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The financial valuation crisis

The inherent limits to taming unstable markets

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7 Conclusion

7.1 Introduction

The crisis of 2007-9 showed the destructive potential of financial instability and crisis. It demonstrated key flaws in market participants' assessments of financial instruments' risks and values. Banks' state-of-the-art risk models extrapolated rising market trends into future estimates, encouraging them to take on ever more risk. Similarly, when asset prices fell they triggered collective sell-offs, further contributing to market turmoil. The credit ratings that labelled complex structured finance instruments as 'safe' turned out to be off the mark. Banks' increased reliance on market prices for asset valuation also contributed to instability, directly linking overall market developments to their measured profits and net worth. Pre-crisis valuation approaches not only *missed* but *contributed* to the crisis (Financial Services Authority [FSA] 2009b).

The crisis also demonstrated that regulatory requirements for these valuation practices had apparently failed to instill prudent routines. Worse still, in some instances they appeared to have contributed to the problems. Moreover, financial supervisors by and large missed the build-up of systemic risk, casting doubt on their own valuation routines. These governance problems have been the thesis' central focus: what explains policymakers' apparent inability to design coherent and effective regulatory approaches to financial firms' and supervisors' valuation routines?

Instead of immediately focusing on the relevant rule-making processes and the various players (regulators, politicians, firms) active therein, I have taken a different approach by first looking at valuation problems' *substance*. One of my core objectives has been to gain a better understanding of valuation practices' role in financial markets and their financial stability implications. Is it in fact true that valuation practices were simply 'wrong', and that alternatives conducive to financial stability were available but ignored?

I have proposed to conceptualize financial markets as a reflexive system. A reflexive system's functioning crucially depends on participants' *assessments* of its functioning. There is a two-way interaction between the system's functioning and market participants' beliefs. Using this perspective, we see financial valuation practices in a whole new light: rather than reflecting risks and values, they influence them. Valuation practices are, in jargon, performative. Importantly, this also changes the governance problem: if valuation practices *influence* financial values, how can regulators know which ones will contribute to financial stability? How can they ensure that valuation practices have the 'right' sort of performative effects?

Using this perspective, I have empirically analyzed various regulatory domains where financial valuation stands central, with an emphasis on the EU context in the immediate run-up to and following the crisis of 2007-9. I have studied accounting standards for financial instruments, the regulation of credit rating agencies, and bank liquidity and capital requirements. I have also studied policymakers' post-crisis attempts to design systemic risk measurement and mitigation tools – the so-called macroprudential policy framework. These cases differ considerably in terms of the distribution of responsibilities, the actors involved, and the object of regulation. Despite this diversity, in all cases we have seen how an appreciation of market reflexivity hampers financial regulators in their attempts to design coherent and effective regulatory frameworks for financial valuation practices.

In this conclusion I recap the thesis' main findings and put them in a broader context. I reiterate why an emphasis on financial market reflexivity helps us to understand the governance dynamics pertaining to financial valuation (section 2). In section 3, I relate these findings to the broader academic literature on financial regulation, with an emphasis on International Political Economy-scholarship. I then reflect on how the thesis' approach and insights can be applied to other financial regulatory domains (section 4). Finally, in section 5, I address the policy consequences: what does financial reflexivity imply for the governance of finance?

7.2 Main findings

7.2.1 Financial markets as a reflexive system

I have argued that understanding the governance of valuation practices requires understanding their role in financial market functioning. In the financial system many different actors create and trade financial instruments that in their very essence link the present to an uncertain future. Entering a debt contract gives someone access to money (purchasing power) *today* in exchange for repayment *later*. This has important consequences: market participants depend on other actors' financial solidity; and this depends on uncertain future outcomes. Further complicating matters, the financial system can be conceptualized as a *reflexive* system: there is a two-way feedback mechanism between actors' assessments and actions on the one hand and the system's functioning on the other. Put differently, actors' assessments of how the system works shape its functioning, in turn affecting actors' assessments (Soros 2008; Beinhocker 2013; Bronk 2013).

Keynes (1964 [1936]) and Minsky (2008 [1986]) already emphasized reflexivity's macro-economic consequences: lacking a solid anchor, financial markets are prone to instability. A period of relative

stability can sow widespread optimism, stimulating behavior that over time will lead to instability. This claim of course has relevance beyond the financial sector in the narrow sense. As finance and money are intrinsically linked – the ‘money supply’ in advanced economies by and large consists of banks’ debt liabilities – financial reflexivity permeates the entire monetary system, introducing a tight link between financial stability and price stability. Given the key economic roles of finance and money, the entire economy is affected by the financial system’s reflexive nature (Brunnermeier and Sannikov 2014; Murau 2017; see section 5).

My central concern, however, has been the implications for financial valuation routines. As the social studies of finance (SSF)-literature has demonstrated, market reflexivity casts a whole new light on the financial valuation problem: valuation practices not merely *reflect* risks and values but *shape* them. In the SSF-literature this is called ‘performativity’: the measurement of something *affects* what is being measured (MacKenzie 2006; Carruthers 2013; Esposito 2013b). This is a crucial insight with major implications: being central to firms’ assessments, these valuation routines are at the core of financial markets and of key importance for financial stability. The SSF-literature’s emphasis on valuation practices’ performativity and Minsky’s argument that the system is prone to instability both derive essentially from the same theoretical origins (cf. Vogl 2015).

7.2.2 Regulatory dilemmas

My core argument is that conceptualizing financial markets as *reflexive* and valuation practices as *performative* is key to understand policymakers’ inability to design coherent and effective regulatory approaches to firms’ and supervisors’ valuation routines. Reflexivity presents regulators with a fundamental problem: not only is there ultimately no ‘objective’ basis to determine a financial instrument’s value and risk, but valuation practices shape these. It is far from obvious which valuation approaches will contribute to financial stability. Worse still, it is not obvious how prescriptive regulators should be vis-à-vis financial firms, as both flexibility and prescriptiveness can have harmful unintended consequences.

In the empirical chapters I have described how policymakers acknowledge and struggle with the ambiguous links between different valuation approaches and financial stability. Banking regulators have failed to settle on a crucial issue: what is the most appropriate valuation technique for financial instruments? The reason is that the main approaches – fair value accounting (FVA) and historical cost accounting (HCA) – both have significant drawbacks in terms of financial stability. So even if the former approach’ reliance on market prices contributes to procyclicality,

the latter may allow firms to hide mounting problems. A mixed approach also comes with significant downsides: valuing assets and liabilities through different standards contravenes the match between them that defines banks' risk management. All this implies that there is no approach that can count on unequivocal support from banking regulators. Interestingly, this debate *predates* the global financial crisis – long before it, banking regulators were already debating what the scope of FVA should be and how its detrimental effects could be limited (see chapter 4).

Similar problems obstruct the design of appropriate risk-assessment technologies, hampering the regulation of credit rating agencies' (CRAs) methodologies, banks' risk models, and banks' provisioning practices. Also here the key problem is how (in)sensitive actors' risk models should be to recent market developments. The debate is whether firms should make point-in-time (PIT) or through-the-cycle (TTC) risk-assessments. The former approach determines a financial instruments' riskiness based on *current* conditions: if circumstances change, assessments should be revised. Regulators embrace the PIT-approach for ensuring up-to-date assessments, yet they dislike the procyclical effects of its short-term horizon. In this sense, TTC-models are better, as they filter out cyclical effects by using longer time-horizons. But while TTC-models provide more stability, they may downplay market trends too much. If firms ignore mounting problems until it is too late, they could be unprepared for what hits them. Similarly, in depressed economic conditions the TTC-approach will understate credit problems in comparison to PIT-models. While this might mitigate stress and thus contribute to stability, it could also make future problems worse. There is no approach that is clearly better in terms of financial stability: relying too much on recent market developments creates problems; downplaying them can be detrimental as well (see chapters 4 and 6).

This suggests regulators must choose from inevitably flawed approaches. But the problem goes deeper. How prescriptive should regulators be? If regulators require all banks to use the same models, they risk steering them in the same direction, contributing to herd behavior. Yet letting firms decide for themselves comes with problems of its own, not only because of firms' opportunism but also because of private sector induced herding. In chapter 5 we called this the 'regulator's conundrum': because valuation routines are inevitably performative, policymakers cannot simply regulate their potentially detrimental effects away.

7.2.3 The regulator's conundrum in practice

These problems affect policy dynamics in the different regulatory domains in various ways, but similar patterns emerge. First, banking regulators generally see no other option but embracing half-baked approaches that blend various valuation routines, and that combine prescriptiveness with a significant amount of flexibility. After decades of debate and regulatory controversies, EU's new accounting standard for financial instrument (IFRS 9) still contains an uneasy mix between FVA and HCA. Where to draw the line proves difficult, however, and the standard leaves quite some room for maneuver for firms to switch from one approach to the other when valuing their financial assets and liabilities. Similarly, loan-loss provisioning requirements in IFRS 9 combine the PIT-approach and TTC-approach. Yet even this approach has become a cause for much concern, with European policymakers fearing that it is *too stringent* and therefore operates procyclically. Lacking a clear solution, the EU proposed to implement IFRS 9 in a stepwise fashion and postpone full adoption until 2023 (chapters 3 and 6).

Similarly, bank capital adequacy standards blend various risk-measurement approaches and contain an uneasy mix of prescriptiveness and flexibility. Banks rely on credit ratings, their own risk models, and supervisors' risk-estimates – which all differ in valuation philosophy. Debates on whether banks' models should all move in the direction of a TTC-approach have been going on for decades, yet they are still unresolved (chapter 6). Similarly, the post-crisis debates on removing credit ratings from banking regulation have been characterized by controversy: while credit ratings clearly have major flaws, it is far from obvious that the main alternative – market-based indicators – are better. Their reliance on market values might even create worse systemic problems. In the absence of a straightforward solution, EU policy makers opted for muddling through by encouraging banks to also look at other risk indicators and at the ratings of non-systemic CRAs (chapter 4). Securities market regulators steer clear from prescribing rating methodologies: standardizing methodologies risks boosting homogeneity in CRAs' risk assessments, contributing to systemic risks. Regulators thus opt for a mixture of procedural and substantive requirements, stopping well short of prescribing CRAs how they should measure risk (chapter 4).

Second, regulators frequently modify financial valuation rules in an *ad hoc* fashion to limit their assessed (future) negative effects. This was most obvious in the FVA-HCA case. Already in the run-up to the crisis, banking regulators feared that significantly increasing FVA's scope would lead to more instability and volatility. They therefore pressured the International Accounting Standards

Board (IASB) to introduce more flexibility in its accounting standard for financial instrument (IAS 39). While this move was celebrated by banks, policymakers were not simply doing their bidding: fearing abuse, banking regulators *also* pressured the IASB to make flexible parts of IAS 39 more prescriptive – much to the chagrin of banks. After the crisis, banking regulators propagated a flexible accounting standard that mixes FVA-HCA, but simultaneously demanded that the IASB would not to make the standard *too* flexible. All this shows the regulator's conundrum in accounting standards: how to square the circle of mixing incompatible valuation approaches and combining prescriptiveness and flexibility? There is no other option than adapting standards continuously (chapter 3).

Ad hoc modifications also played a key role in post-crisis design of bank liquidity standards. Liquidity rules should ensure that banks' have sufficiently stable funding sources and liquid assets to cope with stress. But assets' liquidity depends on market participants' *assessments* of their liquidity, and this in turn is affected by liquidity rules. When regulators try to push banks into 'liquid' asset classes, this might introduce undesirable side effects. A stringent definition of liquid assets could encourage firms to sell non-included assets, thereby contributing to liquidity risk. Moreover, if firms herd into safe asset categories this may over time unwittingly erode their liquidity. The collapse of structured finance products is a clear example of this. Regulators are thus torn between prescriptive rules to tackle insufficient liquidity in crisis times, and sufficient flexibility to limit the rules' perverse performative effects. As the Basel Committee on Banking Supervision (BCBS) gradually found out that its original proposal would most likely have harmful unintended consequences, it saw no other option than to present a much more flexible liquidity standard (chapter 5).

Thirdly, even if financial firms' valuation routines are fundamentally flawed, this does not mean that regulators can necessarily do much better. Regulators confront the reflexivity problem just as much as private actors. Worse still, to the extent that regulators' risk assessments become a focal point for private actors, they may contribute to systemic risk. This problem was evident in the post-crisis debate on the desirability of setting-up a European public CRA. While policymakers deemed more diversity in the CRA-sector quite desirable from a financial stability perspective, they simultaneously feared that a *public* CRA would increase systemic risk. If market participants came to see the EU CRA's ratings as official stamps of approval, it could lead to herd behavior around these indicators. As one respondent put it aptly: if the government is wrong, everybody is wrong. Ultimately, policymakers did not dare go down this road (chapter 4).

Similar problems hampered policymakers in designing macroprudential policy frameworks. These frameworks should enable supervisors to mitigate systemic risks in a top-down fashion. Crucially, supervisors would be able to mitigate the boom-bust nature of financial markets by increasing policy stringency when systemic risks build-up, while making the rules more lenient when imbalances turn into financial distress. But in this domain as well, policy reforms are much limited than initially hoped. The policy's scope is limited: the countercyclical tools available to the European Central Bank (in its role as banking supervisor) and EU Member States' macroprudential authorities are mainly confined to capital adequacy requirements. These authorities' stated objective is to ensure banks can better withstand stress, rather than prevent stress from occurring in the first place.

Crucially, the countercyclical tools' calibration is quite open-ended. While the BCBS has put forward a parsimonious indicator focusing on credit growth trends, the European Systemic Risk Board urges EU macroprudential authorities to focus on a much wider set of indicators. As a result, these authorities look at endless lists of possible systemic risk indicators, while remaining in the dark under what circumstances they should increase capital requirements. In short, it is certainly not the hardwired countercyclical calibration that was hoped for. Also here the reflexivity problem looms large. It prevents a straightforward *measurement* of systemic risks, as supervisors cannot 'step out' of the reflexivity dynamics and assess risk from an 'external' point-of-view. It also hampers an effective strategy to mitigate systemic risks. It is not obvious that increasing capital requirements in response to a stability threat will deliver the desired results. As the macroprudential supervisor's actions become *endogenous* to financial market functioning, a forceful but ill-timed intervention might trigger the panic that supervisors wanted to prevent (chapter 6).

This leads to the fourth and final point: particularly in the domain of financial valuation, the global financial crisis was not the watershed event that many people hoped for. Even if pre-crisis valuation approaches were fundamentally flawed, regulators realized that finding better alternatives would prove quite difficult. While they set out to find better approaches, they acknowledged that any particular solution would have its own major flaws and would over time become controversial. Sweeping reforms would not necessarily improve the situation and could even make things worse. Publicly prescribed valuation approaches could have worse performative effects than their predecessors. Complicating matters, public and private interests are not easily separated, especially not in the crisis aftermath: if overly stringent measures would seriously harm

financial firms, this could also undermine financial stability. Regulators thus often embraced incremental reforms for want of something better (chapter 5).

Summing up, in the empirical parts of this thesis I showed how reflexivity problems haunted European Union policymakers in key regulatory domains, both before and after the crisis. Lacking a clear solution, policymakers often opted for incoherent approaches, and frequently revised the rules if the damaging consequences of one particular approach became evident. As such, the peculiar policy patterns do not stem from regulators' *unwillingness* to design valuation rules conducive to financial stability, but from their *inability* to do so.

7.3 Academic relevance

My main argument put forward in this thesis is that the policy's *substance* – the problem that it means to solve – is key to understand *the politics* of financial regulation. I aim to contribute to International Political Economy (IPE)-work that conceptualizes finance as an internal rather than external factor in policy processes. While this certainly does not exclude a focus on actors and their interests and ideas – and the political institutions that filter them – it does act as a reminder that we should not do so without taking seriously the role played by the object of regulation: financial markets and financial firms' practices themselves. A focus on actors detached from the dilemmas and obstacles that reflexive financial markets introduce may lead to distorted accounts of policy processes and outcomes. We particularly need to reconsider the implicit assumption in IPE-research that policymakers in principle could prescribe valuation practices conducive to financial stability if they only wanted to, and that therefore only *external* factors – capture by the industry, flawed regulatory ideas, or lack of organizational capacity – are to blame for governance problems.

7.3.1 Using economics and sociology to explain policy dynamics

My emphasis on the intrinsic link between public policy and the economy fits well in the broader tradition of (International) Political Economy analysis. This type of analysis rejects “any separation of politics from ‘the economy’” (Johnson et al. 2013: 1015). This political economy perspective is an indispensable correction to mainstream economic perspectives seeing the existence and development of markets as a ‘force of nature’ – with regulatory intervention being an exogenous factor, typically ‘entering’ only to correct market failures (cf. Underhill 2016). It also serves as a correction to analyzing public policymaking detached from the broader economic environment – for example where political decisions on macro-economic policies are explained only through

party politics or the distribution of military power between states (cf. Underhill 1997; Mügge 2010; Schwartz 2010).

Yet perspectives differ on how public policy and the economy are mutually constitutive. The Institutionalist Economics-literature emphasizes market dynamics' influence on the policy constellation (Underhill 2016). The famous example here is the work of Stigler on the strong incentives of a small set of producers to cooperate, aiming to steer public policy in a direction where they gain and consumers lose (Stigler 1971). The currently dominant IPE-approach – the Open Economy Politics (OEP)-approach – uses economic scholarship to theorize the preferences of actors in the political economy. Scholars use insights from trade theory to derive private actors' interests vis-à-vis economic openness. While such explanations also focus on the role of institutions and bargaining dynamics – both at the national and international level – economic theory insights play a key role in the explanation (Oatley 2015).

In this thesis I have attempted to demonstrate that applying economics to IPE-research need not be confined to *mainstream economics*: we may also draw on insights from heterodox economics and economic sociology. Regarding the former, the thesis adds a governance component to the Minskyan insight that market reflexivity leads to endogenous instability (Minsky 1987; Soros 2008). Regarding the latter, it has specifically used MacKenzie's (2006) insights on the performativity of valuation practices. The economic sociology literature on finance – social studies of finance (SSF) – argues forcefully that especially in financial markets 'the devil is in the detail'. The calibration of seemingly technical issues such as financial models may matter greatly for financial market functioning and policy effectiveness – meaning IPE-analysis of financial regulation should pay attention to such issues (see Braun 2016; MacKenzie 2017).

I thus connected the sociological literature on the performativity of financial valuation with heterodox economics take on financial market instability to explain public policy dynamics. As such, it hopes not only to contribute to IPE-scholarship, but also to the SSF-literature – which remains curiously silent on public policy issues (Coombs 2016). This literature focuses mostly on private sector risk practices, while treating regulation as an *exogenous* factor. Yet given intrinsic links between public policy and market practices, such a narrow focus will lead to partial accounts of such practices. Perhaps more importantly, the SSF-focus on technical details risk losing sight of valuation practices' broader societal implications (but see Beunza and Stark 2012; Vogl 2014). As financial regulators often must deal with the macro-effects of micro-practices, the SSF-literature

could gain more political relevance by showing more precisely how these two levels influence one another.

7.3.2 Taking policy dilemmas seriously

What does this heterodox and sociological perspective tell us about financial regulation? Among other things, it means taking seriously the dilemmas that regulators confront when designing financial policies. While IPE-research often emphasizes regulatory dilemmas, these are often localized at the level of policy *objectives*. Singer (2004; 2007) argues that regulators face a trade-off between stability and sectoral competitiveness. But his framework assumes that there is a clear and unambiguous link between rules and policy outcomes: stringent rules are good for stability but bad for competitiveness, and vice versa. Regulators can determine precisely the real-world effects of different types of rules and choose the one that strikes the right balance between the competing policy objectives. The analysis I have presented in this thesis, however, makes this assumption highly questionable. As emphasized above, there is an ambiguous link between different regulatory approaches and financial stability, meaning that policymakers face dilemmas in regulating financial markets that are not so much related to conflicting *policy objectives*, but more to problems with determining appropriate *policy means*.

Similarly, the results should make scholars more careful when dismissing policy dilemmas as irrelevant distractions from the ‘real’ issue at stake: the material interests of the actors involved. A telling example of the potential pitfall is Lall’s (2014) take on the FVA-HCA controversies in 2002-2005. Instead of taking seriously the financial stability problems associated with any particular valuation approach, he posits that this controversy was merely a battle between the Anglo-Saxon accountancy firms who pushed for FVA to gain market share in Europe, versus European banks who disliked the transaction costs associated with switching to a different accounting regime. From this assumption, Lall (2014: 136) wrongly concludes that European banks must have lobbied *against* a policy proposal – the so-called fair value option – which would expand the scope of fair value accounting. In reality, banks were lobbying *in favor* of this proposal, yet to no avail: regulators opposed it, for financial stability concerns (see chapter 3). As I have emphasized throughout this thesis, portraying valuation dilemmas as only a matter of competing material interests is partial at best, misleading at worst.

As a prerequisite for taking seriously regulators’ policy dilemmas, we of course must conceptualize them as actors in their own right. This is not as obvious as it sounds. The scholarly literature still generally treats international financial regulators as mere vectors of competing interests (such as

national governments or private sector stakeholders), not having any agency themselves. This is most prevalent in capture accounts of financial regulation. The institutionalist IPE-literature on financial regulation is more appropriate in this respect (see for example Kruck 2011). Yet the policy obstacles that this literature identifies predominantly revolve around *organizational problems* – for example the lack of regulatory capacity (Kruck 2016) or the existence of veto players that hamper effective policymaking for fear of losing their privileged position in the institutional framework (Moschella and Tsingou 2013b). This implies that all financial policy problems would in principle be fixable, if only there were no institutional frictions. My analysis suggests that a focus on institutional frictions is too narrow to understand regulators’ dilemmas in actual policymaking: we also need to look at the *substantive* policy issues.

Policymakers’ dilemmas are also not merely related to designing rules congruent with the dominant policy paradigm. To be sure, my analysis chimes well with constructivist scholarship that emphasizes the importance of actors’ ideas and beliefs. Yet many constructivist IPE-accounts have adopted the ‘policy paradigm’-lens to explain particular outcomes in financial regulation (cf. Baker 2013b; Blyth 2013). Such a framework may distort the analysis of the actual policy dynamic, as it risks obscuring substantive regulatory dilemmas over the right course of action. As we saw in the previous chapters, regulators are generally much more pragmatic than a paradigm perspective would have us believe. The actual policy content is also often hard to square with dogmatic policymaking. Such insights seem key to understand actual policymaking dynamics, yet when we work our way from practical policymaking towards the ‘bigger paradigm picture’ we lose these insights along the way. This suggests that a constructivist take on regulatory dynamics also needs to take actors’ ideas seriously at a lower level of abstraction – at the level where regulators debate the pros and cons of different rule-sets.

Finally, all this suggests that we may have to differentiate between the issues at stake *within particular policy areas*. IPE-research generally focusses on the institutional framework, policymakers’ ideational frames, or the constellation of different material interests for an *entire* policy domain – say capital adequacy requirements, or credit rating agency regulation (cf. Moschella and Tsingou 2013a). Such an approach implicitly assumes that the same policy dynamics are relevant for each and every ‘sub-issue’ at stake. Yet some issues may be much more tractable than others. For example, developing rules to mitigate CRAs’ conflicts of interest is a wholly different issue than finding ways to limit ratings’ procyclical effects. The ‘implementation problem’ thus need not be the same for every issue within a policy area. This suggests that

presenting a ‘one size fits all’ explanation – for example limited regulatory capacity – for *all* these problems can seriously distort the actual regulatory dynamics.

7.3.3 Capture revisited

The main argument hinges on regulators’ struggles to design appropriate regulatory frameworks to deal with fundamental valuation dilemmas. This should not be interpreted as a claim that private actors play no meaningful role in financial regulation. They definitely do. But to understand their role, the common analytical frame of ‘regulatory capture’ might not always be the most illuminating. This capture perspective suggests that the public interest can be clearly separated from the private interest, and that if regulators reform rules along the lines of banks’ wishes, this must be because they chose private interests over the public ones. But given financial firms’ key importance for the financial system’s functioning, it is far from obvious that societal and firms’ interests will necessarily collide – or that when they converge that the regulator was ‘captured’ (Monnet et al. 2014).

Especially in the aftermath of a financial crisis, regulators have two hearts beating in their chest. As financial market rules have clearly proved inadequate, they are determined to fix regulatory flaws and significantly increase rule stringency. Moreover, they will have to live up to political and societal calls for bold actions. Yet they simultaneously have an interest in financial firms’ viability – as post-crisis recovery and stability will depend to a great extent on restoring the banking sector’s health. As such, depressed financial and economic conditions make sweeping reforms unattractive if this harms a significant share of the sector. In today’s financialized economies, it is hard to hard to disentangle public and private interests: while it makes sense to increase rule-stringency, regulators will be hesitant to do so if it worsens economic problems in the short run. Even if the crisis reminded us that what is good for individual actors can be bad for the system – the so-called micro-macro paradox – this paradox does not apply in reverse: what is bad for the bank, may also be very bad for the system, especially during crisis-times. While such public dependence is problematic from a normative perspective, it is the reality regulators are confronted with when designing regulatory reforms (see chapter 5).

The findings also imply that the extent to which private or public actors are responsible for rule-design and implementation might not always be as crucial for policy outcomes as generally thought. Regulators’ inability to design fool-proof valuation approaches implied that post-crisis publicly mandated rules often showed striking similarities to pre-crisis privately designed ones. One key example is the Credit Rating Agency-Regulation, where the rule substance on the key

issue of rating methodologies did not differ markedly from what private actors had already been doing before the crisis (see chapter 4). Another example is accounting standards, where the private nature of standard setting seemed to be less crucial than the substantial dilemmas (see chapters 3). This throws doubt on claims that the flaws of pre-crisis accounting standards were by and large caused by the private nature of the standard setter (IASB) (e.g. Nölke and Perry 2007). Similarly, equating public steering with governing in the public interest and private discretion with regulatory capture is too simplistic. If public prescriptiveness worsens stability problems, private discretion might very well be the best course of action.

7.3.4 Normative aspirations

In this thesis I argue that we should dive into these controversies and debates that occurred in the policy process and not only treat them as a smokescreen. This also has implications for the IPE literature's normative and prescriptive aspects. Accounts of pre- and post-crisis regulation of firms' valuation practices often agree on at least one thing: regulators fail to do their job right. Surely in many ways policymakers do make mistakes in financial regulation and supervision; indeed, some of the strongest critiques of pre-crisis policy came from regulators themselves (e.g. FSA 2009b). Yet IPE-scholars dismissing the regulation of financial valuation as mistaken or 'wrong' implicitly assume that the translation of a policy ideal (prudent valuation routines conducive to financial stability) into actual policy reforms would have come easy *if only* the regulators had wanted to, or if they had not been led astray by mistaken policy beliefs or self-interested lobbying by financial firms. This assumption is not always warranted: some policy problems are much harder to solve than we often assume.

To be sure, regulatory capture, lack of regulatory resources, or flawed policy ideas all constitute a problem for our aim to design policies conducive to financial stability. So skewed policy input or excessive regulatory reliance on a small set of private actors who stand to gain from particular policies require our full critical attention. Yet the valuation problem that is at the core of financial markets in a way swings free of these regulatory difficulties. Regulatory capture is a problem we better seek to avoid, but even if we would take capture out of financial rule-making, regulators still must deal with the reflexivity problem.

The research shows we need to accept the possibility that market failures are not always and everywhere reducible to regulatory mistakes. Emphasizing regulatory failures fits very well in a perspective where regulators are only hampered by private sector lobbying (Lall 2012) or limited resources (Kruck 2016). It is less obvious if we emphasize inevitable limits to public policymakers'

ability to effectively regulate reflexive systems. Also, if after the crisis regulators refrained from top down steering or sweeping reforms, this need not imply that they believe that private sector practices are superior to public ones. Blaming regulators is easy but not always fair.

7.4 **Suggestions for further study**

To show the relevance of studying financial governance processes through the lens of market reflexivity, this study focused on several key domains that have financial valuation at their heart. The topics studied – accounting for financial instruments, CRA-regulation, and bank liquidity and capital requirements – differ in terms of the object of regulation, the actors involved, and the distribution of responsibilities. The institutional frameworks vary in important ways: a private sector agency (the IASB) is in the lead to design accounting standards, CRA-regulation and supervision is the prerogative of securities markets regulators, and banking regulators are responsible for designing capital and liquidity standards. The private actors directly affected differ. Regulation is also directed at different things: rating methodologies, the composition of banks' balance sheets, and the valuation of instruments on these balance sheets. This diversity makes the cases suitable to illustrate the broad scope of the argument: in each case, policymakers' appreciation that market reflexivity hampers effectively regulating valuation practices has a key influence on rule-output and governance processes.

The list of domains where similar regulatory dilemmas may appear can surely be extended. Consider three examples: (1) stress testing; (2) financial instrument trading; and (3) the asset management industry. Supervisor-led stress testing exercises seem a particularly suitable topic. Such exercises have become a standard supervisory tool to assess firms' and the financial system's ability to cope with potential future stress. These help supervisors and – if results are published – market participants in determining potential weaknesses, allowing them to take precautionary measures (Anderson 2016). Market reflexivity, however, likely introduces severe problems for stress testers. First, it creates market dynamics that are hard, if not impossible, to model. The very essence of financial instability is that feedback loops can turn small problems into a full-blown crisis – but modelling such effects is hardly viable (Borio et al. 2012). Second, publishing stress test results is intentionally *performative*: supervisors aim to trigger market responses that contribute to financial stability (Langley 2013). Yet steering everyone in the right direction can prove hard, particularly as market participants *know* supervisors' intentions and will naturally second guess supervisory results (Goodhart 2016b). When failing to present credible results – as happened several times during the Eurozone debt crisis – supervisors not only risk reputational damage, but

they may *increase* market uncertainty and stress. Studying how such problems have affected the institutionalization of stress testing exercises seems a particularly fruitful research exercise.

Similarly, market reflexivity likely hampers regulators' attempts to govern financial market trading activities. The issue of haircut requirements on securities financing transactions was touched upon in chapter 6 but is quite suitable for further investigation. Haircuts can be seen as the capital requirement in secured borrowing, and these are to a large extent determined by market participants' risk assessments. As in other domains, the risk models that market participants use can have performative effects: optimistic assessments reinforce benign market circumstances, but once problems emerge margins may rise rapidly and market liquidity evaporates. This is basically what happened before and during the crisis 2007-9 (Gorton and Metrick 2012). Despite such obvious flaws, regulators appear to have refrained from directly prescribing haircut risks models. In the EU, for example, the European Market Infrastructure Regulation (EMIR) and associated Regulatory Technical Standards contain provisions to limit procyclical effects of key market participants' risk management practices, but the rules give them much discretion on how to do this (cf. ESRB 2015a). Investigating whether regulators refrained from top-down steering for fear of unintended performative effects seems a second suitable research endeavor.

Thirdly, we may explore post-crisis attempts to mitigate instability resulting from the (rapidly growing) asset management industry. As Haldane (2014) argues, asset management funds' (AMFs) synchronized actions – whether triggered by conventions, accounting practices, or regulatory requirements – may turn idiosyncratic risks into systemic market failures. While the asset management sector differs in important respects from the banking sector, dilemmas similar to those identified in this research could hamper regulators in addressing such problems. Regulators must determine the regulations' prescriptiveness on AMFs' risk-assessment strategies and they must design standards for the valuation of AMFs' assets and liabilities. These issues likely trigger regulatory controversies that have their origin in financial markets' reflexive nature.

Similar dilemmas that hampered EU regulators will also affect regulators elsewhere. We saw several such instances in this PhD-research, for example when addressing the US experience with the full removal of credit rating references in regulation (chapter 4). Moreover, the European focus also necessitated analyzing global regulatory developments – e.g. standard-setting by the FSB, BCBS, the IOSCO, and the IASB – given the EUs close involvement in, and dependence on global regulatory forums (cf. Mügge 2014; Quaglia 2014). Still, the focus on the EU necessitated a neglect of jurisdictions where similar dynamics may operate. Studying the extent to which such

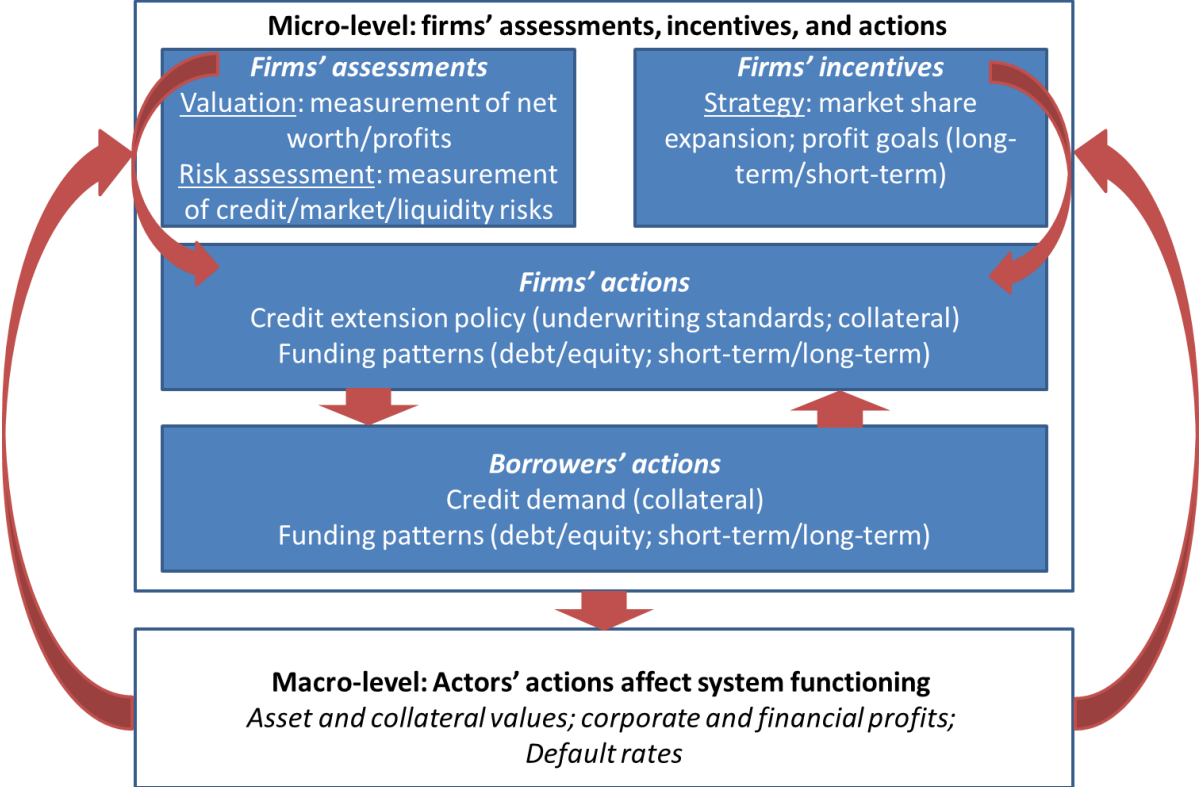
problems affect financial regulation in the USA, Japan, or China – to name just a few – will teach us more about the argument’s scope. While the USA’s and Japan’s financial sectors are rather comparable to those in EU member states, the financial sectors in ‘emerging economies’ such as China are quite different. More comparative work in this respect would give us an idea to what extent national circumstances matter for market reflexivity’s regulatory implications.

I have emphasized how market reflexivity hampers regulators in designing effective solutions for valuation problems. In contrast, other studies have argued that an appreciation of financial markets’ self-referential nature might also inspire innovative regulatory techniques. For example, Coombs (2016) tentatively concludes that regulations aimed at financial algorithms can stimulate benign forms of performativity. Along the same lines, Langley (2013) shows how US regulators’ financial stress testing exercises were intentionally and successfully performative. As regulators had to design and implement new regulatory technologies to limit systemic risks – stress tests and early warning systems – studying the *positive* ways in which they dealt with reflexivity could prove useful.

7.5 Policy implications

The thesis’ implications for financial policymaking are quite sobering: unfortunately, there are no hard and fast ways to limit financial instability. But this message should certainly not inspire nihilism. There are definitively ways to embed market dynamism more explicitly in governance frameworks and rule-sets for financial valuation practices. But it also suggests that more restraints on financial firms’ activities are necessary to limit reflexivity’s detrimental effects. The schematic representation of the financial system (figure 7.1; also depicted in chapter 1) shows that we should not only focus on financial valuation practices, but also on financial firms’ incentives and scope for actions. It also suggests we need to go beyond financial regulation to reassess non-financial actors’ – households, corporations, and semi-public organizations – credit dependence. Finally, if instability is inherent to financial markets, we need to take further measures on distributive and social justice issues.

Figure 7.1 Schematic representation of the financial sector as a reflexive system



7.5.1 The governance of financial valuation

As the empirical chapters detailed, the governance of financial valuation practices is necessarily adaptive, as regulators periodically confront past policy choices' negative effects. Moreover, rules often leave quite some scope for discretion, even if EU regulators also prefers one-size-fits-all solutions to level the playing field. While regulators strive for coherent and prescriptive approaches, they are often forced to abandon this quest when they are confronted by the rules' real-world world effects. This adaptiveness and in-built flexibility are predictable consequences of the financial system's reflexive nature. Yet policymakers often treat such adaptability and heterogeneity as temporary aberrations, that will over time be resolved. They speak of 'completing' post-crisis reforms – as if financial regulation can ever be finished. The policy challenge here is to accept provisional and corrigible solutions as an inevitable part of policymaking – and organize this as well as possible (cf. Sabel and Zeitlin 2008; White 2013; Gerding 2014; Zeitlin 2016).

Regulators should embrace dynamic regulation and frequently reassess regulatory instruments. This should have both a fixed element and a flexible one. With 'fixed' I mean that regulators should periodically – say once every five years, but this depends on the policy domain – revise rules, even

when they are not obviously flawed. The idea is that rules that are fixed for too long will reinforce valuation practices' performative effects and will inevitably spawn evasive behavior by firm. In addition, there is the risk of "regulation-on-autopilot", which "increases the danger of regulators falling asleep at the wheel" (Gerding 2014: 494). If stability breeds instability, as Minsky warns, then periodically shaking up the rules will perhaps reinforce vigilance on the part of both regulators and market participants. Such practices are already quite common – think for example of 'sunset clauses' and in-built review requirements. Yet such practices are now generally biased *against* regulatory requirements and they have a conservative bias: regulators need to defend *existing* rules or abandon them, downplaying the option of *periodically modifying* existing rules. There is thus "a need for a constant regulatory response to what is likely to be constant innovation in response to regulation itself, as well as other forces" (White 2013: 43).

The flexible element is that regulators should always be able to change regulatory instruments' settings when market circumstances change. This plea for *ad hoc* rule-adaptation will not be welcomed by financial firms, as they generally prefer a predictable supervisor. But valuation tools shape financial markets in unforeseen ways and often with undesirable consequences. This implies that a permanent willingness and ability to change course is imperative. Regulatory vigilance requires sufficient capacities and capabilities for financial supervisors – especially when markets are booming (Gerding 2014: 495-6). They could also use some help. Finance needs watchdogs – particularly actors who do not materially benefit from market booms. The EU has implemented several initiatives that try to strengthen civil society actors (for example by supporting the critically-minded NGO Finance Watch), but more can be done to support their capacities (Anheier 2014).

Complementary to purposeful adaptive governance, financial market reflexivity suggests a preference for norm-based standards that allow for sufficiently heterogeneous valuation approaches (White 2013; Claessens 2016). The reason is that overly prescriptive and harmonized valuation rules encourage homogeneous market responses – reinforcing financial markets' boom-bust nature. In practice, regulators already abandon one-size-fits all solutions and embrace pragmatic policy solutions. For example, in the domain of accounting for financial instruments both banking regulators and accounting standard setters have embraced mixed valuation approaches as a 'permanent' feature of the standards – even if the IASB does so reluctantly. More in general, banking regulators have become warier of hard-wiring market values in regulation. Purposefully striving for heterogeneous valuation rules would probably increase their quality and the processes through which they are designed (Romano 2014).

When policy requires continual adaptation, full EU harmonization of financial valuation practices may be counterproductive. To be sure, the EU obviously requires a degree of centralization and harmonization in financial governance given monetary and financial integration (Jones and Underhill 2014; Jones 2015; Zeitlin 2016). But there are limits to centralization. For some parts of financial governance, ‘unlevelling’ the playing field may be more appropriate, especially given countries’ diverse economies and the marked differences between Member States’ financial systems (Warwick Commission 2009; Creel et al. 2014). In the domain of financial valuation, harmonization figures in the EU’s ‘level playing field’ agenda and makes sense from a microprudential perspective. Yet, homogenous risk assessment procedures can amplify systemic risk. This suggests that especially in this domain, policymakers should favor ‘mutual recognition’ over rule harmonization. In other words, it would make more sense to aim for a certain degree of correspondence between different valuation approaches than to strive for maximum similarity (Danielsson 2013).

The problem, however, is not only that similar financial firms in different countries are required to use the same rules, but perhaps more importantly that firms with markedly different business models must do so. Each EU Member State’s banking sector is still populated by banks with various strategies and business models, despite the trend towards more homogeneity in the past decades (cf. Liikanen 2012; Creel et al. 2014). To be sure, it makes sense for banking regulators to apply similar valuation rules to banks – whether these are part of capital adequacy requirements, liquidity rules, or accounting standards. Particularly if we consider assessing the value and risk of an *individual asset*, it does not make much sense to maintain that this depends on banks’ business model. But again, too much similarity might be harmful at the systemic level. In practice, regulators already prescribe different rules for different banks. For example, in capital adequacy requirements for credit risk, banks can choose between a standardized approach and two advanced approaches (Blom 2014). Yet such heterogeneity is mainly informed by banks’ *size* or *their capacities*. Allowing for differentiated rules also with respect to banks’ various business models seems a desirable strategy to stimulate heterogeneity.

Similar considerations apply to the issue of ‘exporting’ regulatory approaches from the banking sector to non-banking actors – such as insurance companies, pension funds, asset management funds, and other entities classified as ‘shadow banks’ (Claessens 2016: 24). These actors are increasingly important in modern financial systems where capital markets are a crucial financing infrastructure, and they often interact or compete with banks. A microprudential perspective would suggest imposing similar valuation requirements on these actors. Think for example of

translating the concept of risk-based capital adequacy requirements to insurance companies regulation (Quaglia 2014). But, yet again, caution is required. From a macroprudential perspective striving for more harmonization may do more harm than good.

Striving for heterogeneous valuation approaches obviously has downsides as well. Most importantly, they allow more discretion at the firm level and hence more scope for abuse (Carmassi and Micossi 2012). Reliance on principle-based rules requires trust in financial firms to comply with the spirit rather than the letter of the rules; and this trust has been seriously undermined by the financial crisis (Black 2011). Regulatory diversity thus comes with serious negative downsides. Yet a pragmatic approach sees this as an inevitable consequence that is eclipsed by the positive aspects of variety and heterogeneity in firms' actions (Danielsson 2013; Romano 2014).

7.5.2 The governance of the financial sector

Mitigating systemic risks will not be possible through financial valuation practices alone. Prudent valuation routines are necessary but will never be sufficient. This implies that we should not only aim to influence actors' valuation practices, but also their room for maneuver. This also applies to non-financial firms and households (the subject of the following section), but particularly holds for financial firms. The relative stability of Western countries' financial systems in three decades after World War II suggests that there are certainly strategies to contain destabilizing reflexive dynamics: "the controlled, constrained financial system was just a safe, but dull place" (Goodhart 2010b: 8). Even if the economic, social, and political contexts were markedly different than today's, we can certainly draw inspiration from these regulatory approaches. A first lesson is the importance of financial sector heterogeneity to limit herd behavior dynamics. A second lesson is the importance of influencing financial firms' ability to create and allocate credit. I address both issues in turn.

Consider banking sector heterogeneity first. In the post-war era, such heterogeneity was not only the result of market forces stimulating small scale, specialized firms, but also an explicit regulatory strategy (Bröker 1989; OECD 1992; Edey and Hviding 1995). Most countries encouraged compartmentalized credit systems, differentiating rules for different types of banks (savings, commercial, agricultural, and investment banks) and often prohibiting mergers and acquisitions. Furthermore, most governments explicitly forbade banks to acquire stakes in insurance companies or non-financial companies (Borio and Filosa 1994).

Over time, policymakers abandoned these approaches. Policymakers presented all-purpose, universal banks as both more efficient (through economies of scale and scope) and more stable (through risk diversification) than limited purpose banks. But as Haldane (2009a) points out, diversification at the firm level led does not ensure heterogeneity at the system level. If the major banks all do the same thing, this reinforces the herd behavior problem: in boom times, those banks that take higher risks will gain market share, thereby forcing their direct competitors to go along (Crockett 2008). If fierce competition between similar banks will not generate the desired results, striving for more heterogeneity would be a fruitful avenue for further reform.

In this regard, the post-crisis experience is not reassuring. The EU's attempt at structural reform has failed. In 2014, the European Commission proposed a Regulation to introduce 'ring fences' within universal banks. While the Council reached an agreement, the EU Parliament failed to do so – leading to a withdrawal of the proposal in October 2017. This suggests that structural reform as initially envisaged – 'breaking up the banks' – is no feasible strategy in the short run. Interestingly, these structural measures have been framed predominantly as a means to address the Too Big To Fail-problem of universal banks. As such, the EC could point at the introduction of Banking Union and the associated resolution mechanisms to buttress the claim that structural reforms had become redundant (European Commission 2017). Yet this framing ignores the problem of sectoral homogeneity that is the result of the universal banks' dominance. It suggests that structural reforms must start anew, but now with the explicit goal to increase banking sector heterogeneity. If breaking up universal banks is no feasible strategy for the foreseeable future, the obvious alternative for stimulating heterogeneity is explicitly supporting other, non-universal banks.

Second, EU policymakers should consider targeting credit growth and its allocation more directly. Credit policies were an explicit part of post-war European financial regulation. Governments deemed the financial system of key importance for economic recovery and stability. Public authorities influenced credit creation, steered its allocation, and in some instances regulated the interest rates charged on these loans (Borio and Filosa 1994; Forsyth and Notermans 1997). Such credit policies were a component of industrial policy, as policymakers wanted to ensure that the price and allocation of credit were conducive to economic growth. In some countries, credit policies were part of monetary policy: credit restrictions were to ensure that the post-war low-interest rate environment would not have excessive inflationary effects (Edey and Hviding 1995). Policymakers also relied on capital controls – limiting the in- and outflow of cross-border finance – to prevent destabilizing cross-border capital flows and to facilitate credit policies (Helleiner

1995; OECD 1992). In sum, steering credit was an essential part of post-war macro-economic policies. From the 1970s onwards, western governments started to abandon such direct interventions in the allocation, price, and growth of credit. They deemed such interventionist policies as inefficient and distortionary, arguing that market forces would be much more suitable. Slowly, credit disappeared from policymakers' radar screens (Turner 2015a).

Since the crisis of 2007-9, however, policymakers have rediscovered credit's macro-economic relevance. The most important way in which policymakers have translated this insight into policy has been through the development of macroprudential policies. As detailed in chapter 6, policymakers have shied away from striving for hardwired countercyclical policy, nor did they aim for a 'public planner' that would be able to prevent all systemic risks in a discretionary fashion. Given financial market reflexivity, such attempts would not merely have been unrealistic, but would likely come with significant downsides (Hellwig 2014). Still, attempts to institutionalize the financial system's macro-economic dimension in policy are a step in the right direction. Pragmatically influencing credit growth and aiming to increase firms' resilience if supervisors deem systemic risks to be building up is a modest, yet important objective (Turner 2015a).

Given central banks' macro-economic expertise and close connection to commercial banks, in most countries central bank departments are in the lead on macroprudential policies. Central banks see macroprudential policy as an essential complement to monetary policy (ECB 2011b; Deutsche Bundesbank 2015). In today's financialized societies, the interest rate tool is not really suitable to prick asset or credit bubbles, as the required interest rate hikes would be excessively harmful for the wider economy (IMF 2013c). Central bankers thus present macroprudential instruments as key to mitigate systemic risks, while monetary policy can still be directed at inflation (Constancio 2015). As such, policymakers have not departed from the pre-crisis 'separation principle', where monetary policy is aimed at price stability, and financial regulation is aimed at financial stability (Fahr and Fell 2017). The key difference is that financial regulation has been adapted to incorporate the systemic dimension more explicitly (see chapter 6).

This development is not without downsides, however. There is the risk of silo-thinking, in which financial stability considerations are deemed to be sole prerogative of the macroprudential authority (Caruana 2011b; George 2015). Moreover, central banks have embraced macroprudential policy responsibilities only half-heartedly, partly because of reluctance to enter the politicized domain of credit allocation: central banks fear for their independence if they opt

for a more interventionist approach (e.g. Ekholm 2014). As a result, we risk that nobody feels responsible for targeting credit growth.

If central banks are reluctant to move in this direction for fear for their independence, one option would be to move macroprudential policy further away from monetary policy. However, financial stability and price stability are intrinsically linked (Lastra and Goodhart 2015; Brunnermeier and Sannikov 2014), suggesting that the pre-crisis separation principle has major flaws. A more radical response would thus be to broaden central banks' mandate to explicitly target both financial stability and price stability, using both macroprudential instruments and monetary policy instruments (Committee on International Economic Policy and Reform 2011). As monetary policy authorities' primary objective after the crisis has been financial stability (Lastra and Goodhart 2015), it would make more sense just to broaden the mandate and formalize this policy objective. This would indeed have to be accompanied by a revision of central banks' independent position, in the sense that accountability mechanisms would have to be much stronger.

To the extent that macroprudential and monetary policies will remain separate domains, there should be sufficient coherence between them. At times the two policy objectives (financial stability and price stability) will conflict, making sufficient cooperation between the relevant authorities essential. The current European institutional framework prioritizes price stability over financial stability. The actions of the ESRB are ultimately subject to approval by the ECB Governing Board that, at least formally, focuses on price stability. There should be no reason why macroprudential policy should permanently have a lower formal standing than monetary policy. Indeed, as the crisis showed, in today's societies financial stability is likely to be as important as price stability. It thus makes sense to give macroprudential authorities in due time more formal powers and a broader policy remit.

As the measures presented above are inspired by post-war regulatory regimes, a possible counterargument is that they would undo the positive social and economic effects of financial openness. Put differently, we would be throwing out the baby with the bathwater. Surely there will be costs involved when attempting to constrain credit extension and to aim for more diversity in the financial sector. Yet in our current financialized societies, the often-posed trade-off between aiming for financial stability and boosting economic growth might no longer apply in a straightforward manner. Research by the BIS, the IMF and by the OECD suggests that many OECD-countries are now at a point where there is "too much finance" (Arcand et al. 2012; cf. Cecchetti and Kharroubi 2013; OECD 2015). Constraining finance could very well support both financial

stability as well as economic development, even though there will surely be distributional consequences. But in aiming to reduce the dominance of finance, it is not enough to focus on the financial sector. We also need to look at factors stimulating society's dependence on financial services.

7.5.3 Finance and society

As BIS-General Manager Caruana (2011b) admitted shortly after the crisis, we cannot exclusively rely on a macroprudential policy framework to ensure the desired degree of financial stability. We could take this claim a step further: financial stability considerations should go beyond policies directly affecting the financial sector. One of the core reasons why the global financial crisis had such damaging and long-lasting effects was because many societies' dependence on financial services had increased significantly, particularly through rising household debts. Reducing the credit dependence of many OECD-countries will therefore be just as important for financial sustainability as developing sound financial regulations. After all, even perfectly designed financial regulations will be of limited use if all other policies push in the opposite direction. The core challenge here is to build a less credit-intensive society (Turner 2015a).

Socioeconomic policies very much affect societies' reliance on financial services. Tax policies encouraging debt finance over equity should over time be eliminated. Similarly, policymakers should ensure housing market policies do not unwittingly push households in unsustainably high debts. This implies ensuring viable alternatives (a well-functioning rental market), prudent valuation routines (conservative estimates of house price values), and caution with explicit government guarantees. It could also involve a reassessment of existing risk-distribution between creditors and debtors – for example designing mortgages where the risks and benefits of housing price changes are distributed more equitably between banks and home owners. Relegating finance to a less central role in society will be an essential part of our efforts to crisis-proof our economies (Scientific Council for Government Policy 2016).

The financial instability problem also is very much related to rising economic inequalities (Turner 2015a). As Minsky (1982) argued, fiscal policies were key to the financial system's relative stability in the post-World War II period, as government spending provided an effective floor under falling economic activity. It thereby ensured firms' profitability in case of a slowdown of the economy, so that they would not default on financial obligations and setting off downward spirals. In modern financial systems, household debt has become (more) dominant. To keep the financial system floating, ensuring business profitability is not enough; it requires stable income streams for

indebted citizens. Yet precisely because of rising economic inequality and increased job insecurity, households' ability to pay off loans can deteriorate rapidly in economic downturns. The implosion of the sub-prime mortgage market in the USA is a case in point. This suggests that labor market policies and social security policies should also be key components of governments' attempts to contribute to financial stability (Turner 2015a).

7.5.4 Legitimacy and justice

The perspective I have outlined in this thesis suggests that instability is inherent to financial markets. It therefore seems better to aim for a system periodically affected a limited amount of instability, than aiming to prevent it altogether. If stability is destabilizing, the latter strategy is doomed to fail. As White (2018: 367) puts it: "the objective of policy should be to avoid truly bad outcomes. This implies a greater willingness of central banks to accept small downturns that redress imbalances in the economy. [Much] larger downturns, with potential social and even political side effects, might [then] be avoided."

Yet getting towards a system where instability is less devastating will take time – if we even get there. When instability reemerges, public support for financial institutions will again be necessary: in crisis times it is penny wise, pound foolish for governments to allow many banks to fail. The costs of bailing out banks is high – but the costs of *not* doing so is unfortunately even higher. Needless to say, public dependence on the viability of private firms is highly undesirable. It does suggest that we should ask ourselves the question: 'what kind of system do we want to save?'. And this requires changes in financial firms' behavior as well as in financial governance.

Even banks that are formally private institutions also have a public dimension, given their importance for the financial system's functioning. Banks' public-private nature needs to be thoroughly embedded in their business models. This suggests that even in good times banks should aim for modest profits, and an emphasis on reinvestment over distribution. It also means banks' remuneration policies should match their public dimension. And it implies that banks should focus much more on their contribution to sustainable economic development, rather than aiming blindly for short-term gains. In short, it requires much more emphasis on banks' corporate social responsibility. While such responsibility may limit future problems, it will certainly not prevent them. That is also not the purpose. The point is that banks must earn and deserve our future support.

The financial system's hybrid public-private nature also requires changes in its governance. It suggests that we discard once and for all the notion that finance is a technocratic affair that can

best be left to experts. Public outrage over bank bailouts is quite understandable. If banks ultimately depend on implicit or explicit public support, public policy must be *comprehensible* for ordinary citizens and financial policymakers must be accountable to the general public. In this sense, the IPE-literature stressing the dangers of complex rules and exclusive regulatory forums is spot-on. If people perceive financial policymaking to be dominated by technocrats and powerful private interests, the system will continue to lack in legitimacy. While the financial crisis has politicized financial regulation and heightened attention for the importance of plurality and dissenting voices, this is an issue that requires much more progress. At the very minimum, it requires an emphasis on simple, comprehensible rules. It also requires better accountability measures for the rule-making authorities.

7.5.5 To conclude

This thesis started with an apt quote by Banque de France governor Christian Noyer in September 2008: “In many respects, the current crisis is about valuation”. Unfortunately, financial markets’ reflexive nature obstructs the design of fool-proof valuation practices that will under all circumstances be conducive to financial stability. A regulatory approach that looks good at one point in time might be the seed of future turmoil. Financial policymakers must therefore be vigilant and proactive, periodically modifying regulatory frameworks to deal with their inevitable unintended consequences. And they should be more supportive of heterogeneous valuation practices, to prevent regulatory induced herd behavior. Yet regulating financial valuation practices will only take us so far. As instability is inherent to financial markets, the more ambitious, if arguably more difficult, route forward is to reduce the vulnerability of our economy and society to the vagaries of finance.