Shadow Banking and Offshore Finance: the role of the Netherlands

Introduction

1.1. AIM OF THE REPORT

The financial crisis that emerged in 2007 with the bankruptcy of the hedge fund of Bear Stearns and developed into a full blown systemic crisis, with the collapse of Lehman Brothers in 2008, introduced the hidden world of *haute finance* to a wider public. In the public debate that followed these events, securitization, the bundling of non-liquid loans, mostly mortgages, into tradable assets, like bonds, moved to the forefront. The collateral to these securitized assets turned sour as an increasing share of home owners was unable to service their debt. The assets, mostly on the books of banks and institutional investors became "toxic", with an unknown risk profile as markets froze. In the academic world this banking model was coined as "originate and distribute", referring to banks that made loans (originate) and bundled these into tradable assets to be sold (distribute) to end-investors like other banks and pension funds. This banking model involved the use of a special purpose entity (SPE), a separate legal vehicle that acted as intermediary in the securitization process and kept the risks, assets and liabilities out of the balance sheet of the parent bank (loan warehousing).

With amazement the wider public took notice of this complex world of finance where credit was intermediated in unconventional ways, outside the regular banking system. This universe of SPE's, linking home owners to pension funds, however, was only the tip of the iceberg.

The new catch-all phrase to describe, define and delimit non-conventional finance is "Shadow Banking". The term was coined in 2007 by Paul McCully from PIMCO, at the yearly meeting of the US Federal Reserve in Jackson Hole. Since then, the term shadow banking was used in a rising number of articles in the Financial Times, 33 in 2007, 100 in 2008 and 222 in 2011. Also, from 2010 onwards, Shadow Banking, became a focal point in the analysis of the crisis ridden financial landscape by the US Fed, the IMF, the EU commission and the FSB, reflected in a growing literature and amount of policy documents. The EU commission issued a green paper in early 2011, recognizing the need to better understand this under regulated, but sizeable part of modern finance that performs systemically important functions.

Shadow Banking is defined as: 'financial intermediation by non-banks', and involves a broad range of actors, activities, products and markets that operate and interact from across different jurisdictions. It includes, repo markets, hedge funds, money market funds (MMF), securitization vehicles and other special purpose entities (SPE's), to name but a few. An essential role is played by the largest investment banks, connecting the different shadow bank entities through their role as dealer, broker and underwriter. This makes these banks pivotal nodes in the shadow banking system.

In essence shadow banking is largely a non-regulated transnational environment where the supply and demand for financial services and products of under-regulated entities is matched, priced, executed and institutionalized. While particular segments, markets, techniques and actors may be regulated in a particular national jurisdiction, the shadow banking *system*, the aggregate level is not. The recent financial crisis showed the dangers of national regulators focusing exclusively on individual actors, like banks, instead of broader financial structures in which they are embedded and the related systemic risk. This omission in the mode of regulation has been widely recognized since 2008 and has led to the current regulatory framework of "macro prudential regulation". This turn in the regulation of finance, towards "the whole" instead of "the parts", is important to understand why the attention of policy makers has turned to shadow banking.

The problems associated with shadow banking can broadly be divided into two areas. First, regulatory arbitrage. This unregulated financial environment, is contrasted by the conventional domain of banking and capital markets, which is regulated. These parallel domains, one regulated and one unregulated, hamper attempts by national regulators to re-regulate finance in the post crisis environment. Instead, regulating conventional capital markets and banks may lead to ever larger flows into the shadow bank network, i.e. creating a 'waterbed effect'. Therefore the central issue of shadow banking, its ability to enable regulatory and tax arbitrage, is blocking attempts to bring order in global financial markets and to rebalance the "financial economy" and the "real economy".

The second problematic area of shadow banking is the host of systemic risks it creates, magnifies and obscures. These systemic risks will be discussed below. In essence, shadow banking, recreates the classical problems of unregulated financial markets that existed in developed economies up until central banks and governments started to act as back stop, stopping the spread of wildfires, by providing transparency, rules and guarantees. In the absence of these basic features of public intervention, shadow banks, generate pro-cyclical behavior, enlarge information asymmetries, and allow for uncontrolled credit creation.

This study will focus on both the macro issues, discussed above, concerning the systemic risks posed by shadow banking, as well as its micro fundaments. It will show how the global network of shadow banking entities is rooted in offshore financial centers (OFC's) such as the Netherlands, Ireland and Luxembourg. In particular this study will discuss how and why, the Netherlands is one of the central nodes in the global shadow banking system. In order to illustrate the micro foundations, this study includes a case study of the Lehman brothers operation in Amsterdam just before it collapsed. The aim of this report is to inform civil society about the critical issues of shadow banking and to press all stakeholders to push for a broad reform agenda that confronts the current "escape route" of financial intermediaries.

Critical issues of Shadow Banking

1.2. WHAT IS SHADOW BANKING?

The general description of shadow banking by the FSB (2011, 2012) is a network of non-bank entities that intermediate credit in an unregulated market environment and outside conventional banking structures, that involves (A) leverage and (B) maturity transformation. Conventional banks are engaged in maturity transformation by taking deposits from households and corporations and extending credit to households, corporations and the state. Long term assets (such as mortgages) are financed with short term liabilities (such as deposits) within the bank. Shadow banking, essentially, does the same. It transforms short term liabilities into long term assets. The difference being that it operates outside a bank and involves a wide range of different actors in an uncoordinated and in transparent manner. The short term liabilities, the functional equivalents of deposits in the banking system, are primarily money market funds (MMF's), hedge funds and repo transactions (FSB 2011; FED NY 2010). The long term assets are typically a variety of structured asset backed paper owned by structured investment vehicles, other special purpose entities and conduit structures (IMF 2011triffin;Alain UK). What we see is that these shadow banking entities combined, create a chain, connecting short term funds with to long term assets, and hence perform the task of maturity transformation and create leverage, just like regular banks.

The credit that was intermediated through this chain of shadow banking entities was an estimated 20 trillion in the US, in 2008 compared to 12 trillion in the conventional banking system (NY FED 2010). A study by the NY FED shows how the liablities of shadow banking entities overtook the liabilities of conventional banking in the mid 1990s. As the financial crisis progressed the liabilities of shadow banking entities in the US declined to 16 trillion in 2010. The FSB quantifed the world total liabilities of shadow banking at 60 trillion in 2008, up from 27 trillion in 2002 (FSB 2011). While this exercise in trying to quantify the size of the market of shadow banking may look impressive, it is important to understand that these are prelimenary studies and little is yet known about the nature and interconnectedness of different entities, the methods to disentangle the capital flows, and double counting of assets and liabilities.

One particular set of interconnections that is critical to the policy debates is the relation between shadow banking and regular banks. As we witnessed with the collapse of the subprime market in 2007, the complex interconnections of modern finance, created different types of infections, freezing markets, previously understood to operate at large distance from structured finance. Instead of conceptualizing these two banking domains as separate, Adair Turner, chairman of the financial services authority in the UK, argues that "we need to understand shadow banking not as something parallel to and separate from the core banking system, but deeply intertwined with it."

> *"Shadow banking could, at least theoretically, exist as a standalone system parallel to but quite separate from banking. But in practice it didn't; rather the shadow banking system which actually developed involved complex interconnections between the banking system and shadow banks"*

The FSB and the US FED have tried to map the different interconnections that exist among shadow banking entities and regular banks. Picture ** below is a simplification of this mapping exercise that shows the different actors and activities involved. The result of this, rudimentary mapping exercise, is that it shows that we are looking at a network of actors that offers a variety of entry points and types of connection instead of a chain with a clear beginning and end. These different actors have their specific motives to be involved in this marketplace. Below we will discuss 6 actors in order to get more familiar with the different shadow banking entities, their motives

Actors

- Actor 1: MMF
    - bridging short term long term maturity
    - acting as equivalent as deposits in regular banking
- Actor 2: SPV securitization
    - Creating liquid from illiquid assets
    - Providing long term investmenst
- Actor 3: repo market
- Actor 4: pension fund
    - Offering long term assets to recyle
- Actor 5: hedge fund
    - Demand for leverage
- Actor 6: role of investment banks
    - Acting as clearinghouse and CCP for transcations

1.3. Critical issue of shadow banking

As was recognized the G-20 in Seoul in 2010 and Cannes in 2011, and by the EU commission in 2012, shadow banking, remains a breeding ground for financial stability issues. The basis for this instability can be separated in three separate clusters. First the market dynamic of shadow banking is prone for procyclic behavior, is nontransparent and inherently instable. Second, the absence of a backstop by a public authority, a lender of last resort, creates the type of market problems that characterized the US financial system up until the federal reserve was setup after the 'panic of 1907'. Third, the transnational nature of shadow banking, and its embeddedness in a web of offshore financial centers and tax haven makes it a showcase for regulatory arbitrage, which hampers attempts to regulate this market segment.

*1.3.1. **Nature of instability***

Shadow banking proved to be unstable after the collapse of Lehman Brothers. Different types markets froze, turned illiquid and collapsed, pointing to complex interconnections between different domains of modern financial markets. According to the FSB (2012) the lack of transparency in separate segments of shadow banking and on their interconnections remains a prime obstacle for regulators to comprehend and police the market. This lack of transparency is found at the macro level and the micro level. In particular the cross border and the bilateral nature of transactions creates an opaque market environment, where existing statistics, methods and techniques provide insufficient oversight to national regulators (FSB 2012).

Next to problems of transparency is the issue of procyclicality. As shadow banking connects across separated markets a change in the valuation of collateral in one market influences another. As particular long term assets experience a boom, like mortgage backed securities (MBS) did up until 2007, their use in the hypothecation process (repo markets and MMF) also increases. Once the market for (ABS) collapsed so did its use as collateral in hypothecation. This shows that the change in the valuation of collateral is enhanced in good times and reduced in bad times and hence means that the market operates procyclical, i.e. enforces booms and busts (FSB 2012).

- Short term credit – enforces procyclical behavior and contributes to overall instability

    "Shadow banking activities are exposed to similar financial risks as banks, without being subject to comparable constraints imposed by banking regulation and supervision. For example, certain shadow banking activities are financed by short-term funding, which is prone to risks of sudden and massive withdrawals of funds by clients." (EU commission 2012)

- problem of high leverage

> *"High leverage can increase the fragility of the financial sector and be a source of systemic risk. Shadow banking activities can be highly leveraged with collateral funding being churned several times, without being subject to the limits imposed by regulation and supervision."* (EU commission 2012)

*1.3.2. **Bank runs and the absence of a public backstop***

- Shadow banking entities do not have access to the central bank acting as lender of last resort.
- This absence of a public backstop means confidence can evaporate
- This means that modern finance is back to pre 1907, i.e. the panic of 1907 after which the US fed was setup to act as public backstop
- This also increases the public costs as regulated banks are affected by a crisis in the shadow banking circuit, as we saw with the recent financial crisis

*1.3.3. **Embeddedness in offshore financial centers and tax havens***

Next to these issues of financial instability, shadow banking thrives in offshore financial centers and enables the conditions to avoid taxes (Palan et al 2011). Shadow banking consists of a variety of actors, discussed above, that often operate across different national jurisdictions. This geography matters for ability of different entities to create complex transnational interconnections. This in turn enables regulatory arbitrage. While regulation remains predominantly confined to the national scale, the network of shadow bank entities often operates across borders on a global scale. The growing transnational nature of corporations from the 1980s onwards was identified by the IMF as a "fiscal termite", i.e. a source for tax avoidance (IMF 2000). The growing intra-firm trade and capital flows enabled TNC's to shift an increasing share of profits and taxable income to offshore financial centers and tax havens (OECD 2013).

The IMF identified innovative modes of financial intermediation, in particular derivatives and hedge funds to be another type of "fiscal termite", eroding the capacity of nation states to tax corporations (IMF 2000). The case of Lehman Brothers, discussed below, clearly shows how the global architecture of this bank was largely tax driven. This spatial organization of different legal entities operating from across different jurisdictions enabled the optimal tax planning and regulatory arbitrage. This aspect of shadow banking, which is not that different from non-financial TNC's, creates an extra dimension to the complexity of shadow banking. This complexity slows down regulators in the different national jurisdictions. It obstructs the quick and clear-cut separation of entities, responsibilities, assets and liabilities that is required in a crisis situation. Moreover it can lead to obscured leverage and counter party risk.

The Netherlands is known to be a pivotal offshore financial center for capital flows related to activities of TNC's, banks and non-bank financial institutions (DNB 2012; EU 2012; FSB 2012). Other financial centers that perform a similar task of pass-through jurisdiction are Ireland and Luxembourg. An IMF study[1], "in search of a definition for offshore financial centers", concluded (IMF 2007):

> *"As indicated above, the current definitions of OFCs do not adequately capture the intrinsic feature of the OFC phenomenon, which is its raison d'être—the provision of financial services to nonresidents, namely, exports of financial services. Although one could argue that any given economy, to some extent, provides financial services, the peculiarity of OFCs is that they have specialized in the supply of financial services on a scale far exceeding the needs and the size of their economies. The following definition attempts to capture that feature so characteristic of OFCs.*
>
> *An OFC is a country or jurisdiction that provides* ***financial services*** *to nonresidents on a scale that is incommensurate with the size and the financing of its domestic economy."*

Another similar definition of an OFC is provided by Liz Dixon of the Bank of England (2001):

> *"An OFC may be defined as a jurisdiction in which transactions with non-residents far outweigh transactions related to the domestic economy"*

Furthermore Dixon states that the nature of OFC's as pass-through jurisdiction means that:

1 Zoromé (2007)

“data on OFC-intermediated business might provide an early indication of interesting developments in global finance. Because financial intermediation undertaken by entities based in many OFC’s is almost entirely ‘entrepot’, the pattern of financial flows through them may occasionally give a clearer reading of developments than data on flows through other international financial centers, such as London and New York, where activity related to the domestic economy is greater.”

Central to the way these OFC’s operate are the wide range of pass-through entities or Special Purpose Entities (SPE’s) domiciled in their jurisdiction. These entities, ranging from wholly owned subsidiaries to complex and opaque ownership structures mostly operate as “brass plate” firm, or “letter-box” company, with no economic activity in the jurisdiction in which they are domiciled, but generate large capital flows. The different subsidiaries of Lehman Brothers in the EU, further elaborated in chapter 4 below, serve as example of how unmanned legal entities, SPE’s, with no economic substance, were able to issue complex and opaque structured notes.

This points to the need to address more carefully the relation between the different types of pass through entities, the underlying economy of specialized service providers, lawyers, fiduciary services, accountants and trusts, and why these entities are geographically concentrated, in a small number of offshore centers like Luxembourg, the Netherlands and Ireland. This serves to understand how the network of shadow bank entities is able to operate effectively across borders, circumventing regulation and taxes. Before having a closer look at Lehman Brothers this study will focus on the Netherlands to provide context to the debate on how offshore finance and shadow banking relate.

The Netherlands as a hub in global shadow banking

3.1 The Dutch offshore financial center in international context

The Netherlands is an offshore financial center, according to the definition, quoted above, that stresses the size of the export of financial services in relation to the domestic economy. By different measures the Netherlands is a large financial entrepot, with large inward and outward flows in relation to its domestic economy. This section provides an overview of different capital flows through which we can contextualize the importance of the Netherlands as OFC. If we look at IMF data on foreign portfolio equity investment (FPEI), in table 1 below, the Netherlands, together with other OFC's, like the Cayman Islands, Luxembourg and Ireland features on the list of ten largest jurisdictions for flows in 2011. The Netherlands together with Luxembourg, however, are the only two OFC's that feature in the top ten in both liabilities and assets.

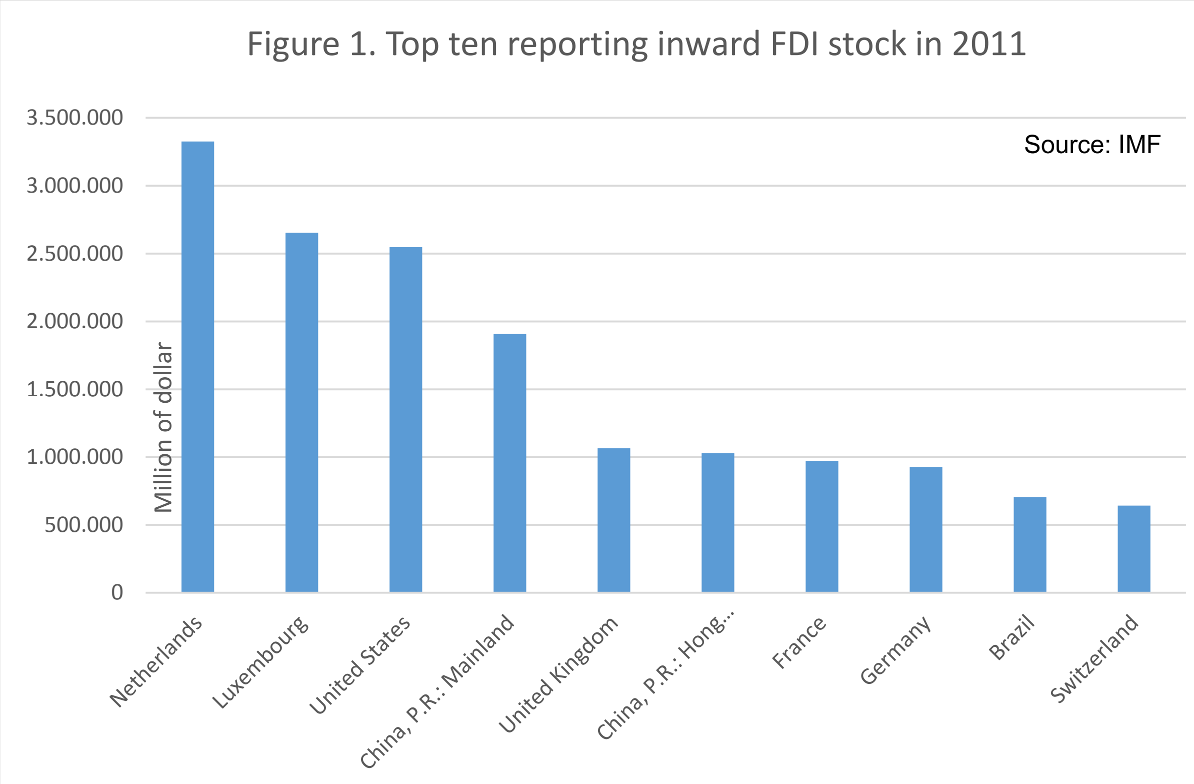
Table 1. Largest ten jurisdictions by holdings and liabilities of FPEI in billion dollar years end of 2011.

	holdings		Liabilities
United States	**6,815,650**	United States	**8,274,515**
Japan	**3,375,244**	United Kingdom	**3,423,282**
United Kingdom	**3,219,158**	Germany	**2,807,698**
Luxembourg	**2,670,504**	France	**2,678,837**
Germany	**2,380,350**	Cayman Islands	**1,907,790**
France	**2,366,447**	Luxembourg	**1,833,818**
Ireland	**1,854,040**	Netherlands	**1,833,668**
Netherlands	**1,430,193**	Japan	**1,416,636**
Switzerland	**1,084,613**	Italy	**1,176,617**
Italy	**1,030,634**	Canada	**1,122,323**

Source: http://cpis.imf.org

If we look at the largest jurisdictions in terms of the inward stock of FDI in 2011, portrayed in figure 1 below, we see that the Netherlands is the largest recipient. Luxembourg is the second largest. Other prominent offshore financial centers in the group of ten largest recipients are Hong Kong and Switzerland. The largest economies in terms of the outflow stock of FDI in 2011 where the US ($2.8 trillion), followed by the Netherlands ($2.3 trillion), The UK ($ 2.2

trillion) and Luxembourg ($1.8 trillion) (IMF data).[2] Again we see that the Netherlands and Luxembourg feature prominently in both the inward and outward stock of FDI.



Next to exceptionally large volumes of FDI in relation to its national economy, the other feature of the Netherlands, and other OFC's, is that these flows are typically generated by special purpose entities (SPE's) or other 'brass plate' pass-through vehicles with no or little economic substance. The purpose of these entities is to provide a formal domicile in a jurisdiction and primarily act as conduit structure to re-route capital for tax planning purposes. According to the OECD: "*In general terms SPE's are entities with no or few employees, little or no physical presence in the host economy, whose assets and liabilities represent investments in or from other countries, and whose core business consists of group financing or holding activities*" OECD 2013.

The bureau of economic analysis (BEA) of the US department of commerce provides data for investments in holdings. This is a proxy for investment flows into SPE's. This data shows the bilateral FDI flows from the point of view of the US economy. The dominance of OFC's in outbound FDI flows is evident. Figure 2 below shows the largest 13 jurisdictions in

[2] http://elibrary-data.imf.org/Report.aspx?Report=11666810

terms of outward US FDI. This clearly shows that FDI towards OFC's, of which the Netherlands was the largest recipient 2011, receive a relative large share of FDI in holdings. In contrast, figure 2 shows that other economies, like the UK, Canada, Germany and France, do not receive a large share of US FDI in holdings. This is an important indicator for the degree in which the receiving jurisdiction is merely acting as conduit, re-routing capital flows.

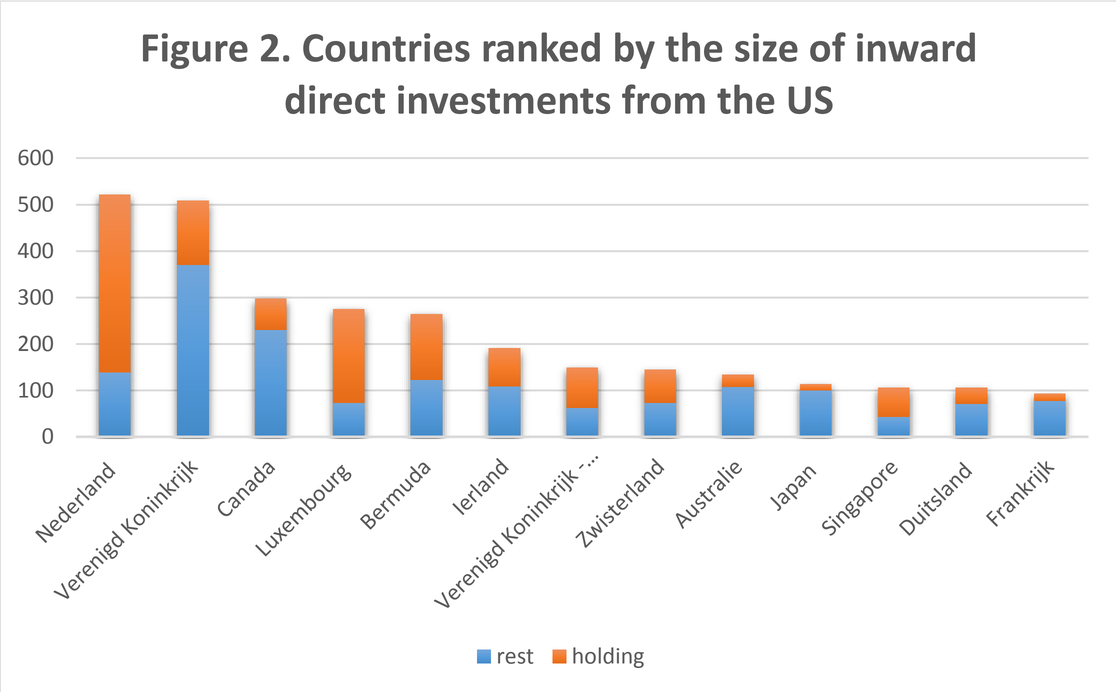
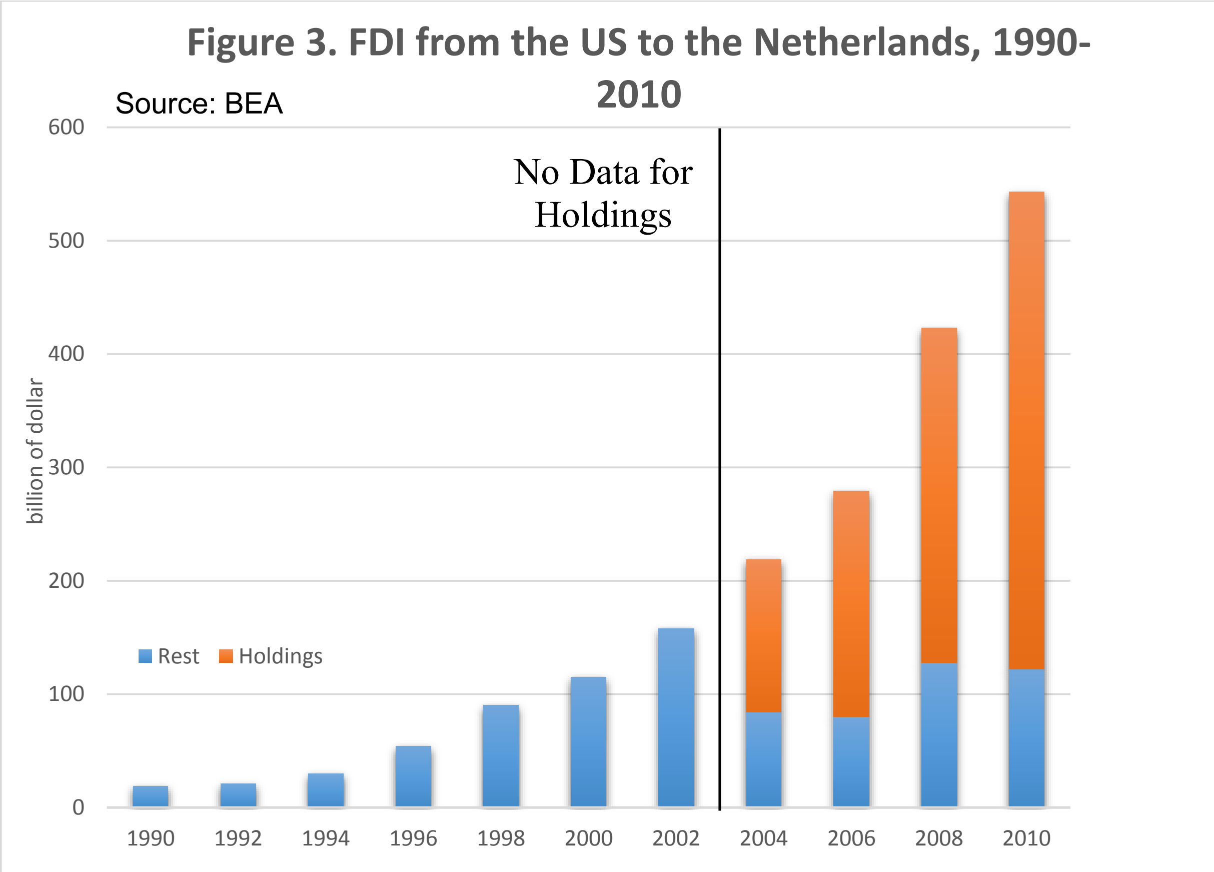
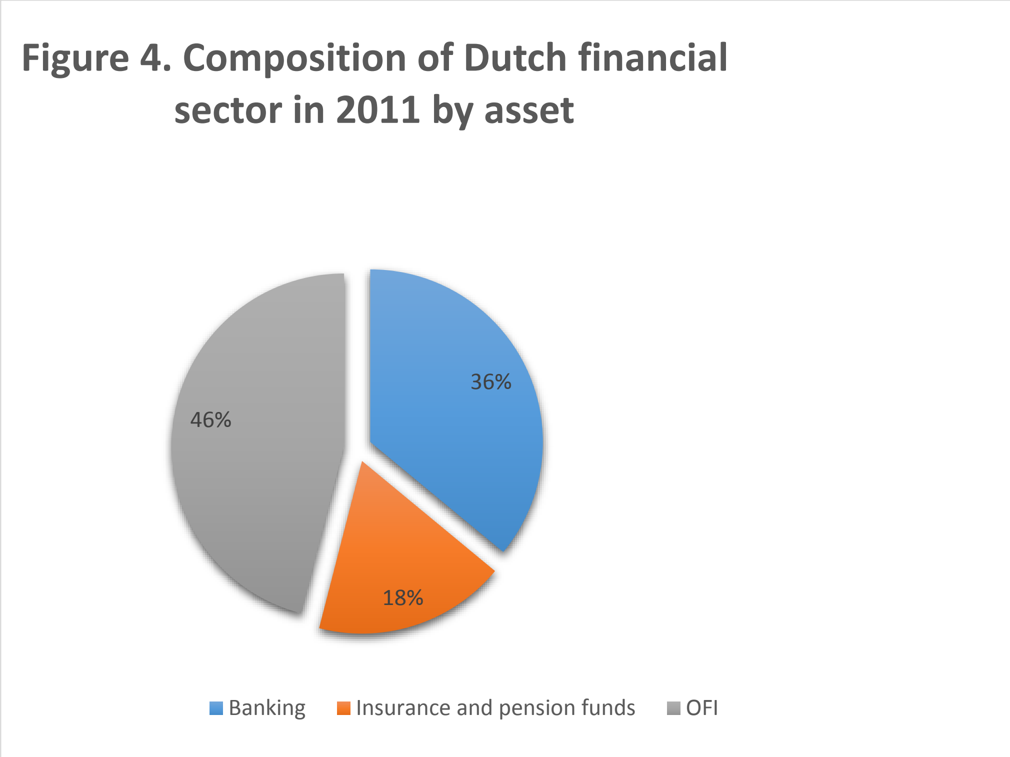


Figure 3 below shows FDI flows from the US to the Netherlands from 1990 onwards. The data for FDI in holdings is not available before 2004, but it shows an increase from 62% in 2004 to 78% in 2010. It is remarkable that both the ICT crash in 2000 and the financial crisis following the collapse of Lehman Brothers in 2008 did not interrupt the ever increasing FDI flows. This sharply contrasts global FDI flows provided by UNCTAD that show a steep decline after 2000 and again after the collapse of Lehman Brothers (UNCTAD WIR database). This discrepancy suggests that these capital flows are less embedded in 'normal' FDI flows.



3.2 Facts and figures about Netherlands

The previous section showed how the Netherlands fits the depiction of an OFC. Primarily because of the large inward and outward FDI flows in relation to the domestic economy. In this section we will look more closely at the Dutch financial industry to understand what generates these large volumes of capital flows. First of all the Dutch financial industry has three different components that are all three exceptionally large and exceptionally globalized (Watson Wyatt 2011; SOMO 2012; IMF GFSR 2012). The pension savings, the banking sector and the Other Financial Institution (OFI) are large in relation to GDP and depend on global markets for funding (banking) and investments (pension funds). In this report we will focus on the OFI sector, which also includes the SPE's described by the OECD above. Figure 4 shows the size of the OFI sector in relation to the other parts of the Dutch financial sector.



The OFI category consists of all financial institutions that cannot be classified as pension fund, bank and insurance company. This implies a broad set of actors and activities that are not part of shadow banking. However at this stage the FSB remains committed to collect OFI data in order to better understand the role and size of shadow banking across jurisdictions (FSB 2012; DNB 2012). In addition the ECB and the EU commission also use the OFI sector as a proxy for the size of shadow banking (ECB 2012; EC 2012). DNB published a study on shadow banking in the Netherlands in which it broke down the OFI sector in different components.

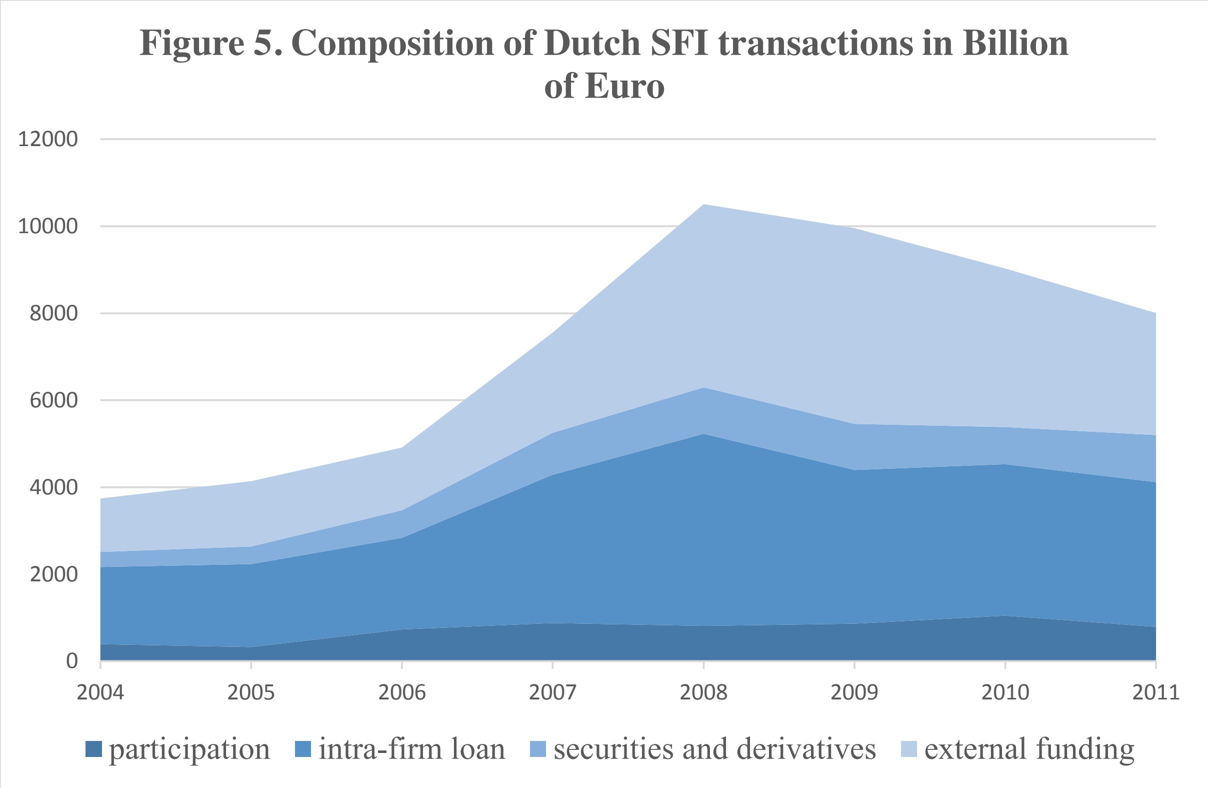
Table 1 below shows the different categories DNB constructed to unpack the broad OFI category. First of all the table shows that Special Financial Institutions (SFI) are the largest category within the Dutch OFI sector. This category is subdivided into financial and non-financial SFI. The DNB SFI category largely overlaps with the OECD SPE description discussed above and serves the purpose of pass-through entity for foreign TNC's and banks (DNB 2008). The next largest category is the SPV sector. This category consists of SPV's with Dutch securitized collateral, mostly mortgages, while SPV's with foreign collateral are part of the category 'financial SFI'. The MMF's, together with repo markets, the primary funding sources of shadow banking in the literature, are very small with 2 billion euro. Also hedge funds do not play an important part of the OFI sector in the Netherlands. The other two large sub categories are investment funds and holdings of financial institutions. Both these sub-categories however are not major entities in shadow banking. This study of DNB reduces the shadow banking part of the Dutch OFI sector from 3.123 billion Euros to 1.698 billion Euros.

The separation of financial from non-financial SFI's is important, since it leads to a reduction of 1.500 billion euro.

Table 1. The composition of the Dutch OFI sector

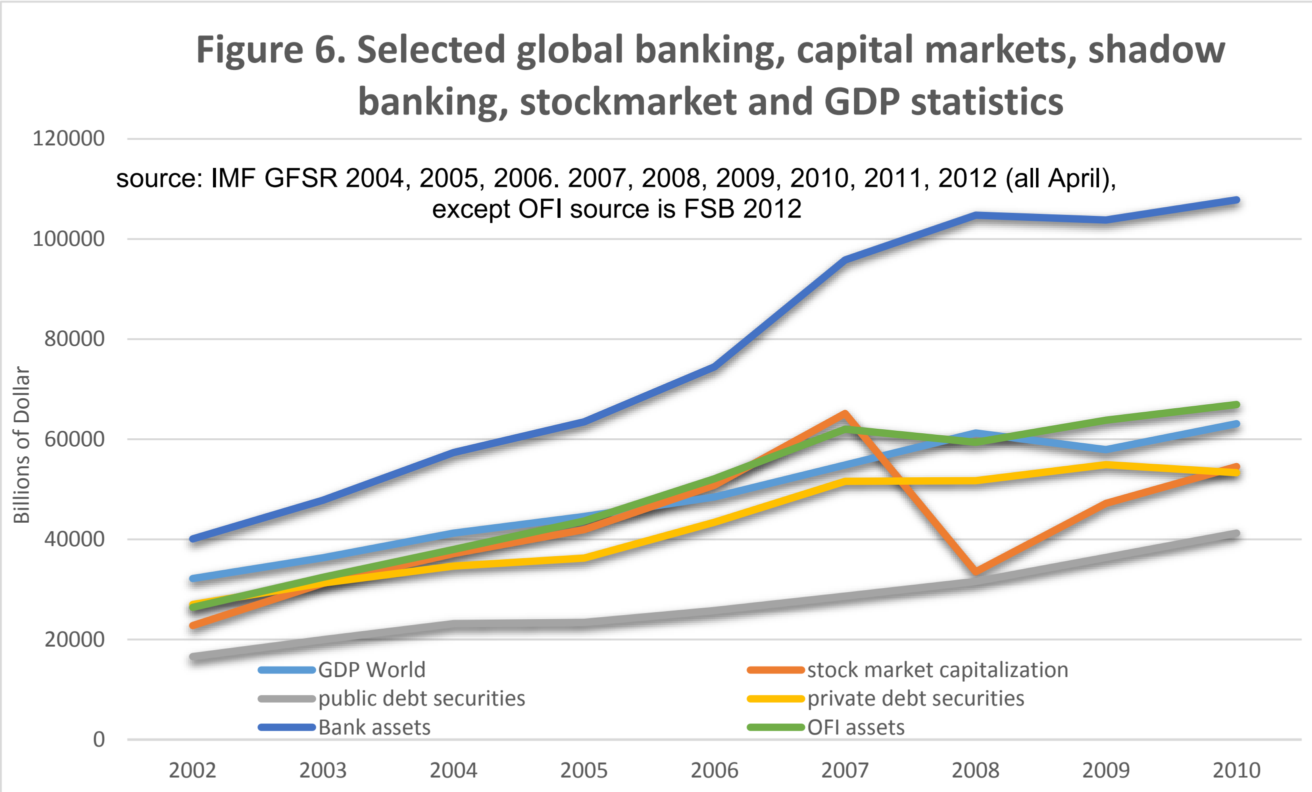
	Assets	Credit intermediation	regulatory oversight/backstop	Part of financial corporation	degree of shadow banking
Financial SFI	500	partly	indirect	Yes	substantial
Non-financial SFI	1500	no	no	Yes	low
Finance company	128	yes	indirect	Yes	substantial
SPV	330	yes	no	Yes	very high
MMF	2	yes	no	Yes	very high
Hedgefund	18	partly	no	Yes	substantial
Invest. Fund	340	no	no	Yes	low
Invest. Trust	91	no	no	Yes	medium
Private equity	25	no	no	Yes	medium
Holdin financial instit	184	no	no	Yes	low
Other	14	no	no	Yes	low

If we look more closely at the SFI sector we find that it conceals extremely large capital flows. These large flows confirm the picture in the previous section, where the Netherlands featured as the largest FDI recipient. Figure 5 below shows the transactions of Dutch SFI's from 2004 to 2011. The total size of transactions of SFI's show the impact of the financial crisis. From a peak of 10.500 billion euro in 2008 they declined to 8.003 billion in 2011.These transactions are annual flows, inward and outward, were four times the size of total assets of SFI's, 2000 billion euro in 2011, portrayed in table 1 above. Graph 5 shows that the largest transactions of Dutch SFI's were generated by intra-firm loans and external funding. Combined these categories make up 77% of all SFI transactions in 2011 an equivalent of roughly 1000% of Dutch GDP (DNB 2013). Intra-firm debt is identified by the OECD to be an important profit shifting channel (OECD 2013). In this report the OECD states that: "*leveraging high tax companies with intra-group debt is a very simple and straightforward way to achieve tax savings at group level*". The question is whether these large intra-firm financial transactions can be fully excluded from shadow banking activities, as DNB claims.



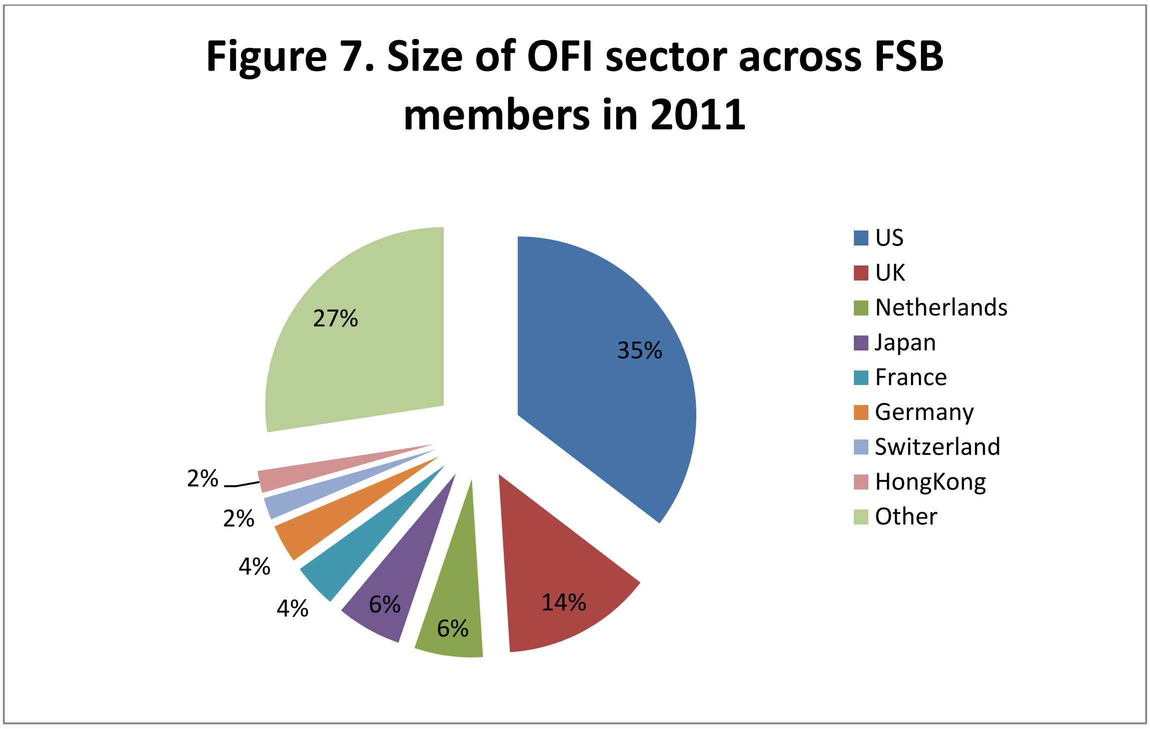
3.3 The Dutch hub in shadow banking

In this section we will compare the OFI statistics from different sources in order to better understand the role of OFC's in shadow banking. The first graph shows the development of selected global financial and economic indicators between 2004 and 2010. It shows that the size of the global OFI sector kept pace with the growth rate of world GDP. This figure also shows that the size of regular banking, at the global scale, remains significantly larger than the OFI sector. This contrasts the data provided by the New York Federal Reserve study on Shadow banking (Pozsar et al 2010). This study showed that in the US shadow banking had outgrown the size of regular banking since 1992 and reached a peak in 2008 of 20 trillion dollar (regular banking was roughly $15 trillion in 2008) in the US. This shows that the rise of shadow banking has not been equal across regions.

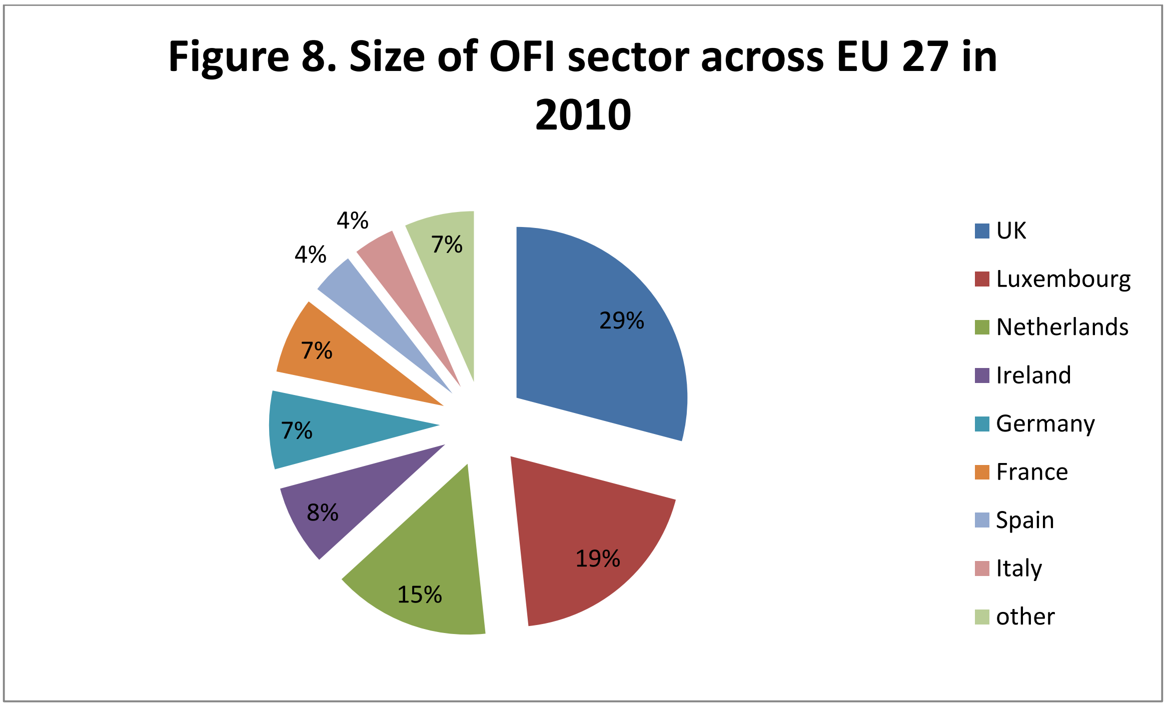


The geography of shadow banking is concentrated in developed economies. Some economies, however, stand out in shadow banking assets and transactions. The US and the UK harbor the world's largest financial centers, New York and London that are the natural habitat of innovative modes of financial intermediation that underpin shadow banking. The US is the birthplace of MMF's and remains pivotal for MMF's and repo transactions (ECB 2012). In the BRIC countries, on the other hand, shadow banking, and other types of innovative financial intermediation are not widespread. In India for instance the size of the OFI sector was 21% of GDP (375 billion dollar) while the regular banking sector was 86% of GDP in 2011(Sinha 2013).

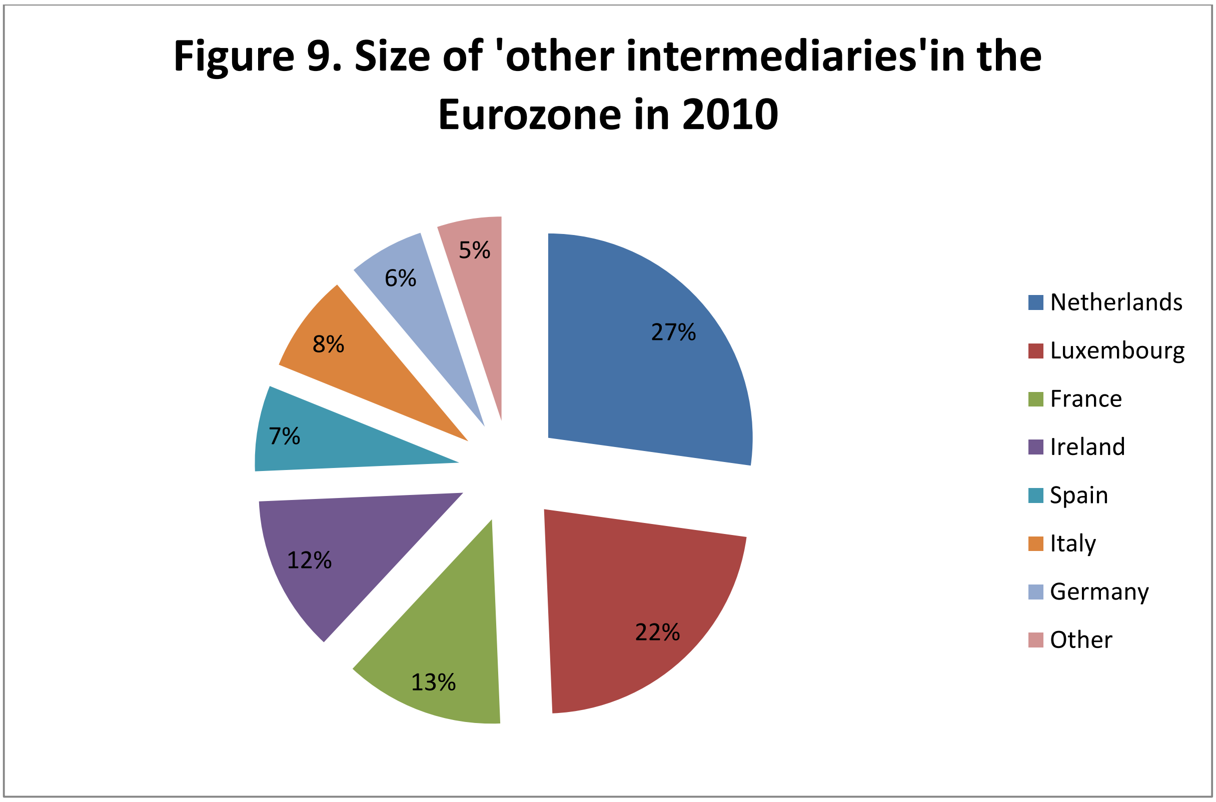
Figure 7 below shows the size of the OFI sector across the different FSB members. The US and the UK, with respectively 34% and 14% of OFI assets are the leading shadow bank jurisdiction. Next are Japan and the Netherlands with both 6% of FSB assets. Japan is the third largest economy and Tokyo remains one of the central global financial centers. The Netherlands on the other hand is not a major economy but an OFC, which captures large global OFI flows through its SPE's, discussed above. In this FSB, Ireland and Luxembourg are absent.



The data portrayed in figure 8 shows the OFI sector in the EU. Now other major OFC's like Luxembourg and Ireland are included. In these figures the combined weight of Ireland, Luxembourg and the Netherlands is 42%.



In graph 9 a different measurement is used namely ‘other intermediaries’ (OI). The OI sector: “comprises the OFI sector plus MMF’s minus investment fund other than MMFs” (ECB 2012). The combined weight of the three OFC’s in the Eurozone was 61% 2010. The largest economies of the Eurozone, Germany, France and Italy on the other hand only captured 27% of the OI sector.



What these figures show is that the Netherlands contains a large segment of the world wide OFI entities and capital flows. Within the EU and the Eurozone its size if evident. Other OFC’s like Luxembourg and Ireland show similar signs of acting as massive conduit jurisdiction. While DNB claims that this large OFI sector should be separated in shadow banking and non-shadow banking OFI entities and activities (DNB 2012), the distinction is not clear-cut. Rather the picture remains messy, particularly because of the large size of intra-firm transactions that SPE’s produce in OFC’s. At the moment the FSB, the EU, the ECB and the IMF have not followed the analytical distinction suggested by DNB and continue to use OFI as a tool to quantify shadow banking. Although the FSB has acknowledged that its method at the moment is to “cast the net wide”, in order to start with a broadest set of entities and activities, it is yet to exclude the non-financial SFI’s from the OFI sector (FSB 2012).

The problem with this large group of SFI entities is that many TNC's use these conduit vehicles for intra firm financial transactions that include leverage. Also treasuries of TNC's, part of these SFI entities, create sizable and opaque financing structures that cannot be fully isolated from shadow banking. While it is important to stress that not all non-financial SFI entities are involved in shadow banking activities and are first and foremost tax driven, there is not a fine line. Most importantly DNB is the only public institution that provides publicly accessible data on SPE's. There are no comparative studies that can corroborate the distinction that DNB suggests.

But even if we fully exclude non-financial SFI's from shadow banking, in terms of entities and activities, there still is an indirect connection. The non-financial SFI entities in the Netherlands and other OFC's produce large outflows of corporate profits towards parent companies located in tax havens like the Cayman Islands. The OECD (2013) quotes a study of JP Morgan that estimates the size of corporate cash pools in tax havens is in the range of $1.7 trillion. In an IMF study Zoltan Pozsar describes how the size of "institutional cash pools" grew from $100 million in 1990 to $2.2 trillion in 2007 and $1.9 trillion in 2010. "

> *"The term institutional cash pool refers to large, centrally managed, short-term cash balances of global non-financial corporations and institutional investors such as asset managers, securities lenders and pension funds"*(IMF 2011).

The following section will provide an overview of the Amsterdam based Lehman Brothers subsidiary. This case study illustrates how a Dutch domiciled financial SFI's was integrated in the broader shadow banking network. This enables us to understand the role of OFC's like the Netherlands in facilitating shadow banking activities. In hindsight we know that the structure of Lehman Brothers collapsed. However, other banks still use the same cross border funding structure as Lehman Brothers did in Amsterdam. These other examples will be discussed after presenting the case of Lehman brothers.

Lehman Brothers Treasury B.V.: the Dutch link in the worldwide operations of Lehman Brothers.

4.1. LEHMAN BROTHERS: A GLOBAL NETWORK OF SUBSIDIARIES

The collapse of Lehman Brothers (LB) in 2008 showed how one of the largest and most successful wall street investment banks disintegrated into chaos, leaving behind a highly complex web of unwound inner company debt, derivative transactions, and joint financing programs, connected by subsidiaries across the planet. Most of the subsidiaries, over 70, where located in the state of Delaware in the US, a well documented tax haven. Other tax havens and offshore financial centers that acted as steppingstone for LB where the Caiman Islands with over 30 affiliates, Hong Kong, Singapore, Switzerland, The Dutch Antilles, Luxembourg and Ireland.

The ultimate owner of all the LB subsidiaries was Lehman Brothers Holding Inc (LBHI), incorporated in Delaware. Underneath this holding a variety of subsidiaries operated independently of each other. Some subsidiaries, acted as independent units, and operated different affiliates themselves. Lehman Brothers Inc, among other activities like investment banking and merchant banking, was one of the largest brokerage companies in the US, acting as primary broker for the Federal Reserve Bank of New York. The Neuberger Berman Inc was an investment advisory firm with assets under management worth 140 billion Dollar and a range of activities like tax planning, trust services, mutual funds, institutional management and private asset management. The London cluster housed a number of affiliates that where involved in the full range of services and products, from private banking, brokerage, underwriting to investment banking. The German based Lehman Brothers Bankhaus AG had a fully-licensed German bank, involved in corporate finance, securities dealing and had its own affiliate in London.

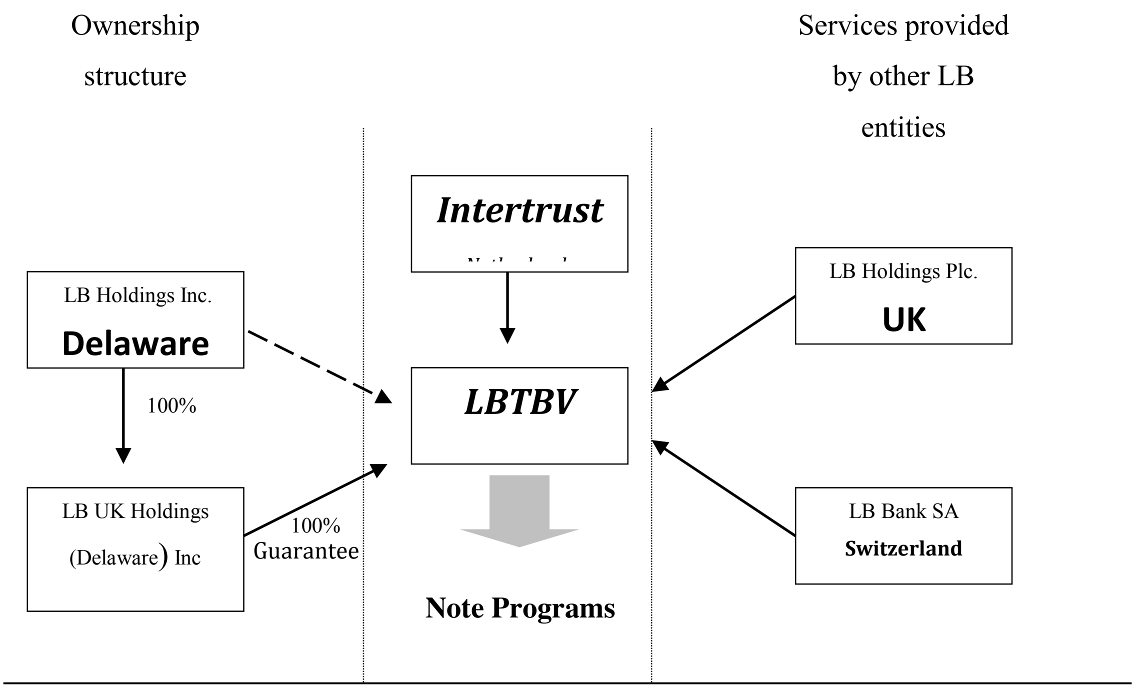
Next to these subsidiaries in the larger financial centers, that employed personnel, that where regulated, that were members of stock exchanges, and had a clear physical presence, often in an iconic building, representing their status as one of the portals to one of the prime investment banks in the world, we find a wide range of shell companies. These subsidiaries, mostly without any employee and no rental contract or ownership of real estate, where scattered across many jurisdictions. The nature of these subsidiaries was always highly specialized as opposed to the subsidiaries in the larger financial centers that offered a wide range of services, and catered to a broad public, private, public and institutional. Instead these shell companies almost exclusively interacted with other LB entities and where booking entities, pass-through entities, issuing vehicle, and other type of special purpose entities for a variety of financial transaction. These empty shells where the machinery of LB outside the prime financial centers, through which regulation and taxes could be circumvented to achieve the optimum corporate structure across different jurisdictions.

For instance, the two vehicles located in Luxembourg where specialized into being repo counterpart and as issuance vehicle for securities that where hedged by derivatives by other LB entities, respectively. The Swiss subsidiary was the central vehicle to book the equity derivatives business, including OTC transactions and a broad range of specialized derivatives products. The subsidiary incorporated in the Netherlands Antilles was a fully owned subsidiary of the Lehman Brothers Asia holdings, and was primarily involved with issuing equity and debt certificates. This case study will focus on a subsidiary which is located in this web of shell companies, outside the larger financial centers, without employees, no physical presence and primarily a vehicle for inter-company transactions, for the purpose of regulatory and fiscal arbitrage. This case study describes the role of the Amsterdam based SPE within the broader structure of LB and focuses on the motives to use the Netherlands as a preferred location to issue debt. This in turn helps to understand the role of the Netherlands as a prominent pass-through jurisdiction in the broader shadow banking network.

4.2. Lehman Brothers in Amsterdam: a shell company acting as conduit for the global Lehman Brothers operations

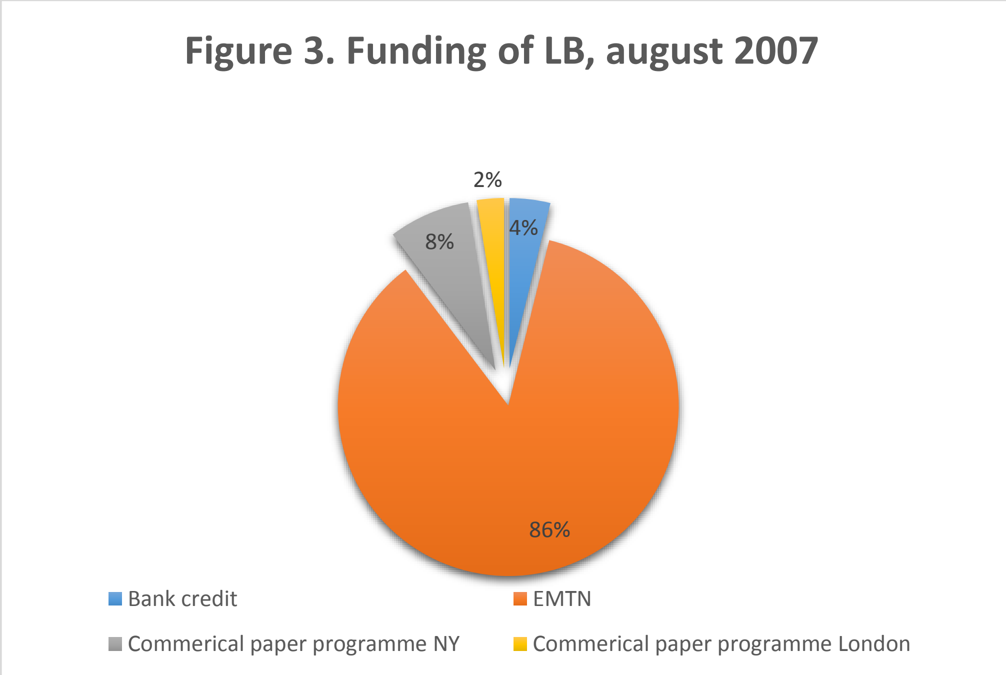
The Dutch subsidiary of LB,- Lehman Brothers Treasury B.V. (LBTBV), was established in Amsterdam in 1995. Figure 2. shows the ownership structure on the left side and the services provided by other LB entities on the right side. LBTBV was fully owned by LB UK holdings (Delaware) Inc, which in turn was fully owned by the ultimate parent, LBHI. As LBTBV was a typical shell company, without employees, or office, it required other LB entities to do the actual work, primarily the treasury function (holding and moving capital across accounts) and secretarial work. The treasury function was provided by the Swiss based LB Bank SA. The secretary functions where performed by the London based LB Holdings Plc. In the middle section of figure 2. we see intertrust, A Dutch trust company that arranged and managed the

Dutch domicile. The services intertrust provided included (A) arranging external directors to comply with Dutch substance requirements; (B) secretarial services concerning taxation and other compliance duties; and (C) arranging an external audit. It was through this Dutch domicile, provided by intertrust that this shell company was able to operate in the Netherlands.



The function of LBTBV in the broader LB structure was to issue debt in order to fund the LBHI that in turn used the funds for activities in other LB subsidiaries. The issuance of debt is referred to in figure 2 above as the "note programs". The debt issuance capacity of these note programs was critical to the ability of LB to extend its overall leverage. Figure 3 below, shows the different components of the planned long term debt and bank credit from LBHI in August 2007. It clearly shows that the European Medium Term Note Program (EMTN) was responsible for

85% (100 Billion US Dollar) of all the long term debt of LB. The other programs and money market (bank credit) operations contributed to no more than 15% of total funding. This shows the pivotal role of the EMTN, in which LBTBV was the (co-) issuer.



In table 1, below, the long term funding is contextualized in the overall financial statement of LB. The total net revenues and net income doubled from 2003 to 2007. The total assets increased by 220% from 312 billion dollars to 691 billion dollars. The long term borrowing increased with 340% from 36 billion dollars to 123 billion dollars in this period. While the total stockholders' equity increased by 177%. The long term capital, consisting of the long- term borrowing and total stockholders' equity, almost tripled. The ratio between long term borrowing and stockholders' equity in the total long term capital, the leverage, increased from 72% to 84%. Most striking is the overall speed in which both assets and liabilities increase in the last years of LB. The long term funding was a pivotal part of the strategy to increase leverage and income, with dramatic consequences. This broader context shows that the note programs, in which LBTBV acted as (co) issuer was not a side show, but central to the overall LB strategy.

Table 1. Selected financial indicators of LB in Billions of Dollars

	2007	2006	2005	2004	2003
Net revenues	19	18	15	12	9
Net income	4	4	3	2	2
Total assets	691	504	410	357	312

Long-term borrowing	123	81	54	49	36
Total stockholders' equity	23	19	17	15	13
Total long-term capital	146	100	71	64	49

Source: Annual report 2007

4.3.THE NOTE PROGRAMS OF LBTBV

The EMTN, portrayed in figure 3 above, was one of four different note programs in which LBTBV acted as issuer. These other note programs included the German note program (4 billion Euro) and the Swiss note program (2 billion dollar). All these programs consisted in setting up a consortium of different LB subsidiaries, each with its particular architecture, to issue and sell debt certificates. However, while the note programs had a stipulated maximum of debt issuance, these thresholds where not reached before LB went bankrupt. Therefore the total issuance was lower than the structures, setup under the different note programs, allowed. Graph 1 below portrays the debt ceiling set by the EMTN. It shows that the maximum issuance was increased in a number of steps since the note program was established in 1995. The latest and largest increase was in 2007 when LB increased the maximum debt issuance from 60 billion to 100 billion dollar.

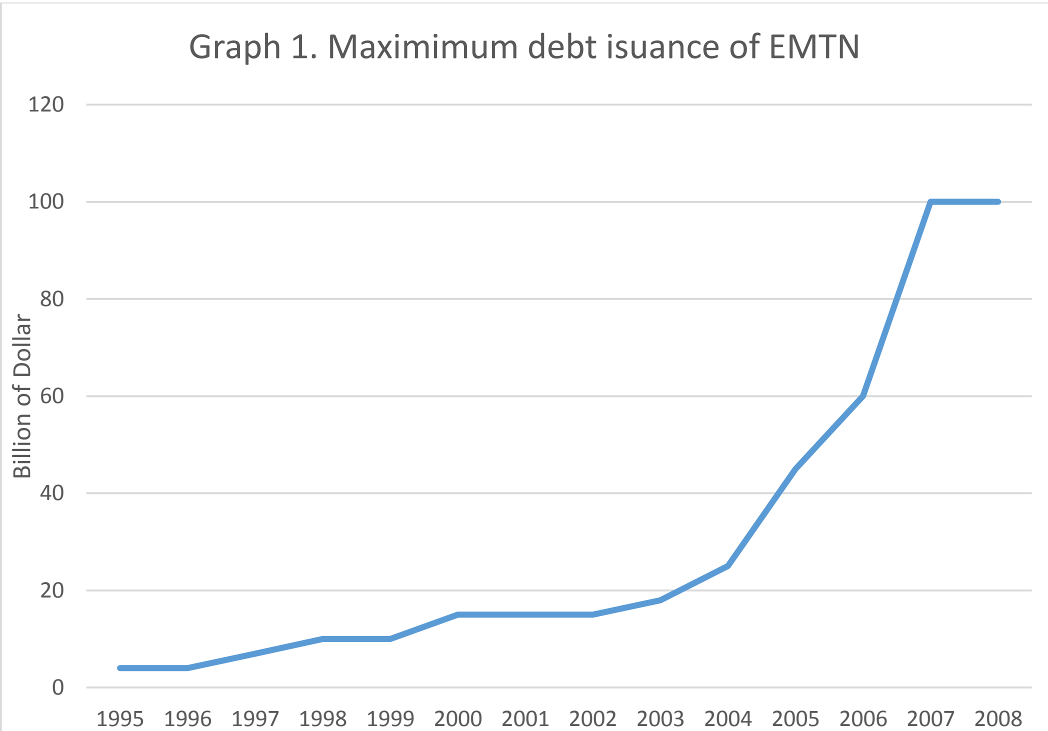
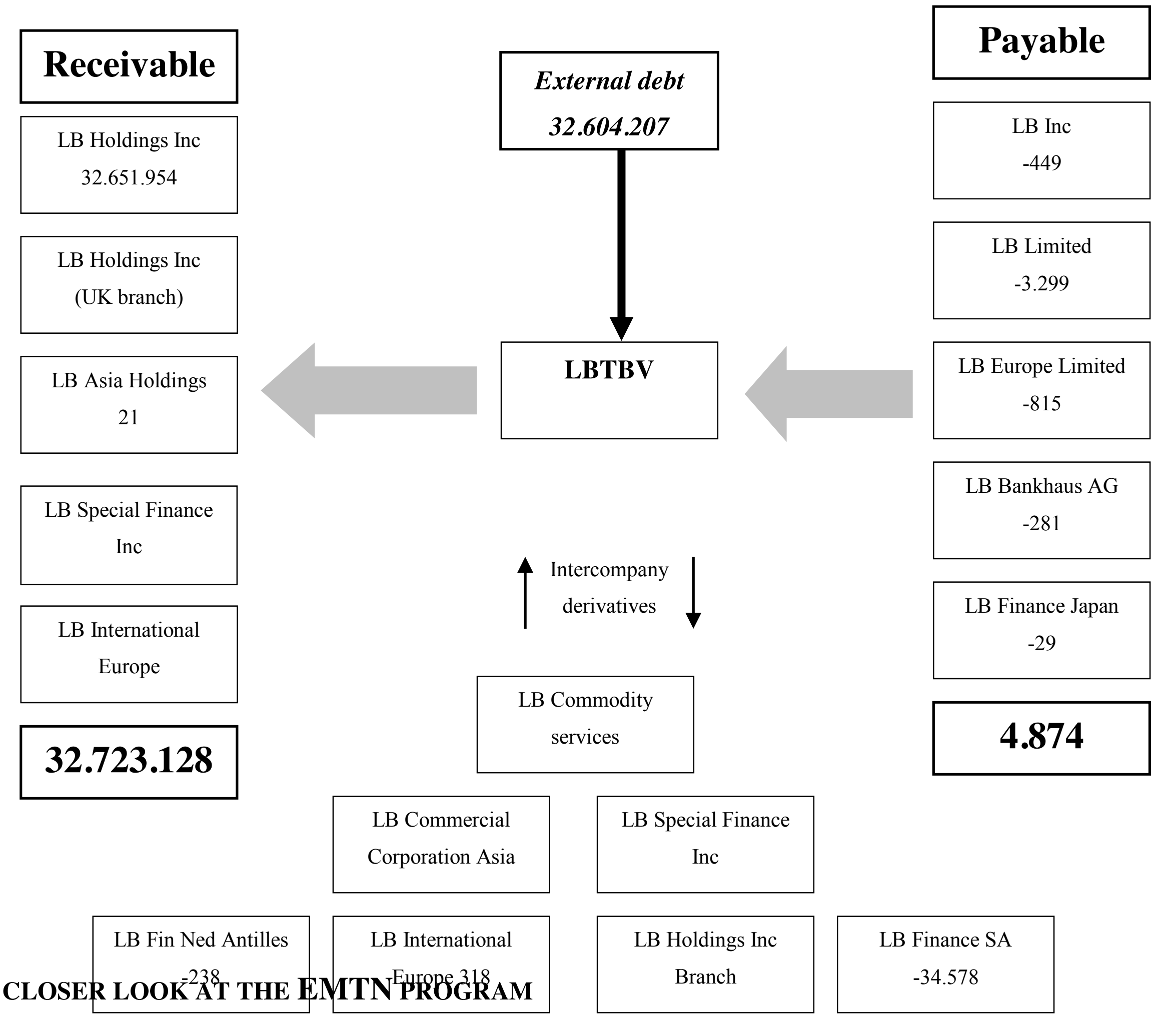


Figure 4 below portrays the balance sheet of LBTBV in 2008 after bankruptcy had been filed. It shows the complex inter-company flow of funds and the central position of LBTBV in the larger LB structure, in particular in funding the company holding. The main debtor of LBTBV is LBHI, where the largest proportion of the external debt (issuance of debt) has been channeled to. Both amount to 32 billion dollar and LBTBV acts only as a pass through entity. This is the reason that the Amsterdam based shell company, without any staff, was the largest creditor of the Lehman brothers holding, once it filed for bankruptcy. The other financial interconnections, including the inter-company derivative transactions are relatively small. Especially if we consider that LB had a total nominal derivatives portfolio of 730 billion dollar in 2007[3]. This shows that the function of this subsidiary was to act as a specialized debt issuance conduit.

Figure 4. Inter-company flow of funds, based on the balance sheet of LBTBV at 7th of October 2008, in 000s of US dollar.



4.4. A CLOSER LOOK AT THE EMTN PROGRAM

[3] Annual report 2007

The EMTN program was established in 1995, the same year LBTBV founded (Euronote 1995). The three original issuing parties where (A) LBTBV, (B) LBHI and (C) the London domiciled Lehman Brothers Holding Plc (LBHP).[4] In 2001 LBHP seized to be an issuing party, and in 2004, the German domiciled Lehman Brothers Bankhaus AG (LBB), became an issuing party. The purpose of the EMTN program was to issue notes "from time to time", "in one or more series", "outside of the United States".

In short the EMTN program organized the cooperation of different LB subsidiaries in issuing debt instruments outside of the US. This allowed LB to mobilize funds without the regulatory scrutiny of the SEC. The issued notes, however, where "irrevocably and unconditionally guaranteed" by LBHI. The arranger and dealer of the program was the London based, Lehman Brothers International Europe (LBIE).

This organizational structure remained largely unchanged throughout the note program. What changed where the exchanges on which the notes were listed. The first notes where issued on the exchanges of Paris, Luxembourg, and London in 1999. In 2001 the notes were listed on the exchange of London, Singapore, Luxembourg and Australia (Euronote 2001). In 2008 the notes were listed on exchange of Ireland, Singapore and Australia (Euronote 2008). Also in the 2008 program the diversity of types of notes, level of complexity and domestically adjusted notes was greatly enlarged. For instance, specific notes where issued for Norway, Denmark, Sweden, Finland, Australia and New Zeeland. These notes where issued in the respective currencies of these countries and each fulfilled the national regulatory and fiscal requirements (Euronote 2008). What we see is that the level of complexity increased as the EMTN program progressed in time. The role of the London based LBIE remained the workhorse of the program acting as arranger and dealer, and LBTVB remained the conduit that was connected to an increasing amount of subsidiaries in ever more different participating countries.

[4] http://www.lehmanbrotherstreasury.com/pdf/english/docs/1999/50180LehmanBrosInfoMemo%5B1%5D.PDF , LBTBV Managing Directors account 2007.

5. Lehman Brother look-alike entities in the Netherlands: can “it” happen again?

The case above describes how Lehman Brothers operated through SPE’s in the Netherlands and elsewhere. This was primarily to avoid withholding taxes and to create a transnational layer of complexity. The activities of LBTBV were not supervised in the Netherlands by DNB. Instead the US was responsible for the supervision of the Dutch entity of Lehman Brothers (DNB 2012). The use of the exchanges of Luxembourg and Ireland to list the notes issued in the Netherlands is yet another layer of complexity.

This financial architecture, however, was not restricted to Lehman Brothers. It was and still is the typical model for financial institutions and banks that seek to setup a conduit structure in the Netherlands. The format these banks and financial institutions use is identical to the structure described in the Lehman Brothers case. The financing structures are about creating ad hoc divisions of labor for each tranche of debt that is issued. Sometimes the structure is copied and extended for another issuance, but most often the actors involved and the division of labor among them changes only slightly. The main tasks to divide are: the “arranger”, the “lead manager”, the “main stabilizer”, the “swap counterparty”, the “cash manager”, and the “seller and servicer”. In the case of Lehman brother these tasks were all performed by Lehman entities. In the case of other financing structures that have a conduit structure in the Netherlands we often find a collaboration of two or more globally active banks.

Moreover these structures combine the following features:

A. The London branch of the globally active bank acts as lead manager and arranger;
B. The Dutch entity (SPE) is a shell company and formally acts as issuer of the notes;
C. A large Dutch trust firm is responsible for all local administrative tasks and responsibilities that are related to a Dutch domicile and tax ruling;
D. Administrative functions related to the note program, are conducted by one or more banks located in the UK;
E. The notes are listed on the exchanges of Ireland, Luxembourg, or both, but are also sold OTC;
F. The notes are not offered to US buyers that are not “qualified institutional investors”, in accordance with regulation S.

An example of this structure is the securitization program of the FCE bank. FCE bank is an independent UK based bank that acts as finance vehicle for the Ford Motor Company. It finances both retail activities and wholesale and intercompany transactions.[5] The funding of this credit institution relied on securitization for around 40% of its operations from 2005 to 2012. For each yearly tranche of securitized assets, the FCE bank setup a separate Dutch legal entity (an SPE). For instance the 2012 tranche of 531 million euro was issued by the SPE named "Globaldrive Auto Receivables 2012-A B.V.".[6] The SPE that issued 508 million euro of securitized assets in 2011 was named "Globaldrive Auto Receivables 2011-A B.V". If we compare both issuing structures we find that in the 2011 tranche, Barclays, Deutsche Bank and HSBC, were the lead managers and lead arrangers. In 2012 the lead managers were Bank of America Merrill Lynch, Credit Agricole Corporate investment Bank, HSBC, SMBC Nikko.

An example of the issuance of debt by a foreign bank with a complex collateral is provided by "Morgan Stanly Investment Management Coniston B.V." which constructs CDO's.[7] Unlike Lehman Brothers, which dealt exclusively with other Lehman brothers subsidiaries, this SPE is organized as follows. The collateral manager is Morgan Stanly. The collateral administrator is Deutsche bank (London branch) and the arranger is Citi group global markets limited. Another SPE from Morgan Stanly in Amsterdam, also issuing notes backed by a collateral of CDO's in 2007, used Lehman Brothers Europe as arranger, and Deutsche Bank London branch as collateral administrator.[8]

Another example is the "Asset Repackaging Trust Five B.V.". This is a Dutch based SPE that since 2001 issues debt to fund securitized mortgages. It operates within a note program with a maximum of 10 billion dollar (August 31 2011). Its lead arranger is the London branch of Deutsche Bank. In this case the London Branch of Deutsche Bank also acts as swap counterpart and issuing and paying agent. The Dutch SPE is domiciled by "Equity Trust", one of the largest trust firms in the Netherlands. The notes are listed on the exchange in Dublin and restricted in their global sales according to US regulation S.

These examples show that the architecture Lehman Brothers used is the general rule in the world of SPE's, investment banking and TNC's that seek external funding in the

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[5] In the FCE bank annual report on 2012, p 6, we find that 56% of the loans advanced where retail and 44% were wholesale. See: http://www.fcebank.com/reports/2012_Annual_FCEReport.pdf

[6] See: http://credit.ford.com/webcontent/absus/2012-A_Prospectus_BLACK_FINAL.pdf

[7] See: http://www.ise.ie/debt_documents/morgstaninvmancon_9831.pdf

[8] See: http://www.ise.ie/debt_documents/morgan%20stanley%20inv%20P_9991.pdf

Netherlands. The exceptionally large capital flows that that enter and exit the Netherlands, discussed above, are largely the result of activities of these SPE's. Although we need to differentiate between financial and non-financial SFI's, discussed above, it is clear that both operate in the same market environment. Both types of SFI's use similar legal methods and an identical architecture in which Dutch specialized service providers organize the domicile in the Netherlands. We see that the legal structure and trust industry that enable TNC's to operate through shell-companies, allow financial institutions, banks and shadow bank entities to embed their operations in a network of OFC's. This shows that the issue of tax avoidance and shadow banking largely overlap. This also means that the type of uncontrolled funding that Lehman Brothers was engaged in, is widely available for other financial institutions and therefore needs to be addressed.

6. Conclusion

The world of finance progressively moved away from traditional banking in the decades preceding the financial crisis of 2008. Particularly since the 1990s we saw how the use of innovative forms of intermediation, like securitization, the use of MMF's and Repo markets accompanied an increasing leverage in developed economies. These complex forms of intermediating credit outside the traditional banking system where coined shadow banking. This banking system consists of a network of intermediaries that interact from across different jurisdictions. Essential to this geography is the role of OFC's, like the Netherlands, Luxembourg and Ireland, that act as conduit jurisdiction. These locations do not harbor the higher value added services, we find in first-tier financial centers like New York and London, but instead we find a specialized service industry that supports pass-through entities.

These jurisdictions enable financial institutions to create levels of complexity and allow for tax avoidance. The large scale use of SPE's, shell–companies, that offer domicile in OFC's, for financial and non-financial institution is at the heart of creating layers of complexity that only add to the systemic risk and the erosion of the tax base. The data show that OFC's contain a massive part of global financial flows. As discussed above we see that the combined weight of Luxembourg, the Netherlands and Ireland in the EU 27 was 42% of all OFI transactions. The case of Lehman Brothers shows how a consortium of legal entities operated from across EU jurisdictions to setup a funding operation that largely operated outside the scope of any EU regulatory body. Also we saw how the same architecture that Lehman Brothers used is the norm in the world of investment banks.

This study tries to contribute to the debate on shadow banking by pointing to the role of OFC's and SPE's. The major concern voiced in the policy debate by the FSB and the EU is the set of systemic risks that shadow banking harbors. Notably the absence of a public backstop and the highly cyclical nature market activities. Our contribution, stressing the role of OFC's in shadow banking, is complementary to these concerns.

We show that OFC's matter in trying to put in place effective forms of control and regulation for global finance. As long as OFC's offer a safe place to SPE's, financial institutions and banks can continue to operate in a lightly regulated environment/ regulatory twilight zone.

This issue needs to be addressed. In the wake of the financial crisis we have seen policy initiatives aiming at re-regulating finance in different policy communities. The debate on shadow banking is part of these debates. As long as OFC's are able to offer a safe haven for financial institutions that aim to circumvent regulation and taxes we will be confronted with a dual market environment. On the one hand we find the conventional market, which includes a clear regulatory framework, and where the vast majority of initiatives for new banking regulation is aimed at. On the other hand we find the financial activities that take place in the offshore world. This duality may lead to the increased importance of shadow banking as a means to extend and intermediate credit. Tackling the issue of OFC's not only important for pushing back tax avoidance, it is essential if we are to be able to properly regulate and supervise global finance in the post-crisis world.

Part this overall goal to re-regulate finance we propose a set of measures aimed at diminishing the levels of complexity in the cross-border funding structure of banks, financial institutions and TNC's. These levels of complexity are the result of tax avoidance, treaty shopping and regulatory arbitrage. The effect of these –unnecessary- complex cross border structures, however, are a regulatory mist. We need to address both the mist and the underlying corporate geography.

First about the mist. Lehman Brothers should act as canary in the mine. The regulatory structure in which US authorities are responsible for the oversight of US banks that employ a vast amount of offshore legal entities to fund their operations should be questioned. As the rise of shadow banking has shown, the capital flows running through these offshore entities increased dramatically in the past decade. The shadow banking structure, which is transnational in nature, cannot be dealt with outdated regulatory structures that remain organized at the national scale. This means that Dutch authorities should take co-responsibility for the oversight of entities of foreign banks that are active in the Netherlands. The activities of these entities should be included in macro-prudential regulatory framework of DNB.

Secondly we need to address the overly complex cross border nature of the offshore entities. This means tackling the underlying difference in the fiscal treatment of debt issuance. This issue is being debated at the G-20, the EU commission and the OECD in the framework of tax evasion and avoidance. Specifically for tax avoidance through debt issuance we propose to increase the substance requirements for SPE's in the Netherlands. The substance requirements should include a higher capital adequacy ratio. SPE's located in the Netherlands should be required to maintain assets of no less than 2% of the total outstanding debt issued.

Third, in order to increase transparency, central banks and national statistical departments should follow the example of the Netherlands and publish figures about SPE entities. The figures on BFI's in the Netherlands are vital to understand the geography and broader development of TNC's and banks. The OECD and the IMF should encourage member states to provide data on SPE transactions to incorporate this information in their FDI statistics.

Finally, the OECD, the FSB, the G-20, and the EU commission should take note of the concentration of OFI flows in a small group of countries. This uneven geography of OFI activities shows that differences in regulation and tax regimes lie at the heart of how shadow banking is spatially organized across jurisdictions. This should have consequences for the analysis and policy measures. First off all the degree to which the behavior of banks and TNC's is shaped by fiscal considerations should be part and parcel of the approach towards shadow banking. Secondly the discussion on tax evasion should be broadened to include the effect of tax havens on the concentration of OFI transactions.

References

Dixon, L. (2001). Financial flows via offshore financial centres as part of the international financial system. Financial Stability Review, June 2001

Sinha, A. (2013). Regulation of Shadow Banking – Issues and challenges. BIS central bankers speeches.

DNB (2012). Het schaduwbankwezen: een verkenning

DNB (2008). Nederland nog steeds aantrekkelijk voor bfi's. Statistisch bulletin september 2008.

ECB (2012). Shadow banking in the euro area an overview. Occasional paper series, no 133/April 2012.

European Commission (2012). Non-bank financial institutions: assessment of their impact on the stability of the financial system. Economic papers 427, November 2012.

OECD (2012).

Pozsar, Z. et al (2010). Shadow Banking. Federal Reserve Bank of New York Staff Reports

FSB (2012). Global Shadow Banking Monitoring Report 2012, 18 November 2012.

IMF (2000). fiscal termites

IMF (2007). Zorome Current rules encourage corporations to finance