Chapter 5

# STABLE FINANCE IN AN UNSTABLE WORLD

Previous chapters have addressed the need for a a different policy mix in Europe, with a greater emphasis on fiscal policy and for policies to address imbalances within, in particular, the Euro Area. There is a third economic policy area in which reform is under way, but in Europe needs to intensify its efforts and make careful, evidence-based choices: finance. The specific features and dysfunctionalities of economic governance in Europe have exacerbated the crisis but this, it should not be forgotten, was originally triggered by problems in the financial sector. Since then national governments, not only in Europe but across the world, have been struggling to establish a sensible regulatory framework for the financial sector, one that permits, even promotes, low-cost lending for real investment and maintains an efficient payments system, while avoiding the pathologies that have caused instability and rising inequalities. Because of the transnational nature of the financial sector, the EU-level has also been heavily involved in developing the regulatory framework. The two main "building sites" are Banking Union, on which considerable progress has already been made, and the incipient Capital Markets Union.

In this concluding chapter we first consider the problem of non-performing loans and discuss the policy options availbe for addressing the problem. We then turn to Capital markets Union, describing the initiatives under discussion, with a focus on proposals to reactivate the securitization market in Europe.

## 5.1. How to address the issue of non-performing loans in the EU

The issue of non-performing loans is gaining momentum in some EU countries, due to their restrictive impact on economic activity, especially for countries which rely mainly on bank financing (Mesnard *et al.*, 2016). Our contribution consists in documenting the magnitude of the issue and discussing the different ways to tackle non-performing loans (NPLs hereafter). We describe first the phenomenon of non-performing loans (NPLs) in the European Union, distin-

guishing both across countries and by types of private borrowers. These distinctions are important since only some EU countries are currently members of the European Banking Union (EBU), namely the euro area members. This raises the question of the appropriate level to solve the issue of NPLs, especially in a context of cross-border banking activities. Distinguishing across different types of private borrowers is also crucial as the economic consequences arising from NPLs may be quite different depending on whether households or firms are over-indebted or not. Second, following Mesnard *et al.* (2016), we present and discuss the different measures—which can be complementary—to address the issue of NPL, i.e.:

- transferring NPLs to dedicated asset management companies (or "bad banks");
- developing a secondary market for NPLs (more precisely, a securitization market for NPLs);
- strengthening insolvency frameworks;
- enhancing supervision;
- amending tax rules.

We mainly focus on two measures, namely bad bank schemes and a securitization market for NPLs. One reason behind this focus is that, to date, bad banks have been predominantly used to solve the issue of NPLs in Europe. Even if we have not yet sufficient hindsight to evaluate the merits of bad banks (ten to fifteen years would be required to draw any definitive conclusion on their merits due to their life span), a preliminary assessment would tend to suggest a rather positive outcome regarding bad banks. Besides, our focus on a securitization market for NPLs is explained by two recent developments at the EU scale. The first one is the possibility, experimented with in Italy, to get a State guarantee on (the senior tranches of) securitized NPLs. The second one relies on the proposal of a "Securitization Directive" in the context of the Capital markets union. (Separately the second part of this chapter examines CMU and models securitization more generally.)

However, our focus on bad banks or a securitization market to tackle NPLs does not mean that other measures are useless, quite the opposite. For instance, reforming insolvency frameworks to enhance recovery rates on NPLs is a prerequisite for either bad banks or a securitization market to be efficient measures.

### a) Depicting the NPLs problem in the EU

Based on World Bank data, the weighted average NPL ratio in the EU (Box 3) stood at 5.6% in 2015 (5.7% for the euro area) compared to 2.8% in 2008 (13).

Table 20. **Non-performing loans to total gross loans**

In %

| Country | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | % point increase since 2008 |
|---|---|---|---|---|---|---|---|---|---|
| AUT | 1.9 | 2.3 | 2.8 | 2.7 | 2.8 | 2.9 | 3.5 | 3.5 | 1.6 |
| BEL | 1.7 | 3.1 | 2.8 | 3.3 | 3.7 | 4.2 | 4.2 | 3.7 | 2.1 |
| BGR | 2.4 | 6.4 | 11.9 | 15.0 | 16.6 | 16.9 | 16.7 | — | 14.3 |
| CYP | 3.6 | 4.5 | 5.8 | 10.0 | 18.4 | 38.6 | 44.9 | 45.6 | 42.0 |
| CZE | 2.8 | 4.6 | 5.4 | 5.2 | 5.2 | 5.2 | 5.6 | 5.6 | 2.8 |
| DEU | 2.9 | 3.3 | 3.2 | 3.0 | 2.9 | 2.7 | 2.3 | — | — |
| DNK | 1.2 | 3.3 | 4.1 | 3.7 | 6.0 | 4.6 | 4.4 | 3.6 | 2.4 |
| ESP | 2.8 | 4.1 | 4.7 | 6.0 | 7.5 | 9.4 | 8.5 | 6.3 | 3.5 |
| EST | 1.9 | 5.2 | 5.4 | 4.0 | 2.6 | 1.5 | 1.4 | 1.0 | -1.0 |
| FIN | 0.4 | 0.6 | 0.6 | 0.5 | 0.5 | — | — | — | — |
| FRA | 2.8 | 4.0 | 3.8 | 4.3 | 4.3 | 4.5 | 4.2 | 4.0 | 1.2 |
| GBR | 1.6 | 3.5 | 4.0 | 4.0 | 3.6 | 3.1 | 1.8 | 1.4 | -0.1 |
| GRC | 4.7 | 7.0 | 9.1 | 14.4 | 23.3 | 31.9 | 33.8 | 34.7 | 30.0 |
| HRV | 4.9 | 7.7 | 11.1 | 12.3 | 13.8 | 15.4 | 16.7 | 16.3 | 11.5 |
| HUN | 3.0 | 8.2 | 10.0 | 13.7 | 16.0 | 16.8 | 15.6 | 11.7 | 8.7 |
| IRL | 1.9 | 9.8 | 13.0 | 16.1 | 25.0 | 25.7 | 20.6 | 14.9 | 13.0 |
| ITA | 6.3 | 9.4 | 10.0 | 11.7 | 13.7 | 16.5 | 18.0 | 18.0 | 11.7 |
| LTU | 6.1 | 24.0 | 23.3 | 18.8 | 14.8 | 11.6 | 8.2 | 5.7 | -0.4 |
| LUX | 0.6 | 0.7 | 0.2 | 0.4 | 0.1 | 0.2 | — | — | — |
| LVA | 2.1 | 14.3 | 15.9 | 14.1 | 8.7 | 6.4 | 4.6 | 4.6 | 2.5 |
| MLT | 5.5 | 5.8 | 7.0 | 7.1 | 7.8 | 8.9 | 9.0 | 9.4 | 3.9 |
| NLD | 1.7 | 3.2 | 2.8 | 2.7 | 3.1 | 3.2 | 3.0 | 2.7 | 1.0 |
| POL | 2.8 | 4.3 | 4.9 | 4.7 | 5.2 | 5.0 | 4.8 | 4.3 | 1.5 |
| PRT | 3.6 | 4.8 | 5.2 | 7.5 | 9.8 | 10.6 | 11.9 | 12.8 | 9.2 |
| ROU | 2.7 | 7.9 | 11.9 | 14.3 | 18.2 | 21.9 | 13.9 | 12.3 | 9.6 |
| SVK | 2.5 | 5.3 | 5.8 | 5.6 | 5.2 | 5.1 | 5.3 | 4.9 | 2.4 |
| SVN | 4.2 | 5.8 | 8.2 | 11.8 | 15.2 | 13.3 | 11.7 | 10.0 | 5.7 |
| SWE | 0.5 | 0.8 | 0.8 | 0.7 | 0.7 | 0.6 | 1.2 | 1.2 | 0.7 |
| **EA** | **2.8** | **4.8** | **5.4** | **6.0** | **7.5** | **7.9** | **6.8** | **5.7** | **2.9** |
| **EU** | **2.8** | **4.7** | **5.4** | **5.8** | **6.7** | **6.4** | **5.6** | **5.6** | **2.9** |

*Source*: World Bank.

Perhaps more note-worthy is the uneven distribution among EU countries, with some of them suffering impressive increases in their NPLs ratios (in particular, Cyprus and Greece). Important increases of NPLs ratio were also recorded in some Central and Eastern European countries (Bulgaria, Croatia, Hungary, Romania and Slovenia) or Western countries (in particular, Ireland). However, while the trend is reversing in some of them (Ireland, Slovenia, Romania, Latvia, Lithuania and Hungary), NPL ratios have increased rapidly in Italy and Portugal over the last four years to reach respectively 18% and 14% in 2015.

### Box 3. Definition and data on NPLs

In order to document the NPLs, we use several sources of data: the European Banking Authority (EBA), the European Central Bank (ECB) as well as the International Monetary Fund (IMF) and the World Bank (WB).

In general and in conformity with EBA' recommendations, an NPL is defined as a loan with at least 90 days overdue debt servicing. All data of NPLs reported by ECB are fully in line with this definition as a homogenous basis for classifying loans is required in the context of EBU, especially for supervisory purposes. As the EBA covers a larger set of European countries (EU countries not in the euro area as well as Norway), there exists some discrepancies in the definition of NPLs. Moreover, forborne loans (or loans whose terms have been changed following or in expectation of financial difficulties of the borrower) are often included in the EBA's data. A similar remark holds for the IMF's or WB's data concerning discrepancies in definition of NPLs. Note that, as a rule of thumb, the ECB reports lower ratios of NPLs than EBA or IMF or WB.

We use alternatively data of ECB, EBA, IMF and WB depending on availability for the question we focus on (EU *versus* EBU countries, time series…).

Table 21 published in EBA (2016) is a useful complement of table 20. It shows how banks' strategic decisions about the geographical diversification of their business contribute to NPLs ratios. On average and in nominal terms, in the euro area, the domestic exposure accounts for 52% of banks' exposures and the EU exposure (excluding domestic exposure) for 24%. However, for banks located in Austria, Belgium, Sweden, and even more in Luxembourg, the EU exposure can reach much higher levels than the average. When we look at NPL-weighted exposures, Germany and France have also EU exposures far above the average.

As the EBU can constitute a good level for solving the NPL issue (though perhaps not the optimal level), we have calculated the level of NPLs and provisions for the euro area as well as their distribution across countries.[1] Using IMF

data (completed by EBA/ECB when needed), we estimate NPLs in the euro area at 1 132 €bn, with some 325 €bn concentrated in Italy (Table 22). In other words, while Italy accounts for "only" 10.1% of gross loans, it concentrates 28.7% of NPLs and 26.3% of provisions, the latter figure signaling a lower coverage rate (45.1%) than the euro area average (49.3%). Finally, according to our estimates, provisions would amount to € 558 billion for the euro area. Assuming (in a first approximation) a recovery rate of 20% on NPLs, it means that € 460 billion of losses need to be absorbed sooner or later to cleanse balances sheets.[2]

Investigating NPLs by types of private owners, the corporate sector concentrates a predominant part of the NPL problem in most EU countries (Table 23). Notable exceptions are Latvia, Hungary and Greece where the household sector accounts for more (or an equal share of) non-performing exposure (NPE) than the corporate sector. Distinguishing across the type of private borrowers is important as the bulk of loans to households is related to real estate purposes and, consequently, is asset-backed (or "secured"). By contrast, loans to corporates are often unsecured. Consequently, the economic consequences and spillovers arising from NPLs will differ, depending on whether households or firms are over-indebted or not. On the one hand, large NPL problems in the household sector will have spillovers on real estate market, probably "adding difficulty to difficulty" by exerting downward pressures on the assets that back the price. On the other hand, NPLs problems in some corporates can have a spillover effect on other corporates through their customer-supplier links, thus giving rise to a more generalized crisis.

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1. EBU includes all 19 euro-area members by default. For remaining EU members, joining EBU is on a volunteer basis.
2. A 20% recovery rate is based on average observations related to defaulted loans. In particular, in the Italian case, the average recovery rate for all NPL procedures was 41% during 2011-2014 according to a survey by the central bank of Italy based on the 25 largest Italian banks. But, according to Moody's (2016) which analysed more than 10 000 loans to small and medium enterprises that defaulted since 2012 in Italian securitizations, the recovery rate is below 10% for more than 55% of defaulted loans. That does not mean *per se* that servicing in the case of securitization is inefficient (see section 2.2) but rather that very bad loans went into securitization market. It is worth noting that the recovery rate is endogenous and will depend on how the different parties involved are able to digest solutions and reforms aiming at tackling NPLs. All in all, a 20% recovery rate is rather conservative.

Table 21. **NPLs exposures of EU countries by region (in March 2016)**

In %

| | AUT | BEL | BGR | CZE | DEU | ESP | EST | FIN | FRA | GBR | GRC | HRV | IRL | ITA | LTU | LUX | LVA | MLT | NLD | PRT | SVN | SWE | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Nominal Exposure** | | | | | | | | | | | | | | | | | | | | | | | |
| **Domestic** | 38 | 48 | 83 | 92 | 56 | 31 | 95 | 68 | 58 | 45 | 81 | 85 | 55 | 62 | 93 | 19 | 93 | 77 | 55 | 74 | 70 | 51 | 52 |
| **Other EU and Norway** | 45 | 43 | 12 | 6 | 22 | 34 | 4 | 28 | 21 | 12 | 12 | 5 | 37 | 29 | 6 | 70 | 4 | 21 | 24 | 15 | 11 | 43 | 24 |
| **Selected Non EU Countries** | 12 | 6 | 1 | 1 | 12 | 27 | 0 | 1 | 10 | 19 | 0 | 0 | 5 | 5 | 0 | 3 | 1 | 1 | 11 | 1 | 0 | 2 | 12 |
| **Rest of World** | 6 | 3 | 3 | 1 | 10 | 8 | 0 | 3 | 12 | 24 | 8 | 10 | 3 | 3 | 0 | 8 | 3 | 1 | 10 | 10 | 19 | 4 | 12 |
| **NPL-weighted exposure*** | | | | | | | | | | | | | | | | | | | | | | | |
| **Domestic** | 23 | 34 | 96 | 93 | 43 | 63 | 97 | 93 | 52 | 47 | 86 | 92 | 83 | 87 | 99 | 24 | 89 | 95 | 64 | 80 | 59 | 14 | 65 |
| **Other EU and Norway** | 54 | 55 | 1 | 4 | 36 | 17 | 1 | 7 | 34 | 16 | 9 | 0 | 15 | 10 | 0 | 57 | 6 | 5 | 23 | 9 | 16 | 79 | 22 |
| **Selected Non EU** | 11 | 4 | 0 | 1 | 8 | 15 | 0 | 0 | 4 | 15 | 0 | 0 | 1 | 1 | 1 | 4 | 2 | 0 | 5 | 1 | 0 | 1 | 5 |
| **Rest of World** | 12 | 7 | 3 | 2 | 13 | 5 | 2 | 1 | 10 | 23 | 5 | 8 | 1 | 2 | 0 | 14 | 3 | 0 | 7 | 10 | 25 | 6 | 8 |

* The NPL-weighted exposures are computed as exposures times NPL ratio by region. That is a measure of risk contribution per each region (with region being "Domestic", "Other EU and Norway", etc.).

*Source*: EBA (2016).

Table 22. **NPLs and provisions in the euro area (at end-2015)**

| | AUT | BEL | CYP | DEU* | EST | ESP | FIN* | FRA | GRC | IRL | ITA | LVA | LUX* | MLT | NLD | PRT | SVK | SVN | EA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **In € (billion)** | | | | | | | | | | | | | | | | | | | |
| **Gross loans** | 642 | 644 | 58 | 5 249 | 16 | 2 585 | 306 | 3 739 | 238 | 385 | 1 800 | 19 | 60 | 10 | 1694 | 270 | 47 | 30 | 17 793 |
| **NPL** | 22 | 24 | 28 | 184 | 0 | 159 | 9 | 149 | 87 | 58 | 325 | 1 | 1 | 1 | 46 | 34 | 2 | 3 | 1 134 |
| **Provisions** | 13 | 10 | 10 | 92 | 0 | 70 | 5 | 76 | 59 | 30 | 147 | 1 | 1 | 0 | 17 | 24 | 1 | 2 | 559 |
| **In % of total EA** | | | | | | | | | | | | | | | | | | | |
| **Gross loans** | 3.6 | 3.6 | 0.3 | 29.5 | 0.1 | 14.5 | 1.7 | 21.0 | 1.3 | 2.2 | 10.1 | 0.1 | 0.2 | 0.1 | 9.5 | 1.6 | 0.3 | 0.2 | 100 |
| **NPL** | 1.9 | 2.2 | 2.5 | 16.2 | 0.0 | 14.1 | 0.8 | 13.2 | 7.7 | 5.1 | 28.7 | 0.1 | 0.1 | 0.1 | 4.1 | 3.0 | 0.2 | 0.3 | 100 |
| **Provisions** | 2.4 | 1.8 | 1.9 | 16.6 | 0.0 | 12.6 | 0.9 | 13.7 | 10.6 | 5.3 | 26.3 | 0.1 | 0.1 | 0.0 | 3.1 | 4.1 | 0,2 | 0.4 | 100 |
| **NPL net of provisions** | 1.5 | 2.5 | 3.0 | 15.9 | 0.0 | 15.6 | 0.7 | 12.7 | 4.9 | 4.8 | 31.1 | 0.0 | 0.1 | 0.1 | 5.0 | 1.8 | 0,2 | 0.2 | 100 |
| **In % of gross loans** | | | | | | | | | | | | | | | | | | | |
| **NPL rate** | 3.4 | 3.8 | 47.7 | 3.5 | 1.0 | 6.2 | 3.0 | 4.0 | 36.6 | 14.9 | 18.1 | 4.6 | 1.7 | 9.4 | 2.7 | 11.9 | 4.9 | 10.0 | 6.4 |
| **Provision rate** | 61.1 | 42.2 | 37.2 | 50.3 | 29.2 | 44.0 | 55.4 | 51.2 | 67.8 | 51.8 | 45.1 | 77.8 | 40.0 | 23.9 | 37.3 | 69.0 | 54.1 | 66.8 | 49.3 |
| **In % of GDP** | | | | | | | | | | | | | | | | | | | |
| **Gross loans** | 188.9 | 157.4 | 329.6 | 173.1 | 81.2 | 240.3 | 146.4 | 171.4 | 135.2 | 150.7 | 109.6 | 78.2 | 114.2 | 111.7 | 250.4 | 150.1 | 59.1 | 78.9 | 170.8 |
| **NPL net of provisions** | 2.5 | 3.4 | 98.8 | 3.0 | 0.6 | 8.3 | 2.0 | 3.3 | 16.0 | 10.8 | 10.9 | 0.8 | 1.2 | 8.0 | 4.3 | 5.7 | 1.3 | 2.6 | 5.5 |

(*) Own computations.
*Source:* IMF (main), ECB and national central banks.

Table 23. **Non Performing Exposure (NPE) Ratios by Sector**

**Asset-weighted average; in percent of total assets, 2014**

| | Total | Corporate | Retail | Total (in % of GDP) |
|---|---|---|---|---|
| **AUT** | 4.6 | 5.0 | 4.0 | 2.0 |
| **BEL** | 3.4 | 5.1 | 2.4 | 2.3 |
| **BGR** | 16.7 | 19.2 | 17.7 | 11.9 |
| **CYP** | 39.4 | 46.3 | 29.6 | 48.0 |
| **DEU** | 2.5 | 2.3 | 2.6 | 1.4 |
| **DNK** | 4.0 | 5.5 | 1.9 | 1.6 |
| **EST** | 12.2 | 18.8 | 6.8 | 9.1 |
| **FIN** | 1.7 | 1.8 | 1.6 | 0.9 |
| **FRA** | 3.2 | 2.9 | 3.4 | 2.7 |
| **GRC** | 25.3 | 23.2 | 26.9 | 25.4 |
| **HRV** | 16.7 | 30.5 | 12.0 | 8.1 |
| **HUN** | 15.6 | 13.8 | 18.9 | 8.7 |
| **IRL** | 32.2 | 50.2 | 21.7 | 40.9 |
| **ITA** | 17.6 | 21.0 | 13.7 | 12.0 |
| **LTU** | 8.9 | 9.7 | 8.1 | 3.2 |
| **LUX** | 5.0 | 5.3 | 3.1 | 7.0 |
| **LVA** | 9.7 | 7.3 | 12.1 | 3.7 |
| **MLT** | 6.3 | 8.8 | 4.7 | 3.0 |
| **NLD** | 3.7 | 7.7 | 1.8 | 5.5 |
| **PRT** | 7.9 | 11.1 | 5.7 | 7.3 |
| **ROU** | 13.9 | 18.7 | 7.8 | 4.3 |
| **SVK** | 5.0 | 6.0 | 4.3 | 4.4 |
| **SVN** | 20.2 | 29.9 | 11.1 | 14.6 |

*Source:* Aiyar *et al.* (2015).

## b) Policy options available to address the issues of NPLs

In this section, following Mesnard *et al.* (2016), we present and discuss the different measures to address directly the issues of NPLs. We mainly focus on bad banks schemes and a securitization market for NPLs. For both measures, we consider in turn its basic functioning, advantages and drawbacks, conditions for success as well as its current use in the EU. The other ways to tackle directly with NPLs related to insolvency frameworks, supervision and tax rules are presented and discussed.

### *Transferring NPLs to dedicated asset management companies (or "bad banks") or to the ECB*

Basic functioning: an asset management company (AMC) acquires, manages, and disposes of distressed assets, such as non-performing loans. The AMC is used to separate distressed assets, that are weighing down a bank's balance sheet, from performing assets that would otherwise form the basis of a financially solvent "good" bank (Gandrud and Hallerberg, 2014).

Advantages/drawbacks: By separating bad assets from good assets, the bank prevents the bad assets from contaminating the good ones. Indeed, so long as the two types of assets are mixed, investors and counterparties are uncertain about the bank's financial health and performance thus impairing its ability to borrow, lend and raise capital (Brenna *et al.*, 2009).

This separation allows banks to concentrate on running the healthy parts of their business while the distressed assets are managed by independent specialists (ECB, 2013).[3] However, the participating banks typically record losses stemming from a transfer of assets at below book value. Thus, from a financial stability perspective, an AMC scheme should be only implemented when there is a high probability of a continued impairment of asset values.

This argument in favor of an AMC is reinforced when it becomes important to avoid a forced workout of problematic assets (including real estate property held as collateral), which could further drive down market prices and set off a race to the bottom.

Design: AMCs can differ according to their ownership and their funding structures. Ownership can range from entirely publicly owned to entirely privately owned. In turn, this will affect: (*i*) when the costs are realized, (*ii*) who pays for their losses and (*iii*) who benefits from their gains. Ultimately, this will affect the bank's liquidity, balance sheet, and profits (Brenna *et al.*, 2009).

It is worth noting that the choice of design has been strongly influenced by the new Eurostat rules (Gandrud and Hallerberg, 2014). Indeed, in July 2009, Eurostat ruled that AMCs with less than 51% private ownership would not be classified as contingent liabilities, but would be counted against the public debt. In September 2009, additional requirements were set up by Eurostat: an

3. We do not consider here the business model of *internal* bad bank (or a restructuring unit within the troubled bank), which is often a prerequisite for a fully separated restructuring unit (see Brenna *et al.*, 2009). We consider only the case of *external* bad bank where the bank shifts the assets off the balance sheet and into a legally separate banking entity (a "bad-bank spinoff").

AMC would be treated as being outside the public sector and as a contingent liability for debt calculations if (*i*) the AMC is a temporary institution (*ii*) there exists a reasonable business plan that would ensure no or minimal losses and (*iii*) a large haircut was applied to the purchase price of acquired assets and the haircut required public recapitalization of the impaired bank (with recapitalization counted against the public budget). This ruling affected the design of ACMs in terms of ownership structure and favored "slim private majority ownership". Yet, Eurostat has subsequently continued to tighten the rules: major changes were published in 2013 and implemented from mid-2014: the hard 51% ownership rule was expanded to focus not just on nominal equity ownership but also on who is effectively in control of the assets and who bears most of the risks from the AMC entity.[4] In summary, due to changes in Eurostat rules, there is a general trend towards the creation of AMCs with private majority ownership.

Conditions for success: The success of bad bank schemes depends on critical factors. First at all, clear objectives are important for its success and, in this respect, conflicting objectives should not be underestimated (ECB, 2013). The consensus view is (*i*) that maintaining financial stability and restoring a healthy flow of credit to the economy are key priorities (especially for central banks) while (*ii*) containing the impact of asset support measures on public finances and safeguarding a level playing field may be also critical considerations (especially for governments).

Second, some reflections have to be conducted about institutions and assets to include in the ACM as well as concerning the pricing of NPLs (ECB, 2013; Brenna *et al.*, 2009). In this respect, "one solution does not fit all".

As regards the right assets which should be taken by the bad bank, the important point is that a bank can only segregate bad assets once without losing its credibility (Brenna *et al.*, 2009). In particular, banks need to address two broad categories of assets: assets with a high risk of default (including NPLs) and nonstrategic assets (including anything the bank wants to dispose of, either to deleverage or otherwise resize its business model). Note that from the point of view of the participating bank, it may be effective to transfer the entire loan

4. Concretely, that means that an AMC which is entirely privately owned, but largely backed by State guarantees, such as the State is shouldering most of the risks, is now considered as a public AMC and is no longer treated as a contingent liability. This kind of structure minimizes its impact on the public budget and potentially imposes a considerable proportion of the total costs of restructuring on the private sector owners of the failed bank.

segment (rather than just NPLs), to divest nonstrategic business or low-risk portfolio for which an adequate price can still be achieved (ECB, 2013). In this respect, pricing will be an important factor in shaping the assets included in the ACM (see below).

As regards institutions, in order to maintain a level playing field, an ACM should remain open to all institutions with a large share of eligible assets. However, from a public finance perspective, carefully chosen criteria may be applied to limit participation to certain institutions, such as those with large concentrations of impaired assets or with systemic relevance (ECB, 2013).

Regarding pricing, third-party expert valuations should be used in order to define reasonable haircuts and therefore yield the best estimate of the long-run value of NPLs (ECB, 2013). The larger the haircuts on NPLs, the more profitable the AMC, thus reducing the creation of zombie banks including zombie bad banks (Gandrud and Hallerberg, 2014).

Third and last, the challenges involved in ACMs require that national or supranational authorities play a key role, especially in creating a common legal and regulatory framework and in supporting bad banks through funding or loss guarantees (Brenna *et al.* 2009).

Use in the EU since 2008: ACMs have been widely used in the EU as part of the response to the financial crisis. According to Gandrud and Hallerberg (2014), 15 AMCs have been created in 12 EU countries over 2008-2014 to assist at least 37 failing banks. The entities were all publicly created AMCs even if they subsequently evolved into slim private majority ownership due to changes in Eurostat rules. Gandrud and Hallerberg (2014, Table 1) provide some details on countries and failed banks involved in ACM. It is worth noting that none of these ACMs was designed as a European "bad bank" (even if foreign investors were allowed in some cases). Public funding (or State guarantees) remains a national feature (except in the particular case of Dexia which was a Belgium/France/Luxembourg joint venture).

Interestingly enough, privately owned AMCs act differently from publicly owned AMCs. In particular, private AMCs have imposed larger haircuts on the price they paid for the assets they acquired (Gandrud and Hallerberg, 2014, Table 3), thus helping in avoiding the creation of zombie banks.

### *Developing a secondary market for NPLs (i.e. a securization market for NPLs)*

Basic functioning: a bank sells its NPLs on a secondary market typically at a lower price than their face value. Buyers of such assets will, very often, sell them to investors as structured credit tranches, after securitizing them (EBA, 2016).

"Originators", i.e. those who sell NPLs, can be banks, leasing companies or manufacturers while investors involved in buying securitized products are predominantly banks, insurers and alternative investment funds.

Securitization can be "traditional", meaning there is an effective legal transfer of NPLs to the issuer of securitized products which becomes entitled to the cash flows generated by NPLs (case of "true sale"). Otherwise, securitization will be "synthetic", with the exposures remaining on the balance sheet of the originator and the credit risk being transferred with the use of credit derivatives or financial guarantees (Delivorias, 2016). This distinction between the two types of securitization is notably important in the case of NPLs as the probability of reimbursement of the original loans is not very high.

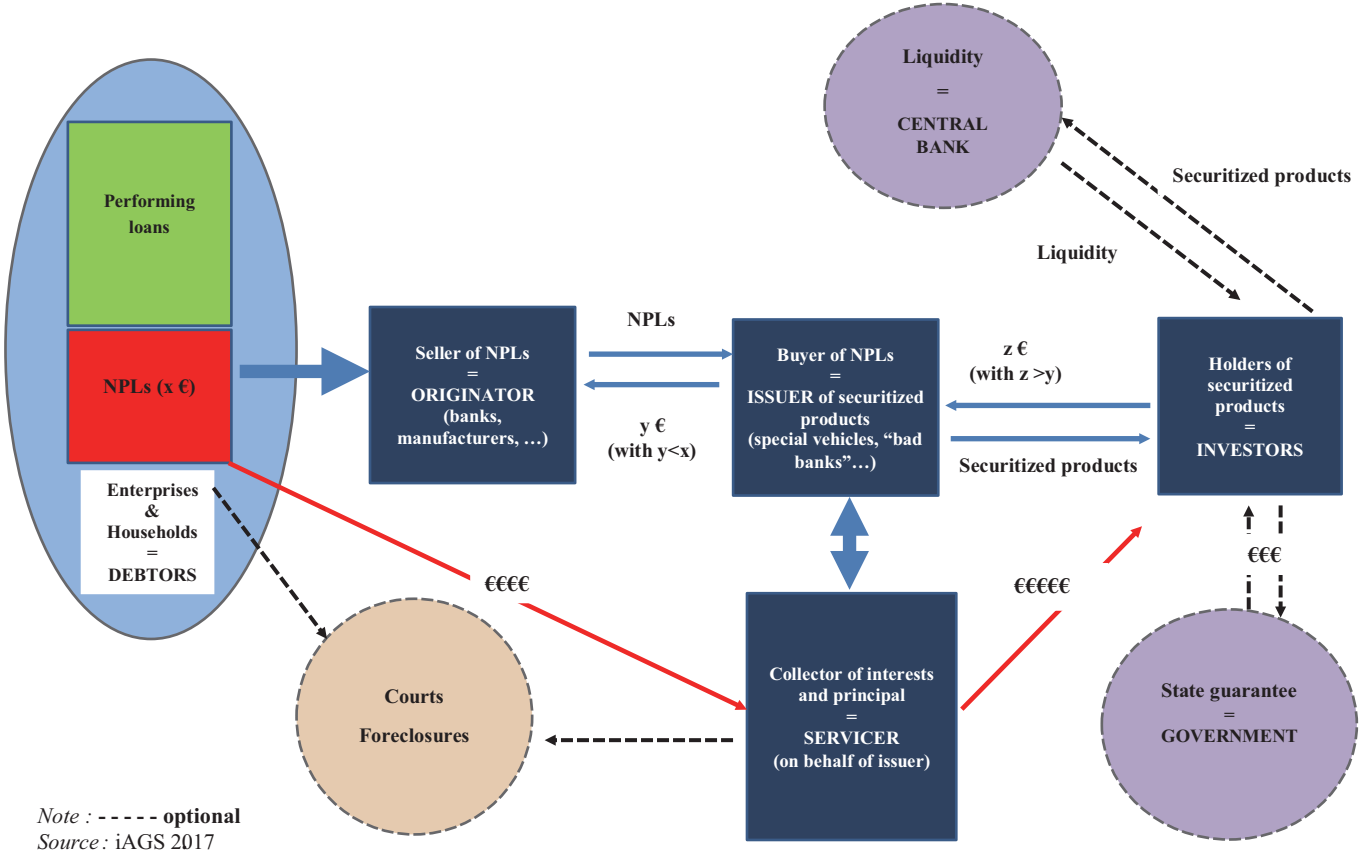
Figure 67 provides a schematic view of the different actors involved in traditional securitization, which constitutes the only form of securitization that could be reasonably developed in the European context.

Advantages/drawbacks: When NPLs are securitized to be sold to investors as structured credit tranches, the marketability of such securitized portfolios is increased (EBA, 2016; Bank of England & ECB, 2014). Securitization helps banks to free up capital that can then be used to grant new credit (European Commission, 2015b). However, the subprime crisis has also shown how, if not properly structured, securitization can magnify financial instability and inflict serious damage to the wider economy.

Securitization of NPLs, compared to securitization of performing loans, poses an additional problem: due to the dispersion in property rights and potential agency frictions brought about by securitization, servicing can inhibit renegotiation of loans (Piskorski *et al.*, 2010). In the case of real estate mortgages, this would come at risk of foreclosure, thus precipitating further a fall in housing prices.

Conditions for success: As noted by Pal *et al.* (2016), NPLs securitizations are dependent for their ultimate success on three variables: (*i*) the quality of the NPLs; (*ii*) the quality of the servicer, and (*iii*) the quality of the servicing environment.

Figure 67. **Traditional securitization ("true sale") of NPLs servicer with another should be facilitated**




*Note :* **- - - - - optional**
*Source :* iAGS 2017

*i*) The quality of NPLs refers to some form of security arising from collateral. The most common form of secured NPL is a mortgage loan, where the loan is secured over a residential or commercial real estate asset, which ultimately can be foreclosed to generate a cash flow. By contrast, in the case of unsecured NPL, the loans are purely payment obligations of the debtors, with the most common form of unsecured NPL being a personal or corporate loan. In the former case, the quality of the NPL depends on the value of the secured asset and the robustness of the legal rights the NPL's holder has in respect of the secured asset. In the latter case, the quality of the NPL depends on the payment ability of the debtor and the robustness of the legal rights that the NPL's holder has against the debtor. In practice, however, neither the value of a secured asset nor the payment ability of a debtor are static; rather they can fluctuate over time quite rapidly (Pal *et al.*, 2016). Consequently, the speed at which resolution is achieved will be important and, in this respect, the quality of servicing environment will play a major role (see *iii*).

*ii)* The quality of the servicer refers to its ultimate capacity to generate cash flow in a context where it can be difficult to collect interests and principal on NPLs. The servicer can take two main approaches in relation to NPLs. The first is a consensual resolution with the debtor, leading to the debtor making a discounted payment in respect of the debt it owes. The second is formal enforcement action, where the servicer exercises the rights it has to extract value from either the secured asset or the debtor itself. In the latter case, a lengthy process could come at risk of deteriorating the value of the secured asset or the payment ability of the debtor. Consequently, providing to the servicer both the capacity and incentives to stabilize the cash flows would be an attractive feature especially in the context of secured NPLs as it would avoid negative spillover effects on market assets. In particular, a higher possibility to oversight and control exercised by investors should be encouraged and the possibility to replace one servicer with another should be facilitated. A better (legal and judicial) environment should also give the possibility for servicers to increase recovery rate.

*iii*) The quality of the servicing environment refers to all administrative, legal and judicial elements which ultimately impact the recovery rate. This will be of particular importance when a consensual resolution with a debtor cannot be achieved such as the servicer will have to consider a formal enforcement action which is often a complicated process. The degree of complexity will dependent on the legal environment in which the servicer is operating, especially in terms of how easily creditors can exercise rights. High costs,

lengthy procedures and low predictability of formal enforcement action will weigh on the ultimate recoveries.

Note that the quality of the servicer and of the servicing environment is also important in the case of a bad-bank spinoff. However, it may become an even more acute issue for a SPE: a poor servicer and a poor servicing environment would put considerable pressure on the discount rates applied to book value of NPLs.

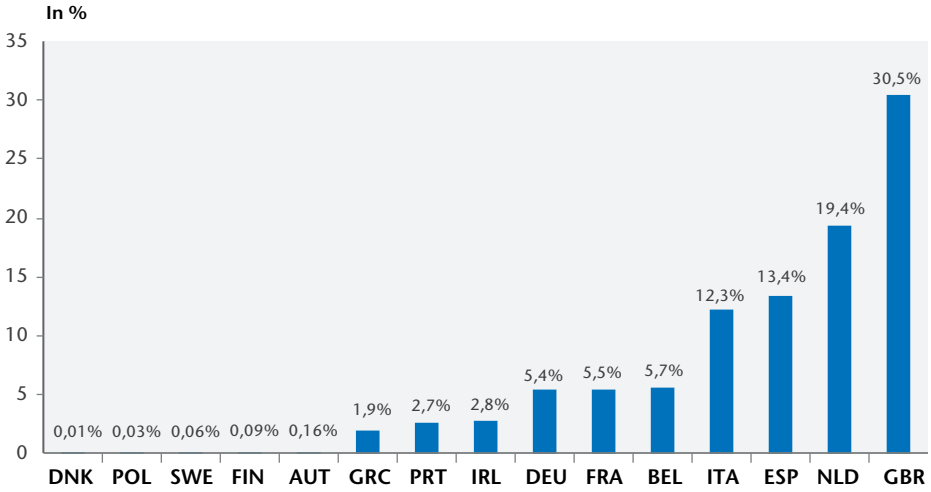
Current situation in the EU: *Due to scarcity of data on NPLs securitization, we first begin by presenting the situation of securitization as a whole.* Since the beginning of the financial crisis, issuance of securitized products in the EU has plummeted. In 2015, European issuance stood at 213.7 €bn, compared with an average of 374 €bn for the eight years leading up to the financial crisis (European Commission, 2015b). Unlike the US market, the European market for securitization has not rebounded. A combination of three factors explains the absence of rebound (Rützel, 2016, European Commission, 2015a): *(i)* the stigma attached to securitization because the financial crisis originated from a sub-segment of the securitization market, *(ii)* the post-crisis tightening of the treatment of securitized products and *(iii)* cheaper funding alternatives for banks (especially through central bank liquidity).

Currently, outstanding amounts of securitized products account for around 1 400 €bn in the EU (or 10% of GDP). The United Kingdom and the Netherlands are the largest markets, accounting together for half of the outstanding securitizations (Figure 68). Spain and Italy follow, accounting together for 25% of the outstanding securitizations. Germany, France and Belgium are comparatively small markets, with a share between 5 and 6% each. Finally, all remaining EU countries are negligible markets in terms of outstanding securitizations.

As a share of GDP, the story is a bit different (Figure 69). The Netherlands ranks first (with outstanding amounts of securitized products accounting for 41% of its GDP) followed by a group of five EU countries with a share between 18% and 22% each (UK, Spain, Belgium, Ireland and Portugal). For Greece and Italy, outstanding securitizations as a share of GDP stand respectively around 15% and 11%. This share is small in remaining large countries (namely France and Germany) and negligible in other EU countries.

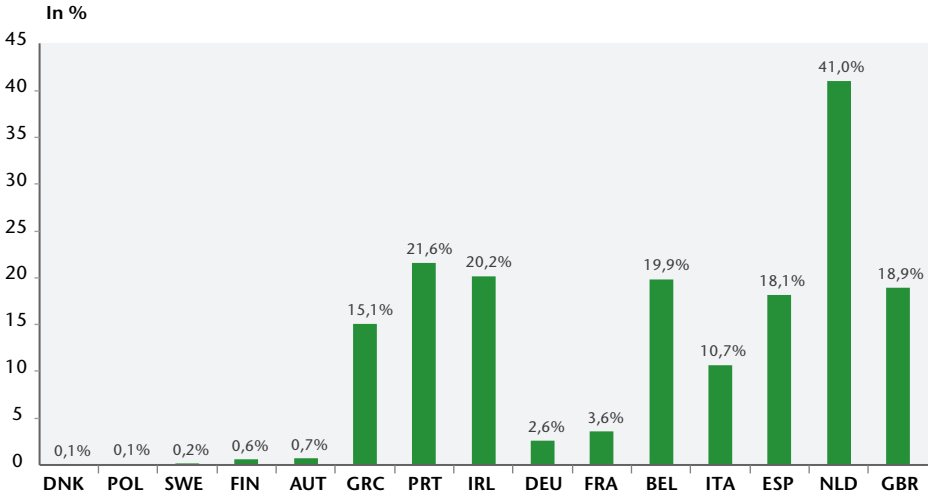
Mainly loans originating from the household sector are securitized, accounting for 80% of total securitization in the euro area (Table 24). The existence of secured loans (especially by real estate mortgages) explains the high share of the household sector in securitization. However, in countries where there exists

Figure 68. **Outstanding amounts of EU securitized products by country in % of the EU total**




*Note:* Data refer to outstanding balances by countries of collateral, which is used as a proxy for country of issuance. Consequently, those data can differ from those reported by the ECB for euro area countries.
*Source:* EBA (2016).

Figure 69. **Outstanding amounts of securitized products in EU countries as a share of GDP**




*Note:* Data refer to outstanding balances by countries of collateral, which is used as a proxy for country of issuance. Consequently, those data can differ from those reported by the ECB for euro area countries.
*Source:* EBA (2016), own computations.

a specialized industry in securitization (as in Luxembourg or Ireland), securitization of loans originating in the corporate sector can reach an important level. With a share of 34%, Italy is also quite engaged in securitization of loans originating in the corporate sector.

If we restrict our analysis to NPL securitization, only few data are available. EBA (2016) provides the following features:

- Within the last 24 months, NPL transactions including securitization at the local banks were recorded in 13 out of 27 EU-countries.
- The share of these transactions in the total amount of NPLs was very low.
- Wherever information on prices is available, the discount to the gross amount of such portfolios is mostly ranging between 50% and 90%.

EBA (2016) concludes that, given these pricing levels, it comes as no surprise that banks in the EU have been reluctant to sell large amounts of distressed assets on the secondary market.

Table 24. **Securitization of loans in the euro area by type of agents**

**In % of total**

| | Loans to corporates | Loans to households |
|---|---|---|
| **EA** | 20 | 80 |
| **BEL** | 25 | 75 |
| **DEU** | 5 | 95 |
| **IRL** | 45 | 55 |
| **ESP** | 14 | 86 |
| **FRA** | 11 | 89 |
| **ITA** | 34 | 66 |
| **LUX** | 69 | 31 |
| **NLD** | 4 | 96 |
| **PRT** | 20 | 80 |

*Source:* ECB, own computations.

The existence and/or efficiency of a distressed debt market across EU countries can be illustrated by the results of the EBA's survey carried out in EU countries (Table 25). In a majority of EU countries, the (local) distressed asset market is either non-existent or ineffective (60% of EU countries) while in only 3 countries (the United-Kingdom, Ireland and Poland), does there seem to be an effective market for distressed assets.

Table 25. **Distressed asset markets and loan securitization in EU countries**

| | Effectiveness of distressed asset markets* | | Efficiency of loan securization** |
|---|---|---|---|
| **Effective** | 3 | **Efficient** | 2 |
| **Somewhat effective** | 8 | **Somewhat efficient** | 7 |
| **Not effective** | 11 | **Not efficient** | 4 |
| **Non-existent** | 5 | **Non-existent** | 14 |

* The term "effective market for distressed assets" relates to the banks' ability to dispose of distressed assets in a timely manner on a sufficiently active and liquid market to not be priced as a forced seller.
** The term "efficient loan securitization" is used to describe an easy and effective way for banks to build securitization structures around portfolios of non-performing and performing debt.
*Source:* EBA (2016, p. 41).

Turning to the efficiency of loan securitization, the ability for banks to securitize loans is either not efficient or non-existent in a majority of cases (Table 6). Only in Belgium and the United Kingdom is loan securitization regarded as efficient, while in Ireland, Germany, Greece, Italy, Spain, Netherlands and Slovakia, asset (local) securitization is somewhat efficient.

### Box 4. Qualifying securitizations: the EBA's criteria and the European Commission proposal's for STS securitization

The creation of a market for high-quality securitization is one of the key objectives of the European Commission's initiative to build a Capital Markets Union.

In July 2015, as a response to the European commission's call for advice, the European Banking Authority (EBA) laid out its criteria for what should constitute a qualifying securitization. Specifically, the EBA outlined that issuances should be simple, standard and transparent (STS). Then, on 30 September 2015, the European Commission proposed a new regulation creating a European framework for STS securitization, based on EBA' criteria.

In particular, "simple securitization" means that:

— Assets packaged in securitization must be homogeneous loans or receivables (e.g. car loans with car loans, residential mortgages with residential mortgages).

— No securitization of securitizations is allowed.

— Loans must have a credit history long enough to allow reliable estimates of default risk. The ownership of a loan must have been transferred to the securitization issuer (i.e. they must be sold by the originator of loans to the entity that will issue the securitization), meaning that "synthetic securitization" is not allowed (see EC, 2015, p.60).

"Transparent and standardized securitization" means that:

— Loans packaged in securitization must have been created using the same lending standards as any other loan, meaning that all borrowers have been subjected to similar scrutiny at time of initial lending;

— At least 5% of the loans portfolio must be retained by the originator. Documents must provide details of the structure used and the payment cascade (i.e. the sequence and amount of payments to each tranche).

— Data on packaged loans must be published on an ongoing basis. The contractual obligations, duties and responsibilities of all key parties to the securitization must be clearly defined.

— To ensure that an STS securitization meets the qualifying criteria, the issuer of the securitization will need to confirm the instrument's compliance with all STS.

In November 2015, the European Council presented to Parliament its suggested regulation laying down common rules on securitization, together with a proposed amendment to the Capital Requirements Regulation (CRR).

The Committee on economic and Monetary Affairs (ECON) is expected to issue its vote in November 2016 with a plenary session of the European Parliament on the subject to be held before the end of the year.

### Box 5. **Dealing with NPLs by offering a State guarantee to NPLs securitization: the case of Italy**

Beginning in 2015, several actions have been undertaken in Italy in order to tackle NPLs.

New features have been introduced to speed up the judicial enforcement procedures and to reform the insolvency regime. In particular, special tax provisions have been implemented to incentivize significantly a pro-active participation of investors in public judicial auctions and the consequent realization of enforced claims (Svetina *et al.*, 2016).

A private fund 'Atlante', whose shareholders are mainly banks and insurers, has been created to support upcoming increases in banks' capital and purchase NPLs. Note however that the total size of the fund will not exceed €6 billion which is clearly low compared to the magnitude of Italians NPLs (see Table 22).

However, the more innovative feature is perhaps the GACS (*Garanzia Cartolarizzazione Sofferenze*) which consists in offering a State guarantee to securing the NPLs entering in a securitization process. We provide more details on GACS *infra*..

Starting in February 2016, for a 18 month period possibly extended for an additional 18 month period, a State guarantee can be granted for securing the senior tranche of asset backed securities issued in the context of securitizations carried out by Italian banks and backed by portfolios of non performing receivables (including leasing receivables).

Both principal and interest payments are secured under the senior tranche for the benefits of senior tranches' holders and for the life of transaction.

The guarantee would secure the senior tranche on condition that the bank selling NPL only holds the minority of the junior tranches and, in any case, an amount of junior tranches which would enable the bank to achieve a balance-sheet deconsolidation of the securitized NPL. The issue of the guarantee will be subject to the payment of a fee which will increase in time.

Note that in Italy, since the securitization law was passed in 1999, there has been a long standing use of securitization as a vehicle for NPL sales. The market was active from 2000-2005 and then, like the rest of the securitization market, died (apart from retained deals) in the post-crisis period. Recently, large US investors have been active in buying Italian securitizations (Perraudin, 2015).

## c) Other policy actions for improving NPLs resolution

In order to remove or ease the impediments to NPLs resolution, additional policy actions have to be implemented as a complement of either ACM schemes and/or securitization of NPLs.

### *Strengthening insolvency frameworks*

As explained by Mesnard *et al.* (2016), insolvency frameworks are key for an efficient resolution of NPLs, as they provide positive/negative incentives for all stakeholders. In particular, inefficient frameworks will make it difficult for debtors and creditors to agree on a timely restructuring of bad debts. The creation of out-of-court procedures and the acceleration of judicial procedures, by reducing the timeline for debt restructuring, also improve the value of NPLs and reduce creditors' losses (Perraudin, 2015).

Mesnard *et al.* (2016) provide a review of European countries where reforms of personal insolvency laws were enacted: Ireland (in 2012 and 2016), Spain (in 2014 and 2015), Greece (in 2015), Italy (in 2015). In a nutshell, reforms aimed at providing advice to indebted agents, to accelerate and address the excessive backlog of pending cases and to create a regulated profession of insolvency administrators. Despite the reforms, the average duration of corporate insolvency proceedings across EU countries remains quite high: in 6 EU countries, the duration is higher than 3 years often due to the lack of judges (EBA, 2016).

### *Amending tax rules*

The tax treatment can affect banks' provisioning policies and this, in turn, has an impact on NPL management (EBA, 2016). In particular, allowing for some sort of deductibility would create incentives for building adequate provisions.

The Italian case is illustrative of how tax treatment of loan loss provisions has prevented adequate provisioning policies within banks. Before the amendment to the law was passed in 2015, new credit losses were deductible in 5 years (and even in 18 years until 2013). The new regime, by allowing immediate full deductibility, is expected to increase banks' incentives to provision in a timely fashion. Empirically however, a strong connection between coverage ratios and tax-deductibility of provisions has not been observed: countries with limited tax-deductibility (Portugal, Poland, Sweden, Malta and Norway) do not report systematically lower coverage ratios than countries where immediate full deductibility is allowed (EBA, 2016). Other complementary factors clearly play a role in provisioning policies, in particular the insolvency framework.

### *Reinforcing supervision*

Further supervision, in particular through a comprehensive asset quality review (AQR), is an important prerequisite for repairing banks' balance sheets. It gives more transparency on bank exposures, sounder provisioning policy and, on average, a gradual reduction in the stock on NPLs.

In this respect, the EBU has been a positive step forward as it allows:

- harmonization in the definition of NPLs (since 2014);
- centralization and exchange of information on individual (large) banks;
- a common stress test exercise to all (large) banks.

However, further areas for improvement remain. First, while a common and harmonized definition of NPL since 2014 has been an important prerequisite for identifying and then repairing banks' balance sheets, a more harmonized application in the definition of default is a necessary complement (EBA, 2016). More generally, issues of harmonization are of particular interest for banks operating on a global scale as the non-harmonization for NPLs exposures outside the EU makes comparisons of the largest EU banks (with large assets abroad) less reliable.

Second, reform in the supervisory framework has to push for improved provisioning and arrears management (see section on amending tax rules). More generally, this means taking more actions to force banks to increase write-offs or disposals.

Third, in order to facilitate the resolution of NPLs, an enhanced transparency regarding real estate collateral valuation would contribute to a better understanding and pricing of the risks. Ultimately, that would facilitate the sale process and would lead to lower discounts in secondary market transactions. A similar remark holds in the case of an ACM as there is also a need for price discovery.

### d) Dealing with NPLs

After reviewing the different ways to deal with NPLs, our chief conclusion is that none of the policy options should be neglected in order to tackle NPLs. Rather, a complementary approach is called for.

- Bad bank schemes appear particularly well-suited to deal with large portfolio of NPLs. While it is still premature to give a definitive assessment on bad banks which were set up in the context of the financial crisis (as they operate over a time span of 10-15 years), first feedbacks are generally positive.[5] For the current situation, the main point is whether bad banks should be created at the European level rather than at the national level. In particular, the EBU offers an opportunity for building bad banks at supranational level, due to ongoing harmonization both in terms of regulation and supervision. Another related question is whether a European Fund (either existent or to be created) should provide guarantees to European bad bank(s) instead of States. It is worth noting that legally speaking, there are not really obstacles to the creation of bad banks at the European level: it is just a matter of political will. We can even imagine that non-European investors hold large capital shares of European bad banks, with application of bail-in principles in case of losses. The main point for the success of a bad bank is the right pricing of loans taken over to avoid zombie banks and opportunistic behaviour. The question of level, either national or European, is more secondary. It should be noted however that the European level would offer the possibility of diversifying the portfolio of bad banks.

5. Note that the positive Swedish bad bank experience in the 90's cannot be replicated in the current situation due to its particularities. First at all, in Sweden, the troubled bad banks were state-owned, meaning that the Sweden's government assumed bad banks debts. Pricing for the NPLs taken over were above market prices which was an indirect way of capitalizing good banks (Englund, 2015). Creating a bad bank based on NPLs from privately owned banks would have been a very different and more complicated operation, since the price paid in that case would have meant a direct transfer from tax payers to private owners. In the current situation, any solution to tackle with NPLs has to minimize the public cost and (majoritary) private ownership of bad banks has to be favored.

- The revival of the EU market for securitization may be a way of widening the range of options that banks could consider for dealing with their NPLs. At the same time, it highlights the need for supervisory guidance in tackling NPLs, particularly in collateral valuation and arrears management. In this respect, the EU Directive aiming at proposing a simple, transparent and standardized (STS) definition for securitization is an important initiative: it will set a "brand mark", signaling that a bundle of assets has complied with predetermined eligibility criteria, thereby satisfying regulatory requirements. However, reactivating securitization more generally raises a large number of issues, which we address in the next section. It is important to note that such a Directive will accompany a development in progress in some European countries to tackle NPLs (Italy and Greece to quote a few). One question to be discussed is whether such securitized products could be eligible for banks' operations with their respective central bank. In our opinion, as long as both pricing and servicing are properly framed, the central bank could accept "STS securitized products" in the context of its liquidity providing operations.

## 5.2. Capital Market Union: a discussion

A number of policy packages have been put together since the onset of the Great Recession and the euro area crisis in an attempt to wrestle with both the perceived causes and the consequences of these crises. A particular weakness is inadequate investment. In response, alongside the European Fund for Strategic Investment (Juncker Plan), discussed in the two previous and in the current iAGS report), the European Commission called in 2014 for steps towards a European Capital Markets Union (CMU).

On 30 September 2015 legislative proposal (Action Plan) was published that sought to put flesh on the bones of CMU (European Commission 2015). According to the Commission (e.g. European Commission 2016 a and b) the two main goals of CMU are to create a genuine single market for capital, raising capital mobility and thus contributing to higher growth and employment, while at the same time rendering financial markets more stable by diversifying sources of finance.

A number of deficiencies in—and challenges to reforms of—European capital markets were also identified. Investment in Europe remains heavily dependent on bank lending. Firms located in different member states face substantial differences in access to and cost of finance, fragmenting the European market.

In many countries access by small and medium-sized enterprises to finance remains difficult. Financial institutions issuing securitized instruments face different regulatory frameworks in different countries, and partly as a result investors exhibit "home bias", disproportionately holding the stocks and bonds of domestic companies. As a consequence, it was argued, Europe does not take sufficient advantage of the ability of large, integrated financial markets to absorb regionally-specific stocks. In a frequently cited study, Asdrubali *et al.* 1996 argued that a substantial part of inter-regional smoothing of consumption to income shocks in the United States came, not only thanks to public federal institutions, but also through private-sector "risk-sharing" channels, including both cross-(state)-border lending and borrowing and cross-ownership of capital.[6] The European CMU can be summed up as an attempt to emulate the (claimed) risk-sharing and stabilizing properties of the US.

While the basic diagnosis that the capital market in Europe is fragmented (or more so than in a country such as the US), and bank-centred (e.g. Valiante 2016, p. 20) there is no broad agreement as to the seriousness of the issues or its relevance to explaining (and thus resolving) the economic problems Europe faces. It is not clear whether the identified features can be rectified, at what cost, and whether any changes to existing structures might not bring with them other disadvantages. What is clear is that the various financial systems in Europe have evolved over decades and are integrated with other policy areas, such as the preference in most EU countries for pension systems centred on pay-as-you-go models. Particularly given that progress has been achieved in regulating the banking sector, with the introduction of Banking Union (see section 3a in this chapter and Lindner *et al.* 2014) and under the Basle III framework, it is far from clear that a greater reliance on capital markets, and thus direct interaction between companies seeking finance and financial investors—is more efficient.

There is already, in principle, the freedom of movement of capital within the EU, which is one of the 'four freedoms'. If corporate lending and investment are weak because of constraints on the financing side, one would already expect to see this being circumvented in the form of greater cross-border lending and borrowing, even given the undoubted legal and other restrictions in practice. Yet private sector flows have remained limited relative to the pre-crisis activity (Darvas *et al.* 2015, p. 44ff.). Put the other way around, removing restrictions via CMU will only be expected to boost desirable lending to the real economy,

6. For a critique see Melitz and Zumer 1999.

investment and growth if the problem is indeed on the financing, the supply side. At least currently, however, survey evidence (see below, and also figure 69 in part 1 of this chapter) suggests that credit growth is so sluggish because of a lack of demand for loans on the part of companies facing fundamental uncertainty about the future and, in many cases, still substantial excess capacity.

Regarding risk diversification an important distinction needs to be made. It is correct that the risk of a single portfolio can be reduced by intelligent diversification of the assets. This logic cannot simply be transferred to the systemic level, however. It is far from clear that merely increasing the number of sources of finance will improve systemic stability. Recent research (e.g. Tasco and Battison 2014) suggests that a deepening of financial interrelationships, which inevitably occurs when the degree of diversification increases, can lead to higher systemic risks which can unleash a domino effect.

Against this background this section discusses some of the specific measures proposed under CMU (1); we then focus on the proposal to activate standardized securitization markets, presenting a model of such markets that points to the need for considerable caution with such securitization in below (b); some implications are drawn out in (c).

### a) CMU state of play and individual measures

The Commission's proposal for CMU encompasses 33 building blocks that are rather disparate in nature. Some—such as the proposal for an EU legal framework for simple, transparent and standardized securitisation, into which we go into more detail below—can be relatively reliably assessed ex ante. Others remain rather vague, including measures for simple and competitive products for private provision for old-age or a financing strategy for investment in green technology.

An important legal step envisioned under CMU is to amend the Solvability II directive in order to facilitate investment by insurance companies in financial instruments to finance infrastructure investment. As discussed elsewhere in this report there is an urgent need to boost public investment in infrastructure, both the demand-side and supply-aide (including environmental) reasons, but there are barriers to higher public investment in most EU Member States (Germany being a notable exception) in the form of the fiscal rules. Facilitating public-private partnerships, which is what the proposed Solvability II amendment is ultimately seeking, is, though, a decidedly second-best way to increase public investment by bringing in private finance. Member State governments can

finance their investment at historically low interest rates, satisfying an urgent need on the part of financial investors for safe assets yielding low but predictable rates of return. Bringing in the private sector would undoubtedly raise the cost of financing projects because private agents face higher interest rates.[7]

A second legal proposal is to revise the prospectus directive with the aim of reducing the compliance costs of SMEs when accessing share and bond markets, while maintaining protection of investors. To the extent that an appropriate balance can be drawn between these, at least partially conflicting, goals, this approach appears sensible. It should not be forgotten, though, that the vast majority of SMEs in Europe are unincorporated firms (partnerships); some smaller corporations may benefit. The Commission is currently consulting on plans to draw up harmonized restructuring and insolvency rules. While there may well be scope for countries copying best (or at least less damaging) practice from other member states, it must be questioned whether there are substantial spillovers between countries in this area that would suggest substantial added value from an EU-wide harmonised approach. Similar considerations apply in the case of the envisaged harmonisation of covered bonds markets. By contrast efforts to bring some European coherence to overcome the national fragmentation of the various crowdfunding platforms would appear valuable, even if the quantitative importance of this niche mode of financing is still small. Hard to evaluate is the intention—on which the Commission has been running a public consultation—to stimulate the nascent European venture capital market in various ways. A legislative proposal is planned to upgrade rules on European Venture Capital Funds (EuVECA) and European Social Entrepreneurship Funds (EuSEF) to open up the market to a wider set of investors and increase the range of companies that can be invested in. While little harm is likely to come from such initiatives, the general note of caution mentioned above is relevant here: venture capital funds are a notable feature of the business environment in the US. It is not clear whether, in a more bank-centred system such an approach can work in a lasting way and on a quantitatively relevant scale.

It should be noted that the Commission is also running a public consultation on the EU regulatory framework for financial services with the aim of identifying regulations introduced in the wake of the crisis that have had inadvertently negative impacts on growth and employment. While there is nothing wrong in principle in subjecting measures that have been introduced—especially during a

7. This is true unless serious efficiency gains are obtained by private involvement.

crisis—to evaluation, unfortunately a "public consultation" is also an exercise in political lobbying.[8] Great care must be taken that this window of opportunity is not seized on by those in the financial sector that, now that the sector has been (partly) stabilized at great public expense, wish to roll back regulations that were introduced very consciously in the wake of the crisis as a quid pro quo for the support provided.

Of all the measures and plans discussed, the most advanced are the revision of the Solvability II Directive and the modernisation of the Prospectus directive which were adopted by the European Parliament in April and June 2016 respectively. The proposal for simple, transparent and standardized securitization is currently still before the European Parliament, and many of the other measures are still at the consultation phase. There is still a need—and an opportunity—for scholarly analysis and political discussion and intervention in these cases. In the next section we focus on the most important of these: the plan to reactivate the securitisation market in Europe.

### b) Model-based evaluation of proposals to reactivate EU securitization markets

A substantial number of studies point to the pernicious role played by a hypertrophic market for credit securitization in the financial market crisis of 2007-2008. Acharya *et al.* (2013) show that regulatory arbitrage—less politely: avoiding costly regulation—was one of the main motives for the development of the securitization market. While securitization seemingly reduced pressures on banks' balance sheets by shifting part of the risk to capital market investors, the authors show that, fundamentally, very little risk was actually transferred. Ultimately the securitized tranches that remained on the bank's book, so as to maintain a high rating, took most of the hit when the market collapsed. Gorton and Metrick (2012) point to the close correlation during the course of the crisis between the spreads on securitized loans and repo rates, on the one hand, and the solvency of the banking sector on the other. Both studies therefore emphasize the systemic risks associated with an excessively large securitization market.[9]

8. Concern with ubiquitous and unchallenged financial sector lobbying on the part of a cross-party group of MEPs was such that Finance Watch was set up as a sort of counter lobby, representing ordinary citizens in debates on the highly technical issues of financial market legislation and now in receipt of EU funding: http://www.finance-watch.org/about-us/why-finance-watch

The rapporteur for the deliberations in the European Parliament on the Commission's proposed regulation (European Parliament 2016) sees one of the greatest dangers of an excessive market for securitized products in the risk that it enables loans to be given to borrowers that are not able to service them over the medium term, especially if interest rates rise. The proposal from the European Commission (European Commission 2015) seeks to counter this argument by setting out clear rules that the securitization market must follow. Supposedly only simple, transparent and standardized products are to be permitted. However, there is concern that in reality other derivatives such as credit default swaps (CDS) and interest rate swaps (IRS) will have to be incorporated into the scheme in order to enable securitized credit and market-risk positions to be hedged, which will increase complexity.[10] Moreover, the experience of attempts within the G20 framework to regulate OTC (over-the-counter) derivative contracts in the wake of the financial crisis suggest that it is very hard in practice to bring such products under the umbrella of a standardized market (Theobald *et al.* 2015). The left-hand panel of Fig. 1 shows, using data from the Bank for International Settlements that the trading volume of standardized derivative contracts remains, despite all the efforts policymakers have made, far below those of non-standardised OTC transactions.

### *CMU and the risks of securitization*

In order to illustrate the potential risk propagation mechanisms of a securitization market, Lojak and Theobald 2016) have developed a model (see Appendix 5) that draws on the so-called stock-flow consistent (SFC) approach that builds on the work by Godley and Lavoie (2006). In this approach output is determined by effective demand and money is endogenous in the sense that credit creation by the commercial banks generates deposits. This is appropriate to analyzing the current situation in Europe as it is widely agreed that it is restrictions on the demand side that prevent faster growth (right-hand panel of Figure 70). Figure 71 illustrates the causal mechanisms of the model.

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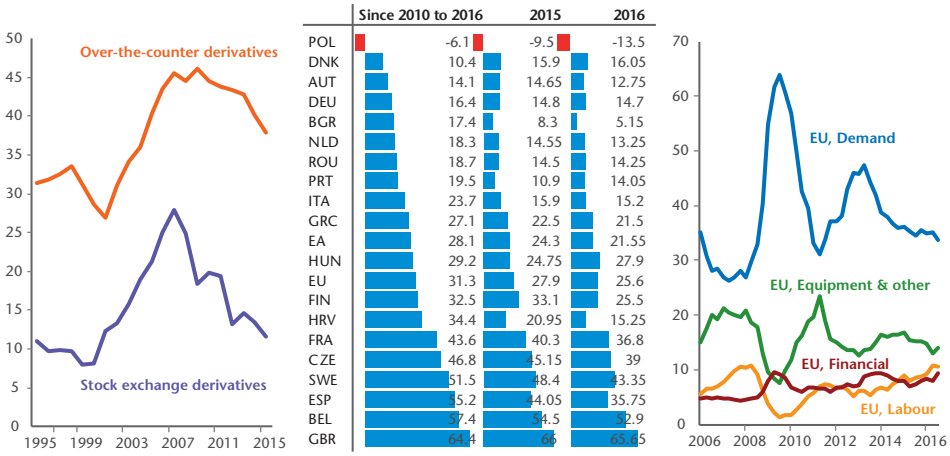
9. Chernenko *et al.* (2014: Figure 1) show the dramatic rise and fall of issuance of US securitisations before and after the financial crisis. According to their analysis issuance of nontraditional securitisations almost quadrupled from 98 $bn in 2002Q4 to 420 $bn at the peak in 2006Q4. By comparison, issuance of traditional securitisations roughly doubled from 103 $bn in 2002Q4 to 200 $bn at its peak in 2007Q2. The idea of an excessively large securitization volume is hard to pin down but the pre-crisis issuance volume serves as a guide.
10. The tranches placed on the capital market by the securitisation company can, for instance, reflect the average maturity of the underlying credit portfolio, but not the exact structure of the individual maturities. Interest rate derivatives are then used to hedge the resulting interest rate risk.

Figure 70. **Derivative trading volumes and limiting factors for extending industrial production**

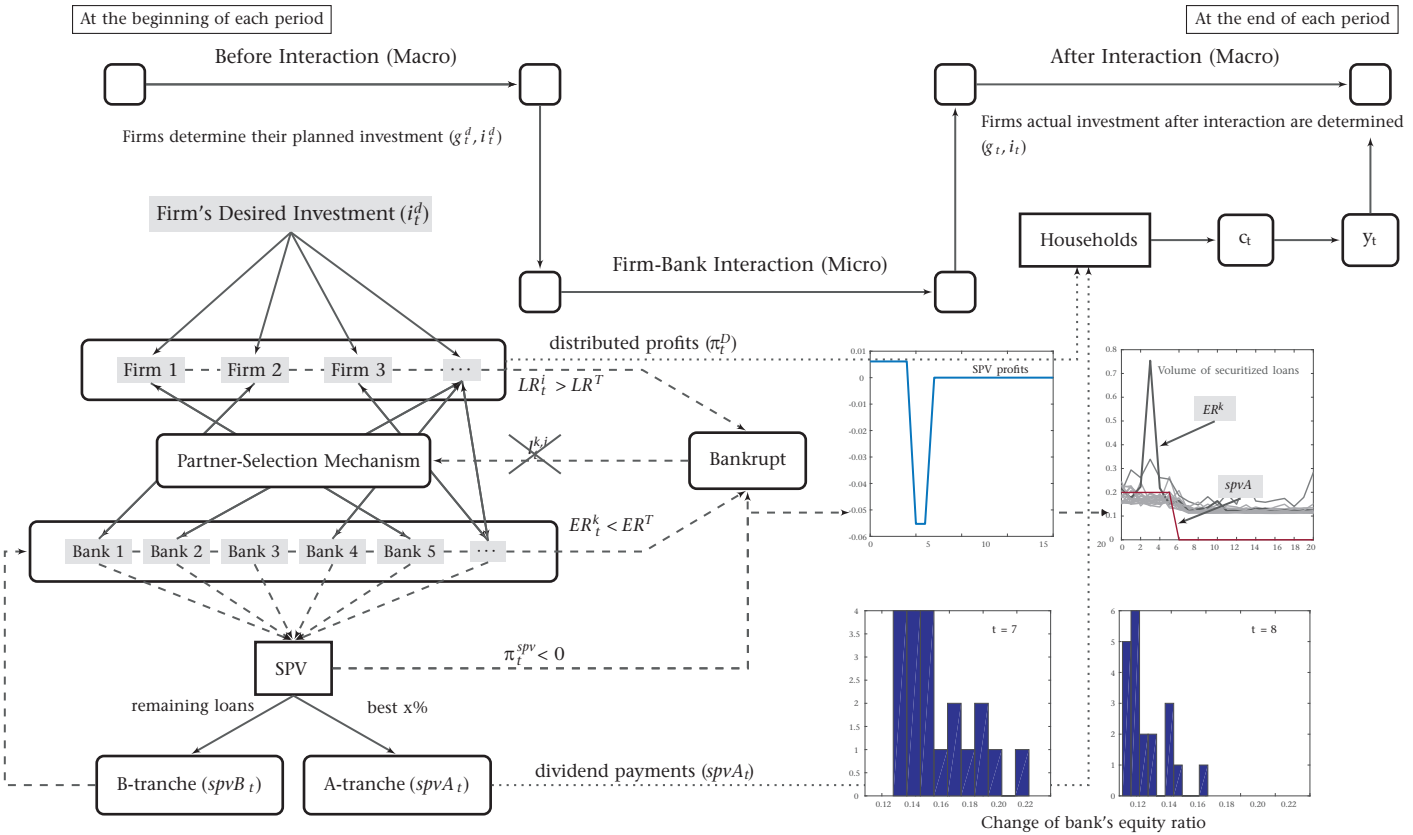



*Left-hand panel:* Trading volumes of standardised and non standardised derivatives from derivatives statisics of the BIS as a multiple of global GDP. Right-hand panel: Survey answers from the joint harmonised EU programme of business and consumer surveys. The corresponding question is ‚What main factors are currently limiting your production?' Middle-hand panel: Country-specific gaps between demand-side and financial restrictions from the same survey.
*Sources:* Bank for International Settlements; EU Commission / DG ECFIN.

Here we present a simulation of the consequences for the real economy of securitizing 20% of the initial credit volume. This is compared to a baseline in which just 1% of loans is securitized. On the one hand, the difference in values may overestimate the size of a re-activated securitization market (*cf.* footnote 4). On the other hand in our model a bank securitises only once during a simulation run, which compared to reality may underestimate securitization activity. However, at the current stage, we are more interested in unveiling the transmissions at work than in estimating the exact effects. The right-hand boxes in Figure 71 and top panel of Figure 72 show a significant deterioration in the equity capital ratios of some of the banks as the SPV starts to make losses and needs to be wound up, reducing the equity ratio of the banks which have securitized loans. The effect is, unsurprisingly, the greater the higher the proportion of loans that are securitized. This is the crucial impulse and the mechanism is as follows.

Initially the profits of the SPV are positive, irrespective of the degree of securitisation, because the yield to investors on the A tranche of the SPV lies below the average interest rate of the underlying portfolio of corporate loans (while at the same time, as noted, being higher than the deposit rate and thus offering household an incentive to purchase). The B tranche constitutes the riskier part

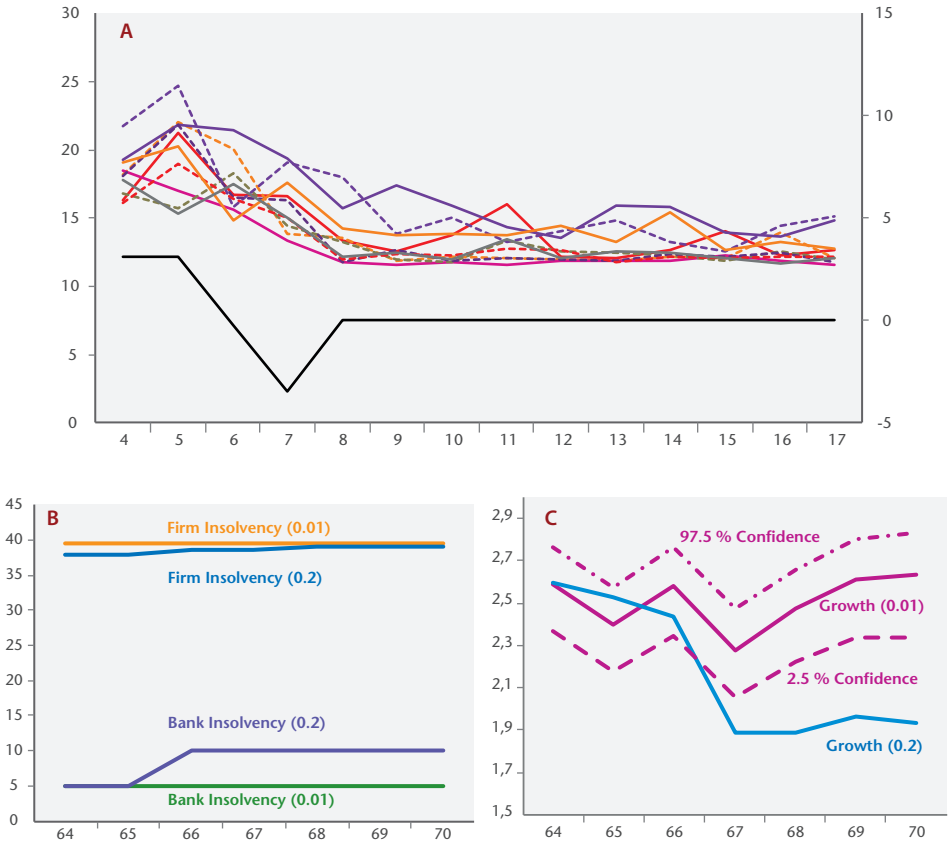
Figure 71. **The stock-flow consistent approach**




*Source:* iAGS 2017

of the SPV credit portfolio, as indicated by the (higher) leverage ratio of the firms taking out the underlying loans. This riskier part of the credit portfolio stays on the banks' books.

Figure 72. **Model Results**




*Top:* Evolution of equity capital ratios for individual banks (left axis) and profits of the securitization company (right axis).
*Bottom left:* Bank and firm insolvencics for different securitization intensities. *Bottom right:* Annualized growth rate of the economy. All time information refers to quarterly frequency.
*Sources:* Lojak and Theobald (2016).

Depending on the starting distribution of the leverage ratio and the subsequent higher debt service cost for higher leveraged firms during the bank selection process, some firms suffer shocks to their ability to service their loans. If the repayment ability of a sufficiently large number of firms is impaired—this is illustrated indirectly in the bottom left panel of Figure 72—and these loans have

been securitized in the first year of the simulation, the SPV continues to make interest payments on the A tranche although its income from companies' debt service payments has been reduced. Its profits turn negative. This represents a loss to the owner-banks of the SPV: they are forced to wind up the SPV at a cost to their own equity capital. As the bottom panels of Figure 72 show, the collapse of an SPV can make the banking sector vulnerable, even if it does not immediately result in additional bank insolvencies. Such an event does not occur until—in the simulation after almost five years—the structurally weakened equity ratio of a bank after the SPV collapse is hit by a further company insolvency.[11] Here it is worth emphasizing that the aggregate share of insolvent firms is the same between the baseline and the scenario with substantial loan securitization.[12] This means that there is no other fundamental difference in the main dynamics of the economy between the first and fifth years apart from the size of the securitization market. In the baseline, a bank can only go bankrupt, when its own credit portfolio is hit hard (several times). In the securitization scenario, it takes fewer defaults in the individual bank's credit portfolio to render the bank insolvent because it already faced losses on the credit portfolio of the securitization company, which is systemically linked to the bank. It is precisely the higher equity capital ratio that enables the banking sector to absorb shocks better in the baseline than the securitization scenario. In contrast, in the securitization scenario additional banking insolvency has knock on effects on lending and thus on investment and economic growth.

Overall the results show that corporate insolvencies (inability to service debts) lead in the longer term, to threats to the solvency of other banks which originally have not provided credit to the affected firm, if a significant proportion of loans are securitized and securitization companies represent an additional source of financial market interconnection. It might be objected that in real world experience to date each SPV is uniquely owned by a single bank, so such contagion cannot occur in the same way as in the model. This is incorrect however as the financial crisis has revealed at least three real-world channels through which banks can be affected by developments in an SPV that they do not directly own: First they can be holders of the A tranche of the securitized loans. Second they can be involved in derivative transactions that are needed in order to hedge the market and credit risk positions of the SPV. And third they can be affected as owners of other SPVs that come under pressure when the securitization market as a whole experiences a liquidity squeeze and pricing problems.

11. Note that we only consider solvency-related mechanisms in the model. In reality, as we saw in the crisis liquidity can be a key issue and can accelerate a downturn dramatically.
12. We assume that no recapitalization takes place.

Figure 72 lower panel, finally, shows that economic growth in the scenario with 20% securitization—and this is the main difference between the two scenarios[13]—is appreciably and lastingly negatively affected by the nexus between financial vulnerability, lending and investment.

All in all the simulation results suggest that reactivating the securitization market in Europe is associated with substantial systemic risks for the European financial system. In the medium and longer run this could well be counterproductive for economic performance. In addition, the inherent complexity of the interrelationships, even within such a stylised model, cast doubt on the claim and intention of the Commission's proposal that the new securitization markets can be kept simple, transparent and standardised.

### c) Implications for policy

The aim of the capital market union is to diversify Europe's financial system, supplementing bank financing with a sophisticated array of capital markets, overcoming fragmentation, with the ultimate goals of "freeing up" inactive capital and stimulating the real economy. Both savers (financial investors) and firms (real-economy investors) are supposed to benefit from more attractive, diverse opportunities. Meanwhile the resilience to asymmetric shocks is supposed to be increased and financial stability more generally ensured if not actually enhanced.

There are two key assumptions underpinning this approach. The first is that anaemic investment in Europe is primarily due to restrictions on the supply (lending) side holding back an expansion of investment in Europe. And the second is that any gain in the allocative efficiency of capital in Europe is not offset by increased risks and instability through increased reliance on capital markets, especially securitized loan markets.

As we have seen above EU surveys of industrial firms clearly show that the majority of firms reporting that they were unable to expand production saw a lack of product demand as by far the most important factor. Way behind lay lack of supplies or capacity limits. Only then, roughly equal in importance, come labour market and financial constraints, each affecting some 10% of firms. Survey data for the service sector do not paint a very different picture. At

13. The confidence bands in the figure illustrate the stochastic influence in the baseline which arises from the starting distribution and random drawing of house-bank relations given an identical share of firm insolvencies.

the country-level, too, it could only be argued maybe for Poland and Bulgaria that financial concerns currently rank in importance with demand-side issues as a barrier to expansion.

It therefore seems likely that, contrary to claims that increased regulatory demands on banks have been reducing the willingness to lend (Demary 2016), investment is being held back by ongoing uncertainty about demand prospects and more generally by political uncertainty regarding the future of the Euro Area and the EU as a whole (IMF 2016, Horn *et al.* 2016). While a time might come in which supply side restrictions gain in relative importance, it is vitally important not to exaggerate the likely impact of the measures planned under CMU in helping the European economy recover. In particular, there is a risk that such proposals distract policymakers' attention from the urgent task of reforming the economic governance architecture so as to enable a speedy recovery of actual output towards its potential and a reduction of unemployment (see chapter 3).

It must be added that experiences with the financial crisis have taught us the immense damage that can be wrought by ill-advised reliance on the efficiency and stability of financial markets. Small efficiency gains are easily dwarfed by the costs of a crash, not to speak of the distributional impacts. The model-based analysis of the proposed revival of securitization in Europe, while provisional and indicative, suggests that, notwithstanding the worthy goal of making securitization simple, transparent and standardized, great caution is called for. A system that diversifies risks in good times may generalize risk in bad times, when it is most needed. Securitization inevitably creates a degree of intransparency about where risks are located. For better or worse Europe's financial model is bank-centered. It is vital that Banking Union is developed to ensure adequate regulation at the appropriate level of Europe's banks and, for instance, succeed in containing non-performing loans as discussed above. Experience suggests that if and when companies see favourable prospects for their sales they will invest, either out of retained profits or by approaching the banks. And if the banks themselves are sound and if they share the non-financial sector's optimism about the path of the economy, they will lend what is needed to finance the required investment.

## 5.3. Conclusion

Alongside economic governance reforms it is vital that Europe take steps to stabilise its financial sector. Alongside national efforts, this also implies EU-level initiatives, the most notable of which are Banking and Capital Markets Union.

The analysis in this chapter points to the importance of addressing the issue of non-performing loans. Bad bank schemes appear particularly well-suited to deal with large portfolios of NPL, even if some implementation details should be discussed (whether the bad bank should be at the European or national level; whether a European Fund should guarantee the new institution). Insolvency frameworks should also be improved and the tax system should incentivize banks for building adequate provisions. Developing a secondary market for NPL—through securitization of those assets—is appealing. However, the subprime crisis has also shown that, if not properly structured, securitization can magnify financial instability and inflict serious damage to the wider economy.

Moreover, our research suggests that a deepening of financial interrelationships implicit in securitization, as proposed under the Capital Market Union, can lead to higher systemic risks. In the medium and longer run this could well turn out to be counterproductive for economic performance. In addition, the inherent complexity of the interrelationships cast doubt on the claim and intention of the Commission's proposal that the new securitization markets can be kept simple, transparent and standardized.

More generally, while the basic diagnosis of fragmented and bank-centered capital markets is widely shared, there is no agreement about the relevance of CMU. The main objective of the CMU is to diversify Europe's financial system, to supplement bank financing with a sophisticated array of capital markets, and to overcome fragmentation, with the ultimate goals of “freeing up” inactive capital and stimulating the real economy. Yet, credit sluggishness is mainly explained by the lack of demand for loans on the part of companies, which face fundamental uncertainty and substantial excess capacity.

## Appendix 5. Modelling a securitization market

The model is of a closed economy without a government sector. The private sector is divided into firms and households, and output consists of consumption and investment. Distinctive characteristics of the model are that both the corporate and the banking sector are microfounded and the latter incorporates a Special Purpose Vehicle (SPV) for the securitization of bank loans.

The non-financial corporate sector consists of 200 firms and the banking sector of 20 banks. These "agents" differ primarily from one another with respect to their leverage ratio, i.e. the ratio between equity and external (borrowed) capital which is drawn from a skewed and heavy tail distribution. First firms select a target for their desired investment volume as a function of capacity utilization, the profit share and the profit rate; this is a neo-Kaleckian specification, on which see for instance Palley (2016). Firms request loans from banks to finance the part of their desired investment that cannot be financed by retained earnings. As long as banks are solvent, they will grant the credit request, but the interest rate they charge in each case depends on the individual debt ratio of a firm relative to the average. Moreover the current version of the model presumes equally distributed investment demand among the firms for each period. Hence, there is a reinforcing process for some firms, namely the one with higher initial debt ratio, to go bankrupt as a higher debt service makes the leverage ratio deteriorate even further. At the same time, the remaining firms are growing faster, which stabilises the aggregated growth rate of the economy. In total, there results a process of interaction between credit-seeking firms and loan-providing banks as is standard in the agent-based modelling literature; specifically similar to the partner selection mechanism in Delligatti *et al.* (2010) and Caiani *et al.* (2016). In addition, in this procedure the relationship between each company and its "house bank" is drawn at random.

The question is when and whether loans demands are not met since this can introduce a supply-side restriction which reduces the accumulation rate of the economy. And the answer depends on the solvency of both the firm and even more the bank. Firms and banks are considered insolvent when their leverage ratio exceeds a certain threshold value. In the case of banks this threshold is set, in accordance with Basle III, at an equity capital requirement of 10.5%. For firms a slightly higher value is assumed. The calibration is preliminary, but plausible in terms of illustrating the orders of magnitude of insolvency risk. In addition, the approach adopted permits

simulations using alternative threshold settings, including the size of the securitized market. When firms become insolvent they cease to engage in additional net investment. When banks become insolvent they cease to lend. If solvent firms are initially matched with an insolvent bank they face additional search costs. Because only a limited number of draws is available with which to establish a relationship with a commercial bank, bank insolvencies constitute a restriction from the supply side. In the case that a firm only draws insolvent banks net investment is reduced by the equivalent of the size of the credit demand. By aggregating the credit decisions at the micro level the aggregate volume of actually realized investment is determined. All corporate balance sheets are closed at the micro level by adjusting individual share prices.

The model does not have an explicit portrayal of the labour market. The wage share is set at 0.7. Just under 50% of the profits of non-financial firms are distributed as dividends. In principle, firms with higher debt ratio could reduce their dividends paid out, but in the current version of the model a constant payout ratio is used. The banks earn profits from the spread between the interest rate on loans and deposits; these are distributed in full to a representative household sector owning the banks. Disposable household income consists of wage and capital income. Under the calibration selected here savings equal investment, firms' assets and liabilities are in balance and, where there are few bank insolvencies, especially in the baseline with a small-sized securitization market, the economy grows at a constant rate.

We now introduce securitization to the model. At the start of the simulation period banks may choose to securitise part of their loans to the corporate sector, selling them to a common special purpose vehicle. Households invest in the A tranche of the SPV because its bonds pay a higher rate of interest than deposits. Banks keep the B tranche which in case of a high default rate of the securitised portfolio has to bear the loss. Such an allocation guarantees a better rating for the A tranche. In this way the model can be used to study the macrofinancial effects of lending with varying degrees of securitization.