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Contents

SUMMARY. Since the establishment of the international gold standard, at the end of the 19th century, the possibility of attaining monetary stability in peripheral countries has been increasingly associated with the decision to peg their currency to an external reference. By contrast, the monetary system adopted in Europe over the previous five centuries had assured stability through the articulation between an internal currency for domestic exchanges and an external currency for foreign trade. The object of this research is to study the coexistence of different standards in the early history of Bulgarian money as a peculiar instance of the passage from the dual currency system of pre-modern Europe to the establishment of a uniform, national and international, all-purpose currency in the form of the gold standard. The broader goal is to enquire, in historical and comparative perspective, how different monetary regimes affect the relation between internal and external balance, between monetary autonomy and monetary stability.

Keywords: Monetary regimes, Monetary policy, Exchange rate regimes
JEL classification: E42, F33, N13

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1. Introduction

The first few decades after Liberation were dedicated by Bulgaria to the construction of a modern political and administrative apparatus. Here, as in other new peripheral states, nation building was continuously confronted with the model provided by the older countries of the West and with the need to find a place within the global balance of powers. A crucial step in this direction was the establishment of a monetary system compliant with the international standard. It would be, however, too simple and simplistic to believe that it was merely a matter of catching up along a predetermined path – if only because the course of the path was not at all predetermined. In fact, all these changes occurred in Bulgaria at a time in which their outcome was not as straightforward as might appear at a first retrospective glance: Bulgaria was engaged in state building, convergence, and monetary reform just as the concept of state, the relationship between centre and periphery and the notion of money were being redefined on a global scale. It is not possible here even to hint at what was at stake on the three levels. The purpose of this paper is rather to investigate, in the light of Bulgaria's early monetary history, how different monetary regimes can affect a state's autonomy, its integration within the international community, and its capability of reconciling the former with the latter.

The construction of a national monetary system is an element of great symbolic and practical importance in modern state-building (Helleiner 2003). In Bulgaria it was undertaken immediately after Liberation with the establishment of the National Bank and the introduction of the lev as the official unit of account. The compliance of the national money with the international standard was deemed to be crucial for the integration of the new state into the 'concert of nations'. The Bulgarian monetary system was initially designed along the bimetallic principles of the Latin Monetary Union. Within three decades, the system eventually conformed to the principles of the gold standard, which had emerged in the meantime as the universally accepted rule of sound money management. In fact, the gold standard had been adopted by a growing, and eventually predominant, number of states throughout the world between 1870 and 1914.[1] Bulgaria was one of the last to join, in 1906, after a tortuous convergence marked by several failed attempts. In order to comply with the gold standard, Bulgaria was required:

[1]The number of countries on gold standard, gold exchange standard or gold peg rose from 5 to 39 from 1870 to 1914 (Officer 2008).

– to establish a unique *unit of account* instead of the plurality of reference units, which had been used in private and public accounting;

– to establish a national *means of exchange*, in the form of a coherent system of coins and eventually of gold-backed banknotes, in order to replace the parallel circulation of domestic and foreign coins, in particular of Russian silver rubles, which was still legally permitted and practically widespread;

– to safeguard the *autonomy of the central bank* against the government's pressures to finance its fiscal deficits through the proceeds of seigniorage;

– to fix the *exchange rate* in terms of an unalterable parity within the international gold standard, after having initially adhere, if somewhat loosely, to the bimetallic standard of the Latin Monetary Union.

It took almost three centuries for the new Bulgarian state to endow itself with a monetary system compliant with the new international standard. Most historical accounts have described the years from the Liberation to the Balkan Wars as a period of 'monetary chaos' (Kiosseva 2000, Avramov 2006: 98–99), in which the legacy of the Turkish domination, pressure from outside, political weakness and mismanagement simply postponed an inevitable outcome: the homologation, at least de facto, to the international gold standard. The story, however, deserves to be revisited in the light of several remarks.

(1) First, what briefly appeared as the definitive and universal monetary system soon proved to be rather fragile and contingent. The gold standard collapsed, together with the other institutional pillars of European liberalism, under the shells of the Great War, and could not be rebuilt afterwards on the same basis. Retrospectively, it was 'a brief experience, a matter of a few decades, a half-century at most. It was only the sense that it was the final step, the ultimate money, that made it seem so much older' (Galbraith 1975:178). Not only in historical, but also in comparative perspective, the gold standard was more an exception than a rule. An increasing body of research, with contributions from various social disciplines, has shown that, in a number of different periods and regions, the rule was to have a plurality of monies, serving different purposes, rather than a unique standard (Kuroda 2008). Hence, even when the gold standard is the eventual outcome, it should not serve as the only benchmark for an accurate historical assessment of the events that lead to its adoption.

(2) The gold standard was not only followed but also preceded by other systems. An alternative benchmark for the events we are considering is indeed available, if only we trace the story according to its true course, i.e. from the beginning rather than from the end. The new order that was eventually established was, in fact, preceded by an older monetary regime that had only recently been replaced even in Western Europe. And this previous, bimetallic

system had lasted much longer, dating back over five centuries (Redish 2000). In terms of plain duration, the 'classical' gold standard marked not the inauguration of a definitive age of gold after a tentative age of darkness, but rather the transition towards a precarious season of gold from a secular period of gold and silver.

(3) The gold standard had many virtues, but also several backdrops that contributed to its fragility. A universal money, firmly anchored to a material basis and thus cosseted from political interference, was seen as the necessary pledge for balanced, safe and unhampered cross-border trade. However, even the classical gold standard was in fact a gold exchange standard, and specifically a gold sterling standard. Hence, it did not encourage nor require the United Kingdom to keep in balance its balance of trade. On the contrary, the pivot country was allowed and encouraged to run increasing trade deficits, spending the revenues of its mounting foreign investments. Growing capital movements were thus not simply an option, but a condition of stability for British and world trade (De Cecco 1974). Despite the appearance of an automatic mechanism, therefore, the system relied heavily on careful management by the leading financial center, and on cooperation by major central banks, in order to ensure the continued acceptance of a national currency in the function of international money and to keep up the expansion required as a condition for stability.

(4) By contrast, the main feature of the old regime was the distinction between an internal currency for local exchanges and an external currency for long-distance trade. These are, in fact, the fundamental traits of what has been called 'the system of imaginary money' (Einaudi 2006). Here, the internal money was the abstract unit of account, possibly embodied in coins of the smallest denomination and of the poorest metal. The external money was made of precious metal, silver and gold, and it crossed the frontiers by assuming, in each territory, the value which it was assigned by the local monetary authority in terms of the local unit of account. The relation between internal and external money was therefore established by the tariff, a public decree specifying the value in imaginary money of all the real coins, national or foreign, circulating within the country. The tariff did not mechanically reflect the value of the metal contained in the different coins, but could also be used as an instrument of monetary policy, to regulate the supply of domestic currency, leaving the external money unaffected. It was the responsibility of monetary authority to set the value of the different currencies in terms of the unit of account, in view of combining internal and external balance, i.e. autonomous national policy and free international trade (Fantacci 2005). Over the eighteenth and nineteenth century, this system was increasingly criticized

for being too complicated and liable of mismanagement by authorities eager for seigniorage. Eventually, it was completely abandoned. Yet one might question whether it was set aside because its defects had become apparent, or because its virtues were no longer understood.

(5) In any case, the existence of a previous monetary regime, and not simply of an institutional void, prior to the establishment of the gold standard may help explain why it took so long, and not only in Bulgaria, for it to be successfully introduced. The apparent disorder and delay in the shift to a new order could depend on the reluctance to renounce the benefits of the old, particularly in allowing for greater autonomy in pursuing objectives of domestic balance. A new monetary regime has to earn its credibility, within even more than without the country where it is adopted. To do so, it sometimes has to win the resistance of the people, who may prefer to continue using old currencies, or even to resort to foreign currencies with a high standing for their diffusion in international trade (Kuroda 2007).

As all these factors clearly suggest, the establishment of the Bulgarian monetary system occurred at a time in which the meaning of money was undergoing a radical change. What was supposed to serve as a means of international settlement? What was the most appropriate domestic means of exchange? And how should national money be related to international money? These questions accompanied the rise of the international gold standard - and resounded again after its demise. It was only for a brief span of years that they seemed to admit only one plausible answer: a fixed quantity of pure gold, to serve as measure and means for all payments, national and international. The identification of money with a quantity of gold came to be deemed a natural law, disregarding the tremendous efforts and controversies that had in fact allowed to establish it. Those efforts were particularly trublesome in peripheral countries, such as Bulgaria, where a great number of different monies were used, both as units of account and as means of payments, and with different and variable relations to different metals, before the simple rule of the gold standard was eventually established.

This research will review the various monetary forms used in Bulgaria from the Liberation to the outbreak of the Balkan wars. The purpose, however, is not simply to enumerate and describe them in their variety, but to provide a tentative explanation of the logic underlying their concurrence – without resorting to the comfortable, but scientifically void, assumption that this was an error waiting to be corrected by more enlightened rulers. I shall make, instead, the assumption that there could indeed be reasons for maintaining multiple monies and regulating their relationship, and that these reasons had to do with the desire to preserve autonomy in pursuing objectives of domestic equilibrium. A hypothesis that deserves to be contemplated, in the light of historical evidence, is if and how an articulation between internal and external money continued to operate, de facto if not de jure, in the various, apparently chaotic, monetary phenomena that characterized the first decades of Bulgarian independence. In particular, I shall consider if and how the distinction between domestic and international circulation may serve to give an adequate account of the succession of monetary orders and disorders in Bulgaria throughout this period. This requires to identify, from time to time, not only which types of currency were used for domestic and for international payments, but also, and more significantly, how they were set into relation.

The different forms taken by internal and external money, and by the relationship between them, may suggest a preliminary distinction in three regimes, covering three successive, if somewhat overlapping, periods of the early history of Bulgaria's monetary system.

I. In the first period immediately after Liberation (1879–1885), foreign coins continued to circulate extensively throughout Bulgaria, while the national currency, the lev, was gradually introduced, first as a unit of account and then as a means of payment. The relationship between internal money (lev) and external money (foreign coins) was determined by law, i.e. by a *tariff*, according to the practice employed extensively throughout Europe to manage bimetallic systems over the previous six centuries.

II. Almost immediately, however, foreign silver coins were received in private transactions at a rate which was lower than the official rate fixed by the tariff. The depreciation of silver coins in terms of the unit of account was called agio. Throughout the long period in which the agio persisted (1882-1906), it was the variable level of the *agio* on the market that determined the relationship between external money (gold coins) and internal money (silver coins).

III. In the meantime, in 1885, the Bulgarian National Bank (BNB) was granted the status of an issuing bank. At the beginning, however, very few banknotes were issued and their value did not substantially exceed the value of the gold reserves kept at the Bank. It was only after the agio disappeared (1906–1913) that Bulgaria managed to establish a gold standard system, with banknotes serving as internal money, gold serving as external money, and the relationship between the two being fixed by convertibility at a par.

Throughout the monetary history of Bulgaria, from its early beginning to its more recent developments, the subjection to external standards has recurrently appeared as a viable alternative to the subjection to local malfunctioning and political pressures, in view of building a stable monetary system. A retrospect on the longer history of European monetary institutions may serve to question whether, even in the case of Bulgaria, the only way to obtain monetary stability is by renouncing monetary autonomy.

2.Tariff (1879–1885)

The willingness to conform to an international monetary standard was apparent immediately after independence, when Bulgaria decided to adhere to the principles of the Latin Monetary Union (LMU). With the law of 27 May 1880, the lev was established as national unit of account at a par with the French franc. All silver and gold coins were to be minted at the same weight and fineness of the French equivalents. The same bimetallic ratio of the LMU (15.5 units of fine silver per unit of fine gold) was thus implicitly accepted.

However, Bulgaria's application of LMU principles had two significant exceptions: it established a state monopoly over minting and it fixed no limit over the issue of silver coins. However, since Bulgaria did not have a mint, coins had to be minted abroad (Petkov 1926: 18), and until their amount was insufficient to meet the needs of domestic circulation, foreign coins circulated widely throughout the country. All these features, which were certainly to be regarded as defects according to the principles of the emerging gold standard, in fact brought the new Bulgarian monetary system closer to the traditional principles of old bimetallism. This is confirmed by the explicit provision of a tariff, to be promulgated by the Prince, establishing the value at which foreign coins could and should be accepted within the principality. The monetary law of 1880, in fact, established that the Finance Ministry was entitled to issue a tariff, whenever it found it necessary (see text of law in appendix to Nedelchev 1940).

The first element of the monetary system that was introduced, directly with the law of 1880, was a national unit of account, and not a national means of payments. Bulgaria coined its first silver coins, for a total value of 10 mio levs, only in 1883 (Trifonoff 1930: 30). Yet this did not mean that Bulgaria failed until then to establish a national monetary system. According to the principle of monetary rule, which was common to most European countries throughout the modern era, the truly distinctive character of a national monetary system was the unit of account, rather than the means of payment.[2] Any coin, even minted abroad, could circulate within a country, provided that it was evaluated in terms of the local unit of account according to the tariff issued by the local authority. In the light of this rule, the fact that foreign coins continued to circulate in Bulgaria for years after independence is not exceptional, nor is it a sign of backwardness or marginality. The same was true for many, even important economic centers throughout Europe, until the establishment of the metal standard.

[2] To be sure, not even the introduction of a national unit of account was immediate and straightforward. Still in 1890 the Ministry of Finance had failed to enforce complete adoption of the lev in bookkeeping by private businesses and banks (Avramov 1999: 36).

The first tariff was issued even before the introduction of the monetary law, with the decree of 11 July 1879 (Figure 1). At this stage, there was obviously no national means of payment: the coins included in the tariff were the Russian ruble, the Turkish lira, the Pound sterling, the Austrian florin, and even the Italian lira, but not the Bulgarian lev, since it hadn't been issued yet in any form or denomination. What is perhaps at first more surprising is that the tariff did not mention a national money, even in the form of a unit of account: in fact, the lev had not been established yet and the value of the coins listed was expressed in French francs. What was then the content of the decree? Can we not say that it established a Bulgarian monetary rule? The fact that the tariff was issued under the juridical form of a decree and in the name of Kniaz Alexander seems to suggest that (monetary) authority was indeed at stake. In fact, if this law did not establish a national unit of account or a national means of payment, it did however enact a national monetary rule by establishing a peculiar relation between unit of account and means of payment – a relation, which could be, and actually was, different from those prevailing abroad.

Figure 1

DECREE OF 11 JULY 1879, ISSUING THE FIRST BULGARIAN MONETARY TARIFF

Указъ.

№ 4.

Ный Александръ I.

Съ Божія милость и волята народна

Князь на България.

По предложеніе на Нашътъ Министръ на Финансытѣ направено съ докладътъ отъ 10 юлій 1879 подъ N 3, основанъ на рѣшеніето на Министерскій Съвѣтъ отъ 9 тек., и като взехмы въ съображеніе загубытѣ, които търпи държавното съкровище отъ сѫществующата тарифа на монетытѣ, постановихмы и постановявамы:

1[0] Да ся издаде една тарифа за разнытѣ монеты които ся употребяватъ въ Княжеството, по съобразна съ истинската стойность на тія монеты.

Испълненіето на това постановленіе възлагамы на Нашътъ Министръ на Финансытѣ.

Изданенъ въ Нашътъ дворецъ, въ Софія, на 11 Юлій 1879 година.

На първообразното подписано:

Александръ.

Приподписано: Министръ на Финансытѣ

Г. Д. Начовичъ.

Source: State Gazette, year I, No.2, 4 August 1879.

Тарифа на Монетытѣ издадена отъ Министерството на Финансытѣ съгласно съ горній Указъ.

Златны Монеты.

	Фр.	Сан.
1 Лира Англійска	25	—
1 „ Турска	22	70
1 Полуимпериалъ	20	60
1 Наполеонъ-доръ	20	—
1 20франкъ: Италіанскій и белгійскій	20	—
8 Фіорини Австрійски	20	—
1 Румунскій 20 Леу	20	—
1 Минцъ, австрійска жълтица	11	80
Сребърны монеты.		
1 Фіоринъ Австрійскій	2	30
1 Лира Италіанска	1	—
1 Меджидіе турско	4	30
$^1/_2$ „ „	2	15
$^1/_4$ „ „	1	$7^1/_2$
1 Леу румунскій	1	—
1 Франкъ французскій	1	—
1 Пятофранкъ	5	—
1 Рубла	3	70
75 Копѣйки	2	$77^1/_2$
50 „	1	85
25 „	—	$92^1/_2$
Размѣнно сребро.		
20 „	—	50
15 „	—	$37^1/_2$
10 „	—	25
1 Кредитна рубла	2	64

Even after the law of 1880, the relation between the newly defined national monetary unit, the lev, and the various foreign coins circulating within Bulgaria (such as the Russian silver ruble, but also Serbian, Rumanian, and Ottoman coins) continued to be determined by a tariff. The local value of foreign coins was not fixed once and for all, and it did not necessarily correspond to their relative appreciation in other countries. The Russian ruble, for example, was evaluated 4 francs in Bulgaria, versus 3.3 and 3.7 francs in Rumania and Serbia respectively (Trifonoff 1930: 30). The value of the ruble was reduced by the Council of Ministers to 3.70 and, on 15 August 1881, to 3.50 levs, in order to reduce the inflow from Rumania and Serbia, where it was valued even less and eventually demonetized (Avramov 1999: 18). On 15 November 1884 the BNB demonetized all Serbian and Rumanian coins (Trifonoff 1930: 31). A couple of months later, on 22 January 1885, a law was passed providing for the depreciation of silver rubles from 3.50 to 3.40 or 3.30 levs (depending on the type of ruble) as of May 1, and for their demonetization within two months after receipt of new 5 levs coins ordered in St. Petersburg. The whole operation had to be postponed, due to unification with Eastern Rumelia and war with Serbia (Avramov 1999: 22–23).

Demonetization of foreign silver coins was eventually accomplished only in 1887. On March 13 a Regent's Decree was passed, allowing a period of 3 months for the payment of taxes with rubles at the cash desks of the Treasury, where they would be received at the value of 3 levs. After this term, they would not be accepted at all. On July 21 the Ministry of Finance sent a letter to BNB district governors to urge conversion of all rubles by the public at officially fixed rates. Within two months, only Bulgarian coins remained in circulation (Avramov 1999: 28–29).[3]

The misalignment in the relative evaluation of foreign coins, and hence their protracted circulation within the country, need not, however, be regarded necessarily as the undesired consequences of inexperienced misconduct. On the contrary, they could be the coherent outcome of a deliberate decision, aiming at attracting and maintaining an adequate amount of silver coins, corresponding to the needs of domestic circulation. To change the value of foreign coins, in terms of the local unit of account, could reflect, not the clumsy attempt to strike the correct assessment, but rather the conscious management of an instrument of monetary policy.

[3] According to Petkov (1926: 17–18), foreign silver coins continued circulating in Bulgaria until 1888.

The question remains open. Was Bulgaria unable or unwilling to enforce state monopoly over coinage, accepting that foreign silver coins circulate extensively throughout the country? Perhaps we can at least advance the hypothesis that Bulgaria could be interested in encouraging the inflow of silver coins, even at the cost of exchanging them for gold, and that the overvaluation of foreign silver coins was intended to provide the domestic market with adequate means of internal circulation.

The issue was not confined to Bulgaria, but involved, in quite similar terms also other neighboring countries. Even in Serbia, for example, before independence, the circulation of a great many foreign coins within the territory was regulated through 'currency exchange rate lists' (Gnjatovic 2006: 46–47) or 'money tariffs', specifying the value of each of them in terms of the local unit of account (Sojic and Djurdjevic 2006: 142). Something similar might have happened also in Bulgaria, and not only before, but also after the Liberation, at least until foreign coins kept circulating.

3. Agio (1882–1906)

When all foreign silver coins were eventually withdrawn from circulation, and substituted with Bulgarian silver coins, the relation between internal and external money assumed a different form. Silver money was now exclusively national money, while gold served as international money. This is how the system was described also by some contemporaries, writing shortly after: ‘la monnaie d'argent reste alors exclusivement une monnaie nationale. Mais le pays dispose en m?me temps d'une monnaie internationale, l'or, pour ses paiements à l'étranger’ (Petkov 1926: 23).

Within this system, the relation between internal and external money was, in principle, fixed, and it corresponded to the official bimetallic ratio (bmr). However, since 1882, gold was accepted at a premium, in exchange for silver or other goods. 'Agio' is the name of the premium that was paid for the purchase of gold against silver, over and above the official rate. It may also be regarded, symmetrically, as the discount at which silver coins were received, not only for the purchase of gold, but for the payment of any price or debt denominated in gold.

How should this agio be interpreted? At first glance, the agio appears as a violation of the legal regime of the tariff: a commercial rate for silver coins was opposed to their official rate; silver coins were subject to a variable degree of depreciation in private transactions with respect to the public rule established by the monetary law. However, the violation was somehow incorporated in the rule: the agio was officially quoted by the BNB. To be sure, the BNB could only exchange metal coins and specie at their legal rates, and therefore could not apply or fix itself any agio. Even if the level of the agio could also reflect decisions of the BNB and of the Ministry of Finance affecting the relative demand of gold and silver coins, the agio was a market rate. And yet, this market rate became a crucial variable in the monetary system of the time, so much so that it was published by the BNB in its official records (BNB 1929).

What was then the agio? Insofar as silver may be regarded as the national currency and gold as the international currency, agio may be interpreted as the peculiar form taken by the exchange rate within the bimetallic system. More precisely, 'it can be said to represent an indicator of depreciation of the national currency against gold, as the internationally recognized legal tender' (Sojic and Djurdjevic 2006: 150n). Agio may be seen, therefore, as the peculiar form taken in Bulgaria, between 1882 and 1906, by the relation between internal and external money.

If this is true, it becomes crucial to enquire the possible factors that might have caused or influenced the appearance, the fluctuation and the eventual disappearance of the agio over time.

The first, most obvious, factor could be related to the difference between the official bmr fixed by the Bulgarian law in conformity with the LMU and the bmr prevailing on international markets. In fact, when Bulgaria adopted the bmr of 1:15.5, many countries, including members of the LMU, had started to shift to a gold standard and to demonetize silver. This had resulted in a sharp decline in the relative value of silver to gold, which was already over 20 in the mid 1880s and reached almost 40 in the first years of the 20th century. As a consequence, silver coins were highly overvalued by Bulgarian law, and it seems only natural that they should be subject to some degree of depreciation in private transactions.

The fluctuations of the agio seem, in fact, to show some correlation with the (inverted) international bmr, especially in the last decade of the 18th century (Figure 2). However, between 1897 and 1902, the agio continued to increase sharply, as the international bmr slightly declined and remained relatively stable around 35. And it continued to fluctuate, if somewhat more widely, around that level, even after 1902, when instead the agio declined as sharply as it had risen, to disappear completely in less than five years.

Figure 2

AGIO IN BULGARIA AND BMR ON INTERNATIONAL MARKETS

Sources: Friedman (1990), BNB (1929).

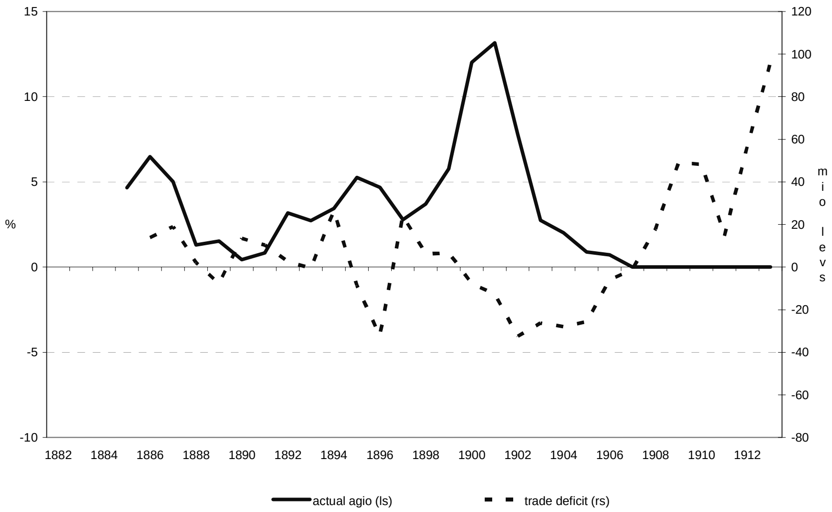
Overvaluation was only a necessary, not a sufficient condition, for the agio to arise. Silver had been overvalued by the Latin monetary union since 1873, but the LMU didn't suffer an agio. In order for an agio to arise, according to some authors, further conditions must hold: there must be an excess supply of coins for local circulation or the country must have a balance of payments deficit and hence an excess demand of gold within the country for foreign payments (see e.g. Petkov 1926: 24).

The first condition seems to apply to the first rise in the agio, in 1894-1895, when, according to a memoire by BNB governor M. Tenev, the government had indulged in an excessive coinage of silver coins for the purpose of earning seigniorage (see BNB archive documents, vol. I, pp. 356–373). The second condition seems to hold for the second, even more dramatic, surge in the agio, at the turn of the century: in this case, it is argued that bad harvests in the last three years of the 19th century caused a balance of trade deficit, which in turn caused an outflow of gold, a suspension of banknote convertibility, and an increase of the agio, that was eventually reduced only after a conspicuous French loan granted to the Bulgarian government in 1902.

However, a first comparison between the agio and the trade deficit seems to rule out any straight forward and exhaustive correlation between trade deficit and agio (Figure 3).

Figure 3

AGIO AND TRADE DEFICIT

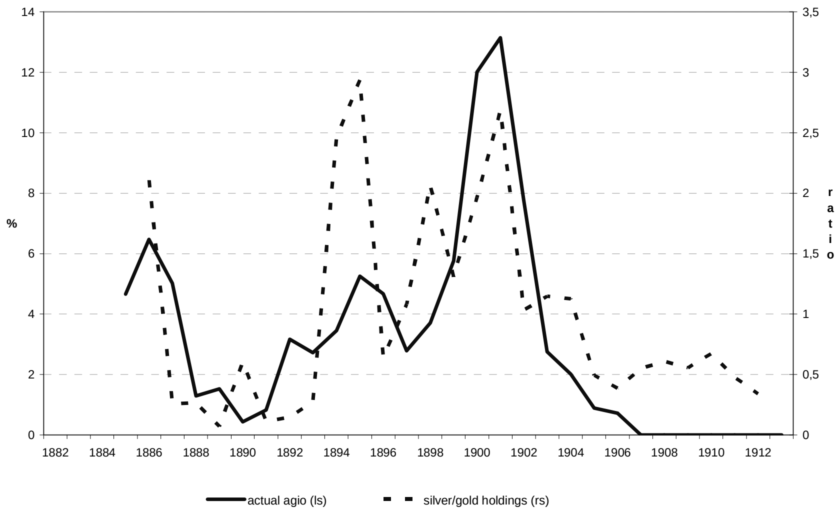


Sources: BNB (1929), Popoff (1920: 420).

A more convincing correlation, at least at first glance, is the one suggested by Avramov (1999: 36), between the agio and the composition of precious metal holdings at the BNB (Figure 4). This correlation could reflect the fact that the relative price of gold and silver follows their relative abundance. The implicit assumption, that ought to be tested, is that the gold and silver holdings of the Bank may serve as a proxy for the overall amounts held in the country. By 1891, silver coins for a value of 8 million levs had been minted and put into circulation (Trifonoff 1930: 41). Circulation of silver coins thus reached its legal limit (Avramov 1999: 30). However, minting of silver coins did not stop here: 5 million levs were issued again in 1892 and another 12 million levs worth of silver coins were put into circulation in 1894. The total amount of silver coins circulating in Bulgaria reached the value of 45 mio levs, corresponding to 14 levs per capita. This inundation of what may be regarded as a fiduciary metal coin worsened its depreciation with respect to gold: the agio started to rise again over 6 per cent (Trifonoff 1930: 40). Issuing of silver coins by BNB was suspended at this date (Dimitrova-Ivanov 2008: 419).

Figure 4

AGIO AND SILVER/GOLD HOLDINGS AT THE BNB



Source: BNB (1929).

This explanation could be further supported by considering not only metal coins, but also paper money, and particularly silver-backed banknotes (Figure 5). On 15 December 1891, an amendment to the 1885 Act had authorized BNB to issue banknotes convertible into silver and backed by silver coins for one third of their value. The law entitled the Ministry of Finance to impose a limit or even a repurchase of banknotes by BNB (Avramov 1999: 36). Fears of increasing the agio suspended application for almost a decade. (Petkov 1926: 11, 27–28) On 21 November 1899, the BNB managing board decided to issue 10 million levs of banknotes convertible into silver (Avramov 1999: 43).[4] The total amount of silver in circulation, in the form of coins or of silver-backed banknotes, increased accordingly. In the meantime, on 13 November,

[4] These banknotes appeared in two denominations: 5 and 10 leva (Trifonoff 1930: 42–43).

convertibility of banknotes into gold had been suspended de jure. Suspension was repeatedly extended until 24 November 1903 (Dimitrova-Ivanov 2008: 419). All this could help explain the surge in the agio around the turn of the century.

Figure 5

AGIO AND SILVER-BACKED BANKNOTES

Source: BNB (1929).

All these explanations are not necessarily alternative, but could well be complementary. More precisely, the variations of the metal holdings of the BNB could help explain why the trade deficit would take so long to affect the agio: in fact, the time lag could reflect the time needed to deplete the gold reserves required for international settlements. The concurrent effects on the agio of all these factors deserve to be tested more accurately through adequate statistical regressions.[5]

Nonetheless, before leaving aside this peculiar regime for purportedly

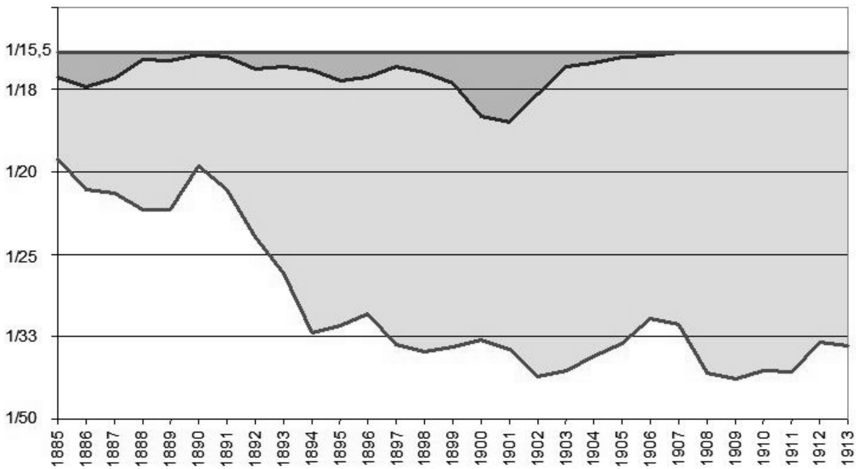
[5] This is, in fact, the object of a broader research, in which the author is engaged together with K. Dimitrova. The provisional results are presented in the paper 'The establishment of the gold standard in Southeast Europe: convergence to a new system or divergence from an old one?', discussed at the Conference CoDiSyNa, Frejus, 25–26 September 2008.

more familiar grounds, it is worth underlying the peculiar way in which it combined national monetary autonomy and integration in the wider economic circuit of international exchanges. The official value assigned to silver coins in Bulgaria was discounted in private transactions through the agio. The very existence of the agio meant that monetary authorities were not capable of enforcing the value they wished. The openness of the Bulgarian economy, through foreign trade and monetary movements, determined a relative demand of silver (national money) and gold (international money) that could well cause their relative price, implied by the agio, to diverge from the bmr implied by the tariff and to converge towards the bmr prevailing on international markets.

In fact, the agio, being a discount on silver coins relatively to gold, may be seen as a correction of the bmr, with respect to the official rate of 1:15. Figure 6 shows the official bmr (red line), the bmr implied by the agio (blue) and the international bmr (green). It confirms that the fluctuations of the agio followed roughly those of the bmr on international markets, as we have seen above (Figure 2). However, it also shows quite clearly that the agio did not depreciate silver all the way down, from the official Bulgarian rate to the international market rate. Despite the agio, silver coins were still coins, not just silver. They still retained a large part of the value assigned by monetary authorities and were not treated as a mere commodity even in private transactions. The agio did not deprive silver coins of all the fiduciary value granted to them by the tariff. If the agio may indeed be regarded as the consequence and measure of a lack of confidence in (and demand of) the domestic currency in relation to the external currency, the data show that the lack of confidence was far from complete.

Figure 6

MONETARY AUTONOMY IN FIXING THE BMR (RELATIVE PRICES OF SILVER TO GOLD)



Source: extrapolations from Friedman (1990) and BNB (1929).

4. Convertibility (1906–1912)

In 1906 the agio disappeared completely thanks to a favorable balance of trade, conspicuous foreign loans, abundant gold reserves and a low minting of silver coins (Trifonoff 1930: 53–54). As the agio was reduced and eventually eliminated, the BNB also managed to successfully circulate banknotes backed by gold. Until then, Bulgaria had lacked a system of central banking. Indeed, the BNB had been founded shortly after Liberation, by the provisional Russian government, two days before going out of office (Petkov 1926: 9). It was established as a State bank. However, it was not an issuing bank, but simply a deposit and discount bank. It could not issue banknotes nor provide overdraft facilities (Trifonoff 1930: 22–24).

Several attempts had been made to endow the new state with a modern central bank. Already in 1880, Russian bankers Ginsburg and Polyakov submitted the proposal for a new BNB, to be established as joint stock company, under government control, entitled to issue coins and banknotes and to sign external sovereign debt, in view of enhancing its capacity of providing capital to an ailing Bulgarian economy, in the hands of usurers. The proposal was withdrawn from the National Assembly by Finance Minister, Petko Karavelov, in fear that it would excessively strengthen Russian influence (Avramov 1999: 16–17).[6]

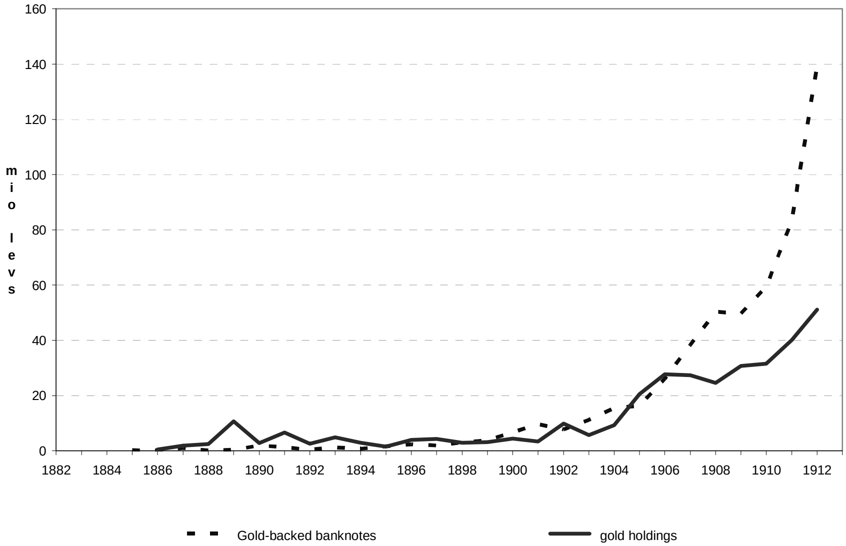
On 11 February 1883 new articles of association of the BNB were approved. BNB was to be established as a joint stock company, and authorized to issue banknotes, backed in metal for one third of their value, and convertible into gold upon request. However, the new statute was not implemented due to the lack of private investors and was eventually repealed by the Karavelov government, which went into office in June 1884 (Avramov 1999: 19–20). A General Act was eventually passed on 27 January 1885. BNB acquired the exclusive right to issue banknotes convertible into gold at request and backed by a proportional gold reserve of one third. A broad interpretation allowed credits towards foreign banks to be assimilated to gold reserves. The amount of banknotes issued should not be more than double the capital and reserves of the Bank. The Bank was authorized to give credit to merchants and manufacturers within 50,000 levs through 'special' current accounts, to lend on mortgage for one year and to lend to the general councils, to municipalities and to rural banks (Petkov 1926: 10).[7]

[6]BNB was put under state ownership by the Karavelov government, to rebuff Russian attempts to control Bulgarian banks and railways (Crampton 2005: 94).

[7]The reform was inspired mainly by the statute of the Bank of Greece (Trifonoff 1930: 32; see also Avramov 1999: 27).

Figure 7

GOLD-BACKED BANKNOTES ISSUED AND GOLD RESERVES AT BNB (THOUSANDS OF LEVS)



Source: BNB (1929).

Hence, in 1885, the first Bulgarian banknotes were put into circulation. They were initially of high denomination, from 20 to 500 levs. (Petkov 1926: 21) Circulation of banknotes initially met with a strong resistance on the part of the public, due to the memory of depreciating paper money under Turkish rule.[8] Moreover, banknotes were immediately converted into gold by speculators, who then brought the gold abroad, converted it into silver at the international market bmr, and brought the silver back into Bulgaria, to have it minted and evaluated at the more favorable bmr. This arbitrage exerted an upward pressure on the domestic bmr, resulting in an increase of the agio. On the other hand, the persistence of the agio was regarded by the Bank as the main obstacle against the circulation of banknotes (Trifonoff 1930: 37–39). In 1888, the Bank issued banknotes of lower denominations, of 5 and 10

[8]After a failed attempt on the part of the Turkish government, the Ottoman Bank had been created in 1864, with the purpose of issuing banknotes. Yet this attempt to circulate paper money had not been more successful (Trifonoff 1930: 20).

levs, in view of expanding their use. However, circulation of banknotes remained low. They were accepted at a premium (agio) against silver coins and hence hoarded (Petkov 1926: 21–22). In any case, the value of BNB banknotes did not exceed the value of the gold reserves, and they did not add significantly to the monetary base, until 1906 (Figure 7).

In 1890, BNB governor and directors participated in a special committee, chaired by the Finance Minister, and proposed the adoption of the gold standard, on the basis of the following provisions: 1) limitation of silver coinage below 8 mio levs legal limit; 2) exchange of silver into gold at BNB against commission; 3) establishment of a 1 mio levs fund for the exchange; 4) provision of further funds by the Treasury. The Ministry of Finance failed to comply with its commitments (1 and 4), and the proposal had to be dropped. Again in 1893, on February 3, a BNB report on coinage urged the Ministry of Finance to establish a gold standard and to withdraw excess 5 levs silver coins from circulation. Losses to the Treasury would be compensated by broader issue of gold-backed banknotes and reduced interest rate. (Avramov 1999: 39) Finally, in 1897, given the rise in agio and the depletion of gold reserves in an effort to contrast it, the BNB called for the abandonment of bimetallism and the adoption of the gold standard. (Trifonoff 1930: 41) However, the measure could not be implemented until 1906, when the agio had eventually receded and gold-backed banknotes were successfully circulated.

This inaugurated the third and most modern stage of Bulgarian money in the pre-war period. It complied with the principles of the gold standard, which was becoming the worldwide standard for the construction of sound and integrated monetary regimes. Despite the fact that it was represented and celebrated as the ultimate truth in money matters, it was, in fact, only a peculiar system with its own distinctive characteristics, which would eventually prove crucial for its demise. According to this peculiar rule, the international money was gold and the national money was paper. As the old monetary authority had consisted in the faculty of issuing a tariff that defined the variable relations between internal and external money, the new monetary authority consisted in the faculty of issuing a domestic money (banknotes) upon the warranty of its fixed relationship with the international money (gold). The relevant rate between internal and external money became the exchange rate between the lev and foreign currencies.

Both the value and the metal content of the currency were now irrevocably fixed, in terms of an unalterable parity. The unit of account was identified with the means of payment. The national monetary authority was deprived of the faculty of assigning and modifying the value of the currency. Any discretion in this respect was revoked. At the same time, also the agio disappeared.

Was it the issuing of banknotes that put an end to the agio, or was it the end of the agio that allowed to issue banknotes? According to Petkov, the agio was responsible for delaying the widespread use of banknotes as a means of circulation. On the other hand, the same author also states that it was by assuring gold convertibility of banknotes that the BNB finally managed to drastically reduce the agio in 1902 and to eventually get rid of it in 1907 (Petkov 1926: 22–29). Something similar happened throughout Western Europe, where, as Bloch states, monetary alterations through the tariff eventually ended when paper money was issued and circulated. Bloch has no doubt: it was this new form of money, and the possibility of increasing its quantity according to the needs of domestic circulation, that allowed monetary authorities to refrain from other, less expedient policies, such as the alteration of the tariff (Bloch 1954).

One must not think, however, that the end of the tariff meant the end of monetary authority and discretion as such. Certainly, under the new regime, the relation between national and international money was fixed at par, by a law of convertibility that was conceived almost as a law of nature, as if the identification between money and metal (of a specific fineness and weight) were an eternal truth that had simply awaited to be discovered. In fact, however, the relation between money and metal, between banknotes and reserve, between internal and external money, continued to be a matter of authority, and hence of confidence. The maintenance of the metal parity relied on the fiduciary bond of the convertibility promised by the issuer, which in turn depended on the liquidity of his reserves, and hence on the overall trend of the trade balance and of the public budget, and ultimately on the supply of foreign loans and on the correct functioning of liquid markets.

Even in this regime a lack of confidence was possible. On 10 October 1912, five days after the outbreak of the First Balkan War, a decree suspended the limitations on government loans by the BNB and consequently the convertibility of BNB banknotes (Trifonoff 1930: 59).[9] By 1914, gold and silver coins had disappeared, leaving only paper money in circulation. Lack of confidence in the excess paper money would show after the end of the war, not perhaps in the form of an agio, but in the form of an internal and external depreciation of the currency. And, despite the purported automatism of the gold standard, the discretion of monetary authorities turned to be essential for an active money management by changing, not the tariff, but the discount rate or the reserve ratio.

[9] According to Dimitrova-Ivanov (2008: 419), at this date, convertibility was suspended only de facto, and it was not suspended de jure until 3 January 1919.

5. Open Questions

The three different regimes are mutually exclusive. They respond to irreconcilable principles. The passage from one to the other is doomed to appear chaotic and to involve a discontinuity. What decides the passage from one set of rules to the other? Can the 'institutional change of the monetary regime' be seen as 'a result of the fight of economic agents', and particular of the struggle between creditors and debtors (Nenovsky 2002: 21–22)? Or is the monetary regime the framework for this fight, and hence a dimension that necessarily precedes it? How can the establishment of a monetary regime be interpreted, if not as the outcome of a struggle for survival or for power?

Perhaps the form of a monetary system is not decided by the same forces that can and will legitimately come into play once the system is established. To establish a monetary system means to determine the form of monetary authority and responsibility. It implies a series of decisions concerning various aspects that cannot be addressed systematically here, but have emerged through the course of this story. To establish a monetary regime means answer a series of questions that can only be briefly evoked here.

Is it better to identify or to distinguish internal and external money? The problems that the US dollar has had to face, ever since the system of Bretton Woods was interpreted as a dollar standard, in order to reconcile its status of national and international currency, should discourage other currencies from taking the lead and encourage the international community to consider if it is really desirable that any currency should perform simultaneously the two functions.

Ought the exchange rate be determined by law or by the market? Within the broad taxonomy of exchange rate regimes envisaged by the IMF, adjustable pegs seem to be the least fashionable. The systems actually implemented tend to polarize at the opposite ends of the scale: most rates are either fixed or flexible. In either case, the possibility of defining and redefining the exchange rate by law seems to be ruled out: if it is not fixed, it is set by the market, and all the authorities can do is try to influence the operation of market forces by announcements or direct intervention. It is common wisdom that authorities are not able to fix exchange rates autonomously. History shows, however, that the monetary system can be designed so that national authorities are not only allowed, but required to define the exchange rate (and this does not mean that they can do so arbitrarily, but on the contrary that they are held responsible for their decision).

Is a rule preferable to discretion? The question is relevant in relation not just to what we are accustomed to considering the key variables of monetary policy, but also to exchange rates. For centuries before the establishment of the gold standard, the tariff was the main lever of monetary policy, like today the discount rate. That the issue is not settled and the option remains open is confirmed, not only by the proposals in this sense advanced by Keynes in the interwar period, but also by the fact that this option was adopted, at least de jure, in the original Bretton Woods system of adjustable pegs. It is questionable whether even the key exchange rates today are in fact determined by market forces.

Is even the dichotomy between national and international money adequate to cover all possible options? Must 'optimal currency areas' be either national or supranational? Could they not be also infranational, regional, local? Must currency areas be intended necessarily in geographical terms? Could it not be conceivable to define a currency area in functional terms, reserving different currencies for different functions? Would it not be possible for different currency areas to coexist, rather than to compete, fulfilling different, complementary tasks? Is it not conceivable to maintain, within one geographical, maybe supranational, monetary area, a certain number of geographical (regional or local) sub-areas, together with several functional sub-areas (with different currencies, e.g., for current account and capital account)?

References

Avramov (1999); 120 Years Bulgarian National Bank: 1879–1999, Sofia: BNB.

Avramov (2006); 'The Bulgarian National Bank in a Historical Perspective: Shaping an Institution, Searching for a Monetary Standard', in: Avramov and Pamuk, ed., Monetary and Fiscal Policies in South-east Europe. Historical and Comparative Perspective, Sofia: BNB, pp. 93–108.

Bloch (1954), Esquisse d'une histoire monétaire de l'Europe, Paris: Colin.

BNB (1929); Jubilee collection of the Bulgarian National Bank, Sofia: State Print (*in Bulgarian*).

Christoforoff (1946); Bulgarian Banking: Historical Development, Sofia (*in Bulgarian*).

Crampton (2005); A Concise History of Bulgaria, 2nd ed., Cambridge: Cambridge University Press.

De Cecco (1974); The International Gold Standard: Money and Empire, London: Blackwell.

Dimitrova-Ivanov (2008); 'Bulgaria', in: Mooslechner and Gnan, ed., The Experience of Exchange Rate Regimes in Southeastern Europe in a Historical and Comparative Perspective, Vienna: OeNB.

Einaudi (2006); 'The Theory of Imaginary Money from Charlemagne to the French Revolution', in: Einaudi, Faucci and Marchionatti, ed., Luigi Einaudi. Selected Economic Essays, London: Palgrave Macmillan, pp. 153–181.

Fantacci (2005); Complementary Currencies: a Prospect on Money from a Retrospect on Premodern Practices, Financial History Review 12.1, pp. 43–61.

Friedman (1990); The Crime of 1873', The Journal of Political Economy, Vol. 98, No. 6, Dec., pp. 1159–1194.

Galbraith (1975); Money. Whence it Came and Where it Went, Boston: Houghton Mifflin.

Gnjatovic (2006); 'Introduction of Limping Gold Standard in the Principality of Serbia' in: Avramov and Pamuk ed., Monetary and Fiscal Policies in South-east Europe. Historical and Comparative Perspective, Sofia: BNB, pp. 45–66.

Helleiner (2003); The Making of National Money. Territorial Currencies in Historical Perspective, Ithaca New York: Cornell University Press.

Kiosseva (2000); History of the Monetary Crisis in Bulgaria, Sofia: Economic University Press (*in Bulgarian*).

Kuroda (2007); The Maria Theresa Dollar in the Early Twentieth-century Red Sea Region: a Complementary Interface between Multiple Markets, Financial History Review, 14.1, pp. 89–110.

Kuroda (2008); What is the complementarity among monies? An introductory note, Financial History Review, 15.1, pp. 7–15.

Lazaretou (2005); The Drachma, Foreign Creditors, and the International Monetary System: Tales of a Currency during the 19th and the early 20th centuries, Explorations in Economic History, 42, pp. 202–236.

Nedelchev (1940); Monetary affairs in Bulgaria: 1879–1940, Sofia (*in Bulgarian*).

Nenovsky (2002); Improving monetary theory in post-communist countries. Looking back to Cantillon, Discussion Paper 28, Sofia: BNB.

Officer (2008); Gold Standard, EH.Net Encyclopedia, http://eh.net/encyclopedia/article/ officer.gold.standard.

Petkov (1926); Prix, circulation et change en Bulgarie de 1890 a 1924, Paris : Jouve & C.

Popoff (1920); La Bulgarie économique, Sofia: Imprimerie de la Cour.

Radovanovic (1998); 110 Years of the National Bank, Belgrade : Institute for Manufacturing Banknotes and Coins.

Redish (2000); Bimetallism: an Economic and Historical Analysis, Cambridge: Cambridge University Press.

Sojic and Djurdjevic (2006); National Bank of Serbia 1884–2006. Establishment and beginning of operation, in: Avramov and Pamuk ed., Monetary and fiscal policies in South-east Europe. Historical and comparative perspective, Sofia: BNB, pp. 141–156.

Trifonoff (1930); La banque nationale de Bulgarie et l'histoire de sa politique monétaire, Lyon: Bosc Frères.

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