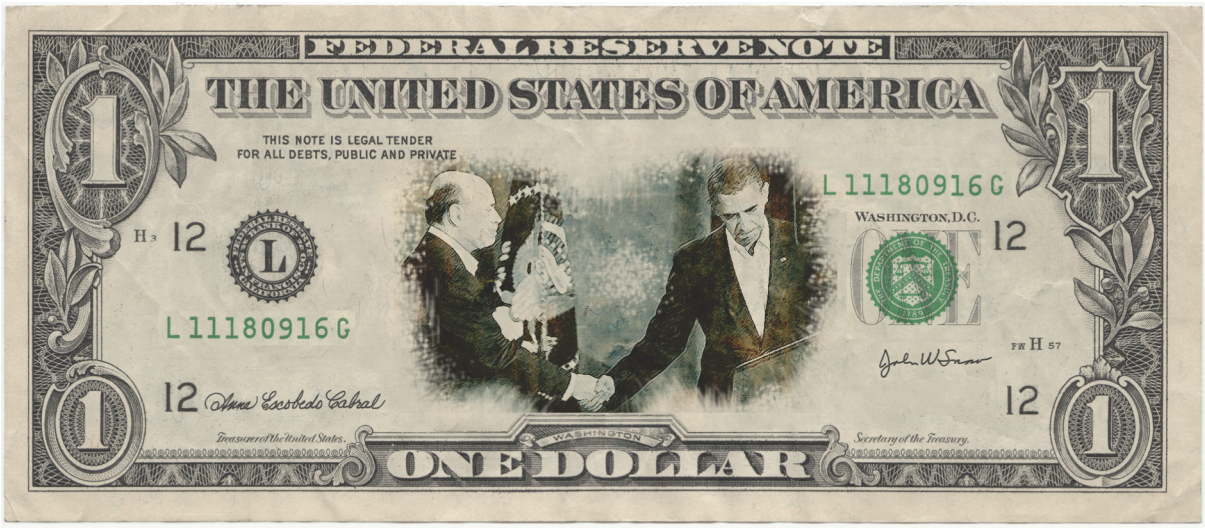
WHO OWNS MONEY?



- How the government lost its ability to control money,

with the emergence of shadow banking

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ABSTRACT

Who owns money?

How the state lost its ability to control money with the emergence of shadow banking:

This analysis dissects contemporary private money, created in the newly recognised shadow banking system. Shadow banking played a key role in the financial crisis in 2008 because it had expanded private credit money on the backing of questionable collateral. This thesis uses a critical realist method to document the fact that the financial crisis was a money crisis. Not only did the private money system break down as the market for Repurchase Agreements froze as confidence vanished, but it was also a crisis of the state-money nexus as financial stability was interrupted. By analysing the contradiction within the theory of money, the political and historical roots of private money, the contemporary shadow banking system with its ability to create and transform money, as well as the regulatory response to the crisis, this thesis concludes that there is a need to rethink the state-money nexus and a need for substantial reforms. There are however two things one must have in mind when speaking of reformation. Firstly, the regulatory process as a "public" response is a mistaken perception. As this thesis show, the regulatory process has been privatised and works more as a competitive battlefield. Secondly, the state has aligned its interest with the financial system in the process of financialisation and the state is thereby reluctant to regulate on private money. Thus, states may have lost both the ability and willingness to control money.

Keywords: Private money, shadow banking, money crisis, financial regulation

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Introduction

"Give me control of a nation's money and I care not who makes it's laws"

Mayer Amschel Rothschild

On September 15, 2008 Lehman Brothers Inc., the biggest bank in the United States at that time, filed its bankruptcy. As we now know this was the beginning of a deadly financial avalanche that called for governments to bail out failed financial institutions and still left the world economy bleeding. In the slipstream of the crisis, politicians and regulators asked themselves how this could have happened, and why no one was able to foresee and avoid such a massive meltdown. Central bankers tried to ease up the economy by lowering the already record low interest rates, but with a current interest rate close to zero, the world economy today is still in a bad shape. The weapons of monetary policy and regulatory mandate given to central bankers, seemed more or less dud against the deadly forces of private financial markets. On one hand the crisis went from a banking crisis into being a sovereign debt crisis, which suddenly questioned the credibility of the government bond, an instrument that historically had been the anchor of the banking system. On the other hand the established reserve requirements in the banks were somehow insufficient. How did the state lose the control over money? What role did the banks play? And what must regulators do to control money and finance in the future?

Problem statement

How and why has the evolution of contemporary finance impacted upon the state-money nexus?

This thesis seeks to elucidate the reason for which the state seems to have lost control over money and the role that banking plays in such transformation. This transformation of money takes place in a certain corner of the contemporary financial system, called the *Shadow Banking System.* The shadow banking system is a parallel banking system operating beyond traditional regulation, that uses the innovation of securitisation to create collateral used in deposit-like banking (G. B. Gorton, 2010b; Poszar, 2011). This thesis argues that shadow

banking creates private money and that this credit money, ultimately challenges the conventional idea of a state-money nexus. Furthermore, industry interests have infiltrated the regulation of global finance that should limit the processes of shadow banking and keep the system stabile. International financial regulation thus may have said to cause the emergence of the system in the first place, and must thereby be critically assessed when looking at how emerging regulation is dealing with shadow banking. So far, regulators and policy makers have overlooked the transformation of the global financial infrastructure and especially its ability to transform money into private financial assets beyond the regulatory scope of the state. Before the crisis in 2008, this system created a seemingly riskless debt that was considered money. Furthermore the new banking system enabled the manipulation of traditional banking requirements as it opened up for skipping off reserve-requiring loans.

By drawing on the political and historical roots of money, this thesis tries to explain how the system has evolved into being an unregulated private money-machine. The political and historical roots of money have always been characterised by a shifting balance between a state-controlled and a privately controlled monetary system, and this is the context in which the shadow banking system must be understood.

Until now the regulatory framework and the monetary policies, which have constructed the financial infrastructure have been influenced by conventional theories of money and banking, such as neo-classical economics and post-Keynesian economics theories. These ideas about money as market-improving tools (M. Friedman & Schwartz, 1986) and banks as simple intermediaries between borrowers and lenders(Merton, 1992), and ideas about money as a creature of the state(Bell, 2001) and banking as liquidity creation(Wray, 2006b), have had an enormous influence on the construction of the global financial infrastructure. This thesis argues that the decreasing ability of the state to control money can only be understood by understanding the shadow banking system and how international finance is regulated. This system again is a result of a greater historical causality that transformed ideas into financial structures and ultimately freed money from the state.

Historically, the relationship between money and the state has been very important, both in terms of national identity (Gilbert & Helleiner, 1999) as well as economically(C. Goodhart, 2000). The innovation of the Bill of Exchange in the medieval period helped establish long distance trade and fertilized the soil for a later capitalist economy. At the time being, governments mainly used the banking system to help finance its expenditures that were high in the medieval period because of continuous warfare. Though it is not exploited in the

same way today, the banking system is still of great importance to governments, as it drives the economy forward by creating risk free credit as well as acting as an absorber of risk[1].

The emergence of the financial crisis in 2008 added renewed relevance to the question of who controls money. In this thesis I argue that the inflation of asset prices that led to the sub-prime bubble was actually the result of the inflation of private money created in the shadow banking system. Prior to the crisis in 2008, only few knew that a new parallel banking system with the ability to create and inflate private money unregulated had emerged. This is although the shadow banking system was the main reason for why ever one was able to borrow money cheaply, which ultimately inflated the housing market in the US. The reason for why the system was able to create and inflate private money lies in the detail. The innovation of securitisation allows loan originating banks to pack these into tranches, pool them together, have them risk-rated and sell them off on the financial market, which has transformed the banking industry into following the business model of "originate-to-distribute". As loans can be skipped off the bank balance sheet it creates perverse incentives as loan maturity becomes secondary to bank profits. As shadow banking is unregulated it was able to create huge amounts of private credit money allocated to the US housing market for investment, which ultimately drove forward huge asset inflation.

Having documented the private money creation in the shadow banking system and how it ultimately impact the traditional state-money nexus it becomes relevant to look at how the state addresses this new situation by looking at contemporary financial regulation. By doing so this thesis argues that international financial regulation has undergone the same privatisation as the rest of the financial industry. The ratification of the Basel II Accord not only signalled a shifting regulatory focus from quantitative solvency to qualitative liquidity based on markets, but also it signalled a greater shift from public authority to private self-regulation. By delegating the mandate to regulate to the regulated industry itself, this thesis argues that the state has given away its power to control money.

The run in the repurchase agreement-market corner of the shadow banking system in 2008 was caused by the uninsured leveraged nature of private money. As such regulators recognised only too late the importance of private money creation to the stability of the financial system. Gradually, scholars have recognised the system as being an important cause of the financial crisis(G. B. Gorton, 2010a; Lall, 2010; Poszar, 2011) and now, four years after

[1] Basel Committee press release in 2008: http://www.bis.org/press/p081120.htm
[2] The neo-classical construction of the barter stage scenario of the economy is not a historical correct example, but is instead used to describe the nature of money (Dillard, 1988) .
[3] Citigroup CEO Charles O. Prince used this very intersting metaphor, in an interview with Financial Times, to describe the

the credit crunch, European regulators have started to identify the shadow banking system as a potential threat to financial stability(Barnier, 2011). This thesis argues that the crisis in 2008 was a manifestation of the underlying crisis of private money credibility. The dynamics of shadow banking are similar to those in the traditional banking system, but where public authorities ultimately guarantee the traditional banking system, the shadow banking system is only backed by the willingness and liquidity of financial market.

To be able to clearly understand the practices of the shadow banking system this thesis dissects the traditional banking. Understanding how banks create money helps to understand why the state is so keen on regulating traditional banking, and how it fails to regulate the new emerging shadow banking system. The function of a traditional bank, as part of a regulated financial system, has been to transform maturity by taking in deposits that could be redeemed at short notice, and lending these deposits out as credit for investments. In practice, the maturity transformation carried out by the technology of Fractional Reserve banking is releasing the economy from the natural constraints of commodity backing, but at the same time it requires the government to intervene to ensure stability and trust in the banking system. If there is no trust in the banking system, fractional reserve banking would be vulnerable to bank runs. Before the Great Depression in the 1930's bank runs would happen from time to time as people rushed to redeem their cash holdings at the bank(G. B. Gorton, 2010b). As this thesis will show, the regulatory framework initiated in the New Deal regulation as a response to the Great Depression effectively ended bank runs. This thesis demonstrates that private money in the shadow banking system is inherently fragile as they rely on safe collateral. The crisis in 2008 is used to illustrate that the notion of safe collateral is only present in the orthodoxy of modern finance theory and that the use of sub-prime mortgage backed collateral, in the form of Collateral Debt Obligations (CDO's) was never a stabile monetary backing.

As such, this thesis not only unfold the argument that the state has lost its ability to control money, but also that private money creation is inherently fragile to market volatility. As the market failed in 2008 the state entered the stage again by initiating massive bailout operations. By doing so the state reinstated itself as the bailout entity of last resort, but this is not to say that the state reinstated itself in the control room of contemporary money. By drawing on the historical and political roots of contemporary finance this thesis represents a step in the direction of a reinterpretation of contemporary money as being characterised by a blurred relationship between market and state. Contemporary money as opposed to conventional theory transcends state and market, as it constitutes a new state-market money nexus.

Reflections on Methodology and analysis

This thesis is inspired by the philosophy of critical realism and so is the approach to understanding the relation between state and money. The Critical realist methodology that this thesis applies is a broader range of theoretical, historical and political analysis to explain the underlying causations of the emergence of private money. The main objective of this thesis is to understand *why* and *how* the state is losing control over money, and why and how the proposed regulatory regime is unable to gain back this control. Such an investigation requires a multi-level causal explanation includes both micro economy, macro economy, politics and history of economy.

The main sources for understanding the critical realist scientific approach come from (Downward & Mearman, 2007; Grix, 2004; Sayer, 2000) and will be elaborated below. As also stated below, it is the critical realisms ability to analyse the causation of an event that qualifies it as a method to understand the relationship between innovation and financial regulation in regards to the question of who controls contemporary money. Below, this thesis present methodological reflections to elaborate on why a critical realist perspective is chosen in this thesis and how this approach will enhance the analysis of contemporary money.

The critical realist perspective

The philosophy of critical realism was first developed in Britain in the 1970's as an alternative to positivism and interpretivism in the social sciences, and was represented by Rom Harré and Roy Bashskar(Sayer, 2000). The discipline of critical realism emerged as a critique of the positivistic economic analysis of the neo-classical economics that had up until that point dominated research programmes. The critique was pointed towards the alleged ability of the neo-classical economics to explain the social world as a composite of a number of regularities that would constitute a social law(Sayer, 2000). Moreover, the mainstream economics have often been criticised for focusing too narrowly on this *one* method of analysis, using the notions of full information and equilibrium to describe how agents behave (Downward & Mearman, 2007) . By applying a critical realist perspective, this draws on history, politics and banking theory to dissect the emergence of private money to understand its impact on the states ability to control money.

The critical realism is a compound of *critical* and *realism,* which makes sense because the approach emphasises, that while social science can adopt some of the causal explanations from realism (or positivist/neo-classical), it needs to keep a distance by getting an interpretive understanding(Grix, 2004). Often the interpretation lies in interpreting the causality that has led to a certain event. Such an interpretism will be used in this thesis to situate the emergence of private money in a bigger context of the political economy of contemporary finance.

The critical realism also re-orientates the discipline of economics toward an ontological philosophy, meaning that one must accept that the world is structured and that it is real. Thereby the critical realist opposes the social constructivists, who see everything as social constructions and also opposes empirical realists, who believe the world is only a state of affairs and events(Bouwel, 2004). Some underlying structures are real and one must accept and understand this to know what is not real and how it impacts on other structures.

A critical realist project

This thesis argues that the contemporary crisis is a private money crisis as private money is inherently fragile and that this fragility triggered the events of 2007-2009. Thus the thesis moves its focus and the level of abstraction to the level of explaining how the state may have lost control over money Practically, this means that instead of using shadow banking as an explanation of the financial crisis in 2008 this project looks at shadow banking as caused by ideas, which have caused regulation and financial innovation. Finally the mix between innovation of finance and financial regulation has caused the state to lose the ability to regulate money. Using the critical realist approach and its strong inter-disciplinary causality helps to enhance an argument that the states lacking ability to control money is caused by an evolving interplay between financial innovation and regulation - business and politics. These causes are again rooted in conventional theories of money and banking, as well as history and politics.

By using a mix of politics and history to establish a causal explanation for how the control of money and ultimately the money supply is no longer controlled by the state, this thesis argues against the exogenous money supply of the orthodox economics. Where orthodox economics tend to see the government as regulating the money creation in banks via regulating the reserve requirements, this thesis uses shadow banking and the process of securitisation to establish an argument, that reserve requirements are dud in terms of limiting the money creation. Firstly, these requirements are limited because financial innovation has opened up for regulatory arbitrage, secondly, the process of international regulation of finance has been

infiltrated and privatised, so that financial institutions and capital markets are regulating themselves. It is only possible to investigate these hypotheses if we move beyond the orthodoxy of economics and into politics and institutional evolution over time.

Chapter guide

This thesis contains four chapters. **Chapter one** addresses the theoretical dispute between private and state money. The focus here is on the very basic tension between the neo-classical theory built on the pillars of market rationality, and the post-Keynesian approach which legitimises money via the state. This theoretical state-market tension is of analytical importance since it spurs a deeper lying contrast between a self-regulated money system and a state regulated system. On one hand the neo-classical theory of money emphasises the efficient argument of money spontaneously emerging as a functional solution to market asymmetries, and on the other hand the post-Keynesians base the legitimacy of money on the states acceptance of it. I argue that the prerequisite analysis of private money as having evolved spontaneously from market transactions relies on a potentially very fragile interpretation of saleableness as liquidity. Because this analysis is built on the prerequisites of the perfected market it is born to fail in the complexities of contemporary financial markets, which I later substantiate by drawing on the failure of collateral in the market for repurchase agreements. On the other hand, the post-Keynesian argument that the state is the only stabile provider of liquidity requires a strong state-money nexus that has been weakened in contemporary finance.

Chapter two examines the evolution of the state-market dichotomy of money as it provides the historical evidence for shifting balances between state-money and private money. Simply put, I argue that era from after the Great Depression through to around 1980 was characterised by a strong state-money, driven by strong regulation of finance that would democratise money, whereas the following era has been characterised by a deregulation of finance and a market-dominated money system. The point is that political and regulatory initiatives, inspired by the theories of money and banking elaborated in chapter one, together with financial innovation and competition, encouraged the emergence of shadow banking and private money.

Chapter three represents the analytical "heart" of the thesis as it addresses the impact of contemporary finance on the state-money nexus. By analysing the shadow banking system and its ability to transform money using *repo*, *collateral* and *securitisation* I show that the state-money nexus has to be redefined. The shadow banking system's ability to create money

beyond the regulation of the state makes it able exceeds the traditional money creation. By examining the shadow banking system as a private money system, I argue that the contemporary crisis is a private money crisis. As the shadow banking sector is not regulated it has a tendency to inflate money as it creates seemingly safe and unlimited collateral to support the private money creation. Thus as the sub-prime bubble burst it revealed a secret of an instable money system underpinned by dubious values.

Chapter four examines international financial regulation as a public response to the emergence of private uncontrollable money. However the main argument here is that international financial regulation cannot be understood as a purely public response as the process has undergone a transformation into being a privatised regulatory body. The privatisation of regulation manifests itself in the Basel II regulation as an adoption of private financial modelling as a result of a shifting focus towards market and liquidity risk. This move has granted a special role to the private credit rating agencies as they were given the responsibility to validate another private self-regulating mechanism – collateral.

Unwrapping the theoretical discussion on private money

As stated in the introduction, this thesis regards the crisis of 2008 to be a deeper crisis of legitimising and handling private money. This next chapter therefore tries to unfold the theoretical debating of the public-private dichotomy of money by discussing the role of the state in determining what money is. The argument is that the contemporary crisis must be understood as having evolved from the blatant conflicts of state versus market-based money, as contemporary money creation, especially in the shadow banking system, transcends the theoretical logic of market versus state money. Put simple, the market-based private money is said to have emerged spontaneously from barter as a common medium of exchange. For private money to be traded and priced correctly in the market it must be a commodity with intrinsic value. On the other hand, the state-money approach places the state at the centre of attention, as it is the state that picks what qualifies as money by denoting a unit of account and afterwards collects taxes in that unit of account. By collecting tax in the picked money stock the state thereby guarantees the liquidity money, which is the state's debt and promise to pay.

The analysis eschews a complete review and discussion of all economic schools and will instead focus on the conflict between the neo-classical *market-rationality* and the post-Keynesian *state-legitimacy* as this is helpful in explaining the difficulties of legitimising private money in contemporary finance. This thesis argues that the meltdown of financial system in 2008 is rooted back into the nature of private money.

In the mainstream economics literature, the crisis of 2008 was a result of irrational behaviour in the market (Greenspan, 2007 & Shiller, 2008). This irrational behaviour was caused by the Federal Reserve that after the 9/11 attacks (and the dotcom-bubble burst in 2000) maintained an artificially low level of interest rate. This further fuelled irrational behaviour, as housing was seen as a cheap and easy way to get wealthy, but the housing bubble burst as well, and values are returning to fundamentals again. Others explain the crisis as a result of macro-structural imbalances such as the 'savings glut' (Bernanke, 2009) in the emerging economy of China, which put downward pressure on yields and encouraged a credit bubble in the United States. Other explanations point towards new structures in the global economy (Crotty, 2009) resulting from financial deregulation and innovation that has driven money "mad" (Strange, 1998) in a speculative circus. The post-Keynesian analysis points to the rise of the money manager capitalism (Herman Minsky in: Wray, 2011) as centralisation of capital in the arms of a few, which has led to increased systemic risk that caused the crisis in 2008. This viewpoint is

aimed towards the centralisation of money, in the professional money managers' care, as an explanation for why financial innovation takes place to meet the demands for higher returns (or in the example of shadow banking, safe and short-term financial assets). This thesis seeks to provide an alternative that explains the causes of the contemporary financial morass as a deeper lying misconception of private money legitimacy, which has resulted in an incontrollable credit system.

By unrolling the theoretical justification of private and public money respectively, the thesis specifies how the success of contemporary private money depends on orthodox belief in the perfected market, and that only if perfect markets are obtainable, can private money be stable. The causation of the contemporary crisis of private money is thereby to be traced back into the theory of money and the orthodox expectation of perfected markets. Only in such perfected and efficient markets, private money as commodity can work as a medium of exchange to overcome the ahistorical inconvenience of barter[2], because only in such markets will every participant have full information on the underlying commodity and its price. The problem however is, that the financial meltdown in 2008 indicated once again that such perfect market does not exist, and that private debt can never become as information insensitive and risk-free, as it is required for such debt to qualify as money, in the theory of private money. Instead the financial instruments in the shadow banking system, as this thesis will elaborate on later, collapsed in an instant and seriously challenged the foundation of a monetary system based on debt instruments and market-rationality.

The orthodoxy of market-based money

As neo-classical economics transformed the rationale of classical economics into a mathematical science it took off in the orthodox prerequisites of free markets with fully informed rational individuals. Thereby, economics as a science was using calculators to calculate human interaction, since economic activity is basically human interaction, whether it's for speculative reasons or real reasons. The use of strong prerequisites in order to model economic transactions between individuals would, despite of its somewhat unrealistic point of departure, still gain a lot of sympathy among policy makers, as states are seen as a prevailing, yet inefficient, intermediary that obstructs the market fundamentals. Thereby, state interaction

[2] The neo-classical construction of the barter stage scenario of the economy is not a historical correct example, but is instead used to describe the nature of money (Dillard, 1988) .

in money matters should be limited to keeping the price levels stable i.e. avoiding inflation(Wray, 2006a).

Though the neo-classical theory was put away as a response to the Keynesian success in the aftermath of the Great Depression, it was to reclaim the position as mainstream economics as the Keynesian expansive policies failed to solve stagflation in the 1970's. The neo-classical model expanded into the macroeconomic monetarism by Friedman, and Eugene Fama's financial theory of Efficient Markets (Breser-Pereira,Luiz Carlos 2009;45). With the introduction of the Efficient Market Hypothesis in particular neo-liberal policymakers found their argument for deregulation of markets, and financial markets in particular. As the next chapter will show the wave of deregulation that helped globalise finance from around 1980 was driven by the theoretical framework of the efficient market. Below I will elucidate the neo-classical economics' explanation of the nature of money. The market theory of neo-classical economics does not allow a great role for money, though the underlying free market-rationality suggest that money may be self-regulating and detached from state intervention. This contrast the post-Keynesian way of understanding money as ultimately a creature of the state.

The origin of money as medium of exchange

More contemporary observations of money being used in the economic transactions, made neo-classical economists puzzled as to why and how money was used in carrying out transactions. Especially Carl Menger was interested in knowing, how seemingly rational human beings would trade intrinsic valuable assets for intrinsic valueless money in terms of coins or notes. Mengers investigation on the origin of money led to a logical deduction of money as having evolved spontaneously from the barter economy as a solution to the problem of the absence of double coincidence of wants (Menger, 1892252). This logical problem of the double coincidence of wants is exemplified as the barter trading situation between a butcher and a barber, in which the barber delivers his service (the service is the commodity) to the butcher, who can only pay for the haircut in ham. The barber cannot use ham at the time of the transaction and instead he gets paid in money, such as coins or notes, so that he can "redeem" the ham at a later point in time. A successful transaction would require the transacting participants to have matching wants at the exact same time, which would of course be a total coincidence, hence the name. The underlying point of this example, and a point that has characterised the neo-classical money model, is that money is nothing outside of the barter trade situation (we may understand the barter situation as the "real" economy), and that money

is nothing without a market. The causality is then determined as market transaction coming first and money evolving second, as a tool to overcome market inconveniences. Furthermore the ahistorical investigation of the origin of money shows the lack of importance that money has in relation to real economic activity – the process of barter trade would go on without the occurrence of money though maybe in an inconvenient way.

The situation of barter trade with an absence of a double coincidence of wants is used to describe why rational actors are willing to trade goods for intrinsically valueless *fiat* money. In such a pre-money economy, the actors would have to spend countless of hours searching for the right *match* to fulfil the actors' needs. Such a search is costly and the costs are considered transaction costs in the neo-classical theory. The solution to bringing down these costs, is for all market participants to accept a common medium of exchange, which would allow the barber to receive a medium of exchange from the butcher, and later use the medium of exchange in a transaction with a blacksmith. Thereby the neo-classical theory seems to have solved the logical problem of overcoming the absence of the double coincidence of wants, and also created an ahistorical explanation for the acceptance of fiat money (Kiyotaki & Wright, 1991) . The general idea that one needs to derive from the barter situation, is that money works as *oil* in the private market transaction and is constituted as a common medium of exchange by the market participants themselves(Wray, 2006b). Thereby, the theory also implies that money in its origin has no linking to a state sovereign, as such an institution is not part of the theory either. This however is historically inaccurate and raises the expectations to the free-market, since money would have to evolve spontaneously out of the market and remain stabile and efficient by the supply and demand function. Menger described his rational origination of money as a result of a basic barter economy stage, but the application of the markets ability to *pick* what is used as common medium of exchange, and thereby money, can be used to understand contemporary finance, private money creation and the instability inherent in such a system .

The saleableness and liquidity of money

For actors in the economy to actively and commonly choose a medium of exchange, it has to be a medium that has *saleableness*(Menger, 1892244; Starr, 2008). It is the saleableness, or the willingness to accept a certain commodity as a common medium of exchange, which gives this commodity its potential as medium of exchange-money, because it can be traded quickly for goods without loosing value. If a commodity is convenient and has only a small gap between

the price it's bought for, and its price when it is sold, it is useful as a common medium of exchange. If the spread between the bid price (buy) and the ask price (sell) is narrow, households are encouraged to use such a commodity as a carrier between different transactions, because they will trust in its stabile value(Starr, 20082).

A major problem however, is that the theory is constituted in the orthodox laboratorial scenario of the barter economy, where the butcher without greater considerations would exchange his valuable ham with a coin, because he would know that the coin potentially could be used in another transaction right around the corner, without losing its value. Such insurance however only exist in orthodox theory, since the risk of illiquidity of assets occurs in real world scenarios, just as the liquidity crisis of 2008 showed. Suddenly, uncertainty may arise around the common medium of exchange and the saleableness (or liquidity) may drop, leaving the commodity possessors with the risk of not being able to skip off the commodity without collecting a loss of value(G. B. Gorton, 2010b; Nesvetailova, 2008). Basing a theory of money on the ability of the atomistic and free market to pick a stable medium of exchange, without incorporating uncertainty, naturally leads to a fragile system and can somehow be used to understand why the shadow banking system experienced a meltdown, and why it had an impact on the traditional banking system, which the thesis will elaborate in chapter three.

In the neo-classical framework, liquidity, as the ability to sell off assets quickly without taking a significant loss, is given, since an efficient market will always be able to allocate the debt and financial instrument (private money) to an investor that has a preference or risk appetite, which matches the seller's need to skip off the loan. When markets fail, a scenario that has not been built into orthodox economics, like the market for securitisation did in 2008, private market-based money fails, because their saleableness, and thereby their general acceptability as a common medium of exchange, rely on the prerequisites of the liquid efficient market.

As modern finance evolved as a result of deregulated markets and the innovation of securitisation, it became possible for banks to transform illiquidity assets, such as mortgage with long maturity into liquid financial assets. These financial assets became attractive as collateral to investors, such as institutional cash pool managers, that were looking for alternative deposit opportunities, as the traditional banking system and government collateral had become bad investments(Poszar, 2011). Thereby turnover from private financial assets increased as a response to increased demand for short-term financial assets, and the neo-classical prediction of a perfected market with infinite liquidity became true – at least until it was proven false.

The neo-classical idea of money as common medium of exchange was further enhanced and approved as central banks in the slipstream of the credit crunch, accepted dubious financial assets as near equivalents to money(Wigan, 2010) As such, the experience shows that the contemporary definition of money may be in a state of transformation, and that it is now in a stage between a private financial asset and a state-approved asset. The problem with the pure market-based money based on the orthodox theory however, is, that money to function, as money must be attractive to many market participants and thereby liquid. The innovation of finance, such as securitisation, which will be elaborated in chapter three, fulfilled the dream of neo-classical economics by turning illiquid assets into liquid near-money standards, which made up the foundation of the private money system.

However, liquidity based on markets only is inherently fragile to changes in information. For neo-classical commodity to become liquid it must be information-insensitive, otherwise it cannot be traded quickly without loss of value. This happened in the financial market in 2007-2008 when the value of the underlying asset in the Collateral Debt Obligations (CDO's), that were used as collateral in the repurchase agreements, were questioned, and since everyone was hoarding for cash, the price of collateral dropped in accordance to the supply-demand mechanism. This thesis will discuss the details of the securitisation process, and the run on repurchase agreements in chapter three, but the point here is, that money, which is evolving from the market, depends on the orthodoxy of liquid (saleable) assets.

Liquidity has become of greater importance in today's financial system, as it is the primary driver for the expansion of the credit system. When credit lines are being expanded, the credit-money system is expanded too, and as long as financial actors believe in the liquidity of the market (mostly in boom-periods), the credit expansion goes on(Nesvetailova, 2008). The problem however, as the experience from the financial crisis in 2008 shows, is that no matter how much liquidity the government pumps into the financial markets, liquidity is not indefinite and when it vanishes from the markets, the private credit system is threatened on its existence, as financial assets used before as a money equivalent, become untradeable and illiquid. As long as assets (debt) are liquid, they could potentially be passed on as money, meaning that the expansion of the monetary system could go on indefinitely, which was the promise of the modern finance theory. Unfortunately, as the opposing Keynesian school argues: "*…there is no such thing as liquidity for the community as a whole"* (Nesvetailova, 2008) and though one bank may 'get up and dance while the music plays' (Nakamoto, 2007), the music at some point

stops and liquidity will vanish[3]. And when liquidity is gone, markets are not perfect in allocating resources or risk. Though the notion of liquidity may have changed significantly since Menger dissected the logical origin of money, the post-Keynesian critique of the unrealistic belief in ever liquid markets (Nesvetailova, 2008) allows for an understanding of the modern money creation, as will be elaborated in chapter three, and of how it creates a great system risk, because of its linkage to liquidity. As long as financial innovation can keep up the pace of transforming any (illiquid) asset class, that may be mortgages, credit card debt etc. into liquid and tradable assets via liquidity transformation, financial expansion is infinite. But outside the orthodox laboratory, markets are in risk of becoming illiquid if trust disappears and future expectations drops. Such a scenario fundamentally questions the existence of money as being the most sellable asset, but different from the nature of neo-classical money, the contemporary economy does not rewind into barter when money is collapsing. Instead, such a financial crisis spills over into the real economy, as the crisis of 2008 shows.

The neutrality of money

The orthodox money model emphasises the neutrality of money and its social independency, meaning that money, to function as a perfect medium of exchange, must ideally be a commodity with intrinsic value. A commodity with an intrinsic value does not need any social interaction or interaction from a hierarchically superior authority to have value, as the asocial supply and demand would effectively valuate the commodity and allocate it more efficiently. The idea of a medium of exchange with intrinsic value was adopted in the gold standard regimes all over the world. As such, the gold standard regime represents a private money system. Contemporary use of collateral in financial transactions is self-regulating in the same way that intrinsic valuable commodities are. However, as I will discuss later the escape from the shadow banking system, that ultimately triggered the financial meltdown in 2008, was caused by uncertainty regarding the collateral. It is thus important for the private money system to implement commodities with values that are transparent and stabile.

The idea of neutral money requires special policies suggested by the monetarist, which elaborates on the rationale described above, of money as being neutral to the underlying real economic activity. In the neo-classical theory, money does not play any significant role, except as a functional device to lower the transaction costs and overcoming the inconvenience of

[3] Citigroup CEO Charles O. Prince used this very intersting metaphor, in an interview with Financial Times, to describe the business situation in 2007 - only a year before the Great financial crisis broke out.

barter, and this underlying real economic activity would happen without the involvement of money in the barter economy. This idea was further developed in the later monetarist school, which suggested that monetary policies should only target price stability, but by focusing the policy suggestions on price stability, neo-classical economics neglects the transformational power that money has, especially in the relationship between finance and the real economy. Where neo-classical economic thinking emphasises the price stability-goal of monetary policy in order to upkeep the, theoretically, efficient price mechanism, heterodox economics emphasises the importance of financial stability, as financial instability may lead to crisis spilling over into the real economy.

The above-described relationship between the monetary economy (understood as money) and the commodity economy, is not a topic in neo-classical economics, as money, according to the quantitative theory of money (Friedman, Milton 1989), has no long-term impact on the underlying real economy (Yeager, 2010) . If the quantity of money is increased by expanding the money supply, the price level will go up and the effect on the real economic activity stays away. This again may be understood by breaking down of the economy into barter, where the trade would go on with or without money. Neo-classical economics described how the monetary quantity had no real long-term impact on the economy, as the price level would follow the quantity of money and find its general equilibrium. Exemplified, if governments print more money to stimulate the demand in the underlying real economy, rational individuals soon adapt to the increased demand for goods, and raise their prices. Thereby, a monetary easing to obtain certain impacts in the underlying economy is wasteful, because the price inflation will lead to slower growth in the future. In the monetarist framework built on neo-classical economics, the use of monetary policies to obtain certain real economy goals, such as i.e. full employment, is useless (M. Friedman & Schwartz, 1986; Kirshner, 200141) . Instead, the monetarist rationale follows the micro-economic rationality of the neo-classical economics – if the government tries to stimulate the economy by printing more money, inflation will grow, as the individual merchant will adapt prices to the increasing demand.

From the quantitative theory of money it is also clear, that governments cannot use the weapon of monetary policy to control the underlying processes of the real economy, as these will always re-establish a new price-level and return to equilibrium, and it is thereby insinuated, that the state cannot play any progressive role in money matters. Since the orthodox money model is built around the prerequisites of market transactions, changes in money supply leads to changes in levels of price. According to the equilibrium models of orthodox economics

the money supply will alwas return to equilibrium. Money becomes a politically neutral phenomenon for at least two reasons. One reason is following the above logic, that money cannot have any longer-term impact on the output of the underlying economy. Another is following the metallist approach, that the supply of money is determined by the natural constraints of precious metals and the demand by the market, which leaves no room for political manipulation of the money supply.

In regards to the processes of the underlying economy, neo-classical economics argues for policies to stabilize prices. For the price mechanism to be able to allocate resources more efficiently, the quantity of money will have to act as stabilising, which restricts central banks to take on only a somewhat defensive or passive role in the economy, which is in line with the neutrality of money. If the price-level is kept under control, and the inflation as well, the neo-classical economics prescribes an efficient allocation of resources, via the price mechanism and the supply and demand curve. These are all built into the Efficient Market Hypothesis, which advocates for the price mechanism as the ultimate mechanism to stabilise the relationship between supply and demand, and allocate resources efficiently (Calomiris & Kahn, 1996; M. Friedman & Schwartz, 199?) .

The efficient market hypothesis and market completeness, are often used as arguments for deregulation of finance and money, as regulation and governments play an inefficient role in most financial models. Instead, deregulated financial markets, according to theory, will increase the overall welfare by enabling risk-sharing and lowering the overall transaction costs of society(de Rezende, 2011:25). The idea of deregulation of money, and eventually finance, is a continuation of the origin of money as a tool to overcome the inconveniences and transaction costs related to barter. If regulation of financial markets is abolished, the nature of money as a convenient medium of exchange will reach its full potential, and the value of money will stabilise around the equilibrium value. However, as contemporary private money is to be seen as credit more than commodity, the potential for money leverage becomes a destabilising factor without prudent regulation.

For money, in the orthodox theory, to have a stable value and to “fit” into the price mechanism, it must be a scarce commodity that is allocated to the people who wants it the most. According to the metallists money must be a scarce commodity, and preferably a metal standard such as gold, because such a commodity would be naturally scarce and have intrinsic value(C. A. E. Goodhart, 1989). By having a scarce commodity money standard as the primary medium of exchange, the state authority is restricted when inflating the money supply, and therefore the price of gold remains stabile, as there can be no inflation. Thereby, the metallist

approach is also a strong private money approach, as the metal-money stock-price is determined in the market, potentially without the involvement of the state.

However, justifying money as a private medium of exchange by referring to a pre-money stage of economy, barter is an ahistorical construction, as shown above. The value of the medium of exchange in the neo-classical model of money relies on the intrinsic value of the chosen money commodity. Money is only priced socially via the price mechanism but is in theory redeemable from any kind of social relation. Contemporary money, however, is different, as it exists only as a debt relation and not direct commodity. As such, debt money becomes a social institution between borrowers and lenders. The money stock of today has no value outside of the social context that it is created in, as money primarily exists as debt contracts, such as repurchase agreements or even bank notes. If one brought these monies outside of their social context they would be become valueless. The failed incorporation of the social aspect of money, within neo-classical finance theory, prohibits a deeper political economy-analysis of money, as money is being formally modelled as an efficient medium of exchange. To support the neo-classical commodity money, however, one may argue that contemporary credit money created in the shadow banking system can be seen as commodity money as well. As the analysis of the shadow banking system will show in chapter three, the money system is actually backed by commodity in the sense of collateral. As such the debt intrinsic valueless debt contract is enhanced with commodity as investors gain ownership over assets used as commodity in case the debt contract is violated. The experience from the money crisis in 2008, however, also reveals that private money even though they are backed by collateral is not politically neutral. Instead it reveals a story of private money as being a potent political subject as it links the emergence of private money to the financialisation of the world economy (described later).

Following the above, it is absolutely essential for the market-based private money argument, that money, whether it is "real" or credit money, is backed by some sort of commodity, since this backing commodity will enable it to fit the pricing model, and thereby make the commodity's price equal to the price of money. Here, we may raise a major critique of the neo-classical commodity money, as the experiences from the sub-prime related money crisis, revealed a failing pricing mechanism. The collateral that was used to underpin the system was so difficult to price that it led to panic-like scenes in the repurchase agreement-market when house price stagnation started manifest itself in default on mortgages. These default then spread to the Collateral Debt Obligations (CDOs) and as these were used as collateral for the whole system, money was suddenly of questionable value. Thus we may

argue that neo-classical commodity theory has been politicised in contemporary finance as the "commodity" has an immanent political nature. As this thesis will discuss later, the use of Credit Rating Agencies (CRAs) to evaluate collateral stemmed from a political privatisation of financial regulation and thereby the pricing mechanism becomes a political subject.

The privatisation of financial regulation is also to be seen in the repurchase market as collateral potentially is a self-regulating tool. Annelise Riles (2011) also recognise this privatisation of financial regulation, but instead argues, with an offset in the neo-liberal Hayek paradigm, that this privatisation is related to the self-regulating nature of collateral. The private money creation in the shadow banking setup (see chapter three) may, from a neo-classical perspective, is money creation backed by collateral, which thereby functions as variant of commodity money. However, the use of collateral becomes controversial when analysed as a substitute for the metallist currency-backing of commodity money, because the definition and the value of collateral depends solely on the market mechanism, and especially on the efficient market's ability to always accept and value collateral properly.

Unfortunately for the argument of market-based money, the efficient market is somewhat of a utopian idea. Having financial assets accepted as medium of exchange requires a transparent, accurate and trustworthy risk-evaluation and pricing, of the financial asset and its underlying collateral, plus a general high level of liquidity in the market place, as liquidity is the basis of allocation of financial assets. Driven by the innovation of securitisation (see chapter three), private money creation was enabled in high volumes, since "good" collateral was available all the time. However, as the banking business model shifted from an "originate-and-hold" to an "originate-to-distribute" paradigm, loan originators became more indifferent to credit default risk, and the creditworthiness evaluation became more loose, as loans were skipped off into the debt-market on the promise of efficient market allocation to whoever had the adequate appetite for risk. The private money creation was then based on leverage, and on the false sense of optimism in a booming economy, which encouraged banks to expand credit lines and mortgage loans, in the faith of a continued low bank borrowing cost level, low levels of credit defaults, low inflation and optimal market liquidity(Nesvetailova, 2008; Wigan, 2010). The sudden loss of trust in the repurchase market, which ultimately triggered a credit crunch and the financial crisis(G. B. Gorton, 2010a), can therefore be interpreted as a crisis of private money, as the use and value of collateral in financial leveraging, the main pillar of commodity-backed private money, was suddenly questioned, and triggered a disbelief in the market's ability to price and allocate risk accurately.

Though the shadow banking system took a huge blow during the immediate crisis, there is no reason to believe that the privatised money system is a dying concept, since the demand for near-money (near-deposit) equivalents, such as repurchase agreements, is still there. This demand may even increase if safe assets, such as Treasury Bills, prove non-safe due to sovereign debt defaults, as a result of the sovereign debt crisis that has hit the PIIGS (Portugal, Italy, Ireland, Greece and Spain) countries. I will come back to that discussion later, but for now focus on the opposing theory of state-money.

The heterodox credit- and state-money approach

Whereas the orthodox money model focused on money as the tool to help market-transactions become more efficient, the credit-money approach focuses not on the market-transaction, but instead on money as debt. As mentioned in the introduction to this chapter, the main difference between the orthodox money approach and the following heterodox approach lies in the role of the state, since the heterodox approach, though it covers both a pure state-money approach, a credit-money approach and an endogenous money approach, ultimately emphasises the role of the state. Under the umbrella of heterodox economics, this thesis both incorporate the pure state-centric Chartalist approach and the post-Keynesian approach, which does also incorporate the creation of private credit as a form of money. As the name indicates, the post-Keynesian group of thinkers is heavily inspired by the works of John Maynard Keynes, but also Herman Minsky, who also developed a theory of money to cover credit(Bell, 2001151; Wray, 2006b).

The post-Keynesian tradition opposes the orthodox economics ahistorical and asocial approach to money, as having spontaneously emerged in the private market. Historically, money never stemmed from the barter economy, but was instead created as a social link, first as a debt punishment in Medieval Germany(Wray, 2006b) and later as a double-balance sheet operation that link debtors and creditors(Bell, 2001; Ingham, 2008). Instead of being a neutral veil of barter, money in the post-Keynesian tradition is considered the single most important institution of capitalism, since it is the driver of investment and production. Opposed to the orthodox economics' function of production, money as credit was the point of departure in the heterodox tradition. As credit is "created" at the beginning of the production, in the faith that later produced commodities would have a surplus value, the Keynesian economics perceives credit as the replacement of purchasing power over time(Wray, 2006a).

The idea of transferring future purchasing power, through time via credit money, does however threaten the stability of the monetary system, as the expansion of credit, and thereby

monetary expansion, is in danger of becoming pro-cyclical and force dangerous credit booms to the economy. As financial institutions create liquidity by performing a liquidity transformation of illiquid assets into liquid financial papers, related to the process of securitisation (de Rezende, 2011), there is a threatening tendency that financial institutions become much too optimistic about the future. In such a booming phase of the economic cycle, financial actors has a tendency to underestimate the risks related to their portfolios, and the credit chains are being expanded faster and faster, a movement that Nesvetaliova (2008) refers to as the "liquidity illusion". This apparent optimism in the market relies on private financial innovation's ability to continuously expand markets by making them liquid. This expansion can be identified in the US housing market, and thus it drives one of the main arguments of this thesis, that the expansion of private money manifests itself in housing market inflation, as liquidity is being allocated here. As financial innovation started mudding the mortgage market, private money supply expanded, but it was not until it had inflated the housing market with cheap credit and unsustainable prices that the real private money inflation was revealed.

Ultimately, the liquidity illusion leads to systemic fragility, since small shocks in the economy potentially results in a loss of confidence and optimistic expectations, and such a loss may freeze the markets or result in financial asset fire-sales (see chapter three) (G. B. Gorton, 2010b; G. B. Gorton & Metrick, 2010) . In chapter three, this thesis strives to analyse the private (near-) money creation in the shadow banking system in much greater detail. The important aspect of post-Keynesian credit money theory however, is that credit not a commodity and has no intrinsic value of its own. Instead credit is a social promise of removing commodities from society now, to supply society with commodity later(Wray, 2010) (Ingham, 2008). Thus, as argued earlier, credit money has no value outside of its legal and social context as the purchasing power can never be redeemed without valid institutions such as clearing houses, central banks and ultimately courts. This neglecting of the institutions of money is one of the major weaknesses of private money theory and ultimately as I will show later, one of the main reasons for the money crisis.

State money

A very distinctive feature of the post-Keynesian approach (in relation to that of the neo-classical economics) is that the state is put into a centre-stage role. Money is a creature of the state, as the state picks the money stock that will work as a unit of account and be collecting tax in this unit of account it forces acceptability on its citizens and on society (Bell, 2001). At

the same time the state acts as the legal guarantee for the unit of account, the ultimate regulator of the banking system and the lender of last resort to the banking system (Bell, 2001; Peacock, 2003; Vaubel, 1984; Wray, 2006b) . It is very essential to this theory that the state is the anchor of the money system, because it chooses by law the money stock, as legal tender money (Febrero, 2009) . Thereby it opposes the orthodoxy of money having emerged from the private market transactions. The reason why the state can act as a guarantor of stable money is because the state is given the mandate to collect taxes, and therefore tax collection becomes the primary promise of future repayment of state-debt. The state also has the monopoly to choose what it will accept as payment of taxes, at its taxation counters. Because both corporations and households have to pay taxes, the state is given a very important role in picking the right money stock as the unit of account. Thereby, the state-money theory also differs decisively from the neo-classical money model, where the functionalism of money as a medium of exchange was the primary prerequisite for a certain commodity to function as money. In the state theory of money, the state creates money of account either as dollars, pounds or another unit, and then imposes taxes in the same unit(Wray, 2010). Thereby, the state constitutes the money system, and money becomes "a creature of the state" (Bell, 2001) .

From the above analysis, it is clear that the post-Keynesian debt-money model states that everybody can create money as debt, but following Minsky, the real challenge is to have it accepted(Bell, 2001). The reason for the state's success in having its debt accepted, is the same it has success in picking the unit of account: because the state has the sovereign power to impose taxes, it chooses to accept its own debt at its taxation counter, or in fact it *must* accept it, since debt as money only functions when a debtor accepts to redeem the debt to the creditor. However the experiences from the credit crunch in 2008 suggest that the state may not just accept its own debt at its counter, but also private debt of questionable value. As the state broadened its collateral criteria as a life-saving support to a financial system that was drowning in illiquid debt of questionable value, the state at the same time recognised the existence of private money, it is argued. As such it may suggest a new market-state money nexus, which I will elaborate in chapter three.

The power of state-money is further emphasised in Bell's (2001) hierarchy of money, where the acceptability of money is being incorporated into tiers, with the state-money on top. The reason why private bank money is accepted as money is not because it is redeemable into state money (coins, notes etc.), though it is when we use our debit card to withdraw cash from our demand deposit. It is because the numbers on the demand deposit account is accepted directly at the state's taxation office (ibid.). The privilege of the state thereby lies in its

monopolised ability to impose its liabilities on its citizens, by picking a unit of account and claim that taxes must be paid in this unit. The state thereby is able to create new money by spending money, via fiscal expansion, as the money it spends is state-debt, which can be used to pay tax obligations.

Especially the fact that the state-money theory is bound to the nation-states ability to ultimately collect taxes becomes one of the theory's main challenges in the globalised world economy. As financial markets have become increasingly deregulated, the geographic enclosure of money has been especially challenged. The deregulation of finance and the relaxation of capital controls in the slipstream of the Bretton Woods break down have enabled a global money production and a denationalisation of money[4], which transcends national boundaries(Helleiner, 1992). At the same time, more and more financial transactions are performed in offshore tax havens, which further questions the nation-state's ability to impose taxes on citizens (or companies), thereby deciding the money stock. Also, the evolution of a worldwide "debt economy"(Mellor, 2010)and the emergence of shadow banking where financial innovation and deregulation allowed for cheap and extensive use of debt (see chapter two), has really enabled actors other than the state has challenged the state-money nexus.

A new money nexus

The first step in the causation analysis of the money crisis lies in identifying the underlying theoretical contradictions in the theory of money. To analyse how the evolution of contemporary finance, and especially the emergence of the shadow banking has impacted on the state-money nexus, one must understand the background for the state-money nexus.

The traditional state-money nexus is ensured, as the state is the originating point of money and the ultimate anchor-of-last-resort to the money system. Thus the state has certain "perks" in regards to money. It may control the supply of money, and thereby the economic activity, by spending money in the economy, as money represents the state debt and the taxable unit. Though the state-money nexus seems stabile in theory, the construction of global financial system and especially the construction of global financial crisis, challenges us to reconsider conventional theory. This chapter suggests a reconsideration of the money nexus, as contemporary money transcends conventional theoretical contradictions. As such money needs to be considered as a state-market money nexus.

[4] "Denationalisation" here does not refer to Hayek's notion of currency competition.

Before the crisis broke out in 2008 the disintermediation of credit or the shadow banking money creation, which this thesis will elaborate on later, was not even considered as a threat to financial stability. However had regulators and politicians been aware of the system and how it produced private money they may have intervened to ensure the system. The theoretical foundation of private money as having emerged spontaneously out of the market is by heterodox economics considered flawed. Thereby monetary stability and ultimately financial stability relies on the utopian prerequisites of the perfected market that picks a convenient medium of exchange to function as money. If we however accept the idea, seeded in our heads when taught neo-classical economics as first-year students, that money is of no real importance to the economy as it is only a veil of the underlying real economy, we fail to understand contemporary private credit money correctly. As this thesis will document the private credit money is of highly significance both politically and economically, as it constitutes the new global financial system's ability to transform institutions and liquidise markets that have not been liquid before. As the financial crisis broke out in 2008 it was first considered a result of an unfortunate correlation between the financial system and the housing market in the US. By understanding the nature of private money, we are able to state that the financial crisis was caused by a very natural and underlying nature of private money and thereby the crisis is also to be considered a crisis of private money.

Neo-classical market-based money is always a product of the private market. Though it has no insurance in the authority of the state in theory, this is not entirely the story of the financial crisis. Here, the private money system was interrelated with the state-money system in multiple ways. As the shadow banking system broke down, it instantly had implications for the traditional banking system that had direct access to central bank liquidity as well as deposit insurance. The innovation of finance enabled the expansion of the neo-classical saleableness into new asset that had not been saleable before. As such mortgages were made liquid by the innovation of securitisation and as more and more investors invested in shadow banking instruments the system became more liquid. In the absence of a central authority the private creation of saleableness or liquidity could be expanded infinitely. The problem however is that the market-based money system is reliant on the backing of stabile commodity, which was progressively eroded in shadow banking money system as underwriting standards were decreased as a result of the perverse incentives in the securitisation-based business model. As the liquidity of these new money instruments was being questioned the system fell apart. As such one would suggest from theory a move back into barter economy, or something similar to it, but instead the fire fighting policies and action plans initiated by the state revealed the

contemporary link between state-money and market-money. In this new state-market money nexus the state is locked to the position of underpinning the failures of the private money system. As such the failure of private money showed that profits are private while risks are socialised in the traditional state-money nexus, as public authorities were forced to bailout failing financial institutions. Because private money, by failing, called for social action, the private money system must be rethought as it no longer is able to claim to be politically neutral in its nature. Money is always a political contested concept as it distributes wealth and transforms institutions, which this thesis will show as the causational analysis progress.

Conclusion

This chapter presented an overview of the controversies between the state-money nexus and private money. In relation to the shadow banking system, which will be elaborated later, it is clear that the main controversy is about whether money can claim political neutrality as it is emphasised in models of the neo-classical, or whether money is inherently political in its nature. The state-money theory represents an inherent social and political nature of money as it can only have value and legitimacy through the state. Thus it constitutes a state-money nexus that connects the state and the citizens through money. Such a state-money nexus has an inherently interest in maintaining financial stability as money is a vital instrument for the survival of the state. In contradiction as the private money has emerged spontaneously from the private market it leaves no room for the state. Though private money is defended as being political neutral, it is the fact that there is no room for the state that actually makes it highly political. As private money has not historically emerged from the private market, it will always carry a political message of liberalisation, deregulation and efficient finance. Furthermore, the outbreak of the financial crisis revealed how contemporary money transcends the conventional theories of money. To capture the new money nexus this chapter discussed the potentiality of a new state-market money nexus.

The next chapter consolidates the contradictions between the state-money nexus and private money as it unfolds the historical lineages of contemporary finance.

The evolution of private money and shadow banking

This chapter provides a history of origin and the evolution of what has come to be known as the shadow banking system and private money creation. The chapter further informs the overall argument, that what caused the world economy to freeze in 2008 is to be seen as a crisis rooted in the evolution of the state-money nexus. The deeper dissection of the political and historical roots of contemporary finance reveals, that the shadow banking system may be perceived as the newest development in a longer evolutionary balance between private and public (state) money.

By understanding the historical public-private dichotomy of money as a result of the interplay between regulation and financial innovation, we get to understand the contextual complexity of the shadow banking system and the important role it plays in creating private credit money, beyond the regulatory boundaries of the state. In such a historical context, the shadow banking system is a decisive move towards a privatised monetary system that potentially detaches the monetary system from the state authority. As this chapter will show, the privatised money creation in the shadow banking system is a result of a historical evolution of finance, characterised by the interplay between financial (de) regulation and innovation in the financial industry.

This chapter eschew from a complete history of money, as it is not relevant for understanding the contemporary state-money nexus. Instead, this chapter starts with a short introduction on how the state-money nexus was originally created by the establishment of the central bank, and its nationalisation in the medieval era. The political analysis conducted in this chapter is focused on how the financial system has evolved, from after the Great depression in the 1930's and up to today. In this context it is important to notice that several parallel movements have helped the evolution of privatised money, as documented in the next chapter regarding shadow banking. This evolution is partly due to the institutional transformation of financial regulation (especially in the US), but also due to international regulatory evolution as the Bretton Woods financial system, as well as the macro-economic development of financialisation[5], that seems to have fundamentally changed the composition of the world economy, and have established the creation of private credit in the centre of the financial system.

[5] *Financialisation* refers to the concept of the growing importance of finance in the world economy, described by several scholars, among them: Epstein (2005).

By focusing especially on the evolution of the US financial system, this analysis takes off in the New Deal regulation of finance, proposed to prevent a recurrence of the Great Depression. In the aftermath of the Great Depression in the 1930's, there was a common understanding of unregulated financial markets as being inherently unstable. To protect nations from new financial and economic collapse, a new regulatory regime imposed tight regulation on financial markets, and effectively prevented any major crises through the 1960's (Crotty, 2009). The economic turbulence in the 1970's US, caused partly by fiscal and inflationary problems linked to the expensive Vietnam war and the Cold war, forced President Nixon to finally close down the dollar convertibility to gold, and effectively put an end to the Bretton Woods financial system. The breakdown of the Bretton Woods system, which had been characterised by strong capital controls and nation state-domination, unleashed a revival of free-market liberalism, leading to deregulation of financial markets. This chapter will also show, that the innovation of finance enabled new financial actors, such as non-banks, to perform the business of traditional regulated bank, which thereby laid the ground for the shadow banking system. The argument is, that the mix of financial regulation (and deregulation) and financial innovation became the perfect medium for the shadow banking business to grow, and that the growth of shadow banking in time caused a shift in the balance of power, in terms of money creation between state and market.

Banking and money has a very long history, and in order to set the context for the state-money nexus and the importance of private money, this chapter will start with a short introduction to early day banking mechanisms, as well as the role of money in the medieval period.

Early day money and banking

The original term *"money"* is adopted from the Roman mint at the temple of Juno Moneta. The term Moneta is derived from the Greek goddess of memory, Mnemosyne. It is in Italy that we find the origins of modern finance, since Italian cities like Venice and Florence were the first to sell interest-bearing debt in the secondary markets(Munro, 2001). The rising economic activity in the medieval period increased the demand for money exchange and coin conversion, as well as other financial activities such as depositing, lending, investing and credit and risk transferring. The evolution of the *bill of exchange* is also dated to medieval Italy, to finance trade and overcome the problem of time and act as a mean of payment(Ferguson, 2009). The bill of exchange was not only a huge innovation that helped finance the newly evolved long-

distance trade to the new frontier countries, but it also laid the foundation of modern banking, with meticulous bookkeeping and risk diversification in the loan portfolios.

The medieval banking system was only scarcely regulated, with the exception of the church's prohibition of usury, which of course may have limited the profit potential significantly. When this prohibition was abolished, it became more attractive to become a banker, which increased competition and made Venice and Florence the financial centres of medieval Europe (Ferguson, 2009). Instead of regulation, the interaction between the private banks and the sovereign of that time was characterised by interdependence, since the sovereigns were very dependent on banks to finance their war expenditures, which at that time were very high. Though the medieval sovereign often promised to pay high interest rates, the probability of a default was very high, and the great losses that states caused the banking business were hard for bankers to absorb. The medieval merchant banking worked as deposit banking for travelling merchants, and share many characteristics with today's depository banking, as deposits were used as collateral for long-term loans performed by the bank[6]. However, there was no clear state-money nexus, as banks also performed as foreign coin exchange for trading merchants, which also implies no unit of account nexus.

Later, the Italian banking practices were adopted in the northern parts of Europe, especially in England, Holland and Sweden. The Swedish *Riksbank* established in 1656, carried out the task of managing multiple currencies, as a result of extensive foreign trade, as well as practicing an early version of fractional reserve banking (Ferguson, 2009). The practice of fractional reserve banking enabled the *Riks Lanebank* to create credit by lending out money in excess of its currency reserves (Ferguson, 2009). The evolution of central banking has a special role in the history of money, as it is historically the most explicit institution through which governments exercise power over banking and financial markets. The first central bank was the Bank of England, established in 1694 as a private bank that was soon given the monopoly of money creation. Bank of England became a powerful bank and soon it forced all other banks to take deposits in it, letting it become the bank of banks, a definition that has stuck to central banking ever since (Schiller, 2008). The history of central banking is of analytical interest, since central bank ownership has shifted over time, and that the central banks have had somewhat different roles and policy targets. Early year central banks were characterised by being private banks given the authority to print money, gradually evolving into a public bankers bank function. The nationalisation of central banks, and the fact that the

[6] See chapter three for elaboration on deposit banking.

liabilities of the central bank became the monetary base of the banking system, has given the institution of central banking a special role in the relationship between public and private money (C. Goodhart, 2000) and constituted the modern state-money relationship. It was during the Civil War in the US, that the government really took over the business of producing money, as the national banking notes, the so-called greenbacks, were backed by US Treasury Bonds and private notes were no longer circulating(G. B. Gorton, 2010b: 2)

The New Deal-regulation and the era of state money

After the shock of the financial crisis in 1929, which ignited the Great Depression, the United State government formulated the New Deal-regulatory framework that fundamentally changed the composition, structure and practices of the financial system in the U.S. (de Rezende, 201127). The period that followed from the New Deal regulation to the outbreak of the crisis in 2007 is called the *quiet period* (de Rezende, 2011; G. B. Gorton, 2010b) in U.S banking history, because no real banking crisis has played out until the crisis of 2008. Though the New Deal programme was established only in the U.S., its ideas of strict financial regulation are somewhat universal, since it also tells a story on the interplay between public regulation and private innovation. As the following historical and political analysis will argue, the quiet period has been characterised by a move from a state-centric and regulated financial system, into a liberalised system in which the shadow banking system emerged and where private money now seems to play a vital role in the economic system.

The Banking Act of 1933, part of the New Deal regulatory framework, was constituted by several initiatives aimed at re-establishing financial stability after the turbulence of the Great Depression, and to avoid such crisis to ever reoccur. By establishing the Federal Deposit Insurance Corporation (FDIC), the U.S. Congress wanted to ensure that bank runs, where people would rush to redeem liquidity from banks based on bank solvency rumours, would never reoccur. The state anchored the banking system by establishing the deposit insurance, as it would act as an anchor of last resort, in case banks would run into trouble. Such a state-insurance would establish a fundamental trust in the banking system, and ensure the financial stability of the system, which would unfortunately only cover rather small private deposits of a maximum of $100.000. The overall rationale of the New Deal constraint was to limit competition in banking, based on the idea that it would destabilise the financial system once again, by pushing banks into too risky business ventures, in order to compete with other banks. As a theoretical backing of the New Deal financial regulatory project, Minsky and Keynes'

reflections on the inherent endogenous financial instability were used to guide a strong restriction on the banking business (Crotty, 2009). At the same time, by guaranteeing the traditional banking deposits, the government made the deposits liquid and fully integrated into the money supply as means of payment (de Rezende, 2011: 27). Following the points of chapter one, the ability of the private banking system to endogenously produce private money potentially leads to financial instability, since unregulated credit-production tends to accelerate in boom periods, and then burst at some point. In the context of the Great Depression's preceding bank collapse, the Banking Act, the Securities Act, the Securities Exchange Act and the Glass-Steagall act can all be interpreted as a strong commitment to the financial stability-regime advocated by the Keynesian economics (ibid.).

The purpose of the Glass-Steagall act was to clearly define the role of banking, by splitting up commercial banking, investment banking and insurance business. Thereby, regulators ensured that deposit banking were restricted to lending out loans on rather short term, whereas investment banks on the other hand were restricted to the underwriting of bigger investment projects. The idea was to create a non-competitive environment, where commercial banks were given advantages so that competition and risk-taking were not profitable. Thereby financial stability, in the traditional banking system, seems to have been enhanced with the introduction of deposit insurance, Glass-Steagall banking split and greater possibilities for deposit banks to use the discount opportunity in the Federal Reserve. As de Rezende (2011) concludes, the financial regulatory efforts taken in the 1930's were highly anti-competitive in the sense that banks were isolated from the competition that ultimately made the banking system fragile before the bank run in 1929. But especially the anti-competitive aspect in the Regulation Q that put a ceiling to the interest rate in deposit banks had certain flaws that potentially could lead to the exact opposite result of what was desired by the financial regulators. Instead of commercial banks not competing on interest rate, and thereby competing on risky funding methods, the lack of monetary policy coordination opened up for a scenario where market rates were higher than those restricted by the ceiling(de Rezende, 2011). As the regulated banking system saw opportunity costs rising as a result of alternative interest rate opportunities that went above the rate imposed by the government interest-rate ceiling, the banking industry as a whole did start to reshape, which the emergence of the Euromarkets (see below) were a good example of.

The regulation of the traditional banking sector may be blamed for being too effective as its intended goal to stabilise finance by removing competition among banks led to a competitive advantage of non-regulated financial firms in competition with the traditional

banks. Though the period up until the 1970's is to be regarded as the quite period of financial stability the institutional transformation of the banking industry implied that the quite period was only a temporary one. As the traditional banking systems ability to provide customers with attractive deposits were weakened alternative opportunities arose and the effective industrial segmentation between commercial banking and investment banking was slowly being blurred out as the innovative powers of private finance started to work. As far as the New Deal financial regulatory project went it was a strengthening of the states ability to control finance and enhance the state-money nexus. By splitting up the commercial bank and investment bank business and at the same time allowing the central bank to support stability in the commercial banking sector by letting it act as a lender of last resort and allow depository banks to borrow easily in the central bank discount window, the relationship between the state and the money-production was clearly strengthened. At the same time, by splitting up banks and defining their area of business, the government also made sure that certain areas of business, such as mortgage lending, was kept in mortgage banks. This effectively enabled the state to control the credit expansion as commercial banks, with the ability to create bank money, were under special commercial bank regulation.

State-money, Bretton Woods and the Euromarket

Though the New Deal programme may have prevented a financial collapse like the one in the 1929 it could not help prevent the global political instabilities that led to the Second World War. After the war there was a need for a financial system that could help finance the rebuild of post-war Europe as well as continuing the financial stability focus that had characterised the US financial system under the New Deal regime. The post-war agreement resulted in the establishment of the Bretton Woods system that continued the strong regulation of finance. As the world economy burned its fingers on the liberal world order of private finance, that characterised the world before the First World War, it was obvious that states now wanted to take control over finance be regulating and limiting access to international finance. The move towards such an interventionist regime that would force finance to serve the real productive economy was not about connecting to a special economic theory, though the Bretton Woods initiative was heavily influenced by the thoughts of Keynesian economics, but instead it was a result of more people from without finance entering into central administrations such as central banks(Helleiner, 1995). Thereby the interest of the financial class and people working within finance was pushed aside for the greater project of rebuilding Europe as well as pursuing full

employment policies in advantage for the working class. Thereby we may interpret the shuttling from a privatised money system into a state-money system as a shuttle between a democratisation of money via the democratic state, into a privatised elitist monetary system. Thereby the evolution of private money, explained in this chapter, leads to a greater insight into the political economy of private money. In such a context the contradiction between state-money and private credit money reveals the very basic contradiction between money as a public and democratic good on one side and money as a privatised elitist good on the other, a point further elaborated later.

In the period after the Second World War, as interest rates were kept generally low in to encourage investments and lessen the burdens of large government debt, the need to rein the economy in other ways became obvious (C. A. E. Goodhart, 2010). International economic transactions were restricted by strong capital controls that were set to partly ensure exchange rate stability as well as allowing national governments to autonomously control their welfare economies. This "Keynesian Revolution" (Epstein, 2005: 77) helped building the western welfare states and led to a golden age of capitalism with increased real wage and strong focus on full employment, which helped in the creation of a strong middle-class. At the same time the post-war public expenditure helped to supply the banking system with liquid and safe government securities, that enhanced the stability of the banking sector, as banks could easily sell Treasury securities to meet reserve needs (de Rezende, 2011). On an international level the Bretton Woods institutions, such as the International Monetary Foundation (IMF), were established to monitor national monetary policies in member countries as well as the capital controls. In line with what Keynesian economics prescribed the national governments were given the tools to control its domestic interest rate to allocate national investments (Bryan,Dick 2005: 33). As well as establishing strong financial regulation to prevent extensive and socially harmful private credit expansion the Bretton Woods system effectively erupted every idea of private dollar-gold convertibility. The privilege of converting dollars into gold was only given to governments and not private individuals, which underlines that this period was focused on the state-money nexus as American dollars became the unit of account that all other currencies were fixed against.

The years of government control over money via capital controls and adjusted interest rates led to a golden era of capitalism (Epstein, 2005)that resulted in global prosperity growth that led to increased employment and the building of modern welfare states. However this age of financial stability as a result of strong state control over money, as shown above, resulted in financial profits circumventing the banking industry, which of course encourage innovative

thinking in the financial sector. In 1956 the emergence of the Euromarkets in the city of London enabled international financial transaction beyond the regulation of the state. As such the Euromarkets ability to circumvent the capital controls, and maybe more important, its political support from both the British government and the US government, implied that the strict national control over money might not last forever(Helleiner, 1995; Helleiner, 2010). The Euromarkets despite utilising the new technology that allowed long-distance trading also utilised that European capital controls were relaxed in comparison to the US. Thereby London-based banks were able to accept dollar-deposits and compete on interest-rate with the Regulation Q interest rate-restricted US deposits (Burn,Gary 1999: f226). As the gap between the regulated interest rate and the interest rate offered "in the market" became bigger the incentive to innovate further, either as the Euromarkets did or by creating new products and ways to circumvent the regulation. For the banking industry the rise of the Euromarkets meant that bankers were no longer restricted by available retail deposits (especially in the US) and liquid government assets, but instead he could use the wholesale Euromarkets to fund the banking business (C. A. E. Goodhart, 2010). Thereby the banking business that had remained stable in the post-war years as a result of the liquid assets provided by the Treasury would now turn towards private wholesale funding, which as the rise of the shadow banking system shows, became a good business for banks. In general the rise of the Euromarkets supports this thesis argument that the state-money nexus has never been a static state of financial order since the ownership of money is inherently characterised by a shifting balance between private and public money. In such a context the issue of control over money becomes a question of political economy since the public money regime of New Deal and Bretton Woods, benefitted the real economy investments, whereas as this thesis will show the private money regime of shadow banking as well as the Euromarkets have emerged to support interests in finance. Furthermore, this shifting balance is impacted on the interplay between financial innovation and financial regulation, which the interplay between the New Deal Regulation Q's anti-competitive restrictions on interest rates and the emergence of the Euromarkets as well as the Money Market Mutual Funds that later should prove to be one of the cornerstone of the shadow banking system.

The new financial orthodoxy and the deregulation of finance

The dollar-pegged exchange rate regime of Bretton Woods soon came under pressure as the US gold reserves had dwindled to around $10 billion, only half of what it originally had been.

As international financial transactions became more frequent with the emergence of new technological innovations as well as the above-described Euromarkets the US economy came under pressure. As the Bretton Woods international system relied on the final convertibility of dollars into gold (Lowenstein,Roger 2011: 76) and the speculative capital movements characterised by the Euromarkets became more frequent the fear of a run on the dollar increased. The gold backing of the dollar had been under pressure for several years, but as Eichengreen notice did the Bretton Woods system exist only as long as it was supported by strong coordination between the central banks and the government in countries supporting the Bretton Woods system(Eichengreen, 1996). As this coordination became too expensive for the parties involved, especially the US had high inflation and increased unemployment, President Nixon chose to shut the gold-window and thereby ending the Bretton Woods era by disabling the convertibility of dollars into gold.

The breakdown of the Bretton Woods indicated a goodbye to the Keynesian public state-money approach where states intervened in financial markets to ensure financial stability and the execution of economic growth strategies. Instead free-market economists and neo-liberal politicians collaborated on a new financial orthodoxy that would bring deregulation and the efficient market theories back into play. With the dollar currency crisis in 1971, the closing of the gold-convertibility and the Keynesian expansive fiscal policies inability to solve the threatening stagflation following the OPEC oil crisis, policy makers oriented themselves towards the free-market economists for solutions. This reorientation kicked off an era characterised by a neo-liberal political and economic agenda. It is the argument of this thesis that the neo-liberal agenda that was materialised in a substantive deregulation of finance moved the world economy towards a private money regime, as debt levels increased and allocated power and resources to a financial sector that was no longer burdened with credit constraints and heavy financial regulation. As governments were being disciplined to pursue sound monetary policies to please global financial markets, the state became unlikely to provide the financial system with safe assets to be used as collateral. Thus, because of the inability of the state to provide enough safe and liquid asset as well as an increased demand for such, as the amount of global financial transactions increased the need for an alternative increased. Instead, the private banking system moved its focus towards private financial assets to anchor the monetary system as collateral. In general more and more actors, both corporate and private (via real estate mortgages and securitisation) oriented themselves away from the regulated banking system to fund their activities and instead funded themselves directly in the private capital market. And as growth in the *real* economy was stagnating more and more

companies engaged in financial business by acquiring financial subsidiaries and used more of their capital to acquire financial assets (Epstein, 2005). Thereby the financialisation of the world economy was on its way and it is the argument of this thesis that the movement of greater capital market power also indicated a move towards a private capital market money system, as banking activities, such as deposit creation, moved from the regulated banking system and into the unregulated spaces.

This private monetary system foundation was further enhanced as pensions where privatised and private pension funds and other cash pools engaged actively in the global financial market in search of yield and safety deposit alternatives (Poszar, 2011). The state-money regime that was characterised by domestic government and central bank coordination, constrained credit creation and overall strong regulation of finance ended partly with the breakdown of the Bretton Woods regime and started a new era of neo-liberal deregulation and privatisation, which also impacted the money system from the 1980's and onwards.

This new era of deregulation of the financial sector and a general commitment to neo-liberal policies put a straight jacket onto the expansive policy autonomy of the nation states and instead called for balanced-budget soundness. Aggregate demand in the productive *real* economy was decreasing into stagnation whereas the finance - that was being unleashed from its strict regulatory constraints - became a profitable alternative for investments, which resulted in shifting balance between the two sectors. As real wages stagnated the financial economy helped maintaining the purchasing power of the working class by issuing credit cards and as debt levels grew in all parts of the economy the world economy became a debt economy(Magdoff, 2006; Mellor, 2010). The debt economy meant that a very competitive though attractive markets for banks and financial institutions and as credit controls were being removed and the demand for loans increased banks had to keep up in order to remain profitable in the new competitive banking environment. At the same time, in 1979 the Fed chairman Volcker introduced a new price stability regime that rose interest rates dramatically. This dramatic rise in interest rates undermined the banks balance sheets, but as commercial banks were still under the Regulation Q interest rate ceiling they could not benefit from the increased rates. Instead the banking system transformed as it created the so-called Money Market Mutual Funds (MMMF's) to pool together traditional depositors to invest directly in deposit alternatives in the wholesale banking market (de Rezende, 2011). In general the banking system transformed into being a market-based system where capital markets would be used for bank funding as well as the ultimate judge on government policies, which of course meant that

market confidence became a real issue for policy makers and resulted in "sound" financial policies.

The wave of deregulation showed the normative impact of neo-liberalism that was represented strongly by Margaret Thatcher in the UK and Ronald Reagan in the US. Deregulation of finance was a deregulation of interest rates, privatisation of public owned banks and removal of credit controls, which further would expand the scope of banking and finance. Depositors that had suffered from the anti-competitive environment under the Regulation Q interest rate ceiling had already moved their deposits out into Money Market Mutual Funds (MMMF's) to circumvent the interest rate ceiling. These MMMF's were allowed to make deposits in the wholesale banking market beyond the banking regulation and increased the competition between banks and non-banks. As these regulatory constraints, such as the interest rate ceiling and the divide between different financial activities became blurred and ultimately dissolved it opened up for competition in the banking sector. As the next chapter will show, this increased competition along with new regulatory initiatives in the 1980's ultimately became the driver for financial innovation that enabled the emergence of the shadow banking system.

Conclusion

This chapter, by unfolding the political and historical roots of contemporary finance, showed that the ownership of money is not static. Instead the history reveals that ownership and control over money is a shuttling balance determined by the interplay between public financial regulation and private financial innovation.

As a response to the devastating events of the Great Depression a certain political sentiment triggered the construction of sound financial regulation. This sentiment was manifested in the New Deal-regulation that would abolish competition amongst banks to ensure financial stability. After the Second World War, politics and money was united in the rebuilding of Europe. On the outside, money was being strictly controlled and allocated strategically to promote growth in the real economy as well as full employment policies. However, this chapter suggests that underneath the surface, financial innovation gradually displaced the ownership of money as it laid the ground for a reconstruction of global finance that was unleashed as soon as finance was deregulated. As such the interplay between financial innovation and regulation becomes the main driver for financial, political and social transformation as private money emerges.

The Shadow Banking System and private money

This chapter represents the analytical "heart" of the thesis, as it explores the shadow banking system, to document the transformational nature of contemporary private money.

In 2010, The Financial Stability Board estimated the size of the shadow banking system to be around €46 trillion and representing nearly 20-25% of the entire (Euro-zone) banking system. In the US, the parallel banking system was estimated to account for 30-35% of the entire financial system (Barnier, 2011). Shadow banking refers to the practices of the non-regulated banking system, that was constituted by off balance sheet practices in the run up to the financial crisis (G. B. Gorton, 2010b). By dissecting this unregulated banking system and its ability transform money I argue that shadow banking constitutes a new money nexus.

By drawing on the evolution of contemporary finance, with shadow banking as the focal point, I argue that the crisis in 2008 was the fulfilment of the underlying money crisis that has been examined throughout this thesis. As the shadow banking system was paralysed by the sudden run in the market for repurchase agreements, it was caused by a deeper misconstruction of private money. This misconstruction, which was encouraged by the interplay between financial regulation and innovation, allowed private money to be created infinitely with only dubious backing, ultimately leading to a massive inflation. The inflation of private credit money did, however, not play out as a normal inflation but instead it was observed in the housing inflation in the US housing market that ultimately ended up as a returning boomerang.

Prior to the crisis, the assets produced and circulated in the shadow banking systems were considered safe and liquid, and a valid alternative to the instruments of the traditional banking system. The main problem however is, that the shadow banking system works without the authoritative support of the state, which historically (see chapter three) has ensured financial stability in the traditional banking system. This however, is not in itself bad. What is potentially bad is that the shadow banking system instead relies on the orthodoxy of private finance theory, which chapter one shows relies on the ability of the unregulated market to create a sustainable form of liquidity. Before the famous credit crunch in 2008, the mix of financial innovation and financial deregulation made the world believe in the ability of the unregulated and unsupported financial system's ability to perform the tasks that were previously reserved the regulated and state-supported banking system, namely the creation of money. This chapter however shows, that the shadow banking system as a private money system has inherited some weaknesses from the theory of market-based money discussed in

chapter one, and that this private money system threatens the stability of the entire financial system.

However, the magnitude of the private money created in the shadow banking system does not just threaten the stability of finance, but it also transforms the state-money nexus that both historically and in heterodox theory has acted as the stabile foundation of the money system. Instead, the contemporary crisis of money potentially shows how the state has been downgraded, and has become dependent on the functional infrastructure of shadow banking. By bailing out weak financial institutions, that for too long had contributed to the uncontrolled creation of private money in the shadow banking system, and by swapping private financial assets with questionable value in return of government bonds, states recognised and legitimised the private creation of money. Thereby, a new private-public money nexus has been established and indicates yet another shift of power from the public to the private in the era of financial deregulation. As such, the shadow banking system is not just another product of financial innovation, but instead a manifestation of the transformative power of private finance, that has denied the state the ability to control money.

Defining the shadow banking system

The purpose of this section is to define shadow banking as well as the key processes that qualify shadow banking as a private money transforming system. Several studies have documented the rise of a new sector, the *shadow banking system*, *the securitised banking system* or *the parallel banking system* (G. Gorton & Metrick, 2010; G. B. Gorton, 2010b; Poszar, 2011) . These names all cover the same phenomenon (from here on the *shadow banking system*), which is a special system combining the use of repurchase agreements and securitisation, all described below, to perform credit disintermediation off the balance sheet of traditional banks (G. B. Gorton, 2010b). Though these different names all capture the same overall phenomenon, Gorton & Metrick have referred to *securitised banking* as the combination of using securitisation and repurchase agreement, which is also the sub-genre of shadow banking this thesis will focus on. I will, however, still only refer to the shadow banking system, as referring to the securitised banking system may end up leaving out important features of the entirety of the system.

The founder of the term *Shadow Banking*, Paul McCulley, a money manager, describes it as: "*the whole alphabet soup of levered up non-bank investment conduits, vehicle and structures"* (Maclachlan & Nowell, 2011) , referring to the endless use of ABS, CDO, CDS,

MMMF (and many more) abbreviations, which indicates the complexity of the shadow banking system.

One of the main differences between the shadow banking system and the traditional banking system is that the shadow banking system is a market-based banking system, and that it uses the capital markets to fund its activities, whereas traditional banks use central banks or private depositors to fund their business. Banks engaged in shadow banking raise funds by skipping off its issued loans to capital market investors through the process of securitisation, elaborated below, whereas traditional banking tends to keep loans on the balance sheet until maturity. The innovation of securitisation is the heart of the shadow banking system, as it allows for banks to transform illiquid assets, such as mortgages, into liquid assets attractive to capital market investors. Illiquid debt was repacked into complex Collateral Debt Obligations (CDO), and sold off to off balance sheet vehicles in exchange of liquidity. As such, securitisation reshaped the sentiment of banking, by promoting the idea of private liquidity creation. Together with the regulatory costs of holding reserves to support loans on the balance sheet, it became attractive for banks to securitise idle assets, and sell them off into the capital market via Special Purpose Vehicles (SPVs), thereby transforming the banking business model from "originate-to-hold" to "originate-to-distribute"[7], in an attempt to compete on profits with non-banks.

In the capital market, institutional investors with large pools of excess cash were ready to invest in these loans originated in the banks, as they were in constant search for safe deposit alternatives. These institutional cash pools, ranging from pension funds, over Money Market Mutual Funds (MMMF) to hedge funds and wealthy individuals, identified by Poszar (2011), had a preference for safety, as they looked towards the money market for deposit alternatives. Because of their size, the traditional banking system was unable to provide safety, because the state-initiated deposit insurance, described in the previous chapter, only covered an amount of up to $100.000 before the crisis! If institutional investors tried to deposit $500.000.000 over night, they would have had to either spread out their deposits into a lot of banks, or spread them into few and run the risk of banks becoming insolvent, and risk never getting back their cash exceeding the $100.000. The shadow banking system offered insured deposits to cash pool managers in the money market, as these near-deposits were backed by collateral. These deposit alternatives, called *repurchase agreements* (repo), provided the cash pool manager with

[7] Originally the intermediation of credit followed the logic of *originate-to-hold* as banks kept loans on their balance sheet until maturity. In the age of securitisation the banking business model has transformed into *originate-to-distribute.* Here banks perform disintermediation of credit off their balance sheet (Rajan, 1998)

a valid alternative to the traditional banking system, as he swapped cash with short-term bonds written on collateral. Thereby, the institutional cash pool would be able to redeem cash quickly, and in addition the repo provided an exemption from the automatic stay bankruptcy rules.

Though the shadow banking system seems to play a rather neutral role in the credit disintermediation process, the following analysis strives to show that what shadow banking really does, is to create a special form of private money, which is heavily expandable and at the same time very fragile. Though traditional commercial banks create money as well, by performing a double balance sheet expansion, the difference between the traditional banking system and the shadow banking system is, that the latter is under no supervision by the central bank, nor is it regulated. In addition, shadow bank money creation is underpinned by the use of privately created collateral such as CDOs, which is inherently fragile, as underlying debt performance is correlated to the performance of the overall collateral, and thereby the entire private money system. By not having a collateral, or commodity, with any intrinsic and stabile value to back the money system, the contemporary private money system of shadow banking differ in a vital aspect from the private money theory discussed earlier. This chapter will discuss the implications hereof, by drawing on the previous analyses, to analyse how the contemporary crisis is a manifestation of a deeper lying money crisis.

The shadow banking system's emergence was a response to an anti-competitive, regulated banking environment, which encouraged banks to exit the regulated industry, and enter the shadow banking system to compete. Thus the shadow banking system is a private response to the public regulation of finance, and writes itself into the public-private dichotomy of contemporary finance. The main question is whether this public-private dichotomy displays an equal relationship between private money and public money, or if private money and shadow banking practices have gained the upper hand. Judged on government's response to the crisis, described in the last chapter, private money has already conquered an indispensible role in contemporary finance and has become too important to fail.

The disintermediation of credit

The evolution of finance, driven by financial innovation, has transformed the logic of traditional credit intermediation performed by banks. This traditional credit intermediation overcomes the fundamental maturity mismatch between long-term borrowers and short-term depositors, closely supervised by governments looking to control the creation of credit money

and deposits. This is basically because the mismatch is never really overcome, but instead captured in the technology of *fractional reserve banking*. For such a system to avoid the risk of bankruns, governments ensured financial stability, by guaranteeing deposits and granting traditional banks access to central bank liquidity. As shown in the previous chapter, the New Deal regulation was aimed at maintaining financial stability, but as competition from non-banks increased, traditional banks had to dismiss the traditional credit intermediation strategy and instead adopt a strategy of disintermediation. Banking was moving away from the "originate-to-hold" models and into the "originate-to-distribute" models, as financial assets became marketable and ready to distribute in financial markets.

Traditionally, banks had funded themselves by taking in deposits from private savers, or by lending from the central bank, but as the finance transformed into a global system with the absence of capital controls, funding directly via capital markets became cheap. At the same time, the disintermediation of credit seemingly perfected markets, as credit risk could be allocated to the actors willing to bear it. Further, the easy access to capital funding, also for private individuals and corporations, meant that traditional bank intermediation was in direct competition with more efficient market-based banks and non-bank institutions (de Rezende, 2011). As shown in chapter three, it was under these conditions that shadow banking emerged.

Banks profited from credit disintermediation, as it expanded the volumes and exceeded the limits of financial production, as regulatory requirements were circumvented. Where traditional banks, within the traditional banking system, performed intermediation between creditors and debtors on the balance sheet of the bank, and thereby being subject to the regulation of the state, the shadow-banking sector performed credit disintermediation outside of the balance sheet of banks. The processes were however identical, as both traditional banks and shadow operating banks performed maturity transformation by financing long-term loans with short-term deposits. The main difference however was, that traditional banks had learned about bank runs the hard way, especially in the run-up to the Great Depression in the 1930's were lots of banks collapsed as depositors rushed to redeem their cash. As the previous chapter shows, this fear of runs encouraged the state-money regime and the pursuit for financial stability. In such a context, shadow banking represents the core of conflict between bank stability and bank competition, a contradiction that was repressed by financial regulation during the state-money regime, but bloomed as finance was deregulated.

Securitisation became the tool for banks to compete in the age of shadow banking, as it enabled the creation of private liquidity. It did so by transforming illiquid loans, such as real estate mortgages with long maturity, into marketable assets sold in the capital market (G.

Gorton & Metrick, 2010) . By collecting and pooling loans together in bundles such as CDOs, the originating banks were able to sell these assets off into a SPVs. Because they received special treatment in the bankruptcy law, SPVs were legally independent of their originating bank. By issuing bonds on the underlying loan portfolio, the SPVs were able to finance the acquisition of loan pools from the originating bank. The trick was simple, as originating banks were able to transfer the risk of credit default to the capital market, while at the same time freeing a lot of liquidity to extend the volume of banking. At the same time, the off balance sheet manoeuvre enabled originating banks to circumvent the regulatory costs associated with holding reserves to back loans on the bank balance sheet. As SPVs were considered independent legal entities, they were not affected by potential originator bankruptcy, as these had no claw-back rights. This special legal treatment made SPVs attractive to both originating banks, as well as capital market investors, as it enabled the redistribution of the credit-risk inherently associated with loans and credit (G. B. Gorton, 2010b: 39), as well as seemingly supplying safe collateral for repurchase finance (Poszar, 2011). The emergence of SPVs used in the securitisation of bank assets reveals how the state have accepted the use of funds or trusts to be used for financial intermediary. By allowing banks to use bankruptcy remote trusts as off balance sheet vehicles, the state has indirectly institutionalised the shadow banking practices. This institutionalisation of SPVs adds to the argument that private money, via regulation, is promoted in the legislation, which constitutes a new state-money nexus.

Though banks were able to skip off assets to SPVs the redistribution of risk associated with the underlying loans and credits was not complete. Originating banks had to hold some of the more risky loans on their balance sheet, to prove to investors the overall quality of the CDOs. As I will discuss below, the drop in real estate prices in the US started a bigger and devastating correlation in these complex structures, and ultimately destabilised the private money system, as CDOs were used as collateral in private money creation.

The extensive use of securitisation transformed traditional banking practices, and allowed for infinite private money creation to take place in the shadow banking system. Traditionally, banks had acted as intermediaries between creditors and debtors, and their profits therefore reflected their ability to evaluate investment projects, as well as knowing the background and credit historic on customers (Ingham, 1999). It was essential for banks to have a real relation with the borrowers of the bank, in order to know their story and limit the exposure to less creditworthy customers. Securitisation transformed this old-fashion banking practice and instead exceeded financial production and the capacity of banks. By giving capital market-based banks the possibility to cheaply issue credit to weak borrowers, securitisation

played an essential role in the creation of asset bubbles. As financial innovation moved the traditional intermediating business model from originate-to-hold onto originate-to-distribute as a result of the new technology of securitisation, the whole industry would change and become much more oriented towards an economy of scale approach to lending (de Rezende, 2011). The process of securitisation, by standardising loan portfolios, makes these loans attractive for capital market purposes, such as collateral in repurchase transactions, which will be elaborated below (de Rezende, 2011).

However, the ability of securitisation to transform and split the bank's responsibility and risk is the heart of the financial crisis, as it created perverse incentives for the financial institutions involved, as well as limiting the transparency of the system and the ability to figure out who actually holds risky positions in the market. By securitising illiquid loans to make them liquid and marketable, originating banks were able to transfer most credit risk into capital markets, which created an incentive to loosen up underwriting standards. This glitch in underwriting was supported by Credit Rating Agencies (CRAs), who simplified complex loan structures. By doing so, they made it easy and attractive for investors without knowledge of debt markets to invest (and deposit) in the market. The argument here is, that using CDOs, especially CDOs backed by real estate, as collateral in the private money system, proved too fragile to support a money system. By securitising sub-prime mortgages and allowing CDOs backed by sub-prime mortgages to act as collateral in the shadow banking system, the private money system became vulnerable to volatility in house prices.

Because shadow banking is a competitive circumvention of state regulation, it is also beyond the protection of the state. Where the maturity mismatch, between lending out long-term and creating deposits short-term, has been secured by the state in the traditional banking sector, with the FDIC-deposit insurance, the shadow banking system is still vulnerable to bank "runs" (G. B. Gorton, 2010b; G. B. Gorton, 2010a). However the correlation between the performance of the housing market and the stability of the private money system indicates the new state-market money nexus.

The private money creation in shadow banking

Though the contemporary crisis has emphasised the need for understanding the dynamics of the shadow banking system, the money creation part of the system is still a relatively new frontier in the academic disciplines. This may have something to do with the fact, that money

has always been perceived as a state-private dichotomy, as traditional commercial banks create money as well.

The traditional commercial bank money creation is done in the process of credit intermediation, where the bank uses maturity transformation to take savers' short-term deposits and invest them into long-term loans. This double balance sheet operation allows the bank to actually create money on both the asset side (by issuing a loan to a borrower), and the liability side (by creating a deposit which the saver can always draw from). This is of course inherently fragile, as only a small fraction of the actual deposits are backed by reserves. After the Great Depression, the state had a political desire to help avoid such fragility to ever again cause a meltdown of the financial system. It did so by creating a far-reaching safety net under the depository banks, which were granted certain benefits, such as deposit insurance to avoid savers to panic in case of solvency rumours, as well as easy access to central bank liquidity. This strong state-money nexus succeeded in avoiding major banking crisis in the period from 1934 through to 2007 (de Rezende, 2011; G. Gorton & Metrick, 2010) .

Though deposit-banking money is created on the balance sheet of the private bank, they are still anchored by the state and the central bank. Furthermore, bank deposits work both as a unit of account, meaning that a citizen can use its bank deposit to transfer money to the state-taxation office, as well as most bank deposits have become legal tender (Bell, 2001; G. Gorton & Metrick, 2010) . However, the rise of institutional cash pools, documented in the previous chapter, and the shortage of government guaranteed deposit instruments (Poszar, 2011), forced the financial system to transform, in order to create a valid private alternative.

Such a private deposit alternative was created, when the shadow banking system started performing repurchase agreements. As these repo deals are given special treatment in the US bankruptcy law (as the SPVs), they act as substitutions for the traditional government supported deposit-banking system (G. Gorton & Metrick, 2010) . Institutional cash pool managers carry lots of cash and want to deposit these cash holdings safely over-night. The problem however is, that they cannot use the traditional deposit bank to store the cash holding, as only a limited amount of the deposit account is insured by the government. In the aftermath of the financial meltdown, the deposit insurance ceiling was raised from $100.000 to $250.000. This may further sustain the argument that regulators of finance have still not figured out the essentials of shadow banking. For a cash pool manager who has to safely deposit billions of dollars, a deposit insurance raise of $150.000 may not result in changed behaviour after all. In line with the fractional reserve theory of banking, the institutional cash pool managers want to keep a distance to traditional deposit banks, as they cannot redeem all their money at once.

Instead of becoming a normal depositor, they become, by injecting billions of dollars into the bank, if anything, equity owners, which would increase the risk of their portfolio. These developments make way for an interpretation of the emergence of shadow banking, and thus private money creation, as a result of the state's inability to ensure larger deposits. Again, financialisation is the key to understand the emergence of the private money system. As the state-money system, rooted in the Keynesian economics' strategies for growth and full employment, became unable to provide the needed guarantees (in terms of deposit insurance of adequate size, as well as government guaranteed instrument for collateral use) as financial transactions increased, it was only a matter of time until a private alternative was established.

The private alternative to repo finance required the shadow banking system to provide the valid collateral, and it did so by creating CDOs, through securitisation to work as collateral in the shadow banking deposit manoeuvre. Hereby, securitisation further exceeded the limitations of financial production, as the supply of transformed illiquid debt into liquid financial assets was absorbed as collateral in the repo market. The exceeding production of finance is caused by financial innovation such as private money in the repo market, which together with securitisation has helped to drive forward the "originate-to-distribute" business model. Cash pool manager's desire for safe liquid deposit alternatives drove the demand for shadow banking. The increased demand coming from the cash pool managers was a manifestation of the growing trend of financialisation. As pensions were privatised, buying a house became an investment and wealth was being distributed unevenly to the richest fraction of the world's population (Epstein, 2005; Mellor, 2010). Thus the emergence of private money, as repo, can be put into a greater context of the financialisation of the world economy, which of course opens up for a political economical interpretation of the distributional patterns of private money. This will be conducted later.

As the world economy became more attached to the financial sector, as a result of a greater movement of financialisation the state incentives were aligned with the financial system. By accepting the use of SPVs states encouraged the creation of private money. Also the official Accounting Standards considered private repo agreements money, as institutional investors were able to redeem their cash holdings quickly by not renewing the short-term repo contract. As such shadow banking practices were considered banking, which enabled them to create near-money. According to the official financial accounting standards, repo is to be considered a cash-equivalent, as these are defined as:

> "*Cash equivalents are short-term, highly liquid investments that are both: readily convertible to known amounts of cash and so near their maturity that they present insignificant risk of changes in value because of changes in interest rates. Examples of items commonly considered to be cash equivalents are Treasury bills, commercial paper, asset- backed commercial paper, repurchase agreements and money market mutual funds*."(Poszar, 2011)

The above quote clearly states, that repos (repurchase agreements) are to be considered cash equivalents, as they are highly liquid instruments with short maturity. There are however several reasons to question repo as sustainable cash equivalents. The below section strives to show, that while repo may qualify as near-money cash equivalents, according to the above described terms, the creation of private money suffers from the child illnesses inherited from the theory of market-based money. Here it is especially the liquidity aspect of money that is being questioned. Although the liquid aspect of financial instruments seems to be one of the most important features of the shadow banking creation of money, it is also evident that liquidity rests on certain prerequisites connected to efficient financial markets, which the credit crunch in 2008 was a real-life critique of. For now we may consider repo a form of private money, as it is a product of maturity transformation beyond state-control. Just as commercial bank deposits, the repo pays interest to the institutional cash pools that deposit their cash holdings in the repo market, and thereby repo banking has to be considered private money creation.

The illusionary stability of private money

As the institutional cash pool demand for government guaranteed short-term instruments, and insured bank deposits exceeded the supply of these instruments, especially in the years from 2003 to 2007 (Poszar, 2011), the shadow banking system arose to fill the gap, by creating collateral, for example used in repo finance. The traditional state-money nexus incorporates the Treasury bond in the financial transactions as well as the clearing function, but as the volume of financial transactions increased as global finance was set free, a shortage of such secure collateral emerged. Instead the shadow banks provides the needed alternative as they issue bonds on the securitised portfolio of loans, meaning that they use the loans as collateral to fund the loans. These privately guaranteed cash equivalents, such as repo, used for institutional

investors' deposits in exchange of collateral, was long considered a risk-free safe deposit alternative. The problem was however, that the collateral backing these repo agreements was not to be considered risk free, which led to fluctuations in the price of collateral in the dawning financial collapse.

Securitised collateral used in repo, was considered risk-stripped (G. B. Gorton & Metrick, 2010) , as it had undergone the process of securitisation. For the shadow banking system it was used in repo deals, as it constituted a valid, privately insured alternative to the government guaranteed instruments. Amongst these guaranteed instruments were traditional bank deposits, which I previously showed was guaranteed by the government, as well as being legal tender money. In the process of creating the valid collateral for private money creation, the global credit-rating agencies (CRAs) played a significant role, since they, by rating the probability of default on the underlying CDO, facilitated a smooth pattern between the loan origination and the institutional investors. By rating the underlying portfolios of loans, CRAs would help in the creation of liquidity, as these CDOs would become attractive to investors that would not traditionally invest in capital markets (Nesvetailova, 2008). Thus the overall goal of securitisation was to privately create liquidity, as illiquid assets was being reconstructed and became marketable. The use of housing mortgages as collateral before the crisis in 2008 however, points to a very central problem of private money creation, as private money to become a common medium of exchange are absolutely dependent on the liquidity of the market. If financial assets, such as CDOs, are not regarded safe, they potentially become illiquid and expensive to use in financial transactions, as the risk of loosing money increases. The collapse of the repo market clearly showed that the orthodox promise of private liquidity was not being kept. Instead, the neo-classical foundation of the deregulated financial markets' ability to pick a sustainable and stabile commodity as money was eroded by hysteria, as investors started to question the value of collateral and rushed to redeem cash.

The use of securitised mortgage loans, and especially sub-prime mortgages, to anchor the private money system as collateral, proved to be very fragile as house prices started falling. The story of increased "haircuts", or increased demand for over-collateralisation in repo trade to compensate for the growing uncertainty of underlying values, in the prelude crisis is well known (G. B. Gorton & Metrick, 2010; G. B. Gorton, 2010a) . Yet it is also a sign of the difference between a private money system and a state-money system. The use of securitised bonds as collateral in repo was never valid as a private commodity substitute, though it pretended to be, as risks related to the underlying debt obligations were blurred away in the complexity of the structured financial products. Instead, as the correlation between a drop in

house prices and the bonds related to repo finance was starting to become clear, it resulted in "run-like" behaviour in the repo market (G. B. Gorton & Metrick, 2010) . When the price of the underlying collateral was questioned, as financial models proved unable to calculate correlations between different asset groups, and markets, the repo market self-regulated. Thus, institutional investor who had been depositors in the repo finance mechanism claimed an over-collateralisation, the so-called haircut, for accepting collateral. As haircuts increased, the originating banks had to find more collateral or accept less cash, which ultimately made the system vulnerable. In the traditional system, this would have meant fluctuating capital requirements, which would have made the traditional system fragile as well. The problem however by the shadow banking system is that it has not capital requirements, except the self-regulating mechanism of collateral. When capital market investors claimed more collateral to back the repo trade, it did look like they were cashing out money from the system into safety. The seemingly safe financial instruments were not as safe as the innovation of finance had promised. As such, the life-blood liquidity of private money dried up and private money transactions froze. This illustrates shadow banking's difficulties in overcoming the natural constraints of private money, namely that it relies on improbable prerequisites of perfected and liquid markets. Among several weaknesses, the private money system's inability to provide a stabile and reliable foundational anchor has proven to be one the most aggravating weaknesses. Driven forward by a strong belief in the innovation of finance, securitisation of dubious debt never created the same sustainable trust as the traditional banking system had built up by being supported by the state. Instead of perfecting the market for credit intermediation, the disintermediation process created a fragile private money system, which undermined the underwriting standards in the search for collateral to support an ever-expanding private money supply.

As documented in chapter two, traditional banks were given certain advantageous benefits after the Great Depression to stop destabilising competition between banks. The deposit insurance ensured that banks could ensure normal savers their deposits in the bank, something that other financial institutions were not able to, as well as traditional commercial banks were granted access to cheap central bank lending. This central bank channel ensured the liquidity of the banking system via the potential injection of the state-based high-powered money. The non-banking sector was not granted the same advantages, therefore this non-banking sector had to innovate on financial products to become as attractive. Crucially, securitisation was the answer to the private money-supporters' prayers, as it allowed for traditionally idle loans on the balance sheet to be skipped off and instead used as collateral in

private repo banking. As the competition amongst banks and non-banks were given free as finance was deregulated it indicated an ideological shift from stability to competition. The deregulation of finance that was part of the neo-liberal Reagan-project in the US (de Rezende, 2011; B. M. Friedman & Maier, 1999) encouraged the competition amongst banks as a way of protecting bank customers from too expensive banking. Previously the protection of customers had been to establish institutions, such as the FDIC, to project customers from losing their deposits in the banks, but with finance being deregulated the rationale was turned upside down. Instead of ensuring stability the government mandated the regulated to regulate themselves. The new financial regulatory approach that stemmed from the Basel Committee, see next chapter, does also promote the idea of self-regulation.

Monetary aggregates and the private money inflation

The transition of money, going from the state-money regime running from the 1930's through 1980's, to the private money system of shadow banking, was partly driven by a theoretical and political desire to constrain the state's ability to control money and ultimately to inflate money. Following chapter one, the main dispute between the market-based commodity money and the state-centric fiat money theory, was the one about inflation. Orthodox economics promised that commodity money, with a natural supply constraint such as gold, would be the perfect medium of exchange, as it would never inflate and thereby maintain stabile prices. Thus the movement from the state-centric financial order, especially in the post-war world, towards a deregulated financial system, was also seemingly a movement from financial stability policies to price stability policies (C. A. E. Goodhart, 2010). This movement would thereby indicate a move away from inflation, since the state's exploitation of money as a political tool would become useless. By anchoring the new private money around collateral, the system adopts the commodity-money logic, as private money creation would somehow be limited by the ability to provide safe collateral. The shadow banking system has proven this logic of natural constraint wrong, as the use of securitisation, collateral and repo allowed for the private credit money system to inflate as well. The innovation of securitisation allowed banks to loosen up credit policies, repack loans into CDOs that were subsequently given the credit rating AAA, and then sell them off into the capital market, which had a major impact on the speculative nature of this new financial system. With the emergence of private money, cheap and easy credit became available to the public. As such private money fulfilled the political right wing's goal of the "ownership society", where all classes of society would own a piece of the market,

either through stocks or as the sub-prime crisis is an example of; housing (Klein, 2008). This inflated the housing economy and created a bubble, as private money and shadow banking helped in supplying cheap credit. Thus this thesis argues, that what was perceived to be a housing crisis was really a manifestation of an underlying inflation (and crisis) of private money.

The size of the repo market, as well as the exact amount of private money created in the shadow banking system, is difficult to measure, since the system seems to go "under the radar" of conventional monetary aggregates (G. B. Gorton, 2010b). Therefore, the Federal Reserve (Fed), the US central bank, that usually measures the narrow money and broad money aggregates in the M1 and M2 aggregates, discontinued the counting of the broadest money created in the shadow banking system, M3. The M3 aggregate does include the cash equivalents that were created in the shadow banking system as response to the institutional cash pools, but as Poszar (2011) concludes, there is a conceptual problem with the scope of the US monetary aggregates, especially after the M3 aggregate was dropped(Poszar, 2011). The explanation for dropping it was that it was expensive, and that it did not provide any additional information than had already been obtained when measuring M2. Gorton (2010b) explains that even though the Fed had continued their M3 aggregates, this M3 would not have been suspicious as it counted only the M3 aggregate from official brokers and dealer, whereas the exact size of the repo market was much bigger and broader, thus pointing towards the too narrow scope of US monetary aggregates. Besides showing that money, created in the shadow banking system, exceeds the conventional aggregates as it become the broadest possible money supply, it also shows the nature of contemporary private money.

I argue that the conventional monetary aggregates could never have revealed the potentiality of private money, even though M3 had been measured. Contemporary private money inflation is not counted in the monetary aggregates but instead private money, as it is credit, is measured elsewhere in the economy. Private money was instead manifested in unsustainable levels of cheap credit enabled by cheap funding and credit risk transfer in the shadow banking system. As private money was created it was allocated to the economy as credit cards, mortgages etc. In the housing market it found an unseen potential for further expansion. Through the use of the securitisation, traditional banks and financial institutions such as Fannie Mae and Freddie Mac, two of the US biggest mortgage finance companies, were able transform the liquidity of illiquid loans, sell them off and issue new loans without carrying additional risk. So far, this thesis has used the securitisation of sub-prime mortgages to document the inherent instability of private money as sub-prime mortgages were securitised

and used for collateral for the funding of SPV activities. However, the sub-prime part of the credit securitisation only counts for around $1.7 trillion dollars of the estimated $20 trillion that was floating around in the shadow banking system(G. B. Gorton, 2010a). Still, sub-prime is a good entry to understand the underlying problematic of a private money system as the cheap credit money created here was mainly allocated to the real estate market. Thereby, the access to cheap credit allowed for mortgage dealers to relax underwriting standards, which ultimately opened up for the issuance of NINJA-loans (no-job-no-income-no-assets), sub-prime loans with little or no repayment plus other types of risky loans(Schiller, 2008). As risky loans were securitised they became liquid and saleable in the capital market, which freed up the capacity in banks to finance even more loans. At the same time, the private Credit Rating Agencies (CRA), that were put in charge of credit evaluation as part of the privatisation of financial regulation (see the next chapter), were paid fees by the banks, which loans they evaluated. This reveals that contemporary private money is constituted in a complex system of financial products, new financial actors and a privatised regulatory system (see next chapter) and therefore must be considered beyond the scope of the traditional state-money nexus.

In the following section this thesis argues, that if the Fed had measured private money (M3) correctly, and had it understood the new money nexus by levelling the weighting between the private money system and the traditional state-money nexus, a whole new story would have revealed itself. This story would be about how contemporary finance creates private money, and that this money transfer liquidity into new markets, such as the mortgage market, and that it will potentially inflate these markets and dry up liquidity, ending in a bubble burst.

Constructing a new state-market money nexus

The evolution of contemporary finance has indeed indicated an emerging official institutionalisation of private money. As the sub-prime housing market was squeezed and a series of defaults started showing some of the correlations to CDOs, it triggered a massive exodus from shadow bank funding market. By the time shadow bank funding (including repo transactions) was dried up, originating banks were forced to take some of their risky assets back onto their balance sheet and reverse securitisation (Crotty, 2009). Politicians and central bankers were forced to react quickly, as nobody was able to oversee the systemic correlations and consequences of a collapsing financial system, and measures were taken to dry up the credit crunch.

This bailout process included, amongst other measures, that central banks (at least in the US and the UK) would pay full face value for CDOs that had no or limited market value, as private liquidity was gone, or they (the governments) would overvalue collateral to be used in central bank repo (ibid.). *Bailout* as a broad term covers all the measures taken in the post-credit crunch, though these measures range from decreasing target rates, broadening accepted collateral in central bank repo, injection of liquidity, and purchase and nationalisation of troubled financial institutions and assets, a nationalisation that is estimated to have cost the general public around $78 billion (Crotty, 2009; G. B. Gorton, 2010b). It is however not so much the price of bailing out the private money system (the $78 billion however covers more than shadow banking activities!) as it is the manifestation of the power of private money, which is important to notice. By having central banks accepting and buying CDOs at full face value, it showed its public recognition of private money and the ability of shadow banking to create private money.

The recognition of private money in the slipstream of the financial crisis definitely calls for a rethinking of the state-money nexus. As the world economy has undergone a transformation of financialisation and both commercial and household debt levels have grown, future politicians needs to recognise a new state-market money nexus in order to understand the politics of private money. The new state-market money nexus has, until now, left the state in a role where it is under the control of the financial market. Herein, if private money fails, the state by default is required to unreflectively bailout the private money system. As bailing out the over-leveraged private money system is not cheap, it has left national economies at the verge of bankruptcy. Thereby we might argue that the state has lost it ability to control money.

Conclusion

This chapter examined and documented the contemporary private money creation enabled by the emergence of the shadow banking system. This unregulated corner of the financial system transformed money as it created near-money financial instruments. Among these instruments were repo contracts that in the unregulated shadow banking system worked as an alternative to deposits issued in the regulated traditional banking system. As such the shadow banking system is a banking system beyond the regulation and safety of the traditional state-money regulated banking system.

However the system's role in the crisis of 2010 reveals that the crisis was a private money crisis. Private money created in the shadow banking system helped in leveraging the

financial system to a degree where inflation was inevitable. This inflation was not seen in the conventional monetary aggregates, but instead in the housing market that was fuelled by the access of cheap credit created as a result of cheap bank funding via shadow banking. As such the crisis revealed the interconnection between the private money system (shadow banking) and the state-money system (the traditional banking system) as collateral in the repo market was suddenly being questioned and demand for haircuts was steeply increasing.

As the crisis broke out, states were fast to support the private money system as it bailed out failed financial institutions. Thus, this chapter concludes that contemporary finance manifested in the shadow banking practices, reshape the traditional state-money nexus as it leaves the state with limited control over private money. The interconnection between private money and state-money is however revealed in the development of the crisis, which calls for defining a state-market money nexus to capture the political dynamics of contemporary finance.

In the last chapter, this thesis analyse the state response to untamed contemporary finance more broadly by dissecting international financial regulation. Financial regulation, if understood as the public response to private finance, has already failed before even getting started, as the chapter unfolds how financial regulation has been privatised and thereby immune to needed substantial reform.

The attempt to Re-Regulate private money

This last chapter focuses on the regulatory response to the private money crisis rolled out in the previous chapter. By analysing the politics of financial regulation in general this chapter provides an end-analysis on whether the state has lost its ability to control money.

Financial regulation, normally perceived as a public response to the private banking industry's financial engineering, has had a key role in the evolution of contemporary finance. Money, at the core of finance, is characterised by a special state-market dichotomy. As such financial regulation traditionally is perceived to be the democratic, state-driven, response to forces of financial market, of this dichotomy. However in the age of globalised finance the regulatory response to the behaviour of private financial markets has not always been driven by the wish of the public. Especially when considering global finance, public policy has not always been an output of state action. Instead the process of international regulation is influenced by a diverse group of actors ranging from governments, NGO's, International Organisations, lobbyists and private financial firms. The influence of private actors is not unimportant as it shows that the mandate to regulate has been delegated to those that were supposed to be regulated. Thus it forces us to question whether the regulation of finance is actual to be perceived as the public response to private markets or whether it becomes a private response to private deficiencies.

The understanding of financial regulation as a blurred state response to private markets also raises questions of the political economy of regulation. The end-result of regulation can never be objective as it is a political result, contested and contingent, in a never-ending battle of possession over the powers of finance. Actors, no matter whether it is governments or banks, use the process of regulation to gain control over money. I argue that private actors have won this battle of regulatory possession as international regulation has undergone a transformation towards a private regulation. This transformation manifests itself in the adoption of liquidity and market risk principles in the Basel framework that has granted the regulatory powers to the regulated themselves by adopting private internal risk processes, the use of private Credit Rating Agencies (CRA) and principles of collateral self-regulation. All in all, if contemporary financial regulation is to be perceived as an indicator of the states renewed ability to control private money, the state seems dud. Substantive reforms seem far away as the encouragement of private regulators to regulate private money is non existing.

Why governments fail to govern money

Banks have traditionally been targeted for extensive regulation in capitalist societies in recognition of the very special role they play. Besides providing society with vital infrastructure such as an efficient payment systems and clearing systems banks are also seen as primary providers of liquidity(de Rezende, 2011). As such, banks supplied credit to the real economy and only secondary sought after reserves to back this lending. By creating money as credit and maintaining the payment system the banking industry is uniquely connected to the overall wellbeing of the economy and thereby of great interest to the state. Though most regulation of finance is made to retain the stability of the banking system, there is no pareto-optimal "amount" regulation (Kashyap, Berner, & Goodhart, 2011) . Stability always has a price and though stability is saving the public from losses in times of crisis, the cost of stabilising regulation becomes a cost to the public in good economic times. The rise of non-bank Money Market Mutual Funds (MMMF's) as a response to anti-competitive regulation within the traditional banking sector illustrates this point. Depositors felt increased regulatory costs, as they were not receiving any interest on their deposits, while traditional deposit banks felt the regulatory cost in profits circumventing the traditional banking sector. The response came from both the banking sector as well as from depositors as they both supported the disintermediation of credit and banking.

Financial regulation thus writes itself into the political economy of a financialised world economy as contemporary financial regulation has been favouring the banking sectors own models and suggestions on how to regulate finance. Thus it has kept the regulatory costs low under the slogan that increased costs would be allocated to the stakeholders of the bank and in recognition of the banks special societal role to the society as a whole. The alignment between the interests of the financial class and the middle class that was manifested in political right wings formulation of the "ownership society" continues the story of increased dependence on the performance of the financial sector. Thus the traditional alliance between the regulatory authority and the working class has been deteriorated and instead manifests the transforming and powerful role of finance. Modern finance theory supported the neo-liberal trends emerging in the late 1970's and has resulted in liberalisation and deregulation of finance. In the financialised world economy, as more and more people's wealth was attached to the performance of financial markets in terms of stock ownership, mortgages and interest rates, the state was constraint from intervening in financial markets. I argue that the deregulation of

finance is visible in the way that the former public domain of regulation has been delegated to private actors themselves. If one thinks that the public response to private finance goes through regulation of finance, this thesis disagrees as financial regulation has been privatised and aligned with the interest of finance. Thus, as the public is unable to substantially reform finance via regulation, one may argue that the state has ultimately lost the ability to control money.

The privatisation of state regulation

In order to reconstitute a stabile banking system, as finance was progressively deregulated in the 1980's the Bank of International Settlement (BIS) was approved as the organ to manage such reconstitution. BIS was originally constituted for the purpose servicing and supervising German reparation payments (Seabrooke, 2006143). After the collapse of the Bretton Woods system the BIS became a regulatory organ as it in 1988 formulated the first Basel Accord (Basel I) containing private financial standards (King & Sinclair, 2003) . The need for international financial standards and regulation was realised as the first real cross-border financial meltdown hit the world economy. By linking the German Herstatt-bank with the New York-based Franklin National Bank this crisis for the first time showed the need for an international regulatory organ(Lall, 2010). The 1988 accord was the first set of international standards for banking negotiated in the new BIS-setting. Though the Accord implements minimum capital requirements to stop the plague of credit default exposures in the international banking system the real negotiation process of the Basel Accord was driven by a political desire to even the playing field of international finance. Oatley and Nabor (1998) documented how the capital requirements were driven by US officials as an attempt to use financial regulation to redistribute wealth by levelling the competitive playing field of international finance, between US banks and German and Japanese banks (Oatley & Nabors, 1998) . As the public's interest had been aligned with the interest of the US banking system, politicians and regulators ensured that international financial regulation reflected the interests of the US banking system. Thus, it was the in the interest of the US banking system to pursue standards for capital requirements as they would level the international playing field of banking competition.

Though the first Basel Accord succeeded in making American banks more competitive it failed in providing international financial stability. Instead, the 1988 Basel I Accord's strict focus on the minimum capital requirements of actors operating within the traditional banking

sector encouraged the use of securitisation to reduce the impact of minimum capital requirements in traditional banks(de Rezende, 2011; Lall, 2009). As the capital requirements constrained the banks from keeping loans on their balance sheets, as it became expensive, while still enabling them (banks) to originate the loans, it encouraged banks to keep loans off balance sheet. Thereby the minimum capital requirements encouraged the innovation of the "originate-to-distribute" business model driven by the innovation of securitisation.

The real privatisation of financial regulation was written into the Basel II accord, acting as an amendment to the original accord. The amendments to the 1988 Accord to incorporate market risk signalled a move towards a new private regulatory regime. As such the BIS wrote:

"As from the end of 1997, or earlier if their supervisory authority so prescribes, banks will be required to measure and apply capital charges in respect of their market risks in addition to their credit risks. Market risk is defined as the risk of losses in on and off-balance- sheet positions arising from movements in market prices. "(Bank of International Settlement, 1996)

Basel II, thereby, not only recognised an efficient financial market able to price financial assets correctly. As all banks were now forced to use private risk models to calculate their market risk exposure it favoured the big and sophisticated financial institutions with the capacity to calculate market risk efficiently(Lall, 2009). This move reveals a regulatory appreciation of the modern finance theory's alleged ability to create precise models. Banks that did not have sufficient modelling resources to engage in this Advanced Internal Rating (A-IRB) were forced to adopt a default model, which was significantly more expensive to use than well-functioning models. As such Basel II did not substantially reform the international financial regulation. Basel I was recognised for being heavily influenced by domestic US banking interests to level competition in international banking, in favour of US banks. So was the Basel II accord heavily influenced by big banks, with the ability to build financial models, which resulted in the Basel II accord being used as yet another competitive tool.

Furthermore, in Basel II, by incorporating the use of private market risk, and by allowing banks to use their own models to calculate this risk, international financial regulation was delegated to those that were subjects to regulation. As such, the former public domain of financial regulation was privatised and delegated to private financial actors as risk and capital buffers were calculated in private financial models. Prior, the credit risk framework of Basel I

would use quantitative capital requirements to force banks robust and solvent, but the amendments in Basel II were instead focused on the qualitative evaluation of risk as capital requirements now depended on the quality of the exposures on balance sheet. As a result of this privatisation of regulation the new state-market money nexus revealed itself.

The regulation of finance had traditionally been driven by a desire to maintain financial stability, in order to avoid banking crisis and thereby social costs to society. This however was partly abolished with the privatisation of regulation as the interest of financial regulation was being aligned with that of those being regulated. Instead of being focused on maintaining financial stability for the good of the public, private financial regulation was used as a competitive tool for banks to level the competitive playing field (Oatley & Nabors, 1998) .

The alignment of the interest of the regulated and the regulators was aligned even before the amendment was made. Lall (2009) documents how the Basel Committee responsible for the initiation of the Basel regulation, was heavily influenced by lobbying interests of the financial industry to impose certain regulations and leave others out. Especially the adoption of the internal risk weighting that was implemented, as part of the move towards market risk, discussed above, was a result of heavy lobbying. The regulatory capture that stems from lobbying activities is not insignificant in analysing international financial regulation. In good times banks are able to allocate lots of resources to both lobbying activities, recruiting and sophisticated financial models, which makes them very powerful in the regulatory process. The privatisation of regulation makes it difficult for the public to regulate finance. Instead of aiming at overall financial stability, tendencies within financial regulation, such as the Basel framework, instead suggest that regulation has become yet another place to compete for financial firms. Those with most political power, in terms of having their risk models adopted, win in the competition with the rest of the financial actors, and the state!

The privatisation of regulation is also manifested in the way that Credit Rating Agencies (CRAs) are being put at the centre of attention to rate financial assets. CRAs are private institutions that analyse the creditworthiness of financial actors as well as products. As such the implementation of CRA-standards into Basel II is the recognition of the disintermediation of credit. As the banking business model moved to the "originate-to-distribute" version, it was important for financial institutions to have a central information gathering about creditworthiness, as individual collection of data would be too expensive (King & Sinclair, 2003) . As documented in the previous chapter, the use of CRAs to rate mezzanines of bonds was also a driver for the attractiveness of the shadow banking system, to institutional investors. CRAs become a global monitor of financial markets and an argument for further

deregulation in the name of orthodox financial modelling. If CRAs were reliable, they could evaluate products and these could be priced properly and allocated to the right actors, it was said. The problem however with the liberalisation of regulation, in terms of CRA use, was that CRA became a business in itself. Today firms like Moody's, Standard and Poor's and Fitch compete on rating. Thus financial institution, especially those engaged in shadow banking and securitisation, are able to "shop" around in order to get the highest rating on their products. As CRAs compete on a global level, and because fees pay them from valuations, there is a slight risk that CRAs instead of stabilising the global financial system instead leads to even more fragility. As CRA power increase it become clear that the political construction of international financial regulation is flawed in terms of stabilising the relationship between private and public. The current sovereign debt crisis has manifested the private domination of finance and regulation as CRA evaluations, such as downgrades of sovereign bonds, can potentially force nation-states to initiate reform- and austerity programmes, to look good in the beauty contest of international finance. The policies of austerity are in favour of the financial system as it puts a straightjacket unto the nation-state, forcing them to cut wages and keep inflation and public spending under control. As such, CRAs are writing themselves into the political economy of financialisation by benefitting the financial class at the expense of the public and the working class, as described in chapter two.

Though the shadow banking system is unregulated, in terms of conventional regulation of capital requirements etc. it still did work until its collapse. As I have shown above, the use of inherently instable commodity backing, in terms of collateral, resulted in the run in the repo market, where haircuts were progressively increased to make collateral more safe. The history of the use of collateral in banking is long, but I argue that modern stabile collateral has only been in place sine the FDIC deposit insurance, described in chapter two. As such, it was the states explicit guarantee of deposits that laid the ground for modern collateral backed banking. As the shadow banking system is not regulated and is not included in the FDIC-programme, why would they then use collateral? As Annelise Riles (2011) argues:

> *"Collateral, at the nexus of the law of property and contract, is the paradigmatic private regulatory device, and yet it is also the subject of numerous forms of state regulation. Hence it provides a unique vantage point on the tug-of-wars over private versus public governance of the markets."* (Riles, 2011)

As financial transactions in the shadow banking system relied on over-the-counter (OTC) repo contracts, that circumvented central clearing-houses, such as traditional exchanges, it had to rely on other mechanisms. Collateral here is the manifestation of private regulation, as it becomes a liberalized self-regulating mechanism that regulates markets through using property laws. I argue that the use of unquestioned use of collateral and the way haircuts were implemented as a market mechanism manifests the acceptance of self-regulation in financial markets.

Regulating private money

The privatisation of financial regulation, documented above, shows a political potential to threaten the democracy of money. Following chapter two, the historical lineages of financial regulation and innovation show that ownership over money has been characterised between a shifting balance between private and public. As such, making money public requires substantial reforms.

These substantial reforms are unlikely to happen however, as I will argue for below. The amendments made to Basel I, where highly influenced by private financial actors, such as the International Swaps and Derivatives Association (ISDA) (Lall, 2009) , which represents over 860 private non-state actors with an interest in the derivatives market. Basel II, as a result hereof, did emphasise the difference between the banking book and the trading book of the bank, where the latter represented assets that were being traded and sold off into the market. As such assets on the trading book of the bank, were made eligible for lower capital requirements as a result of the heavy lobbyism imposed by ISDA (ibid.). The rationale behind the less capital required for the trading book enhances the overall observation, as private financial institutions infiltrates the regulatory process and adopts neo-classical economical ideas, such as perfected liquid markets. However the sub-prime crisis revealed that trading books were just as risky as banking books, as seemingly liquid instruments, such as securitised CDOs were suddenly illiquid and forced onto the trading book for long time. At the same time, when the Basel process turned it focus towards market risk, which had become a growing problem since capital controls and interest rate restrictions had been abolished and banks were facing increased risk of interest rate fluctuations, it again ended up relying on private risk management tools, such as Value at Risk (VaR) models. These models though being complex, did not incorporate market risk effectively and proved insufficient to cope with sub-prime related market risk. This thesis argues that this adaptation of financial model in regulation all

rely on the illusion of liquidity (Nesvetailova, 2008) discussed in chapter one. Here an unrealistic belief in the innovation of finance, such as in new complex risk models to calculate market risk, helped in fuelling the synthetic liquidity boom. As the boom went on all loans were possibly liquid. As such, the argument for lowering the capital requirements on trading book assets seemed valid, but as it relied on the belief in financial modelling that were used competitively within the banking industry, the trading book requirements are another sign of privatisation of financial regulation.

Though the shadow banking system has so far remained untouched by regulation, the crisis has indicated a shift in international financial regulation. As I accounted for above, the Basel I and Basel II proposals were all made up in regulatory forums impacted by private non-government actors. This resulted in Basel I being used to level the international playing field (Oatley & Nabors, 1998) of competition, and Basel II being exploited to favours major banks in competition with smaller ones (Seabrooke, 2006). Basel III however indicates that the market is retreating from the policy process (Véron, 2012) as the process was initiated by the European Commission under supervision of the gathering of the 20 biggest economies in the world (G-20). If it is the case that market forces are retreating from the regulatory process, this might indicate that the state has the ability to regain the political control over money.

Whether financial reform will happen through conventional channels still remains in question. The Basel III accord seems to have come up with very few solutions to the regulation of finance. As Vestergaard (2012) argues, the proposed raise of Tier 1 capital in banks from 8.0% to 8.5% has no effect since the average level of tier 1 capital in US banks is around 10% (Vestergaard, 2012) . Basically there are two major problems by re-regulating the capital requirement, even though most regulators and central bankers (such as Timothy Geitner from the US Treasury) make the point that requiring capital is the only way to stabilise the banking system. If the European Central Bank (ECB) was to raise the capital requirement for banks in a time of recession or slow growth, they would most likely obtain this capital by holding back on lending. This would further slow down the economy and thereby clearly show the trade off between short-term growth strategies and long-term stabile reform programmes. The idea is that banks will actually see capital requirements as a regulatory tax and impose it on customers in terms of lending timidity. Furthermore regulating on capital requirement was tried in the Basel I accord. As such it encouraged banks to somehow perform disintermediation of credit, which was driven by securitisation and shadow banking. Ultimately this would lead to a more fragile entirety of the financial system.

Almost four years after the Lehman Brothers collapsed and initiated the global financial meltdown there has only been preliminary steps towards regulating private money. The EU Commission has in April 2012 initiated a hearing process and published a "green paper" that identifies shadow banking. Without coming up with concrete suggestions, as it is a very early working paper, the paper does seem to correctly identify the main concerning point of shadow banking, namely securitisation, repo and SPV (European Commission, 2012) . As the EU green paper is a very "green" proposal this thesis will not go into the details, as these might be out-dated in a few months when the real proposal gets out.

The fact that the regulatory process of Basel III has been without real influence of industrial interests may make the proposal more democratic legitimate. However, financial regulation is inherently associated with enormous complexities and mathematical models. As such by leaving the regulated out of the regulation process, regulators risk the lack of competencies and "know-how" of the banking business. This is a topic, only lightly identified in academic papers, however. An example is the Basel III suggested risk retention to stamp out leveraged use of securitisation. Risk retention orders originating banks to hold more of their risk on balance sheet in securitisation. As such, it moves in the complete opposite direction of Basel I, that rested on the neo-classical finance belief that securitisation could pass on risk to investors willing to bear the risk. The populism in financial regulation that is driven by the desire of the public may however end up harming society as a whole. Risk retention may place enormous risk on the balance sheet of regulated banks and make them vulnerable to shocks, and at the same time demolish the efficiency of finance. As states and its citizens were forced to bailout failed financial institutions after the credit crunch it was realised how high the social costs of banking failure are. This leads back to the argument presented at the beginning of this chapter as financial regulation always has costs. If there is no regulation the cost comes when the financial system fails and needs to be bailed out. If the system is regulated then it may demolish the efficient nature of finance and the cost is allocated to customers via costly credit.

Conclusion

This chapter has examined how regulation of finance has been perceived and whether it is able to control private money. By dissecting the regulatory processes this chapter revealed the underlying politics of international financial regulation.

The process of regulating finance is often perceived as a public limitation of the private market. This chapter however argues that financial regulation has a certain political nature built

into that transform regulation into a competitive battlefield instead of a forum for reform. The Basel process is a good example of this. The first accord, Basel I, was used to level the playing field between American banks and other banks by imposing capital requirements on all banks. The Basel II accord did the same by imposing the use of complex modelling into risk calculations and thereby favoured big banks. As such this chapter concludes that the process of international regulation has been privatised to an extend that does not provide high hopes for substantial reform of the private money system that played a major role in melting down the world economy. As regulation is being privatised the public response remains dumb as financial firms compete in the name of regulation.

Conclusion

This thesis has unfolded the development of private money creation in contemporary finance in an attempt to understand how this private money creation, manifested in the evolution of shadow banking, has impacted on the state-money nexus. By identifying private money creation in shadow banking activities as well as placing the shadow banking system in the context of the financial crisis in 2007-2009 this thesis argues that this crisis was of a very fundamental nature, in the sense that it was a crisis of money.

By dissecting the political and historical construction of a global financial system based on the creation of private money this thesis writes itself into the core of political economy. The run in the repo market was not just a financial one time event of failure, but instead a historical and political culmination of the failure of private money.

In chapter one, contradiction between the theory of state-money and the theory of market-based money was unfolded to show that neither of these conventions apply to contemporary money as it is characterised by being a mix of both. The inherent instability of the orthodox private money however revealed itself in the collapse on collateral and liquidity. The state, thus, still guarantees liquidity of last resort. As such there is a need for a reconstruction of a theoretical state-market money nexus that incorporate both private and public liquidity and its interrelation.

In chapter two, the thesis dissected the political and historical evolution of contemporary finance and documented how the state versus market contradiction has played out in history. Private money, thus, evolve in the interplay between public financial regulation and private financial innovation. I further argued that the evolution of private money has been enhanced in the age of financial liberalisation and financialisation, which writes private money into the political economy of financialisation.

In chapter three, the shadow banking system was dissected and proved to be private money creating system and a serious challenge to the conventional state-money nexus. By enabling regulatory arbitrage as well as maturity transformation without the backstop of the nation-state, the private money system is a possible threat to financial stability as it potentially creates infinite leveraged private credit money. This credit money inflates, but where traditional state-money is counted in monetary aggregates, the shadow bank money is manifested in asset inflation. The public response to the failure of private money also not only indicates that the private and public money are interconnected, but also indicate the

transformational ability that contemporary finance has on underlying incentives, rationales and politics.

In the last chapter, the thesis analysed and the public response to private money creation, in terms of financial regulation. However, the analysis showed that we might perceive, as a "public" response to the free and private markets is not always public, as financial companies have lobbied the regulatory process and privatised regulation. As such, financial regulation has been used for competitive purposes rather than stabilising purposes, which inevitable challenges the states control over money.

Through the use of a critical realist approach that allowed for multiple methods and levels of abstraction, this thesis has made the case that the evolution of contemporary finance has been characterised by a transformation towards private money and private regulation. Private money, created in the shadow banking was never stabile, but relied on the mercy of the theoretical orthodoxy of the perfected financial markets ability to create liquidity and stability through prices. As the value of collateral was suddenly being questioned, the private money system fell apart, and normally that would have meant state-money dominance. However, the political transformation of private money that spread roots all the way backs into theory and to the first circumvention of the anti-competitive legislation in US banking history. The contemporary state-money nexus has been transformed into a relationship where states are dependent on the infrastructure of finance to provide cheap credit for maintaining purchasing power and thereby social stability. In case this private infrastructure is threatened the state fights the fire to maintain the stability. As such it enhances the private money system that will keep on in threatening the state-money nexus and ultimately discipline the state to follow the incentives of the financial market, as it is already partly the case today. For the state to have a chance to regain its central position and democratise finance, it will require substantial reforms not only in finance itself but also in the global political sphere, as the ones that should mainly be left outside the door have infiltrated international regulation. If these substantial reforms fail, the crisis in 2007-2009 may be perceived in the future, to be the manifestation of the state losing it's ability to control money.

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