

**Paul van Zeeland and the first decade of the US Federal Reserve System:  
an analysis from a student of Kemmerer who became Belgian Prime Minister**

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“Is there any country in the world on which it is harder to come to a reasoned, comprehensive opinion than the United States? I very much doubt it. So many disparate elements, sometimes merged, sometimes simply juxtaposed; many races, radically different climates, vast distances, accumulated wealth, endless resources and barely controlled energy: in short, a turbulent new world. How can we reach a judgment in the face of all that?” (Paul van Zeeland, *Quelques impressions des Etats-Unis* [Some impressions of the United States], *La Revue Générale*, 1922. Volume CVIII, p. 194).

## **1. Introduction**

Paul van Zeeland (1893-1973) was a towering figure in Belgian politics in the 20th century. He is especially famous for his time as Prime Minister (1935-1937). In 1935, he left two main marks in economic policy, first, putting an end to the deflation policy in devaluing the Belgian franc and second, introducing radical reforms, like the establishment of the Banking Commission for the supervision of banks. In a 1937 by-election, he soundly defeated Leon Degrelle, the leader of the fascist Rex party, effectively stopping the advance

of fascism in Belgium. In the post-war period, he was Foreign Minister from 1949 to 1954, and was renowned for his strongly Atlanticist approach towards European integration.

Before entering politics, van Zeeland made a quick career at the National Bank of Belgium (NBB), becoming Secretary of the Bank in 1924, Director in 1926 and Vice-Governor in 1934. He was very closely involved in international monetary matters, like the creation of the Bank for International Settlements in 1930. He pursued an academic career as well. Together with Albert-Edouard Janssen, he became one of the founders of the *Institut des Sciences Économiques* at the University of Leuven/Louvain in 1928 (Dujardin and Dumoulin, 1997).

Paul van Zeeland's analysis of the early years of the Federal Reserve (he was only 29 years old at the time) remains an unstudied subject, both in the literature on van Zeeland<sup>1</sup> as well as in studies on the Fed. Two possible reasons can explain this neglect in the literature on the Fed: the book was in French and, after its publication, van Zeeland did not publish articles linked to the question in English. This justifies one more venture into the history of the Fed. His participation in the discussion on its creation is furthermore essential to understand his attitude when he proposed monetary reforms in Belgium in the 1920s.

The aim of this article is to show the originality of this young Belgian economist's analysis of the Fed, as he draws both from his experience in the US and Belgium. The secondary literature, including Dimand (2003), Mehrling (2002), Meltzer (2003) and Wells (2004), emphasises the analysis of many American economists such as Irving Fisher, David Kinley, Frank Taussig, Olivier Sprague, James L. Laughlin, Henry Parker Willis, Paul Warburg and Benjamin Strong of the early years of the Fed, but do not include any analysis

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<sup>1</sup> Even the two most prominent biographies, Dujardin and Dumoulin (1997) and Henau (1995), do not go into van Zeeland's analysis of the Fed very much.

of the Belgian economist van Zeeland. We will focus in particular on van Zeeland's originality as compared to Kemmerer, his mentor.

In the next section, we study the monetary debates about banking reform in the United States before van Zeeland's arrival and we discuss in particular E. W. Kemmerer's position on the US banking reforms and the Fed. In the third section, we go into the formation of the young van Zeeland and we refer to the financial chaos in Belgium after the First World War that influenced his monetary thinking. Then, in the fourth section, we contrast Kemmerer and van Zeeland's theoretical arguments and practical recommendations for the young American Federal Reserve System, and provide a more general assessment of van Zeeland's contribution.

## **2. Kemmerer and US banking reform before the creation of the Fed**

Edwin Walter Kemmerer (1875-1945) was an eminent economist and academic<sup>2</sup>. A cosmopolitan and well-informed person preoccupied with the economic affairs of his time. He intervened directly or indirectly in many of the monetary debates that took place in the US and in the international arena in the last years of the nineteenth century and in the first three decades of the twentieth century. He helped shape the institutions in his own country and elsewhere, like the Philippines, Mexico and various Latin American countries (Drake, 1989).

Kemmerer was an active member of the *American Economic Association* and became its president in 1926. He was a member of commissions dealing with the creation of the Federal Reserve System – particularly the Aldrich Commission – and was monetary adviser to different governments in the US and abroad. As he contributed to the establishment of five Latin American central banks (in Bolivia, Chile, Colombia, Ecuador and Peru) and to the adoption of the gold standard to stabilize exchange rates, he was known as a "money doctor".

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<sup>2</sup> For a wider analysis of Kemmerer's monetary theory, see Gomez Betancourt (2010a & 2010b).

In his capacity as money doctor, Kemmerer travelled extensively, in America, in Asia and in Europe. He was in direct contact with American Presidents, with Finance Ministers, Treasury officials, high-level civil servants and many businessmen. Kemmerer's participation in the banking reform debate in the US and his contribution to the establishment of the Federal Reserve System are significant. These are key reasons why the young Paul van Zeeland decided to pursue his studies in Economics with Kemmerer at Princeton.

Kemmerer had just published the fourth edition of his book entitled *The ABC of the Federal Reserve System* when van Zeeland arrived at Princeton in 1920<sup>3</sup>. This book was very successful, with twelve editions in total<sup>4</sup>. The outline of the book was very easy to follow: in the first part Kemmerer analysed the four defects of the old banking system prior to the creation of the Fed, and in the second part he presented the solution to these problems, thanks to the Federal Reserve act and its later amendments<sup>5</sup>.

After the Civil War (1860-1865) and before the arrival of van Zeeland in the US, the American monetary debates concerned three main problems: first, the instability of the price level (inflation period following the great deflation), second, the recurrent banking crises which occurred under the National Banking System (1863-1913) as well as the necessity of a banking reform, and third, the choice of the metallic standard (among gold coin standard, bimetallism, gold exchange standard, etc.) which would work best with the development of the American credit system.

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<sup>3</sup> We choose to quote here Kemmerer's Fourth edition of April 1920 because this was the edition used and quoted by van Zeeland in his dissertation.

<sup>4</sup> The comparison between the different editions is a work in progress we are currently involved with.

<sup>5</sup> We also found several discussions on banking reform in special editions of *The Journal of Political Economy* (December 1911 and January 1912), including articles by MacVeagh (1911), Perrin (1911), Kemmerer (1911c), Frame (1912), Hulbert (1912), Wall (1912), and Willis (1912). *The American Economic Review* also published articles on this subject and dedicated a special edition to analysis of the Aldrich Plan in 1911. Contributors included Scott (1911), Sprague (1911), Cooke (1911), as well as Kemmerer (1911b). Between 1911 and 1913 Kemmerer published seven articles and one book on this topic.

The National Banking System (NBS) was the US banking system established in the midst of the US Civil War, in 1863, by the Northern states of the federal Union in order to contribute to the war financing effort and to strengthen and homogenize the circulation of banknotes. Its aim was to provide safety, convertibility, uniformity, and elasticity of paper currency. This system was kept on and extended after the Civil War, surviving for 50 years, until the creation of the Fed, in 1913.

The NBS had two main advantages. First, the uniformity of banknotes made forgery particularly difficult (only the signature of each bank was different). Second, the issuing of banknotes was bond-backed, which meant that they were guaranteed by US Treasury Bonds. As a consequence, these banknotes were credit-risk-free.

According to Kemmerer's book *ABC of the Fed*, the main shortcomings of the NBS which justified setting up the Federal Reserve were (1) decentralization and the rigidity of commercial bank reserves, (2) the inelasticity of banknotes and deposits, (3) the absence of any organized system of domestic and international transfers and (4) a constraining relationship with the Federal Treasury due to the absence of a market for money which would allow banks to place their funds in the short term (when banks had surpluses, they had no market to place them). There was a broad consensus on the first two points at the time among analysts of the Federal Reserve System (Warburg, Burgess, Steels and van Zeeland).

Firstly, concerning the decentralization issue, Kemmerer not only thought about the absence of responsible national institutions (such as a central bank or genuine national banks) for coordinating the US money market like in France or England, but also the problem of scattered and immobile gold reserves. In Kemmerer's words: "The great majority of national banks were national in nothing but name. Most of these banks were independent units, each working for itself. There was little teamwork. In times of threatened panic the different parts of the system worked at cross purposes". (Kemmerer 1920, p. 3-4).

Reserves were dispersed throughout the country, difficult to move, and could not be easily transferred to regions where they were scarce. According to Kemmerer, this was the most serious feature of the decentralization:

“In America bank reserves were so scattered and so jealously guarded that in times of threatened panic they were comparatively ineffective in staying the storm. The situation was analogous to what would happen today if after drilling our American army to a high point of fighting efficiency, we should scatter the men in small units all over the United States to protect the country from a threatened invasion. Each community would be jealous of its own squad of soldiers, but the invader would come and the efficiency of our well drilled soldiers would be practically nil. The point of the illustration will be clear to everyone recalling the mad scramble for reserve money on the part of banks throughout the country at the time of the panic of 1907. Our supply of reserve money was large. In fact we had at that time in the United States the largest supply of gold in the world. It was ineffective, however, because widely scattered; hence, suspension of cash payments throughout the country, currency premiums, the breakdown of our domestic exchanges, the illegal issue of millions of dollars of money substitutes, and all the other disgraceful accompaniments of an American panic”. (Kemmerer 1920, p.6).

According to Paul Warburg (1930, pp. 52-55), the 1907 crisis was not the result of a lack of gold in the US, but the distribution of reserves among a very large number of banks that then hoarded gold independently and in self-interest during the crisis, thus provoking both a shortage of gold and an extended panic. As he said, "the result of our system is that our immense quantities of gold and coins remain unused despite the fact that our gold reserves

are four times greater than England's, and despite our massive monetary circulation per person of 35 dollars. Consequently every year, we suffer from severe currency shortages"<sup>6</sup>.

The reserve requirements were very strict and banks could not go below the set limit, even in a crisis. According to van Zeeland: "The situation has been compared – not without humor – to that of a nation which would have taken care to form a territorial army in times of peace but would refrain from using it in times of war, lest all the reserves should be lost." (van Zeeland 1922, p. 25). In times of crisis, what matters are the excess reserves, not the required reserves.

Secondly, one of the most important defects of the National Banking System was the inelasticity of money. Kemmerer proved that there was a proportional relationship between seasonal variations and the scarcity of currency and credit, hence the instability of interest rates. He attributed this phenomenon to the demand associated with crop shifts and the unresponsive bond-secured currency system (Kemmerer 1911b, p. 33). As early as 1910, Kemmerer wrote a study on the variation of short-term interest rates on the money market in the largest American cities. This study (as well as his 1911 article) revealed the weaknesses of the National Banking System, established since 1863, and advocated a more elastic money and credit-issuing system, which would allow farmers greater access to liquidity.

One of the purposes of the Federal Reserve Act was to reduce the system's inelasticity problem, to respond to the demand for money during the crop seasons and to avoid currency panics. According to Kemmerer, "Banknote circulation frequently declined at the same time when business needs demanded an increase, and increased when the business situation called for a decline" (Kemmerer 1920, p. 11). However, bankers and business people in the Midwest and the South generally favoured an asset-based currency since their historical

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<sup>6</sup> On the decentralization problem in US, see also Rist (1938, p. 437).



experience had proved that government-sponsored currency (as opposed to bond-secured currency) tended to be over-issued and inflationary.

These two main problems – the inelastic currency and scattered reserves – largely contributed to the 1907 financial panic in the US and the resulting failure of many American commercial banks during this period. After the 1907 crisis, some economists and bankers, namely Vanderlip, Hepburn and especially Warburg, recommended the creation of a European-style “central bank” for the US. In Kemmerer’s view, a central bank was needed in order to ensure the elasticity of money and credit, as well as the liquidity of the money market. With a new system, based on real bills doctrine, the central bank puts an end to the considerable and often erratic fluctuation of the interest rate. Kemmerer shares Paul Warburg’s (1930) goals.

Thirdly, Kemmerer also dealt with the problem of transfers for domestic exchange and the foreign exchange dependence. On the subject of domestic transfers, he explains that it was expensive and troublesome, requiring heavy shipments of currency back and forth all over the country. He wrote: “Many banks imposed exchange charges – some high and some low – for the collection of out-of-town checks received over their counters. The length of time in which checks were in transit was increased and the economic cost to the community for the collection of checks was made heavier. One serious phase of the practice of routing checks was the manner in which it padded legal reserves”. (Kemmerer 1920, p.21).

A second part of the exchange difficulties under the old banking system concerned overseas trade. According to Kemmerer: “our foreign trade was financed largely through London, And those parts of the trade which were with the Orient and with South America were financed almost entirely through London... The trouble was not that we utilized them, but that we utilized them too much and were unduly dependent upon them. This involved several difficulties only two of which need be mentioned here. In the first place, payments

through London gave rise to additional foreign exchange operation, which normally added to both the expense and the risk of financing a shipment of goods. In the second place, the fact that invoices, bills of lading and other documents passed through the hands of foreign banks and of South American or oriental branches of foreign banks gave to our foreign competitors "inside" information concerning our foreign business information that was often used to their advantage in competition with our own citizens". (Kemmerer 1920, pp. 23-24).

Fourthly, the last main problem, according to Kemmerer, was the defective government deposit system. Kemmerer insisted on the link between the State and the Federal Reserve. He singled out three issues to resolve: first, there was a continual hoarding in Treasury vaults of large sums of money involving administrative expenses and loss of interest, second, in some seasons, government revenue exceeded expenditure and in other seasons disbursements exceeded revenue, and third, depository banks relied unduly upon the Secretary of the Treasury for aid, which he referred to as "the grandfatherly attitude of the Secretary of the Treasury toward the banks".

The volume of banknotes that banks could put into circulation depended on the amount of federal government bonds they had in their portfolio and which secured the banknotes. Issuing currency was based on a bond-secured system, meaning that the national banks could issue notes upon purchase of certain government securities, mainly US government bonds. Consequently, the national banks' issuing capacity depended on the amount of Treasury bonds they had.

"The relation between our Treasury Department and the national banks encourage on the part of banks the practice of depending upon the government for aid in times of emergency, and tend to prevent the banks from making independently, in advance, proper provision for the regularly recurring heavy seasonal demands" (Kemmerer 1911a, p. 249).

Thus, the volume of national banknotes available fluctuated according to the quantity of bonds issued and was not related to American economic activity. In an attempt to solve this problem, the banking debate participants focused on finding an alternative model to the bond-secured currency system between 1894 and 1908. The new asset-based currency model put forward a currency guaranteed by private assets (the issuing system had to be backed by commercial paper), rather than by US government bonds.

Oliver Sprague (1913) coined the term “Kemmerer’s Plan” of banking reform to highlight Kemmerer’s contribution to the banking system debate<sup>7</sup>. For the sake of thoroughness, let us mention two original aspects of Kemmerer’s plan. First, he proposed including representatives of all sectors of society, looking for more democratic representation on the federal banks’ boards and, more broadly, in the monetary policy decision-making bodies. Second, he argued that the State should guarantee the liquidity of banknotes and the solvency of the central bank (even though it was a private capital institution). It was the State’s responsibility to ensure the convertibility of the central bank’s notes, for there must be total confidence in bank money<sup>8</sup>.

Finally, the Fed was composed of twelve Federal Reserve Banks: “Instead of one central bank, the United States has 12 central banks; but these banks do practically no business with the public. They are pre-eminently bankers’ banks, owned by other banks and functioning to

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<sup>7</sup> “Professor Kemmerer is to be congratulated on the plan of organization which he has devised for the control of the machinery needed to make possible cooperative action among bankers. He had attacked the chief obstacle, which has been encountered in the effort to secure banking reform legislation –the widespread fear that greater power over money and credit might be secured by a few banks and bankers in the money centers, and particularly by those of New York City. Professor Kemmerer’s plan has the enormous advantage of being far more simple than that adopted by the National Monetary Commission. Under the plan of the Commission it is most unlikely that control would ever be acquired by particular groups or classes of banks; under Professor Kemmerer’s plan this possibility would be even more remote. But this is not its chief virtue. It is conspicuously a better plan because it makes more obvious, more intelligible, the impossibility of undesirable control over the proposed Reserve Association”. (Sprague in Banking Reform Discussion, Kemmerer 1913b, p. 68). See Gomez Betancourt 2008 & 2010b.

<sup>8</sup> Kemmerer, who consider himself as a “progressive” (Republican) in 1913, played an important political part in supporting the reforms proposed, on the one hand, by bankers and Republican groups, and on the other hand, by the politicians in power at the time, i.e. the Democrats. On Kemmerer’s political position, see Gomez Betancourt (2013).

and for their member banks. These 12 central reserve banks, however, are federated together and controlled in matters of broad policy by a central governing board which itself conducts no banking business". (Introduction of Kemmerer in: van Zeeland, 1922: p. VII.

In the same vein as van Zeeland's thesis, central bankers such as Harding (1925) published short histories of the Fed, in addition to Steels (1926) and Burgess (1930), who analyzed the relationship between the reserve banks and the money market<sup>9</sup>.

### **3. The formation and central banking background of van Zeeland**

We do not have any of van Zeeland's writings pre-dating his studies in Princeton<sup>10</sup>. In order to get an idea about his ideas before he started working on his book on the Federal Reserve, we first take a look at his formative years. We then move on to an overview of central banking in Belgium, in van Zeeland's times.

#### ***3.1 Van Zeeland's background***

Paul van Zeeland was born in Soignies on 11 November 1893. He studied Law and philosophy in Leuven. His studies were interrupted by the First World War (he became a German prisoner). After the war, he finished his Law studies and started also with Political and Social Sciences studies, which included Economics. As in several other continental-European countries, courses in Economics were taught in the so-called "Schools of Political and Social Sciences", sub-divisions of the Law Faculty. Most professors teaching economics

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<sup>9</sup> For a general history of the Fed, we study Prochnow (1960), Friedman and Schwartz's monetary history (1963), Beckart (1972), West (1977), Timberlake (1978), Livingston (1986), Moore (1990), international origins of the Fed by Broz (1997), Austrian approach by Rothbard (1999), and recently Meltzer (2003) and Wells (2004). We were especially impressed by Wicker's outstanding book entitled *The Great Debate on Banking Reform* recently published in 2005.

<sup>10</sup> Neither of the two main biographies of van Zeeland (Dujardin and Dumoulin, 1997 and Henau, 1995) have any information about this. Naturally, van Zeeland was very young when he went to the United States. Furthermore, part of his archives was destroyed in a fire.

had a law background and much emphasis was put on institutional and descriptive elements. Van Zeeland also followed courses on money and central banking with A.-E. Janssen, who was also at the National Bank of Belgium, being a Director from 1919 to 1925.

A.-E. Janssen quickly became a mentor for van Zeeland. Janssen had obtained degrees in Law and in Political and Diplomatic Sciences at the University of Leuven/Louvain. His doctoral dissertation, "*Les conventions monétaires*" (Monetary unions), was a discussion of international monetary relations, from both a legal and an economic perspective. The main body of the book contained a detailed analysis of the German, Scandinavian and, in particular, Latin monetary union. In his assessment of currency unions, he was pessimistic about the latter. He realised that, from the late 19<sup>th</sup> century onwards, nation states increasingly considered monetary matters as an integral part of their national sovereignty. Therefore, monetary unions could only survive if they were preceded by political unification, a process that was not on the agenda in the early 20<sup>th</sup> century (Janssen, 1911, pp. 433-435). In a fifth chapter, he examined the then ongoing discussions on international monetary relations. Janssen's perspective was partly historical, but also very forward-looking. He took a great interest in the future development of the international monetary and financial system: "*So we find ourselves in the midst of a straightforward case of economic development; ... it has come about by the extension of sophisticated means of payment, moving on from coins to the banknote, from the banknote to the cheque and through the cheque to transfer and settlement*" (Janssen, 1911, p. 423).

Van Zeeland's later thesis on the Federal Reserve fitted perfectly into Janssen's research programme on money and central banking (Maes, 2010). In his course on "Les Banques d'émission", Janssen first discussed several central banks, especially the Banque de France, the Bank of England, the German Reichsbank, the National Bank of Belgium and the Federal Reserve. Thereafter, he provided a comparative analysis of emission banks, focusing on

elements like capital and reserves, the gold and silver reserves, the regularisation of international payments and the relationship with the State and with commercial banks (AEJA, No 525).

The First World War provided the impetus for important changes in Belgian academic life (Maes and Buyst, 2005b). In order to save Belgium from starvation during the German occupation, the United States established the *Commission for Relief in Belgium* (CRB). After the Armistice, the remaining funds were used to create several educational and scientific associations; one of them was the *CRB Educational Foundation*. The CRB awarded "Graduate Fellowships" to enable promising young Belgians to pursue graduate studies at top American universities such as Columbia, Harvard, MIT, Princeton, Chicago, Stanford or Yale. Paul van Zeeland was among the first group of CRB students in 1920.

Van Zeeland went to Princeton, to study Monetary Economics with the famous "money doctor", Edwin W. Kemmerer. In his (unpublished) *Mémoires*, van Zeeland described Kemmerer as, "*Petit, mince, tout en nerf, ne vivant que pour et par sa science; le meilleur théoricien de la finance que j'aie rencontré*" (Small, thin, always on edge, living only for and through his science, the best finance theorist that I have ever met) (van Zeeland, *Mémoires*, I.B., PVZA). As advised by Janssen, van Zeeland followed several courses given by Kemmerer. He also wrote a paper on "*The Financial and Monetary Crisis in Belgium*" (Report by Paul van Zeeland, PUA). Paul van Zeeland was further influenced by Kemmerer's close links with the Federal Reserve System. He obtained an internship at the newly-created Statistics Department of the New York Fed for the three weeks of the Christmas holidays, meeting Benjamin Strong (Paul van Zeeland, Report of the Foundation Scholars, BAEFA).

The First World War and the ensuing monetary chaos pointed up the need for economic analysis at the National Bank of Belgium to be reinforced. During Board discussions in the

National Bank, A.-E. Janssen pleaded for the creation of a real "Service d'Études Économiques" (Van der Wee and Tavernier, 1975).

The first economist to be recruited was Paul van Zeeland. Back from Princeton, he was taken on as "Conseiller au Service des Etudes Économiques" on 1 October 1921. In May 1922, van Zeeland received a permanent appointment as Head of the Service d'Études, as testament to the profound knowledge he had acquired in the United States, not only of monetary economics but also of how economic research at a central bank should be organised.

At the NBB, the immediate policy challenge was the stabilization of the Belgian franc. A few months after joining the NBB, in December 1921, van Zeeland produced a note running to 107 pages on the theme of "*Inflation et déflation*" (Inflation and deflation), containing a comprehensive plan to remedy Belgium's monetary difficulties (NBBA, N099/7).

Meanwhile, van Zeeland also continued his work on a study of the Federal Reserve System, which he had pursued in the United States under the direction of Kemmerer. As mentioned above, the topic also fitted in perfectly with A.-E. Janssen's research programme on issuing banks. His study on the organisation and functioning of the Federal Reserve System became his Ph.D. dissertation at the University of Leuven/Louvain, with Janssen as his supervisor (van Zeeland, 1922).

### ***3.2 Central banking in Belgium***

Van Zeeland's approach towards central banking was naturally shaped by the Belgian experience of central banking. The National Bank of Belgium was founded in 1850, after banking crises in 1838 and 1848 had led to the suspension of convertibility of the notes of the two largest commercial banks and the drying up of discount credits. The National Bank was, in essence, an issuing and discount bank (Buyst, Maes *et al.*, 2005). The law founding the

National Bank gave the Bank three important missions: the issue of banknotes, the organisation of short-term commercial credit, in particular the rediscounting of commercial paper, and the function of State cashier.

The US National Monetary Commission also produced a volume on the Belgian central bank in 1910, written by Charles Conant. He argued that: “The history of the National Bank of Belgium is of special interest to the student of banking systems because of the lateness of its foundation and the ability of its founders to garner up the results of the experience of Belgium and of other countries in what they conceived to be the best attainable form of organization.” (Conant, 1910, 5). He further observed that: “The business of the Bank is limited substantially to the discount of commercial paper and excludes, except to a limited extent, advances upon securities or any other noncommercial asset.” (Conant, 1910, 5). This basis of rapidly convertible commercial paper was the foundation of the Bank’s note-issuing system.

The National Bank was *de facto* entrusted with the monopoly for issuing banknotes, in order to ensure uniform circulation of paper money in Belgium. So that the banknotes would always be convertible into precious metal, the National Bank was not allowed to get involved in any shareholdings or medium- to long-term lending. In the same vein, there were tight restrictions on lending to the State.

Frère-Orban, the founder of the National Bank, adhered to the “banking principle” (i.e. that the central bank accommodates the needs of business by discounting commercial paper), like most central banks on the European continent. But, as observed by Kauch (1950, 81): “the lesson of 1848 in France had shown that, when applied in full as it had previously been in that country, with no minimum cash reserve, no statutory ratio, no ceiling, this principle could have unfortunate consequences”. So Frère-Orban introduced a proportional reserve



system, “while – subject to that proviso – maintaining the principle of transactions in self-liquidating securities and business needs being met in full.” (Kauch, 1950, 81).

Like many other central banks, the National Bank of Belgium was set up as a special type of commercial bank, for which the government had wide-ranging oversight powers. So, the Governor was appointed by the King and there was also a Government Commissioner. The function of State cashier underlined the public nature of the institution, too. Over time, the public character of the National Bank has been reinforced. An important step came in 1873, when the banknotes it issued became legal tender.

Banknotes in circulation have dominated the liabilities side of the National Bank’s balance sheet. In the early 20<sup>th</sup> century, two main items dominated the assets side: precious metals and discount credit.

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**Table 1 Balance sheet of the National Bank of Belgium in 1913**

(end of year, in millions of Belgian francs)

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Assets		Liabilities	
Gold and silver reserves	472	Banknotes in circulation	1 067
Discount credit and bills for collection	635	Current accounts	117
Advances on public funds	61	Own capital	113
Public funds	100		
Sundry	45	Sundry	16
<b>Total</b>	<b>1 313</b>	<b>Total</b>	<b>1 313</b>

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Source: National Bank of Belgium, Bulletin, September 1950, Table 1

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Originally, banknotes represented claims on metal standard money and were intended mainly to facilitate large-value payments. At the end of the 19<sup>th</sup> century, they became more widely established as payment instruments. The large-scale replacement of coins by notes also led to a growing concentration of the country's stock of precious metal at the National Bank. So, it played an ever-growing role in settling the balance of payments, and became the custodian of the country's international payment instruments. As noted by A.-E. Janssen, this contributed to the growing importance of the "*monetary*" function of the National Bank, as compared to its "*credit*" function (discount credit) (A.-E. Janssen, Comment par une lente évolution la fonction monétaire de l'Institut d'émission est devenu dominante, AEJA).

It is further noteworthy that the National Bank of Belgium was a model for the reform of the banking system in Japan in 1882. As argued by Count Matsukata, the then Japanese Finance Minister:

"In point of the perfectness of organization and the well-regulated condition of business management, the National Bank of Belgium stands highest. This fact is due doubtless to the lateness of its founding, which enabled it to consider fully the mistakes as well as the successes of older banks. Its regulations are for this reason more perfect than those of any others, winning highest praises from the financiers of the world ... In the case of a Japanese central bank, therefore, no better pattern can be found than the National Bank of Belgium" (as quoted in Conant, 1910, 12).

With the outbreak of the First World War and the invasion of Belgium by Germany in August 1914, the convertibility of the banknotes was suspended. The war was a catastrophe for the Belgian economy, with manufacturing activity grinding to an almost complete standstill. Moreover, the heavy war levies were largely financed by money creation. The

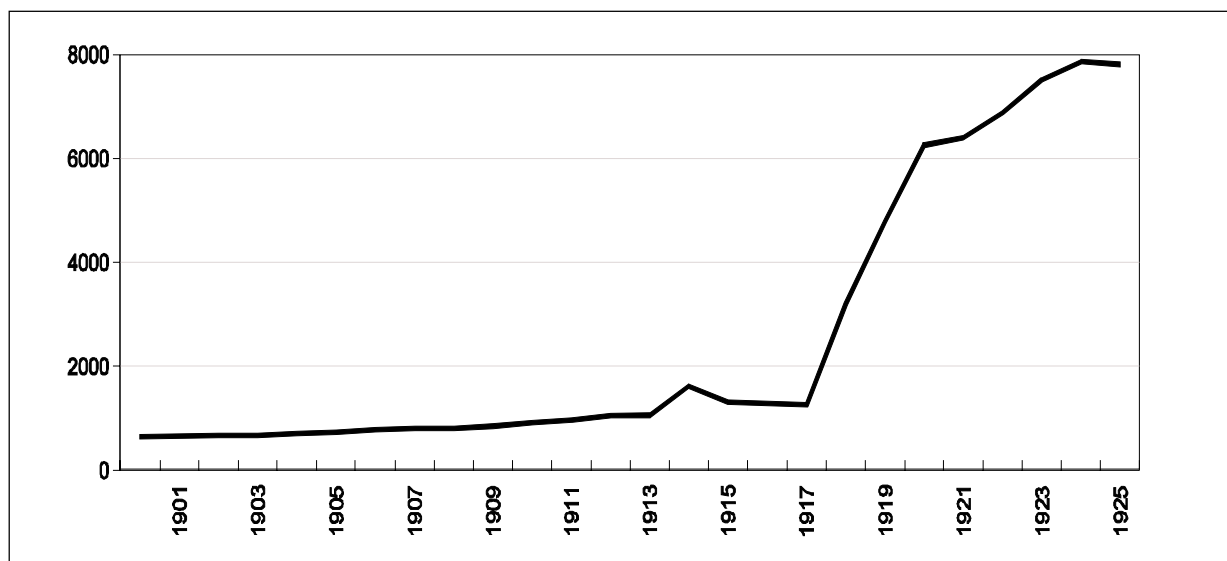
increase in liquidity received a further impetus when the German authorities started paying in German marks for their purchases in Belgium at a compulsory, overvalued, exchange rate. As a consequence of the war, the money supply expanded, generating severe inflationary pressures (Buyst and Maes, 2007). Furthermore, shortly after the Armistice in 1918, the Belgian government decided to exchange all domestic holdings of German marks for Belgian francs at the rate formerly imposed by Germany. The measure caused a massive fraudulent influx of marks. Naturally, this once again increased Belgium's money supply, with further inflationary consequences.

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**Chart 1 - Banknotes in circulation in Belgium, 1900-1925**

(Millions of Belgian francs)

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Source: NBB.

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Albert-Edouard Janssen was one of the first in Belgium to warn against the perils of inflation. In 1919, he was a member of the Allied Mission in the United States, where he gave a well-documented lecture about Belgium's financial situation (AEJA, No. 639). He provided

a stringent analysis of the increase in banknotes. He defended the exchange of German marks for Belgian franc notes, in order to "revive our industrial life". However, he stressed the inflationary dangers of the expansion of money in circulation and the need to bring it under control. Moreover, he was confident that Belgium would receive its war reparations from Germany, even if the timing was "a matter of doubt". It would be a vain hope.

As head of the Economic Service, van Zeeland would have to struggle with stabilising the Belgian franc in a situation where the National Bank, due to the war, had a huge amount of government debt on its balance sheet, a serious burden for monetary policy.

The First World War marked a watershed in Belgian history, leading to profound political and social changes and reforms. In November 1918, a government of "national union", the Delacroix I government, was formed. It introduced key reforms, like a new voting system based on "one man, one vote"<sup>11</sup> (strengthening naturally the Socialist party) and greater rights for the trade unions. The war had led to an emancipation of the working class, not only in Belgium, leading also to significantly less (downward) wage flexibility. Moreover, the post-war reconstruction needs, as well as the expectation of German war reparations, pushed the Delacroix government into an expansionary budgetary policy. As a result, both the budget deficit and public debt exploded.

#### **4. Kemmerer and van Zeeland on the Fed: the American and the Belgian**

A few years after the vivid debates on US banking reform, Paul van Zeeland arrived at Princeton in 1920 and worked on this subject under the supervision of Kemmerer. In 1922, he completed his Ph. D. dissertation – with Janssen as advisor – at the University of Louvain on

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<sup>11</sup> Before, people could have several votes, depending on parameters like taxes paid or education. Women were not given the right to vote.

the theme of *La réforme bancaire aux Etats-Unis d'Amérique de 1913 à 1921, le système de la réserve fédérale*. It contained a preface by Kemmerer.

Kemmerer described van Zeeland as: “This special preparation, coupled with his high ability as a scholar and with the broad training in economics and finance with which he began this work, has enabled him to write a book on the American banking system that is at once a comprehensive, sound and critical exposition of American banking.” (Introduction by Kemmerer in: van Zeeland, 1922: p. VIII).

Van Zeeland shared many of Kemmerer’s ideas, in particular about three analytical issues associated with the banking reform. First, they were both quantity theorists. Second, they both explained – based also on Paul Warburg’s analysis of the Fed – the importance of the elasticity of banking money to have the capacity to meet the Americans demand for money. Third, they also agreed on the need for banking reform and were optimistic about the new Federal reserve’s capacity to solve most of the problems of the national banking system.

Van Zeeland’s book was effectively more critical than Kemmerer’s towards the National Banking System and the Federal Reserve System. The differences are already clearly visible in the structure of his book, as compared to Kemmerer's *ABC of the Federal Reserve*. Van Zeeland also starts his book with Kemmerer’s four problems: decentralization, inelasticity, transfer and Treasury. However, van Zeeland puts more emphasis than Kemmerer on the development of the financial markets, especially the discount market, and the international dimension.

While van Zeeland was clearly strongly influenced by Kemmerer, there were also quite a few important differences, four of which stand out. First and most significant is the importance that van Zeeland attaches to the discount market. Second, the international role of the Fed. Third, how the system becomes more centralized. And fourth, the need to guarantee independence of the Fed from the US government.

Van Zeeland starts with an introduction in which he analyses the situation before 1914 and the main elements of the Federal Reserve Act. In the second part, he studies the different elements making up the system and in a third part he analyses the functioning of the system. He concludes with the tendencies for the future of the Federal Reserve System and his own appreciation.

The first part of van Zeeland's book, the general overview, comprises three chapters: "The financial situation in the United States before 1914", "The reform movement", and "Key points of the Federal Reserve Act". In the second part, on the constitutive elements of the System, there are three chapters, concerning the "Member Banks", the "Federal Reserve Banks", and the "Federal Reserve Board". The main body of the book comes in the third part on the functioning of the system, with six chapters: "Discounts, loans and purchase of securities"; "The reserve mechanism"; "Banknote issuance"; "The cheque system"; "The Reserve System in the service of the Government"; and "The Reserve System and international finance". The fourth concluding part has a chapter on "The Reserve System: general trends and assessment".

From the outset, van Zeeland takes an optimistic view that the establishment of the Fed has resolved US problems of financial instability: "From now on there will no longer be any panics; there is a clear-sighted authority, well-placed and well-equipped, keeping an eye on things, and taking preventive action in time. If despite everything a crisis were to erupt, the banks are no longer in dire streets, but have the backing of the entire System behind them, with all its strength, all its resources and all its knowledge." (van Zeeland 1922, p.71). Kemmerer agrees. History proves they were wrong.

In his overview of the first years of the functioning of the Fed, van Zeeland emphasised the role of the Board and the centralization of the new system. In his view, the Board "forms the keystone of the System. It is the central authority, the guiding principle and the unifying

factor" (van Zeeland 1922, p.94). Kemmerer held the same opinion (see Friedman 1960 and Friedman & Schwartz 1963).

In the second part of his book, van Zeeland paid a lot of attention to the discount market. He noted the differences with the system in Europe, where issuing banks discount paper from commercial firms, while, in the United States, the Federal Reserve Banks are bankers' banks and have no direct relations with the public: "The principal way in which the Reserve Banks distribute the credit at their disposal is via discounting. In reality, discounting is rediscounting, because they can only include in their portfolio securities already endorsed by a "Member Bank". The European central banks, while acting mainly as the banks of banks, practise direct discounting, and they receive deposits and open accounts for individuals. They regard this approach as a way of staying in direct contact with the business world, as well as offering greater scope for steering the money market." (van Zeeland 1922, p.116). In fact, throughout his work, van Zeeland is always careful to point out the differences and similarities between the United States and Europe.

Van Zeeland paid special attention to bankers' acceptances, which were virtually unknown in the United States before the Fed:

"There is another type of commercial bill that the Reserve Banks accept for discounting, namely 'bankers' acceptances'. These are bills of exchange, either drawn directly on a bank under a credit facility or any other kind of arrangement, or drawn initially on a trader but accepted by a bank under a mutual agreement. While 'trade acceptances' were rare in the United States before the reform, 'bankers' acceptances' were practically unheard of" (van Zeeland 1922, p.127-128).

The absence of these financial markets before the establishment of the Federal Reserve had profound consequences, as the United States was completely dependent on other

financial centres, especially London, for financing its foreign trade: "This situation was open to serious criticism and caused justifiable complaints. It made US foreign trade dependent on the big European financial centres, particularly London: it was through those centres that distant transactions between the United States and the rest of the world were financed." (van Zeeland 1922, p.127-128).

Van Zeeland warned against the strong position of the government in the decision-making process of the Federal Reserve System, with the consequent threats to financial stability, "the danger is real: it is certainly a weakness of the new regime that the function of preventing excessive expansion of the financial system is placed solely in the hands of an institution of government origin, without any automatic restraint against that tendency" (van Zeeland 1922, p.167).

A further difference between the American and the Belgian systems was the international dimension of the new Federal Reserve. So, van Zeeland devoted a whole chapter to the Fed and international finance. He described how, before 1914, the US financial markets were very small from an international perspective and did not play any role at all in the world economy. As is well known from the literature, deep and liquid financial markets are a crucial determinant of international currencies, together with the size of the economy and monetary and financial stability. Van Zeeland understood this crucial link between strong and well-developed financial markets and the international role of a currency only too well: "some Americans dreamt of at least giving New York an honourable position in world finance and emancipating US foreign trade to some extent. First it was necessary to create, i.e. develop, a domestic bill discount market so that bills denominated in dollars could be traded at any time." (van Zeeland 1922, p.243).

Van Zeeland further emphasised the crucial role of the Federal Reserve in the development of the discount market: "Bills of exchange rapidly became part of business



practice, and by means of the rediscounting mechanism offered by the Reserve Banks an active discount market in dollar-denominated bills was created within a few years." (van Zeeland 1922, p.244).

This emphasis on the development of the discount market and the international role of the US dollar marked the originality of van Zeeland's writing, compared to Kemmerer's. It can probably be attributed to his European background, which made him more sensitive to the international dimension of what was happening in the United States and its impact on the world scene. It followed on from van Zeeland's comparative perspective, always looking at the differences and similarities between the United States and Europe. Moreover, van Zeeland spent his 1920 Christmas break at the New York Fed, which was very closely involved in the financial markets. Its Governor, Benjamin Strong, was very active in developing the acceptances market and strengthening the international role of the dollar (Eichengreen, 2011, p. 29).

While van Zeeland clearly understood that, with the Federal Reserve and the First World War, the international financial scene was changing, he still believed in the superiority of London as a financial centre: "It is true that much has already been done to develop the financial influence of the United States in the outside world. The legal means exist. The war enabled the Americans to make considerable progress down that road. Yet the superiority of London in this field is not at all shaken, and despite keeping its distance from precious metals, the pound sterling is still the leading international unit of currency, way ahead of the gold dollar". In a footnote, he continues: "In an article in *The Times* (16 September 1920), Otto H. Kahn recognises that in these terms: It is vain to assert that we are in the process of replacing England as an international financial centre. England's traditional position is the outcome of geographical, economic and psychological factors, racial qualities and centuries of experience." (van Zeeland 1922, p.256).

In his conclusion, van Zeeland again emphasised the stabilising role of the Federal Reserve for the US economy: "Under the thoughtful guidance of the Reserve Board, the system became what it was intended to be: the financial market regulator. The key stabilising influence in the economic life of the United States." (van Zeeland 1922, p.259). He further emphasised how the System has become more centralised, even if this was not the original intention. The authors of the 1913 Federal Reserve Act "had deliberately laid down the principles and had expected them to evolve. But there was another principle that they had not foreseen, the seed of which was contained in the Act, unbeknown to them: the tendency towards ever-increasing and ever more effective centralisation." (van Zeeland 1922, p.265). For van Zeeland, the reforms had succeeded in creating a financial market for the United States as a whole, a strong contrast with the earlier fragmentation:

"It happens that, by force of circumstances and by the effect of the Act's guiding principles themselves, the autonomy of the Reserve Banks was steadily demolished. It was inevitable. The main purposes of the Act, such as the reorganisation of the country's reserves, the reform of the currency circulation, the creation of a national cheque clearing institution, and the rationalisation of the money market, all require a policy on a national scale; real barriers creating arbitrary divisions within the country would be impenetrable obstacles. For example, let us suppose that there is ample money in the West and, owing to the selfish opposition of a Reserve Bank, it is impossible to make that surplus available to the East, which is suffering a temporary crisis: what use would the Reform have been in that case?" (van Zeeland 1922, p.265-266).

With hindsight, van Zeeland's view, like Kemmerer's and many others', was far too optimistic. In the ensuing years, financial crises would further hamper the United States.

Especially in times of tension, the flaws in the Federal Reserve's institutional structure and regional tensions would come to the fore. It would, at times, lead to serious debates on the setting of the discounts rates by the Federal Reserve Banks. Also the Fed's policies during the Great Depression were seriously criticised. Van Zeeland's optimistic view had quite a few similarities with the early years of the euro, marked by a strong belief that the euro itself would further financial integration. The US experience shows that financial integration is not an easy process, with many hidden difficulties on its way.

The fourth and last main difference between van Zeeland and his American advisor is the necessity to first guarantee the independence of the Fed from the US government. For van Zeeland, marked by Belgium's wartime experience and the ensuing financial chaos, the main weakness of the Federal Reserve System was the strong influence of the Federal government in the Federal Reserve Board:

"Who can fail to see the danger in such a situation? In general, the System is exposed to the drawbacks that threaten any State Bank. Political interference in the financial conduct of the institution, confusion between the credit of the State and that of the Bank, undue pressure by the State to obtain excessive aid from the Bank, etc. In the United States, perhaps more so than elsewhere, these are menacing drawbacks." (van Zeeland 1922, p.269).

In van Zeeland's view, it was crucial to strengthen the centralization and independence of the Fed: "Would it not be infinitely preferable to recognise the true character of the role played by the Reserve Board, and reform its organisation so as to avoid the criticisms and disadvantages resulting from its current form of constitution? Since it is ultimately the Reserve Board that holds, for the entire United States, the eminent position which had been

attributed to each Reserve Bank in its own district, why not establish it according to the same principles that were applied in setting up the Management Boards of the Reserve Banks, namely: 1) Essential independence 2) Limited government control 3) Representation of the various business groups 4) Authority in the hands of those representatives?" (van Zeeland 1922, p.272).

For Kemmerer, no any one group of interest must control monetary policy. It was important for all sectors (industrial, commerce and specially farmers) to be represented on the Board of this independent banking system, but it is the State that should guarantee the confidence in bank money. Van Zeeland was against State intervention in Board decisions. His plea for central bank independence was in line with ideas in Europe. The first post-war economic conference, organised by the League of Nations in Brussels in 1920, also called for central bank independence (Toniolo, 2005, 19).

With the 1935 Banking Act, a further step towards centralization was taken, with the creation of the Federal Open Market Committee. Moreover, the Treasury Secretary and the Comptroller of the Currency, who, initially, were members of the Federal Reserve Board, were removed from the Board, a step increasing the independence of the Fed from the government. As observed by Meltzer (2003, 415), "The Banking Act of 1935 permanently changed the Federal Reserve's structure and laid the foundation for the postwar Federal Reserve System. Out went the legal basis for semiautonomous, regional banks, each controlling its own portfolio. Reorganization shifted power and authority over the reserve banks to the Federal Reserve Board in Washington, where it remained. Although the Treasury controlled most decisions until after World War II, the 1935 Act made possible the centralized system that developed once the Federal Reserve became free to pursue an independent policy."

## **Conclusion**

This paper has taken a closer look into Paul van Zeeland's 1922 analysis of the early years of the Federal Reserve System. The article points up a neglected analysis of the Fed by this Belgian economist. This is all the more important as there are only few examples of histories of the Federal Reserve System coming from non-American economists. This one is even more interesting as van Zeeland was close to the American debates and protagonists. The study also fills a gap in the work of Paul van Zeeland, who went on to become Prime Minister of Belgium in the 1930s. Van Zeeland fellowships in US in the 1920s marked his career. While he has been the topic of much literature in Belgium, his analysis of the Federal Reserve System has been largely neglected.

Under the supervision of Edwin Walter Kemmerer, van Zeeland worked on a study of the Federal Reserve System at Princeton in 1920. The focus of this paper is on a comparison of the work of this young European student, Paul van Zeeland with his professor, Edwin Walter Kemmerer – the money doctor and money theoretician. There are clear similarities in the analyses of both men, for instance in their adherence to the quantity theory of money and real bills doctrine, as well as in their emphasis on the elasticity of the money supply and the availability of reserves to commercial banks. Moreover, they shared a view, with hindsight a rather naïve view, that, with the Fed, financial crises would be a thing of the past. However, there were also important differences, like the significance that van Zeeland accorded to the discount market (a key factor for the international role of the dollar), to a stronger centralisation of the Fed, as well as to its independence from the State (elements related to van Zeeland's continental European background: his studies in Leuven and his work as the first head of the Belgian central bank's Economic Service). This was in contrast to Kemmerer's defence of farmers' interests. Van Zeeland's plaidoyer for more centralization would come to fruition in the 1935 Banking Act.

Moreover, the paper shows that there were very important and intense transatlantic exchanges of ideas on central banking at the time, with Belgium playing a significant role. The experience of Belgian central banking was described as of “special interest” in Conant’s study for the National Monetary Commission. The experience of the newly created Federal Reserve System soon attracted the attention of A.-E. Janssen, Director at the Belgian central bank and professor at the University of Louvain. He sent one of his most brilliant students to the US for a more profound study. It shows the keen interest in the central banking community in the early 20<sup>th</sup> century to learn from the experience in other countries, with Belgium playing an innovative role in this process of the spread of ideas.

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BAEFA: Belgian American Educational Foundation, Brussels.

FRBNYA: Federal Reserve Bank of New York, New York.

NBBA: National Bank of Belgium, Brussels.

PUA: Princeton University, Princeton.

PVZA: Papers Paul van Zeeland, Université Catholique de Louvain, Louvain-la Neuve.

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## **Abstract**

This paper goes into the analysis of Paul van Zeeland (1893-1973) of the first years of the Federal Reserve System. Under the supervision of Edwin Walter Kemmerer, van Zeeland (Belgian Prime Minister in the 1930s) worked on a study of the Fed at Princeton in 1920. There are clear similarities in the analyses of both men, for instance in their adherence to the quantity theory of money and real bills doctrine, as well as in their emphasis on the elasticity of the money supply and the availability of reserves to commercial banks. Moreover, they shared a view, with hindsight a rather naïve view, that with the Fed in place, financial crises would be a distant memory. However, there were also important differences, like the significance that van Zeeland accorded to the discount market (a key factor for the international role of the dollar), to a stronger centralization of the Fed, as well as to its independence from the State (elements related to van Zeeland's continental European background: his studies in Leuven and his work as the first head of the Economic Service of the Belgian central bank). Van Zeeland's plaidoyer for more centralization would be taken up in the 1935 Banking Act. Finally, the paper shows the very important and intense transatlantic exchange of ideas on central banking, with Belgium playing an important role.

**Keys words:** van Zeeland, Federal Reserve System, Banking Reform, Kemmerer.

**JEL:** B1, N21, N26, E58.