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Financial Literacy and Financial Stabilityⁱ

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Abstract

Financial (il)literacy is an important channel through which financial instabilities can arise. Yet financial literacy is not a sufficient condition for financial stability. Even if all actors in financial markets are fully financially literate, they may ignore the impact of their own decisions on the functioning and stability of the financial system. This has implications for academia and central banks. Further analytical work is needed to understand the link between micro-decision making and macro-economic outcomes. Academia can also contribute to designing good policy evaluation studies and improving teaching of financial stability. For central banks, acknowledging the role of communication for financial stability is important. While policies related to financial consumer protection and financial stability need to be delineated in order to ensure accountability and transparency, synergies between these policy areas can be exploited. This includes developing common narratives, common data strategies, and frameworks for policy evaluation.

1 Motivation

Well-functioning financial markets can have significant positive welfare implications. For the individual, saving and borrowing allow consumption to be smoothed over time and across states of nature. Wealth can be accumulated over time by the power of compound interest. Differences in financial literacy across individuals can thus be a relevant factor behind differences in wealth across individuals (Lusardi, Michaud, Mitchell 2017). Not least, good financial planning helps ensure financial independence. For society as a whole, well-functioning financial markets contribute to growth, allow innovative projects to be financed, and risks associated with these projects to be shared and diversified.

In order to reap these benefits, individual market participants must have a basic understanding of relevant financial concepts, and appropriate regulations must be in place in order to prevent the build-up of risks in the financial system. The household sector is particularly important in this regard, given that credit-driven business cycles often operate through household demand (Mian and Sufi 2018).

Financial exuberance can thus have severe negative implications, both at the individual and at the aggregate level. Understanding the factors that prevent excessive financial risk

taking and improve financial resilience is important. So what do we know about the links between financial literacy and financial stability? Is financial literacy a precondition for financial stability? And how do policy decisions that target micro-level incentives affect aggregate outcomes?

Financial literacy is an individual trait, related to the capability of individuals to deal with financial concepts, to take sound financial decisions, and to balance the risks and returns of these decisions. Measures that mitigate the adverse effects of limited financial knowledge can take various forms, ranging from educational interventions to consumer protection legislation. Policy interventions can be justified if they correct market failures, including externalities (i.e. effects on third parties that are not consenting), if exchanges take place without full information or knowledge, or if market power prevails (Tirole 2017, Chapter 6).

By contrast, analysing financial stability issues requires taking an aggregate perspective. Risks to financial stability emerge if distress in parts of the financial system threatens the functioning of the entire financial system. When a financial system becomes impaired, there may be dire consequences for economic activity such as losses in output, resource misallocation, and social costs. Hence, the ability of the financial system to perform its key macroeconomic functions is the focus of financial stability surveillance and, ultimately, policy.

Post-crisis, macroprudential policy has been established as a new policy field that explicitly targets financial stability. Such macroprudential policies can take various forms, e.g. bank-based instruments that internalise systemic risk externalities or borrower-based instruments that allow imposing minimum standards for the granting of (mortgage) loans.

In this paper, I will begin by discussing the links between financial literacy and financial stability. I will argue that financial (il)literacy is an important channel through which financial instabilities can arise. Uninformed investors may take on excessive risk. This risk-taking behaviour can become systemic if there are common exposures to the same risk factor, or if risks cluster in specific institutions or market segments. In this sense, lack of financial literacy is an important factor behind financial instabilities. Yet financial literacy is

not a sufficient condition for financial stability. Even if all actors in financial markets are fully financially literate, they may ignore systemic risk externalities, i.e. the impact of their own decisions on the functioning and stability of the financial system. Relatedly, financial market participants may have full knowledge of financial concepts but may make mistakes in forecasting future market developments.

From these observations, several conclusions for research and policy follow. For academia, these include a greater emphasis on analysing the link between micro-decision making and macro-economic outcomes, designing good policy evaluation studies, and improving teaching of financial literacy and financial stability. For policy-makers, I see the need to clearly delineate different policy areas – in particular, financial consumer protection and financial stability. This is important in order to ensure accountability and transparency. At the same time, synergies between these policy areas can be exploited by developing common narratives, common data strategies, and frameworks for policy evaluation. I will use policy measures targeting the housing market as an example to illustrate my points.

2 How are Financial Literacy and Financial Stability Related?

Financial literacy and financial stability are related to financial resilience. Financial resilience ensures that risks are manageable and do not threaten individual wellbeing or societal welfare. If an adverse shock hits, financial structures and systems should be sufficiently robust to buffer the shock and provide insurance against adverse events.

Micro- versus Macro-Perspectives

Yet the perspective taken by financial literacy and financial stability differs. Financial literacy is a concept related to the individual. It denotes appropriate skills and knowledge that enable individuals to make sound financial decisions. Lusardi and Mitchell (2011a, 2011b) developed three questions measuring fundamental concepts necessary to financial decision making, related to interest rates, inflation and the benefits of investment diversification. These questions have been widely used and added

to several national surveys, including the Panel on Household Finances (PHF) in Germany (Schmidt and Tzamourani 2017). A related concept is financial capability, which includes economic behaviour such as managing day-to-day spending well, looking ahead and planning unanticipated expenditures, selecting and using available products appropriately.²

Financial stability is a concept related to the financial system. Financial instabilities can arise if shocks to individual financial institutions or market segments have repercussions throughout the financial system, thus threatening its functioning and having adverse implications for the real economy. Financial instability thus describes a situation in which the financial system does not perform its key macroeconomic functions, including the allocation of financial resources and risks as well as the smooth functioning of the payments systems.

Is financial literacy a necessary condition for financial stability, and can financial stability be achieved only if financial decisions at the individual level are sound? Sound financial decisions at the individual level are obviously conducive to financial stability. But they are not a sufficient condition — because individuals will tend to ignore the systemic risk externalities of their decisions and actions.

The Role of Expectations

Studying the link between (financial) decision making and aggregate outcomes is not a new field in the macroeconomic literature. Researchers have looked into investment biases such as home bias or habit formation for a long time — but often without directly linking these insights to the stability of the financial system. The behavioural finance literature shows that departing from the assumption of full rationality can help explain many real world phenomena. Distorted beliefs, excessive trading, insufficient diversification, or other examples of suboptimal investment behaviour can be attributed to psychological biases (Barberis and Thaler 2003). Implications of behavioural models for the financial system depend on the ability of informed, rational traders to offset the induced distortions.

Recent literature has made advances by linking decision making at the individual level to macroeconomic outcomes. Mian and Sufi (2018) argue that one major lesson of the re-

cent financial crisis is the importance of credit-driven business cycles that operate through household demand – and that systematic mistakes in the formation of expectation are crucial. This channel has three elements. The first is an expansion of credit supply which fuels household demand for consumption goods and housing, thus filtering through to economic activities. The second ingredient is an expansion in the real economy which is driven by an increased demand of households. The third element is a bust which is aggravated by nominal rigidities, distress in the banking sector, and legacies of the boom phase such as a resource mis-allocation towards the non-tradables and housing sector.

Distorted expectations can be a particularly powerful channel for the propagation of shocks. Dynamics of the credit cycle might be driven by agents that overestimate the probability of good future states of the world and, thereby, neglect risks (Bordalo, Gennaioli, and Shleifer 2018). If investors extrapolate past trends and rely too much on past returns to predict future returns, financial bubbles might arise (Barberis, Greenwood, Jin, and Shleifer 2018). A number of studies find evidence for extrapolative behaviour, for instance, in the stock market (Greenwood and Shleifer 2014) and the US housing market (Case, Shiller, and Thompson 2012).

Dynamic asset pricing model can be used to link the degree of investor experience to distortions in expectations and to the probability of financial bubbles (Adam, Beutel, Marcet, and Merkel 2015). Dynamic stochastic general equilibrium models (DSGE) with extrapolative expectations can generate excessive house price booms and household debt (Gelain, Lansing, and Mendicino 2013). Extrapolative expectations imply that credit constraints are believed to be loose (tight) for a longer time than would be assumed under rational expectations. Extrapolative expectations can act as a powerful financial accelerator which amplifies microeconomic frictions and has strong financial and macroeconomic effects (Winkler 2016). Empirical evidence shows that overly optimistic expectations fuelled house price growth in the U.S. in the up-run to the financial crisis. This price behaviour is consistent with search models in which a small fraction of overly optimistic agents push up house prices (Piazzesi and Schneider 2009).

Essentially, these theoretical models link distorted expectations to excessive asset price bubbles and excessive household debt. Empirical studies using aggregate data support

the mechanisms stressed by these models, in particular the link running from asset price bubbles to financial crises (Reinhart and Rogoff 2008, 2009; Brunnermeier 2009). Moreover, early warning models also link asset price and credit bubbles to financial crises (Beutel, List, and von Schweinitz 2018). Also, several asset pricing anomalies can be explained by the fact that households typically do not participate in financial markets directly but rather operate through financial intermediaries (He and Krishnamurty 2018). Hence, the relevant marginal investor is not the individual household but the intermediaries facing various constraints.

Financial Literacy and Expectations

Essentially, all ingredients of financial crises – balance sheet effects, runs, and network effects – can be linked to and are potentially aggravated by limited financial knowledge. Identifying the exact channel running from distorted micro-economic decisions to aggregate outcomes is inherently more difficult. One key question is whether financial literacy has an impact on the degree of distortions in expectations. Empirical evidence supports that individuals with better financial education have less distorted expectations. For example, typical households (in the U.S.) are excessively optimistic during booms and excessively pessimistic after busts (Adam, Marcet, and Beutel 2017). At the same time, better informed professional investors do not suffer from the same systematic biases (Beutel 2017). Moreover, experience with investing in financial markets (in years) and personal experiences (good or bad past returns) have a strong impact on households' expectations (Malmendier and Nagel 2011; Vissing-Jorgensen 2004).

Financial experience, in turn, is related to higher financial knowledge. In surveys, half of the respondents stated that personal financial experiences have been their most important way of “learning about financial topics”, followed by learning from friends or family (22%), and the media (13%) (Hogarth and Hilgert 2002). Only 10% stated high school or college courses (5%), or training courses outside of school (5%) as their most important source of financial knowledge. Similarly, financial knowledge rises with experience and decays at older ages (Lusardi and Mitchell 2011a). Experience with financial instruments is a more important driver of financial knowledge than college or high school education

(Peng, Bartholomae, Fox, and Cravener 2007), which could be one reason for why financial literacy is so low and remains low among large groups of the population.

Summing up, the behavioural finance literature has contributed to an improved understanding of the link between distorted expectations, which can stem from limited investor experience and thus limited financial literacy, to financial bubbles or house price booms and household debt. Improved financial literacy and education can mitigate some of these effects but cannot alleviate systemic risk externalities. Also, financial education is targeted at consumers, not financial intermediaries. These insights are particularly relevant for the housing market, given that investment into housing is one of the most important financial decisions taken by most individuals. How borrower incentives and financial knowledge affect aggregate outcome on the housing market is thus an issue to which I will turn next.

3 Micro- and Macro-Perspectives of the Housing Market

Real estate assets are a significant component of the financial wealth of households and household debt is dominated by mortgage loans. In Germany, mortgage loans account for about 70% of household debt, and for about 50% of loans issued by banks to the non-financial private sector.³ The Household Finance and Consumption Survey (HFCS) shows that about 20% of households in Germany have taken out mortgage loans; this number is slightly higher (23%) in the euro area. In Germany, the share of mortgage debt to total household debt is 88% according to the survey.⁴ The corresponding figure for the euro area is in a similar range (86%) (HFCN 2016). Financial mistakes related to housing finance can, therefore, have important implications for individual wealth and consumption decisions.

Risks to financial stability

Unsustainable housing market developments also play a key role for the build-up of risks to financial stability. About two-thirds of banking crises were preceded by housing market booms, and housing market boom-bust cycles are often followed by a crisis (Crowe, Dell’Ariccia, Deniz and Rabanal 2011). Additionally, economic downturns that are accom-

panied by a bust in the housing market are estimated to last around 40% longer, and they are almost three times as severe as those without housing busts (Claessens, Kose, and Terrones 2009). In general, financial crises which are connected with a housing market bubble tend to be more severe if the bubble was financed by excessive credit resulting in high leverage of private households and other housing market participants (IMF 2012; Jordà, Schularick, and Taylor 2015a).

Looking deeper into country examples allows identifying some regularities. First, at the aggregate level, a build-up of risks from the housing market often stems from a combination of rising house prices, strong mortgage growth, and a deterioration of credit standards (Jordà, Schularick, and Taylor 2015b; Mian and Sufi 2010). Such developments are especially problematic if too many market participants form overly optimistic expectations as regards their ability to service debt over the whole cycle of a mortgage loan or with respect to future house price growth. Also, macroeconomic risks and system-wide repercussions are often difficult to assess for individuals. Additionally, overly optimistic expectations during a boom can favour a bias towards low levels of awareness of risks. This is even more problematic if a boom is accompanied by large current account deficits or a domestic building boom (Bunda and Ca'Zorzi 2009; Kannan, Rabanal, and Scott 2011).

The role of financial literacy

Financial literacy and, in particular, financial education can affect the probability of mortgage defaults. Surveys of subprime mortgage borrowers in the US who took out loans pre-crisis show a large and statistically significant negative association between numerical ability and mortgage default (Gerardi, Goette, and Meier 2013). This relationship is robust to controlling for a large set of sociodemographic variables and other aspects of cognitive ability, and it does not depend on the type of mortgage contract. Similarly, participation in a long-term financial education and counselling programme can be related to the default rates of mortgages (Agarwal, Amromin, Ben-David, Chomsisengphet, and Evanoff 2010). Ex-post delinquency rates among programme graduates are significantly lower due to different types of mortgage contracts, the post-purchase counselling, and the budgeting and credit management skills taught. Moreover, increases in education (years of schooling)

lead to substantial reductions in the probability of bankruptcy and foreclosure, slightly higher credit scores, and fewer delinquent credit card payments (Cole, Paulson, and Shastry 2014). The effect of education on foreclosure was particularly pronounced during the recent financial crisis. Work of Brown, Collins, Schmeiser, and Urban (2014) also shows that financial education in high schools has an effect on debt behaviour and reduces the probability of defaulting on debt.

The Role of Macroprudential Policies

While improved financial education can help improve the quality of financial decisions at the individual level, additional measures may be needed in order to mitigate negative externalities for the financial system. Macroprudential policy has thus been established in order to contain financial stability risks arising from unsustainable financial market developments, including the housing market. Essentially, macroprudential policy fills the gap between microprudential supervision, which focuses on the stability of individual financial institutions, and monetary policy, which focuses on price stability.

Risks for financial stability can arise if strong increases in prices for real estate, a strong expansion of mortgage lending, and declining credit standards coincide. Such trends are particularly risky if a large number of market participants form overly optimistic expectations with regard to the future evolution of prices and debt sustainability, and if they do not take sufficient account of the fact that house prices can fall and interest rates can rise.

Macroprudential measures addressing risks to financial stability aim at reducing the probability that mortgage-related risks materialise and that these risks have system-wide implications because of insufficient buffers in the system. These policy measures can target the demand or the supply-side of the market for mortgage lending. Measures targeting the supply side are, for example, capital-based measures that aim at increasing the resilience of lenders and their capacity to absorb losses during a market downturn.

In many instances, though, issues of debt sustainability arising from the housing market are not a key risk for banks but for households. Macroprudential instruments targeting the

demand side thus address the probability of borrower default and the losses arising from default. The probability of borrower default can be limited through restrictions on loan-to-value-ratios (LTVs), that is, caps on the ratio of borrowed money relative to the value of a residential property. Another set of instruments is related to the ability of households to service debt, thus limiting losses. These instruments include the debt-service-to-income ratio and the debt-to-income ratio. Amortisation requirements can provide additional safeguards against future deteriorations in debt sustainability.

Essentially, these macroprudential instruments related to the housing market are similar to indicators that individual borrowers and lenders use as a basis for loan decisions. Binding targets, however, limit the contractual freedom of private market participants. Before invoking binding macroprudential measures, softer policy interventions, including communication strategies, can thus be useful. In this context, financial education can play an important role in terms of a longer-term strategy towards financial stability.

Recent policy discussions in Germany can serve as an illustration. In the year 2015, the German Financial Stability Committee issued a recommendation addressing potential risks arising from the mortgage market (Financial Stability Committee 2015). The Committee argued that, while not seeing imminent risks to financial stability, a legal basis for macroprudential instruments related to the housing market would be needed as a precautionary measure. In addition, the Committee recommended the creation of a legal basis for the collection of granular data of the housing market. Better data serve two purposes – improved risk assessments and impact assessments of policy measures.

Subsequent policy discussions centred around the need for policy instruments, in particular in view of the parallel introduction of new guidelines related to consumer protection,⁵ and the costs and benefits of additional data collections. In 2017, the German parliament passed legislation providing the legal basis for two out of four requested macroprudential instruments, modifying consumer protection legislation related to real estate, but without providing the legal basis for additional granular data (Bundesgesetzblatt 2017; Deutsche Bundesbank 2017; Federal Government of Germany 2016).

To sum up, buying and financing a house is one of the most important financial decisions taken by many households. Promoting financial literacy with respect to housing finance can thus contribute to improved decision making. This contributes to financial stability by reducing the probability of financial crisis linked to high indebtedness of households. Yet, improved financial knowledge alone does not address the issue of negative externalities. Macroprudential policies targeted at the housing market – or, more generally, other market segments where excessive credit is an issue – are thus needed. Their effectiveness, in turn, will depend on the degree of financial literacy at the individual level.

4 Lessons for Academia

In recent years, empirical research has focused on the identification of causal effects: How do particular policy measures affect policy outcomes? How can environmental factors be isolated? These strands of research have brought many important new insights into individual decision making and, in particular, the implications of financial literacy.

Recent empirical work has made significant contributions to tackle the issue that financial literacy can be endogenous, using methods allowing causal impact analysis (Lusardi and Mitchell 2014). For example, economists are more likely to hold shares in companies than non-economists – which can be the result of economists being more financially literate, or it can be due to some other (unobserved) factors driving financial literacy. This issue has been addressed using the fact that universities have been established in a particular region as an (exogenous) instrument (Christiansen, Joensen, and Rangvid 2008). Other studies use an experimental setting in which a randomly selected group is assigned to a “treatment” such as an education programme, while another randomly selected group acts as the control group. A study for India uses a randomised field experiment on low-income urban households to study the effect of a financial education programme on financial behaviour (Carpena, Cole, Shapiro, and Zia 2011). Participation in the programme influenced awareness of and attitudes towards financial products and financial planning tools.

In a recent study, Kaiser and Menkoff (2016) perform a meta-analysis of studies on the effects of financial education programmes. Their main finding is that financial education and financial literacy impact financial behaviour. At the same time, the way in which financial education is implemented matters. For example, teaching low-income participants has a weaker impact, behaviour is difficult to influence, providing financial education at a “teachable moment” provides the best results, and interventions in low-income countries appear to be less successful than those in high-income countries.

Develop Evaluation Methods

Using causal identification methods to analyse the drivers of financial stability and the effects of macroprudential policies is, obviously, more difficult for a number of reasons.

First, macroprudential policy is a relatively new policy area. Hence, there is not much experience with the use of these policies across countries. Also, systematic documentation of macroprudential policy measures started only recently. The International Monetary Fund (IMF) has been publishing, since 2017, a regular survey on macroprudential policy measures (IMF 2018), which can be a good starting point for empirical work.

Second, in order to assess the effects of financial education, it is sufficient to link education received by an individual to outcomes at the individual level. Assessing the effects of financial stability policies, in contrast, requires linking interventions that affect decisions at the micro-level to aggregate outcomes. Focusing on the big picture and on the question of how micro-incentives and decisions add up to aggregate behaviour is thus needed.

A related question is how frictions and biases that affect micro-level decision making aggregate up and affect financial stability, and how these frictions can be identified early on. Uninformed investors will always be present in markets. The question is how important they are, quantitatively, for market outcomes. Vissing-Jorgensen (2004) argues that direct evidence on investors’ beliefs is needed in order to determine which aspects of behavioural finance models are relevant and thus which models provide reliable input into policy debates. In typical environments, however, information about investors’ beliefs is not

available, and the question arises how to develop robust policy implications in such environments of limited information.

Essentially, this boils down to the question of how the need for policy interventions and the effects of policies that have been implemented can be assessed. Designing appropriate strategies for impact assessments, both ex ante and ex post, can be an important contribution of research.

Teaching Economic and Financial Knowledge

Well-designed financial education programmes can improve financial knowledge that is relevant for day-to-day decision making. In parallel, efforts should be made to improve teaching financial stability and to integrate this into curricula of universities. This provides the necessary academic background for macroprudential policies and analytical work related to financial stability to both, policymakers and academics. The challenge is that teaching financial stability requires input from many fields including micro- and macroeconomics, public finance, theory of regulation, or even competition theory. Teaching needs to cover empirical methods – as well as knowledge about institutions. In most universities, such knowledge is spread across different departments. Possible steps forward involve developing a macroprudential module for CORE, an open-access online teaching tool,⁶ and introducing basic concepts related to financial knowledge and financial stability already in curricula of schools.

Not least, closing gaps in financial literacy as well as teaching financial stability can greatly enhance the success of communication strategies of central banks. Many central banks engage in training courses related to general economic knowledge and issues related to price stability. Broadening the focus of these activities to include aspects of financial literacy and financial stability is a natural next step.

5 Lessons for Central Banks

What are the Policy Objectives?

Policy interventions in financial markets can have many different motivations. Justification for the microprudential regulation of banks, for instance, derives from information asymmetries and moral hazard in banking models (Dewatripont and Tirole 1994): banks finance themselves with short-term deposits and invest in longer-term assets. This exposes banks to a run-risk, and deposit insurance reduces the liquidity risk for depositors. In order to prevent moral hazard on the part of banks and to delegate monitoring away from uninformed depositors, bank capital regulation and monitoring through the deposit insurer helps aligning incentives.

Macroprudential supervision and regulation have a different motivation (Borio 2003). They aim at internalizing systemic risk externalities. Individual market participants do not take sufficiently into account that their own actions might affect the stability of the entire financial system, be it through “too big to fail” issues, common exposures, or interconnections within the financial system. Macroprudential policy measures can take many different forms, they can apply to different types of market participants, and they can range from relatively soft tools such as communication to more interventionist measures.

Consumer protection, in turn, aims at protecting the individual from unsound financial decision making. Financial markets are subject not only to “traditional” market failures such as externalities, information asymmetries, market power, and coordination failures, but also to inefficiencies related to biases and cognitive limitations (Campbell, Jackson, Madrian, and Tufano 2011). The latter include the lack of basic financial literacy. When households lack the training necessary to assess their financial decisions, they may make mistakes that lower their own welfare, and this can have broader consequences for the economy (Campbell 2016).

Consumer protection regulation focuses on provisions for fair treatment and on disclosure requirements.⁷ The “European Mortgage Directive”⁸ can serve as an example. It includes guidelines for the advertising of products, the provision of information, affordability provi-

sions, minimum standards for advice, and requirements for the qualification of staff.⁹ Regulations may also extend to the content and terms of financial products in order to align products with the demand of consumers and to protect consumers from acting against their own interests. Such consumer protection policies involve trade-offs between, on the one hand, the benefits of intervention in terms of correcting market failure and, on the other hand, the costs of policy mistakes and constraints imposed on individual decision-making. These trade-offs should be confronted explicitly, based on high-quality evidence.¹⁰

The need for micro- and macroprudential regulation is linked to the ability of market participants to process financial information and to take financial decisions. The reasons that give rise to microprudential regulation are weakened, the more informed depositors are. The better market participants react to relatively soft interventions such as communication as macroprudential instruments, the weaker is the case for stronger interventions such as the imposition of binding constraints on borrowing and investing.

Yet, consumer protection and financial stability are typically treated as separate policy areas, often with different institutions being in charge of the implementation of these policies. Central banks are typically involved in macroprudential policies, recognising the analytical similarities between financial stability and monetary policy. Consumer protection is often the responsibility of microprudential supervisors, given that these policies focus on individual behaviour, and given that these policies can have distributional consequences thus requiring broad political support. These decisions are outside the realm of (independent) central banks. The Bundesbank, for example, is a member of the German Financial Stability Committee but has no responsibilities with regard to consumer protection.

At the same time, the typical division of labor often prevents an efficient coordination between the different policy areas. I thus see two main areas for cooperation between authorities in charge of macroprudential policies, financial education, and consumer protection.

Develop Common Data and Evaluation Strategies

Developing common data and evaluation strategies can be an important area of cooperation between policies that aim at enhanced financial literacy and financial stability. The indicators that are relevant to monitor the sustainability of individual-level finances are very similar to those needed to assess the stability of the financial system. As regards the housing market, for example, loan-to-value ratios and debt-to-income ratios are relevant, at the level of households and of the financial system. Also, information about financial knowledge might be relevant for financial stability analysis. Hence, defining data requirements needed for the monitoring of risks jointly across the policy areas can be an important contribution to reducing reporting costs and ensuring consistency of indicators.

Similarly, assessing the effects and the effectiveness of policy interventions related to household finance (consumer protection) and financial stability will rely on similar micro-level mechanism. Developing common protocols and strategies for policy evaluation can be useful.

Develop Common Narratives

A second area where different policies can benefit from closer cooperation is communication. Often, the narratives that can be used to explain why policy measures are needed are very similar. For example, the resilience of individual households with regard to shocks to the mortgage market is related to loan-to-value and debt-to-income ratios. Similar indicators matter when assessing the probability of a systemic crisis to the mortgage market and its severity. Explaining financial stability issues can thus build on narratives that are related to individual experiences with the assessment of credit risks.

At the same time, communicating financial stability needs to go beyond examples related to decision-making at the individual level. Take the common explanation of why macro-prudential policies are needed. We typically argue that systemic risks in financial systems arise if distress in one institution or a group of financial institutions threatens the functioning of the entire financial system. This includes domino effects due to direct contractual

linkages and informational contagion leading to runs on assets of other financial institutions, even without any direct contractual linkages. While these mechanisms may be relatively intuitive, the standard definition of macroprudential policy is not. The sentence “Macroprudential policy aims at internalising systemic risk externalities.” is informative for economists but it is likely complex and too technical for most non-economists.

It is thus not surprising that many intuitive but potentially misleading narratives dominate public policy discussions on financial stability issues. These include statements such as “Equity capital is a burden for banks.”, “Low bank profitability poses risks to financial stability.”, “Tighter regulations put domestic banks at a competitive disadvantage.”, “Small banks have not contributed to the financial crisis and thus do not pose risks to financial stability.”, “Banks that have to hold more capital cannot lend as much.” Why are these statements potentially misleading? Because equity capital is not a “burden” but enables banks to lend, because low profitability can be a symptom of overcapacities and fierce competition in banking markets,¹¹ because stronger and better regulated banks contribute to the resilience of the financial system and may find it easier to acquire market shares, particularly in times of crisis, and because distress of small banks can become systemic if these banks have common exposures to macroeconomic risks.

So how can one deal with the dichotomy of difficult-to-explain policy objectives and the need to develop intuitive narratives? Developing good narratives which are not yet tautological is important. Financial stability analysis requires a strong analytical framework that addresses the complexities of the financial system. But “explaining” the complexity of the financial system to the general public – and even to informed observers – is challenging. Given that other policy areas such as consumer protection or fiscal policy face similar challenges, developing narratives in cooperation and learning from experience can be fruitful. Developing narratives acknowledges the importance of communication strategies. A recent report by the Committee on the Global Financial System (CGFS) stresses the importance of communication strategies and gives examples (CGFS 2016).

Narratives are not only important in terms of explaining what financial stability policies are about. They can also influence the stability of financial system in their own right. The

propagation of narratives within a financial system can have implications for the propagation of shocks within the system and the re-enforcement of biases at the individual level, as has been stressed recently by Shiller (2017).

6 Summing Up

Financial (il)literacy is an important channel through which financial instabilities can arise. Yet financial literacy is not a sufficient condition for financial stability. Even if all actors in financial markets are fully financially literate, they may ignore the impact of their own decisions on the functioning and stability of the financial system.

Financial literacy and financial stability are thus close cousins. Yet, policy often treats them as distinct areas. This is important in order to ensure accountability and transparency. Yet, closer cooperation in terms of analytical work, communication, policy evaluation, and – not least – data strategies can improve coordination between policy areas. This would, ultimately, contribute to enhanced resilience at the level of the individual and of the financial system.

This has implications for academia and central banks. For academia, further analytical work is needed to understand the link between micro-decision making and macro-economic outcomes. Academia can also contribute to designing good policy evaluation studies and improving teaching of financial stability. For central banks, acknowledging the role of communication for financial stability is important. Exploiting synergies between policy areas dealing with financial stability and financial literacy can be fruitful. This includes developing common narratives, common data strategies, and frameworks for policy evaluation. So far, knowledge about the role of narratives, communication, and financial stability is very limited, thus requiring more research and analytical work.

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- ² The OECD International Network on Financial Education (OECD/INFE) defines financial literacy as a combination of awareness, knowledge, skill, attitude, and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing (OECD 2018). This definition is reflected in the OECD/INFE questionnaire to measure literacy and financial inclusion, which is used in the OECD/INFE Survey of Adult Financial Literacy Competencies. Results from the data collection across G20 countries (and two guest countries) are reported in OECD (2017).
- ³ Information on household debt is based on information on the German residential real estate market available at www.bundesbank.de/residential_property. Information on loan volumes is based on data for the German banking system available at https://www.bundesbank.de/Navigation/EN/Statistics/Time_series_databases/Banks_and_other_financial_institutions/banks_and_other_financial_institutions_details_value_node.html?tsId=BBK01.PQ3013&listId=www_s10v_vjkre_05 (mortgage loans). https://www.bundesbank.de/Navigation/EN/Statistics/Time_series_databases/Banks_and_other_financial_institutions/banks_and_other_financial_institutions_details_value_node.html?tsId=BBK01.PQA350&listId=www_s10v_vjkre_01 (total lending).
- ⁴ The discrepancy between the HFCS and the aggregate figures is due to different definitions of, for example, the household sector, and possibly measurement errors typically accompanying survey estimates.
- ⁵ On 21 March 2016, the “Mortgage Credit Directive” (Directive 2014/17/EU of the European Parliament and of the Council) was transposed into German law. The main objectives of the directive are to improve consumer protection, to create a transparent and efficient single European market for loans for house purchase, and to contribute to sustainable lending and borrowing. The transposition into German law was modified in 2017 in combination with the introduction of a legal basis for borrower-based measures for mortgage financing in Germany.
- ⁶ Further information on CORE is available at: <http://www.core-econ.org>.
- ⁷ The G20 High-level Principles on Financial Consumer Protection (OECD 2011) also encourage provisions to promote consumers’ financial literacy. It advocates that financial services providers should have as an objective to work in the best interest of their customers and that they should assess the financial capabilities, situation, and needs of their customers before agreeing to provide them with a product, advice or service.
- ⁸ See Directive 2014/17/EU of the European Parliament and of the Council.
- ⁹ The directive prescribes that relevant provisions should be laid down by Member States.
- ¹⁰ For example, the 2009 Credit Card Accountability Responsibility and Disclosure (CARD) Act in the United States imposes limits on credit card fees. Agarwal, Chomsisengphet, Mahoney, and Stroebel (2015) analyse the effectiveness of this aspect of the CARD Act as well as the requirement for clear information on credit card statements on the costs of making only the minimum payment. They find that regulatory limits on credit card fees reduce overall borrowing costs. They find no evidence of an offsetting increase in interest charges or a reduction in the volume of credit.

¹¹ Evidence on the risk-return trade-off for banks is inconclusive. Recent evidence for US states suggests that intensified competition can promote risk taking and have negative implications for financial stability (Jiang, Levine, Lin 2018).