etrangeres, Banque de France, banques coloniales*. Paris: impr. de R. Laroche.
- Toprak, Z. (1985). "Osmanlı devleti'nde para ve bankacılık". In: *Tanzimat'tan Cumhuriyet'e Türkiye Ansiklopedisi*. İletişim.
- Triffin, R. (1964). *The evolution of the international monetary system: historical reappraisal and future perspectives*. Princeton, N.J.: International Finance Section, Dept. of Economics, Princeton University.
- Tschoegl, A.E. (2001). "Maria Theresa's Thaler: A case of international money". In: *Eastern Economic Journal* 27.4, pp. 443–462.
- Tunçer A. C. (2011). "Fiscal autonomy, monetary regime and sovereign risk". PhD thesis.
- Willis, H.P. (1901). *A history of the Latin Monetary Union: a study of international monetary action*. University of Chicago Press.
- Young, G. (1906). *Corps de droit Ottoman*. Paris, Londres: Clarendon Press.
- Yousef, T.M. (2002). "Egypt's growth performance under economic liberalism: a reassessment with new GDP estimates, 1886-1945". In: *Review of Income and Wealth* 48.4.

Figures

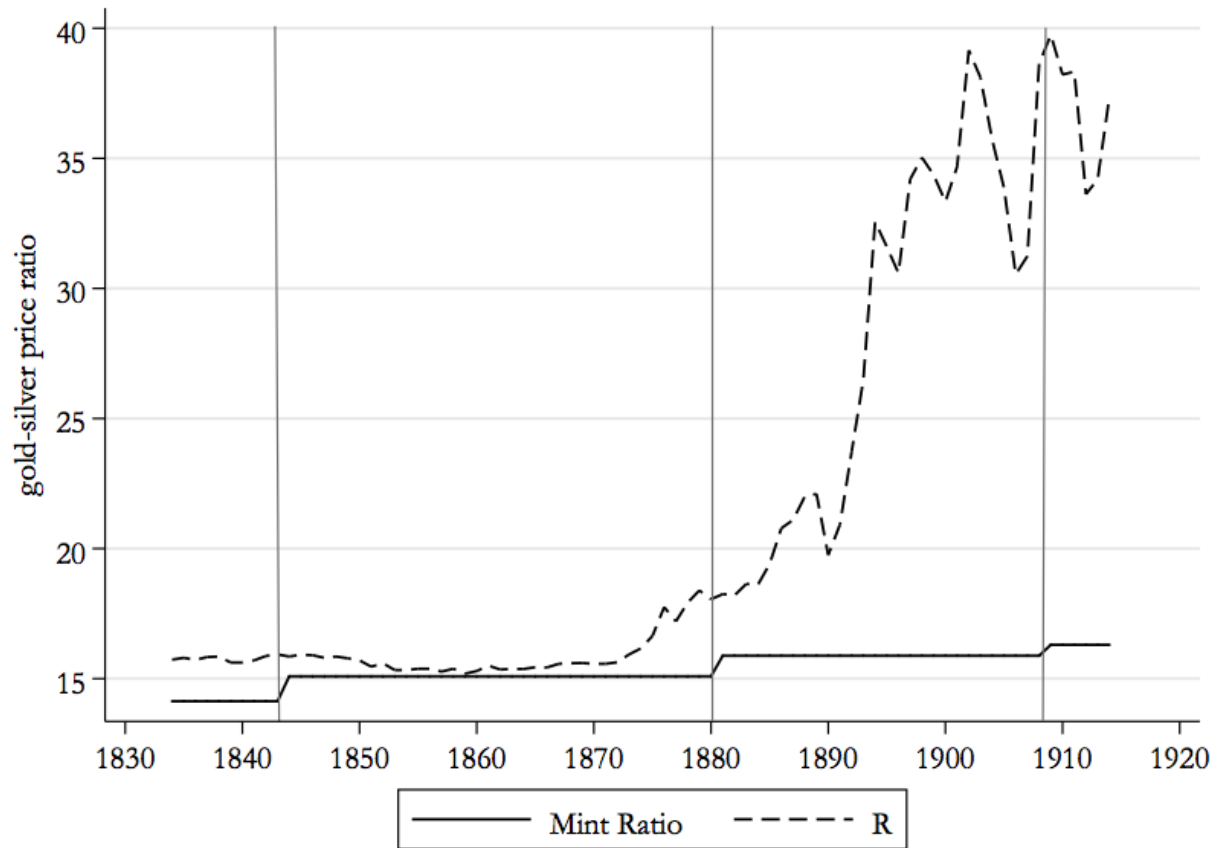


Figure 1: *International gold silver-ratio (R) and the official mint ratio of the Ottoman Empire (1834-1914).* Vertical lines refer to changes in the monetary regulation. Sources: Own calculation. R is based on Officer (2008).

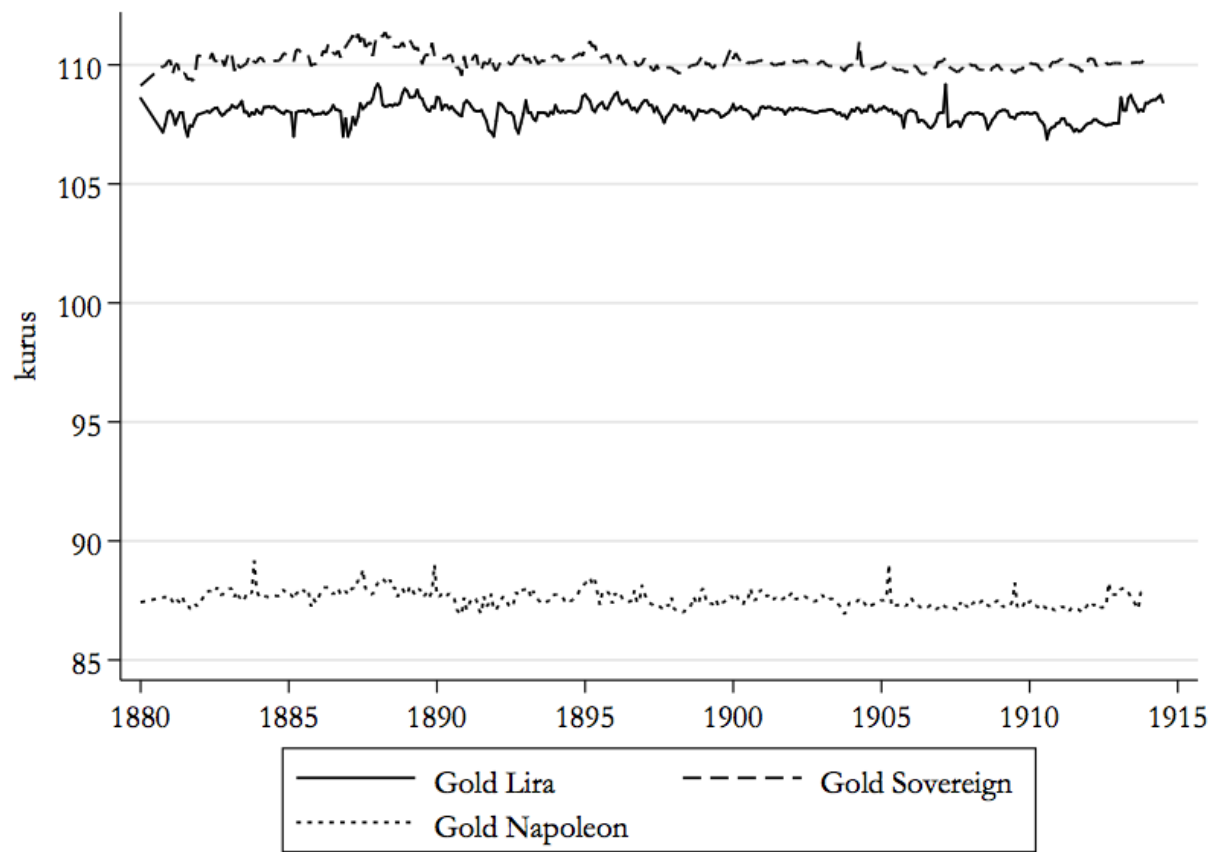


Figure 2: *Exchange rates of kuruş in Istanbul (1880-1913).* End of month values. Sources: Daily edition of the LHEE (1880-1914).

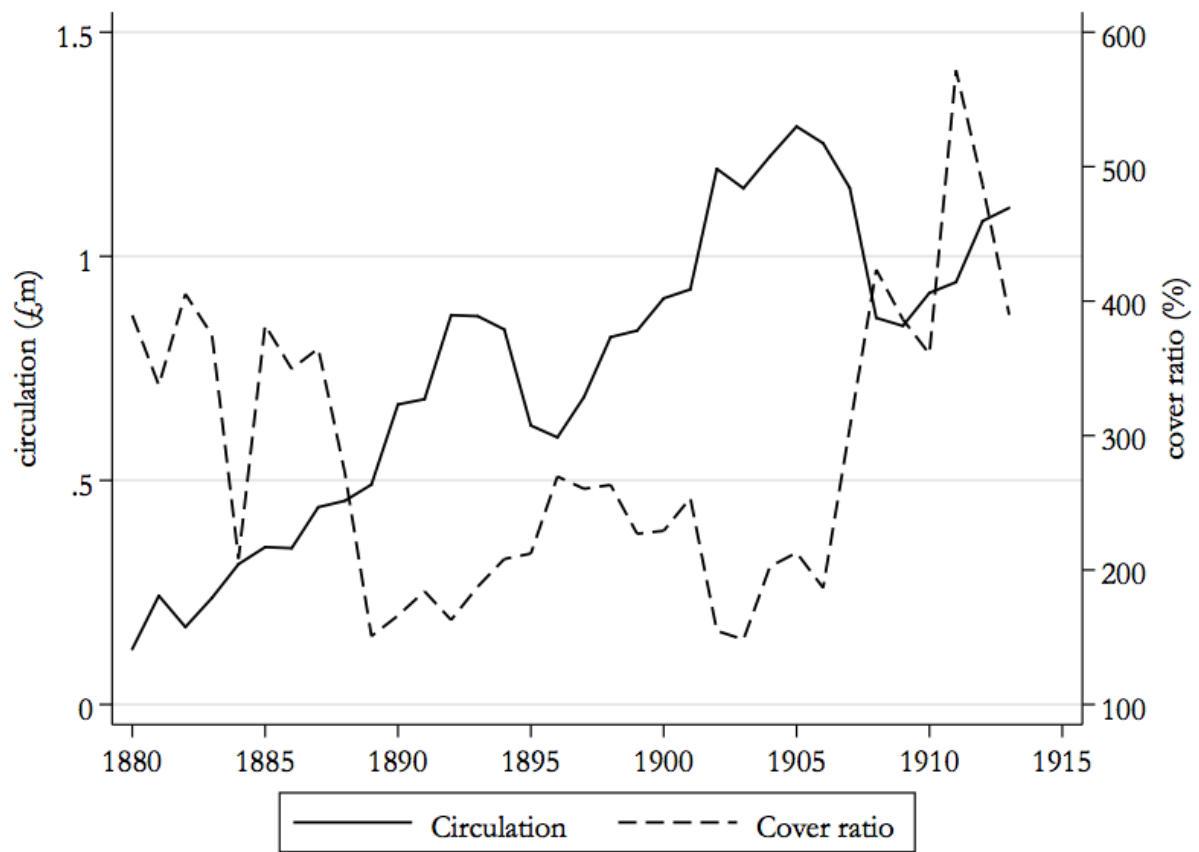


Figure 3: *Minting activity of the Ottoman Empire (1880-1914).* Sources: Calculated from Ferid (1914),

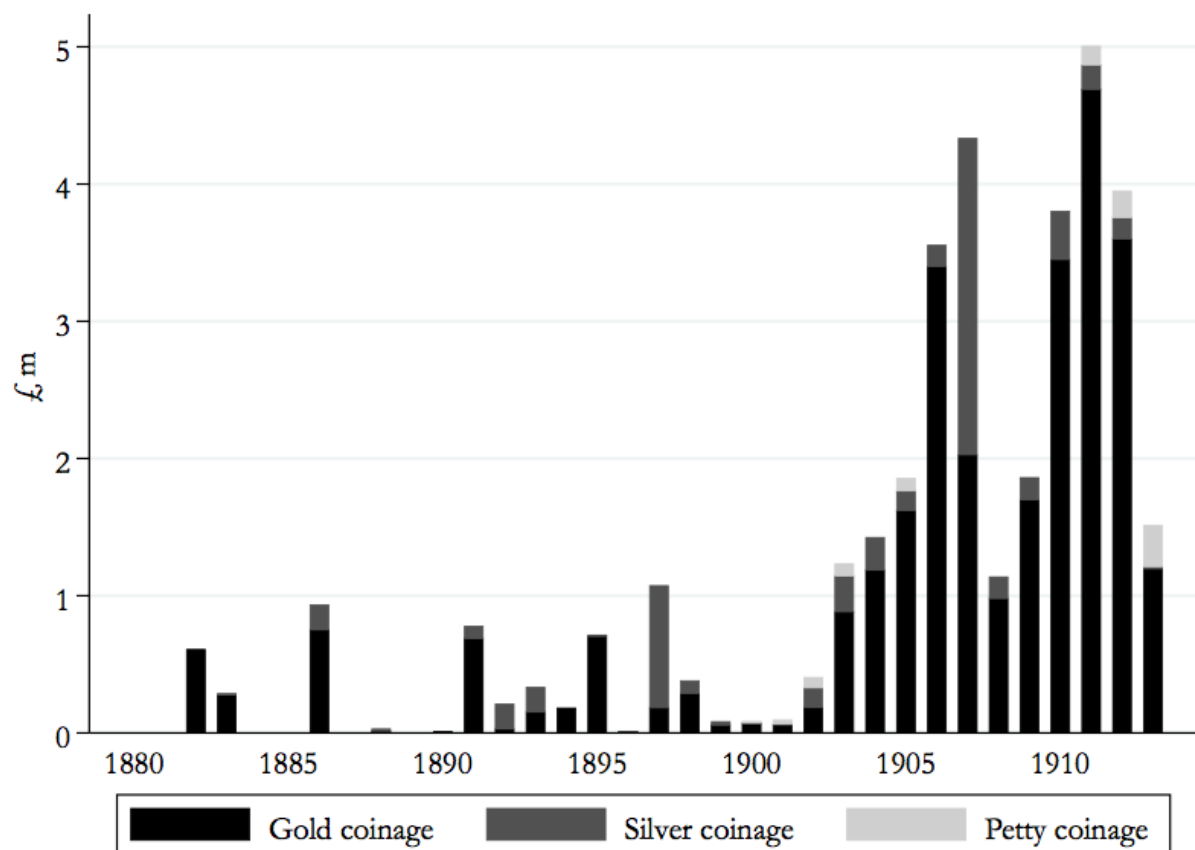


Figure 4: *IOB notes in circulation and cover ratio (1880-1913).* Cover ratio is defined as the total reserves as a percentage of notes in circulation. Sources: Eldem (1999); IOB (1863-1914).



Figure 5: *IOB cover ratios: total and Istanbul (1896-1913).* Cover ratio is defined as total reserves as a percentage of notes in circulation. The dotted lines indicate mean values of each cover ratio. Sources: Eldem (1999); IOB (1863-1914). Istanbul figures are kindly communicated by E. Eldem based on *Cash Reserve Ledger and Banknotes Ledger* of the IOB (1863-1914).

Tables

Table 1: Monetary standards and currency in circulation, 1844-1914

Year	Monetary standard	Currency in circulation	Monetary authorities
1844	Bimetallism	Gold coins Silver coins State notes	Mint Treasury
1863	Bimetallism	Gold coins Silver coins Bank notes	Mint IOB
1876	Bimetallism	Gold coins Silver coins Bank notes State notes	Mint Treasury IOB
1880	Limping standard	Gold coins Silver coins Bank notes	Mint IOB
1914	Fiat money standard	Gold coins Silver coins State notes	Mint Treasury

Sources: Own elaboration.

Table 2: Coins struck, 1844-1914

Year	Coin	Metallic content (gr.)	Legal value (<i>kuruş</i>)	Mint equivalent	R	Mint ratio
1844					15.85	15.09
	Silver <i>kuruş</i>	0.998	1	1.0017		
	Gold <i>lira</i>	6.614	100	15.117		
1880					18.05	15.88
	Silver <i>kuruş</i>	0.998	1	1.0017		
	Gold <i>lira</i>	6.614	105.25	15.913		
1909					39.74	16.30
	Silver <i>kuruş</i>	0.998	1	1.0017		
	Gold <i>lira</i>	6.614	108	16.329		

Sources: Elaborated from Kuyucak (1948); Schneider et al. (1994); Tunçer (2011); Young (1906). Metallic content of a coin refers to its net gold and silver content, which is the product of the weight of a coin and its fineness. Legal value is the nominal value of the coin, which is shown in the denominations of the *kuruş*. The intrinsic value of a coin is expressed by its mint equivalent which is by definition the value of a coin divided by the product of its fineness and its weight. The mint ratio is simply the ratio of the mint equivalent of gold to silver, showing the official relationship between 1 gram of gold and 1 gram of silver. R is international gold and silver ratio.

Table 3: Exchange rates of *lira* and *kuruş* in Ottoman provinces, 1883-1914

Province	1883	1888	1889	1893	1905	1907	1914
Adana						124	
Aleppo			125			127	
Beirut	123				124	124.6	124.6
Baghdad				103.5	103		
Basra		148	153				
Damascus							130.8
Edirne						123	
Homs							123
Istanbul	108.3	109.1	109	108.6	108.4	108.2	108.7
Izmir					178	178	
Jaffa						142	
Salonica	124					102.5	
Sidon							125
Tripoli							124

Sources: Between 1883 and 1893 from FOGB (1880-1914); 1905 and 1914 are from Schneider et al. (1994, p.41). 1907 is from Biliotti (1909, p.124). Moreover, see Eldem (1999, pp.150-151); Pamuk (2008, pp.21-22).

Table 4: Bank notes in circulation across peripheries, 1880-1914

Country	Percentage of monetary base	Per capita (£)	Percentage of GDP	Percentage of total liabilities
Argentina	67.8	5.7	18	n.a.
Austria-Hungary	55.9	1.7	9.9	72.4
Belgium	44.4	3.5	10.2	78.4
Brazil	65.5	1.9	26.1	44
Denmark	51.5	2.1	7.3	69.3
Egypt	15.2	0.2	2	23
Greece	65.6	1.5	18.1	31
Italy	59.3	2.1	13.5	64.6
Norway	59.1	1.5	5.9	65.9
Ottoman Empire	1.8	0.1	0.4	3.7
Portugal	36.2	1.6	5.8	39.7
Russia	44.3	0.8	10.7	50
Spain	39.1	2.1	10.7	48.5
Sweden	40.6	1.1	4.5	57.1

Sources: Total mint output and bank notes in circulation for the Ottoman Empire, Greece and Egypt are based on official statistics and national bank reports of each country as reported in Tunçer (2011). For the remaining countries gold and silver stock is calculated by using GBRM (1880-1914). These figures are cross-checked with USCC (1880-1914) and UST (1880-1914). GDP and population estimates for the Ottoman Empire are from Pamuk (2006); Yousef (2002). Bank notes in circulation, GDP and population figures for the remaining countries are from Flandreau and Zumer (2004) see <http://eh.net/databases/Finance/> (accessed on 25/02/2013). Banknotes in circulation as a share of total liabilities is elaborated from François (1896); Servais (1911); Levy (1911). Notes: All figures are 1880-1914 averages. Bank notes as percentage of total liabilities refer to year 1909 figures. Gold and silver stock estimates exclude re-coinages, and includes annual mint output. Total stock estimates also include minting of copper and nickel coinage.

Table 5: Central bank of issue activities and legal status, 1880-1914

Country	State is shareholder	Managing council/head appointed by the government	Statutory advances to government	Profits owned/shared by the state	Limited monopoly of issue
Austria-Hungary	✗	✓	✓	✓	✗
Argentina	✓	✓	✓	✗	✓
Belgium	✗	✓	✓	✓	✗
Brazil	✗	✓	✗	✓	✓
Denmark	✗	✓	✓	✓	✗
Egypt	✓	✓	✓	✗	✗
Greece	✓	✗	✓	✓	✓
Italy	✗	✓	✓	✓	✓
Norway	✓	✓	✗	✓	✓
Ottoman Empire	✗	✗	✓	✗	✗
Portugal	✗	✓	✓	✓	✓
Russia	✓	✓	✓	✓	✗
Spain	✗	✓	✓	✗	✗
Sweden	✓	✓	✓	✓	✓

Sources: For information on individual issue banks, see François (1896); Servais (1911); Levy (1911); Conant (1915). For the Ottoman Empire, Egypt and Greece we rely on Tunçer (2011).