Paul van Zeeland and the first decade of the US Federal Reserve System: The analysis from a European central banker who was a student of Kemmerer

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by Ivo Maes and Rebeca Gomez Betancourt

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Abstract

The establishment of a central bank occurred at very different moments in the process of economic integration in the United States and the European Union. In this paper, we go into the first years of the Federal Reserve System through the lens of Paul van Zeeland's PhD dissertation. Paul van Zeeland (1893-1973) became the first Head of the Economics Service of the National Bank of Belgium in 1921, after his studies in Princeton with Edwin Walter Kemmerer. There are clear similarities in their analyses of the Federal Reserve System, for instance in their adherence to the gold standard and the real bills doctrine as well as in their emphasis on the elasticity of the money supply. 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. So, van Zeeland, like several other economists as Warburg, accorded greater significance to the discount market (a key factor for the international role of the dollar) and to a stronger centralization of the Fed (which would be taken up in the 1935 Banking Act). Moreover, very specific for van Zeeland is the importance given to the Fed's independence from the State (an element related to his continental European background and Belgium's experience of monetary financing during the war).

JEL codes: A11, B1, E58, F02, N23.

Keys words: van Zeeland, Kemmerer, Federal Reserve System, financial crisis, banking reform.

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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, 1922b:194).

1. INTRODUCTION

As is well known, the establishment of a central bank occurred at very different moments in the process of economic and political integration in the United States and the European Union. One might argue that the United States, already from its origins, from the Declaration of Independence in July 1776, constituted in many ways a federal state. The civil war, from 1861 to 1865, confirmed the federal nature of the United States, as against the southern confederate view. Still the establishment of a federal central bank only occurred in 1913 and the early functioning of the Federal Reserve System was not always easy. Moreover, notwithstanding the political union, there were important cleavages in the American economy and society, whereby one might note certain similarities with the Euro Area. As observed by one of America's foremost economists of the time, the Harvard professor Allyn Young:

> "So far as finance is concerned the most important cleavage has been the one between 'creditor regions', supporters of 'sound money' and of an effective centralized control of banking operations, and 'debtor regions', partisans of 'cheap money' and advocates of the largest practicable degree of freedom in the establishing and operating of banks. The recurrent 'cheap money' movements that have characterized the political history of the United States have sprung from the fact that the opening up and developing of new lands have called for expenditures of capital in amounts far beyond the resources of the actual settlers. New regions have generally been debtor regions, and there is more than mere coincidence in the fact that demands for cheap money have always been voiced most loudly on the frontier." (Young 1926)

In this paper we analyse the establishment and the first years of the Federal Reserve System through the lens of Paul van Zeeland's Ph.D dissertation as well as the analyses of his American mentor, Edwin Walter Kemmerer. Paul van Zeeland (1893-1973) was the first Head of the Economics Service of the National Bank of Belgium, in 1921. After a brilliant career at the Bank, he entered politics. He is especially famous for his time as Prime Minister (1935-1937). In 1935, he put an end to the deflation policy in devaluing the Belgian franc. Moreover, he introduced radical financial reforms, especially the establishment of the Banking Commission for the supervision of banks and the introduction of a deposit guarantee system. Walter Lippmann, in the New York Herald Tribune of 29 January 1938, described van Zeeland as "perhaps the most efficient, the least confused, and the most surefooted of the statesmen who had dealt with the depression". 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.

Van Zeeland studied in Louvain with A.-E. Janssen and in Princeton with E. W. Kemmerer. He wrote a dissertation untitled: *La réforme bancaire aux Etats-Unis d'Amérique de 1913 à 1921, le système de la réserve fédérale* (van Zeeland 1922). Paul van Zeeland's analysis of the early years of the Federal Reserve remains an unstudied subject, both in the literature on van Zeeland[1] 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 on this theme in English.

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 Mehrling (2002), Dimand (2003), Meltzer (2003) and Wells (2004), emphasizes 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 of van Zeeland. We will focus in particular on van Zeeland's originality as compared to Kemmerer, his mentor[2].

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. In the third section, we go into the formation of the

1 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.

2 Van Zeeland was not the only Belgian who studied the functioning of the Fed. A few year later, Jean Steels also went to the US with a CRB fellowship, studying at Harvard with Allyn Young. His work *La banque à succursales dans le système bancaire des États-Unis,* was published in 1926.

young van Zeeland and we analyse 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 US Federal Reserve System. As an epilogue we go into van Zeeland's ideas about (European) monetary union. We also try to draw some lessons from our analysis for Europe's monetary union.

2. KEMMERER AND US BANKING REFORM BEFORE THE CREATION OF THE FED

Edwin Walter Kemmerer (1875-1945) was an eminent economist and academic[3]. In 1899 he started a PhD at Cornell University. He chose to work on the quantity theory of money (QTM), a choice that would be pivotal for his professional future: Kemmerer was a quantity theorist, but also a defender of gold-monometallism, putting him at odds with several other quantity theorists who favored bimetallism. One of Kemmerer's first professors of economics, Willard Fisher, was one of the major American bimetallists, and like most bimetallists, defended QTM. Jeremiah Jenks, Kemmerer's PhD adviser, was a monometallist and quantity theorist. He strongly influenced Kemmerer who continued to work on the QTM as his PhD thesis topic, developing a statistical test to prove its long-term validity in the United States between 1879 and 1901.

Kemmerer was also an active member of the *American Economic Association* and became its president in 1926. He intervened 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. Kemmerer 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" (Drake 1989). These were key reasons why the young Paul van Zeeland decided to pursue his studies 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[4]. This book was very successful, with twelve editions in total. The outline of the book was easy: in the first part Kemmerer analyzed the four defects of the old National Banking System prior to the

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3 For a wider analysis of Kemmerer's monetary theory, see Gomez Betancourt (2010a & 2010b). On his biography see Gomez Betancourt (2016).

4 We choose to quote here from Kemmerer's Fourth edition of April 1920 because this was the edition used and quoted by van Zeeland in his dissertation.

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.

In 1863, in the midst of the US Civil War, the National Banking System (NBS) was established 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 and uniformity 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 US Treasury Bonds guaranteed them. As a consequence, these banknotes were credit-risk-free.

After the Civil War (1860-1865) the American monetary debates concerned three main issues: first, the instability of the price level, second, the recurrent banking crises which occurred under the National Banking System and the consequent necessity of a banking reform, and third, the choice of the metallic standard (among gold coin standard, bimetallism, gold exchange standard, etc.)[5].

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 money market which would allow banks to place their short-term funds (when banks had surpluses, there was 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 (like Warburg, Burgess and van Zeeland).

Firstly, concerning the decentralization issue, Kemmerer not only worried 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 about 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

5 In his 1944 book, Kemmerer identified three types of gold standards, which depend on whether all or only some of the characteristics defining the GS are present. The first is the Gold Coin Standard (GCS), also called Gold Specie Standard (GSS) or Gold Standard (GS). In this system, gold coins circulate within a country, bank notes are convertible into gold coins without restriction, and coinage is unlimited at costs generally determined by the law. The second type is the Gold Exchange Standard (GES) in which there is neither free coinage of gold nor domestic gold coins in circulation, although the latter would not compromise the effectiveness of the mechanism. Currency reserves consist of short-term interest-yielding investments in foreign financial markets. The third type is the Gold Bullion Standard (GBS). It relies neither on domestic gold circulation, nor on unlimited gold coinage. Gold is stored in the issuing bank and only serves to maintain the stability of the exchange rate. Bank notes are convertible only above a certain amount (equivalent to a bullion) and exclusively for exportation.

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: 3-4).

Gold 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: 6).

Paul van Zeeland was on the same line: "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: 25).

Later research (Eichengreen *et al.* 2014) has confirmed the importance of the mutualisation of gold reserves for the cohesion and stability of the US monetary union, comparing it, in a certain way, with the TARGET2 system in Europe's monetary union.

Secondly, one of the most important defects of the National Banking System was the inelasticity of the supply of money. Kemmerer argued that there was a relationship between seasonal variations and the scarcity of currency and credit, leading to an instability of interest rates. He attributed this phenomenon to the demand associated with harvests and the unresponsive bond-secured currency system (Kemmerer 1911b: 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 showed the weaknesses of the National Banking System and advocated a more elastic money and credit system, which would allow farmers greater access to credit.

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[6]. 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[7]. 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 the real bills doctrine, the central bank could put an end to the considerable and often erratic fluctuations of interest rates. Kemmerer advocated the real bills doctrine and believed that money issuing and credit allowance should meet the needs of trade.

The real bills doctrine, as defended by Kemmerer and also van Zeeland, has been severely criticized.According to Mints (1945), "many writers have clearly had no faith in it but have failed to state their opposition explicitly. Among those who have done so, the analysis of D. H. Robertson merits consideration." (Mints 1945: 260). Not only Robertson (1922), but also Lauchlin Currie (1934), Harris (1936), Hawtrey (1924) among others criticized the real bills doctrine. The main argument against it was their opposition to tie the money supply to short-term assets. In Robertson's words, “money is very much untied and runs about the city” (Robertson 1922: 102).

According to Mints, “While Lord Keynes has not explicitly criticized the real-bills doctrine, it is nevertheless clear that he has no faith in it. He has strongly urged that the central bank should be ready to deal in debts of all maturities rather than confine itself to those of short term. This is rank heresy to any believer in the real-bills doctrine.” (Mints 1945: 260). Mints argues then that, if the central bank operated in this manner, the structure of interest rates could be directly affected, whereas under existing practices the price of long-term debts is left to be “influenced by belated and imperfect reactions from the price of short-term debts”. (Keynes 1936: 206).

Kemmerer, as well as van Zeeland and many other (American) economists of that time who supported the real-bills doctrine, argued that an elastic currency was necessary to meet the needs of trade while restricting the banks to loans for commercial purposes. Kemmerer was worried about the liquidity risk. The way to prevent it was confining banking to short-term commercial loans to warrant the liquidity position. Nevertheless, despite the criticism, in these years and until the reform of the Banking Act in 1935, the

[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.” On the decentralization problem in US, see also Laughlin (1933) and Rist (1938, p.437).

[7] Warburg knew continental European central banking very well, also because he was a German immigrant.

Federal Reserve followed the real bills doctrine. For many later analysts, like Allan Meltzer (2003), the real bills doctrine was one of the reasons of the “flawed” Fed policies which contributed to the Great Depression (cf. infra).

Thirdly, Kemmerer discussed the issues of domestic transfers and the foreign exchange dependence. On the subject of domestic transfers, he explained 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: 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: 23-24).

Fourthly, the last main problem, according to Kemmerer, was the “defective government deposit system”. Indeed, 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. The bond-secured system, implied 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: 249).

Thus, the volume of national banknotes available fluctuated according to the quantity of bonds issued and was not related to 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. The new model put forward a currency guaranteed by commercial paper, as in many continental European countries, according to the “real bills” approach (cf. infra).

Oliver Sprague (1913) coined the term “Kemmerer’s Plan” of banking reform to highlight Kemmerer’s contribution to the banking system debate[8]. The two original aspects of Kemmerer’s plan were: 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, as there should be total confidence in bank money[9].

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[10]. 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.

8 “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: 68).

9 Kemmerer, who considered 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 (2016).

10 Neither of the two main biographies of van Zeeland (Dujardin and Dumoulin 1997 and Henau 1995) have any information about this. Part of his archives was destroyed in a fire.

3.1. Van Zeeland's formation

Paul van Zeeland was born in Soignies on 11 November 1893. He studied Law and Philosophy in Louvain. 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 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. Janssen quickly became a mentor for van Zeeland.

Janssen had obtained degrees in Law and in Political and Diplomatic Sciences at the University of 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 realized that, from the late 19th 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 20th century (Janssen 1911: 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: 423).

Van Zeeland's later thesis on the Federal Reserve fitted perfectly into Janssen's research program on money and central banking (Maes 2010). In his course on "Les banques d'émission" (issuing banks), 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 issuing banks, focusing on elements like capital and reserves, the gold and silver reserves, the regularization of international payments and the relationship with the State and with commercial banks (AEJA, No 525, n.d.). In the following years, van Zeeland also gave this course.

The First World War provided the impetus for important changes in Belgian academic life (Maes and Buyst 2005). 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 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, n.d., 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, 1921, PUA). Paul van Zeeland was further influenced by Kemmerer's close links with the Federal Reserve System. During his year in the US, he was an intern 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, 1921, BAEFA).

The First World War and the ensuing monetary chaos also 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'Etudes 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, a 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 organized.

He made a quick career at 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 Louvain in 1928 (Dujardin and Dumoulin 1997).

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 the Federal Reserve System, which he had initiated in the United States under the direction of Kemmerer. As mentioned above, the topic fitted in perfectly with A.-E. Janssen's research program on issuing banks. His study on the organization and functioning of the Federal Reserve System became his Ph.D. dissertation at the University of 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 organization of short-term commercial credit, in particular the rediscounting of commercial paper, and the function of State cashier.

The National Bank was *de facto* entrusted with the monopoly for issuing banknotes. In order that banknotes would always be convertible into precious metal, the National Bank was not allowed to get involved in 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).

Originally, banknotes represented claims on metal standard money and were intended mainly to facilitate large-value payments. At the end of the 19^{th} century, they became more widely established as payment instruments. In 1873, an important step was taken along the road towards the Bank becoming a public institution when banknotes were made legal tender: henceforward, no-one could refuse to accept payment in banknotes.

This made the right of issue even more important. Also, the State appropriated an ever-increasing proportion of the Bank's profits, particularly when renewing the right of issue.

The large-scale replacement of coins by notes in the monetary circulation led to a growing concentration of countries' stock of precious metal at the central bank. So, the National Bank 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).

The National Bank of Belgium also innovated in accumulating foreign-currency-denominated assets and using them in foreign exchange market interventions and other operations (Eichengreen *et al.* 2018: 16)

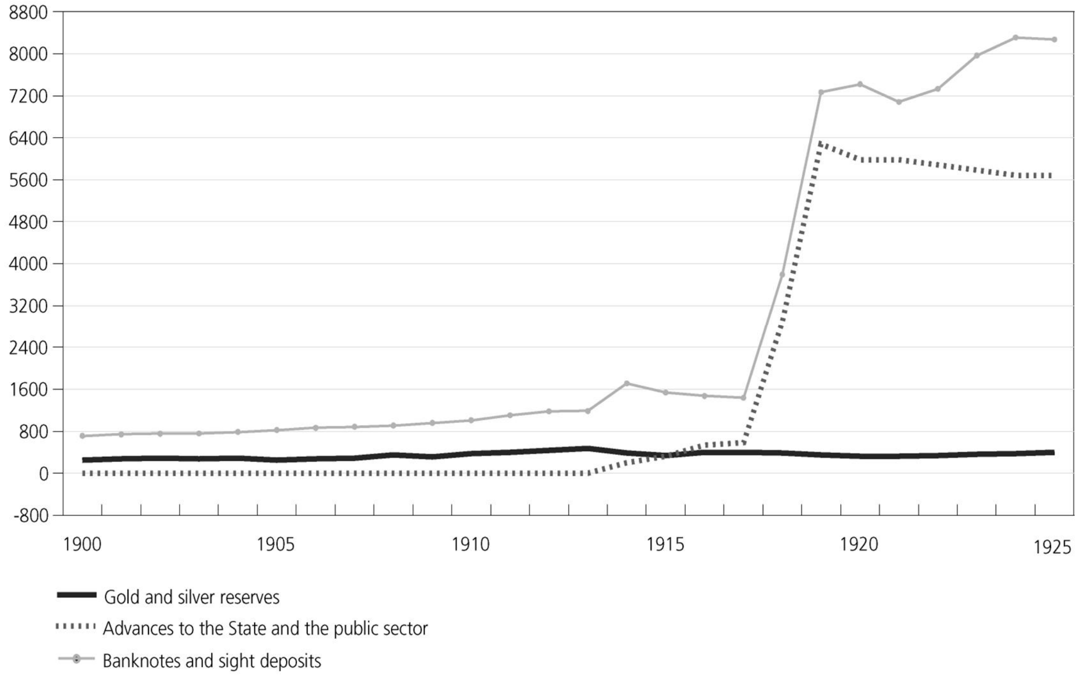
The US National Monetary Commission, who prepared the establishment of the Fed, also produced a volume on the Belgian central bank in 1910, written by Charles Conant. He argued that: "The history of the National Bank of Belgium is of special interest to the student of banking systems because of the lateness 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 non-commercial asset." (Conant 1910: 5). This basis of rapidly convertible commercial paper was the foundation of the Bank's note-issuing system.

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.

Chart 1 - Selected items of the balance sheet of the National Bank of Belgium, 1900-1925 (end of year, millions of Belgian francs)



Source: NBB.

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.

Van Zeeland's monetary ideas in the early 1920s reflected both his Belgian and American formation. Both Kemmerer and Janssen, as so many economists after World War One, were in favour of the gold standard and hoped that convertibility could be restored quickly. For van Zeeland, like Janssen, there was also the influence of scholastic economic thought, which emphasized the economic order and monetary stability[11]. Van Zeeland, like Kemmerer and Janssen, was also an advocate of the real bills doctrine. He strongly adhered to the view that banknotes had to be covered by gold or short-term commercial transactions. He abhorred of banknotes issued by the State, "with no metal or commercial basis". "In this case, the notes are no longer 'banknotes' but really 'paper money'. The State does not have the power to create value; this is something that results from economic laws that elude the State just like the laws of physics or chemistry." (van Zeeland 1921: 7). However, confronted with the monetary chaos after the war, van Zeeland needed a theoretical framework to analyse Belgium's economic imbalances. Kemmerer's quantity theory fitted the picture perfectly[12].

As head of the Economic Service in the early 1920s, van Zeeland was preoccupied with the need to stabilize 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.

4. Kemmerer and van Zeeland on the Federal Reserve System

Van Zeeland's dissertation, *La réforme bancaire aux Etats-Unis d'Amérique de 1913 à 1921, le système de la réserve fédérale,* 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: VIII).

Before the publication, Kemmerer also read van Zeeland's manuscript. He sent van Zeeland a seven page letter with many detailed remarks and made further annotations on

[11] Louvain was an important center of scholastic economic thought, see Almodovar and Teixeira 2008.

[12] Later, van Zeeland would move to more "Keynesian" positions. He would become famous for, as prime minister in 1935, ending Belgium's deflation policy with a 28 % devaluation of the Belgian franc (see Gomez Betancourt and Maes 2017).

the manuscript (Letter from Kemmerer to van Zeeland, 28 December 1921, EWKA). He had only one general observation:

> "I am greatly pleased with the general character of your study. It appeals to me as an excellent exposition and criticism of the main features of the federal reserve system, and I think it will perform a very useful service in bringing to the people of France and Belgium a better understanding of our financial system – a system so different from the systems of Europe that I fear it is not very well understood by many people on the continent."

Van Zeeland shared many of Kemmerer's ideas, in particular about four issues associated with the banking reform. First, they were both quantity theorists. Second, they both were convinced – based also on Paul Warburg's analysis – of the importance of the elasticity of banking money in order to meet the American demand for money. Third, they also agreed on the need for banking reform. Fourth, they 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 more critical than Kemmerer's towards the National Banking System and the Federal Reserve System and put also others accents. Van Zeeland started his book with Kemmerer's four problems: decentralization, inelasticity, transfer and Treasury. However, while van Zeeland was clearly strongly influenced by Kemmerer, there were also important differences, four of which stand out. First and very significantly is the importance that van Zeeland attached to the discount market. Second, the international role of the Fed. Third, how the system became more centralized. And fourth, and very critically, the need to guarantee the independence of the Fed from the US government, very much shaped by van Zeeland's experience of Belgian central banking during World War One and European central banking.

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.

From the outset, van Zeeland, like Kemmerer, 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: 71). However, history would prove them wrong.

In his overview of the first years of the functioning of the Fed, van Zeeland emphasized 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: 94). Kemmerer held the same opinion (see Friedman and Schwartz 1963)[13].

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, practice 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: 116).

As observed by White (2013), most histories of the Federal Reserve did not pay much attention to the responsibilities of the Federal Reserve in in the area of banking supervision, even if this was in the title of the 1913 Federal Reserve Act: “To Establish a More Effective Supervision of Banking”. This is also so for van Zeeland and Kemmerer, even if van Zeeland (1922: 99-100) discussed it. Indeed the focus of most studies of the Fed was on monetary policy issues. This was clearly so for van Zeeland, who as a continental European central banker was more accustomed to a model in which central banks were still also competitors of commercial banks and who was marked by the monetary disorder of World War One.

Van Zeeland, much more than Kemmerer, 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

[13] However, as a referee pointed out, while the power base of the Federal Reserve became centralized in the 1920s, the centrality of power was with the New York Fed, and especially its President Benjamin Strong, not the Board in Washington.

> before the reform, ‘bankers’ acceptances’ were practically unheard of" (van Zeeland 1922: 127-128)[14].

In fact, throughout his book, van Zeeland is always careful to point out the differences and similarities between the United States and Europe.

Like Kemmerer, van Zeeland argued that 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 centers, 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 centers, particularly London: it was through those centers that distant transactions between the United States and the rest of the world were financed." (van Zeeland 1922: 127-128).

A difference between them concerned the international dimension of the new Federal Reserve. Van Zeeland devoted a whole chapter to the Fed and international finance. He described how, before 1914, the US financial markets were rather small from an international perspective. 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 (Eichengreen 2011). 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 honorable 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: 243).

Van Zeeland further emphasized 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: 244). Later research (Eichengreen *et al.* 2018: 63) also stressed the role of the Fed as market maker in the discount market.

This emphasis on the development of the discount market and the international role of the US dollar marked a difference of van Zeeland’s writing, compared to Kemmerer’s, even if this point was also made by several other authors, like Warburg (who had contributed the volume on the discount system in Europe to the National Monetary Commission). It can probably be attributed to van Zeeland’s European background, which made him more sensitive to the international dimension of what was happening in the

14 Eichengreen *et al.* (2018) also very much stress the importance of a market in bankers' acceptances for the rise of the US dollar as an international currency.

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[15]. Its Governor, Benjamin Strong, was very active in developing the acceptances market and strengthening the international role of the dollar (Eichengreen 2011: 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 center: "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 recognizes that in these terms: It is vain to assert that we are in the process of replacing England as an international financial center. England's traditional position is the outcome of geographical, economic and psychological factors, racial qualities and centuries of experience." (van Zeeland 1922: 256).

In his conclusion, van Zeeland, sketches out his ideas about the future of the Fed and presents his own appreciation of the Fed. Kemmerer (letter to van Zeeland of 28 December 1921, EWKA) called this chapter "particularly good".

Van Zeeland, like Kemmerer, emphasized the stabilizing 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 stabilizing influence in the economic life of the United States." (van Zeeland 1922: 259). He further emphasized how the System has become more centralized, 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: 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 reorganization of the country's reserves, the reform of the currency

[15] In a letter of 19 December 1920 to Kemmerer, van Zeeland writes that he "could not have found a better manner of spending my vacations" (EWKA).

circulation, the creation of a national cheque clearing institution, and the rationalization 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: 265-266).

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. With hindsight, van Zeeland's assessment of the Fed, like Kemmerer's and many others, was far too optimistic. In the ensuing years, financial crises would further hamper the United States. Several elements can account for this.

Firstly, as observed by Goodhart (1969: 3), Kemmerer, as well as van Zeeland, did not make a distinction between cyclical and seasonal variations:

> "No work on cyclical variations was presented to the National Monetary Commission. Moreover, financial crises and seasonal variations were not considered to be separate phenomena. Financial crises were attributed, with a great deal of truth, not so much to cyclical factors as to the natural results of the recurring autumnal pressures upon the money market; these seasonal pressures were so extreme that it took only a little extra strain – in the form of overheated boom conditions or the bursting bubbles of Wall Street speculation – to turn tightness into distress. The Federal Reserve System, whatever is required of it today, originally was brought into existence not to provide anti-cyclical monetary management but simply to prevent the regular seasonal swings in liquidity." (Goodhart 1969: 3).

Secondly, 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. Probably the most serious disagreement occurred in June 1933, when the Chicago Fed refused to buy Government securities from the New York Fed, leaving the newly elected President, Franklin Delano Roosevelt, no choice but to declare a bank holiday (Eichengreen *et al.* 2014: 15). This would give the impulse to the 1935 Banking Act and the creation of the Federal Open Market Committee, a crucial step in the centralization of decision making at the Fed. The US experience showes thus that monetary and financial integration is not an easy process.

Thirdly, also the Fed's policies during the Great Depression were seriously criticized. Meltzer, in the official history of the Federal Reserve System, is very hard: "Failure to act during the Great Depression was the Federal Reserve's largest error, but far from its only one. Failure to expand can be explained as the result of prevailing beliefs about the inevitability of a downturn following the stock market boom. Nothing in theory or central banking practice can explain why the Federal Reserve did not respond to the failure of thousands of banks. Most of the banking failures from 1929 to 1932, and the final collapse in the winter of 1933, could have been avoided. The failing banks included many member banks. After years of recession, banks had little eligible paper to borrow against. The Federal Reserve, following the real bills doctrine, saw no reason to expand." (Meltzer 2003: 728-729). For Meltzer, an important culprit was the real bills doctrine, "a destructive and mistaken interpretation of banking theory". He emphasises further the importance of ideas: "The original Federal Reserve Act wrote the real bills doctrine into law. At the Federal Reserve Board, and at several reserve banks, officials followed this doctrine. They considered real bills – commercial credit – to be the only correct foundation for credit expansion. If banks did not borrow, they believed it was wrong to expand credit. This policy gives rise to procyclical policy action: credit and money expand when output expands and contract when output contracts. The gold standard, too, makes policy action procyclical." (Meltzer 2003: 729)[16].

A main difference between van Zeeland and his American mentor was the necessity to guarantee the independence of the Fed from the US government. 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 monetary and 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: 167).

For van Zeeland, marked by the continental European tradition of central banking and 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: 269).

16 In practice, during the Great Depression, the Fed also moved away from the real bills doctrine by operating much more with government securities as collateral and, subsequently, the direct purchase of government securities.

In van Zeeland's view, it was crucial to strengthen the centralization and independence of the Fed: “Would it not be infinitely preferable to recognize the true character of the role played by the Reserve Board, and reform its organization 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: 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's plea for central bank independence was in line with ideas in Europe. The first post-war financial conference, organised by the League of Nations in Brussels in 1920, also called for central bank independence. When discussing the monetary chaos after the war and the requests for monetary financing by governments, the Commission for Monetary Circulation and Exchange Rates advanced a resolution: “Banks and especially issuing banks should not be under any political influence and should only be managed under the inspiration of the principles of a vigilant financial policy” (Conférence Financière Internationale 1920: 18). The conference unanimously adopted this resolution. One year later, in early 1921, Bank of England Governor Montagu Norman tabled some resolutions to be adopted by the central banks. This is considered as “a kind of central bank manifesto” (Toniolo 2005: 19). The first point stressed the independence of the central banks: “Autonomy and freedom from political control are desirable for all Central and Reserve Banks” (Sayers 1976: Appendix 10). Also the 1922 Genoa conference concluded that banks of issue "should be free from political pressures, and should be conducted solely on lines of prudent finance" (Report of the Financial Commission of the Genoa Conference, reprinted in Federal Reserve Board 1922: 678).

Naturally, central bank independence will always be a sensitive issue, as central banks are responsible for crucial public functions, especially with respect to monetary and financial stability and the payments systems. Van Zeeland approached central bank independence from a very different perspective from most American economists. In the United States, many feared a Fed dominated by commercial bankers, in particular the powerful east-coast financial community. This made a dominant position for the government much more acceptable. Van Zeeland feared State control of the central bank, given also the dramatic experience of monetary financing during World War One.

As mentioned, with the 1935 Banking Act, an important step towards centralization was taken, especially 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 post-war 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."

5. EPILOGUE: VAN ZEELAND, THE FEDERAL RESERVE SYSTEM AND EUROPEAN (MONETARY) UNION

After the Second World War, Paul van Zeeland was very closely involved in the process of European integration. Together with the Pole Joseph Rethinger, he was the founder of the European League for Economic Cooperation (Dumoulin and Dutrieu 1993). The League was one of the European movements at the basis of the Congress of Europe held in The Hague, on 7-11 May 1948, a meeting of crucial importance in the process of post-war European integration. Van Zeeland became the Chairman of the Congress's Economic Commission.

As early as the interwar period, van Zeeland had acquired a strong reputation in the international arena. In April 1937, when he was still Belgian Prime Minister, he was asked by the French and British Governments to make a report on what could be done to reduce the barriers to international trade and promote general prosperity (van Zeeland 1938). Many of his later ideas were already evident in this report.

While van Zeeland strongly favoured European economic integration, he should not be considered as a European federalist, but as a "confederalist" (Dujardin and Dumoulin 1995). Van Zeeland exposed his ideas on many occasions. A good overview can be found in a lecture "*La Belgique et l'Occident Européen*" given in Paris in 1945. Van Zeeland emphasised the Nation State as the basis of the international order, while at the top should be a Universal League. In his view, Europe was one of the "intermediary organs":

> "At the bottom, the Nation State.
>
> At the top, a Universal League.
>
> Between the two, the intermediary organs, which must ensure the balance and stability of the international body politic. Among these intermediary organs, two types can be distinguished.

> The first could be described as 'vertical' or 'functional'. They have functions or tasks to perform that transcend all borders, national and regional, but which are constrained by their purpose for example, those that fall to the International Court of Justice, the Bank for International Settlements, etc.
>
> The other type, by contrast, have a 'horizontal' character: they are regional groupings. When we talk about a 'region', this word should be given the broadest, most comprehensive interpretation possible, so as to encompass not only the consequences of geographical proximity, but also all the affinities that tend to bring men closer to each other. Spiritual affinities often constitute motives or levers at least as efficient as the most active material interests. ...
>
> In short, we might think of the regional grouping as a stage and a means towards universalism." (van Zeeland 1945: 12-13).

Van Zeeland further stressed very much the notion of national sovereignty: "the Nation State is still alive, autonomous, master of its destiny. But, using its rights and accepting its obligations, it delegates certain powers to entities to which it is an integral part, and that perform tasks from which it will benefit itself." (van Zeeland 1945: 33). Later, as Belgian Foreign Minister from 1949 to 1954, he appeared reluctant towards European political union. Pierre Uri, one of Monnet's trusted lieutenants, characterised him as "a gravedigger of the political Community" (Dujardin and Dumoulin 1995: 197).

On the economic plane, van Zeeland argued that the European region should become a customs union and a monetary union: "In the current circumstances, I think a regional grouping, to attain all these, economic, objectives, must go straight for radical solutions; that is, as far as a customs union and monetary union." (van Zeeland 1945: 19).

Especially with the hindsight of the euro area crisis, it might seem rather naïve to think that a monetary union could be sustainable without an economic union. However, van Zeeland was probably thinking more in terms of a gold standard regime, which one might describe as a monetary union with several Nation States and central banks[17].

It is remarkable that van Zeeland had already been criticised on this issue much earlier, in May 1942, when, as Chairman of the Belgian Commission for Post-war Reconstruction, he had presented Belgium's peace aims at the Council on Foreign Relations in New York (Belgian Peace Aims, PVZA, Archives de l'UCL, FD Cehec A19, n°313).

In his presentation in New York, he emphasised that organisation on the regional level would have to start with the establishment of a monetary and customs union. Regarding the functioning of a monetary union, he referred to the US Federal Reserve System:

[17] As in his report on the reduction of barriers to trade (van Zeeland 1938: 94).

"Similarly, a single monetary system would be set up. The several states might retain their national banks, but these would become subject to the control of a regional organization. They would occupy a position somewhat like distinct Federal Reserve Banks in the United States with the regional body serving as a sort of Federal Reserve Board."

His ideas about monetary union were received very critically by his public in New York. A crucial issue was whether a monetary union could function without centralised monetary decision-making and an economic and political union. "Mr. Altschul questioned whether it would be possible to prevent one or another of the national banks from doing something which would be harmful to the banks of cooperating countries unless there should be some sort of real political authority to back up the central board." In his reply, van Zeeland argued for central bank independence. In his view, the central banks would have to be separated from national treasuries. Moreover, he emphasised the need for good faith among the different actors: "The central board rather than the governments of member states would determine the policies to be followed. If conditions should arise which would make it desirable for one bank to increase its notes, or to adopt some other relief measure, the board would doubtless agree to such a course. One has to assume a certain amount of good faith on the part of all parties concerned. Without good faith no sort of cooperation would be possible." However, many interlocutors were sceptical that "good faith" would be enough: "Mr. Diebold expressed the view that while it might be possible to rely on good faith to keep the several banks in line in the great majority of cases, in some it probably would not. It then would be necessary to have a supra-national political authority with adequate power to enforce the decisions of the central board. Mr. Shuster agreed, especially since in the case of many regional formations there would be wide differences (cultural, economic, political, etc.) between the component states. Mr. van Zeeland admitted that friction would be inevitable. But this, he said, could be overcome."[18]

So, van Zeeland's proposals for European monetary union seem not to be on the same line as his earlier analysis of the Federal Reserve System. There, van Zeeland had argued, approvingly, that there was a centralising tendency in the Federal Reserve System, something he was much more ambiguous about for Europe.

In his capacity as President of the European League for Economic Cooperation and as Belgian Foreign Minister, from 1949 to 1954, van Zeeland played an important role in the process of European economic integration in the post-war period, even though he was very much against a political union. What was of crucial importance for the Belgian statesman was cooperation between Europe and the United States. Van Zeeland was one

[18] So, in terms of the (later) monetarist-economist controversy about European monetary integration, van Zeeland took a very monetarist position, as he was in favour of a monetary union without an economic union and without a mechanism for the coordination of economic policies (for overviews of the monetarist-economist controversy see Maes 2002 and 2004).

of the fiercest advocates of a strong Atlantic dimension to European integration, the roots of which go back to his studies in the United States.

6. Conclusion

The establishment of a federal central bank occurred at very different moments in the process of economic and political integration in the United States and the European Union. While the United States, already from its origins in 1776, constituted in many ways a federal state, the Federal Reserve System was only established in 1913. By contrast, the European Central Bank was established in 1998, when the process of economic and political integration was less well advanced. Notwithstanding these differences, both policy-makers and academics have been active in "drawing lessons" from the United States' experience for Europe's economic and monetary union (see, e.g., Butzen *et al.*, 2014 or Gaspar, 2015). In this paper, we would also like to draw some lessons from the US experience, focusing on the establishment and early years of the Federal Reserve System through the lens of the analyses of two eminent economists: Paul van Zeeland and Edwin W. Kemmerer.

The focus of this paper was on Paul van Zeeland's 1922 analysis of the early years of the Federal Reserve System, in comparison with his American mentor Edwin Walter Kemmerer – the money doctor and money theoretician. The article points up a neglected analysis of the Federal Reserve by this Belgian economist. This is all the more important as there are only very few examples of analyses 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. While he has been the topic of much literature in Belgium, his analysis of the Federal Reserve System has been largely neglected.

There are clear similarities in the analyses of both men, for instance in their adherence to the gold standard and real bills doctrine, as well as in their emphasis on the elasticity of the money supply. 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. Van Zeeland, like several other economists as Warburg, accorded a greater significance to the discount market (a key factor for the international role of the dollar) and to a stronger centralization of the Fed (which would be taken up in the 1935 Banking Act). Moreover, van Zeeland singled out the importance of the Fed's independence from the State (an element related to his continental European background and Belgium's experience of monetary financing during the war).

The early experience of the establishment and functioning of the Federal Reserve System clearly showed that monetary and financial integration is not an easy process, with many hidden difficulties on the way. Even if there was a US political union, the Federal Reserve System went through several crises, which revealed flaws in its initial institutional set-up. The institutional architecture of the Fed was therefore strengthened over time. This should be a further spur to achieve a "Genuine Economic and Monetary Union" in Europe, as well as to increase the resilience of Europe's economies. We further highlighted the (naïve) optimism of van Zeeland and Kemmerer that, with the Federal Reserve System in place, financial crises would be a memory of the past. This should be an extra reason for policy-makers in Europe not to be complacent, as the experience of the Fed has shown the inherent fragility of the financial system. Policy-makers can never rest on their laurels, they always have to remain vigilant.

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AEJA: Papers A.-E. Janssen, Université Catholique de Louvain, Louvain-la-Neuve.

BAEFA: Belgian American Educational Foundation, Brussels.

EWKA: Papers E.W. Kemmerer, Seeley G. Mudd Manuscript Library, Princeton

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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