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European Monetary Integration and the Public-Private Money Divide: Can Post-Crisis Reforms Harmonize Private Money Creation in the Eurozone?

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Abstract

Based on the conceptual framework of the 'Money View', this paper argues that European monetary integration until the Eurocrisis has only focused on harmonizing public money on a supranational level while neglecting private credit money creation. The privately issued credit money supply in the European Monetary Union (EMU) is made up of both bank deposits and 'shadow money' forms (e.g. money market fund shares and repurchase agreements). The paper discusses if the institutional evolution and the political reform projects after the crisis lead to an upload of the frameworks for private credit money creation on a European level. On the one hand, the paper takes into account the ECB's role in compensating the unwillingness of European banks to continue intra-EMU cross-border lending by tolerating and supporting TARGET 2 balances. On the other the hand, it addresses the Banking Union reforms. The paper finds that with regard to bank deposits as 'traditional' private credit money, a spill-over is taking place that by and large leads to monetary integration further down the monetary hierarchy and seems to establish the public-private partnership for deposit creation on a European level. Finally, the paper defines an avenue for further research on the creation and regulation of shadow money in the EMU.

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Keywords: European Monetary Union, European Central Bank, Banking Union, Eurocrisis, Target II, Private Money.

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1. Introduction

This paper adopts a 'Money View' perspective to provide an analysis and interpretation of recent events in the European Monetary Union (EMU). The Money View is an institutionalist framework for the analysis of monetary and financial systems. A key concept of the Money View is to regard the monetary systems as hierarchical: Different layers of public and private monetary instruments, issued by different financial institutions, co-exist next to each other (Mehrling 2011, 2015a). The contemporary money supply is thus made up of three types of credit money: liabilities issued by central banks (central bank deposits and currency), liabilities issued by commercial banks (deposits) and liabilities issued by non-bank financial institutions that trade at par to the former, termed 'shadow money' (e.g. money market fund shares and repurchase agreements) (cf. Pozsar 2014).

Matthias Matthijs and Mark Blyth begin their 2015 edited volume 'The Future of the Euro' with the following statement: "What we term the *euro experience* shows how unfinished institutional design of the euro led to overall economic divergence across the Eurozone, rather than the convergence that EU leaders had anticipated at Masstricht in the early 1990s" (Matthijs and Blyth 2012: 2). This paper concurs with the assessment that the EMU's architecture is unfinished. However, as the Money View perspective will yield, it is not so much unfinished due to a lack of political or fiscal union, as traditionally argued. Instead, the monetary union that was created by the Treaty of Maastricht in 1992 is in itself incomplete as it has merely uploaded the top level of the monetary hierarchy to a European level. The creation of money forms further down the hierarchy, i.e. bank deposits and shadow money, remained largely nationally organised.

Based on this notion, this paper asks whether post-crisis reforms of the EMU are able to harmonize private money creation in the Eurozone. The analysis focuses on bank deposits as the traditional form of privately issued credit money and postpones the study of shadow money to future research. It discusses the institutional evolution of the European Central Bank (ECB) with regard to cross-border deposit flows in the EMU as well as the political project of establishing a Banking Union. The study suggests that despite drawbacks in the Banking Union project, there is a neofunctionalist spill-over going on that establishes the public-private partnership for deposit creation on a European level.

The paper is organized as follows. Section 2 presents some key aspects of the Money View as a conceptual lens for scholarship in International Political Economy (IPE) that seeks to study the political economy of monetary and financial systems. Section 3 applies those concepts on the history of European monetary and financial integration up to the outbreak of the Eurocrisis; it finds that only the top layer of the hierarchy of money had been integrated so far. Section 4 discusses the impact of the Eurocrisis as a banking crisis and studies the institutional development of the ECB as well as the political project of Banking Union. Section 5 concludes and spells out the avenue for further research.

2. The 'Money View' as a Conceptual Lens for IPE

The 'Money View' is an institutionalist conceptual framework for the analysis of credit money systems. Common sense among central bankers in the late 19th and early 20th century, yet ousted after the World Wars, the Money View has gained momentum after the 2007-9 Financial Crisis. It has been used e.g. to analyze shadow banking and the institutional evolution of the Federal Reserve (cf. Mehrling 2011, 2013; Pozsar 2014). In this, the Money View stands in contrast to the model-based, ahistorical approach of neo-classical economics as it takes institutions seriously and focuses on the actual 'financial plumbing' of the 'real world'. Methodically, arguments of the Money View are based on the analysis of balance sheet dynamics. In this, the Money View takes the proverbial assessment of Minsky (1986) seriously, according to which money creation is nothing but a mere balance sheet operation.

Following Mehrling (2015a), this section presents three analytical concepts of a Money View perspective that are particularly useful for institutionalist analyzes in IPE: money creation as a swap of IOUs, the hierarchy of money and the public-private money hybridity. As a fourth dimension specific to the EMU, the section introduces the distinction between national and supranational money creation.

Money creation as a swap of IOUs: The Money View is an expression of what Schumpeter (1954: 686) calls a 'credit theory of money', according to which money in its essence is circulating debt. The underlying notion of the monetary system is that of a payment system (Mehrling 2011) or an accounting system of exchange (Arnon 2011: 152ff). Payment occurs via tradable debt claims ('inside money') that are transferred in between the accounts of the participating institutions. This follows the accounting rules of double-entry bookkeeping. Hence, the formally accurate way that allows representing the dynamics in the payments system and goes right to the heart of the matter is an analysis of balance sheets.

In such a credit money system, money creation takes place when financial institutions, in exchange for a long-term IOU owed to them, create a short-term IOU that can be traded on secondary markets against commodities, services or other financial instruments. The most common example is when banks issue loans by creating deposits. The loan constitutes an asset of the bank, as it is a long-term IOU owed *to* the bank; the deposit, as a short-term IOU owed *by* the bank, is the bank's liability. In terms of balance sheet mechanics, when a bank hands out a loan, it expands its balance sheet on both sides and swaps IOUs of different maturities. The short-term maturities, in so far as they are tradable on a secondary market, function as money that can be used by the receiver of the loan. Assuming that regulatory restrictions are absent, money creation can thus literally occur out of nothing:

Borrower		Bank	
+ Money (short-term IOU)	+ Loan (long-term IOU)	+ Loan (long-term IOU)	+ Money (short-term IOU)

Money creation, from a Money View perspective, is thus the 'byproduct' of granting credit (McMillan 2014: 6). Empirically, the contemporary financial system has two main channels of credit money creation: On the one hand, commercial banks issue deposits in the traditional banking system. In the shadow banking system, on the other hand, various non-bank financial institutions – conceptually understood as shadow banks – create short-term IOUs that function as 'shadow money'.

If credit money created today is a promise to pay credit money tomorrow, we seem to be approaching logical difficulties. What is the payment of ultimate money supposed to be? A traditional argument is that it must be a money form with 'actual value'. This is why until the 20th century, the majority of monetary theorists, which ultimately adhered to a 'monetary theory of credit', believed that it was not possible to decouple monetary systems from a scarce commodity such as gold (cf. Arnon 2011). A counter-argument comes from Mitchell-Innes (1914), one of the 'founders' of a modern credit theory of money, who postulates that we only need the highest money as an 'idea' – as a 'unit of account'. "The eye", he argues, "has never seen, nor the hand touched a dollar. All that we can touch or see is a promise to pay or satisfy a debt due for an amount called a dollar" (Mitchell-Innes 1914: 155).

The Hierarchy of Money: The monetary system as a payments systems is fundamentally hierarchical (Minsky 1986). The idea of hierarchy refers to the different forms of credit money within a domestic payments system and the various institutions issuing them as their liabilities. Money forms higher up in the hierarchy are safer, more acceptable from a demand side and of more stable value, yet scarcer and more exclusive to supply; money forms further down the hierarchy are more 'elastic' to create and more accessible from the supply side, but are less acceptable from a demand side and have a higher risk of breaking away from par. The reason for this is that par clearance – i.e. keeping up a one-to-one exchange rate between various credit money forms at different positions within the hierarchy of money – cannot be taken for granted. Par clearance needs to be actively established, either politically by the central bank or via market forces (cf. Mehrling 2015a).

Figure 1 – based on Mehrling (2012) – highlights this idea in the form of a 'Monetary Pyramid'. On the top is an actual or a fictional unit of account – e.g. gold or dollar, respectively. Below this are a range of institutions issuing debt claims as inside money. The IOUs issued by the central bank are higher ranking than those of the commercial banking system, which in turn are higher ranking than those of the shadow banking system. Money creation as a swap of IOUs involves transcending the different layers of the hierarchy. Within the hierarchy, the various IOUs imply a promise to pay the higher-ranking form of money. The money form situated at the top is the final means of settling payment (cf. Pozsar 2014: 7-8). In this, there is no clear dividing line between money and credit. Depending on the issuing institution's position in the hierarchy, a credit money form will look like money if held as asset on the institution's balance sheet or credit if held as liability on the institution's balance sheet (cf. Mehrling 2012). The money forms further up in the hierarchy

have a higher 'moneyness', i.e. they appear as money to a greater number of actors, while the 'creditness' of money increases further down the hierarchy:

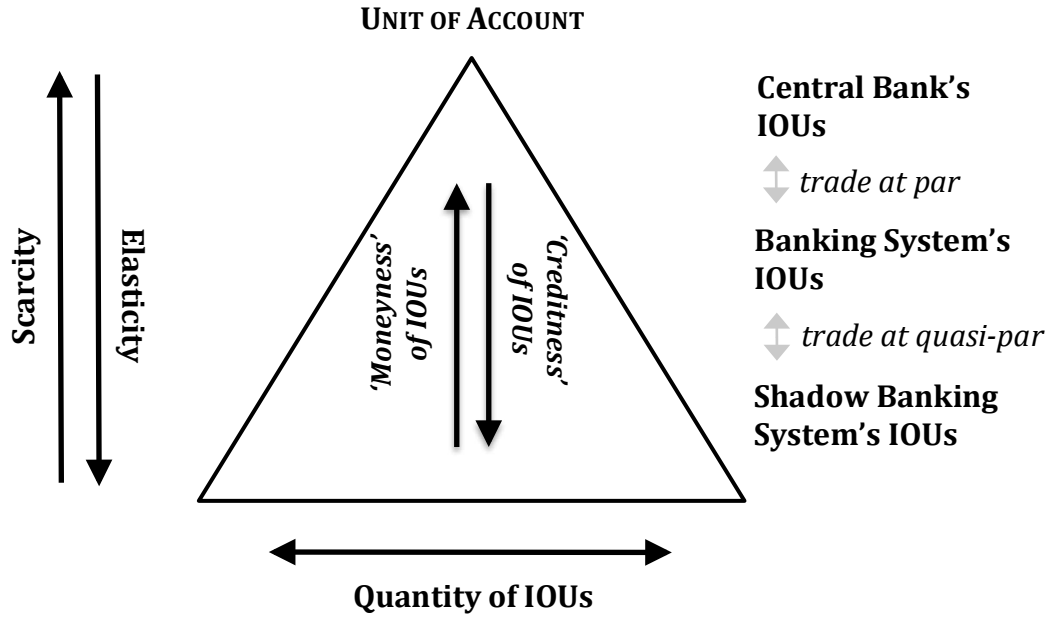

Figure 1 –The Hierarchy of Money (conceptually)

Public-private money hybridity: Money that is created as a byproduct of credit intermediation can be issued both by public and by private institutions. The money supply in general is thus a hybrid of public and private money forms. In normal times, public and private money forms trade at par with each other, which makes them appear similar and conceals inherent differences. From a Money View perspective, real-world monetary systems are thus situated in between idealizations that see the money supply – be it in a descriptive or a normative sense – as either purely public (cf. Knapp 1905) or purely private (cf. Menger 1892; von Hayek 1976). The actual delineation between public and private money forms is historically contingent and can shift over time.

Figure 2—based on Pozsar (2014: 15)—shows the 'Money Matrix' as a heuristic tool to systematize the public-private divide of credit money forms. The left column displays two different categories of public credit money: The money-like liabilities of a public institution, typically a modern-type central bank or the treasury, are *pure public money*. *Private-public money* are the money-like liabilities of private institutions that have public liquidity and solvency backstops and can tap public institutions' balance sheets via the discount window or deposit insurance. Thus, a public-private partnership for money creation is in place, in which the public authorities also assume competences for regulating and supervising the private issuing institutions. The right column displays two different categories of private credit money: The money-like liabilities of private institutions that do not have

access to backstops on a public balance sheet are *public-private money* if issued against public assets, and *purely private money* if issued against private assets.

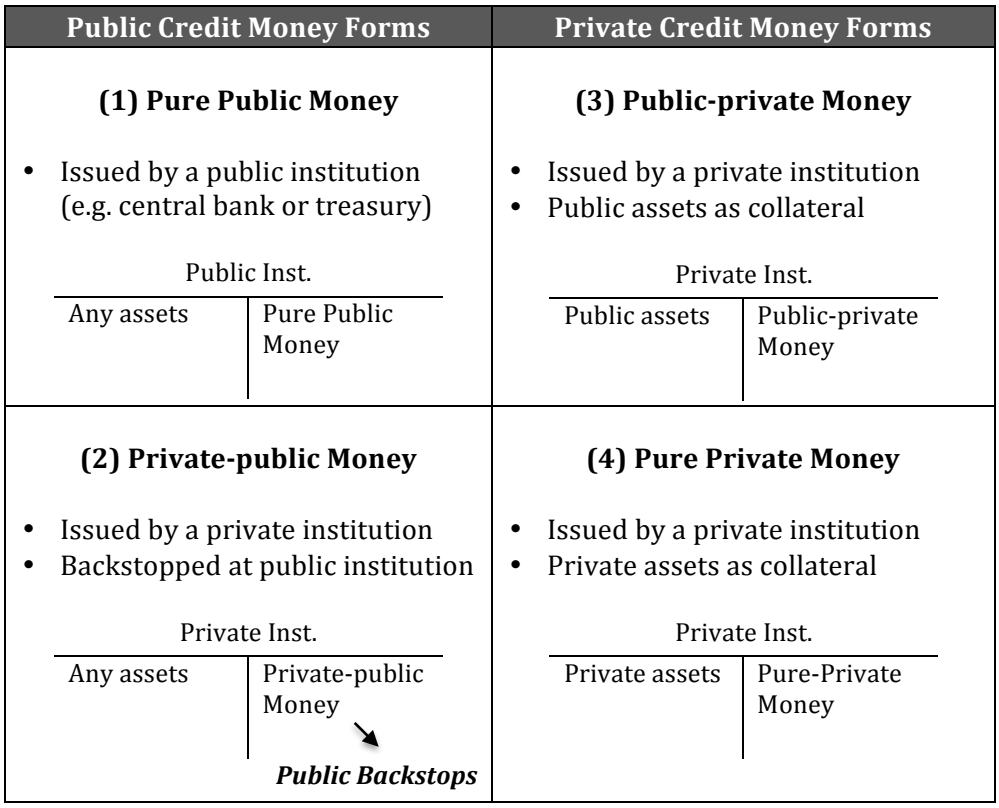

Figure 2 –The Money Matrix (conceptually)

National vs supranational level: When considering the creation of public credit money, it plays a role on which horizontal layer within a political system the respective public authorities are situated. In modern Western liberal democracies, the nation state has typically assumed this responsibility (Helleiner 2003). In the case of a regional integration project such as the EU, however, the responsibilities may be spread across different layers within a multi-level governance system. *Pure public money* may be issued by national or supranational central banks or treasuries. *Private public money* may have liquidity and solvency backstops on the balance sheets of national or supranational public institutions, and national or supranational bodies may assume responsibilities for regulation and supervision.

In addition, similar concerns about the national or supranational level apply to private credit money. On the one hand, *public-private* and *pure private money*, although they are not publicly backstopped, are created on money and capital markets that may be national or supranational with regard to their scope and regulation. On the other hand, in the case of *public-private money*, it plays a role if the public collateral that is used is that of a national or a supranational institution.

3. European Monetary Integration (1957-2009)

This section will apply the conceptual insights of the Money View as presented in Section 2 on the EMU before the Eurocrisis, which began to unfold in 2009. It will study in terms of the Money Matrix how the processes of European monetary unification had an impact on various forms of public and private credit money within Europe. In this, it will discuss the first two waves of monetary and financial integration (1957-1980 and 1985-2005). As to be demonstrated, only the key central bank money forms—currency as well as central bank deposits—were fully integrated on a supranational level. Commercial bank deposits remained in an ambiguous position between national and supranational regulatory competences. In addition, new forms of 'shadow money' emerged in the private credit money realm.

The setup of the Money Matrix in typical European states before the process of monetary integration can be imagined as depicted in Figure 3, which incorporates the 'traditional' money supply in the mid-20th century. Liabilities issued by central banks, i.e. currency and central bank deposits, are *pure public money* and situated at the top of the monetary hierarchy. They were denominated in various national units of account. Deposits as liabilities issued by commercial banks are *private-public money* insofar as they fall under the deposit insurance limit, and *pure private money* if they are uninsured (cf. Pozsar 2014: 13-17).[1]

Public Credit Money Forms	Private Credit Money Forms
(1) Pure Public Money **NATIONAL:** Central Bank liabilities • Currency (Notes, Coins) • Central bank deposits	**(3) Public-private Money**
(2) Private-public Money **NATIONAL:** Commercial bank liabilities • Insured bank deposits	**(4) Pure Private Money** **NATIONAL:** Commercial bank liabilites • Uninsured bank deposits

Figure 3 –The Money Matrix (empirically, mid-20th century)

[1] Pozsar (2014) also regards short-term bonds issued by the Treasury, insofar as they trade at par to central bank liabilities, as a form of *pure public money*. For the perspective adopted in this paper, this aspect is left aside.

European monetary integration prior to the International Financial Crisis 2007-9 and the Eurocrisis (from 2009) has occurred in two major waves that first led to establishing the European Monetary System (EMS), and then introduced the euro as a single currency (Valiante 2016: 28-37):

The first wave dates back to 1957 and began with the Treaty of Rome, which founded the European Community and in principle allowed free capital movement insofar as it was necessary to make the single market function. This was the basis for two Capital Directives of 1960 and 1963 that opened up cross-border flows for some banking transactions but not the financial market in general. The 1966 Segré Report called for further financial integration and the establishment of a joint securities market. With the Bretton Woods System gradually collapsing in the late 1960s and early 1970s, a group of experts under the chairmanship of Pierre Werner was given the mandate to inquire into the possibility of establishing an Economic and Monetary Union in the European Community. The Werner Report of 1970 proposed to realize Economic and Monetary Union in stages, but postponed a strict timetable. Instead, it fostered the establishment of a single currency bank (the 'Snake in the tunnel'). After the Nixon shock and the failure of the Snake, the European Monetary System (EMS) was established in 1979, which was based on fixed but adjustable exchange rates and the introduction of the European Currency Unit (Valiante 2016: 29-31). As a system of fixed exchange rates, the EMS kept all forms of public and private credit money national but only coordinated fluctuations of the inner-European exchange rate.

The second wave of financial integration started with the 1985 EC White Paper on Completing the Internal Market (or 'Single Market Programme'), which made the point that a single financial market had to be based on free movement of capital and financial services. The 1987 Single European Act reaffirmed that the single market should be completed by the end of 1992. In 1988, the European Council returned to the ideas of the Werner Report and restated the 'objective of progressive realization of economic and monetary union'. In 1989, the Delors Report was published, written by a committee in charge of proposing tangible steps towards monetary union, which considered it as necessary for monetary union that currencies are made irreversibly convertible and that banking and financial markets are fully integrated.[2] The plan for Economic and Monetary Union was then implemented in three phases: complete freedom of capital transaction and greater governmental and central bank coordination from 1990; economic policy convergence and lauch of the European Monetary Institute from 1994; and the introduction of the euro in line with the establishment of the European Central Bank (ECB) conducting a single monetary policy as head of the European System of Central Banks (ESCB) in 1999. The detailed architectural design of the European Monetary Union (EMU) had been decided upon in the 1992 Maastricht Treaty, which had tailored the Stability and Growth Pact (Valiante 2016: 31-34).

[2] The call for full integration of banking and financial markets is the origin of today's call for Banking and Capital Market Union.

As a consequence of the second wave of monetary and financial integration, the regulatory competences for the public and private credit money forms were spread across different layers of the multi-level governance system. Thus, how were the key credit money forms situated within the Money Matrix and the national-supranational divide?

Central bank liabilities: The foundation of the European Monetary Union with the introduction of the euro as a single currency and the establishment of the ECB as an independent EU institution situated at the top of a federal system of National Central Banks made the realm of *pure public money* supranational. Both currency and central bank deposits were put under the control ECB, although the execution of many policies is still done by the National Central Banks (NCBs). For those member states participating in EMU, the euro replaced various national currencies as the unit of account at the top of the monetary hierarchy.

Commercial bank liabilities: Bank deposits as commercial bank liabilities are created by banks as private institutions, but public authorities provide an institutional framework that amounts to an elaborate public-private partnership for deposit creation. It is made up of four dimensions: liquidity backstops, solvency backstops, bank regulation and bank supervision (cf. Section 2, also see Bundesbank 2014). Whilst the realm of *pure public money* at the top of the monetary hierarchy was put under full supranational control, the *private-public money* realm was not, given that not all of the four dimensions were transferred to the EU level:

First, the liquidity backstops were in principle made supranational as the ECB became responsible for the discount window. With the ECB in charge of the EMU's monetary policy, it has received discretion over the short-term interest rate at which banks can borrow central bank deposits. While the actual implementation of those policies may still be conducted by the National Central Banks, they are subject to directives coming from the ECB. However, National Central Banks still are in the position to give Emergency Liquidity Assistance to their national banks at their own discretion; the ECB in this regard only has veto powers.

Second, the solvency backstops for banks were not unified on a supranational level as the deposit insurance schemes remained entirely under the control of the EMU member states. Thus, solvency risk was not pooled on a European level, but the national insurance systems remained in place, which—as of 2007—not only varied from country to country with regard to their perceived credibility, but also had different actual quantitative levels of deposit insurance.

Third, the competences for the regulation of commercial banks—i.e. the determination and enforcement of general rules for the banking industry (cf. De Larosière et al. 2009: 13)—were spread across national, European and international levels. The main example for the impact of international financial governance processes on banking regulation before the Eurocrisis are the Basel Accords (Basel I of 1988 and Basel II of 2004), which provided international guidelines for bank

capital requirements. Basel II was translated into national laws of EU Member States via the EU Directives 2006/48/EG and 2006/49/EG (cf. Goldbach 2015). Still, the national levels continued to be the most important and influential frameworks for bank regulation and reflected various national particularities and historical experiences (cf. Busch 2009).

Fourth, the supervision of commercial banks—i.e. the "process designed to oversee financial institutions in order to ensure that rules and standards are properly applied" (De Larosière et al. 2009: 13)—remained largely national. The national competent authorities had a focus on micro-prudential supervision of individual banks but neglected transnational and macroprudential risks (ibid: 10).

Shadow money forms: Financial globalization, the development of eurodollar markets and the rise of the shadow banking system roughly coincided with the second wave of European monetary and financial integration. In the course of this process, new forms of private credit money substitutes developed that trade at par to the traditional money supply and thus found their way into the Money Matrix.[3] While this is particularly true for the United States, which are situated at the centre of the global financial system, it also had an impact on Europe. Following Ricks (2016), among the private credit money forms that emerged in the run up to the 2007-9 Financial Crisis, are money market fund shares, repurchase agreements ('repos'), asset-backed commercial papers, and eurodollars. To a certain extent, these shadow money forms also affect the euro area, either because they are created domestically or have a transnational scope and are thus meaningful for the EMU financial system (cf. Bakk-Simon et al. 2012, Gabor 2013, Bundesbank 2014).

Shadow money forms, as private money substitutes, naturally occupy the 'private credit money' realm and are either *public-private* or *pure-private money*, depending on the collateral against which they are issued. In the EMU, while some country-specific and supranational regulations are in place, they do not have public backstops (Bundesbank 2014: 17). Yet, in 2008, public backstops were established by the Federal Reserve and the U.S. Treasury to backstop money market fund shares and repos in the United States. Those backstops are still in place today in the form of implicit guarantees. Both shadow money forms thus were shifted from the private to the public credit money realm and effectively became *private-public money* (Murau 2016). It may be argued that the Federal Reserve backstops also affect shadow money in the EMU, e.g. due to the liquidity swap lines that the Fed established with the six major central bank in 2007 (cf. Mehrling 2015b, McDowell 2012).[4]

[3] For a theoretical description on the rise of new forms of private credit money substitutes due to financial innovation in times of an expanding leverage cycle, see Minsky (1986),.

[4] Developing a systematic understanding of the role of shadow money in the EMU and how private credit money creation in the U.S. as the centre of the global financial system has transnational effects on Europe will be aconceptual key challenges lying ahead for this research project.

Figure 4 synthesizes the findings that the above discussion of the various layers within the EMU's monetary hierarchy has generated. It demonstrates that despite the introduction of the single currency, European monetary integration has remained incomplete because the creation of credit money forms further down in the hierarchy was not organized on a European level. On the one hand, this refers to bank deposits as the 'traditional' privately issued credit money form, for which a public-private partnership is in place, yet with backstops and responsibilities spread across national and supranational jurisdictions. On the other hand, shadow money forms—primarily money market fund shares and repurchase agreements—have emerged with even more diffuse regulatory responsibilites.

Public Credit Money Forms	Private Credit Money Forms
(1) Pure Public Money **Supranational:** Central Bank liabilities • Currency (Notes, Coins) • Central bank deposits	**(3) Public-private Money** **Diffuse responsibilities:** Shadow money • issued against public debt
(2) Private-public Money **Between national + supranational:** Commercial bank liabilities • Insured bank deposits	**(4) Pure Private Money** **Between national + supranational:** Commercial bank liabilites • Uninsured bank deposits **Diffuse responsibilities:** Shadow money • issued against private debt

Figure 4 –The Money Matrix (empirically, pre-2009)

According to a dominant narrative, the EMU's architecture is incomplete because there is only monetary and not fiscal union. The notion that it is not possible to have a functioning monetary union without a fiscal union may or may not be true. Still, the present analysis suggests that it misses an important point: There is not even a proper monetary union in the EMU. A Money View perspective—which regards the monetary system as hierarchical and as a public-private hybrid—suggests that only the forms of *pure public money* at the very top of the hierarchy of money were uploaded on Union level. The money forms further down the hierarchy, which functionally and quantitatively are a much more important part of the general money supply, have not been integrated.

4. Institutional evolution since the Eurocrisis

This section will focus on commercial bank deposits as the second layer in the EMU's hierarchy of money and discuss the institutional evolution that has been initiated by the Eurocrisis. As a starting point, it will take the account of the monetary hierarchy within the EMU as it had developed during the second wave of monetary and financial integration. The main question to be asked is whether an upload of the public-private partnership on the European level has taken place or is currently underway. To answer this question, both the institutional developments of the ECB and the political project of establishing Banking Union will be looked at. The section will first recall some key aspects of the Eurocrisis as a banking crisis that mutated into a sovereign debt crisis. Afterwards, it will discuss both the institutional developments of the ECB and the political project of establishing Banking Union.

4.1 The Eurocrisis as a banking crisis

In the wake of the 2007-9 Financial Crisis, severe strains manifested themselves in the EMU and triggered what became known as the Eurocrisis. Most prominently, the Eurocrisis became associated with a sovereign debt crisis due to dramatic increases of spreads on the sovereign bonds of EMU countries (cf. Figure 5). In the first place, however, it materialized in the form of a crisis in the European banking system. In pre-crisis years, substantial imbalances had emerged. Core EMU countries such as Germany, France and the Netherlands had massive current account surpluses vis-à-vis periphery countries such as Ireland, Portugal, Spain and Greece. Concomitantly, the banking systems of the surplus countries were net lenders to the periphery. According to the dominant view of the time, those imbalances were a positive sign, not a flaw (Baldwin and Gros 2015).

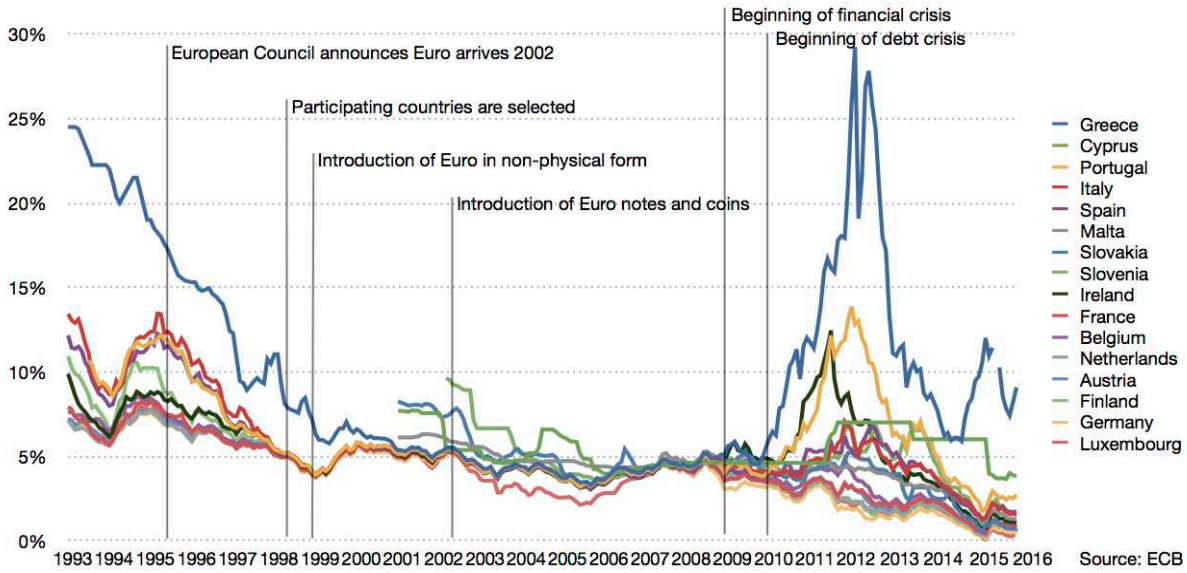

Figure 5 – Sovereign Bond Spreads of EMU countries and the Eurocrisis

With the outbreak of the Eurocrisis, cross-country lending activities of European banks came to a halt. It became obvious that, due to the absence of supranational structures for private money, euro denominated bank deposits held in deficit countries were different from those in surplus countries. Figure 6—adopted from Gros (2012)—visualizes what happened with intra-European financial flows during the Eurocrisis. In 2010, the initially free flows of deposits through the euro area stopped and concentrated on the Northern countries, which were perceived as a safe haven. The sudden stop of financial flows had a substantial negative impact on both banks and governments in the peripheral countries with current account deficits. The banking crisis spilled-over into a sovereign debt crisis: Low growth rates lead to rising government deficits and increasing public ratios, and a number of governments had to take on some of their banking system's debts on their balance sheets (Baldwin and Gros 2015).

Figure 6 –Bank Liquidity Flows in the EMU, before and during the Eurocrisis

In reaction to the Eurocrisis, national governments, EU institutions and the ECB adopted a range of different emergency interventions. In the banking crisis, the main crisis responses were conducted by the ECB with standard and non-standard measures. With sovereign debt becoming the pressing issue, the ECB launched its Securities Market Programme (SMP) in 2010 and in 2012 its successor, the Outright Monetary Transactions (OMT) programme, following the announcement of ECB President Draghi "to do whatever it takes" to preserve the euro (McBride and Alessi 2015, Draghi 2012). On a political level, the European Financial Stability Facility (EFSF) and the European Financial Stabilisation Mechanism (EFSM) were established, later succeed by European Stability Mechanism (ESM), and reforms such as the European Semester, the Sixpack and the Euro-Plus-Pack introduced.

The next sections will concentrate on two particular aspects of post-crisis institutional evolution. First, it will be discussed how the ECB took on the function of backstopping cross-border flows in the EMU via the TARGET 2 system. Second, the project of Banking Union will be looked at which—if successful—will establish the public-private framework for deposit creation on a European level.

4.2 The ECB as backstop for cross-border deposit flows

When the cross-border flows of deposits across the EMU came to a halt, the ECB developed into the core institution of the European banking system that constantly provides liquidity and incentivises cross-border financial flows. Figure 7—adopted from Gros (2012)—visualises this function that the ECB started to exercise in the crisis: The ECB seeks to direct the funds that are concentrated in the 'overflowed' North back to the 'dried out' South.

Figure 7 –Impact of the ECB on Bank Liquidity Flows to combat the Eurocrisis

Before the Eurocrisis, the current account deficits in the EMU had been financed by the private banking system. The banking systems of the deficit countries took out loans from the banking systems of the surplus countries and received privately created deposits instead:

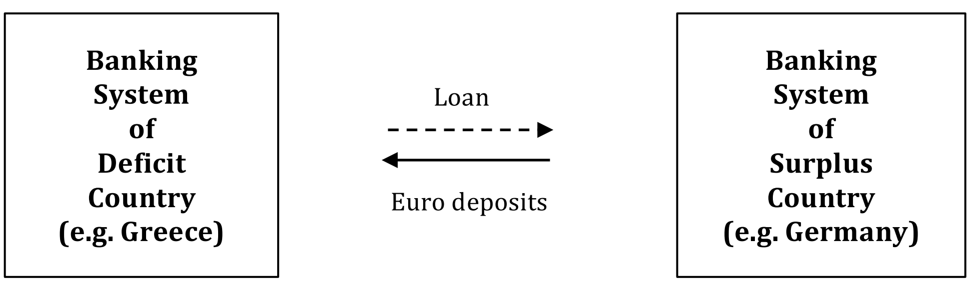

Figure 8 – Private Lending within EMU (pre-crisis)

In the Eurocrisis, this mechanism ceased to work. Banks of surplus countries were no longer willing to lend to banks of deficit countries as they feared a collapse of those banks or even the bankruptcy of the deficit country, which probably would have swept away its domestic banking system.

At this point in the crisis, euro-denominated deposits within the Eurosystem were close to breaking par. Effectively, a Greek euro deposit was no longer equivalent to a German euro deposit. Par, however, was sustained during the Eurocrisis, despite the unwillingness of surplus banks to lend to deficit banks. The reason is that the Eurosystem stepped in and the ECB adopted its role as the main conduit for cross-border capital flows (Gros 2012): Surplus banks started lending to their respective surplus central bank; deficit banks borrowed from their respective central bank. The necessary cross-border transactions then were conducted between both central banks: This manifested itself in the form of TARGET 2 balances (Figure 9).

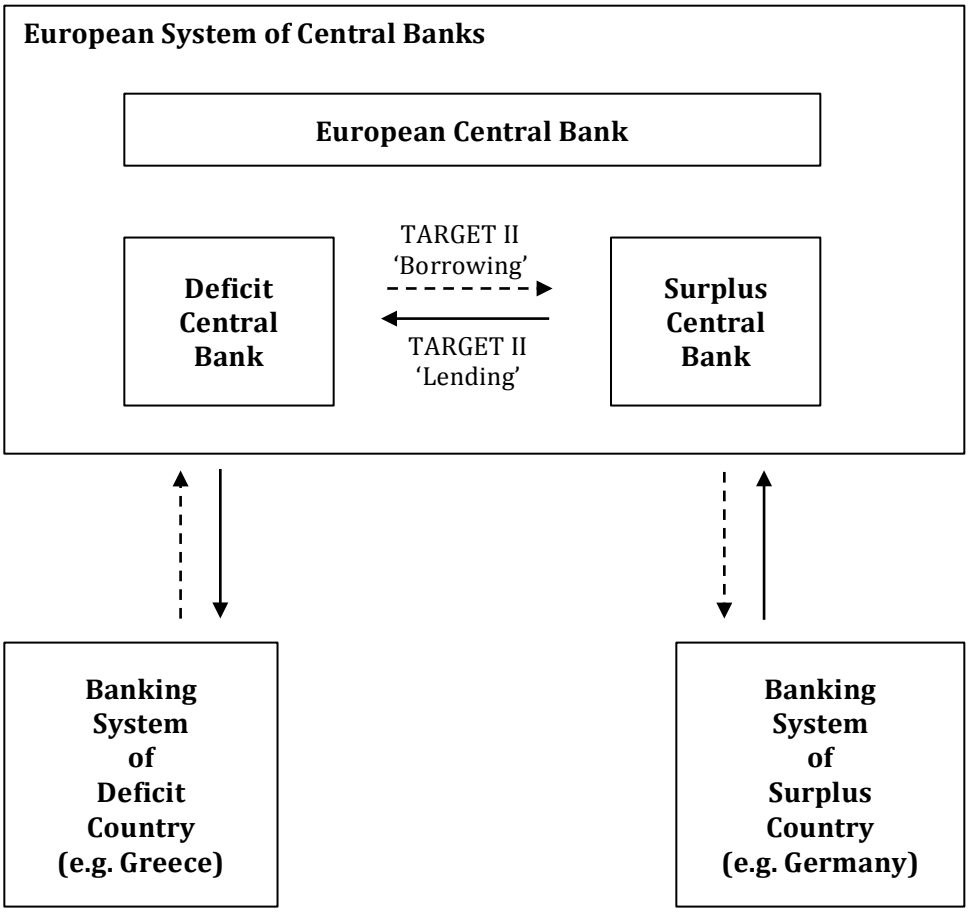

Figure 9 – Public lending within EMU via TARGET II balances (post-crisis)

TARGET 2—the Trans-European Automated Real-time Gross Settlement Express Transfer System—is the Eurosystems internal payment and settlement system. Whittaker (2016: 1) explains that it is a necessary feature within the Eurosystem to clear cross-border payments that national central banks (NCBs) can borrow from each other via TARGET 2: "If a deposit is moved from a Greek bank to a German bank, for instance, the Greek bank makes up for its lost deposit by

borrowing more from its NCB (the Bank of Greece, BoG); the current account of the German bank at its NCB (the Bundesbank) is credited; and the Bundesbank acquires a claim on the BoG. The accumulation of these debts between the NCBs are the Target2 balances". As Sinn and Wollmershäuser (2012: 468-469) put it in their seminal publication on TARGET 2 balances, the surpluses and deficits in TARGET 2 "basically have to be understood as classical balance-of-payments surpluses and deficits as known from fixed-exchange-rate systems." TARGET 2 thus mirrors intra-EMU cross border flows in the deposit system.

Figure 10—adopted from Whittaker (2016)—depicts the aggregated TARGET 2 liabilities of Italy, Spain, Portugal and Greece from 2008 to 2016.

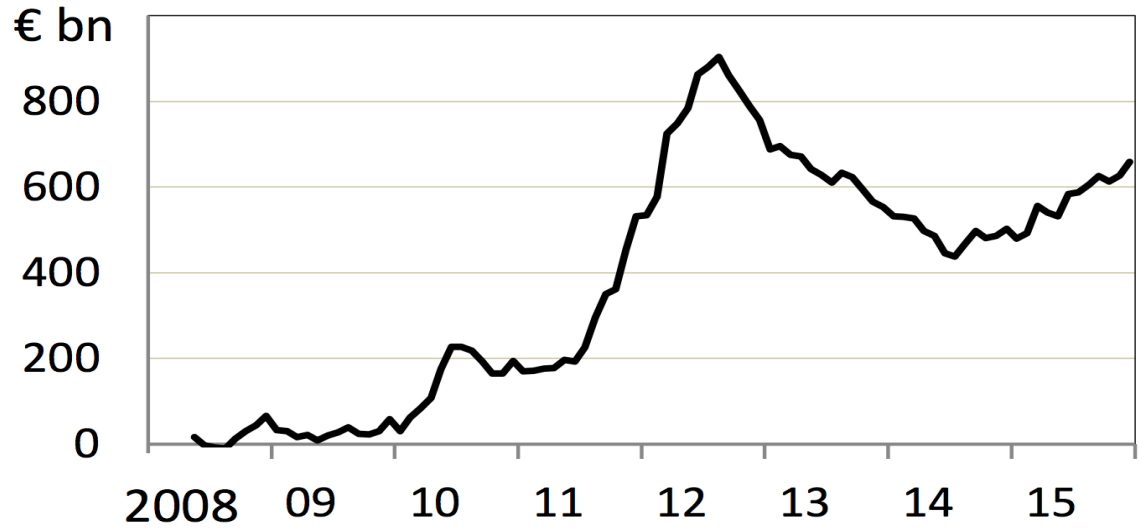

Figure 10 – TARGET 2 liabilities of Italy, Spain, Portugal and Greece (2008-2016)

The chart indicates the extent to which the Eurosystem has provided elasticity to the banking systems of deficit countries. As to Sinn and Wollmershäuser (2012: 469), the ECB "tolerated and actively supported voluminous money creation and lending in the core of the Eurozone". Thus, money creation that in pre-crisis times occurred on the private balance sheets of European banks was shifted up in the hierarchy of money to public balance sheets.

4.3 Banking Union

The primary political response to the distortions in the banking system that occurred in the context of the Eurocrisis is the project of establishing a Banking Union. In this, EU policy-makers re-address issues that had been raised already in the Delors Report of 1989. The key publication laying out the EU's strategy towards harmonizing the European banking systems after the Eurocrisis are three high-level reports, namely the De Larosière Report on Financial Supervision (De Larosière et al. 2009), the Four Presidents' Report 'Toward a Genuine Economic and Monetary Union' (Van Rompuy et al. 2012) as well as the Five Presidents' Report 'Completing Europe's Economic and Monetary Union' (Juncker et al. 2015). Valiante (2016) frames this as the third wave of monetary and financial integration.

The De Larosière Report called for the completion of the Single Rulebook for bank regulation and a joint architecture for bank supervision (De Larosière 2009, Valiante 2016: 38). The introduction of a Banking Union has primarily been suggested in the Four Presidents' Report. The Report calls for "the establishment of an effective Single Supervisory Mechanism (SSM) for the banking sector and the entry into force of the Capital Requirement Regulation and Directive (CRR/CRDIV)" as well as for an "[a]greement on the harmonization of national resolution and deposit guarantee frameworks, ensuring appropriate funding from the financial industry" (cf. Van Rompuy et al. 2012). The Five Presidents' Report re-emphasizes the need of a 'Banking Union', in conjunction with the introduction of a 'Capital Markets Union', to achieve a 'Financial Union' (Juncker et al. 2015: 4-5).

Already on 17 April 2012, six months before the Four President's Report was published, IMF Managing Director Christine Lagarde had in effect called publicly for a European Banking Union when she stated: "In the euro zone, a single financial market cannot rely on legal and institutional frameworks that operate on an asymmetric national basis. To break the feedback loop between sovereigns and banks, we need more risk sharing across borders in the banking system. In the near term, a pan-euro area facility that has the capacity to take direct stakes in banks would help. Looking further ahead, monetary union needs to be supported by stronger financial integration which our analysis suggests be in the form of unified supervision, a single bank resolution authority with a common backstop, and a single deposit insurance fund" (Lagarde 2012).

The main driving force for Banking Union, as referred to in public documents, is to break the strong connection between sovereigns and banks (Lagarde 2012; Van Rompuy et al. 2012). At the same time, establishing a European Banking Union—if successful—implies an upload of the public-private framework for deposit creation to a European level. An effective Banking Union would bring along a unified supranational organization of those elements of the public-private framework, which had not been fully integrated prior to the Eurocrisis, namely solvency backstops, bank regulation and bank supervision.

Solvency backstop: Establishing a joint solvency backstop for commercial banks in addition to the existing liquidity backstop takes place in two main ways. On the one hand, national deposit insurance levels have been fully harmonized for all EU countries at an amount 100.000 EUR. This has been implemented via an EU Directive of March 2009 (Directive 2009/14/EC) and was reached on 31 December 2010. It was seen as a first step towards establishing a single European Deposit Insurance Scheme (EDIS), as proposed in the Five Presidents' Report (Juncker et al. 2015:11). This aspect of Banking Union, however, has been the most contested so far, especially because Germany is substantially opposed to it. Therefore, it is far from certain that the political climate will allow that a single deposit insurance fund is going to be established any time soon (Strupczewski 2015).

On the other hand, the European regime for recovery and resolution of commercial banks established a European backstop for systemically relevant banks that face bankruptcy. The idea of the recovery and resolution regime—in line with the guidelines agreed upon at the G20 Summit of Pittsburgh in 2009—is that large banks corporations should be able to become bankrupt whilst the systemically relevant parts of their business continue to function. This is to avoid the 'too big to fail' problem which became manifest in the 2007-9 Financial Crisis. In this recovery and resolution is supposed to remain fiscally neutral. Thus, the recovery and resolution regime seeks to establish a solvency backstop that is publicly organized, yet privately funded. This has been implemented in the EU via the Bank Recovery and Resolution Directive (BRRD) that was passed in December 2013. It provides a common framework for all EU countries of how to deal with troubled banks. For EMU Member States, the BRRD has established the Single Resolution Mechansim (SRM). The SRM centralises the decision-making process for bank resolution at the Single Resolution Board (SRB) and creates a Single Resolution Fund (SRF) that directly covers all significant institutions and cross-border banks (cf. PWC 2014).

Bank regulation: Harmonizing European bank regulation has occurred in two major steps. On the one hand, the Single Rulebook, which had been brought up by the De Larosière Report, should conceptualize a unified framework for regulating the EU's financial sector. In particular, the banking system was to become more resilient, transparent and more efficient. To this end, the European Banking Authority (EBA) was established in 2011 with the mandate to develop binding technical standards and guidelines for the Single Rulebook (EBA 2016).

On the one hand, the Basel III Accords for banks' capital requirements have been translated into EU law via the Capital Requirements Directive IV (CRD IV), which was formally published in June 2013. It contains the Capital Requirements Directive (2013/36/EU) (CRD), which is to be implemented into national law, as well as the Capital Requirements Regulation (575/2013) (CRR), which directly applies to banks and financial firms in the EU. Among others, CRD IV enhances the requirements for the quality and quantity of the banks' equity, new requirements for liquidity and leverage, new laws for counterparty risk, and new macroprudential standards (Bank of England 2016).

Bank supervision: Bank supervision has been harmonized on a European level by establishing the Single Supervisory Mechanism (SSM) based on the Single Rulebook. Within the SSM, the ECB and national competent authorities (NCAs) of participating Member States have harmonized their responsibilities for bank supervision according to a single rulebook. In this, the ECB directly supervises banks that are categorised as 'significant', while NCAs supervise banks considered 'less significant'. The SSM officially entered into operation in November 2014 (ECB 2014: 4). In the Four Presidents' Report, with regard to the SSM, it was perceived as "crucial that the ECB is equipped with a strong supervisory toolkit, and that the ECB's ultimate responsibility for banking supervision is coupled with adequate control powers (Van Rompuy et al. 2012: 6).

5. Conclusion and next research steps

The question this paper has sought to address was whether post-crisis reforms and institutional developments can harmonize private money creation in the Eurozone.

The analysis proceeded from a Money View perspective, according to which the money supply is made up of different, hierarchically structured IOUs that trade at par to each other and can be issued by public or private institutions. In this, the conceptual lens on money stands in contrast to the view that public authorities are able to control the money supply. Money creation is seen as a phenomenon endogenous to the financial system. The lending activities of financial institutions cannot be fully regulated by public authorities. Financial innovation will always make it possible to develop money substitutes outside of the government controlled monetary realm. Therefore, the money supply is made up of central bank liabilities, deposits as 'traditional' bank money as well as 'shadow' money forms issued by non-bank financial institutions.

As has been argued in the present analysis, in the second wave of European monetary and financial integration, only the top level in the hierarchy of money has been integrated on a supranational level as only central bank liabilities have been truly Europeanized. All other money forms, which are issued on private institutions' balance sheets, were only integrated to an incomplete extent. The Eurocrisis has demonstrated the deficiencies of the system, as banks largely stopped cross-border lending and applied national rationales again. This was evidence for the fact that the public-private framework for deposit creation had remained mainly nationally organised and a robust EMU-wide banking system was absent.

The project of Banking Union that has been on the agenda for the past years in principle addresses the short-comings with regard to deposit creation. The Five Presidents' Report argues—very much in line with a Money View perspective on EMU— that "[a]s the vast majority of money is bank deposits, money can only be truly single if confidence in the safety of bank deposits is the same irrespective of the Member State in which a bank operates" (Juncker et al. 2015: 11). Banking

Union thus seeks to upload the public-private framework for deposit creation to a European level. In addition to the supranational liquidity backstop, a supranational solvency backstop for banks as well as supranational bank regulation and supervision are to be established. However, the political process of creating Banking Union has proven to be slow and uncertain. While the Single Resolution Mechanism and the Single Supervisory Authority are in place today, the plan for a European Deposit Insurance Mechanism has receded into the distance.

In the meantime, the ECB has made a remarkable institutional development and has de facto taken on new responsibilities. During the crisis, it covered the unwillingness of the European banking system for cross-border lending. By tolerating increasing TARGET 2 balances, the Eurosystem effectively allowed compensating the collapse of private money creation with public money creation. From a Money View perspective, this may be interpreted as a shift of money creation from the private to the public realm.

The present analysis thus suggests to cautiously respond to the question of this paper with a Yes. Banking Union appears to be a typical EU-style functional spill-over: Integration in one policy field works well for a while until a crisis emerges that creates a perceived need for further integration of a neighbouring policy field (cf. Haas 1958). It seems that the private-public framework for deposit creation is slowly being uploaded on a European level. Where political action has been absent, slow or ineffective, the ECB has stepped in. Still, the effectiveness of the actual political measures is a major concern. It remains to be seen if the reform steps that have been announced or were taken will prove viable and sufficient in the future.

However, this paper's analysis of post-crisis developments has only focused on the 'traditional' money supply. As a next step in the research process, it will be necessary to address the use of private money substitutes within the EMU. The U.S. based shadow banking system brings forth a number of systemically private credit money forms (Ricks 2016) that for institutional investors play the role of cash. "Money begins where M2 ends", says Pozsar (2015). To understand the extent to which those U.S. specific, yet inherently transnational, phenomena can be translated to Europe and play a role in the euro area will require further empirical analysis. Studying the European shadow money supply will complement the above analysis of private credit money creation in the EMU and deliver a more complete picture on the question if the realm of private credit money is being harmonized in the post-crisis EMU.

Understanding the role of private credit money in the EMU is particularly relevant as there is a chance that endogenous institutional developments in the market-based credit system could be able to overcome the structural national separation within the EMU's deposit banking system if political measures fail. It is thus possible that new financial structures emerge next to the fragmented EMU-banking system that are actually supranational in nature. The recent analysis of

Valiante (2016) suggests an understanding that institutional evolution should go in this direction, as he identifies for the EMU an "overreliance on its banking system" (ibid: xiii). He consequently endorses the Commission's push towards a Capital Market Union. This would certainly have an effect on private money creation beyond the commercial banking system and eventually imply a harmonization of shadow money creation on a European level.

Following from the above, Figure 11 presents a preliminary account of the Money Matrix as it has developed in the post-crisis EMU:

Public Credit Money Forms	Private Credit Money Forms
(1) Pure Public Money **Supranational:** Central Bank liabilities • Currency (Notes, Coins) • Central bank deposits	**(3) Public-private Money** **Diffuse responsibilities:** Shadow money • issued against public debt
(2) Private-public Money **Towards supranational:** Commercial bank liabilities • Insured bank deposits	**(4) Pure Private Money** **Towards supranational:** Commercial bank liabilites • Uninsured bank deposits **Diffuse responsibilities:** Shadow money • issued against private debt

Figure 11 –The Money Matrix (empirically, post-crisis)

As this table indicates, the future of private money creation in the European Monetary Union remains an open question and deserves further research.

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