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SME Funding Without Banks?

On the Interplay of Banks and Markets¹

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Abstract

The Capital Markets Union-project of the European Commission aims for an increase of market-based debt financing of small and medium-sized enterprises (SMEs), complementing bank lending. In this essay we argue that rather than focussing on pure non-bank lending, a reasonable mix of bank- and market-based financing should be considered. Banks are said to have a comparative advantage in critical lending functions such as credit screening, debtor monitoring and debt renegotiation. All forms of lending require a persistent skin-in-the-game of critical players in order to be effective. The regulator should insist on full disclosure of skin-in-the-game, thereby improving capital allocation and reducing systemic risks.

¹ SAFE policy papers represent the authors' personal opinions and do not necessarily reflect the views of the Research Center SAFE or its staff.

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1. Banks versus Markets?

Common wisdom, evidenced by numbers, tells us that funding of companies is largely bank based in Continental Europe and market based in the USA. The ratio of bond financing over total corporate credit financing is about 70 percent in the USA versus less than 50 percent in Continental Europe. Also the higher ratio of market value of listed shares over GDP indicates different roles of banks in both parts of the world. Hence, in Continental Europe banks appear to be dominant players in debt origination, while in the USA their role is more limited. There is some evidence that bank-based economies are less stable, and possibly even slower growing than market-based economies (Langfield and Pagano, 2015³). One reason for the stimulating role of market-financing is that on average bank lending is of a shorter term and therefore also more cyclical than bond based lending. Another reason is that banks, particularly smaller and regional institutions, are more exposed to correlated losses in their portfolios than institutional and other private investors. This was evidenced by the recent financial crisis which affected banks badly, and also pushed the world economy downwards in a significant way. Quite differently, the new economy crisis in 2001 likely hit institutional equity investors more severely, since they had invested significantly in stocks of new economy firms. Banks remained largely unaffected by this crisis, and there was little effect on the world economy (Franke and Krahen, 2009 b).

The European Commission recently initiated a longer-term policy agenda aiming for an enhanced Capital Markets Union, with a stronger role of market-based corporate financing, possibly reducing the strong dependence on bank lending which is typical for European markets. The key question is whether market-based financing is a viable channel for funding of small and medium sized enterprises (SMEs) that is sufficiently independent from banks in order to partially replace bank funding. Or, alternatively, does effective funding of SMEs rather require a complementary relationship between banks and markets, with their roles being intertwined and dependent on each other?

Existing documents discussed at the EU level, in particular the European Commission's Green paper (2015), suggest a list of policy measures to enhance the growth of non-bank financing for the real economy, particularly SMEs, newly founded and start-up companies (SUCs).

In this essay, we broadly support the general direction of this policy initiative, namely strengthening the capital market leg of the financial system in Europe. However, we are sceptical about the potential for new, bank-free debt financing instruments. We rather believe that growth in SME and

³ There is a large literature on the bank-growth relationship, and Langfield/Pagano's findings have been questioned, see the discussion of their paper in *Economic Policy*.

SUC financing will mainly be achieved by leveraging the technical expertise of banks, where ‘technical expertise’ relates to several information-related abilities of banks such as screening, monitoring and renegotiating lending relationships. We will argue in this essay that welfare enhancing growth in market-based financing rests on a smart combination of banking and market functions: the role of banks as information producer and monitor should be combined with the role of markets as liquidity provider, (partial) risk absorber, and point of access to investors. Therefore, the “either-or” language prevailing in the current Capital Markets Union-debate is more aptly replaced by an “as well as” language.

Credit intermediation is increasingly decomposed by assigning different functions in the value chain of credit financing to different economic agents. What is the optimal industrial organization of the lending business? Under which conditions may the traditionally relationship-based role of banks be taken over by other players, or even by the “market”? How can informational and other problems in lending be overcome by non-bank players? How can the associated agency problems be solved satisfactorily? What are the limits of assigning different roles in lending to different agents? The main reason why banks emerged as strong intermediaries were the difficulties of negotiating and agreeing enforceable lending contracts between the ultimate supplier of funding, typically a household, and the ultimate user of funding, typically a firm. Banks are using their institutional design and expertise to bridge this household-firm divide implied by asymmetric information between the contracting parties.

New financial instruments have emerged. We will assess their sustainability using basic insights from contract theory. We focus on syndicated lending instruments, broadly defined. This comprises a set of debt instruments allowing for risk sharing among at least two lenders. These creditors may be banks and/or non-banks. Syndicated lending instruments – broadly defined – comprise corporate bonds, credit securitizations, syndicated loans narrowly defined, private placements, club deals, as well as credits granted by investment funds and asset managers, including credit funds. These instruments differ in many institutional features. But as any credit, these instruments have to overcome information and incentive problems that characterize the most elementary aspect of the borrower-lender relationship.

In addition, syndicated lending has to deal with information and incentive problems between lenders. The contract between lenders has to specify the obligations of each lender and the details of credit risk sharing. To handle these problems effectively, the lenders have to allocate responsibilities among themselves. Who should be responsible for collecting and analysing borrower related information, designing the lending contract with the borrower, monitoring the borrower, and leading a renegotiation of the terms and conditions?

We also emphasize a common characteristic of syndicated lending instruments, namely the appropriate level of risk retention by the arranger/manager of the debt financing. Finally, third parties like rating agencies, accounting firms and trustees have to be involved formally.

We argue that regulators should not promote lending without banks, instead they should try to improve market mechanisms with banks being integrated. For a better capital allocation, banks should assume the roles in which they have a comparative advantage. The regulator should motivate them to take on these roles. However, they need to transfer the default risk to non-banks, subject to the condition that the banks which are acting as lead managers in syndicated lending transactions retain enough skin in the game to constrain adverse selection and moral hazard.

We do not address equity financing of SMEs including venture capital in this paper. We also exclude large companies which are usually listed and rated, and, thus, are rather transparent. Large European companies have comparatively little problems in accessing capital markets by issuing bonds, not all that dissimilar to the US. Further, no attempt is made to deliver a full analytical or empirical account of any lending instrument.

In section 2 we discuss various syndicated lending instruments, broadly defined, and discuss select evidence. In section 3, we compare different financial players with regard to their capabilities important for lending. In section 4, we draw some cautious policy conclusions relating to the European Capital Markets Union-project.

2. Syndicated Lending Instruments, broadly defined

Since this paper deals with lending instruments for SMEs, it is necessary to specify the set of firms which may be affected. Do all SMEs belong to this set? The European Commission ([EU-Recommendation 2003/361](#)) classifies a firm as an SME if the number of employees is below 250, the annual revenue is below EUR 50 mn, or total assets are below EUR 43 mn. According to the German commercial code (HGB § 267) a medium sized corporation is defined as having less than 250 employees, less than EUR 40 mn revenue and total assets of less than EUR 20 mn. As far as lending volumes are concerned, it seems appropriate to say that a typical SME-debt claim will probably not exceed EUR 20 mn. At the lower end of the volume scale, individual loans may also be too small to justify the costs of some type of sharing arrangement among creditors. We cannot specify an explicit lower limit, and such limits may even be tested in the future, given the advances of information processing. Quite generally, the higher the default risk of a loan, the smaller is the critical loan volume for switching to syndicated lending. Most small enterprises will normally obtain a loan from a single lender so that our analysis does not apply to these firms.

2.1 Bonds

An important syndicated lending instrument, in the broad sense of the term, is a corporate bond. Usually, banks are involved as arranger and underwriter in the issuance of a bond. Underwriting indicates the bank's confidence in the issue. If the bank buys part of the bonds in the underwriting process, it may gradually onsell these bonds so that the entire default risk is transferred to third party investors. Underwriting motivates the bank to analyse the quality of the borrower carefully so that adverse selection problems faced by investors are mitigated. Also ratings of bonds before issuance help investors to cope with informational deficits.

There is a vast empirical literature on bond markets, particularly the US bond market. The market for corporate bonds of large German firms is said to operate effectively, implying accessibility and sufficient market depth. Note that many bonds are often issued offshore for tax reasons. For smaller companies, in contrast, the bond market is much less liquid or even accessible. There has been some recent growth in the market, relative to the numbers since the onset of the financial crisis. The experience so far is nevertheless quite disappointing, both volume-wise and performance-wise. For example, following a recent study, there are 24 bonds due for repayment in 2016. At the beginning of 2016, one third of these issuers were already insolvent (Bösl, 2016). This is a high default frequency, given the firms' average initial B-rating.

		Rating of issue					Sponsor of issue				
Bond price (%)	No. observed	No rating	Rating by S&P, Moody	Rating by Credit-reform	Other rating agencies	∑	DB, CB, IKB, UBS	Baader, Lampe, Quirin, Oddo, Warburg	Other sponsor or n.a.	Self emission	∑
< 10	24 (14,0)	1 (4,2)	1 (4,2)	15 (62,5)	7 (29,2)	24 (100)	2 (8,3)	6 (25,0)	15 (62,5)	1 (4,2)	24 (100)
10, < 80	31 (18,0)	8 (25,8)	-	19 (61,3)	4 (12,9)	31 (100)	-	13 (41,9)	17 (54,8)	1 (3,2)	31 (100)
80, < 90	15 (8,7)	3 (20,0)	-	11 (73,3)	1 (6,7)	15 (100)	-	4 (26,7)	11 (73,3)	-	15 (100)
90, < 100	41 (24,4)	9 (22,0)	1 (2,4)	23 (56,1)	8 (19,5)	41 (100)	-	8 (19,5)	32 (78,0)	1 (2,4)	41 (100)
≥ 100	60 (34,9)	26 (43,3)	6 (10,0)	21 (35,0)	7 (11,7)	60 (100)	11 (18,3)	23 (38,3)	22 (36,7)	4 (6,7)	60 (100)
∑	171 (100)	47 (27,5)	8 (4,7)	89 (52,0)	27 (15,8)	171 (100)	13 (7,6)	54 (31,6)	97 (56,7)	7 (4,1)	171 (100)

Table 1: This table presents descriptive statistics of 171 German SME-bonds listed at exchanges as of February 10, 2016. Depending on its price, each bond is assigned a price range. Within each price range, the number of bonds with some or no rating is shown. Also the number of bonds with certain sponsors is shown. DB = Deutsche Bank, CB = Commerzbank, IKB = Deutsche Industriebank. N.a. = no answer. This table is compiled

from the data on single listed SME-bonds, provided by: Notierte Mittelstandsanleihen - BondGuide <http://www.bondguide.de/notierte-mittelstandsanleihen/>.

Table 1 provides some publicly available numbers on listed German SME bonds, based on Notierte Mittelstandsanleihen – BondGuide. The numbers in Table 1 are supposed to give a snapshot of market activity and market pricing on February 10, 2016.

About 35% of the bonds are priced over par. Given low liquidity and other biases, also bonds priced above 90% may be non-distressed. About 40% are priced below 90%, suggesting that these bonds are more or less distressed.

52 % of the bonds are rated by the German rating agency Creditreform. For all price ranges below 90%, the share of bonds rated by Creditreform is upward biased (higher than 52 %) and downward biased for prices above par. Interestingly, 6 of the 8 bonds which were rated by S&P or by Moody's, are quoted above par. But these well-known agencies rated bonds in less than 5 % of all cases. 7 of 27 bonds, rated by other rating agencies, are priced below 10% indicating a strong bias towards distress. These findings suggest that ratings are important. However, strong differences apparently exist in the quality of ratings across rating agencies. Surprisingly about 43% of the non-rated bonds are priced above par.

Looking at the sponsors, bonds sponsored by four big banks are mostly priced above par. The number of bonds sponsored by small banks is over proportional in the price range of 10 to 80%, but also above par. The number of bonds sponsored by "other sponsors" is over proportional in the price range below 10% and under proportional above par. Interestingly, 4 of 7 self-issuance bonds (i.e. without a sponsor) are quoted above par.

The four big banks appear to be successful in terms of bond performance, the smaller banks indicate a mixed performance and the "other sponsors" are mostly associated with weak performances. These results suggest that the reputation of the sponsor is a quality indicator and that banks have an advantage in screening borrowers compared to nonbanks. Summarizing, even though most of these bonds have an initial rating, it appears that gate-keeping in this market is insufficient. In other words, access to this market was not prudently managed and supervised. Clearly, ratings alone are not sufficient to tackle informational problems.

Another determinant of bond performance relates to the monitoring of bonds and potential renegotiations/restructurings. After the issuance date, a trustee is responsible for monitoring the debtor's ability to repay coupons and principal. The bond indenture may explicitly restrict responsibilities of the trustee in order to protect him against litigation. Moreover, the trustee typically has no skin in the game, i.e. does not own any of these bonds. This setup may weaken the protection of creditors provided by the trustee. It may also help to explain why the observed default

frequencies of bonds are higher than those for loans in respect of the same debtor (Emery and Cantor 2005). Also, some anecdotal evidence indicates that restructurings of distressed SME-bonds are hampered by third parties involved in the renegotiations, for instance financial advisors, who are primarily interested in earning money rather than in an effective restructuring result (Bösl 2016).

There are also other European markets for SME bonds, some are subsidized by governments. A particular example is the Italian market for mini-bonds (for more details see the OECD-study of Nassr and Wehinger, 2015). So far these markets had only very limited success. Nassr and Wehinger (2015, p. 166) conclude “SMEs are to a large extent ill-equipped for direct debt issuance on corporate bond markets, thus the market for SME bonds is relatively small in terms of outstanding volume.” Also, the ECB survey on the access to finance of enterprises in the euro area shows that issuing debt securities is practically irrelevant for SMEs (ECB, 2015).

Often the US is cited as an example where SMEs have much better access to bond financing relative to continental Europe. Nassr and Wehinger (2015) as well as Stiglitz (2016) do not support this view. Apart from bank loans, kept by banks, “loans, *partially guaranteed by the US Small Business Administration*, have a leading role in the SME securitization space in the United States” (Nassr and Wehinger (2015, p.115). Even without detailed data about the bond issuance proceeds in the US, some findings indicate that the situation in Europe is not much different from the US. For example, Barclays’ overview of US high yield bond issuance covering the beginning of 2016 until March 10, 2016 displays 36 issues, with only 2 issues having issuance proceeds of less than USD 100 mn, one with USD 77.9 mn and the other one with USD 87.1 mn (Barclays, 2016, last page). Even these volumes require sizeable medium-sized borrowing companies. Also discussions with finance professors in the US and with other financial experts indicate that bond issuance proceeds below USD 100 mn are the exception, in particular if the default risk is substantial. This is not surprising given the high fixed cost of bonds issuance. A bond issuance appears to be attractive only for large issuance volumes. Therefore, we conclude that SME bond financing is difficult even in a well-developed capital market like the US, probably for reasons of costly information production and other processing costs that require larger issuance volumes to be viable.

However, as pointed out by Raettig (2016) and Hedtstück (2015a), (2015b), there is a so-called Nordic mini-bond miracle. About 1500 high yield bonds with an average volume of EUR 18 mn were issued. This market is managed by the institution Nordic trustee, owned by various banks and institutional investors, which safeguards the interests of the bondholders against the issuers. More analysis is needed to better understand this market which could become a role model.

2.2 Credit Securitization

A relative of bond financing is credit securitization. In a securitization transaction the default risk of a portfolio of loans and/or bonds is transferred to a bankruptcy remote special-purpose vehicle (SPV) which transfers a large part of the default risk to investors by issuing bonds. Originators of these transactions are mostly banks, but also investment firms. Rating agencies are important players in these transactions since they rate the individual credit claims and also the bonds issued by the SPV. The bonds issued by the SPV are tranching subject to strict subordination, the higher rated bonds bear default losses only after the lower rated bonds have been completely wiped out by earlier default losses. Securitization transactions boomed until 2006, in particular the securitization of residential mortgage backed (RMB) loans. Since many tranches of these RMB-securitizations incurred heavy losses in the financial crisis, the number of securitization transactions went down dramatically, except for transactions securitizing special loans such as auto loans (Franke, 2013). Collateralized debt obligation (CDO) transactions are backed by corporate loans/bonds⁴. The global CDO issuance volume peaked at USD 481 bn. in 2007, then declined sharply to a low of USD 4 bn. in 2009 and went up again to a rather modest amount of USD 86 bn. in 2015 (sifma, Global CDO Issuance, electronic website). This strong decline in demand for securitization transactions is due to the mistrust of investors as a result of the sub-prime crisis and allegedly high risk weights for securitization tranches. While the outstanding volume of CDO-transactions went down after the crisis, the outstanding volume of asset-backed securities issued by the small business administration (SBA) in the US has monotonically increased since 1985 until 2013 (Nassr and Wehinger, 2015). In view of the subsidizing guarantees given by the SBA, the growth in its securitization transactions may not be surprising.

A few characteristics regarding the securitization industry and the processing of securitization transactions appear to be important to fully understand the caution of investors:

1. Some of these transactions, in particular residential mortgage backed securities (RMBS)-transactions, are based on long value chains. Many parties are involved such as loan brokers, wholesale financiers, banks, rating agencies, accounting firms, law firms, servicing firms. Each party specialized in certain jobs so that the transactions are supposed to benefit from more expertise and lower cost. However, the involved parties have different objectives so that their interaction is subject to many agency problems. This may explain why loan brokers attracted many bad loans, rating agencies overrated transactions and originators and other financial intermediaries sold securitization tranches to investors overstating the quality of these investments (Franke and Krahen, 2009b). Many banks paid or still pay high penalties for misrepresenting the quality of securitization tranches. The lesson to be learnt is that long value chains generate severe quality problems which apparently

⁴ Real estate investments of corporations are not included in this definition. They may be securitized through Commercial Mortgage Backed Securities (CMBS).

are difficult to overcome by quality controls. This explains why the European Commission promotes simple, standardized and transparent securitization transactions.

2. An advantage of securitization transactions is that idiosyncratic risks of single credit claims are diversified in large portfolios of claims. Therefore, the risks of such portfolios are mainly driven by systematic risk factors which may be easier to forecast. But the systematic risk of securitization transactions depends heavily on the strength of the statistical interdependencies between defaults of different loans/bonds. There is little agreement on the strength of these interdependencies and, hence, on the systemic risks of transactions. If the systemic risks are erroneously underestimated, then the loss rate distribution of the portfolio of securitized claims will be misestimated.

3. An investor who buys a securitization tranche is interested in the default risk of this tranche. The estimation problems of the tranche risks are aggravated by strict subordination of securitization tranches (Franke and Weber, 2012). If all tranches were ranked *pari passu*, the expected loss rate of the portfolio would be the crucial information for an investor. Given the strict subordination of securitization tranches, the default risk of each additional tranche hinges strongly on the standard deviation and on the shape of the loss rate distribution. In view of the difficulties in estimating the portfolio loss rate distribution, the estimation of the tranche loss risk may not be reliable. This might simplify and motivate the misrepresentation of information on tranches to investors.

4. As a response to these problems the originator of the transaction could retain a portion of the default risk. It would render adverse selection less attractive for the originator and also mitigate moral hazard if the originator stayed permanently involved in the management and servicing of the portfolio loans. However, as the first loss position mostly took more than half of the expected default losses (Franke, Herrmann and Weber, 2012) in the past, originators often sold most or all of this position implying very little risk retention. Regulators now require the originator to retain 5% of the default risk. While 5% seems to be a respectable number, the crux of the current regulation is the ambiguity involved in measuring the extent of retention. As it stands, the retention requirement can largely be avoided (Krahn and Wilde, 2016).

5. A trustee is responsible for safeguarding the rights of the investors. Effectively renegotiating and restructuring distressed claims while observing the strict subordination of tranches is a complicated task. It may create conflicts of interests between owners of different tranches so that the owners of some tranche may sue the trustee if they feel that he did not pay enough attention to their interests.

These considerations may explain why investors still view securitization tranches as a questionable investment. Transferring 95% of the default risk could stabilise the financial system if two conditions were met: First, the current investors are largely non-banks. The empirical evidence, however, indicates that before the crisis most risks were transferred between banks, including money market

funds which sought investment in AAA-tranches (Franke and Krahn, 2009a). Understanding and managing the risks of securitization tranches may be a domain of banks and specialized players such as hedge funds, but not of other private investors. Second, securitization may only stabilize the financial system if the originating banks do not replace the securitized default risk by extending new loans and securitize them again. Otherwise the economy may end up with even higher systematic risk. In an empirical analysis of banks which lend and securitize, Franke and Krahn (2006) find that the systematic stock price risk of these banks, measured by their betas, actually grows with new securitization transactions.

Thus, it appears that so far no successful concept for the securitization of SME loans has been developed. As most SME loans are provided by banks, it will be difficult to bypass banks in this business. Of course, financial stability might be improved if banks transfer a substantial part of the default risk through securitization to non-banks.

2.3 Syndicated Loans

2.3.1 Involvement of Banks and Non-Banks

Given the difficulties of funding SMEs through bonds and securitization transactions, it is natural to consider other debt financing instruments where non-banks might play a major role. The most prominent non-securitized syndicated lending instrument is the syndicated loan. Its volume is higher than that of bonds and equity issues together (Drucker and Puri, 2007). The typical lead arranger and lead manager is a bank. Non-banks may be lead arrangers in market niches in which they develop a special expertise (Grupp, 2015). Nandy and Shao (2010) and Lim et al (2014) argue that non-banks are “lenders of last resort”, they provide credit for companies which have difficulties getting money from banks. In leveraged loans⁵, non-banks provided 70% of the funding in 2007, starting from close to zero % in 1970 (Nandy and Shao, 2010). While traditional syndicates were composed of banks only, non-banks including insurance companies increasingly joined syndicates as financiers.

The dominant role of banks may also be due to the regulation in some countries requiring a banking license to perform commercial lending. The European Commission and the German supervisory authority Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) now permit commercial lending by Alternative Investment Funds under certain conditions⁶. But still relational banking plays a strong role. Banks have very good information on the borrower so that credit screening is rather cheap. Also the borrower often prefers “his” bank as a lead arranger and manager because confidence in fair cooperation has been built up over time. Cross-selling of financial services is another advantage of

⁵ Leveraged loans are loans to firms that are already highly indebted.

⁶ Rundschreiben der BaFin vom 12.5.2015. Communication of the European Commission: Action Plan on Building a Capital Markets Union, 30.9.2015.

relational banking which may even motivate banks to offer lower loan interest rates to the customer. Hence, both the bank and the customer have an ongoing interest in maintaining a good relationship.

In a recent analysis of a subset of data on syndicated US-loans covering the years 1997-2015, Fornol (2016) finds that in 77% of the deals only banks are syndicate members and only in 5.7% of the deals a non-bank is a lead arranger⁷. The share of funding provided by non-banks is 3.8%. Analysing leveraged loans only, defined as loans with a credit spread of at least 125 bp over LIBOR or another reference rate, Fornol (2016) finds that non-banks provide about 34% of revolving credit facilities. Using more recent data Lim et al. (2014) and Ivashina und Sun (2011) arrive at shares of 70% and 62%, respectively. Analysing leveraged term loans A, B, C, D⁸ only, Fornol finds that the share of non-banks increases with lower quality of loans indicated by a longer maturity. Almost 13% of term loans B, C and D are managed by a non-bank. Their funding share is about 71.5% compared to only 40.6% in term A loans. Surprising is the high funding share of 45.2% of the lead arranger in institutional loans. These are term loans usually designed for funding by institutional investors. This high share is probably explained by the desire of the other syndicate members to ensure a strong interest of the lead manager in monitoring the borrower and renegotiating/restructuring distressed loans.

These findings indicate that non-banks are much more interested in lower quality-loans than banks. But still only 13% of the term loans B, C and D were managed by a non-bank. The dominance of banks in managing these loans indicates their comparative advantage in screening and management.

The informational advantage of banks is widely acknowledged in the literature, see for example Nini (2004) und Gianetti/Yafeh (2010). Nini finds that in emerging markets local banks participate in more risky loans relatively more often. Their participation reduces the credit spreads.

Cumming et al. (2015) analyse syndicated loans around the globe. They also find that mostly banks manage syndicates. Typically a revolving credit facility is combined with a few term loans of different maturities. In countries with strong creditor protection and efficient enforcement mechanisms the market for syndicated loans appears to be bigger and tranching is more likely.

⁷ Fornol observes an average of USD 103 mn and a standard deviation of USD 141 mn for the volume of syndicated loans. Given the strong skewness of the volume distribution, the median is clearly less than USD 100 mn. Fornol also observes an average of 6.5 and a standard deviation of 6.2 for the number of syndicate members. For Germany, Austria and Switzerland Dealogic reports some deals with a volume of more than EUR 1 bn and also various deals with a volume below EUR 1 mn.

⁸ These loans differ in maturity such that A loans have the shortest and D loans the longest maturity.

2.3.2 The Use of Covenants and Credit Quality

A very important task of credit management is monitoring the debtors. If a creditor finds out in the monitoring process that his claim is severely endangered, then he may want to take action. But he can do this effectively only if the debt contract allows him to do so, in particular if a credit covenant in the debt contract is violated⁹. Therefore we address these covenants here. The typical credit covenant defines a default event. For example, a technical default may be triggered if the leverage ratio of the debtor surpasses a limit, stated in the debt contract. This event permits the syndicate to renegotiate and restructure the loan. If the borrower does not agree, then the syndicate can immediately call the loan. Thus, covenants serve as an early warning system and as a strong lever of the syndicate to constrain the default risk by forcing the borrower to enter into contract renegotiations.

More covenants in a debt contract indicate, *ceteris paribus*, that the lenders attach more importance to potential renegotiations/restructurings of the credit. For single bank lenders, loan contracts in Germany traditionally did not include covenants. Still today loan contracts, based on a long term, trustful relation between the bank and the borrower, may not include covenants or only a few. According to financial lawyers the use of covenants is strongest in bank loan contracts, somewhat weaker in syndicated loan contracts and weakest in bond contracts. This suggests that impediments to [incentives for] renegotiations/restructurings are strongest [weakest] in bond contracts and weakest [strongest] in bank loan contracts.

A covenant may be considered an option for the lenders, at the expense of the borrower. Therefore, applying the costly contracting hypothesis (Smith and Warner, 1979), it follows that the lenders cannot impose more covenants on the borrower without granting concessions such as lowering credit spreads. A covenant is attractive for the lenders if its expected net benefit, defined as the gross benefit to the lenders minus their transaction cost of a renegotiation, exceeds the value of the concessions granted to the debtor. For the debtor the covenant is attractive if the value of the concessions is higher than the expected loss in strategic options.

It should not come as a surprise that covenants are less attractive if the probability of a default and, hence, of achieving renegotiation benefits is rather low¹⁰. Empirical evidence indicates that covenants are rare in agreements with investment-grade borrowers, but more frequent in the case of speculative-grade borrowers (Bradley and Roberts 2004, ACT 2013). Nandy and Shao (2010)

⁹ In Germany a creditor may call a loan if the debtor's situation or the value of a collateral has significantly declined (§490 (1) BGB).

¹⁰ The use of covenants varies with macro-conditions. Moody's (2016) documents the recent weakening of covenant protection in high yield-bonds. This was also confirmed in interviews with financial experts.

confirm the finding of Drucker and Puri (2007) that high default risk-syndicated loans arranged by institutional investors are subject to many covenants.

The value of the covenants for the syndicate depends on the quality of the monitoring and renegotiation process by the syndicate. Sufi (2007) finds that the lead manager has a higher funding share and the syndicate is smaller when the borrower requires more intensive and more deliberate monitoring. Mora (2013) observes a positive relation between the lead arranger's share and the number of covenants. Both findings suggest that a renegotiation may be more effective if the lead manager is more incentivized. Also the renegotiation cost is probably smaller, the smaller the syndicate and therefore the steering committee is. Hence, it makes sense to set up a smaller syndicate and to reinforce incentives of the lead manager if the likelihood of a renegotiation increases. This is consistent with Preece und Mullineaux (1996) who find that the transaction cost of writing a syndicated loan contract increases and the value of the renegotiation option declines in the growing number of syndicate members. Lee und Mullineaux (2004) find that syndicates tend to be smaller if less information about the borrower is available and the default risk is relatively high.

As every syndicate member can sell its share in the secondary market, the value of the renegotiation option may decline with a growing instability of the syndicate membership. The borrower may dislike trading of syndicate shares in a secondary market because he does not know the purchasers, the de-jure lenders. For this reason the borrower may, and usually does, insist on a transfer clause restricting the set of potential purchasers.

Whenever syndicate shares can be sold, it makes little sense to determine ex ante the composition of the steering committee responsible for renegotiations. Uncertainty about the future composition of the committee will lower the initial value of the renegotiation option. Moreover, a higher share of funding by institutional investors may render renegotiations less effective, *ceteris paribus*, because non-banks tend to have less renegotiation expertise than banks. This may explain why loans arranged by institutional investors are sold more often than those arranged by banks, as observed by Nandy und Shao (2010).

There is one caveat to the preceding discussion which relates to contract endogeneity: the set of contractual terms in a syndicated loan agreement, including the composition of the syndicate, loan shares, fee structure, covenant selection and covenant tightness is determined simultaneously and are thus mutually interdependent. In other words, there is no simple causality between contract terms.

The preceding discussion focuses on "standard" syndicated loans. These are defined as loans to debtors in industries for which the lenders have a "normal" or a general expertise and apply the same techniques across all borrower industries. However, we also observe "niche" players, i.e.

investors who specialise on lending to selected borrower classes or on selected borrowing instruments by applying specialized techniques. An example for such a niche is residential real estate lending. Another example are credit funds which specialise on mezzanine syndicate loans. These investors extend loans only to borrowers where they have an advantage in credit screening and monitoring compared to banks. The covenant protection depends on the equity characteristics of the loan. The more a loan features the characteristics of equity, the less covenants exist. Any covenant would impair the accountability as equity capital because it might trigger a default event before final maturity. If there are no covenants, usually other devices serve to protect lenders. For example, representatives of the lenders specialized in the debtor's industry may regularly discuss the business policy with the debtor to gain a more direct impact on this policy. Interestingly, many credit funds are related to a bank. This might be due to the previous regulation that only banks were allowed to perform commercial lending so that credit funds needed a fronting bank to pursue their lending business. Niche players may gradually replace banks as lenders.

2.4 Private Placements and Club Deals

Private placements are similar to syndicated loans, discussed in the previous section. In the European Union, banks were usually involved as placement agents which is likely due to regulatory requirements.¹¹ The transaction process is highly standardized and effectively organized. Usually, less than 10 investors participate. The best-known example in Germany is the *Schuldscheindarlehen*, a well-established, traditional funding instrument, mostly used by investment-grade borrowers. Often a bank sets up the contract for the *Schuldscheindarlehen* and then places it among various investors. The terms of the private placement are the same for all investors.

Club deals are more flexible than private placements. Even though the credit documentation is the same for all creditors, the borrower can negotiate the interest rate with each investor individually. This may allow the borrower to lower the overall cost of funding. Nowadays a credit advisor may advise the borrower, set up the borrowing contract and then look for investors to participate. The financial advisor is mostly looking for relational banks as creditors because this lowers the overall funding cost.

Summarising, relational banks still play a strong role in private placements and club deals. However, institutional lenders strengthen their participation in these transactions.

¹¹ A private placement is classified as investment service in the form of placing of financial instruments without a firm commitment basis – Art. 4 (1) No. 2, Annex I Section A (7) of MiFID I. Art. 5 No. 1 of MiFID I states that authorization for the performance of investment services is required by the Member States in accordance with Art. 5-15 of MiFID I. The provisions of MiFID II in this regard remained unchanged. Usually banks have such an authorization since they are subject to strict requirements.

3. Comparative Advantages of Banks and Non-banks in Lending Functions

To better understand the involvement of banks and non-banks in lending, we consider the main functions in lending and compare the abilities of banks and nonbanks to fulfil these functions. Non-banks are heterogeneous with respect to their expertise in screening, monitoring and renegotiating claims. For the purpose of a rather intuitive typology we distinguish three types of non-bank expertise. A nonbank may be a) an investment expert and an investor such as a pension fund or an

<i>Function in lending process</i>		<i>Banks</i>	<i>Non-banks</i>		
			Inv. expert & investor	Inv. advisor	Trustee
Credit screening	Standard	++	oo	oo	na
	niche	++	+++	+++	na
Obtaining cheap and flexible funding		++	oo	na	na
Monitoring the borrower	Standard	++	oo	oo	+
	niche	++	+++	+++	+
Renegotiating loans/bonds	Standard	++	oo	oo	oo
	niche	++	+++	+++	oo
Managing non-performing loans		-	na	na	na

Table 2: The table displays the strengths of different players in different functions in lending. Legend: “standard” refers to credit without specialized expertise of lender for type of borrower, “niche” refers to credit with specialized expertise of lender for type of borrower; +++ extremely strong, ++ very strong, + strong, oo satisfactory, - weak, -- very weak, “na” no answer because irrelevant.

insurance company with strong investment expertise, b) an investment expert only taking the role of an adviser, or c) a trustee. We suggest Table 2 as a basis for assessing the merits of different types of players for the key functions in the lending value chain, ranging from credit screening to the management of non-performing loans.

Table 2 has to be read with caution since it is based on rather intuitive assessments of comparative expertise. It clearly cannot replace a full and case-sensitive analysis. However, this reasoning should support a critique of an overly simplistic dichotomy of banks and markets. Our approach aims to allocate a lending function to those players which have a comparative advantage in performing this function.

As embedded in Table 1, the main functions in lending are credit screening, obtaining cheap and flexible funding, monitoring the borrower and renegotiating distressed loans/bonds. Table 1 suggests that banks have a comparative advantage in terms of the main functions in corporate financing with regard to a standard loan. Due to their access to central bank funding, they obtain cheap and flexible liquidity. Non-banks are not specialists in these functions unless they are niche players. An important difference between investment experts/investors and investment advisers is that the latter have no skin in the game except for their reputation. This may foster adverse selection and moral hazard. When trustees are involved in bond issues, they protect the contractual rights of bondholders, but do little in addition to this. Renegotiating bond claims is difficult for them because of the diverging interests of bondholders and the inability to provide fresh money without the help of other financial intermediaries. It is assumed in Table 1 that non-performing loans are regularly sold to specialized firms such as vulture funds, hedge funds or bank subsidiaries specialized on handling these loans. These firms attempt to extract as much money as possible out of these loans, ignoring the bank's relationship with the borrower.

Comparative advantages are not carved in stone. Banks today are effectively challenged by Financial Technology firms (FinTechs) in one of their core strengths, namely the credit screening. Some FinTechs collect large sets of data very effectively and provide investors with electronic tools to analyse these data. Hence, investors may perform a credit screening on their own and do not need to access a bank's knowledge. These electronic screenings may be more reliable than manual ones. If FinTechs do not have experience in lending to a certain type of borrower or certain classes of borrowers, they may be able to obtain some experience from analysing their data pool. However, they lack qualitative data about the borrower based on the expertise of credit specialists. Further, they do not have access to data about other financial transactions of the borrower, in contrast to relational banks. Banks' informational advantage may explain why they extend loans to less transparent borrowers at lower credit spreads (Barath et al., 2011). Although, a FinTech may mitigate potential informational gaps by asking the borrower to disclose his relevant data, it is difficult to see why banks may not obtain the same data for their credit screening.

Equally important, FinTechs do not take any default risks. They just provide a cheap electronic trading platform. Otherwise they would face restrictions imposed by the current banking regulation. This may limit the motivation to supply complementary services like producing reliable loan ratings. Every investor in a typical FinTech solution or platform is responsible for his own credit risk assessment. Given a cost advantage of FinTechs and assuming that banks can better rate loans of firms with various business lines, we conjecture that FinTechs particularly attract borrowers with narrowly tailored business models, typically small firms.

A disadvantage of banks in lending are the high regulatory costs, driven by micro- and macro-prudential risks. These costs may be similar for insurance companies investing in loans/bonds.

4. Comparing Securitization Transactions and Syndicated Loans

As the European Union promotes securitization transactions and syndicated loans with less involvement of banks, it is instructive to compare both arrangements, keeping in mind that CDO-transactions still suffer from reduced global issuance volumes while syndicated loans, private placements and club deals appear to be attractive to both creditors and borrowers. We analyse several aspects.

1. (Economies of scale) Syndicated loans are usually not available to small enterprises because the additional transaction costs relative to single lender-loans are not matched by additional diversification benefits. But a bank may pool many small single lender-loans in a securitization transaction and, thereby, transfer substantial parts of the default risk.

2. (Information asymmetry - transparency) With respect to information opaqueness, syndicated loans to larger firms may be classified as simpler and more transparent financial products than securitization transactions. The former focus on one borrower only, while the latter usually requires information on many borrowers and their interdependencies. All syndicate members have the same access to detailed information on the borrower, the lending contract and the involvement of syndicate members. Hence, information asymmetry will typically play a smaller role in syndicated loans than in securitization transactions.

3. (Tranching) If there is any tranching at all in a syndicated loan, e.g. through a combination of a short term credit line and a term loan, its structure is rather simple. Predicting loss rates of a single tranche is relatively easy. In the case of a speculative-grade borrower, tranching is rather an exception, since lenders usually take such kind of risk for a single term only. Revolving credit facilities are mostly provided by bank syndicate members while the other loans may be funded by bank and non-bank syndicate members.

Simple tranching, or no tranching at all, will typically reduce potential conflicts of interests between syndicate members and harmonize incentives among the lead manager and the ordinary members of the syndicate. Syndicate members use to agree ex-ante on the formation of a steering committee responsible for the renegotiation process in the event of a technical default or an outright distress. Its members provide the majority (typically about 2/3) of the funding. The lead manager is usually part of this group.

Compared to the participative setup in a syndicated loan default, the trustee in a securitization transaction basically acts on his own when he enforces the contractual creditor rights. Otherwise, he has rather limited responsibilities. Given the strict subordination of tranches in a securitization transaction, conflicts of interests in an ongoing renegotiation process between owners of different tranches may emerge. These incentive conflicts may impose substantial litigation risks not only on the trustee, but also on the holders of more senior tranches. Moreover, in most cases, the trustee has no skin in the game except for his reputation. Therefore, this setup for handling distressed loans appears rather ineffective compared to that for a syndicated loan.

4. (Confidentiality) Small and medium sized (SME) borrowers may prefer a syndicated loan because confidential information is not disclosed to the public, or even to other investors. A transfer clause ensures that the confidentiality obligation survives the transfer date of the loan contract. By contrast, in a securitization transaction all tranche holders are entitled to access information on securitized claims. Information is often made public via an offering circular. Preference for confidentiality of borrower information may be stronger in some countries, like in Europe, than in others. Note, however, that securitization transactions may be set up as synthetic transactions. In this case the borrower does not face the risk of a loan transfer and the subsequent disclosure of information to investors.

5. (Skin in the game) The average funding share of the lead manager is about 40.7% if the syndicate is composed of banks only. It grows from 28.3 to 49.5% with a higher share of non-banks (Fornol, 2016). Hence, the implied default risk retention of the lead manager of a syndicated loan is much higher than the prescribed 5% of an originator in a securitization transaction. This problem of low skin-in-the-game for sponsors of a securitization is aggravated by the possibilities of mitigating risk retention in the current legislation (Krahn and Wilde, 2016). Therefore adverse selection and moral hazard of the lead manager tend to be constrained more effectively in syndicated loans as opposed to securitization transactions.

6. (Transaction cost) The transaction costs of a syndicated loan are likely lower than that of a securitization transaction. The setup of a separate legal entity, an SPV, and the associated contracts between the various involved parties are avoided. A rating of an agency is not necessarily required. The communication between the lead manager and other syndicate members is rather simple due to the small number of members and their repeated interactions in different syndicated loan transactions.

One might argue that tranches of syndicated loans are less tradable than securitization tranches. Hence, creditors might charge a higher illiquidity premium on syndicated loans. But this is not

obvious. Trading platforms for tranches of syndicated loans have emerged over time. Furthermore, liquidity of securitization tranches is largely limited to the large and super-safe AAA-tranches.

7. (Regulatory cost) The discussion about the calculation of risk weighted assets in order to determine the required amount of equity capital to be held by a bank illustrates the significance of regulatory costs. The risk weight of a syndicated loan may be 100%. However, if a bank sells a part of its loan share to an investor who is not subject to equity capital requirements, the capital relief is proportional to the transferred loan share which implies regulatory arbitrage.

The risk weights for AAA-tranches of a securitization transaction are very low, but increase for tranches with a rating below BB- to 1250%. Retaining the first loss position also requires equity capital one-to-one. Therefore bank-originators may prefer to hold mezzanine and senior tranches instead of first loss positions, unless the regulator prescribes otherwise. Selling the first loss position to an investor who is not subject to equity capital requirements, allows for strong regulatory arbitrage.

5. Policy Lessons and Recommendations

The previous discussion highlighted various aspects. Firstly, SME-bond financing is troubled by opacity of bond issuers, by weak sponsors (gate-keepers) and by a weak role of the bond trustee. Secondly, securitization transactions of SME-loans are troubled by value chains with strong agency problems and, likely, by low risk retention rates of originators so that investors remain concerned about adverse selection and moral hazard. Moreover, the weak role of the trustee limits the effectiveness of renegotiations. So far, the European Commission's proposal of simple, standardized and transparent securitizations has not been finalized – it should in any case reflect the arguments developed in this paper: effective securitization policy should motivate risk transfer from banks to non-banks, but it requires rules for effective risk retention of the originator. Risk retention should be publicly announced in a transparent manner so that investors can gauge the danger of adverse selection and moral hazard. Current rules and proposals do not fulfill this requirement.

Thirdly, syndicated loans, private placements and club deals are flexible in their arrangement. They typically involve high risk retention rates of the lead manager. Often relational banks are involved as financiers who are well informed about the debtor. This strengthens capital allocation quite generally, and it tends to mitigate systemic risks generated by poor credit decisions, while possibly increasing business cycle risk. Syndicated lending instruments provide high levels of transparency among syndicate members, while preserving confidentiality vis-à-vis the public. This may be valued highly by SMEs. We observe a growing number of non-banks in syndicated loans, and we expect the

role of asset managers (debt funds, mutual funds, pension funds, insurance companies) to rise significantly over the coming years.

Fourthly, we observe that for standard loans banks continue to have significant comparative advantages in most lending functions along the value chain. We also note, however, that bank lending contributes to systemic risk.

What, then, are our condensed policy lessons? First and most importantly, a successful European Capital Markets Union-project should not attempt to promote lending instruments for SMEs which completely bypass banks. Banks play an important role in constraining ineffective capital allocation and the associated economic risks. A functional finance approach of regulation should encourage the different players to take those roles in which they have a comparative advantage.

Second, as bank lending contributes to systemic risks, the regulator should encourage risk transfer from banks to non-banks. But effective and transparent risk retention of the lead manager is important to constrain adverse selection and moral hazard. Even though it is difficult, the regulator should strive for risk retention rules for the lead manager in syndicated lending, broadly defined, so that a balance between socially desirable incentives for the lead manager and systemic risks is achieved.

Third, in line with the functional finance approach, niche players who are specialized in particular classes of borrowers and only engage in specific types of loan transactions may be successful. If they do not contribute to the overall systemic risk and observe the rules of investor protection, the regulator should encourage this kind of business by less restrictive regulation.

6. Conclusion

The European Capital Markets Union-project promotes financing channels which bypass banks. This is motivated by the observation that debt financing of banks is counter-cyclical and rather unstable. Debt financing by other investors is likely more stable. Moreover, banks generate systemic risks. However, there are also arguments to maintain and support the strong role of bank lending in the SME market, namely comparative advantages of banks in credit screening, debtor monitoring and renegotiation of debt claims. Bypassing banks in SME-lending may likely impair effective capital allocation and may even increase correlated default risks in the economy.

This overall perspective suggests that smart regulation should build on the complementarity of banks and markets, rather than on their stand-alone properties. The functional finance approach suggests an optimal industrial organization of lending business, by allocating different lending functions to different players. To mitigate the associated adverse selection and moral hazard problems, those

who arrange syndicated lending transactions in a broad sense, should retain a substantial portion of the default risk in a transparent manner. Apart from niche players, it appears desirable to motivate banks to take the lead role. Prescribing more loan-level transparency might be promising in the long-term, but given the preferences of SMEs for confidentiality, stronger requirements for transparency are likely to support traditional financing instruments via banks in the short and medium term.

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