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The emergence of the Classical Gold Standard

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Abstract

This paper asks why the Classical Gold Standard (1870s - 1914) emerged: Why did the vast majority of countries tie their currencies to gold in the late 19th century, while there was only one country – the UK – on gold in 1850? The literature distinguishes a number of theories to explain why gold won over bimetallism and silver. We will show the pitfalls of these theories (macroeconomic theory, ideological theory, political economy of choice between gold and silver) and show that neither the early English lead in following gold nor the German shift to gold in 1873 were as important as conventional accounts have it. Similarly, we argue that the silver supply shock materializing in the early 1870s was only the nail in the coffin of silver and bimetallic standards. Instead, we focus on the impact of the 1850s gold supply shock (due to the immense gold discoveries in California and Australia) on the European monetary system. Studying monetary commissions in 13 European countries between 1861 and 1874, we show that the pan-European movement in favour of gold monometallism was motivated by three key factors: gold being available in sufficient quantities to actually contemplate the transition to gold monometallism (while silver had become scarce, at least in the bimetallic countries), widespread misgivings over the working of bimetallism and the fact that gold could encapsulate more value in the same volume than silver (i.e. coin convenience).

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1. Introduction

The Classical Gold Standard (1870s – 1914) was the first system of fixed exchange rates to span the entire globe. By the outbreak of World War I, virtually all countries followed the gold standard: either they had made their currencies convertible into gold or they had, at least, stabilised their exchange-rates with respect to convertible currencies.¹

Given the vast research on a large number of aspects of the Classical Gold Standard, it is surprising how little attention has been devoted to the historical origins of this unique monetary system. Why did the Classical Gold Standard emerge in the first place? Was the emergence of the Classical Gold Standard the logical outcome of 19th century monetary history or could there have been equally well the advent of a global silver standard? To be sure: We are not concerned here with the timing and the reasons why *individual* countries tied their currencies to gold once the Classical Gold Standard contained a suitable number of powerful trading and capital exporting countries. This tipping point was reached in autumn 1873, when Germany and France joined England in following the gold standard. After 1873, network externalities – i.e. boosting trade by reducing transaction costs and importing capital at lower cost – explain well the diffusion of the Classical Gold Standard.²

This paper is concerned with the time span 1860 – 1873: While virtually all European countries (except for the UK and Portugal) were either on a silver or a bimetallic standard, we witness a pan-European movement in favour of gold that translated slowly but surely into gold monometallic legislation: Romania (1867), Austria-Hungary (1867), Sweden (1872), Norway (1872), Denmark (1872), Germany (1873), the Netherlands (1873), Belgium (1873), France (1873) and Switzerland (1874). Two issues can be inferred from this. First, given the large number and importance of countries switching to gold in 1873, it seems sensible to see 1873 as the year that marks the emergence of the Classical Gold Standard (as does most of the literature). Second, this movement can hardly be explained on the ground of network externalities alone, despite the size and the importance of the UK

¹ B. Eichengreen and M. Flandreau, "The Geography of the Gold Standard," in *Currency Convertibility: The Gold Standard and Beyond*, ed. Jorge Braga de Macedo, Barry Eichengreen, and Jaime Reis, *Routledge Explorations in Economic History* (London, New York: Routledge, 1996). C. M. Meissner, "A New World Order: Explaining the International Diffusion of the Gold Standard, 1870-1913," *Journal of International Economics* 66 (2005).

² Meissner, "A New World Order: Explaining the International Diffusion of the Gold Standard, 1870-1913."

economy at the time (cf. table 1). In the early 1860s, when the whole of continental Europe (except for Portugal) was on a silver or a bimetallic standard, network externalities would have hardly militated in favour of gold monometallism.

The absence of a straightforward economic rationale might have led scholars to focus on the shift to gold by Germany, who was the first large continental European country to adopt gold in July 1873. Once the idiosyncrasies of the German case were explained, it was thought, understanding the emergence of the Classical Gold Standard as a whole could again be based on economic reasoning. With the UK and Germany on gold, network externalities would now militate in favour of gold monometallism. As for the German decision to adopt gold, different authors have stressed different factors, but they all argue that non-economic factors played a crucial role. Gallarotti³, Milward⁴ and Eichengreen⁵ have stressed that Germany's decision was largely motivated by its desire to emulate the English economic model of which it saw the currency as an important cornerstone. Friedman⁶, by contrast, saw the Franco-Prussian war (1870) and the war indemnity imposed upon France as crucial.

We argue, by contrast, that focussing on the decision of Germany alone entails two major risks. First and most obvious, such an approach cannot explain why a number of European countries adopted the gold standard a number of years before Germany. Second, if everything is reduced to the decision of only one country, the emergence of the Classical Gold Standard is likely to appear as a rather idiosyncratic event or, as Flandreau put it, as an "accident of history"⁷. Such an approach misses what was, arguably, the most important feature of the 1860s and the early 1870s: a pan-European movement in favour of gold monometallism. Drawing on legislation, monetary commissions and chambers of commerce meetings from 13 European countries from 1860 to 1873 as well as on two international monetary conferences – the 1865 Latin Monetary Union conference and the 1867 International Monetary Conference, both held in Paris – , we show that gold

³ G. M. Gallarotti, "The Scramble for Gold: Monetary Regime Transformation in the 1870s," in *Monetary Regimes in Transition*, ed. Michael D. Bordo and Forrest H. Capie (Cambridge: Cambridge University Press, 1993).

⁴ A. S. Milward, "The Origins of the Gold Standard," in *Currency Convertibility: The Gold Standard and Beyond*, ed. Jorge Braga de Macedo, Barry Eichengreen, and Jaime Reis, *Routledge Explorations in Economic History* (London, New York: Routledge, 1996).

⁵ B. Eichengreen, *Globalizing Capital: A History of the International Monetary System* (Princeton: Princeton University Press, 1996).

⁶ M. Friedman, "Bimetallism Revisited," *Journal of Economic Perspectives* 4 (1990).

⁷ M. Flandreau, "The French Crime of 1873: An Essay on the Emergence of the International Gold Standard, 1870-1880," *Journal of Economic History* 56 (1996): p. 863.

monometallism had won over both bimetallism and silver monometallism on a pan-European much earlier than 1873. As early as 1867, the world monetary system was clearly heading towards gold monometallism. Of equal importance, the early English example in following the gold standard was far less important than is commonly assumed, and the German 1873 decision to adopt gold had little to do neither with admiration for the English economic and political system nor the Franco-Prussian war.

What then explains the pan-European movement in favour of gold monometallism that is at the heart of this paper? Our argument is based on the availability of gold and silver in the European monetary system in the 1860s and on matters of coin convenience. While we might be “disappointed” that contemporaries had arguments as trivial as these on their minds, the argument put forward in this paper has the clear advantage that similar considerations were found to be of decisive importance when the gold standard had been introduced in England⁸ (1717/1816) and Portugal⁹ (1854). In our view, everything started with the gold supply shock of the 1850s: The immense gold findings in California (1848) and Australia (1851) brought, for the first time ever, gold to Europe in amounts large enough to actually contemplate the transition to gold for a large number of countries. European silver holdings, by contrast, had been dwindling rapidly since the early 1850s as a result of species re-composition in the bimetallic countries. Both factors combined gave rise to a discussion of the monetary standard, with gold, silver and bimetalism as options. With the notable exception of France, bimetalism never found widespread support in any of the countries; but even in France support for bimetalism dwindled away in the late 1860s. This left legislators and monetary commissions to choose between gold and silver. The monetary commissions show that the growing sentiment in favour of gold was motivated by matters of coin convenience. Gold was readily available in sufficient quantities, and it allowed to encapsulate more value in the same volume than silver. This was a major advantage at a time of rapidly increasing trade, large parts of which were still settled in coin. Moreover, gold coinage was more accurate and less prone to wear and tear than silver coinage. Last but not least, taking full advantage of gold no longer implied dispensing with silver for smaller payments, as silver token coinage had become widely accepted as a result of the monetary disturbances of the 1850s. It follows from this view

⁸ F. W. Fetter and D. Gregory, *Monetary and Financial Policy* (Dublin: Irish University Press, 1973), p. 16.

⁹ J. Reis, "First to Join the Gold Standard, 1854," in *Currency Convertibility: The Gold Standard and Beyond*, ed. Jorge Braga de Macedo, Barry Eichengreen, and Jaime Reis, *Routledge Explorations in Economic History* (London, New York: Routledge, 1996).

that we attach far less importance to the silver supply shock of the early 1870s than most accounts of the Classical Gold Standard do. In our view, the silver supply shock was only the nail in the coffin of the silver and bimetallic standards.

2. Theories on the emergence of the Classical Gold Standard

Explaining and discussing some theories on the emergence of the Classical Gold Standard in this chapter serves a double purpose. First, it helps avoid confusion between two very different kind of questions: the *emergence* of the Classical Gold Standard versus the *diffusion* of the Classical Gold Standard, i.e. explaining the timing and the reasons why a particular country was interested in joining the Classical Gold Standard after 1873. Disentangling the two questions from each other will show that the theories presented speak more, if not exclusively, to the second question and not the first one which we are interested in in this paper. Second, discussing currently held views in the literature will prepare us for just how different the debate on the monetary standard in the 1860s and early 1870s actually was from what we have come to think about it conventionally.

2.1 Macroeconomic theories based on network externalities

This school of thought argues that countries joined the gold standard in order to improve their macroeconomic performance. Two sub-schools can be distinguished, either highlighting improved conditions for capital imports or the prospect of increased trade with other gold standard countries. In both cases the argument is one of network externalities: countries are attracted to gold because a large number of other countries are (already) operating under this system.

The idea that adherence to the gold standard would improve access to international capital markets has been advanced most prominently by Bordo and Rockoff.¹⁰ The economic rationale is straightforward: as the major capital exporting countries – the UK, France, and Germany – were all on gold, the capital importing countries would benefit from being on the same monetary system. Controlling for a large number of variables, Bordo and

¹⁰ M. D. Bordo and H. Rockoff, "The Gold Standard as a 'Good Housekeeping Seal of Approval'," *Journal of Economic History* 56 (1996).

Rockoff show that countries on gold enjoyed lower sovereign bond yields than countries off gold.¹¹ As for the importance of trade, Meissner finds in a recent cross-country study that the prospect of increased trade was one of the main motivations to join the gold standard after 1870.¹²

The macroeconomic theory comes with an important caveat. As the key argument is based on network externalities, this theory does not claim to explain the emergence of the Classical Gold Standard; even though this is often erroneously inferred. The macroeconomic theory attempts to explain the diffusion of the Classical Gold Standard and explicitly limits itself to the period after 1870.¹³

If we wanted to extend the macroeconomic theory to prior 1870, we would need to show that either trade with gold standard countries or gold denominated capital imports played a major role for countries that desired to switch to gold in the 1860s. In other words, that the UK – the only major country on gold at that time – had such a dominant position in the 1860s that it alone could generate network externalities. While the UK was certainly the richest country at that time in terms of GDP per capita, it was outnumbered by far by the bimetallic bloc and the silver bloc in terms of population and aggregate GDP. Table 1 shows these key variables for the three currency blocs in 1870.

We have not yet completed our data base of bilateral trade and capital exports in the late 1860s. For this reason, we will confine ourselves at this stage to some remarks which we believe are sufficient to, at least, raise serious doubts about network externalities operating in favour of gold in the 1860s. An extreme case in point is Austria-Hungary, which in 1867 wanted to switch its monetary system to gold. At that time, Austro-Hungarian trade with the silver-based German states accounted for 57.3%, which is ten times more than trade with the UK (figure 1). In fact, as the protocol of the 1867 monetary commission shows, the ease of trade with the German states was one of the main arguments voiced against the gold standard; nonetheless, joining gold was favoured almost unanimously.¹⁴ Capital imports did not militate in favour of gold either. A recent analysis of the Austrian sovereign bond market has shown that the first issue of a gold bond by Austria-Hungary dates from as

¹¹ For a different assessment cf. M. Flandreau and F. Zumer, *The Making of Global Finance. 1880 - 1913* (Paris: 2004).

¹² Meissner, "A New World Order: Explaining the International Diffusion of the Gold Standard, 1870-1913."

¹³ Bordo and Rockoff, "The Gold Standard as a 'Good Housekeeping Seal of Approval'," pp. 389, 96, Meissner, "A New World Order: Explaining the International Diffusion of the Gold Standard, 1870-1913."

¹⁴ *Verhandlungen der Special-Commission zur Berathung der Münzfrage vom 10. bis zum 14. April 1867*, (Vienna: 1867).

late as 1876. All government bonds issued prior to that date had been in silver or in paper (none of which circulated in the UK to a considerable extent).¹⁵ We can conclude from this that both the idea of boosting trade and improving conditions on the capital market would have suggested Austria-Hungary stay on silver – which is exactly the opposite of what Austria-Hungary desired to do in 1867.

Table 1: GDP per capita, population and GDP in European countries in 1867

	GDP per capita (1990 US dollar)	Population (million)	GDP (1990 billion US dollar)
Gold			
UK	2968	30.9	90.7
Portugal	941	4.3	4.0
Total Gold		35.2	94.7
Bimetallic			
France	1813	38.2	69.3
Italy	1421	27.4	39.0
Belgium	2497	5.0	12.5
Switzerland	1431	2.6	4.5
Total Bimetallic		73.2	125.3
Silver			
Germany	1766	38.4	67.9
Austria-Hungary			
Netherlands	2660	3.5	9.3
Sweden	1431	4.2	6.0
Denmark	2003	1.8	3.4
Norway	1402	1.7	2.4
Total Silver (without Austria- Hungary)		49.6	89.0

Source: A. Maddison, *The World Economy. Historical Statistics*, Paris 2003.

¹⁵ M. Morys, "The Classical Gold Standard in the European Periphery: A Case Study of Austria-Hungary and Italy, 1870-1913" (PhD thesis London School of Economics and Political Science, 2006).

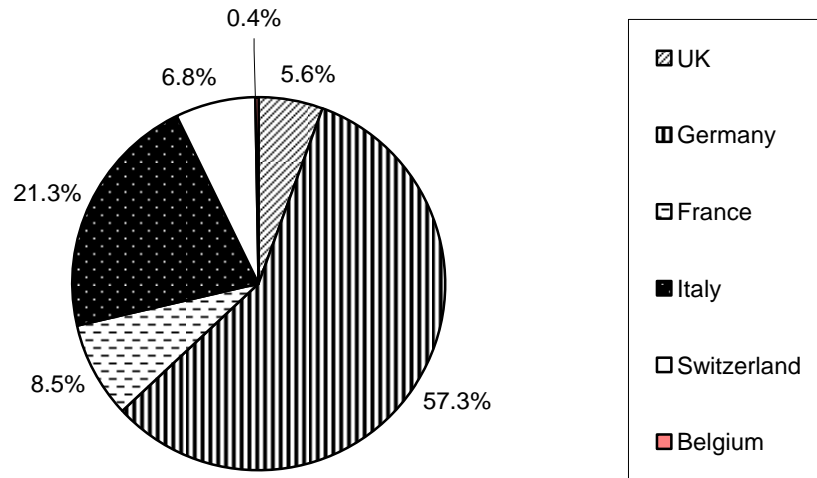


Figure 1: Austro-Hungarian trade volume with major trade partners in 1867.

Source: k.k. Finanzministerium, *Statistische Tabellen zur Währungs-Frage der Österreichisch-ungarischen Monarchie*, Vienna 1892, pp. 290-296, figures 193 – 198.

2.2 The Classical Gold Standard as the result of a political economy of metallic choice

In the case of this theory, there is a need to differentiate between the original theory, first proposed by de Cecco¹⁶, and its subsequent interpretations and enlargements, most recently connected to Gallarotti¹⁷. We shall refer to them as “mild” version and the “strong” version, respectively.

The “mild version” speaks to the diffusion of the Classical Gold Standard rather than its emergence, but it seems appropriate to explain it first. Drawing heavily on the exchange-rate dynamics between gold standard and silver standard countries after 1873, de Cecco attempts to explain why the industrial class preferred gold and why the landed interests favoured silver as a monetary standard. As silver depreciated with respect to gold starting in late 1873 (figure 4), silver standard countries gained an export advantage (and an import disadvantage) compared to gold standard countries. This theory claims that such a development was in the interest of the agricultural class: imports were of little practical concern to agricultural producers, but the export advantages were highly welcome;

¹⁶ M. de Cecco, *Money and Empire: The International Gold Standard, 1890-1914* (Oxford: Blackwell, 1974).

¹⁷ G. M. Gallarotti, *The Anatomy of an International Monetary Order: The Classical Gold Standard, 1880-1914* (Oxford: Oxford University Press, 1995).

especially, as a mildly depreciating exchange rate with respect to gold standard countries was likely to counteract the secular price decline in agricultural commodities starting in the 1870s due to the American grain invasion. The bourgeoisie, by contrast, is seen as a natural supporter of the gold standard for two reasons: first, industrialisation required imports from abroad, which meant that the industrial class would feel the import disadvantage of a silver standard much more than the agricultural class. Second, a corollary of the depreciation of silver with respect to gold was that silver standard countries would enjoy higher inflation than gold standard countries. The bourgeoisie would hold most of its wealth in bonds and stocks, thereby being much more prone to inflation than landed interests. Thus, silver was the choice of the agricultural class, while gold was the preferred metal of the industrial class.

The other key ingredient of this theory is that 19th century history is seen as a conflict between a rising bourgeoisie and an agricultural class in decline. Once the bourgeoisie got the upper hand, it abandoned the inflation prone silver standard in favour of the hard money gold standard. Hence, the choice of the metallic standard is interpreted as reflecting the status of economic development. In de Cecco's view, this explains why backward countries such as Russia joined the gold standard so late.

As pointed out, there is also a "strong" version of this theory. De Cecco does not claim to explain why countries such as England, Germany, and France joined the gold standard; he exclusively refers to the years after 1873, trying to explain why countries such as Russia joined the Classical Gold Standard so late. In that sense, the "mild" theory does not even come in conflict with what we are discussing in this paper.¹⁸

By contrast, Gallarotti has taken de Cecco's argument much further, ignoring the 1873 watershed and, instead, trying to explain 19th century discussions on the monetary standard as a whole:

¹⁸ It is worth pointing out that recent research has been sceptical towards de Cecco's hypothesis. For a cross-country study cf. Meissner, "A New World Order: Explaining the International Diffusion of the Gold Standard, 1870-1913." In particular regarding the cases of Italy and Austria-Hungary (i.e. Austria-Hungary's second attempt to join the gold standard which culminated in the 1892 legislation) cf. Morys, "The Classical Gold Standard in the European Periphery: A Case Study of Austria-Hungary and Italy, 1870-1913".

„... the spectrum of domestic politics changed significantly in the developed world in the 19th century. The rise of political liberalism was a manifestation of the political rise of an urban-industrial class and a challenge to the traditional dominance of an agricultural class. With the shift in the political balance of power came a concomitant shift in monetary preferences from a standard oriented around a bulky and inflationary metal (i.e., silver) to one oriented around a light and non-inflationary metal (i.e., gold). The victory of gold over silver in gold-club nations was coterminous with the political victory of a new class of urban industry over the more traditional classes connected with the land.“¹⁹

Such a broad version of the theory entirely neglects the turning point of 1873. Research has shown that before 1873, no such connection between silver and inflation existed.²⁰ If at all, the reverse might be true for some periods such as the 1850s, when gold came to be seen as the inflationary metal (cf. chapter 3). As such a connection did not exist before 1873, we should not be surprised that countries of very different economic development wanted to join the gold standard at the same point in time. As we will see in chapter 4, Romania, a poor country at the European periphery, was among the first countries to pass gold standard legislation in 1867.

2.3 The Gold Standard as an ideological choice

This theory argues that the adoption of the gold standard was largely determined by non-economic factors. The theory does not deny that adherence to gold might have delivered substantial economic advantages, but it argues that the reasons why the gold standard emerged in the first place were of ideological rather than economic nature. This theory has always found very strong supporters, among them Mertens²¹ and, more recently, Milward²²:

¹⁹ Gallarotti, *The Anatomy of an International Monetary Order: The Classical Gold Standard, 1880-1914*, p. 10.

²⁰ Flandreau, "The French Crime of 1873: An Essay on the Emergence of the International Gold Standard, 1870-1880," p. 887. Morys, "The Classical Gold Standard in the European Periphery: A Case Study of Austria-Hungary and Italy, 1870-1913", pp. 76-87.

²¹ J. E. Mertens, *La naissance et le développement de l'etalon or. 1696-1922* (Paris: Presses Universitaires de France, 1944), pp. 341-47.

²² Milward, "The Origins of the Gold Standard."

„... nations came to see monetary standards as economic and political status symbols. Gold monometallism came to confer high status, while silver and bimetalism came to confer low status. Much of the status of gold was conferred on the metal because it was a characteristic of advanced-industrial nations in the 19th century that their economies were able to keep more gold in circulation relative to less advanced economies. The status was compounded by the fact that Britain had been practicing a gold standard ... The example of Britain was especially compelling because its elites were drawing associations between Britain's monetary practices and its industrial successes.”²³

As in the case of the two theories spelt out earlier, it seems to be important to keep the tipping point of 1873 in mind. Once England, Germany, France, and Belgium had settled on gold in that crucial year, ideological reasons were certainly one motivation why countries wanted to join the Classical Gold Standard. For instance, Charles Feer-Herzog, one of the most respected monetary specialists of the time, bluntly stated at the 1878 International Monetary Conference that “gold is the rich countries' standard, and silver the poor countries' standard.”²⁴ Can the same be said for the period before 1873?

The theory that the emergence of the gold standard owes more to ideology than economics draws strongly on the German process of monetary unification in the early 1870s. With France defeated in 1870, the Germans came to admire England most; England was not only associated with economic success, but also with the more liberal political system desired by large parts of the German population after the Bismarckian *Reichsgründung*.²⁵ While some evidence can be marshalled to support this theory²⁶, we believe such an approach draws too narrowly on a period of less than three years between the German victory of France (September 1870) and the adoption of the gold standard (July 1873). Throughout the 1860s up until the Franco-Prussian war, the German states followed the standard pattern that we will describe in more detail in the fourth chapter. As evidenced by subsequent chambers of commerce meetings, the German states pronounced themselves increasingly clear in favour of gold monometallism based on the French coinage system (i.e. adopting the French system of coinage without the link to bimetalism). The point of orientation for the German states – as much as for all other European countries – was

²³ Gallarotti, *The Anatomy of an International Monetary Order: The Classical Gold Standard, 1880-1914*, p. 9.

²⁴ Quoted after S. P. Reti, *Silver and Gold: The Political Economy of International Monetary Conferences, 1867-1892* (Westport (CT), London: Greenwood, 1998), p. 77.

²⁵ Milward, "The Origins of the Gold Standard."

²⁶ Mertens, *La naissance et le développement de l'etalon or. 1696-1922*, pp. 118-23. K. Helfferich, *Die Reform des deutschen Geldwesens nach Gründung des Reiches* (Leipzig: Duncker, 1898).

France rather than the UK. Why, if the early English example had been so important for the emergence of the Classical Gold Standard, would have the European countries wanted to adopt French rather than English coinage? France was politically the hegemon in the 1860s; on the economic level, it witnessed considerable improvements under the *Empire* and had spread its monetary system to a bloc of 74 million people, more than twice as much as the UK (cf. table 1). The only thing that sets the German case apart is that *after* the Franco-Prussian war, adopting the French coinage system was seen as incompatible with the new political status in Europe. This change in attitude, however, did little to influence the decision in favour of gold; it only meant that Germany would have its own coinage system based on coin ratios different from France.

3. The monetary standard in Europe until 1865

3.1 Coin convenience and monetary standards in Europe until 1850

Since the earliest times, metals have not only been used for weaponry and jewellery, but also for monetary purposes. While metals were not the sole items used as a medium of exchange – as Latin *pecunia* (money), derived from *pecus* (cattle), demonstrates –, they were by far the most important ones. Among the many metals, two have featured most prominently: gold and, more widely used, silver.

Why was silver so particularly desirable for monetary purposes? Traditionally, i.e. before the introduction of deposit banks and paper money, silver suited the requirements of money best; namely, as a store of value and as a medium of exchange. As a store of value, precious metals in general are well suited due to their unchanging nature. As well as their unchanging nature, gold and silver – in contrast to copper, iron, nickel, and bronze²⁷ - were particularly attractive for monetary use due to their scarcity. Gold was particularly scarce until the gold discoveries in California (1848) and Australia (1851). The best estimates available suggest that by 1850, 30 times more silver than gold had been extracted worldwide since Columbus' times (figures 2 and 3). Compared to what happened in the second half of the 19th century (and contrary to their own perceptions, labelling the age of discoveries the *siglo de oro*) not even the Spaniards had found *Eldorado*.

While silver and gold performed equally well in terms of store of value, silver enjoyed a clear advantage as a medium of exchange, the other characteristic of money. This advantage followed naturally from silver being less scarce than gold. A commodity standard required coins that would encapsulate a metallic value suitable for most transactions, including the transactions of daily life. Copper coins, for instance, would have been overly bulky for most transactions. 17th century Sweden, which had to rely on copper in the absence of gold and silver, famously invented the bank note in response to these inconveniences.²⁸ Gold, by contrast, was so precious that extremely small coins would have been needed for most transactions. Silver turned out to be the happy medium: big enough, but never bulky. The wage series that have been collected by Bob Allen in the context of

²⁷ Bronze is no elementary metal, but an alloy of copper and tin.

²⁸

the great divergence debate clearly demonstrate why silver was the most suited metal in the late Middle Ages and Early Modern Europe. Daily wages ranged between two and ten grams silver, which translated into convenient coin sizes.²⁹ Gold, by contrast, was relegated to the settlement of extremely large sums of money, often involving long distances where weight played an important role. Silver became the money for daily use, while gold was viewed as representing extreme wealth. The dichotomy between silver and gold in popular imagination is well captured in Shakespeare's *Merchant of Venice* (III, 2): Bassanio describes gold as "hard food for Midas" and silver as "pale and common drudge between man and man".

The advantages of gold over silver in settling large transactions over long distances suggest that it was no coincidence that England was the first country to introduce the gold standard in 1717.³⁰ By then, England had acquired a sizeable maritime empire, which involved a substantial amount of intercontinental transactions. Due to the industrial revolution later in the 18th century, transactions increased in both numbers and size, conferring an additional advantage to the lighter gold as opposed to the bulkier silver.

It should be emphasised that England was the exception rather than the rule, and that it remained the only country to follow the gold standard until 1854.³¹ All other countries found other solutions in their quest to reconcile the use of silver on a daily basis with the advantages of using gold to settle large transactions.³² The most common approach was to use so-called "trade coins" made out of gold. Trade coins were tailored for large cross-country transactions, and they often exhibited the same design, weight, and fineness as the coins of the country they were sent to. In some cases, trade coins were even named after their most common destination. For example, the *Dukat*, a century-old Habsburg trade coin that was to remain the most important Austrian trade coin until 1870, was named after the *ducati*, the Venetian gold coins.³³

²⁹ R. C. Allen, "The Great Divergence in European Wages and Prices from the Middle Ages to the First World War," *Explorations in Economic History* 38 (2001).

³⁰ Mertens, *La naissance et le développement de l'etalon or. 1696-1922*, pp. 55-109. A. Redish, "The Evolution of the Gold Standard in England," *Journal of Economic History* 50 (1990).

³¹ Reis, "First to Join the Gold Standard, 1854."

³² A good overview is given by L. L. Einaudi, *European Monetary Unification and the International Gold Standard* (Oxford: Oxford University Press, 2000), pp. 20-36. A very detailed description of the early modern Holy Roman Empire can be found in: B. Sprenger, *Das Geld der Deutschen. Geldgeschichte Deutschlands von den Anfängen bis zur Gegenwart* (Paderborn: Ferdinand Schöningh, 2002), pp. 73-147.

³³ Sprenger, *Das Geld der Deutschen. Geldgeschichte Deutschlands von den Anfängen bis zur Gegenwart*, p. 78.

To be sure: Trade coins did not enjoy any link to the domestic monetary system. Trade coins were not legal tender, nor was there free coinage on private account. Instead, the mint produced trade coins according to demand and sold them at a variable price, which essentially depended on the current gold-silver ratio. Occasionally, trade coins enjoyed legal tender status in other countries; at least they would be accepted *de facto*, for this was their *raison d'être*. In sum, even though trade coins had no connection to the domestic monetary system, the combination of a silver standard complemented with gold coins combined the best of both worlds. A country could have it both ways, using silver for daily transactions and gold for the settlement of large sums of money.

Another solution to the quest to reconcile the use of silver for the payments of daily life with the advantages of using gold to settle large transactions was to extend the two key components of any metallic system to silver and gold simultaneously (free coinage on private account and unlimited legal tender status), i.e. to introduce a bimetallic standard. This was the solution adopted in 1803 by France, which was to become the global advocate of bimetallism for many decades.³⁴ The benefits of a bimetallic system are straightforward. If both silver and gold enjoy full legal tender status, the number of ways transactions can be settled is doubled and transactions costs with gold *and* silver standard countries are reduced.

At the same time, such a system is afflicted with a specific problem. The legal ratio between gold and silver stipulated in the coinage act (also referred to as coin ratio or mint ratio) is likely to differ from the market ratio between gold and silver as determined by supply and demand on world bullion markets. Any such difference between coin ratio and market ratio can potentially be exploited in two ways. First, the metal whose price is lower in bullion markets than the coin ratio suggests is brought to the mint (which in the late 19th century was often the bank of note issue itself) and coined on private account; in a second step, it is then attempted to redeem the currency obtained (be it coins or bank notes) at the bank of note issue into the other metal, i.e. the one whose price is higher in bullion markets

³⁴ The recent literature on French bimetallism has been dominated by Flandreau. Many of his ideas challenging the conventional wisdom on bimetallism stem from: M. Flandreau, *L'or du monde. La France et la stabilité du système monétaire international. 1848-1873* (Paris: 1995). This book has recently been translated into English: M. Flandreau, *The Glitter of Gold. France, Bimetallism, and the Emergence of the International Gold Standard. 1848-1873* (Oxford: Oxford University Press, 2004). Cf. also H. P. Willis, *A History of the Latin Monetary Union: A Study of International Monetary Action* (Chicago: University of Chicago Press, 1901), pp. 1-14. Mertens, *La naissance et le développement de l'étalon or. 1696-1922*, pp. 257-76.

than the coin ratio implies. As this would be an “obvious get-rich scheme” (Friedman) for arbitrageurs at the expense of the bank of note issue, the latter’s obligation under bimetallism only implied to redeem at its discretion in either metal.³⁵ While this way of arbitrage was hence eliminated, another danger remained very real: targeting the currency in circulation rather than the bank of note issue’s vault. Arbitrageurs would benefit from withdrawing the metal whose price is higher on bullion markets than the coin ratio suggests – often referred to as the “good metal” – and replacing it with the “bad metal”. This process of the bad metal driving the good metal out of circulation is conventionally referred to as Gresham’s Law.

As coin ratio and market ratio will rarely be the same, any bimetallic system inherently carries the tendency to become a de-facto monometallism. In the words of Ludwig von Mises, bimetallism was the “alternative standard” rather than the “double standard”.³⁶ This conventional view of bimetallism as “knife edge” has recently been challenged by Friedman and Flandreau, whose research is partly inspired by Irving Fisher’s analysis of bimetallism. Fisher pointed out to a potentially self-stabilizing mechanism of bimetallism. The bad metal will flow to the mint, thereby increasing demand for it, which in turns increases its market price. By contrast, the good metal will be withdrawn from circulation, thereby increasing its supply at the open market, which in turn reduces its price. Fisher hence argued that equilibrium under bimetallism was restored by readjusting the domestic currency composition.

Which of the two – bimetallism as “knife edge” versus the self-stabilizing mechanism of bimetallism – fits better 19th century monetary history? This depends on whether the capacity to readjust the domestic currency composition has come to an end or not. For the French bimetallic experience from 1820 to 1850 – a time when gold sold on bullion markets consistently above 15.5 : 1, the French bimetallic ratio – there is widespread agreement that the system developed ever more into de facto silver monometallism.³⁷ Controversy has centred very much on how to see bimetallism from 1850 – 1873, i.e. after the gold findings of California (and later Australia) poured large quantities of gold into Europe and made the market ratio remain below 15.5 : 1 for 15 years until 1865. Flandreau

³⁵ Friedman, "Bimetallism Revisited," p. 86.

³⁶

³⁷ A. Redish, "The Persistence of Bimetallism in Nineteenth-Century France," *Economic History Review* 68 (1995).

in particular has portrayed bimetallism as in equilibrium from 1848 – 1873.³⁸ While coin estimates, reproduced in figure 5, suggest a dramatic re-arrangement of domestic currency from silver to gold, they do not imply that France necessarily ran out of silver. This, however, is exactly the issue that other scholars have taken issue with. Redish, for instance, quotes overwhelming evidence of the 1850s and 1860s that silver coin was almost entirely missing in France; in other words, Redish argues that France was operating a de facto gold standard since the early 1850s.³⁹ Before spelling out our own point of view – which will be crucial to our interpretation of the emergence of the Classical Gold Standard – we feel the need to explain somewhat more in detail the consequences of the 1850s gold supply shock to the European monetary system. This is what we turn to now.

3.2 1848 – 1865: Gold supply shock to the world monetary system

The 1850s and 1860s witnessed a major change with profound long-run implications for the global monetary system. In fact, it is argued in this paper that the gold supply shock to the world monetary system due to large gold discoveries in California and in Australia prepared the ground for the global shift to gold in the late 1860s and early 1870s. For the first time in history, gold came to be viewed as the relatively abundant metal, while silver was perceived as extremely scarce.⁴⁰ The large gold discoveries in California in 1848 and in Australia in 1851 put pressure on the gold price in the 1850s and early 1860s. This trend was reversed in the mid-1860s, when large quantities of silver poured into Europe.⁴¹ This alleviated the pressure on gold, putting it back on silver (cf. figure 4).

³⁸ M. Flandreau, "As Good as Gold? Bimetallism in Equilibrium 1848-1873," in *Monetary Standards and Exchange Rates*, ed. Lawrence Officer (London: Routledge, 1997). M. Flandreau, "'Water Seeks a Level': Modeling Bimetallic Exchange Rates and the Bimetallic Band," *Journal of Money, Credit and Banking* 34 (2002). Cf. also S. E. Oppers, "A Model of the Bimetallic System," *Journal of Monetary Economics* 46 (2000).

³⁹ Redish, "Redish 1995."

⁴⁰ R. S. Sayers, "The Question of the Standard in the 1850s," *Economic History. Economic Journal Supplement* 2 (1933).

⁴¹ This was partly due to recent discoveries in Nevada and Mexico and partly due to more sophisticated extraction techniques.

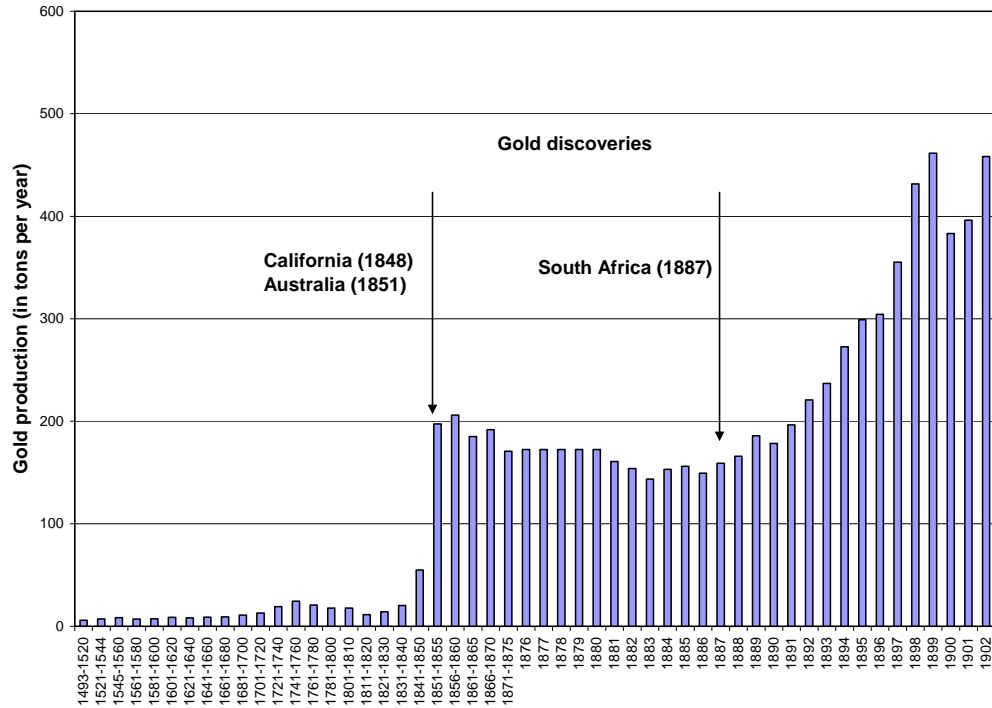


Figure 2: Global gold production 1493-1902 (in tons per year)

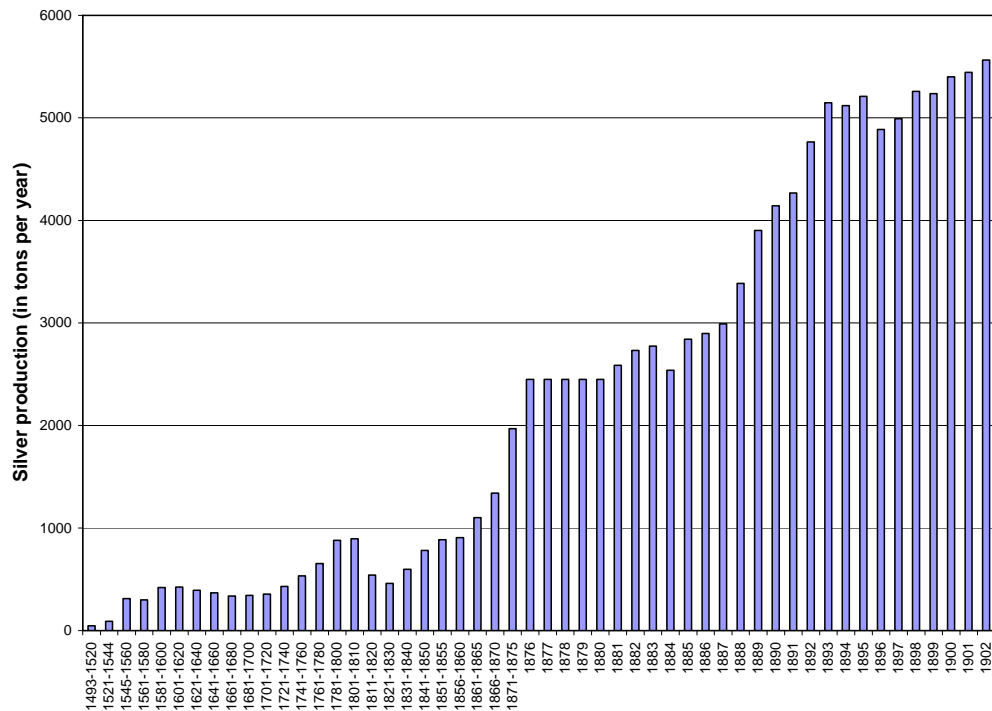


Figure 3: Global silver production 1493-1902 (in tons per year)

Sources for both figures: A. G. Soetbeer, *Edelmetall-Produktion und Werthverhältnis zwischen Gold und Silber seit der Entdeckung Amerika's bis zur Gegenwart*, Gotha 1879, pp. 107-112. k.k. Finanzministerium, *Tabellen zur Währungsstatistik*, 3rd ed., Vienna 1903, p. 3.

The discussions of the 1850s surrounding the monetary standard have largely fallen into oblivion. The most recent academic article encompassing more than one country dates back to the 1930s.⁴² The academic negligence is largely because none of the major countries actually switched the monetary standard in the 1850s. Nonetheless, major debates took place throughout the 1850s in England, France and the German states.

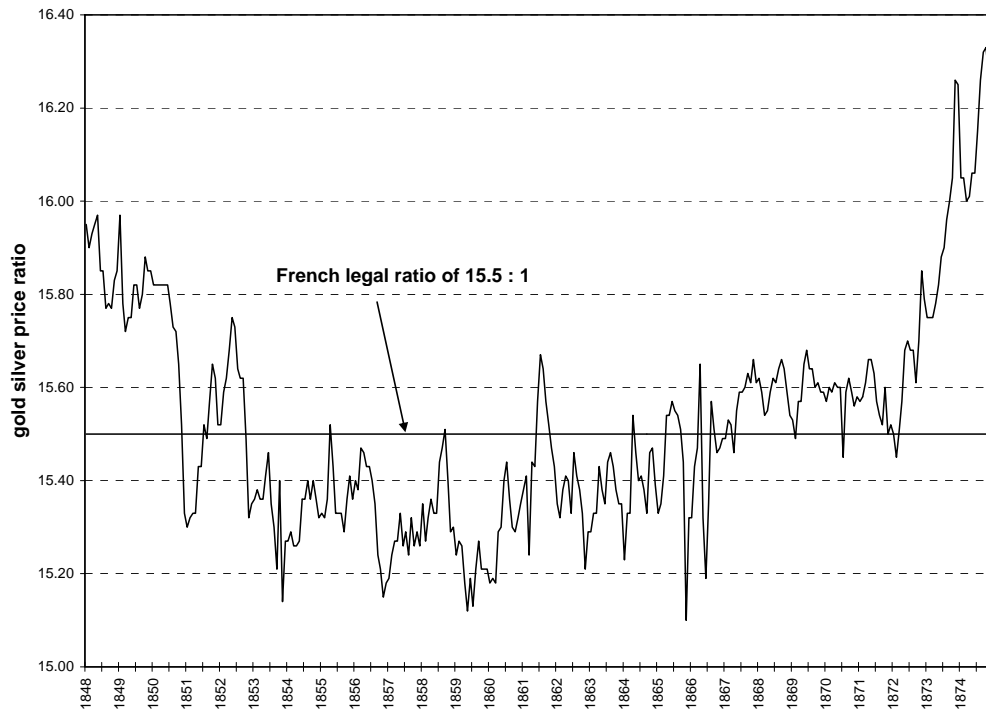


Figure 4: Monthly gold silver price ratio, 1848 – 1874.

Source: J.L. Laughlin, *The History of Bimetallism in the United States*, 4th ed., New York 1897, p. 294.

The drop of the gold-silver ratio below 15.5 : 1, the French legal ratio, generated a profound change in perceptions. In the early 1850s, pamphlets were published throughout Europe suggesting that gold and not silver was associated with monetary instability.⁴³

⁴² Sayers, "The Question of the Standard in the 1850s."

⁴³ J. Ward, *Observations on the effect of the Californian and Australian gold, and on the impossibility of continuing the present standard in the event of gold becoming seriously depreciated* (London: 1852). C. Coquelin, "De la dépréciation de l'or, et du système monétaire français," *Journal des Economistes* 117 (1851). A. G. Soetbeer, *Andeutungen in Bezug auf die vermehrte Goldproduktion und ihren Einfluß. Nebst einer lithographierten Tabelle* (Hamburg: 1852). G. Galotti, *Del ribasso del valore permutabile dell'oro e delle conseguenze che debbono derivare da questo ribasso* (Naples: 1856).

Many people in the United Kingdom suggested the country abandon its gold standard, as an inflationary standard seemed incompatible with the UK's economic and financial status.⁴⁴ Other countries, such as the Netherlands (1849), cut off any ties with gold and put their countries firmly on silver.⁴⁵ Similarly, Switzerland adopted silver monometallism in 1850. The only country not following the trend was Portugal, which joined the gold standard in 1854. This, however, was a sign of economic weakness rather than strength, as gold was simply cheaper to acquire in the 1850s.⁴⁶ Further evidence that gold and not silver was associated with monetary instability at that time are the discussions surrounding the Vienna coinage treaty (1857) between the states of the German confederation. Prussia argued vehemently against the adoption of the gold standard favoured by Austria, the second most important but financially relatively weak state in the German confederation.⁴⁷

The country that deserves most attention in this context is France. As we noted earlier, bimetalism before 1850 had existed on paper rather than in practice. The large discoveries of the 1850s provided France with the opportunity to make the bimetallic standard truly work for the first time. Thus, large quantities of gold were sent to France and coined at the mint. Simultaneously, ever more silver was withdrawn from French circulation. During the course of the 1850s and early 1860s, reserves and circulation in France were increasingly dominated by the relatively inexpensive metal, gold (figure 5).⁴⁸

⁴⁴ Sayers, "The Question of the Standard in the 1850s."

⁴⁵ Ibid.: p. 587. Suess, *Die Zukunft des Goldes* (Vienna: 1877), pp. 8-9.

⁴⁶ Reis, "First to Join the Gold Standard, 1854," pp. 167-73.

⁴⁷ A. G. Soetbeer, *Litteraturnachweis über Geld- und Münzwesen insbesondere über den Währungsstreit, 1871-1891. Mit geschichtlichen und statistischen Erläuterungen* (Berlin: 1892), p. 78.

⁴⁸ Flandreau, "The French Crime of 1873: An Essay on the Emergence of the International Gold Standard, 1870-1880," pp. 865-70 and 80-85.

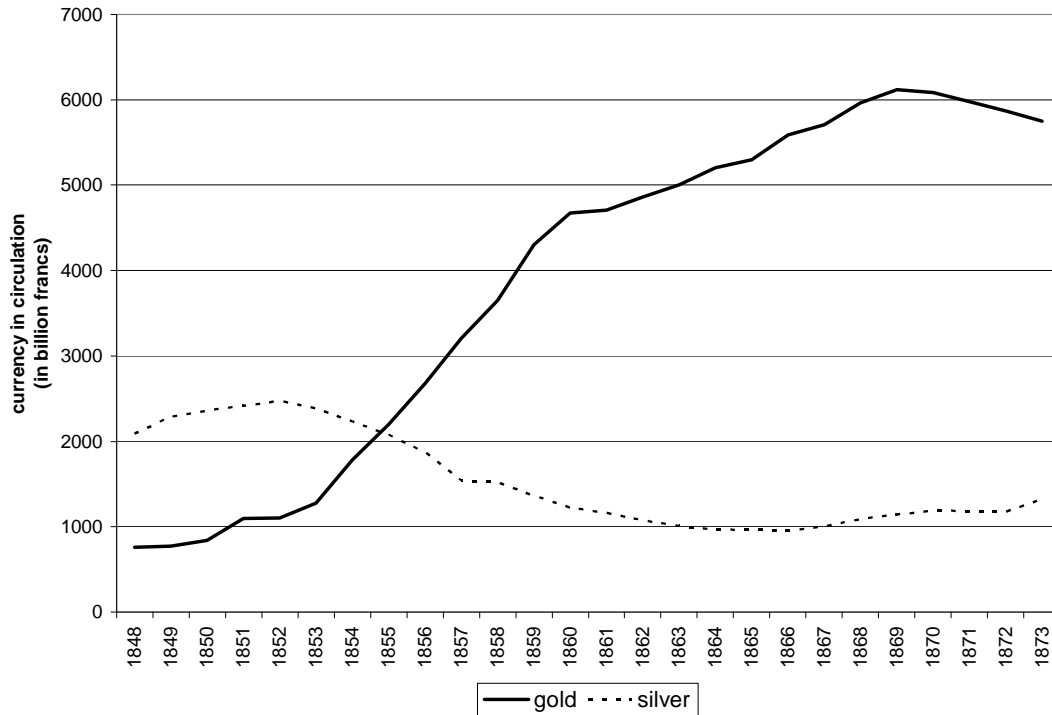


Figure 5: French currency in circulation, 1848 - 1873.

Source: M. Flandreau, *Coin Memories: Estimates of the French Metallic Currency*, *Journal of European Economic History*, 25 (1995), p. 308.

Gold replacing silver led to a number of problems. First and most important, small coins were increasingly absent. As early as 1857, a French government commission reports that silver “had disappeared almost entirely”⁴⁹. It is difficult to reconcile statements such as this one – which can be found in abundance in late 1850s and 1860s sources, a point also made by Redish⁵⁰ - with the revisionist perspective allured to earlier that tend to portray bimetallism as in equilibrium in the 1850s. Second, the substitution of silver for gold created problems relating to France’s neighbours Belgium, Switzerland, and Piedmont-Sardinia.⁵¹

Due to occupation in the Napoleonic wars, Belgium, Switzerland, and Piedmont-Sardinia had all adopted the system of French coinage that was based on the decimal system, 1 silver franc having a weight of exactly 5 grams at a fineness of 900/1000. Coins

⁴⁹ Ministère des Finances, *Documents relatifs à la question monétaire* (Paris: Imprimerie impériale, 1868), p. 51.

⁵⁰ Redish, "Redish 1995."

⁵¹ Einaudi, *European Monetary Unification and the International Gold Standard*, pp. 37-40.

being completely identical proved very beneficial, which explains why the three countries retained the French system even after 1815. Piedmontese could pay for French goods simply by sending domestic coins to France, which would then circulate in France as if they were French coins. This system of a *de facto* coinage union worked very well in the first half of the 19th century when gold circulation was limited and the face value of silver coins was identical to their intrinsic value.

As the disappearance of silver coin became an ever more pressing problem, France, Belgium, Switzerland, and Italy thought of remedies against the silver exports. As early as 1854 France was forced to introduce a 5 franc gold coin as a substitute for the 5 franc silver coin.⁵² France (1850, 1857, 1861) and Switzerland (1859) called monetary commissions to specifically deal with the question of silver exports. In the case of Italy, the same issue was discussed by the 1862 monetary commission⁵³ within the broader context of monetary unification⁵⁴ after the establishment of the kingdom of Italy (1860). The solution to the export of silver, first suggested by the French commission of 1857⁵⁵, was straightforward. Rather than coining silver coin with a fineness of 900/1000 as stipulated in the French 1803 legislation, reducing the fineness would stop withdrawing silver from circulation from being profitable. With the fineness of silver coin reduced but their weight and nominal value left unaltered, this would normally imply a change of the gold-silver legal ratio. The Swiss, who were the first to react to the silver efflux by legislative means, took a more subtle approach, however. The idea was to retain the original fineness of 900/1000 only for the 5 franc coin, thereby leaving the bimetallic link between gold and silver at a ratio of 15.5 : 1 unaltered. The fineness of all coins below 5 francs – 2 francs, 1 franc, 50 centimes and 20 centimes – would be reduced to 800/1000. In other words, only the 5 franc coin would remain a full-bodied coin, while coins below 5 franc were reduced to token coins (i.e. a coin whose intrinsic value is lower than its face value).

The Swiss legislation stopped the export of silver, only to create another problem. As already mentioned, coins were widely used for cross-border transactions, bringing many of them to France, Italy and Belgium. These countries, therefore, found themselves in a delicate position. On the one hand, domestically coined silver coins were leaving the

⁵² Redish, "Redish 1995," p. 732.

⁵³ *Atti parlamentari, Camera dei deputati, legislatura VIII, sessione 1861, documenti, n. 258. Atti parlamentari, Camera dei deputati, legislatura VIII, sessione 1861, documenti, n. 258-A.*

⁵⁴ R. de Mattia, *L'unificazione monetaria italiana* (Turin: 1959).

⁵⁵ Willis, *A History of the Latin Monetary Union: A Study of International Monetary Action*, pp. 11-14.

country, as the three countries had maintained a composition of 900/1000. On the other hand, they were flooded with Swiss silver token coins.⁵⁶ Such a situation was not acceptable to the French, Italian and Belgian authorities. The most straightforward remedy was to reduce the fineness of the own silver coins as well. Italy⁵⁷ and France⁵⁸ took similar steps, even though they reduced the fineness only to 835/1000 and did not reduce as many full-bodied silver coins to token coins as the Swiss had done. Table 2 summarizes the changes in legislation in the four bimetallic countries between 1860 and 1864.

Table 2: Fineness of silver coinage in bimetallic countries

Country	Year of coinage act	Denomination (Franc / Lira)				
		5	2	1	0.50	0.20
Switzerland	1860	900	800	800	800	800
Italy	1862	900	900	835	835	835
France	1864	900	900	900	835	835
LMU convention	1865	900	835	835	835	835

Source: Ministère des Affaires Etrangères, *Conférence monétaire entre la Belgique, la France, l'Italie et la Suisse, Procès verbaux*, Paris 1865.

Obviously, the steps taken by Switzerland, Italy and France could only lead to a “race to the bottom” in terms of fineness, and thus was not sustainable in the long term. It took little time before the four countries realised their mutual dependence in monetary matters. Standardisation of coinage appeared to be the most promising way out of the problem. France and Belgium, which had suffered most from the influx of foreign token coins as they had maintained the initial fineness of 900/1000 the longest⁵⁹, thus called a conference in late 1865, which gave rise to what became known as the Latin Monetary Union, established by international treaty on 23rd December 1865. A detailed examination of the 1865 International Monetary Conference will demonstrate how fragile bimetallicism was by

⁵⁶ Einaudi, *European Monetary Unification and the International Gold Standard*, pp. 37-40.

⁵⁷ Articles 2 and 3 of the 1862 Italian coinage act, reprinted in M. de Cecco, ed., *L'Italia ed il sistema finanziario internazionale. 1861-1914*, Collana storica della Banca d'Italia. Serie "Documenti". Volume I (Rome: Editori Laterza, 1990), pp. 90-93.

⁵⁸ Ministère des Affaires Etrangères, *Conférence monétaire entre la Belgique, la France, l'Italie et la Suisse, Procès verbaux, novembre et décembre 1865* (Paris: Imprimerie impériale, 1865), p. 4.

⁵⁹ Belgium, in fact, did not change its legislation at all.

that time. We will argue that the Latin Monetary Union is better understood as a transitory step towards gold monometallism rather than as the foundation of a bimetallic bloc.

4. Monetary commissions and monetary legislation 1865 – 1873

4.1 The 1865 International Monetary Conference and the Latin Monetary Union

We have described at the end of the previous chapter the monetary problems facing France, Belgium, Italy and Switzerland in the early 1860s. The international monetary conference of 1865, called in response to these problems, gave rise to what has become known as the Latin Monetary Union (LMU). A fair assessment of the 1865 monetary conference and the LMU is important, as much depends on it. If the LMU is seen, as is conventionally the case, as the firm commitment of four countries to bimetallism, then it makes sense to portray the pre-1870 European monetary order as triangular, with a (small) gold bloc led by England, a bimetallic bloc led by France and a silver bloc positioned around the German states. We will argue, however, that the LMU is best understood as a compromise between three countries desiring to switch to gold monometallism as soon as possible and a reluctant France in which opinion remained divided over the issue of the monetary standard. While the LMU left bimetallism at 15.5 : 1 formally intact, a future transition to gold was made as easy as never before. No more than suspending the free coinage of the 5 franc silver coin, the only remaining link to bimetallism, was required to switch to gold; which is exactly what the governments of Belgium and France (France, in the meantime, had changed its position in favour of gold monometallism) eventually did in September 1873. This explains why the LMU is probably better seen as a transitory agreements on the way towards gold monometallism.

The LMU was an attempt to retain and, where necessary, to restore the advantages of identical coinage without being exposed to the heavy influx of silver token coins.⁶⁰ This goal translated into the following clauses⁶¹: Articles 2 and 3 unified the coinage of the full-bodied coins (all gold coins and the 5 franc silver coin), essentially confirming pre-existing

⁶⁰ Willis, *A History of the Latin Monetary Union: A Study of International Monetary Action*, pp. 33-41. Mertens, *La naissance et le développement de l'etalon or. 1696-1922*, pp. 263-67.

⁶¹ A reprint of the Latin Monetary Union convention can be found in de Cecco, ed., *L'Italia ed il sistema finanziario internazionale. 1861-1914*, pp. 94-99.

practice and previous national legislation (cf. table 2). Art. 4 unified the coinage of token silver coins (i.e. coins below 5 francs / 5 lire), thereby terminating the “race to the bottom (of fineness)” which had been the very reason why the Paris monetary conference had been called in the first place. As we can see from table 2, the LMU agreement weakened considerably the link to bimetallism. This link was henceforth reduced to a single coin, the 5 franc silver piece. Also, in order to distribute seigniorage in a fair way, there was a ceiling to the coinage of token silver coins of 6 francs per inhabitant (coinage of full-bodied coins naturally remained unlimited, article 9).

All this demonstrates that the LMU is best understood as a practical solution to very specific problems facing France, Belgium, Italy and Switzerland. The LMU was a coinage union rather than a monetary union. The terminology *Latin Monetary Union* is not of its own making and was first used by Anglo-Saxon commentators, apparently afraid of some *grand projet* that was notably absent, as we have seen.⁶² If the LMU had been labelled coinage union, probably a great deal of confusion and exaggeration would have been avoided; this is because the label “monetary union” has often evoked comparisons to much more ambitious projects of monetary unification. This most unfortunate error stems from the fact that both French and Italian do not have separate words for “coin” and “money” (French *monnaie* and Italian *moneta*), whereas English and German do. As opposed to English language sources, German sources use the more appropriate word “coinage union” (Münzunion) rather than “monetary union” (Währungsunion).

The very limited character of the LMU is underscored by the fact that the LMU convention did not go beyond public tills (articles 2, 3, 7), i.e. it did not grant legal tender status to foreign coins. Last but not least, that such an arrangement can hardly be called a *monetary* union becomes clear from what the LMU treaty *did not* stipulate: for instance, member countries were not obliged to have a convertible currency at all, an omission that would already create problems in May 1866 when Italy declared the lira inconvertible.

Our interpretation that the LMU agreement is best understood as a compromise between Belgium, Switzerland and Italy desiring to switch to gold and a reluctant France is supported by the protocol of the conference.⁶³ On a number of occasions, Belgium, Switzerland and Italy made clear their desire to switch to gold monometallism as soon as

⁶² Einaudi, *European Monetary Unification and the International Gold Standard*, p. 37.

⁶³ Ministère des Affaires Etrangères, *Conférence monétaire entre la Belgique, la France, l'Italie et la Suisse, Procès verbaux, novembre et décembre 1865*.

possible.⁶⁴ Belgium in particular, which had been affected by the drain of silver more than the others owing to its geographic position between the three large currency blocs, was very insistent that the LMU agreement be based on gold. It tried to bring the question of the monetary standard itself on the agenda, an attempt blocked by the French.⁶⁵ The Swiss delegation made another attempt in this direction, but again without success.⁶⁶

Why, then, did Belgium, Switzerland and Italy accept the LMU treaty at all, if they were so convinced of the merits of gold monometallism? The simple answer is that the LMU agreement, while a compromise, came at no cost whatsoever to the three countries. The free coinage of the 5 franc silver piece, which was the only remnant of bimetallism, posed no immediate threat, as no one took up this option anyway given that for the last 15 years silver had been undervalued at the mint (cf. figure 4). If silver were ever to devalue to the point that it would flow to the mint again, free coinage could quickly be suspended (as it happened in September 1873). What mattered most in the specific circumstances of 1865 was to put the silver token coinage on a common footing; which had been achieved by the LMU agreement. As for the other two goals – switching to gold and safeguarding the pre-existing monetary community – , Belgium, Switzerland and Italy could only have one of the two in the face of French resistance. As postponing the transition to gold entailed no costs, safeguarding the conveniences of the pre-existing monetary community would naturally take precedence.

This interpretation is confirmed by the Italian 1862 decision to adopt bimetallism. The Italian states had been largely on silver on the eve of Italian unification, but the single most important one of them, Piedmont-Sardinia, followed bimetallism.⁶⁷ The monetary commission appointed by the Italian government to discuss the question of the monetary standard spoke out in favour of gold monometallism, which it saw as “the most logic system”.⁶⁸ The commission cautioned against the adoption of gold, however, as long as France remained on bimetallism. Such a step was considered to be “premature”. The commission’s advice was to prepare the transition to gold monometallism as much as possible – for instance by introducing silver token coins for values of 1 Lira and below – and to try to convince France of the merits of gold monometallism whenever an opportunity

⁶⁴ Ibid., pp. 6, 12, 21-29 (Belgium), 30, 72-73 (Switzerland), 43, 72-73 (Italy).

⁶⁵ Ibid., pp. 12, 31.

⁶⁶ Ibid., pp. 72-73.

⁶⁷ de Mattia, *L'unificazione monetaria italiana*.

⁶⁸ *Atti parlamentari, Camera dei deputati, legislatura VIII, sessione 1861, documenti, n. 258-A*.

arose. The 1865 International Monetary Conference can be seen as a continuation of this policy.

4.2 Developments in the silver standard countries

We have so far only studied the response of the bimetallic countries to the gold supply shock of the 1850s. How did the silver countries respond to the same phenomenon? While the impact on the domestic monetary system was necessarily different, the conclusions reached were, interestingly enough, rather similar to the bimetallic countries: increasing support for a transition to gold monometallism.

The impact of the global gold supply shock on the silver bloc countries was necessarily very different from the impact it had on the bimetallic countries. Ideally, the silver driven out of circulation in the bimetallic countries as a result of Gresham's Law would find its way to the silver bloc countries. It is not quite clear, however, whether this is what happened in the European silver standard countries. From the evidence we have, the reverse might be true. Figure 6 shows the cover ratio of German banks of note issue from 1855 to 1880.

Further research has to establish whether the results found for the German states were also true for other bimetallic countries. Also, it might be that the cover ratio collapsed in the early 1860s as a result of events unrelated to what happened in the bimetallic countries. In the eyes of contemporaries the two events were certainly closely connected, as the 3rd meeting of the German chambers of commerce demonstrates.⁶⁹ Contemporaries had the following chain of events in mind: As silver coin had become very scarce in the bimetallic countries, they came to rely on gold coin to settle payments with silver standard countries. As a result, French gold coins – and in particular the so-called Napoleon d'Or, the 20 franc gold coin – flooded the European continent. The monetary commissions we have studied all indicate that the Napoleon d'Or circulated much more widely in Europe than the English sovereign, its slightly heavier English rival.⁷⁰ At the same time, silver left the silver bloc countries in order to settle trade with the bimetallic countries. The resulting shortage of silver was counteracted by an increased supply of paper money. In this situation, it was

⁶⁹ *Verhandlungen des dritten deutschen Handelstages zu Frankfurt am Main*, (Frankfurt: 1865).

⁷⁰ *Ibid.*, p. 58. Ministère des Affaires Etrangères, *Conférence monétaire internationale. Procès-verbaux* (Paris: Imprimerie impériale, 1867), p. 17.

only understandable that efforts were made to put the foreign gold coins now circulating in the silver bloc countries to monetary use in an attempt to reduce the amount of paper currency which was viewed with suspicion by contemporaries.

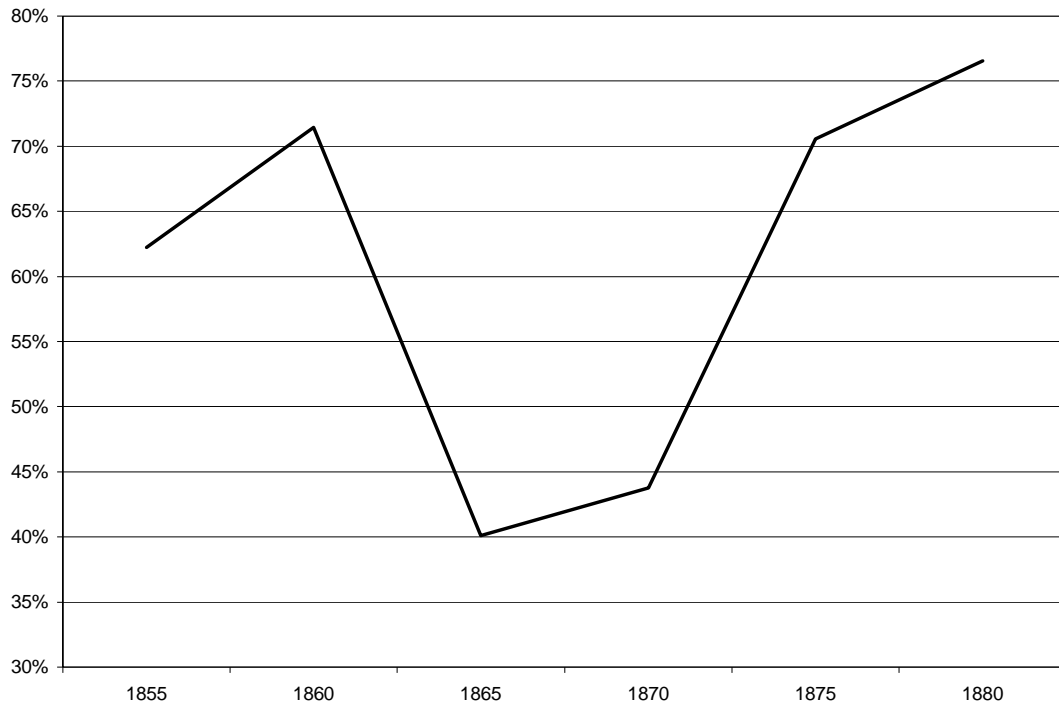


Figure 6: Cover ratio of bank of note issue in the German states, 1855 – 1880.

Source: B. Sprenger, *Das Geld der Deutschen. Geldgeschichte Deutschlands von den Anfängen bis zur Gegenwart*, Paderborn 2002, pp. 166, 192.

This was the economic rationale behind subsequent meetings of the German chambers of commerce, in which they pronounced themselves increasingly clearly in favour of gold monometallism. During the 1861⁷¹ and the 1865⁷² meetings, the chambers of commerce stopped short of requesting the introduction of gold monometallism, but they requested to mint gold coins identical to the Napoleon d’Or. Such a gold coin was to be accepted at the public tills at a variable rate. In both meetings we can, however, already detect strong support in favour of gold monometallism. This movement grew stronger, and in 1868 the

⁷¹ *Verhandlungen des ersten deutschen Handelstages zu Heidelberg*, (Heidelberg: 1861).

⁷² *Verhandlungen des dritten deutschen Handelstages zu Frankfurt am Main*.

chamber of commerce meeting voted in favour of gold monometallism almost anonymously.⁷³

The development in Austria-Hungary was similar. Following the defeat against Prussia at the battle of Königgrätz (Sadowa), Austria withdrew both from the coinage union among the German states. Consequently, it called a monetary commission to discuss the question of the monetary standard. The 1867 commission recommended the adoption of the French coinage system but without its link to bimetallism.⁷⁴ The solution proposed by the monetary commission was similar to what Italy, Belgium and Switzerland had done by minting coins of identical shape, weight and fineness, with only the effigy being different. An additional difference in the Austrian case was that the unit of account also needed to be adjusted. 1 Austrian florin was to equal 2 ½ French franc.

From further afield, another silver standard country decided to switch to gold. By law of 4th May 1867, Romania adopted the French system of coinage, but again without its links link to bimetallism.⁷⁵

Summarizing the experience of the continental European countries on the eve of the International Monetary Conference in Paris in 1867, we can conclude as follows: even though for different reasons, both bimetallic countries and silver standard countries came to express a desire to switch to gold monometallism. In the case of the bimetallic countries, Gresham's Law had driven full-bodied silver coin largely out of circulation. Retaining silver in circulation was possible only by converting the bulk of silver coins into tokens. In the silver standard countries, silver scarcity did not stem from the mechanics of bimetallism but – if we can trust the contemporaries – from trade relations with the bimetallic countries: gold coins from the bimetallic countries flowed in and silver coins flowed out. If the issue of paper currency on a massive scale was to be avoided, the easiest way of doing so would be to put the gold now available in the silver standard countries to monetary use. In order to circumvent the pitfalls of bimetallism, silver could then be used for the coinage of token coins.

Equally important, bimetallic countries and silver standard countries not only favoured increasingly gold monometallism, but they also expressed a clear-cut preference in favour of the same coinage system, i.e. the French one. This reflected not only the fact that the

⁷³ *Verhandlungen des vierten deutschen Handelstages*, (1868).

⁷⁴ *Verhandlungen der Special-Commission zur Berathung der Münzfrage vom 10. bis zum 14. April 1867*.

⁷⁵ Ministère des Finances, *Procès-verbaux et rapport de la commission monétaire, suivis d'annexes relatifs à la question monétaire* (Paris: Imprimerie impériale, 1869), p. 157.

French system was more rational in the sense that it was based on the metric system, undoubtedly an important feature at a time when the harmonization of weights and measures was high on the agenda. The crucial factor was that the European countries had been exposed to French gold coins, especially the Napoleon d'Or, more than to gold coins of other origins, including the English sovereign.

Gold monometallism based on the French coinage system was hence what countries wished for. This call would not be ignored for too long. The French government – or at least the constantly increasingly gold faction within French government circles⁷⁶ – saw an opportunity to spread the French system all across Europe and, potentially, beyond. In 1867 the French government called an International Monetary Commission to discuss plans for monetary unification. This is what we turn to now.

4.3 The 1867 International Monetary Conference

While the LMU convention of 1865 has been described as a practical solution to very specific problems, the 1867 International Monetary Conference was characterised by a more ambitious project.⁷⁷ Nothing less than the unification of coinage on a global scale was attempted. The 20 countries attending the conference – all of which were from Europe with the exception of the US – unanimously voted in favour of gold as the monetary standard. This made the resolution of the 1867 monetary conference the clearest signal yet that the world would move towards the gold standard. Regarding the coinage, it was stated that the five franc gold piece, at a fineness of 900/1000, should be the common denominator. International coinage was to be based on the acceptance of the 25-franc piece, which would require some debasement of the English sovereign and the American half-eagle. In other words, the 20 countries present at the 1867 International Monetary Conference wanted exactly what Italy, Belgium and Switzerland had already wished for in 1865 and what Austria-Hungary and Romania had decided to do in the meantime: the shift to gold monometallism based on the French coinage system. What were the reasons for the unanimous vote in favour of gold monometallism?

⁷⁶ The research of Einaudi has stressed different attitudes within the French government and administration to the question of the monetary standard. Cf. L. L. Einaudi, "From the Franc to the 'Europe': The Attempted Transformation of the Latin Monetary Union into a European Monetary Union, 1865-1873," *Economic History Review* 53 (2000).

⁷⁷ Reti, *Silver and Gold: The Political Economy of International Monetary Conferences. 1867-1892*, pp. 34-45.

To begin with, there was widespread agreement that, for the first time ever, there was enough gold in circulation to be not only confined to trade coins but to be actually employed as monetary standard in all European countries and the US.⁷⁸ In fact, it was argued that silver could not be chosen as a common standard for there was not enough of it left in circulation within Europe. This is certainly in accordance with our findings presented above.

Is there any chance to quantify the amounts of gold and silver in European circulation in 1867? As we have not yet finished our work in this respect, we confine ourselves to some observations. Flandreau has estimated coin estimates for France which we have reproduced in figure 5. There is little reason to assume that the distribution of gold to silver coin was vastly different in the other three LMU countries. If we now add to this the UK and Portugal, both of which were on gold *de jure* and *de facto*, we see that actually the overwhelming part of the European population lived in countries with a predominant gold circulation (cf. table 1).

Global coinage data also point to a predominance of gold in European monetary circulation. France alone minted between 1852 and 1867 5 billion francs in gold, which was ten times more than it minted in silver.⁷⁹ The UK and the US combined minted the equivalent of another 5 billion francs. Similar to France, silver coinage only amounted to 10% of the gold coinage.

It is interesting to compare the coinage data with the data for global gold production. The 10 billion French gold franc that were minted in France, the UK and the US since the gold discoveries in California in 1848 translate into 2900 tons gold brought to the mint. This suggests that almost all gold produced in this period was actually minted, and very little of it employed for different use (cf. figure 2).

Gold being available in sufficient quantities is a necessary but not yet a sufficient condition for a European gold standard. Why did the 1867 International Monetary Conference not favour bimetallism or silver monometallism instead? As for bimetallism, the protocols clearly show that contemporaries viewed bimetallism as a knife-edge story. In fact, even France supported the gold monometallic agenda of the 1867 International Monetary

⁷⁸ Ministère des Affaires Etrangères, *Conférence monétaire internationale. Procès-verbaux*, pp. 17, 38, 40, 111.

⁷⁹ *Ibid.*, p. 23. Ministères des Finances et de l'Agriculture et du Commerce, *Conseil Supérieur du Commerce, de l'Agriculture et de l'Industrie. Enquête sur la question monétaire*, 2 vols. (Paris: 1872), p. 387.

Conference and, as we will see in the next section, French support for bimetallism dwindled away quickly after 1867.

As bimetallism was ruled out, that left countries with the choice between gold and silver. Faced with this choice, the conference essentially came up with two arguments in favour of gold. First, it was believed that only gold was available in sufficient quantities. Second, matters of coin convenience militated in favour of gold. Gold encapsulated more value in the same volume, and this was seen as advantageous at a time when cross-border transactions had increased both in terms of volume and in terms of number of transactions.⁸⁰ It is often argued that these motivations did not play a role, given that most of European commerce was actually settled with bills than with coins; an argument raised both by contemporaries⁸¹ and by modern researchers⁸². We believe this might be true later in the century, but not in the 1860s. The 1860s monetary commissions we have studied are full of evidence that a large number of transactions were still settled in coin.⁸³ It might well be that the physical superiority of gold over silver was of little importance later in the 19th century, when most transactions were settled with bills of exchange drawn on foreign places. However, in the 1860s things looked different, and monetary commissions attached great importance to the physical properties of the metals. Similarly, contemporary economists such as Jevons saw this as a distinct advantage of gold over silver.⁸⁴ Last but not least, gold coin was far less prone to wear and tear, an issue that had been discussed at great length already in the 1865 LMU conference⁸⁵ but was also of some importance at the 1867 International Monetary Conference⁸⁶.

⁸⁰ Ministère des Affaires Etrangères, *Conférence monétaire internationale. Procès-verbaux*, p. 111.

⁸¹ For instance by Walter Bagehot, the publisher of the London *The Economist*. Cf. Einaudi, *European Monetary Unification and the International Gold Standard*, p. 65.

⁸² Flandreau, "The French Crime of 1873: An Essay on the Emergence of the International Gold Standard, 1870-1880," pp. 875-78.

⁸³ Ministère des Affaires Etrangères, *Conférence monétaire entre la Belgique, la France, l'Italie et la Suisse, Procès verbaux, novembre et décembre 1865*, p. 23. *Verhandlungen der Special-Commission zur Berathung der Münzfrage vom 10. bis zum 14. April 1867*, pp. 24, 49-50. *Atti parlamentari, Camera dei deputati, legislatura VIII, sessione 1861, documenti, n. 258-A*, pp. 3-4. *Verhandlungen des dritten deutschen Handelstages zu Frankfurt am Main*, pp. 61-64.

⁸⁴ Friedman, "Bimetallism Revisited."

⁸⁵ Ministère des Affaires Etrangères, *Conférence monétaire entre la Belgique, la France, l'Italie et la Suisse, Procès verbaux, novembre et décembre 1865*.

⁸⁶ ———, *Conférence monétaire internationale. Procès-verbaux*, p. 111.

4.4 Developments 1867 – 1873

The monetary commissions and the coinage legislation we study in this section will be of interest for two reasons. First, they will demonstrate the continued importance of the French system of gold coinage which served as a point of reference for other countries; second, they will demonstrate that the German gold standard legislation of July 1873 actually came late in comparison to many other countries. Table 3 summarizes the monetary legislation and the monetary commissions studied in this paper.

It might be worthwhile to begin this section with developments in France. France is often portrayed as the bulwark of bimetallism, but on closer inspection such a perspective seems difficult to sustain. In the 1860s, France called three monetary commissions to discuss the monetary system. The first one took place immediately before the 1867 International Monetary Conference, while the other two commissions took place in 1868/69 and 1869/70, respectively. In addition, chambers of commerce and tax collectors were asked to submit their views on the monetary standard in preparation of the 1868/69 monetary commission. Figure 7, showing the results of the three commissions and the views presented by the chambers of commerce and the tax collectors, demonstrate that support for bimetallism was dwindling also within France.

Table 3: Monetary Commissions and Monetary Legislation 1861 - 1873

Country	Monetary Commission	Monetary Legislation
Germany	1861 (First Chamber of Commerce meeting)	
	1865 (Third Chamber of Commerce meeting)	
	1868 (Fourth Chamber of Commerce meeting)	
		1873 (9.7.)
Italy	1862	1862 (2.8.)
		1865 (LMU Convention)
		1874 (Addition to LMU Convention)
France	1858	
	1862	
	1867	1865 (LMU Convention)
	1868/69	
	1869/70	1874 (Addition to LMU Convention)
Belgium		1865 (LMU Convention)
		1874 (Addition to LMU Convention)
Switzerland		1865 (LMU Convention)
		1874 (Addition to LMU Convention)
Austria	1867 Commission 1867 Negotiations with LMU	
Greece	1868	1868
Spain		18.10.1868
Romania		4.5.1867
Sweden	1869	1872 (SMU Convention)
Denmark		1872 (SMU Convention)
Norway		1872
Netherlands	1872	1873

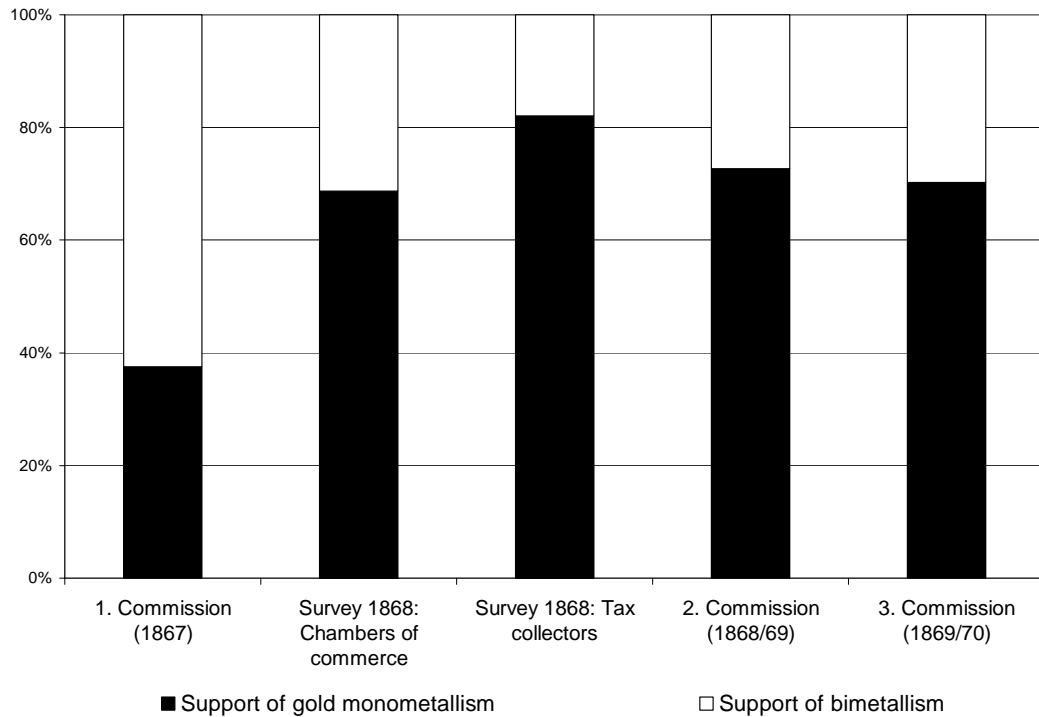


Figure 7: Increasing support for gold monometallism in France, 1867 – 1870.

Source: Ministère des Finances, *Documents relatifs à la question monétaire*, Paris 1868. Ministère des Finances, *Procès-verbaux et rapport de la commission monétaire, suivis d'annexes relatifs à la question monétaire*, Paris 1869. Ministères des Finances et de l'Agriculture et du Commerce, Conseil Supérieur du Commerce, de l'Agriculture et de l'Industrie, *Enquête sur la question monétaire*, Paris 1872.

The last two commissions voted overwhelmingly in favour of gold monometallism. It seems reasonable to assume that France itself would have moved to gold monometallism earlier, if this had not been rendered impossible by the outbreak of the Franco-Prussian War. This was certainly the view entertained by Soetbeer, one of the leading experts on the question of the monetary standard to whom we incidentally owe the most accurate estimates of 19th century gold and silver production.

If bimetallism had been working so badly as suggested by the commissions we studied, why then had France so long advocated bimetallism? Also, what explains the timing of France turning away from bimetallism? To begin with the second question first, two points seem to explain why France moved away from supporting bimetallism in the late 1860s. First, the silver scarcity became an ever more pressing issue. But this was certainly not sufficient a motivation, for silver scarcity had been witnessed for 15 years, and bimetallism

still had not been abandoned. A key factor appears to have been that France knew it could achieve European monetary unification only on the basis of the gold standard.⁸⁷ The 1867 International Monetary Conference had made this very clear. Interestingly enough, the first question on the questionnaires for both the 1868/69 and the 1869/70 monetary commission was no longer about the monetary standard – as had been the case in the 1867 monetary commission – but about whether monetary unification could only be achieved through the adoption of the gold standard; a question that was answered almost unanimously in both commissions.

Why, then, did the French government continue to support bimetallism until 1873 despite the monetary commissions of 1868/69 and 1869/70 and a public ever more hostile to the maintenance of this system? The first economic historian to struggle with this question was Willis in his fundamental study on the history of the Latin Monetary Union.⁸⁸ His findings were later confirmed by Mertens⁸⁹ and Einaudi⁹⁰, who offers the most recent comprehensive interpretation of the Latin Monetary Union from 1865 to 1873. Their findings all lead to the same conclusion: the French Ministry of Finance, the Bank of France and parts of the French *haute finance* were the only stern supporters of bimetallism. The Bank of France's reasons to support bimetallism were twofold: first, the double standard meant that two metals, rather than just one, were available for convertibility; second, the double standard was seen as the only way to maintain the value of the existing reserves in the Bank's vaults. The support of the French *haute finance* for bimetallism is well documented⁹¹ and easy to explain: they favoured bimetallism simply because it allowed arbitrage profits. But if support for bimetallism was really as limited as is suggested here, why then did Napoleon III decide to continue with bimetallism, despite declining popular support? The three books quoted concur that Napoleon III was in great need of the Bank of France and the French *haute finance* to support his ambitious political projects; so, he sided with them whenever the question of the monetary standard arose.

The Austro-Hungarian government was well aware that the French government was edging towards gold. We have already mentioned the Austro-Hungarian April 1867

⁸⁷ Einaudi, "From the Franc to the 'Europe': The Attempted Transformation of the Latin Monetary Union into a European Monetary Union, 1865-1873."

⁸⁸ Willis, *A History of the Latin Monetary Union: A Study of International Monetary Action*, pp. 57-60.

⁸⁹ Mertens, *La naissance et le développement de l'etalon or. 1696-1922*, pp. 265-67.

⁹⁰ Einaudi, *European Monetary Unification and the International Gold Standard*, pp. 40-46.

⁹¹ de Cecco, ed., *L'Italia ed il sistema finanziario internazionale. 1861-1914*, pp. 13, 122-33, 369-83. De Cecco also provides additional references for the Rothschild family.

monetary commission which concluded in favour of gold monometallism and the French system of coinage. In the summer of the same year, following the 1867 International Monetary Conference, Austria-Hungary started negotiations with France regarding the accession to the Latin Monetary Union. A key condition on behalf of Austria-Hungary, was however, that it were not forced to accept silver coins at public tills. In other words, it intended to join the Latin Monetary Union only in so far its gold content was concerned. In a sign of France edging towards gold, the French government accepted this demand. Austria-Hungary was allowed to join the Latin Monetary Union only as far as the mutual acceptance of gold coins at public tills was concerned.⁹²

Another example of a country quickly moving to gold was Sweden. Immediately after the 1867 International Monetary Conference it began to mint coins similar to the French gold coins. These coins were meant as trade coins that could be transformed into legal tender at any moment. In September 1869 Sweden called a monetary commission which in August 1870 recommended the introduction of the gold standard based on the French coinage system.⁹³ In extension of this domestic move, Sweden, Denmark and Norway formed a coinage union based on these principles on 18th December 1872 which became known as the Scandinavian Monetary Union. While the gold coins were based on the French system, the silver token coins followed a different pattern.

Not all countries moved to gold as quickly and as unconditionally as Austria-Hungary and the Scandinavian countries, however. Greece joined the Latin Monetary Union in 1868, both with respect to its gold and its silver component.⁹⁴ Similarly, Spain adjusted its coinage system to that of the LMU in 1868.⁹⁵ Another case in point was the Netherlands which intended to move to bimetallism in January 1873. While we have not yet been able to study in detail the Greek and the Spanish case, the Dutch case is very interesting in the sense that the decision in favour of bimetallism contained a key caveat: the Netherlands intended to suspend, or at least limit, from the beginning the free coinage of silver coin.⁹⁶ In that sense,

⁹² The text of the convention, signed on 31st July 1867, can be found in k.k. Finanzministerium, *Denkschrift über den Gang der Währungsfrage seit dem Jahre 1867* (Vienna: Kaiserlich-königliche Hof- und Staatsdruckerei, 1892), pp. 3-5.

⁹³ *Documents relatifs a la Question monétaire recueillis et publiés par M. le Ministre des Finances*, (Brussels: 1873), p. 135.

⁹⁴ Ministère des Finances, *Procès-verbaux et rapport de la commission monétaire, suivis d'annexes relatifs à la question monétaire*, p. 157.

⁹⁵ *Ibid.*

⁹⁶ *Documents relatifs a la Question monétaire recueillis et publiés par M. le Ministre des Finances*, pp.2-3.

the Dutch case might be closer to a transition to the gold standard than it looks on the surface.

Last but not least, Germany was also moving towards gold monometallism. Such a move was to be based for a long time on the French coinage system. The 1868 meeting of the German chambers of commerce, to which we already referred earlier, voted in favour of such a move. Nowhere in this protocol is any specific reference made to the German states following the English example.⁹⁷ This recommendation of the German chambers of commerce was given to the governments of the German states in 1869. The reference to the French coinage system was only omitted *after* the Franco-Prussian War when adopting French coinage seemed incompatible with the recently acquired political status. Interestingly enough, English coinage was not contemplated as an alternative.⁹⁸ After prolonged discussions the German coinage act was passed on 9th July 1873.

⁹⁷ *Verhandlungen des vierten deutschen Handelstages.*

⁹⁸ Helfferich, *Die Reform des deutschen Geldwesens nach Gründung des Reiches.*

5. How important was the silver supply shock of the 1870s?

We have argued so far that the emergence of the Classical Gold Standard in the late 1860s and early 1870s is best explained by the gold supply shock beginning with the gold discoveries in California and Australia. This shock set in motion a trend towards gold monometallism both in the bimetallic and the silver standard countries, a trend that would translate slowly but surely into pro-gold legislation starting in 1867. Incidentally, the argument put forward largely diminishes the role that the early English example in following gold played; also, we showed that Germany's 1873 decision had no domino effect, but was rather one of many decisions taken at the time in favour of gold.

The inclined reader of this paper might be surprised that another supply shock has not yet figured in our account: the silver supply shock beginning in the late 1860s. In fact, it is *this* supply shock – rather than the gold supply shock – which normally figures prominently in accounts on the emergence of the Classical Gold Standard. The September 1873 decision of France and Belgium to limit the free coinage of silver is seen by many as inevitable, given that the excessive silver production had increased the gold-silver price ratio to 15.96 : 1 the previous month (cf. figure 4). As a consequence of this decision, the bimetallic bloc could no longer provide the exchange-rate stability it had hitherto provided between the gold and the silver bloc. This theory essentially says that the gold standard was a historical inevitability after 1873, but it leaves unanswered why countries wanted to join gold before 1873.

Here again we see how important it is to get the chronology right. If the emergence of the Classical Gold Standard is, explicitly or implicitly, reduced to the 1873 decision of Germany to adopt gold monometallism, then it is tempting to explain the emergence of the Classical Gold Standard by the silver supply shock. We have argued differently, however, attempting to show that the 1860s pan-European movement in favour of gold was based on very different considerations. In fact, in the 1867 International Monetary Conference any sense of the silver supply shock being imminent is completely absent.⁹⁹

It is yet another thing to argue that once gold standard countries began to sell off their silver supplies, this would create a problem for countries that remained on silver and

⁹⁹ Ministère des Affaires Etrangères, *Conférence monétaire internationale. Procès-verbaux.*

bimetallic standards. This position has recently been challenged by Flandreau¹⁰⁰ and Oppers¹⁰¹. They argue that the bimetallic bloc could have readjusted its gold and silver holdings similarly to the way the gold supply shock in the 1850s had been well absorbed. As a consequence, the limitation of free silver coinage in September 1873 by France and Belgium is interpreted in a very different way: the authorities were not forced to do it. They had other reasons. Different advocates of this theory have presented different explanations. Mertens, who first introduced this idea to the academic debate in his study *La naissance et le développement de l'étalon-or* (1944), argued that the authorities acted in panic, not seeing that the gold-silver ratio of 15.96 : 1 in August 1873 would only be a temporary deviation from the legal ratio of 15.5 : 1.¹⁰² Oppers, by contrast, argues that given “this *Zeitgeist* in favour of gold as the basis of the currency, France and Belgium were unwilling to let bimetallic arbitrage significantly reduce the share of gold in their circulation...”.¹⁰³ Yet another explanation is provided by Flandreau for the events of September 1873: France was unwilling to allow Germany to use the bimetallic system to sell off its demonetised silver; given the tensions between Germany and France following the Franco-Prussian war of 1870, Flandreau argues, this goal suddenly became more important to France than the maintenance of bimetallicism.

Without discussing the difference between Mertens, Oppers, and Flandreau in detail¹⁰⁴, it is worth elaborating on how they attempt to disprove the inevitability theory they are fighting. Estimating an econometric model, Oppers and Flandreau try to show that bimetallicism would have been feasible despite rising world silver production (and German demonetisation). One of the key time series needed for their estimation is the world silver production; an excessive production would make bimetallicism unsustainable. By the very nature of things, they have to use the data series of actual silver production from 1870 to World War I.¹⁰⁵ To prove their point, however, they would have had to use the silver production that would have taken place, had the price of silver not fallen since the 1870s,

¹⁰⁰ Flandreau, "The French Crime of 1873: An Essay on the Emergence of the International Gold Standard, 1870-1880."

¹⁰¹ S. Oppers, "Was the Worldwide Shift to Gold Inevitable? An Analysis of the End of Bimetallicism," *Journal of Monetary Economics* 37 (1996).

¹⁰² Mertens, *La naissance et le développement de l'étalon or. 1696-1922*, pp. 337, 52 and 55.

¹⁰³ Oppers, "Was the Worldwide Shift to Gold Inevitable? An Analysis of the End of Bimetallicism," p. 149.

¹⁰⁴ A fundamental difference between Mertens and Oppers, on the one hand, and Flandreau, on the other, is that Flandreau entirely fades out Belgium in the events of September 1873. In fact, Belgium limited the free coinage of silver on 5th September 1873, with France following suit the next day. France might have had a “political” reason to block German silver sales, but what about Belgium?

¹⁰⁵ Which is very similar to the one we use in figure 2.

but instead stabilised due to the continued existence of the bimetallic bloc. Free coinage on private account would have acted as a price stabilizer, thus leading to a substantially larger world silver production than actually experienced after the decline of the silver price. Such a counterfactual time series does not exist for obvious reasons. As a consequence, both authors introduce inevitably a certain bias into their econometric estimation: the estimation results based on the historical time series could potentially suggest the viability of bimetallism after 1873 (as they find in their articles), whereas the unknown counterfactual time series might not. Oppers is actually very frank about the inherent limitation of his finding.¹⁰⁶

While such a counterfactual is fascinating on an intellectual level, we do believe that it is worth keeping in mind that both France and Belgium had expressed their desire to switch to gold monometallism much earlier than 1873. In the case of Belgium, this goes back, at least, to the 1865 conference that gave rise to the Latin Monetary Union. But also in the case of France, gold monometallism had found increasing support in the late 1860s, as explained in chapter 4 (cf. figure 7), and the two last commissions of 1868/69 and 1869/70 had voted in favour of gold monometallism by a wide margin.

¹⁰⁶ Oppers, "Was the Worldwide Shift to Gold Inevitable? An Analysis of the End of Bimetallism," p. 157. Mertens – even though he did not set up an econometric model – was equally aware of this limitation, in case later economic historians would venture to set up such a model. Cf. Mertens, *La naissance et le développement de l'etalon or. 1696-1922*, p. 335.

Bibliography

- Allen, R. C. "The Great Divergence in European Wages and Prices from the Middle Ages to the First World War." *Explorations in Economic History* 38 (2001): 411-47.
- Atti parlamentari, Camera dei deputati, legislatura VIII, sessione 1861, documenti, n. 258.*
- Atti parlamentari, Camera dei deputati, legislatura VIII, sessione 1861, documenti, n. 258-A.*
- Baas, N. W. J. "Die Doppelwährungspolitik Frankreichs 1850-1885." PhD thesis European University Institute, 1984.
- Bordo, M. D., and H. Rockoff. "The Gold Standard as a 'Good Housekeeping Seal of Approval'." *Journal of Economic History* 56 (1996): 389-428.
- Coquelin, C. "De la dépréciation de l'or, et du système monétaire français." *Journal des Economistes* 117 (1851): 55-67.
- de Cecco, M., ed. *L'Italia ed il sistema finanziario internazionale. 1861-1914*. Edited by Banca d'Italia, Collana storica della Banca d'Italia. Serie "Documenti". Volume I. Rome: Editori Laterza, 1990.
- . *Money and Empire: The International Gold Standard, 1890-1914*. Oxford: Blackwell, 1974.
- de Mattia, R. *L'unificazione monetaria italiana*. Turin, 1959.
- Documents relatifs a la Question monétaire recueillis et publiés par M. le Ministre des Finances*. Brussels, 1873.
- Eichengreen, B. *Globalizing Capital: A History of the International Monetary System*. Princeton: Princeton University Press, 1996.
- Eichengreen, B., and M. Flandreau. "The Geography of the Gold Standard." In *Currency Convertibility: The Gold Standard and Beyond*, edited by Jorge Braga de Macedo, Barry Eichengreen and Jaime Reis, 113-43. London, New York: Routledge, 1996.
- Einaudi, L. L. *European Monetary Unification and the International Gold Standard*. Oxford: Oxford University Press, 2000.
- . "From the Franc to the 'Europe': The Attempted Transformation of the Latin Monetary Union into a European Monetary Union, 1865-1873." *Economic History Review* 53 (2000): 284-308.
- Fetter, F. W., and D. Gregory. *Monetary and Financial Policy*. Dublin: Irish University Press, 1973.
- Flandreau, M. "As Good as Gold? Bimetallism in Equilibrium 1848-1873." In *Monetary Standards and Exchange Rates*, edited by Lawrence Officer, 150-76. London: Routledge, 1997.
- . "The French Crime of 1873: An Essay on the Emergence of the International Gold Standard, 1870-1880." *Journal of Economic History* 56 (1996): 862-97.

- . *The Glitter of Gold. France, Bimetallism, and the Emergence of the International Gold Standard. 1848-1873*. Oxford: Oxford University Press, 2004.
- . *L'or du monde. La France et la stabilité du système monétaire international. 1848-1873*. Paris, 1995.
- . "'Water Seeks a Level": Modeling Bimetallic Exchange Rates and the Bimetallic Band." *Journal of Money, Credit and Banking* 34 (2002): 491-519.
- Flandreau, M., and F. Zumer. *The Making of Global Finance. 1880 - 1913*. Paris, 2004.
- Friedman, M. "Bimetallism Revisited." *Journal of Economic Perspectives* 4 (1990): 85-104.
- Gallarotti, G. M. *The Anatomy of an International Monetary Order: The Classical Gold Standard, 1880-1914*. Oxford: Oxford University Press, 1995.
- . "The Scramble for Gold: Monetary Regime Transformation in the 1870s." In *Monetary Regimes in Transition*, edited by Michael D. Bordo and Forrest H. Capie, 85-104. Cambridge: Cambridge University Press, 1993.
- Galotti, G. *Del ribasso del valore permutabile dell'oro e delle conseguenze che debbono derivare da questo ribasso*. Naples, 1856.
- Helfferrich, K. *Die Reform des deutschen Geldwesens nach Gründung des Reiches*. Leipzig: Duncker, 1898.
- Janssen, A. E. *Les conventions monétaires*. Brussels, 1911.
- k.k. Finanzministerium. *Denkschrift über den Gang der Währungsfrage seit dem Jahre 1867*. Vienna: Kaiserlich-königliche Hof- und Staatsdruckerei, 1892.
- Maddison, A. *The World Economy. Historical Statistics*. Paris: OECD Development Centre Studies, 2003.
- Meissner, C. M. "A New World Order: Explaining the International Diffusion of the Gold Standard, 1870-1913." *Journal of International Economics* 66 (2005): 385-406.
- Mertens, J. E. *La naissance et le développement de l'étalon or. 1696-1922*. Paris: Presses Universitaires de France, 1944.
- Milward, A. S. "The Origins of the Gold Standard." In *Currency Convertibility: The Gold Standard and Beyond*, edited by Jorge Braga de Macedo, Barry Eichengreen and Jaime Reis, 87-101. London, New York: Routledge, 1996.
- Ministère des Affaires Etrangères. *Conférence monétaire entre la Belgique, la France, l'Italie et la Suisse, Procès verbaux*. Paris: Imprimerie nationale, 1874.
- . *Conférence monétaire entre la Belgique, la France, l'Italie et la Suisse, Procès verbaux, novembre et décembre 1865*. Paris: Imprimerie impériale, 1865.
- . *Conférence monétaire internationale. Procès-verbaux*. Paris: Imprimerie impériale, 1867.
- Ministère des Finances. *Documents relatifs à la question monétaire*. Paris: Imprimerie impériale, 1868.
- . *Procès-verbaux et rapport de la commission monétaire, suivis d'annexes relatifs à la question monétaire*. Paris: Imprimerie impériale, 1869.
- . *Rapport de la Commission chargée d'étudier la question monétaire*. Paris, 1858.

- Ministères des Finances et de l'Agriculture et du Commerce. *Conseil Supérieur du Commerce, de l'Agriculture et de l'Industrie. Enquête sur la question monétaire*. 2 vols. Paris, 1872.
- Morys, M. "The Classical Gold Standard in the European Periphery: A Case Study of Austria-Hungary and Italy, 1870-1913." PhD thesis London School of Economics and Political Science, 2006.
- Oppers, S. "Was the Worldwide Shift to Gold Inevitable? An Analysis of the End of Bimetallism." *Journal of Monetary Economics* 37 (1996): 143-62.
- Oppers, S. E. "A Model of the Bimetallic System." *Journal of Monetary Economics* 46 (2000): 517-33.
- Redish, A. "The Evolution of the Gold Standard in England." *Journal of Economic History* 50 (1990): 789-805.
- . "The Persistence of Bimetallism in Nineteenth-Century France." *Economic History Review* 68 (1995): 717-36.
- Reis, J. "First to Join the Gold Standard, 1854." In *Currency Convertibility: The Gold Standard and Beyond*, edited by Jorge Braga de Macedo, Barry Eichengreen and Jaime Reis, 159-81. London, New York: Routledge, 1996.
- Reti, S. P. *Silver and Gold: The Political Economy of International Monetary Conferences, 1867-1892*. Westport (CT), London: Greenwood, 1998.
- Sayers, R. S. "The Question of the Standard in the 1850s." *Economic History. Economic Journal Supplement* 2 (1933): 575-601.
- Soetbeer, A. G. *Andeutungen in Bezug auf die vermehrte Goldproduktion und ihren Einfluß. Nebst einer lithographierten Tabelle*. Hamburg, 1852.
- . *Litterarnachweis über Geld- und Münzwesen insbesondere über den Währungsstreit, 1871-1891. Mit geschichtlichen und statistischen Erläuterungen*. Berlin, 1892.
- Sprenger, B. *Das Geld der Deutschen. Geldgeschichte Deutschlands von den Anfängen bis zur Gegenwart*. Paderborn: Ferdinand Schöningh, 2002.
- Suess. *Die Zukunft des Goldes*. Vienna, 1877.
- Verhandlungen der Special-Commission zur Berathung der Münzfrage vom 10. bis zum 14. April 1867*. Vienna, 1867.
- Verhandlungen des dritten deutschen Handelstages zu Frankfurt am Main*. Frankfurt, 1865.
- Verhandlungen des ersten deutschen Handelstages zu Heidelberg*. Heidelberg, 1861.
- Verhandlungen des vierten deutschen Handelstages*. 1868.
- Ward, J. *Observations on the effect of the Californian and Australian gold, and on the impossibility of continuing the present standard in the event of gold becoming seriously depreciated*. London, 1852.
- Willis, H. P. *A History of the Latin Monetary Union: A Study of International Monetary Action*. Chicago: University of Chicago Press, 1901.