APPENDIX 1. SHADOW BANKING IN ESTONIA

The term shadow banking came into use in the USA at the time of the global financial crisis to denote financial institutions other than banks that were involved in securitising bank loans. As these institutions did not fall under financial supervision, there was no control over the assessment and capitalisation of the risks that were distributed during the securitisation process. When the crisis broke, doubts arose about the actual value of the financial assets that had been created, and this played a significant role in triggering the financial crisis. As a result, international organisations, led by the Financial Stability Board (FSB) representing the G20 countries, have put work into monitoring shadow banking by estimating the size of it and assessing the risks it poses to financial stability and how they can be reduced.

Shadow banking is difficult to define as its nature and its structure can vary widely between countries. It is a rapidly growing and developing area of finance that operates beyond the normal regulatory environment, and so there is a shortage of data on how it operates. The FSB has defined shadow banking as **credit intermediation involving entities and activities outside the regular banking system**[25].

Credit intermediation using non-bank financial intermediaries or channels can be good for economic development as it offers companies and households an alternative to banks as a source of funding. However it can also bring with it **risks to the functioning of the financial system**. If non-bank credit intermediaries are left to manage their assets and liabilities like banks, the risks may stem directly from shadow banking in itself, but the functioning of the system could also be threatened by the connections between shadow banking and the regular banking system. Banks may make use of shadow banking to help them circumvent regulation and this could lead risks to build up in the banking system.

The International Monetary Fund (IMF)[26] notes that shadow banking tends to grow faster when requirements for banks are tightening and there is ample liquidity in financial markets. There has been a decline in securitisation in the major economies since the financial crisis, but investment funds, which come under the heading of shadow banking, have grown quickly in size. Shadow banking has rapidly increased a lot further in developing countries after the crisis too, and its growth has even surpassed that of the regular banks. The growth in shadow banking in those countries is still partly related to the natural deepening of the financial system. As strict requirements and high liquidity are likely to endure in the near future, the environment will favour the development of shadow banking in future too.

25 Financial Stability Board. Shadow Banking: Scoping the Issues. A Background Note of the Financial Stability Board, 12 April 2011

26 IMF. Shadow Banking Around the Globe: How Large, and How Risky? Global Financial Stability Report, October 2014

Identifying shadow banking

The FSB recommends that shadow banking be investigated in two stages. First shadow banking as a whole should be identified and defined, then the focus should move to the systemic risks that it creates.

It is important for the first stage to cover all entities involved in providing credit outside the banking system and all the activities that involve credit outside the banking system. Non-bank entities and non-bank operations are to be found in an environment that does not apply prudential regulation or financial supervision, or that applies them much less than is the case for banks carrying out similar operations.

The second stage identifies entities or operations that may pose a systemic risk. Such entities operate like banks in that they transform the maturities and liquidity of assets and liabilities, transfer credit risk and use financial leverage, all of which can create significant risks. Transformation of maturities or liquidity by financing long-term assets with short-term liabilities could lead to a process similar to a run on a bank, which could cause systemic risks if it were large enough. The use of leverage can increase pro-cyclicality and this can then lead to sharp falls in financial leverage and to a rapid sell-off of assets.

Systemic risks can also be caused by the **connections between shadow banking and the regular banking system**. These connections can arise if banks make shadow banking transactions or if they invest in financial instruments issued outside the banking system. Banks may also be connected to shadow banking if they have taken similar positions to the shadow banking entities and are exposed to similar risks.

The European Commission published a green paper on shadow banking in 2012[27], which based its definition of shadow banking on that of the FSB. The Commission identified possible entities and operations that could come under shadow banking, but emphasised that its list was not exhaustive.

Entities:

- Special purpose entities which perform liquidity and/or maturity transformation; for example, securitisation vehicles such as ABCP conduits, Special Investment Vehicles (SIV) and other Special Purpose Vehicles (SPV);
- Money Market Funds (MMFs) and other types of investment funds or products with deposit-like characteristics, which make them vulnerable to massive redemptions ("runs");
- Investment funds, including Exchange Traded Funds (ETFs), that provide credit or are leveraged;

27 European Commission. Green Paper on Shadow Banking, 2012

- Finance companies and securities entities providing credit or credit guarantees, or performing liquidity and/or maturity transformation without being regulated like a bank;
- Insurance and reinsurance undertakings which issue or guarantee credit products.

Activities:

- Securitisation;
- Securities lending and repo.

Both the European Central Bank[28] and the European Systemic Risk Board[29] agreed with the general outline proposed by the Commission. Both of them emphasised however that the definitions should remain flexible as shadow banking is not a static concept and can vary from country to country because both legal systems and changes in the law can be different.

The European Banking Authority (EBA) started public consultation in March this year[30] about the introduction of limits on the positions of banks with shadow banking entities, and within this it proposed a definition of shadow banking. The EBA proposal defines shadow banking in a similar form to that used by the FSB. In its definition, shadow banking entities are those that are engaged in credit intermediation, meaning they carry out banking activities which may include transformation of liquidity and maturities, leverage, transfer of credit risk or other similar activities, but that do not fall under consolidated or individual supervision. This definition does not include entities referred to in Article 2, paragraph 5 or Article 9, paragraph 2 of Directive 2013/36/EU (CRD IV), which are savings and loan associations, and public sector financial institutions. In this the EBA defines shadow banking partly through activities and partly through entities, which should not come under shadow banking as they are covered by financial supervision[31].

The IMF defines shadow banking as financial intermediaries or activities providing financial intermediation that are outside the regular banking system and do not have an official guarantee scheme.

Estimating the volume of shadow banking

It is hard to measure the volume of shadow banking because it operates outside the regulated sector and the forms it appears in can vary greatly between and within countries. The IMF has noted that shadow banking in advanced economies is largely a network of financial institutions

28 European Central Bank. Commission's Green Paper on Shadow Banking. The Eurosystem's Reply, 2012

29 European Systemic Risk Board. The ESRB's reply to the European Commission's Green Paper on Shadow Banking, 2012

30 European Banking Authority. Draft EBA Guidelines on limits on exposures to shadow banking entities which carry out banking activities outside a regulated framework under Article 395 para 2 Regulation (EU) No. 575/2013, 19 March 2015

31 The EBA has proposed not classing under shadow banking those investment funds that are defined as UCITS, which are not money market funds.

and operations in which credit intermediation between lenders and borrowers is divided into groups of transactions through securitisation. Shadow banking in developing countries in contrast is mainly used to supply credit from lenders to borrowers[32].

The FSB recommends that the following points should be considered in estimating the volume of shadow banking.

- Firstly the broader definition should be considered, which classes as shadow banking all other financial intermediaries (OFIs) as defined in the financial account of the national accounts, other than insurers and pension funds or public sector financial institutions. The advantage of this is that the data are accessible and comparable between countries.

- Secondly, shadow banking can be taken more narrowly to mean non-bank financial intermediaries or transactions that could in themselves present a systemic risk to financial stability. This excludes from the broader definition those financial institutions that do not directly intermediate credit, and financial intermediaries that are part of banking groups and so are subject to financial supervision.

The IMF has proposed an alternative approach whereby the volume of shadow banking is measured by the liabilities that are not related to banks or to the core activities of other financial companies. For a narrower definition this could also exclude liabilities within the financial sector that are not connected to core activities. This approach requires specific data to be available, and so the FSB solution is used more widely.

Shadow banking in Estonia

Applying the broadest definition of shadow banking to Estonia, including all **other financial intermediaries that are not insurers or pension funds**, gives a volume of 6.8 billion euros for the third quarter of 2014, equal to 32% of the financial assets of banks, or 36% of GDP (see Figure A1.1). This definition includes those investment funds that are not pension funds.

Savings and loan associations are listed as bank-like deposit-taking corporations in the financial account and the EBA has recommended that these associations should also be left out from the definition of shadow banking. Savings and loan associations do not fall under financial supervision though, so they currently classed under shadow banking.

Savings and loan associations are cooperative financial institutions whose main function is to provide members with deposit and loan facilities. Their membership has grown sharply in recent years in Estonia, with around one thousand new members joining in 2014, more than half of them joining the Tartu savings and loan association. Members join savings and loan associa-

32 IMF. Shadow Banking Around the Globe: How Large, and How Risky? Global Financial Stability Report, October 2014

Figure A1.1. Estimated volume of non-bank credit intermediation in Estonia from financial account data and broadly defined

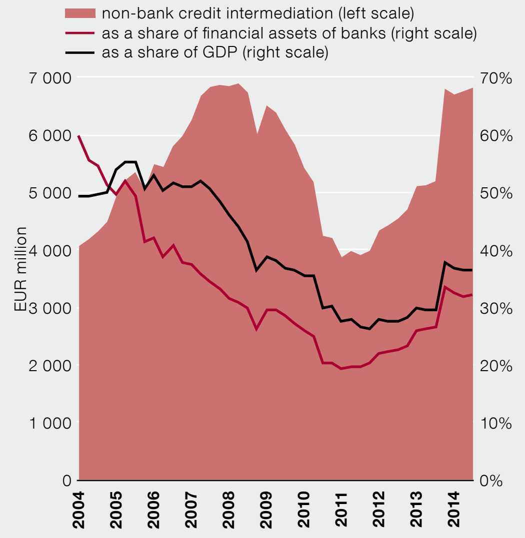
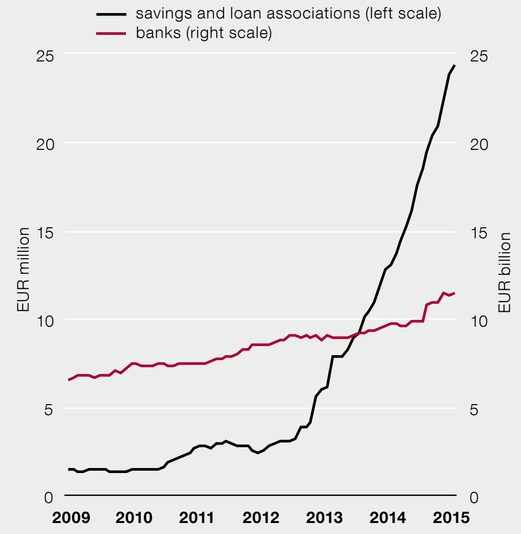


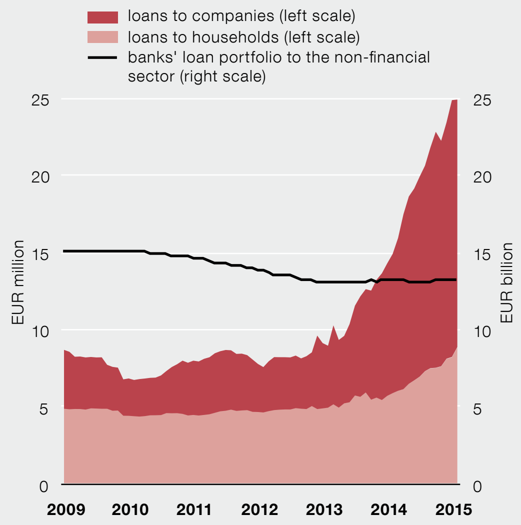
Figure A1.2. Demand and term deposits in banks and savings and loan associations



tions primarily because they offer a higher rate of interest on deposits than the commercial banks do, as their rates last year were around 5%. The demand and term deposits they held last year increased by 85% to 22.4 million euros (see Figure A1.2), and the loans they issued increased by 71% in the same period to 23.4 million euros (see Figure A1.3).

Shadow banking can also be defined more narrowly as those **financial institutions that could present a risk to financial stability**. The FSB recommends that this definition should exclude financial institutions that fall under consolidated financial supervision; financial institutions that do not engage in credit intermediation, such as some investment funds; and other financial institutions that do not pose systemic risks. The lease companies

Figure A1.3. Savings and loan associations' loan portfolio to the non-financial sector



that are part of banking groups in Estonia could evidently be seen to fall into this category.

Defining **investment funds** is problematic, as at least some of them should probably not be classed under shadow banking. As funds require thorough analysis, and as they are relatively small in size, the definition currently used is all investment funds that are not pension funds.

The largest group classed under shadow banking is **other financial institutions**. This includes various lenders and financial companies, and also a large number of companies that have been set up to manage the investments of individual private investors in order to optimise their income tax payments. Financial institutions engaged in intermediating credit, such as instant or pay day loan companies, should be classed under shadow banking, as they could pose a systemic risk. Their activities include transformation of maturities and liquidity and the use of leverage. Shadow banking should not include financial companies that are investment companies established to manage the investments of an individual investor, as long as they do not grant loans or pose systemic risks.

There has been a lot of public discussion of **crowdfunding** in Estonia in the past few years. Crowdfunding is a form of funding that uses small investments from large numbers of investors[33]. The parties to the transaction are mainly brought together over the internet by specialised platforms created for crowdfunding and run by companies that find projects and investors who want to invest in those projects, and provide technical solutions to allow them to do so. Although crowdfunding may seem at first glance to fall under the definition of shadow banking, it cannot really be classed as such in the form it has so far taken in Estonia. As there is generally no transformation of maturities and liquidity, no transfer of credit risk and no use of leverage, crowdfunding in its current form does not pose any systemic risks. Lenders make agreements with borrowers directly, and the company providing the technical platform in most cases does not take any position itself.

Over five thousand economic units were reclassified by Statistics Estonia as Other Financial Intermediaries from 1 December 2014, though some of them were economically inactive. All companies operating as financial institutions had to register themselves with the Police and Border Guard Board by 1 July 2014, and at the end of March there were more than one thousand such entities registered in the Register of Economic Activities. The law on creditors and credit intermediaries states that anyone providing consumer credit needs to apply to the Financial Supervision Authority for a licence, and this makes it possible to estimate the actual asset volumes and risks of the shadow banking entities engaged in credit intermediation. The Financial Supervision Authority estimates there may be around a hundred applicants for licences.

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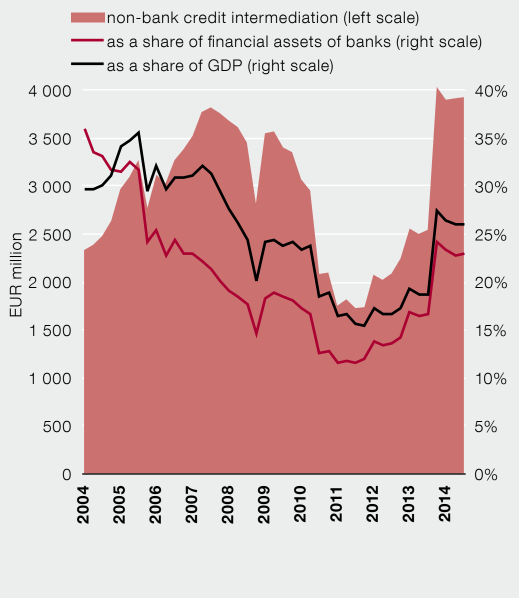
33 For more on crowdfunding see Box 2 in Financing of the Economy 2015 published by Eesti Pank.

The narrower definition of shadow banking currently excludes financial auxiliaries, as they generally do not engage in credit intermediation.

Under the narrower definition, the volume of shadow banking at the end of the third quarter of 2014 was estimated to be around 3.9 billion euros, which was equal to 19% of the financial assets of banks, or 21% of GDP (see Figure A1.4). As there are a number of companies listed as other financial institutions that should probably not be classed under shadow banking, this figure can be assumed to overestimate the real amount by a wide margin, meaning the actual volume of shadow banking is probably substantially smaller.

Shadow banking in large economies also includes securitisation, or lending against securities, but the financial markets in Estonia are small and illiquid, so there is little securitisation or lending against securities in Estonia, and shadow banking mainly consists of credit intermediation from lenders to borrowers.

Figure A1.4. Estimated volume of non-bank credit intermediation in Estonia from financial account data



Conclusion

Shadow banking in Estonia can cover savings and loan associations, financial institutions outside the regular banking system that intermediate credit, and some investment funds. The volume of shadow banking assets cannot be estimated using data from the financial accounts as other financial intermediaries also include companies that do not intermediate credit directly. The law on creditors and credit intermediaries states that anyone providing consumer credit needs to apply to the Financial Supervision Authority for a licence, and this allows the asset volumes and risks to the financial system of non-bank financial intermediaries that engage in credit intermediation to be estimated more accurately.