Financial Improvisations during World War I in France: Issues of Liquidity

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ABSTRACT

This article highlights the improvisations in financial management during World War I. The option of a moratorium on bank deposits to the detriment of rediscount reflected a refusal to allow the *Banque de France* to fulfil its role of lender of last resort. The subsequent choice of a preference for a floating debt laid the foundation for a loss of control over the money market by the French monetary authorities. The article questions the relationship of WWI contemporaries with liquidity.

1. Introduction

On the monetary and financial front, the war had been firmly anticipated. The so-called gold policy conducted by the *Banque de France* from the 1890s onwards was aimed at consolidating gold reserves with the perspective of taking revenge on Germany[1]. On the eve of the conflict, this strategy was intensified: deposits rose from FF3.2 billion in January 1913 to FF4.1 billion by July 1914. The more operational aspects of the monetary consequences of war were also taken on board. A circular dated January 6th, 1906, was sent to branch managers indicating the measures to be taken in the event of conflict, particularly regarding demands for gold conver-

[1] R. Robin-Vignat, *La Banque de France et l'Etat (1898-1920). La politique de gouverneur Pallain*, Thèse, Paris, Université Paris X, 2001.

sion. The equivalent of FF1.5 billion in 20 and 5 franc notes was printed to cope with a likely hoarding of cash at the outbreak of war. At the financial level, a convention drawn up between the French State and the Bank in November 1911 included terms whereby, at the time of general mobilization, the central bank would grant an advance of FF2.9 billion to the French Ministry of Finance.

In financial circles, the pundits were predicting a short war, as in 1870. The French military were supremely confident in their plan of action. For their part, economists were saying that, at all events, the war could not last long owing to the limited sums of financial resources available to each of the warring parties. They calculated that the maximum debts that the national economy could bear would be FF15 billion, or at the very most, FF20 billion. At the time, no-one ever even imagined that the conflict was to last 51 months at a cost that proved to be 6 to 8 times greater. The evaluation of war expenditures and forms of financing have been covered by a number of works and have been established in clear terms (see H.E. Fisk[2], H. Truchi[3], Germain Martin[4]). French spending between August 1914 and December 1918 amounted to FF158.5 billion (just over three times the GDP of 1913 evaluated at FF49.6 billion), a figure that was split between actual war expenditures, of around FF130 billion, and "other administrative expenses".

In the long term, the French authorities under-estimated the cost of the war and, in the short term, the extent of misgivings shown by savers faced with the imminence of war. In particular, this was reflected by a wave of panic leading to a run on banks which, in a state of emergency, questioned the role of the Banque de France as lender of last resort.

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[2] H.E. Fisk, *French Public Finance in the Great War and Today*, Bankers Trust Co., New York, 1922.

[3] H. Truchi, *Les finances de guerre de la France*, PUF, Paris, 1926.

[4] Germain-*Martin, Les finances publiques de la France et la fortune privée (1914-1925)*, Payot, Paris, 1925.

The aim of this article is, by using archival material, to underline the levels of improvisation in the conflict's monetary and financial management, with the focus placed on the relationship between contemporaries and the notion of liquidity. What answers did they provide to the liquidity crisis of summer 1914? Why did they fear the surge in direct advances and levels of currency in circulation? Did they analyse the consequences of the growth in the floating debt for the capacity of the Banque de France to control the money market?

Our approach is three-phased. The first section analyses the conduct of authorities during the liquidity crisis of summer 1914. The second section shows the dangers of having chosen the floating debt as a means to finance spending. The final section shows how the Banque de France lost control of the money market during and after the war.

2. The difficulties encountered by the French monetary authorities in coping with the liquidity crisis on the eve of the conflict

2.1 *Financial tensions and a run on the banks*

From November 1913, the French government knew that war with Germany was imminent. On the Paris financial market, the beginning of 1914 was marked by a clear downward trend. From May onwards, a wave of suspicion emerged in relation to banks where, according to H. Bonin "the interbank market toughened"[5] and rumours were rife. There was a run on the *Société Générale*, the bank that symbolized international banking expansion in the Balkans and the Germanic regions of Europe. In Bordeaux, the Samazeuilh banking and trading house folded. After the assassination of Austrian Archduke Franz-Ferdinand in Sarajevo on the 28th of June, 1914, the

[5] H. Bonin, "Les quatre crises de la Société Générale (1886-2008). La crise d'un modèle économique au cœur des crises conjoncturelles", in *Revue Historique*, (4), n. 668, 2013, pp. 905-933.

threat of war hung more heavily than ever and the financial markets reacted sharply to the growing tensions between nation states. Share prices fell heavily on the Paris stock exchange: between July 3rd and August 7th, the drop was around 10%[6]. From the 25th of July onwards, misgivings turned into a full-blown run on banks. According to Germain Martin, "cash withdrawals were made at all credit institutions and banking companies"[7]. Depositors flocked to bank counters (as rumours continued to grow, particularly regarding the financial results of the *Société Générale*)[8]. After some hesitation[9], the central bank upped its rediscounting: in the space of 6 days, from the 6th to the 27th of August, its portfolio rose from FF1.58 to 3.04 billion. At the Banque de France, worries grew over the franc's creditworthiness. The issue of paper money rose to the extent where the bank asked the Ministry of Finance – on the 29th of July – to raise the ceiling for currency in circulation (see graph 3).

On the 30th of July, in order to cope with the consequences of cash hoarding and facilitate transactions, the Banque de France, by virtue of the Act of August 12th, 1870, decided to resume the issue of 5 and 20 franc notes[10]. A stock worth FF1.5 billion of these low denomination notes had been printed earlier and distributed to branches.

Likewise, a check was put on refinancing operations, but also and more importantly, to respond to the rise in the discount rate decided by the Bank of England to protect its gold and silver reserves,

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[6] D. Le Bris "Wars, inflation and stock market returns in France, 1870-1945", in *Financial History Review*, vol. 19, 3, 2012, pp. 337-361.

[7] Germain Martin, *Les problèmes du crédit en France*, Payot, Paris, 1919, p. 139.

[8] According to Germain Martin, at the beginning of June, deposit withdrawals reached FF250 million. On June 8th, a communiqué from the Ministry of Finance sought to reassure the general public as to the quality of the bank's portfolio (see Bonin, 2013, for further details).

[9] A. Liesse A "La Banque de France, hier, aujourd'hui, demain", in *La Revue Hebdomadaire*, September 23, 1916.

[10] To judge the relative size of these sums, it should be noted that in early 1914, the daily wage "for certain categories of worker" in Paris was FF8.3 francs, and FF4.7 in the provinces.

Governor Georges Pallain[11] proposed that the Banque de France raise its own interest rate from 3.5% to 4.5% on July 30th, then from 4.5% to 6% on the 1st of August.

Coming on top of all these emergency measures, the Act of August 5th introduced the inconvertibility of the franc and raised the ceiling for currency circulation to FF12 billion (Fig. 1). At the same time it authorized the possibility to introduce future increases by simple statute.

As soon as the convertibility of the franc into gold was suspended, the rise in rates was no longer of any real use. Imitating once again the Bank of England, the central bank lowered its discount rate to 5% on the 20th of August. The rate was kept at this level until April 1920.

2.2 *A moratorium on bank deposits or rediscounting… the issues of choice for a central bank*

In an environment of uncertainty and money hoarding, obtaining loans became extremely difficult and the country was hit by a liquidity crisis. The liquidation of forward transactions scheduled for the 31st of July (transactions that could be settled only through obtaining credit) became impossible and was postponed for one month[12]. The continuity of payments threatened to be seriously jeopardized. As a result, a moratorium on commercial paper was proclaimed on the 31st of July. However, the Banque de France continued to discount these bills. A part of its portfolio was thus lastingly immobilized. In the bank's balance sheet, the 'deferred bills

[11] Georges Pallain had been at the head of the Banque de France since 1898, a man whose will and character had enabled the bank to assert its operational autonomy in the early 20th century. The bank successfully overcame serious crises such as, for example, that of 1907 (to learn more about Governor Pallain, see Vignat, 2001).

[12] The definitive liquidation of forward transactions took place on September 30th, 1915, thanks basically to the granting, by the Banque de France, of two lines of credit to the Chamber of Stockbrokers: one of FF200 million in November 1914, the other of FF50 million in September 1915. This support was granted at the request of the Ministry of Finance.

of exchange' heading hit a peak in early October 1914 (FF4.47 billion). The goodwill of debtors, a number of measures taken by the central bank itself (for instance the splitting of reimbursements or the recovery of sums due at domicile) plus the partial lifting of the moratorium[13] led to the gradual lowering of this heading: one year later, in July 1915, it was no more than FF2.1 billion.

To snuff out the run on banks and get a grip on the liquidity crisis, the Statute of August 2nd partially froze deposits and current accounts (withdrawals were limited to FF250 and 5% of surplus)[14]. The moratorium narrowly averted a number of banks from going under, most notably the *Société Générale*, which always seemed to be under the most serious threat despite aid from a consortium of banks (see H. Bonin).

The employment of this strategy had major consequences for the Banque de France. It was being offered the opportunity to participate in what appeared to us a century later to be the era of "Modern Central Banking", in the wake of work by Singleton[15], by playing the role of lender of last resort (LLR) in the specific context of a country going to war. The Banque de France had already filled the role of LLR in the past, in 1889, by granting, at the request of the Ministry of Finance, a loan of FF100 million to avoid spreading the difficulties encountered by the *Comptoir d'Escompte*, an establishment involved in a bankruptcy scam (for more details, see Hautcoeur, Riva & White)[16]. In 1914, it was no longer a question of dealing with the fai-

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[13] The statute of December 23rd, 1915 put an end to the moratorium for debtors having contracts with the State. Likewise, the statute of December 29th, 1917 and the Act of July 26th, 1918 ended the moratorium for debtors having made exceptional profits from the war and those residing in inland regions or who continued their operations.

[14] Depositors employing people for the exercise of an industrial or commercial profession had the possibility of withdrawing sums equivalent to the amount to be paid in wages each week or month; they were obliged to justify the use of this money by producing employee payment statements. The Act of August 2nd was complemented by a Statute of August 9th, which extended the relaxation of conditions.

[15] J. Singleton, *Central Banking in the Twentieth Century*, Cambridge University Press, Cambridge, 2010.

[16] P.-C. Hautcoeur, A. Riva, E. White,*Bagehot on the continent? How the Banque de France*

lure of an establishment, no matter how large, but of coping with a more global liquidity crisis triggered by the concerns of depositors and owners. The Banque de France had the opportunity to implement the principles systematized by Bagehot[17] (lending to any non-liquid but solvent bank applying a penalizing rate of interest) and even to adapt these principles and imagine new solutions to help banks and the financial system. Assuming this function at the time involved the deployment of an unlimited rediscount policy. According to Germain Martin[18], the sum of FF500 or 600 million granted to establishments in the Paris marketplace would have helped to avert the moratorium on deposits. Later, Charles Rist[19] accused the Banque de France of having preferred this solution to the widening of discount. Georges Pallain denied having recommended a moratorium on deposits but it is true to say that, during and after the crisis, he employed a restrictive strategy discount-wise for fear of creating excessively high levels of liquidity.

Consequently, the moratorium introduced a form of bank blocking. Even though the measure was lifted on the 1st of January, 1915, it was probably to have the lasting effect of fuelling savers' deep misgivings over banks: after the war, the level of saving deposits never recovered their 1913 levels. According to Alain Plessis[20], who retraced the evolution of deposits with the four main deposit banks, on a like-to-like basis deposits that amounted to 5,699 million francs in 1913 stood at only 2,800 million in 1918 and at 2,360 million in 1919.

The moratorium doubtless had something to do with the failure

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Managed the Crisis of 1889, Seminar historic mission of the Banque de France, October 9th, 2013.

17 W. Bagehot, *Lombard Street: A Description of the Money Market*, John Murray, London, 1919, 1st edition 1873.

18 Quoted by Robin-Vignat, 2001.

19 Ch. Rist, *Histoire des doctrines relatives au crédit et à la monnaie depuis John Law jusqu'à nos jours*, Sirey, Paris, 1938, p. 447.

20 For a clearer perspective on the influence of the Great War on banking activity, see A. Plessis, "Les banques, le crédit et l'économie", in M. Levy-Leboyer, J.-C. Casanova (dir.), *Entre l'Etat et le marché*, Gallimard, Paris, 1991, pp. 331-364.

of the loan of FF805 million issued in redeemable annuities by the Ministry of Finance from the 7th of July, 1914. At the beginning of September, less than half of this amount had attracted investors[21]. This failure was symptomatic of a difficulty encountered in coping with the outbreak of war and of an under-estimation of the misgivings and uncertainty in the run-up to the conflict.

3. The designated choice of the floating debt to finance the war

In all, French government spending between August 1914 and December 1918 rose to FF158.5 billion, a figure that includes FF130 billion for war expenditures and "other expenditures" relating to public administration. French public spending was financed by the three classic channels of taxation, loans and money creation through direct advances from the Banque de France. The extent of each of these ways and means of financing is shown in the table below:

TABLE 1
Ways and means of financing French government spending, 1914 to 1918

	In billions of current-value francs	In % of total resources
Taxes	23.2	15
Short- and medium-term debt	56.0	35
Long-term debt	35.4	22
Foreign debt	27.3	17
Central Bank Direct advances	16.7	11

Source: recreated by the author. The due date for short- and medium-term debt was lower than or equal to ten years; that for the long-term debt was in excess of ten years.

Several outstanding facts become apparent when studying French financial stewardship at this time. In the first place, the tax

[21] For further details on this point, see G. Lachapelle, *Le crédit public*, Berger-Levrault, Paris, 1932, tome 2, pp. IX-XXII.

receipts seem to be inadequate regarding the country's available resources. Secondly, it appears that the authorities resorted to loans on a massive scale, essentially short- and medium-term debt (Treasury and Defence Bills), without considering the implications for control of the money market. Finally, the rise in direct advances from the Banque de France to the State constituted an unprecedented money-market upheaval (even though the said advances represented only a little more than 10% of expenditures) and were a cause for concern at the Banque de France.

3.1 Inadequacy of the tax effort

In France between 1914 and 1918, taxes covered 15% of spending during that period, i.e. a little less than in Germany (19% according to Balderston[22] and Ritschl[23]) and much less than in the United States (28%) or in Great Britain (28-29%). It would seem that the tax effort in France could have been more substantial. The example of Great Britain is an interesting point of comparison. For a financial effort as significant as that in France (the budget rose from £ 362 million for the 1914-15 fiscal year to £ 2.5 billion in 1918-1919, i.e. multiplied 6.9 times over, whereas in France the figure was 6.2, rising from FF8.9 million to FF55.2 billion), the British authorities asked more from their tax-payers: between 28 and 29% of expenditures were covered by taxes. From the outbreak of hostilities, Lloyd George – the then Chancellor of the Exchequer – increased fiscal pressure by raising, most notably, levels of income tax. However, the scope of this comparison is limited by the fact that hostilities did not occur on British territory and that the country's GDP rose by 13% between 1913 and 1918, whereas during the same period in France GDP fell by over 23%.

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[22] T. Balderston, "War finance and inflation in Britain and Germany, 1914-1918", in *The Economic History Review*, vol. 42, (2), 1989, pp. 222-244.
[23] A. Ritschl, "The pity of peace: Germany's economy at war, 1914-1918 and beyond", in Broadberry, Stephen and Harrison, Mark (eds.), *The economics of World War I*, Cambridge University Press, Cambridge, 2005, pp. 41-76.

Having said that, in France the massive subscriptions to Defence Bills coupons clearly demonstrated that considerable cash resources existed within the country. In this context, heavier taxation would have been a substitution in the allocation of available resources, from savings to tax and not from consumer activity to tax. Lack of political will and the weakness of successive governments explain this misguided error in French financial policy during the war.

At the beginning of the conflict, Ribot (the Minister of Finance between August 26th, 1914, and March 20th, 1917) was slow to propose an agenda with which to increase budget revenues. He thus deferred the application of income tax. After the event, he justified his action by invoking the fact that the majority of tax controllers had been mobilized and, more fundamentally, by emphasizing that any tightening of fiscal pressure would have risked producing a negative influence on the morale of the French people.

The Minister of Finance thus waited until 1916 before resorting to income tax. The yield was low, bringing in not even a billion francs between 1916 and 1918. Still in 1916, in May, Ribot proposed a wide-ranging tax reform, which envisaged the doubling of all existing direct tax contributions. The project, however, met with a hostile reception in the Lower Chamber, whose members had been elected specifically to work on a programme aimed at completely overhauling direct taxation. Until the end of the war, only isolated tax increases were passed by parliament. For instance, a tax on war profits – very difficult to collect – was adopted on the 1st of July 1916. Owing to wide-ranging tax evasion, it brought in, in all, a little less than FF1.5 billion. The Act of December 31st, 1916, introduced a slight increase in income tax, a tax on profits and the tax on marketable securities. Other hikes followed in 1917 and 1918 but their impact was limited.

The French tax effort could have been more consequential. Earlier measures, wider tax bases, higher tax rates and above all a stronger political will would have made it possible to increase receipts and to reduce by the same amount the level of floating debt at the end of the war.

3.2 *The floating debt and its hazards*

In all, almost three-quarters of French spending was covered by loans: 35% through short- and medium-term debt, 22% by long-term debt and 17% by foreign debt.

The prospect of a short war led the government initially to give preference to floating debt. The conditions for the creation of National Defence coupons are testimony to the reality of the financial improvisation that prevailed at the beginning of the war. The idea behind this issue came from Alfred Neymarck (in "Le Rentier") and it was taken up by Governor Pallain, who passed it on to Ribot: "*The idea appealed to me, I grew to like it, even though all around me, civil servants and even outside with financiers, it met only with scepticism or indifference*"[24]. Since they were created in 1824 under the name "royal coupons", subscription to these coupons had been reserved only for banks and institutional bodies (Chambers of Commerce, Railway Companies…). The statute of September 13th, 1914, stipulated that these coupons could now also be acquired by the public at large. An astute reader of the memoirs of Thiers[25], Ribot gave them the name "Bons de la Défense Nationale" (National Defence Bills). They could serve as a means of payment for State requisitions. With a nominal and individual value of FF100, 500, 1000 francs and even higher[26], these coupons were issued with maturities of 3, 6 and 12 months: short maturities that were testimony to confidence in victory, but which also carried serious risks in terms of controlling short-term credit transactions. In the event of a wide dissemination of coupons, their renewal (or demand for reimbursement) would be balanced against the conditions of discount and, in an extreme case, the floa-

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24 A. Ribot, *Lettres à un ami*, Bossard, Paris, 1924, p. 27.

25 In attendance in Bordeaux alongside the government, Octave Homberg notes in his memoirs: "I remember that M. Ribot, caught up in a meeting, had me wait in his own private office, and that I noticed on his table, not without surprise, the memoirs of M. Thiers", *Les coulisses de l'histoire, souvenirs 1898-1928*, Fayard, Paris, 1928, p. 121.

26 The Minister of Finance kept the possibility to authorize the printing of denominations of 10,000 francs and higher.

ting debt might have paralysed the Banque de France's discount policy. These coupons bore interest of 5% payable upfront. This yield, high for that day and age (or at any rate before inflation raised its head), was, to quote the Minister of Finance, "*a condition for success if we wished such success to be quick and considerable*"[27]. In addition, because there were no alternative investments, the demand from savers was very high. The subscription was quickly successful: in November 1915, FF15 million. In September 1916, the circulation of these coupons had practically reached the figure of FF9 billion. By the end of the war, the amount of coupons in the hands of the general public was in excess of FF30 billion. But already, at that time, the sword of Damocles – in this case the threat of non-renewal – was hanging heavily over the coupon and fund managers. The Treasury was indebted to the French people's confidence in the recovery of the franc for not having had to cope with massive demands for reimbursement. If this had not been so, the Treasury would have been forced to resort to advances from the Banque de France to avoid suspension of payments.

The launch of perpetual annuity loans, also known as consolidation loans, helped to check the rise in floating debt, as one of their characteristics was that they were payable not only in cash but also in National Defence Bills, bonds and even in other forms of securities (Treasury bonds, 3% annuities, 3.5% amortizable annuities and also Russian coupons for the 1918 loan). The payment of annuities in bonds translated to an equivalent reduction in the amount of the floating debt.

The remainder of the 'short- and medium-term debt' heading in table 1 (the figure of FF56 billion) was made up of "traditional" Treasury coupons and especially National Defence bonds. The bonds were created by the Act of February 10th, 1915, as the conflict became bogged down in trench warfare and looked like lasting for much longer than anticipated. They were 5% bonds, exempt from tax, pa-

[27] A. Ribot, *Ibid.*, p. 30.

yable per 6-month period and upfront, with the characteristic of being less liquid than National Defence coupons in that maturity could be as long as 10 years.

The increase in the amount of floating debt and the prolongation of hostilities then prompted the Ministry of Finance to issue longer-term loans. Four major consolidation loans were launched between 1914 and 1918 (but only the first three contributed to financing the war effort). The inaugural loan came rather late on at the end of 1915. Until then, the issue of National Defence coupons and bonds had sufficed to keep the Treasury's coffers flowing. In addition, prior to the issue, Ribot felt it necessary to go ahead with the definitive liquidation of forward transactions (done on September 30th, 1915). The Ministry offered savers 5% annuities at the effective rate of 5.73% redeemable only from 1931 onwards. An active propaganda campaign, stressing the civic responsibility of the French population, allowed the Treasury to collect new resources worth over FF6 billion and to consolidate the public debt for an equivalent sum.

TABLE 2
Results of consolidation loans made between 1914 and 1918 (in billions of current value francs)

	5% annuity loan 1915	5% annuity loan 1916	4% annuity loan 1917	4% annuity loan 1918
Date of subscription	Nov. 25-Dec. 15	Oct. 5-25	Nov. 26-Dec. 16	Oct. 20-Nov. 25
Effective rate	5.73%	5.71%	5.83%	5.68%
Cash	6.284	5.425	5.174	7.240
National Defence coupons	2.244	3.693	4.582	13.263
National Defence bonds	3.316	0.956	0.449	1.412
Miscellaneous	1.463	0.008	0.004	0.248
Total	13.307	10.082	10.209	22.163

Source: Germain-Martin, *Les finances publiques de la France et la fortune privée (1914-1925)*, Payot, Paris, 1925, p. 179.

During the conflict, the Ministry of Finance repeated the operation on three occasions, at regular intervals in order to replenish the savings of the French people. Table 2 gives a summarized view of the results of all loans. While subscriptions in 1916 and 1917 were slightly down on 1915, each time at somewhere around FF10 billion, the armistice made the 1918 loan a huge success: more than FF22 billion was collected.

3.3 Direct money created via advances to the State

In conformance with the State/Bank convention of November 1911, the central bank granted an advance of FF2.9 billion to the Ministry of Finance at the time of general mobilization. As the coffers of the Treasury were empty after the loan of July 1914 had failed, the advance quickly proved to be insufficient. From September 21st, 1914, a new agreement raised the ceiling for advances to FF6 billion.

The text of this convention already set the guidelines for French monetary policy at the end of the war, as it stipulated that the government "*undertakes to reimburse, as quickly as possible, the advances made to the State by the Bank, either by way of ordinary resources from the budget, or from the first loans or from other extraordinary resources it may have available*"[28]. It also established the financial conditions applied to the other advances made during the war. The interest paid was 1% and could be raised to 3% one year after the end of hostilities. The 2% difference was to then supply a special reserve fund destined to cover the losses of the Banque de France[29].

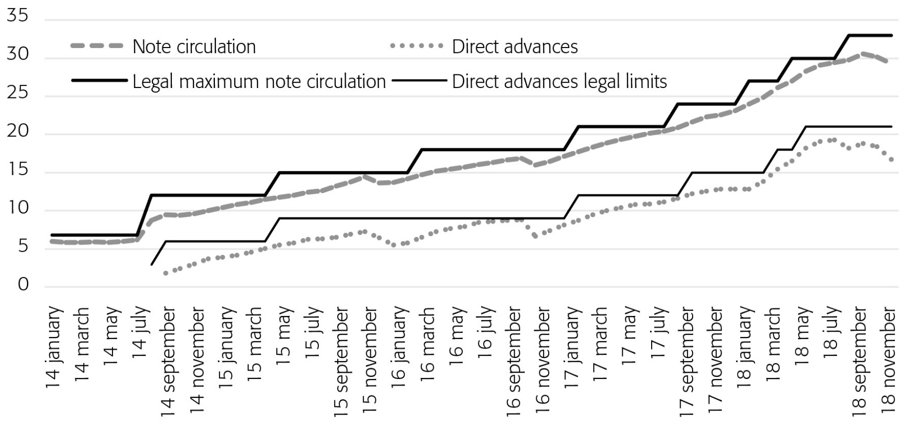
During the conflict, the ceiling for direct advances was, in all, raised on six occasions (see Fig. 1): by the end of 1918, it had reached the sum of FF21 billion. As emphasized by Felsenhardt: "*the way had been paved for the Bank by the memorable example of 1870; it knew it had*

[28] Procés verbal du Conseil Général PVCG (minutes from the general board of meeting of the Banque de France), session of September 21st, 1914.

[29] For its part, the convention of October 26th, 1917, envisaged the possibility whereby the balance of this account might be higher than the losses of the central bank: "*the surplus, in the same way as all the sums to be paid into the special account at a later date, will be written in as depreciation of the State debt, or directly to the account of the Treasury when this debt is reimbursed*". (PVCG minutes, session of October 25, 1917). This article recalls the government's intention to implement a quick return to the previous monetary order.

to provide the Treasury, for National Defence, with all the sums the latter could not obtain through taxation or loans"[30]. The graph below shows nonetheless a rather clear drop in the rhythm at which the ceiling was raised. Recourse to advances thus seems to have been relatively moderate up until 1917: Ribot, who held the portfolio of Finance Minister between August 1914 and March 1917, deliberately took great care to use this expedient most sparingly. After he left office, increases in the ceiling occurred at increasingly closer intervals. This situation was, in particular, symptomatic of the more lax financial management seen with Klotz, the Minister of Finance under Painlevé, then Clemenceau between November 1917 and January 1920. His work methods earned the Minister a number of clear warnings, leading, for example, to the following words from the socialist Thomas: "*at this rate, we are undoubtedly assured, should the war last one year longer, of irremediably compromising the creditworthiness of France*"[31].

Figure 1
Note circulation and direct advances between January 1914 and December 1918 (in billion francs)



Sources: Archives of Banque de France, bilans hebdomadaires.

[30] W. Felsenhardt, *La Banque de France de 1897 à nos jours*, Imprimerie de l'Université, Bordeaux, 1922, p. 73.
[31] National Archives, Papiers Albert Thomas, 94 AP 364, a letter from Thomas to Klotz dated July 8th, 1918.

By the time the armistice was signed, advances had risen to FF18.42 billion. While, in the light of expenditures incurred, this sum may seem small (we should remember that these advances effectively covered only a little more than 10% of spending), when we compare the figure with the money in circulation before the war (less than FF6 billion), the size of the shock becomes immediately apparent. This growth in advances naturally had the direct effect of triggering a growth in circulation: by November 1918, it had exceeded FF30 billion. More broadly, according to the calculations made by Patat & Lutfalla[32], it appears that the monetary financing of the war swelled the M2 aggregate from a little over FF15 billion pre-war to almost FF46 billion at the time of the armistice.

At the end of 1918, the ratio between gold reserves and currency in circulation was 18%. This precious metal cover was insufficient to consider re-establishing convertibility of the French franc. The counterpart of the money supply comprised an overly large share of receivables from the State: in 1918, advances represented more than 50% of the bank's assets. What is more, and notably opposed to the experience of 1870, the weight of the floating debt brought with it the threat of a crisis of no-confidence, the likely outcome of which would be the implementation of a money-creation policy. The existence of all these debts was totally incompatible with a return to the old monetary system. For contemporaries, restoring the old system involved the prior reimbursement of advances and consolidation of the debt, as they were unable to separate the question of the principle of a return to gold from that of a level necessarily equivalent to that seen before the war.

Over the war period, prices also rose quite substantially. The retail price index, from a base of 100 in 1913, reached 207 in 1918, while that for wholesale prices topped 338. For Paul Einzig, this "*rise in prices during the war was caused by the increase in demand while supply fell away; this increase was triggered by the creation of additional purcha-*

[32] J.-P. Patat, M. Lutfalla, *Histoire monétaire de la France au XX^{è} siècle*, Economica, Paris, 1986, p. 30.

sing capacity in the form of an increase in the extent of means of payment, and was rendered permanent by a corresponding increase in incomes"[33]. The growth in the extent of means of payment (which effectively aimed at financing the growing needs of the State) appears to have sparked the rise in the general levels of prices. The fact that this rise in prices occurred in a less than proportional way to the rise in currency circulation seems to bear witness to a slight growth in the demand for real money balances (it may, *a priori*, be accounted for by growing uncertainty).

4. Undermining the Banque de France's autonomy and loss of control over the money market

From the beginning of the conflict, the Banque de France asserted its authority to ensure that the "*creditworthiness of its paper money remained unshakable*"[34]. Maintaining the stability of its currency was, for the bank a duty "*to which all else must make way*"[35]. It already had sights set on a return to the former gold parity of the franc. The gold policy implemented for several decades[36] was aimed specifically at coping with the inevitable growth in the quantity of paper money at the time of the conflict, and to keep the ratio between gold reserves/currency in circulation at a high level. To achieve this objective, it also had to endeavour to contain the growth in the issue of paper money by attempting to curtail rediscount and applications for advances from the government.

4.1 Curtailing discount

When it came to creating money, at the beginning of the conflict

[33] P. Einzig, *La formation et le mouvement des prix en France depuis 1914 (formation and movement of prices in France since 1914)*, Ph.D, Rousseau, Paris, 1923, p. 36.
[34] PVCG minutes, session of August 4th, 1914.
[35] PVCG minutes, session of August 12th, 1914.
[36] See Robin-Vignat., *Ibid*.

Pallain took a number of personal initiatives designed to curtail the increase in amounts of paper money. On the 4th of August, he met with Noulens (the Minister of Finance up until the 26th of august, 1914 in the first Viviani cabinet) to promote the idea of a large-scale loan. Pallain saw in this move already the possibility to restrict recourse to direct advances from the bank, i.e. the monetary financing of the conflict. Likewise, the governor gave strict instructions to limit the discount of bills of exchange under the moratorium; he asked local senior officers to check on individual operations and to "*demand stringent justifications for the use of funds*"[37].

It is important emphasize that, between the end of August 1914 and April 1920, the discount rate remained steady at 5%, i.e. a relatively high level and strictly equivalent to that of Defence Bills. At a time when the floating debt was high, if the discount rate had been higher, agents could have sought to meet their cash needs not through discount but by demanding the reimbursement of public securities, thereby making life extremely difficult for the Treasury.

Over the following weeks, the Banque de France deployed the same stringent strategy for rediscount. It sought the ability to meet the State's financial demands and tightened its credit policy. On the 2nd of August, the General Board voted in favour of a special system for making discounts at counters, with the Bank now granting rediscount only in proportion to the payable quota of bank deposits set by the moratorium statute of August 1st. For advances on securities, it demanded fixing the use of funds for "general interest" needs. Pallain issued strict instructions to Discount Committees in their examination of guarantor signatures. For this reason, the *Société Générale* bank was refused a presentment of FF80 million in September 1914, and for a further presentment in February 1915, the argument forwarded by the Banque de France being the bank's precarious balance sheet situation (see Robin-Vignat). The war was marked by the Banque de France's low level of discount activities, as shown in the

[37] Circular note n. 895 dated August 10th, 1914, signed by Pallain, PVCG, session of August 14th, 1914.

table below. Between 1913 and 1918, French GDP fell by over 23%; over the same period the number of discounted bills of exchange slumped by nearly 80%. The level of discounts, in turn, plummeted from FF20 billion in 1913 and 18.8 billion in 1914 to just FF2.82 billion in 1915, 6.65 billion in 1916, and 9.49 billion in 1917 before recovering to FF14.58 in 1918 in an inflationary environment.

TABLE 3
Discount Operations with the Banque de France between 1913 and 1922

	Number of bills discounted in FF millions	Amount of discounts in FF billions
1913	30.04	20.00
1914	21.95	18.80
1915	2.90	2.82
1916	6.09	6.54
1917	6.63	9.49
1918	6.76	14.58
1919	8.00	15.70
1920	12.32	32.02
1921	15.34	30.79
1922	22.95	33.98

Source: *Statistique générale de la France, Annuaire Statistique*, 1922, p. 82. These figures do not take account of prolonged effects.

Pallain's strategy of giving preference to meeting the State's financial needs to the "detriment" of business was, at the outset, criticized on the Paris market and discussed within the Board. Questioned by captains of industry such as Rothschild, Heine and Wendel, who wanted the Banque de France to lend greater support to commerce and industry, Pallain replied *"the same necessities in 1870 led to the same solutions, i.e. reserving, to quote M. de Waru at the session of July 31st, 1870, the Bank's credits for the needs of our real commerce"*[38].

[38] PVCG minutes, session of August 14th, 1914.

It was, according to the Governor, the creditworthiness of paper money, and even the Bank's very existence, that would be threatened by the implementation of a more expansionist credit policy. There was to be no wavering from the line he had defined. While it was true that the discounting of bills of exchange under the effect of the moratorium harmed the liquidity of the Bank's portfolio, the stances adopted by Pallain were testimony above all else to a deep-rooted attachment to the integrity of the franc and to a somewhat dogmatic conception of the management of monetary affairs. Here, the governor's own thinking seemed to come before any economic and social reasoning.

Pallain managed rather easily to convince the General Board that it was the Bank's duty to meet the financial needs of the State while looking to contain the growth of currency circulation, resulting in caution being the watchword for rediscounting. It was important to maintain confidence in the currency and to build a prosperous future. In the minds of contemporaries, there was no doubting that, like after the events of 1848 and 1870, the franc was destined to recover its former gold parity.

Divergences gradually subsided within the Board, but clearly the powers that be were missing the point: the sums in play were low compared with the government's financial requirements. It was the latter that prompted a growth in the extent of means of payment in circulation in the economy. On the Bank's balance sheet, the 'State Advances' heading, which accounted for 2.9% of assets in 1913, rose sharply to somewhere around 30% in 1914, 40% in 1916 and 51% in 1918. To achieve its objective of monetary stability, the Banque de France had to attempt to drastically restrict its direct advances to the State. This it did not do.

4.2 Discussions around applications for direct advances

The analysis of discussions between the Banque de France and the Ministry of Finance revolving around the rise in advances gives crucial insight into the central bank's low level of autonomy and helps us to analyse the reactions of players in the face of the rise in cash balances throughout the economy.

The resistance offered by the Banque de France to applications from the Treasury was extremely low. The bank always gave a favourable reply to applications from the Ministry of Finance. Ribot noted that "*M. Pallain was readily worried about what would become of the bank in this major crisis; but he felt very deeply about what the bank owed the State, and after a little token resistance and a few pleasantries, he always ended up by consenting to our applications*"[39]. Jeanneney described his resistance as "*timid, discreet, indecisive*" and observed that at the Treasury Ribot "*knew how to get himself obeyed*"[40]. The tone employed by the Minister was indeed rather directive: in September 1914, he wrote to Pallain: "*the time has come to envisage the necessity of raising the amount of this advance to a higher figure. Indeed, no-one could ever believe that a sum of 3 billion (…) would suffice to cover war expenditures, beyond the start-up of the campaign and spending over the first few months… The war looks like being long and it is to the Banque de France that we must have recourse to sustain it until the very end*"[41]. There is no perceptible break in the attitude of the Banque de France; Thierry and Klotz, after Ribot, were to obtain satisfaction in the same way. The central bank's resistance came down simply to suggesting recourse to a public loan. But it was the Ministry of Finance alone that defined the guidelines for its financial policy. As proof, Pallain's appeal of August 4th, 1914 went unheeded, and the first loan was launched only at the end of 1915.

Even though monetary power was in the hands of the Ministry of Finance and while, for the time being, the objective of monetary policy was to support the war effort, a consensus prevailed over the future return of the franc to its former parity. Successive Finance Mi-

[39] A. Ribot, *Ibid.*, p. 20.

[40] J.-N. *Jeanneney, François de Wendel en République, l'argent et le pouvoir 1914-1940*, Seuil, Paris, 1976, p. 32.

[41] Letter from Ribot to Pallain dated September 18th, 1914, PVCG minutes, session of September 19th, 1914.

nisters asserted their determination to work for a post-war restoration of the franc's former gold parity as quickly as possible. This involved, of course, the return of advances. Very early on, Alexandre Ribot stated that "*when a crisis such as that we are seeing now forces the State to have recourse to the Bank, it can safely do so only providing it returns to the previous state of order as soon as possible*"[42]. His immediate successor, Joseph Thierry, spoke in exactly the same terms: "*one of our first concerns, when we liquidate the situation caused by the war, will be to refund to the Bank the large sums it has advanced us since the declaration of war*"[43]. The central bank naturally would have liked to have known immediately under which conditions these reimbursements might be made, but as Ribot noted: "*That was obviously impossible*"[44].

Meanwhile, the Treasury on the rue de Rivoli indicated its commitment to restoring the old order. As early as 1915, the government took measures designed to strengthen the Banque de France's gold and silver reserves. Likewise, the reduction in the Treasury's loan account with the Bank, supporting major public loans, was testimony to its intention to reduce as far possible currency in circulation: at the end of 1918, for example, cash flowing into the Treasury's coffers helped to lower liquid money circulation by almost a billion francs.

This clearly-demonstrated consensus helps to explain the surprising passivity seen in the Banque de France.

In 1870-1871 in a similar context, the central bank had shown strong resistance to the government's applications for liquidity. This time, however, their attitude was much more conciliatory. So why the change? What were the factors likely to explain this retreat?

The monetary and financial events of the 1870s were still very fresh in the memories of those running the Bank. The oldest member

[42] Letter from Ribot to Pallain dated September 18th, 1914, PVCG minutes, session of September 19th, 1914.
[43] Interview with the Minister of Finance published in the British *Morning Pos*t, included in the PVCG minutes, session of June 21st, 1917.
[44] A. Ribot, *Ibid.*, p. 23.

of the General Board, Baron Hottinguer, was already a member in 1870 and the older regents stilled recalled the events. Governor Georges Pallain was also a player throughout the episode, but "on the other side of the fence", firstly alongside Ernest Picard, when the latter was appointed Finance Minister in the Government of National Defence, then as chief of staff with Léon Say, the Minister of Finance in 1872. Stronger for this experience, the Bank's directors were certain that, as during the 1870s, the Treasury would reimburse the direct advances granted to it and that the franc would quickly recover its gold convertibility.

Again, in an attempt to explain this passive attitude from the Banque de France, we might note that some of the bank's directors were former senior officers at the Treasury. Straight out of the Inspectorate of Finances, Charles Sergent, second sub-governor between July 1911 and December 1917, was director of the General Movement of Funds at the Treasury between 1909 and 1911. His replacement at the Bank, André Luquet, also an inspector of finances, held the position of Head of the Treasury on two occasions: between July 1911 and 1913, then again between March and December 1917. Before that, Luquet was also chief of staff with Rouvier (at the Ministry of Finance in 1905). Even though the Bank had an undeniable ability to mould people into supporting monetary stability, these two men, better than anyone, were likely to clearly put across to others the mass of financial constraints that were weighing heavily on the State and the all-importance of its needs for liquidity.

Lastly and most importantly, we should emphasize the fact that these applications for advances were made at a rather difficult time for the Banque de France. The Bank's right of issue privilege was to expire on the 31st of December, 1920. It had to negotiate renewal of this right during the war, and so found itself in a position of weakness when entertaining demands for money from the Ministry of Finance.

From this viewpoint, the Bank's strategy seemed to be one of attempting to link negotiations for right of issue with the advances its was granting to the government. Deliberations amongst the General

Board point to the fact that the central bank considered these advances as a way to secure this privilege. In April 1916, at the time when the first interviews with the Ministry of Finance were held to discuss the issue, the General Board stated: "*there will be reason to ask the Minister, when he requests a new extension to the figure of advances granted thus far, to introduce, either into the text of the agreement or into a document attached to this agreement, a declaration asserting the government's resolution to present to the Chambers, as soon as possible, a parliamentary bill for the renewal of this right*"[45]. Furthermore, the time devoted to negotiations, as written into the Board's minutes, shows that this question was the true priority of the Banque de France between 1916 and 1918.

The first exchanges of view occurred in early 1916, the outcome of which was the signing of the Pallain-Klotz agreement of October 26th, 1917. The parliamentary debates of 1918 were uneventful and in any case far less passionate than during the 1890s. As emphasized by Netter: "*the prorogation of the privilege had been settled in people's mind for a long while*"[46]. However, discussions dragged on and the government did nothing to speed up the procedure, as the strategic context was not in its favour. In June 1918, when it agreed to raise the ceiling for advances to FF21 billion, the Bank appeared to show signs of displeasure when writing to the Minister: "*These resources provide a sufficient period of time, it would seem (…) to obtain from parliament a majority vote for the bill relative to the renewal of the right of issue*"[47]. Parliament finally adopted the bill on the 30th of July, 1918, by 231 votes for and 72 against. Subsequently the Senate voted unanimously in favour on December 19th of the same year.

The Bank's institutional autonomy was strengthened by this text, which extended its right of issue for a period of 25 years, as opposed to 23 in 1897; additionally, and contrary to the earlier text of

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45 PVCG minutes, session of April 8th, 1916.

46 M. Netter, *Histoire de la Banque de France entre les deux guerres 1918-1939*, Pomponne, edited by Monique de Tayrac 1994, p.2.

47 Letter from Pallain to Klotz, PVCG, session of June 4th, 1918.

1897, the bill of 1918 did not provide for any challenge to the privilege throughout that period.

The conditions under which the renewal was achieved (the very large consensus gained), constituted a further manifestation of the collective commitment to returning to the former monetary order.

5. Conclusion

The French monetary authorities were taken aback by the extent of the misgivings shown by savers at the time of the country going to war. The moratorium on deposits, decreed as an emergency measure to offset the liquidity crisis, stopped the run on banks but also led to lasting mistrust of these same institutions. In this context, the Banque de France did not assume the role of lender of last resort that it could have. Anticipating a short war, the government, supported by the Banque de France, gave preference to the floating debt as a means of finance, without seeing the hazards intrinsic to the liquidity of these short-term securities. The Treasury's financial needs significantly paralysed the Banque de France's action via the traditional use of the discount rate during and after the conflict. The rise in the rate of National Defence Bills effectively appeared to result in raising on the interest charge served with public securities, something the State wished to avoid in order to make its debt more easily bearable. Additionally, and at a time when the floating debt was high, agents could also have attempted to meet their liquidity needs not through discount but via a demand for reimbursement of public securities: such a move would have incurred a serious risk of suspension of payment at the Treasury. After the war, French monetary policy gave the impression of being subordinate and passive[48]. The monetary base was then, to a large extent, endogenous to varia-

[48] B. Blancheton, "The false balance sheets of the Bank of France and the origins of the Franc crisis, 1924-1926", in *Accounting History Review* (ex *Accounting, Business and Financial History*), vol. 22, n. 1, march, 2012, pp. 1-22.

tions in the demand for Treasury securities. The Banque de France had lost control over the money market.

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