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The financial valuation crisis

The inherent limits to taming unstable markets

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2 Theorizing the politics of financial valuation

2.1 Introduction

At the heart of this thesis stands a question that is of key importance for our understanding of the politics of financial regulation: what explains policymakers' inability to design coherent and effective regulatory approaches to financial firms' and supervisors' valuation routines? The previous chapter provided an overview of the thesis' focus and argument. In the current chapter, I elaborate on its theoretical and methodological aspects. Before doing so, section 2 puts more flesh on the bones of the main empirical puzzle: the problems with regulating financial valuation practices.

In section 3, I review the relevant International Political Economy (IPE)-literature on financial regulation, focusing specifically on how different strands within IPE have addressed the financial valuation problem. Many IPE-approaches assume that policymakers could in principle design financial valuation routines conducive to financial stability, highlighting factors exogenous to financial markets – such as private interests lobbying or the influence of a flawed policy paradigm – that prevent them from doing so. This assumption, I argue, is highly questionable.

To substantiate this claim, I review the heterodox economics-literature and the social studies of finance (SSF)-literature (section 4). The work of Minsky (1986 [2008]) and Soros (2008) is key to understanding financial markets' boom-bust nature. They highlight the importance of reflexivity: the financial system's functioning depends in a circular fashion on market participants' assessments of its functioning. The SSF-literature is useful for understanding the role of valuation practices therein: rather than mirroring an already existing external reality, they *shape* it, and may do so in destabilizing ways. Yet while these bodies of literature are particularly helpful in understanding financial markets' inherent instability – and the key role that financial valuation practices play therein – it tells us less about the concomitant regulatory problems.

What does financial market's reflexive nature and valuation routines' performative effects imply for the politics of financial regulation? This is the central question of section 5. Here I elaborate on the empirical questions that the heterodox economics and SSF-perspectives generate for the regulation of financial valuation. Section 6 discusses the methodological choices I have made to answer these questions. Finally, section 7 provides a summary of this chapter.

2.2 Governing financial valuation

2.2.1 The changing faces of financial regulation

In the three decades after World War II, Western countries' financial sectors were "a safe, but dull place" (Goodhart 2010b: 8). While this was to an important extent a reflection of the post-war economic context, public regulation also played a major role. Informed by the devastating consequences of the Great Depression, governments had introduced a variety of measures to prevent such a disaster from happening again.

Ensuring financial stability was thus a key public policy concern. Financial stability requires that key institutions – banks, or institutions closely linked to the banking sector – can continue to meet their contractual obligations without serious disruptions. And it means the absence of significant volatility in asset prices that would impair the financial sector's normal functioning (Crockett 1997). The main post-war strategy to maintain stability was to limit competition between financial firms through so-called *structural regulations*. Policymakers explicitly supported compartmentalized financial systems, differentiating rules for different types of banks and often prohibiting mergers and acquisitions. They also prohibited banks from acquiring stakes in insurance companies and non-financial firms. In addition, policymakers applied *conduct regulations*, such as limits on banks' deposit and lending rates and credit quotas. Such measures were a complementary way to ensure that firms would behave prudently (Bröker 1989; Organisation for Economic Development and Cooperation [OECD] 1992; Borio and Filosa 1994; Edey and Hviding 1995; Claessens 2016).

Apart from maintaining financial stability, there was a second rationale for public intervention in financial markets: stimulating the financial sector's contribution to economic recovery. Governments aimed to ensure credit allocation would be conducive to this goal (Hodgman 1973). They often did so by limiting lending rates and stimulating the financing of particular economic sectors (trade, agriculture, industry) (Zysman 1983). Public financial institutions generally played an important role in this regard (Forsyth and Notermans 1997). Governments limited cross-border capital flows, not only to facilitate exchange rate policies in the Bretton Woods context but also to support the credit policies. Capital outflows could undermine cheap credit policies, while capital inflows could lead to excessive inflation (OECD 1992).

Over time this regulatory framework became increasingly difficult to maintain. Specialized banks wanted to expand their work field or experienced more competition from less stringently regulated financial firms, leading them to push for a relaxation of structural regulations. Financial

globalization returned as so-called *Eurodollar markets* allowed banks and non-financial firms to evade national regulations. The real break came in the 1970s, when the Bretton Woods regime collapsed and Western countries' economies experienced both economic stagnation and rapidly rising inflation. Governments' inability to ensure quick economic recovery seriously dented trust in top-down public steering.

From that moment onwards, governments focused more and more on stimulating market forces to boost economic growth. This policy recipe was also applied to financial services. Governments eliminated most of the conduct regulations focused on credit growth and allocation, facilitating the subsequent rapid expansion of private debt levels. They progressively dismantled capital controls, further boosting financial globalization. And policymakers relaxed or abolished structural regulations, enabling the emergence of big, universal banks (OECD 1992; Borio and Filosa 1994; OECD 2002; Borio and White 2004).

2.2.2 Regulating financial valuation

The decades preceding the 2007-9 financial crisis were certainly not merely a period of deregulation. Financial authorities acknowledged the financial stability risks of the highly competitive environment that followed financial liberalization and globalization. Precisely because of these stability risks, policymakers developed new prudential requirements for financial institutions. These requirements targeted financial firms' balance sheets, aiming to ensure firms could withstand adverse scenarios such as high losses and funding difficulties. Most importantly, policymakers introduced formal and binding rules for banks' capital adequacy ratios – the level of equity in relation to bank assets' riskiness (Tarrullo 2008; Claessens 2016).

In tandem with these regulatory reforms, financial systems and the players active therein changed profoundly (Coleman 1996; Underhill 1997; Boot and Marinč 2008). Complementary to changes in the scope and scale of banks' activities, financial valuation practices changed significantly. The increased importance of banks' international trading and market-making activities stimulated reliance on market-based measures of financial instruments' value (Financial Stability Forum [FSF] and Committee on the Global Financial System [CGFS] 2009). Supported by technological developments, particularly computers' increased computing powers and data storage capacities, firms increasingly relied on risk models – such as Value-at-Risk models – to aid their assessments of potential future losses (MacKenzie 2006). The globalization of financial markets boosted demand for common yardsticks to assess financial instruments' riskiness, leading to a widespread usage of bond ratings produced by credit rating agencies (CRAs) (Sinclair 2014).

As financial stability policy shifted from structural and conduct regulations to prudential rules, regulators also became much more focused on ensuring that firms' valuation practices were conducive to financial stability. In international negotiations on capital adequacy regulation, one of the most controversial issues has been how to determine the riskiness of banks' exposures. The question is not only whether firms or supervisors should do the risk assessment, but also what methodologies they should use, and how to deal with the models' unintended consequences (Tarullo 2008). Debates on accounting standards for financial instruments have centered on valuation methodologies: should firms value their assets and liabilities relying on their current market prices or the original transaction values (Georgiou and Jack 2011)? And under what circumstances should firms recognize impending investment losses: when actual defaults occur, or already when firms' risk assessments indicate that something is wrong (Borio and Lowe 2001)? When developing rules for CRAs, policymakers have had to address not only how to regulate their methodologies, but also to what extent market participants and regulators themselves should rely on these risk assessments (Sy 2009).

In the 2007-9 global financial crisis, firms' valuation routines broke down. In the Summer of 2007, the biggest CRAs downgraded many structured finance products previously labeled 'safe', leading to widespread market stress. As markets for these complex securities dried up, firms had a hard time assessing their values. This in turn created panic that firms would default on their commitments, worsening the stress. Banks claimed that events were so exceptional that their risk models could not make sense of them, with observers neatly pointing out that this meant their models were inadequate (Haldane 2009c). The crisis clearly was intimately linked to valuation problems (Banque de France 2008b): "valuation issues are at the heart of today's modern, market-based, and risk-sensitive financial systems" (Noyer 2008: 1), and something had gone terribly wrong.

But being a crisis of valuation, it was also a crisis of the *governance* of valuation. Critics proposed roughly two, conflicting narratives of what had gone wrong. One narrative framed the problem as one of undue public intervention distorting financial market functioning in general and firms' valuation routines in particular. Regulatory reliance on credit ratings had ensured demand for these ratings, interfering with the normal operation of the rating market (cf. Partnoy 2009). Accounting standards had allowed firms to ignore financial market developments and hide mounting troubles from outside investors, disabling the markets' disciplinary powers (Laux and Leuz 2009). And arbitrary risk-measures in capital adequacy standards led to a discrepancy between firms' and regulators' risk assessments, incentivizing firms to 'game the system' rather

than focus on the actual risks they were taking (Dowd 2009). So, the problem was too much public interference and too little reliance on market-sensitive valuation practices, with straightforward normative implications: regulators should steer clear of firms' valuation routines to ensure that market forces could henceforth do their disciplinary job.

The opposing narrative was that regulators had almost completely privatized valuation responsibilities in the run-up to the crisis, leading to overly lenient rules and excessively high dependence on market-sensitive valuation routines. Basel II – the global capital adequacy standard implemented shortly before the crisis – effectively delegated financial regulation to firms themselves, allowing major banks to use their own risk models to calculate capital charges (Lall 2012). By relying on recent market data, these models proved fundamentally incapable of predicting a major crash. Worse still, they contributed to financial firms' procyclical behavior, by underestimating risks in the boom but overestimating them in the bust (Warwick Commission 2009). The privatization of regulation was also evident in the increased regulatory reliance on credit ratings, making regulators and firms highly dependent on unaccountable, private rating agencies. This reinforced credit ratings' procyclical effects substantially (Kruck 2016). Finally, accounting standards required financial firms to measure their financial instruments "at fair value under almost all circumstances" (Lall 2014: 135). In short, the crash was the result of privatized, market-sensitive valuation approaches. The obvious solution: regulators should take back control and design routines conducive to financial market stability.

While these accounts contain elements of truth, both are unsatisfactory. The first account rightly stresses the significant influence of public intervention on financial market functioning. However, the claim that without public intervention firms' valuation routines would have ensured self-stabilizing markets is unconvincing. Indeed, as financial markets have been subject to extensive public scrutiny since at least the 1930s, this account fails to explain why things went so terribly wrong at this particular point in time. Moreover, many pro-market commentators had celebrated pre-crisis regulatory reforms as a welcome trend towards *less* public interference, making their subsequent claim that excessive government intervention caused the crisis opportunistic.

The second account rightly signals this pre-crisis liberalization trend, but significantly overstates the regulatory shift towards private, market-sensitive valuation approaches. For example, while fair value accounting was in ascendency in the run up to the crisis, Lall (2014) is wrong to assert that accounting standards required full fair value accounting. Indeed, even in France, the country where the greatest share of banking sector assets had been subject to FVA before the crisis, this

share did not exceed 50 percent (FSF and CGFS 2009). Similarly, capital adequacy standards mixed several valuation approaches – relying on risk assessments of CRAs, banks, and regulators themselves –, hardly constituting a full-blown privatization of financial regulation.

2.2.3 Peculiar policy patterns

In this thesis, I discern different patterns in the governance of financial valuation. Instead of a clear and straightforward implementation of a specific policy approach – for example, a market-based approach before the crisis, and a wholesale reform afterwards – we see a failure to implement any approach fully, both before and after the crisis. Indeed, three decades of international deliberation and negotiations have not yielded a straightforward solution to two particularly controversial issues. First, in any regulatory domain, policymakers fail to design stable requirements for firms' valuation *methods*. The valuation rules – whether they pertain to methodologies for valuing assets and liabilities, assessing losses in firms' loan portfolios, or measuring the credit risk of bond and credit exposures – have been continuously revised, never settling on a clear-cut choice for one approach over another. Second, the *distribution of responsibilities* between firms and supervisors remains contested, as regulators constantly move back and forward between giving firms more discretion and subsequently limiting it.

These patterns are evident in the governance of key valuation activities: accounting standards and rules on banks' and CRAs' risk models. They are all characterized by being perpetually work-in-progress, failing to resolve the core issue of what firms' valuation approaches should look like and what should be the appropriate distribution of responsibilities between private and public actors. Even the global financial crisis of 2007-9 failed to change this situation. New accounting standards for financial instruments are significantly different from their predecessors, but they fail to resolve the inherent flaw of mixing two seemingly incompatible valuation approaches – reliance on current market prices, and past transaction prices (see chapter 3). Supervisors scrutinize CRAs' risk assessment methodologies, but do not actually prescribe their content (Underhill 2015). Finally, newly issued capital requirements (Basel III) have reshuffled the boundaries between private and public-sector risk-assessments, without settling the issue of how to measure the risk of losses on a particular portfolio (Lall 2012).

Neither did policymakers' post-crisis attempts to design or strengthen financial supervisors' own risk assessment models – as a correction to firms' flawed approaches – lead to very convincing outcomes. The popularity of the macroprudential policy approach certainly boosted the case for supervisors responding to systemic risks in a top-down, countercyclical fashion (Baker 2013b). Yet

despite high hopes, supervisors seem unable to design foolproof systemic risk models (Hellwig 2014). Newly introduced macroprudential tools are only very loosely tied to systemic risk indicators, and there is a lack of consensus whether supervisors are at all capable of signaling the build-up of risk in time to be able to effectively constrain systemic risk build-ups (Barwell 2014). Systemic stress-tests conducted in the European Union (EU) after the sovereign debt crisis have done little to instill confidence in supervisors' capacity to do so. Rather than creating transparency and confidence, the models and assumptions underlying these tests were challenged from all sides, creating confusion rather than clarity (cf. Anderson 2016).

In sum, instead of the rules moving steadily in a specific direction – for example from supervisor designed valuation routines towards increased private responsibilities, or the other way around – they seem destined to be stuck in some uneasy compromise that neither regulators nor firms seem particularly happy about. Indeed, even when policymakers present a brand-new standard, they often state that the rules are work in progress and will need further revision. And as the crisis made painfully clear, the pre-crisis regulatory approaches failed to instill prudent behavior, making the post-crisis inertia particularly worrisome. What explains policymakers' apparent inability to design coherent and effective regulatory approaches to financial firms' and supervisors' valuation routines?

2.3 The politics of financial regulation

The controversies over financial firms' valuation approaches have to a significant extent played out in negotiations within and between global regulatory forums. A good place to start investigating the politics of financial valuation is therefore the International Political Economy (IPE)-literature on global financial regulation. In this section, I provide an overview of IPE-scholarship that addresses aspects of the main research question, discussing how different IPE-approaches explain political controversies over financial valuation. I conclude that one particularly pressing issue has so far received little attention in the IPE-literature: the possibility that policymakers are hard-pressed to find appropriate solutions to financial valuation problems. Instead, in many of the IPE-accounts on financial regulation, substantive dilemmas are assumed to be absent or trivial.

One important disclaimer applies to this section. For analytical purposes and for the readability of the text, I split the IPE-literature on finance into relatively clearly demarcated 'approaches'. Of course, this does injustice to actual empirical studies' often more eclectic and nuanced perspectives. For example, while I distinguish between scholarship stressing the importance of

private firms' material interests and scholarship focusing on actors' belief systems, much IPE-scholarship allows for both to play a meaningful role (for example, Underhill 2015). Actual IPE-studies thus generally blend aspects of these different approaches.

2.3.1 Stability, competitiveness, and regulatory coordination

Financial globalization took off from the 1970s onwards, with international capital flows increasing rapidly and with financial firms expanding their cross-border activities (Helleiner 1995). IPE-scholars have since paid extensive attention for the ways in which policymakers stimulated this process and dealt with undesirable consequences (Oatley and Nabors 1998; Simmons 2001; Singer 2007). A dominant research question was whether and how states would strive for international regulatory coordination. Under what circumstances do states harmonize national rules, and when will they refrain from doing so?

Answering this question required prying open governments' regulatory objectives. On the one hand, governments aim for financial stability: "the stability of the key institutions and markets that go to make up the financial system" (Crockett 1997: 9). Governments fear financial instability as it can jeopardize the safety of voters' deposits, because it can disrupt the payments system, and because it can cause serious economic harm with significant public and private costs. On the other hand, governments care about firms' room for maneuver to fulfill a key economic role: financing economic activities efficiently. According to Singer (2007), maintaining the right balance between stability and efficiency is the core overarching issue in financial regulation. Banking regulators have the task to design rules stringent enough to ensure stability but lenient enough to ensure efficiency.

IPE-scholars have argued that financial globalization put serious pressure on governments' regulatory frameworks. It introduced the possibility of a widespread 'regulatory race to the bottom': as financial firms seek the jurisdiction with the lowest regulatory burden, all governments would have incentives to competitively deregulate, to the detriment of financial stability. Scholars have thus explained the post-1980 international coordination initiatives as policymakers' attempts to marry international competitiveness with financial stability (Singer 2007).

International regulatory forums are the place where this coordination often plays out. The Basel Committee on Banking Supervision (BCBS) has since the 1980s been the main forum responsible for developing international standards for banking regulation and supervision. The International Organization for Securities Commissions (IOSCO) provides the forum for deliberations on

standards for securities markets regulation. The International Accounting Standards Board (IASB) has played a crucial role in the international harmonization of accounting standards. And the Financial Stability Board (FSB) – previously the Financial Stability Forum (FSF) – is tasked with the coordination of these different regulatory initiatives.

Scholars have generally analyzed these international regulatory forums as mere vectors of (powerful) governments (Oatley and Nabors 1998; Simmons 2001; Singer 2007). These arenas are the battleground where state fight out conflicts about international rules; but the organizations themselves have no independent role to play. States' power depends on the (relative) size of their markets (Simmons 2001) and the degree of regulatory centralization within these states (Bach and Newman 2007; Posner 2009; Büthe and Mattli 2011). Scholars have argued that these factors account for the United States' dominant role in global financial regulation, only countered by countries with relatively less power, such as the United Kingdom, Japan, Germany and France (Simmons 2001).

Yet if we return to the thesis' main research question, the harmonization literature does not provide many clues why regulators would have difficulty designing valuation rules conducive to financial stability. As the harmonization (or otherwise) of national rules was the key dependent variable, scholars focused less on the rules' actual *substance* (their content). Scholars explicitly or implicitly assumed that financial regulators know precisely what rules will balance the objectives – regulators' 'win set', as Singer (2004) calls it. Objectives neatly translate into specific policies: rules can be more or less stringent and thus be more or less conducive to financial stability. But this assumption seems at odds with the financial crisis: why would regulators allow this to happen? One possibility is that supervisors preferred efficiency over stability. While this surely contains some truth, the costs of the crisis far outweigh the pre-crisis economic gains. Another possibility is that the crisis was an exogenous, once-in-lifetime experience that regulators could not possibly take into account. But this conflicts with the broad post-crisis consensus that pre-crisis regulation contributed to the financial crisis (Financial Services Authority [FSA] 2009b). As such, the crisis throws doubt on Singer's (2007) contention that regulators can perfectly translate objectives in regulatory frameworks conducive to these objectives.

Another possibility is that pre-crisis conflicts at the global level obstructed the development of effective regulation. But again, this explanation fails to satisfy: many valuation rules blamed for contributing to the crisis were in fact developed at the global level – for example the Basel capital adequacy framework, and International Accounting Standards. If these rules were indeed

deficient, then the regulatory harmonization-framework cannot really account for why this is the case. Rule-output of global forums should reflect the preferences of powerful states (Kapstein 1992; cf. Thiemann 2014), but why would they prefer flawed rules? In short, while these accounts provide valuable insights in international harmonization efforts, they provide less guidance on addressing the rules' substantive aspects. To account for rules' potential deficiencies, we must look elsewhere.

2.3.2 Regulatory approaches and the battle of the systems

The Varieties of Capitalism (VoC)-strand within the IPE-literature pays specific attention to financial standards' substance. Blending elements of historical institutionalism and comparative policy economy, this literature posits that a country's financial regulatory approach is embedded in a wider institutional framework that closely matches the economy's specificities (Hall and Soskice 2001). The economy's different components each fulfil particular functions, but how these components interact differs from country to country. So, while finance plays a key role in the functioning of all modern capitalist economies, the countries' financial systems will differ markedly. For example, whereas in some countries bank loans are corporates' dominant form of external finance, in others bond and equity finance are more important. This symbiotic relationship between the financial system and the economy is the result of a long development, and historical path dependencies ensure that changes are limited and slow (Zysman 1983).

Although VoC-scholars argue that each country has its own particular 'variety of capitalism', as a shorthand for analysis they have grouped similar countries in various ideal types (cf. Hall and Soskice 2001). A dominant distinction is the split between 'liberal market economies' and 'coordinated market economies'. The former group – generally Anglo-Saxon countries such as the USA, the United Kingdom (UK), Canada, and Australia – is characterized by

adversarial management-labour relations, comparatively short-term employment, the predominance of financial markets for capital provision, an active market for corporate control, and an increased emphasis on short-term price movements on stock markets (Perry and Nölke 2006: 569).

These countries' financial regulatory approach is aimed at providing ample room for market forces: light-touch regulation that aims to stimulate competition. The latter group – encompassing continental European countries (most notably Germany and France) and Japan – is characterized by more consensual economic relations, with ample room for cooperation and more active, interventionist governance styles. Financial regulation provides 'insiders', particularly banks,

protection from outside competition, in return for their active contribution to long-term economic development (Perry and Nölke 2006).

Financial globalization potentially disrupts this historically evolved financial regulatory approach. States therefore aim to ensure that international standards are compatible with national ones. International rules that differ markedly from domestic regulatory frameworks could undermine the sector's stability and its contribution to economic development. The core regulatory problem thus is to ensure that international rules do not depart too far from countries' traditional approaches. International forums are the battleground for fights between national regulators representing seemingly incompatible regulatory traditions.

Applied to this thesis' topic – the regulation of financial valuation – this perspective suggests that controversies and half-baked rules derive from the incompatibility of liberal market and coordinated market economies' valuation methods. While the power of the USA and the UK ensured an Anglo-Saxon bias in global standards, successful resistance from continental European countries and Japan implied they were an uneasy compromise. Consider international debates on accounting standards. The recurrent clashes over the appropriate valuation method – fair value accounting (FVA) versus historical cost accounting (HCA) – are basically conflicts between the liberal market approach (favoring FVA's transparency) and the coordinated market approach (favoring HCA's stability) (cf. Perry and Nölke 2006; Palea 2015). The result of international bargaining is an incoherent compromise. Similarly, pre-crisis controversies over hardwiring credit ratings in regulation essentially derive from a clash between two regulatory systems, with one camp (led by German regulators) being skeptical and the other (led by US regulators) enthusiastic. Again, the result is an ill-conceived standard (Kruck 2013).

The VoC-literature is right to stress that financial regulatory approaches can differ markedly among countries and that these national differences are often the source of conflict in international negotiations. Yet identifying the key source of regulatory controversies over financial valuation in countries' incompatible regulatory systems is unsatisfactory, for three reasons. First, it unwarrantedly assumes an absence of valuation dilemmas at the national level. However, a cursory glance at, for example, the USA shows that regulatory problems can be just as thorny there. The US experience of accounting standard reform shows that national standards can be as messy as international ones. Just like international accounting standards, the US standard setter has not succeeded in picking one method over another one – with the scope of FVA being continuously revised (Greenberg et al. 2013). Similarly, US banking regulators have continuously

revised rules on how banks should calculate the credit risks inherent to their balance sheets – without ever finding a stable regulatory approach (Barth and Matteo Miller 2017). One might argue that problems at the national level perfectly account for international rules’ incoherence. Yet this merely displaces the problem, for what would explain controversies over national standards’ substance? The VoC-literature does not provide many clues to answer this latter question.

Second, the VoC-literature risks making a caricature of the stability and coherence of countries’ regulatory approaches (cf. Hardie and Howarth 2013). Countries’ financial sectors have changed markedly over time, and so have their financial regulations (OECD 2011). For example, framing conflicts over international financial accounting standards as a clash between countries traditionally favoring fair value accounting and those favoring historical cost is partial, at best. As many financial systems had become more ‘market oriented’, all regulators (whether from Germany, France, the UK or the USA) wanted to expand fair value accounting. Attributing international conflict to incompatible traditions then becomes quite misleading. Indeed, when the crisis hit in 2008, French banks’ fair value assets as a share of total assets was 47 percent, significantly more than the 30 percent in the USA (FSF-CGFS 2009: 11). This seems incompatible with the assumed ‘traditional’ French banking system. It means that we should not assume that international conflicts over financial valuation are time-invariant ‘battles of the systems’.

Finally, the VoC-approach assumes that regulators can without much effort derive regulatory preferences from *structural* factors: the needs of the economic system. This downplays the fact that financial regulation can have markedly different consequences for different societal actors – and that these actors might also play an important role in financial regulatory politics. The next section thus discusses the literature emphasizing the importance of private sector bargaining in financial regulatory affairs.

2.3.3 Material interests and regulatory capture

The private interest IPE-approach stresses that the rule-output of global regulatory forums is best understood as the (temporary) outcome of interest group bargaining. The overriding research objective is to find out the different private and public actors’ material interests. Material interests are the root source of political conflicts over the regulation of valuation practices. Private actors stand to gain or lose from different regulatory approaches, both because regulatory requirements impose compliance costs or taxes (directly affecting profits) and because it sets the terms of competition (Underhill 1997). Public actors balance different stakeholders’ rule-preferences to

fulfil their own material benefits: to get re-elected (politicians) or maintain their independent position (regulators) (Goldbach 2012).

Scholars adopted this perspective to explain actors' preferences for economic openness – removing or erecting barriers to cross-border flows of goods, services, people, and capital – and regulatory harmonization. Private actors who stand to gain from competing on foreign markets will push for economic openness and international harmonization, while less competitive actors favor protectionism, so the argument (Lake 2009; Mügge 2010; cf. Milner 1989). Although material interest analyses have generally focused on regulatory harmonization efforts, scholars have increasingly studied the *substance* of (newly created) international rules. But in terms of the analysis this does not change much: private actors prefer rules maximizing income and minimizing costs. So firms will favor rules that will boost their competitiveness while decreasing compliance costs (Goldbach 2012).

How do these private preferences translate into actual policy reform? One strand (the Open Economy Politics-approach) stresses the importance of *domestic politics*: actors' regulatory preferences are 'aggregated' at the national level, after which governments' international bargaining power determines the actual policy outcomes at the international level. So domestic political institutions are key to understanding governments' preferences at the international level, as they structure the bargaining of competing societal groups (Lake 2009). Another strand (the transnational politics-approach) emphasizes the key importance of *global regulatory forums'* institutional configuration, as firms have responded to (and pushed for) the supranationalization of rule-making authority (Mügge 2010; Lall 2012). Of course, both dynamics can operate simultaneously, with private actors operating at both the national and international level pushing for their preferred regulatory outcomes.

A key issue is to determine who wins the bargaining competition. Private interest-scholars argue that financial policymaking is particularly prone to 'regulatory capture': a situation in which the content and purpose of regulation derives from powerful private stakeholders, to the detriment of the public interest. This insight builds on the economic theory of regulation, as developed by Chicago-school economists Stigler (1971) and Peltzman (1976). In brief, the Stigler-Peltzman argument is that given regulation's distributional consequences, private stakeholders will aim to steer rule-making to their benefit. Put very simply, producers and consumers have different stakes in regulation. Yet there is an incentive problem. For producers, as a rule, the benefits of exerting influence on the policy process will far outweigh the costs. For consumers, costs will generally

exceed individual benefits. This creates a collective action problem: the large consumer group will fail to organize successfully, as each consumer has an incentive to free ride. For the smaller group of producers, on the other hand, it is easier to organize. Stigler (1971: 3) therefore concludes “that, as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit”. This capture story is quite deterministic: no matter how you organize the policy development process, you will always end up with rules biased towards vested interests (see Pagliari 2012a). The normative implication, then, is that it is usually better not to try, with deregulation as the default policy recipe (see Weber 2012).

Private interest-scholars focusing on global financial regulation generally take a more empirical (inductivist) approach: do we, in practice, see a group of actors ‘capturing’ the regulatory process? They highlight several factors that make global financial regulation particularly susceptible to capture dynamics: a small set of firms have disproportionate resources to organize themselves; international regulatory forums mostly operate in the shadow, giving privileged access to a small group of insiders; and financial markets’ ever increasing complexity makes regulators technically and intellectually dependent on powerful financial firms’ knowledge and expertise (Baker 2010; Pagliari 2012a; Underhill 2015). Thus, in global financial rulemaking often the most powerful firm coalitions successfully convince policymakers to implement rules favoring them rather than being conducive to the public interest. Less powerful stakeholders – such as small, domestically oriented firms and financial services consumers – lose out in this regulatory battle, failing to influence the rule substance (Baker 2010; Lall 2012; Pagliari and Young 2014; Goldbach 2015). In comparison to the Stigler-Peltzman variant, the normative implications are less skeptical towards regulation: public regulation can be conducive to the public interest, but this requires balanced policy input and independent, but accountable regulators.

Other scholars have enriched such accounts of private sector influence on financial regulation. Some scholars have argued that the politics of international financial regulation involves more private actors than just the big, transnational banks (Kastner 2014; Pagliari and Young 2014), implying that a “*multitude of participants within or outside finance are capable of exercising an influence that knocks the regulator off its original balance*” (Pagliari 2012a: 9). Other scholars take issue with the idea that big banks always get their way: Young (2012), for example, argues that regulators frequently resist big financial firms’ lobby attempts, and adopt rules against their opposition. So more actors than powerful banks may capture financial regulation, and capture is never complete.

Turning to the issue of financial valuation, material interest scholars argued that pre-crisis regulatory developments in the domain of credit rating agencies, accounting standards, and bank capital adequacy standards mainly benefited powerful, transnational firms. For example, the Basel II's Internal Ratings Based (IRB) approach – only available for banks with 'sophisticated' risk management systems – allowed big financial firms to lower their capital requirements, deemed to constitute a competitive advantage (Underhill and Zhang 2008; Blom 2011; Lall 2012).

By hijacking the negotiations [...], large international banks succeeded in minimizing their required levels of capital, with potentially disastrous consequences for the stability of the international financial system (Lall 2012: 611).

Privileged access to decision-making forums may also allow non-banking firms to capture the regulatory process. According to Lall (2014: 134), the global shift to fair value accounting mainly benefited the Big Four accounting firms (Ernst & Young, PwC, Deloitte, and KPMG) who could expand market share in European countries used to historical cost accounting, while harming European firms by imposing 'switching costs' on them. And hardwiring ratings in regulation further boosted the Big three rating agencies' (Standard & Poor's, Moody's, and Fitch) dominant position, harming potential challengers.

Similarly, the limited nature of post-crisis reforms stems from vested interests' powerful lobby – be they big, transnationally active banks, accounting firms, or credit rating agencies. Basel III is not significantly different from its predecessor, reformed accounting standards do not meaningfully depart from the pre-crisis approach, and post-crisis rating agency reforms are "not terribly significant" (Helleiner 2014: 86; cf. Lall 2012; 2014). International regulators' attempts to fix financial regulations' flaws were led astray by particularistic interests, so the argument (Helleiner 2014; Goldbach 2015; Underhill 2015). Hence, rules governing global finance are still by and large the same as before the crisis – an approach that mainly favors big financial firms.

The material interest perspective and its capture variants rightly emphasize that (international) financial standard setting is often dominated by a small group of stakeholders, introducing the risk that powerful private actors exercise a disproportionately large influence. But there are two key limitations. First, actual policymaking patterns suggest that financial valuation controversies are not fully reducible to the problem that public regulators are under private actors' spell. Indeed, this would be difficult to square with the identified empirical pattern where regulators continuously label rules as 'work in progress' and frequently modify them. One could argue that this dynamic stems from regulators being at times able to free themselves from private interests and propose rules conducive to the public good, after which they are reined in again by powerful

lobby efforts and backtrack on their initial proposal. Yet this introduces another problem, for what explains the variance in capture over time? In short, there are empirical reasons to doubt this story's completeness.

Second, the capture account presents a rather narrow perspective on the substantive issues at stake. The key regulatory controversy is located at the level of objectives: do regulators aim for rules conducive to the public, or the private interest? Substantive dilemmas – what rules are in fact conducive to the public interest? – are mostly absent. Debates over the *substantive issues* are a distraction from the *real* issues at stake, namely the material interest of the stakeholders. In Hecló's terms, it is all powering and little puzzling. Both regulators and financial firms are attributed the ability to know precisely the (future) real-world effects of different rule-sets (cf. Singer 2007); and if regulators change their mind along the way it must have been because they eventually gave in to financial firms' wishes. On financial valuation issues, however, it is very well possible that there is controversy and disagreement in the regulatory community about the appropriateness of different rule-sets.

2.3.4 Ideas, policy paradigms, and expert networks

Constructivist scholars explicitly challenge the conjecture that all policy dynamics are reducible to actors' material interests (Abdelal et al. 2010). They argue that actors' observed actions are often incompatible with their assumed material interest. A more principled objection is that even if actors mainly care about their material interests, they must *know* or *understand* what these are. This implies scholars should investigate actors' ideas about their goals and the associated preferred policies. As the political world is inherently social, scholars must take seriously the social world's defining characteristic: it is populated by *thinking* actors (McNamara 1998; Blyth 2002; Chwieroth 2010).

Constructivist scholarship has generally studied global financial standards through the lens of policy paradigms, or 'regulatory philosophies' (cf. Baker 2006; McPhilemy 2013). This is congruent with the constructivist's central claim that "*collectively held* ideas shape the social, economic and political world in which we live" (Abdelal et al. 2010: 2; emphasis added). Scholars argue that the pre-crisis policy reforms constitute the progressive institutionalization of a neoliberal policy paradigm (Blyth 2003; Best 2010; Germain 2010; Mügge 2011a). This paradigm's core idea is that market forces are (generally) the best way to achieve public interests. It suggests self-regulation is preferable to public intervention (Pagliari 2012b). In terms of rule substance, it implies a belief that "greater transparency, more disclosure and more effective risk management by financial

firms based on market prices are all that is required for the regulation of efficient markets” (Baker 2013b: 117).

Pro-market beliefs had been gaining popularity since at least the 1970s and had been floating around for hundreds of years. To explain their pre-crisis application to financial regulation, constructivist scholars point to institutions, particularly regulatory forums. A neoliberal paradigm was embedded in national regulatory agencies (McPhilemy 2013) as well as at international regulatory forums (Baker 2006; Chwioroth 2010; Mügge 2011a). McPhilemy (2013) has emphasized the key importance of pro-market beliefs for the UK financial market regulator’s (the Financial Services Authority) policy approach. Mügge (2011a) stresses that a dogmatic pro-market approach – where regulators’ dominant concern is the policy’s intellectual coherence rather than its contribution to public interests – took a firm hold in international regulatory forums. The institutional context is thus of key importance: regulator’s relative insulation from political scrutiny ensured the room for maneuver to pursue this type of policy approach (Mügge 2011a; McPhilemy 2013).

Why this institutional isolation? According to Porter (2014), the technical and increasingly global nature of financial markets warranted the delegation of policymaking to technocratic, supranational regulatory agencies that were only to a very limited extent exposed to democratic control and contestation. Politicians delegated rule-development responsibilities for bank capital, accounting, and credit rating agencies to unaccountable agencies such as the FSF, the BCBS, the IOSCO, and the IASB at the global level. At the European level, insulated agencies such as the Committee of European Securities Regulators (CESR), the Committee of European Banking Supervisors (CEBS) and the European Financial Reporting Advisory Group (EFRAG) gained influence. These policy arenas were particularly prone to group think of technocrats aiming to implement ‘intellectually coherent’ policies (Mügge 2011a).

Financial valuation rules developed by these agencies breathed the belief in market forces’ disciplinary powers (Seabrooke and Tsingou 2009; Mügge 2011a). The IASB presided over a general shift from the traditional historical cost accounting approach – recording assets and liabilities at the price when acquired – to fair value accounting, where market values play a dominant role (Nölke and Perry 2007; Mügge 2011a; Botzem 2013). This latter approach was deemed more coherent as it relies on “market actors as the discoverers of value” (Mügge 2011a: 194). Rating agencies were exempt from public scrutiny, as the IOSCO and the CESR trusted in the healing powers of CRAs’ reputational concerns. Simultaneously, credit ratings were hardwired in

a wide set of financial rules, reflecting regulators' belief in their superiority over publicly developed risk-indicators (Pagliari 2012b). Finally, regulators reformed bank capital adequacy standards to increase reliance on banks' (market-based) risk management systems (such as Value-at-Risk-models) (Tarullo 2008). Hence, technocrats reformed valuation rules along the lines of neoliberal orthodoxy, so the argument.

As the financial crisis seemingly challenged policy orthodoxy's core belief – market forces contribute to the public interest – constructivist scholars have since investigated whether a new regulatory paradigm emerged. Some scholars argue a paradigm shift is underway. Baker (2013) maintains that the crisis triggered a 'macroprudential ideational shift' in banking regulation. He describes this shift as an 'insider coup-d'état', where reform-oriented regulators succeeded in quickly transforming the regulatory 'cognitive filter'. This ideational shift makes possible a whole new, more interventionist regulatory approach (Baker 2013b). Other scholars stress neoliberal ideas' flexibility, meaning that policymakers could just believe they had to be implemented better. Actors' ability to blame the crisis not on underlying ideas but on how they were implemented ensured post-crisis continuity rather than change (cf. Blyth 2013; Schmidt and Thatcher 2014).

The constructivist approach rightly identifies a broad pre-crisis shift to policies favoring private sector practices over government steering. Yet actual policies – both before and after the crisis – appear much more hybrid than the paradigm perspective would have us believe. For example, bank capital adequacy rules are a mixed bag in terms of valuation (risk-assessment) approaches. Roughly half of EU's banking assets is subject to Basel's Internal Ratings Based (IRB) approach, that mostly relies on banks' risk indicators. The other half is subject to the Standardized Approach where ratings and supervisory assessments are more prominent (FSB 2014; Trucharte Artigas et al. 2015). The IRB-approach also does not fully delegate risk assessment responsibilities to banks: instead, key provisions are developed by regulators (Young 2012). So, it is a hybrid approach: regulators became ever more involved in calculating risks and assessing the adequacy of banks' internal risk management systems, while at the same time introducing considerable scope for discretion (Haldane 2013a). The standardized approach does not fully rely on private sector risk assessments, i.e. credit ratings. Less than ten per cent of outstanding corporate credit is externally rated (EBF 2016), and consumer credit, such as mortgages, is not rated at all. Moreover, EU policymakers allow banks to ignore EU sovereign bonds' ratings when assessing their riskiness (European Systemic Risk Board [ESRB] 2015b). In short, it is hard to square the variety in valuation approaches with a dogmatic implementation of pro-market orthodoxy.

One could counter this critique by arguing that this hybridity is due to the underlying policy paradigm's flexibility. But this counterargument introduces more problems than it solves, as this essentially forms a departure of a paradigm-based explanation. Indeed, the argument that pre-crisis policy reforms constituted a dogmatic implementation of a neoliberal policy paradigm conflicts with the argument that pro-market beliefs are compatible with multiple policy routes (cf. Mügge 2013; Schmidt and Thatcher 2014). If policy paradigms are really that flexible, it becomes quite difficult to recognize dogmatic policymaking. For example, analysts have portrayed regulatory reliance on credit ratings both as excessive market reliance (Nölke and Perry 2007) and as undue public intervention in what should have been a free market for financial information (Partnoy 2009). To understand such policies, we thus clearly need to go beyond policy paradigm-explanations.

More importantly for our purposes, the policy paradigm-framework obscures substantive dilemmas over the right course of action. It only allows for policy actors to be temporarily unsure about the right way to go, due to externally triggered crises. Once the dust has settled, actors should again know precisely what to do – either because of a paradigm shift, or because actors succeeded in saving the pre-crisis paradigm through incremental fixes. But taking ideas seriously also requires taking doubts and uncertainties seriously – whether this is during a crisis or otherwise (Nelson and Katzenstein 2014). Moreover, by locating the key policymaking problem as designing an appropriate translation of economic orthodoxy in actual policies, scholars risk obscuring the more practical problems that policymakers face: what rule-sets for financial valuation will likely be most conducive to public interests? Here the paradigm variant of constructivist thinking unfortunately provides little guidance.

2.4 Financial markets as a reflexive system

The approaches described above provide important insights in the politics of financial regulation. Yet they do not really get at the heart of why regulating financial valuation practices appears to be so difficult. These difficulties appear to transcend mere conflicts over adjustment costs, material benefits, or the rules' appropriateness in light of policy orthodoxy. The IPE-literature addresses two fundamental questions only peripherally: how do valuation techniques affect financial market functioning? And what does this imply for financial regulation?

In this section, I will use insights from heterodox economics and the social studies of finance-literature to present an answer the first question. Both literatures attack the neoclassical economics' conceptualization of valuation practices as methods to discover a financial

instruments' 'true' value or risk. Instead, they argue that these practices are at the core of financial markets and that they are a crucial component of financial markets' inherent instability (MacKenzie 2006; Minsky 2008 [1986]; Soros 2008; Sinclair 2010). These literatures tell us much about valuation techniques' influence on financial markets, but they have less to say about the second question: the concomitant political and regulatory consequences. This issue will then be discussed in section 5.

2.4.1 Finance as any other market

To appreciate the ideas of both heterodox economics and social studies of finance we must look at what they are challenging: neoclassical economics' conceptualization of finance and financial markets. This line of thought strictly separates financial activity from real economic activity, treating financial activity as a mere *derivative* of what happens in the real economy. Finance has a *passive* role in economic processes: financial transactions are merely manifestations of transactions in the real economy (Winkler 1998: 7). As neoclassical economics gained ground after World War II and especially after the 1970s, finance increasingly disappeared from (macro)economists' radar screen: "Finance came to be seen effectively as a veil – a factor that, as a first approximation, could be ignored when seeking to understand business fluctuations" (Borio 2009: 1).

Finance is not special: the 'laws' that apply to other markets also apply to financial markets. The most pro-market version of this line of thinking can be summarized as follows. Markets are populated by atomistic, utility-maximizing agents that can calculate precisely what course of action has the highest probability of furthering their material interests. Through competitive forces, this self-serving behavior will at an aggregate level lead to self-equilibrating markets and maximize economic welfare. As market mechanisms are the best way to organize humans' natural propensity to trade, they have spread widely across modern day societies. This in principle requires no outside (public) interference; indeed, public intervention is thought of as an outside force distorting markets' normal operation.

As Turner (2010b: 1319) points out, such a summary is quite a caricature of academic economics, as a good deal of economic research was devoted to understanding under what conditions these simplistic ideas do not hold true. Particular lines of thought – most notably: institutional economics – emphasize obstacles to the efficient functioning of market mechanisms that arise from overly high 'transaction costs': information asymmetries, public goods, externalities, and natural monopolies (Akerlof 1970; Meade 1973). Solving market failures requires cooperation (or

collusion) between market participants. If, however, markets are too complex and free rider behavior too difficult to contain, public intervention is the most suitable strategy to fix market failures (Underhill 2016). Information asymmetries between consumers and producers can be fixed by transparency requirements or product standards; externalities such as pollution can be internalized through taxation; and monopoly positions can be addressed through competition policy (cf. Den Hartog 2010).

However, any benefits arising from state intervention could be outweighed by the costs of government failure. Policymakers themselves are confronted with endemic information asymmetries, hampering them in designing optimal policies regulatory design. Moreover, as already discussed above, there is always the risk of capture by a select group of well-organized market participants that bend the rules to their wishes. Even if markets fail to produce 'optimal' results, this thus does not necessarily mean government intervention will deliver better results (cf. Posner 1974; Stigler 1971).

What about financial valuation? What happens in the 'real economy' (investment, trade, consumption) determines what happens in financial markets. Financial firms' valuation practices are thus merely *instrumental*: they must ensure that identified values and risks are accurate *reflections* of their real economic substance. Valuation involves discovering a financial instrument's 'fundamental value', based on an analysis of real economy variables such as the firm's income, its inventory, and the relevant industry in which it operates. Financial market participants' trading activity will subsequently ensure – if the markets are functioning properly – that market prices reflect equilibrium values. Similarly, risk models help market participants calculate financial instruments' true riskiness. Competitive forces filter out flawed models and thus ensure that only the best ones survive. Valuation techniques are therefore not much more than efficiency enhancing tools: functional technologies that do not themselves significantly alter ways in which markets generally operate (see for a more elaborate discussion: Weber 2012; Marandola and Sinclair 2014; Mügge and Perry 2014).

Regulating financial valuation practices can be a way to fix market failures. For example, as free rider problems prevented the emergence of 'investor paid' credit rating agencies, the dominant CRAs are all paid by debt issuers. This creates perverse incentives on the part of CRAs, as they are tempted to inflate ratings to attract business. Regulating CRAs' risk assessment procedures could then be a way to ensure ratings reflect debt instruments' 'true' riskiness (Coffee 2011). Similarly, financial firms can be tempted to hide negative information from outside investors, worsening

information asymmetries and thereby hamper effective market discipline. Accounting standards are a way to fix these problems. Finally, banks' actions might create externalities in the form of financial stability risks. Public intervention can be a way to ensure banks take these wider stability risks into account. Regulating banks' risk models is one way of achieving this (Tarullo 2008).

While these economic ideas on markets and public regulation contain many valuable elements, several aspects are unsatisfactory for our purposes. Finance is treated as a passive force facilitating real-economy processes, while it is much more realistic to emphasize the interactions and mutual dependencies between finance and the economy. Moreover, this perspective on financial values and risks is limited. While it allows for market failures in the domain of financial valuation, it implicitly assumes that 'risks' and 'values' exist independent of firms' actions, waiting to be 'discovered' by valuation practices. As I will argue below, it makes more sense to treat risks and values as being endogenous to market participants' behavior. Lastly, these ideas tell us little about regulators' problems to effectively regulate financial valuation practices. Although it is true that public intervention can lead to new problems, the concept of 'regulation failure' is not specific enough about *why* regulation failure would be particularly prominent in the domain of financial valuation.

2.4.2 Finance as an active, destabilizing force

The great contribution of the heterodox economist Hyman Minsky was to remind us that our economies are inherently 'financial'. He forcefully rejected the neoclassical perspective that finance is of marginal importance for economic processes:

Established economic theory [...] can demonstrate that an abstractly defined exchange mechanism will lead to a coherent, if not an optimum, result. However, this mathematical result is proven for models that abstract from corporate boardrooms and Wall Street. The model does not deal with time, money, uncertainty, financing of ownership of capital assets, and investment (Minsky 2008 [1986]: 4).

Minsky argued that finance is an active rather than passive force – and that it plays a key role in our economies' instability. He claimed that periods of benign economic conditions are followed by periods of financial turmoil and economic bust. Going further, he argued that these periods are intimately related: the seeds for financial and economic turmoil are sown in periods of economic prosperity. This is Minsky's famous argument: stability is destabilizing. But why is this the case?

Minsky conceptualized the economy as a financial system in which a great amount of balance sheets and cash flows are linked in a highly complex fashion. It is a complex network of intertwined relationships, where one actor's investment spending is another actor's income. To finance

investment, economic actors take on debt to generate future income, that in turn will be used for interest payments. This inevitably ties the fate of the financial sector to the 'real economy', and vice versa. In effect, there is no such thing as a 'real economy' separate from financial factors.

Debt finance is the key to understanding the instability of this finance-economy nexus. Debt liabilities and interest payment obligations are generally nominally fixed: debt obligations do not fluctuate in tandem with economic developments. Only when the debt contract is due and a new one is concluded do terms and conditions change. The value of actors' assets and income streams, in contrast, do fluctuate along with economic conditions. This makes actors' economic positions inherently risky: there is always the possibility that income streams (volatile) fail to match debt payment obligations (fixed), or that the value of an actor's assets does not match the value of its debt liabilities (Detzer and Herr 2014).

Minsky called the difference between actors' expected incomes and their future payment obligations the 'margin of safety'. In stable periods, the great majority of market participants has an income sufficient to meet debt payment obligations. Put differently, system-wide safety margins are adequate. The economy has a robust financial structure: small changes in economic conditions will not inhibit the ability of most units to meet their financial commitments. But as participants in the non-financial sectors make high profits, they have incentives to take on more debt to finance additional investment. They can achieve a higher return on equity by borrowing more money. The rise in the value of the assets they can pledge as collateral rises and supports their increased borrowing. Financial firms are eager to provide the finance: standing aside means foregone profits, and they feel assured by value rises of borrowers' collateral and low default rates. This behavior in the aggregate reinforces the economic boom: a feedback loop sets in, where an economic expansion feeds upon itself (Kregel 2008).

As more and more market participants take on debt-positions that require ever increasing profits and asset price rises, the system becomes more fragile – even though it superficially looks more stable than ever. Increasing fragility makes the financial-economic system more prone to a destabilizing response to changes in economic conditions. When margins of safety have been sufficiently reduced, only a very small departure of actors' initial expectations may change many firms' strategies to meet fixed payment obligations, such as inventory sales. The system is ready for collapse. A relatively insignificant event – such as a rise in the interest rates, which further reduces system-wide safety margins – may set-off a destabilizing feedback loop. As borrowers default on their debt payments financial firms get into trouble, which influences their terms to

non-financial firms. As all actors simultaneously deleverage to improve their financial position, the aggregate effect is a worsening of economic conditions – a micro-macro paradox. Economic problems set-off a systemic financial-economic crisis (Minsky 2008 [1986]; Kregel 2008; Wray 2009).

In the post-war period, this destabilizing process was muted in Western economies. Indeed, as Minsky (1982) himself pointed out for the USA, the most significant economic event of the post-war era was the absence of economic depression. Public intervention played an important role. As mentioned above, it significantly constrained financial firms' room for maneuver. Moreover, central banks acted as stabilizers, for example through lender of last resort policies. And government spending played a key role. Investment spending made economic activity less dependent on unstable dynamics in the private sector. Furthermore, the government engaged in deficit spending in case of economic slowdown. In periods of economic and financial turmoil, these factors limited the extent of losses that banks, firms, and households suffered, ensuring an effective floor under the financial economy (Minsky 1982: 9-11).

In such a constrained and steered environment, the financial system's destabilizing potential was thus limited. All this changed, however, after the 1970s. Financial liberalization played a particularly important role, as it "weakens financing constraints, supporting the full self-reinforcing interplay between perceptions of value and risk, risk attitudes and funding conditions" (Borio 2012: 6). What role do these value and risk perceptions play?

2.4.3 Market reflexivity

A core component of Minsky's explanation for the financial system's inherent boom-bust tendencies is its reflexive nature: market participants' assessments of the system's functioning shape its functioning, in turn affecting participants' assessments. Confronted with inevitable uncertainty about future outcomes, investors' assessments of future returns depend on their current optimism or pessimism. Cautious borrowers choose high margins of safety. If expectations about future cash flows turn out to be too modest, the borrower may decide that she had been too cautious and reduce the safety margins. The same applies to lenders: if (most of) their clients meet their payment obligations, banks' worries about borrowers' solvency risks decrease, and they will provide more funds. A period of benign economic conditions thus changes actors' expectations and their behavior, which in turn boosts economic conditions. Economic stability can endogenously lead to an economic boom. Similarly, should events prove less favorable than expected – central banks push up the interest rate, or income flows are less than expected –

expectations are revised, and a self-reinforcing downward spiral can set in (Detzer and Herr 2014; Papadimitriou and Wray 1998).

Market participants are thus confronted with a high degree of uncertainty about future outcomes, and mistakes will be inevitable (Mehrling 1999). But the problem goes deeper: as market participants' expectations and corresponding actions in the aggregate (partly) *shape* these outcomes, the whole process has an inbuilt indeterminacy: "any attempt to forecast which of the myriad possible futures will actually be realized comes down to an attempt to forecast the forecasts of one's fellow economic units" (Mehrling 1999: 141). So market reflexivity itself contributes to uncertainty, meaning that there are no objective anchors for expectations. The financial system is anchored in market participants' assessments, but in a circular way these are dependent on market circumstances (Sinclair 2010; Mügge and Perry 2014).

Market reflexivity is also central to Soros' (1987; 2008; 2013) account of the financial system's proneness to instability. More than Minsky, Soros emphasizes the importance of market participants' cognitive limitations. Confronted by a reality of extreme complexity, market participants have little choice but to resort to "various methods of simplification: generalizations, dichotomies, metaphors, decision rules, and moral precepts [...]" (Soros 2013: 311). This corresponds to behavioral finance scholarship that emphasizes that market participants' decision-making systemically differ from what would be expected from the rational expectations theory and the efficient market hypothesis (Detzer and Herr 2014). Similarly, Soros challenges the postulates of these theories by emphasizing reflexivity and fallibility, leading him to conclude that markets can be subject to reflexive positive feedback loops that drive apart market participants' views and the actual situation (Soros 2013).

Soros (2013: 323) analyzes financial boom-bust processes (or bubbles) as the result two components: "an underlying trend that prevails in reality and a misconception relating to that trend". The boom sets in when a trend and a misconception reinforce one another. He gives the example of a real estate bubble. Easy credit is the trend that triggers it, the misconception is market participants' belief that collateral values are independent of credit availability. Reflexive feedback loops then drive an asset bubble: cheap credit causes asset prices to rise, there are fewer defaults, credit performance improves, and lending standards are relaxed. The credit boom thus feeds on itself. Inevitably, expectations are so far removed from reality that market participants must admit they made mistakes. The trend then reverses. Forced liquidations and depressed real

estate values reinforce market participants' pessimism. The process becomes self-reinforcing in the opposite direction, often in a much more turbulent manner.

Soros is right to emphasize that the financial system's *social* nature is key to understanding its inherent instability. However, it is unclear why he explains financial instability by pointing at actors' *mistakes*. As Bronk (2013: 345) rightly points out, "there is lurking in his thought a residual equilibrium notion of reversion to fundamentals – of an inevitable and growing divergence between perceptions and reality that must be resolved". Indeed, it is surprising that Soros sticks to the concept of 'fundamentals', given its clear association with the neoclassical conception of finance as a 'mirror' of an external economic reality; a perspective that Soros explicitly rejects. As Detzer and Herr (2014: 27) argue, it seems to be "theoretically much clearer to assume that there are no fundamentals which determine asset prices". If the economic system is reflexive all the way to its core, we should drop any distinction between 'the subjective social world' and 'objective reality' (see the next section).

The work of Minsky and Soros contains key elements to understand financial markets' recurrent instability. By emphasizing financial markets' *active* rather than *passive* role in economic processes, and the inbuilt indeterminacy in financial relations, it provides key clues why financial markets periodically implode. It is thus unsurprising that these ideas have gained in popularity to explain the increased prevalence of financial instability in our economies. Echoes of these ideas can also be heard in recent theories on the monetary system. The so-called I-theory on money (where the 'I' stands for 'intermediaries') holds that not only financial stability, but also price stability is in key ways influenced by bank activities. As the money supply by and large consists of bank deposits – and bank deposits are created (destroyed) in the process of borrowing (repayment), financial reflexivity permeates the entire monetary system (Murau 2017; Brunnermeier and Sannikov 2014).

The reflexivity concept also suggests a perspective on financial valuation that is radically different from the neoclassical perspective: rather than measuring an external reality, market participants' assessments shape this reality. Yet for our purposes, one crucial aspect is still missing. While the notion of reflexivity clearly indicates the fundamental importance of market participants' valuation practices, their specific roles are left unexplored. For example, whether assets are valued with reference to market value or their acquisition price matters for financial market functioning, but such specificities receive less attention in Minsky's and Soros's work. Instead, the accounts

rely on more generic notions such as market participants' optimism or misconceptions. To explore the role of valuation techniques, the social studies of finance-literature provides important clues.

2.4.4 Re-socializing financial markets

The social studies of finance (SSF)-literature aims to 'open the black box' of financial markets and study them in their actual manifestations (Knorr Cetina and Preda 2012). The literature emerged in the 1990s and 2000s in tandem with a broader sociological interest to study markets. Economic sociologists dismiss the neoclassical account of markets as 'asocial' and 'natural' as fundamentally misleading:

As soon as one observes the formation and operation of real markets, it becomes obvious that none of [their] dynamism is possible without deep involvement by entrepreneurs, managers, workers, firms, and governments. [...] Competition and market forces are themselves defined by market actors and governments over time. These forces are not exogenous to market society, but endogenous to these social relations (Fligstein 2002: 3-4).

The SSF-literature agrees with economic sociology's starting point that markets are inherently social (De Goede 2005; Preda 2007a). As De Goede (2005: 23) puts it succinctly, "[s]ocial studies of finance repopulates abstracted financial markets with human traders and speculators, who have particular and complex relations to what they understand to be the market [...]". In short, the aim is a resocialization of financial practices.

The SSF-literature, however, wants to avoid too a stark distinction between 'the social' and 'the natural'. Drawing on science and technology studies (STS), it emphasizes that markets are complex assemblages of humans and 'non-humans' – such as laws, institutions, technologies, models, and screens (Leyshon and Thrift 1999; Preda 2007b). SSF-scholars thus conceptualize markets as socio-technical constructs that are shaped by the interaction of actors, their ideas, and the technologies they use (Callon 1998; De Goede 2005; MacKenzie 2006). This leads to the question what determines the functioning of these socio-technical constructs: what makes financial markets operate in practice? What roles do technologies and economic ideas play? And how do they develop over time?

The SSF-perspective, like the heterodox economics perspective, dismisses the mainstream economics conceptualization of 'financial value' and 'financial risk' as external entities that are waiting to be accurately measured (Paudyn 2013; Persaud 2015). As Beunza et al. (2006) put it, a price is a social thing – or perhaps better still: a socio-technical thing. Indeed, the value and risk of a financial instrument must be 'constructed' by market participants using tools, techniques, and

models. These valuation technologies are crucial: they are not merely an ‘aid’ for actors, but they conjointly with the actors’ actions construct the instrument’s value and risk.

What makes financial value and risk special is that they are essentially statements about the future. The ‘credit risk’ of an instrument can never be observed. Risk is always in a state of ‘virtuality’: it is a claim about likely future outcomes. Once problems materialize we no longer speak about risk (Paudyn 2013). Perry and Nölke (2006: 562) stress that “since the future is inherently unknowable, any precise value placed on an asset is ultimately an estimation of the future, rather than a simple fact”. To put it bluntly: no valuation practices, no value. That does not make them any less ‘real’, as valuations exert great influence on people’s actions. Neither is the point that value and risk are wholly subjective and can be redefined by any actor at will. In contrast, they are constructed through the interaction of a wide variety of valuation practices (Mügge and Perry 2014).

Valuation practices are therefore not merely useful tools that increase market efficiency, as a neoclassical perspective would have it. They are much more fundamental: valuation practices make financial markets possible (Knorr Cetina 2007). Valuation and risk management are thus part of the financial system’s core. Seen from this angle, credit ratings do not merely reduce information asymmetries between debt issuers and investors. Instead, they are part of the financial instruments themselves, significantly affecting supply and demand (Sinclair 2010; MacKenzie 2011). Likewise, banks’ risk modeling techniques play a major role in constructing the ‘risk’ of an investment or an asset class. So, measuring an asset class’s riskiness by looking at historical default rates generates markedly different assessments and responses than looking at default insurance instruments’ current market price (Daniélsson 2002). And if the value of an instrument does not exist independently of the practices that measure it, accounting standards get a whole new significance. Whether one uses a financial instruments’ current market price or its historical cost to determine its value, the measurement technique *constructs* rather than *reflects* the value (Perry and Nölke 2006; Power 2010).

2.4.5 Valuation and performativity

Valuation practices thus construct a reality, rather than merely reflect an already existing situation. The SSF-literature calls this ‘performativity’: instead of passively recording an external reality, these practices act as an “active force transforming its environment” (MacKenzie 2006: 12). Performativity is a concept originating in the philosophy of language (Austin 1962). A performative statement is one that “establishes its referent through the very act of uttering”

(MacKenzie et al. 2007: 3). For example, the utterance 'I apologize' does not refer to an existing state of affairs but brings it (the apology) into being. This makes it a performative utterance. And the speech act itself is not enough to bring about the desired effect: how the utterance is made may influence the receiver's interpretation. A sarcastic tone of voice will create an insult rather than an apology (MacKenzie et al. 2007).

Studying valuation practices' performativity implies studying how their practical effects relate to the underlying assumptions, models, and tools. A core research focus is the performativity of *economic ideas*: studying how insights from the academic literature are translated into market practices and subsequently modify market functioning (Callon 1998; Muniesa 2000; Clark et al. 2004; MacKenzie 2006). Financial theories can do so with varying success. MacKenzie (2006) distinguishes four types of performativity. Generic performativity is the weakest variant, merely denoting that that economists and market participants use the same concepts or theories. Effective performativity is one step stronger, where a theory's application modifies economic processes. Barnesian performativity is the strongest variant, denoting the situation where the practical application of models makes economic processes more like the models' assumptions. Counterperformativity is its mirror image, when applying models makes reality conform *less well* to the models' initial depiction of the world (MacKenzie 2006; cf. Bronk 2013).

MacKenzie (2004) has analyzed the 1987 stock market crash as a probable and particularly dramatic episode of counterperformativity. It centers on the widespread application of the Black-Scholes-Merton option pricing theory. This theory was a crucial enabling factor in the rise of a specific strategy: portfolio insurance. It was performative in both the generic and the effective sense: market participants used it, and it was at the heart of the growth of derivatives markets. However, its widespread application was widely regarded as having contributed to the 1987 stock market crash, which did not at all conform to the models' underlying assumptions:

The crash was a grotesquely unlikely event on the [...] model of stock-price movements underpinning Black-Scholes-Merton option pricing theory [...]. More generally, the crash is a frequently cited counter-example to finance theory's claim that stock price movements are the result of the impact of new information on rational expectations of future returns from those stocks. Yet it is hard to identify 'new news' over the previous weekend that would rationally justify such a huge, sudden re-evaluation of stocks (MacKenzie 2004: 307).

This is thus an instance of counterperformativity: the crash invalidated the theory's underlying assumptions about the behavior of market prices.

Performativity, however, need not necessarily be tightly linked to academic financial theories. Assumptions underlying valuation practices can have (counter)performative effects whether or not they are linked to academic knowledge. Default assumptions in credit rating agencies' structured finance models are a case in point. The newness of these products implied that historical default experience was very limited – so CRAs took historical default correlations from the corporate sector and applied them to the structured finance sector. This allowed for the construction of very complex products that would still receive a favorable rating (MacKenzie 2011). The familiarity of the signals (the ratings) and the initial positive assessments of CRAs contributed to structured finance products' popularity. The resulting credit inflow sustained housing price increases and ensured that subprime mortgage owners could continue to refinance their house. This, in turn, ensured that the observed default rates *confirmed* CRAs initial positive assessments. Ultimately, however, rampant demand unhinged the whole market segment (cf. Carruthers 2013). The correlation assumption broke down – actual defaults differed markedly from initial assumptions (MacKenzie 2011).

But what ensures that valuation practices have performative effects? Three general conditions are conducive. First, the practices (or their outputs) must be widely used – or market participants believe that they are widely used. Second, there are limited alternatives to the valuation practice. Bronk (2013) calls this an analytical monoculture: market participants' beliefs converge around one specific assessment. The credit ratings that labeled structured finance instruments as safe are a telling example: while there were probably also alternative risk assessments of their safety, market participants predominantly focused on ratings (also because of their inclusion in financial contracts and regulations). Finally, market participants can easily adapt their actions – for example, buying more assets or extending more credit – in response to perceived value and risk assessments. In other words, valuation practices can easily affect the behavior of market participants, thereby strengthening the belief-behavior-belief feedback loop.

We should note the intimate link between 'reflexivity' and 'performativity'. Reflexivity denotes the broader phenomenon where there is a two-way feedback loop between actors' assessments and a system's functioning. Performativity can be thought of as "a specific facet of market reflexivity more generally: it specifically concerns formalized routines and models that purport to assess or observe markets but shape them instead" (Stellinga and Mügge 2017: 397). It could thus be understood as "a form of hard-wired reflexivity" (ibid.: 397).

2.4.6 The political dimension of financial valuation

De Goede (2005: 24) stresses that opening the black box of financial market practices also implies “a politicization of practices and technologies that were hitherto regarded as natural and a-political”. Similarly, MacKenzie (2004: 328) argues that exposing financial practices’ performative effects prompts a political question: “what sort of a world do we want to see performed?”. It exposes a political reality: if value measurement is not a neutral reflection of an underlying, external value, then the tools, technologies, and assumptions to construct it also lose their neutrality. Valuation practices are inherently political as they have distributive consequences and real-world effects. As such, it adds a dimension to the issue of ‘power’: whereas the traditional focus of International Political Economy-analysis is on powerful ‘actors’, the SSF-literature broadens our attention to include powerful valuation practices (cf. Carstensen and Schmidt 2016).

This perspective thus encourages an analysis of valuation practices’ political dimensions. For example, given the importance of credit ratings in financial markets, a government’s borrowing costs depends on the rating. It is thus warranted to investigate the methodologies that CRAs use to evaluate what is ‘appropriate’ fiscal conduct. According to Paudyn (2013), these methodologies impose upon governments a neoliberal model of budgetary policy (but see Saudis 2015 for a critical take). Similarly, accounting standards are inherently political, as they form the basis of calculating assets, liabilities, equity, and profits. So, Perry and Nölke (2006) argue that an accounting framework centered on market-based value measures favors financial sectors over productive sectors. There is power in numbers, as MacKenzie (2003) reminds us: in the Enron debacle people lost their jobs because of them. And the global financial crisis was very much a valuation crisis (Warwick Commission 2009).

Despite the major contribution of the SSF-literature to our understanding of the (political) nature of financial valuation, it pays relatively little attention to performativity’s *regulatory* implications. “[R]egulation remains a peripheral subject in the sociology of finance”, Coombs (2016: 281) argues. This is surprising: if valuation practices are at the core of financial market functioning and therefore inherently political, what does this imply for financial regulation? After all, financial policies have a major influence on financial firms’ valuation practices. Even if policymakers do not usually discuss valuation practices in terms of their ‘performative effects’, the continued regulatory controversies over valuation approaches in practices as diverse as accounting, risk modelling, stress testing, and systemic risk monitoring show that policymakers are well aware of their importance. But are regulators really in the position to determine which valuation practices

will have, to paraphrase MacKenzie (2004), ‘the right kind of performative effects’? And if financial regulators aim to design rules conducive to financial stability, is it obvious what rules ensure a ‘benign’ form of performativity? And can a performativity perspective be congruent with more traditional IPE-takes on policy processes, such as capture dynamics? These policy-related questions receive scant attention in the SSF-literature.

2.5 The politics of financial valuation

The IPE-literature on financial regulation reviewed in section 3 implicitly or explicitly assumes that public policy could *in principle* design valuation practices conducive to financial stability. The main factors hampering public policy from achieving this are obstacles that are in a way *external* to financial valuation, for example policy inertia, private interest bargaining, or policymakers’ flawed regulatory beliefs. Yet while all these factors in fact play a meaningful role in the politics of financial regulation, the heterodox economics and social studies of finance accounts reviewed in section 4 suggest that this is not the entire story.

These accounts indicate that that there is no clear or stable link between financial valuation practices and the public policy goal of financial stability. Reflexivity – the assessment-behavior-assessment feedback loops – means that financial markets are ultimately built on shaky foundations. It implies that valuation techniques are performative: the values and risks that market participants calculate do not exist independently from the tools that are used to measure them. They can transform the reality they seek to describe and can do so in destabilizing ways. But if the widespread use of specific valuation techniques can contribute to financial instability, what could this imply for the politics of financial valuation? This section presents the potential regulatory implications of financial reflexivity; implications that are further investigated in the subsequent empirical chapters.

2.5.1 The market and regulatory context

While financial markets are inherently reflexive, the extent to which market reflexivity and valuation practices’ performative effects become a regulatory concern should depend on the broader regulatory and market circumstances. The extent of financial market liberalization is of key importance: when market participants face little constraints in their ability to extend credit, the assessment-behavior-assessment feedback loop will be particularly strong. Financial liberalization reduces limits on financial firms’ actions, thereby strengthening the self-reinforcing interaction between risk attitudes and financial firms’ willingness to extend credit (Borio 2012: 6).

Relatedly, the competitive environment matters. Fierce competition between firms that operate on similar business models will feel compelled to join the herd, strengthening reflexive feedback loops. Cartel-like circumstances, on the other hand, stifle competitive forces and thereby limit the significance of markets' reflexive nature for financial stability policy (Goodhart 2016a).

This suggests that the identified dynamics will be particularly prominent in circumstances where market participants have ample room for maneuver and where competitive forces are strong. This implies that the dynamics were less prominent in the post-war period, where competitive forces were significantly constrained (see section 2 of this chapter). This changed from the 1980s onwards, as western governments liberalized their financial sectors and as financial markets changed profoundly under the influence of innovations and technologies (OECD 1992). In these circumstances, market reflexivity became a much more prominent problem (Minsky 1987). Despite post-crisis reregulation, governments have still maintained the basic pre-crisis principle that market forces should be the dominant allocation mechanism. Moreover, as the crisis will likely have heightened regulators' appreciation of financial market reflexivity, I expected the salience for regulators of finding solutions to valuation problems to be especially high in post-crisis regulatory debates (see, for example, FSA 2009b).

2.5.2 Dilemmas pertaining to regulating financial valuation

The idea that valuation practices are performative shines a whole new light on their role in financial markets. It changes how we look at accounting practices, that relate to the way companies value assets and liabilities for official financial reports: rather than merely measuring (market) prices, accounting practices shape these (Mügge and Perry 2014). The same applies to risk measurement: market risks are affected by the tools used to measure them. Credit rating issuance and usage is a prominent example: as many market participants rely on credit ratings to assess a debt obligation's default risk, these ratings shape the risks they are supposedly merely measuring (Sinclair 2010). But the list can easily be expanded, for instance firms' assessment of their financial portfolios' riskiness; their use of quantitative models such as Value-at-Risk; or firms' stress testing practices that assess whether they can withstand adverse market conditions (Lockwood 2015).

Turning to the regulation of these practices, two aspects seem particularly relevant. First, the extent to which firms themselves can decide on the most appropriate valuation methods. Regulators may choose to be very prescriptive, effectively telling firms what to do. They may also to a significant extent leave it up to the firms themselves to figure out the most appropriate

valuation method (Blom 2011). To the extent that regulators tell firms what to do, a second aspect comes to the fore: what type of information should firms use to assess financial instruments' value and risk? Valuing an instrument with reference to its original transaction price (its historical cost) will generally yield a markedly different result than if valued with reference to its current transaction price; in jargon, its 'fair value' (Enria et al. 2004). Similarly, assessing an instrument's or a portfolio's riskiness based on historical default rates (in jargon: a through-the-cycle method) will lead to different outcomes than if estimated based on current market circumstances (a point-in-time method) (Gonzales et al. 2004; Hunt 2009).

How do these considerations relate to regulators' task to contribute to financial stability? A prescriptive approach seems to score better on 'rule stringency' than a discretionary approach, suggesting it is the best way to contribute to financial stability (cf. Blom 2011). Yet a very prescriptive approach risks hard-wiring one specific valuation procedure into policy and thereby force many market participants in the same direction. This is especially the case when rules are applicable at the European or even global level. As the uniformity of firms' valuation approaches could stimulate herd behavior among market participants, financial stability might be at risk (Danielsson 2013). Similarly, as up-to-date information on banks' financial positions is indispensable for market supervision, public authorities have strong incentives to prescribe market-based valuation approaches. But a high reliance on recent trends may reinforce market procyclicality, as it tightens the link between recent trends and financial firms' behavior (European Central Bank [ECB] 2004). This suggests regulators are confronted with tough policy dilemmas when designing rules for financial valuation.

These implications need not be confined to the regulation of private actors' valuation practices. Public actors likewise assess financial stability risks, for instance through stress testing exercises, or by comparing current to past market trends. These public valuation techniques are not necessarily immune to the challenges posed by financial markets' reflexive nature and the performative effects of valuation techniques (Kregel 2014). Just like private actors, supervisors cannot step out of financial markets and assess (systemic) risks from an external point of view. And to the extent that supervisors intervene in financial markets based on specific systemic risk assessments, these assessment techniques may have performative effects. In a reflexive system, it is highly uncertain whether such actions will mitigate systemic risk.

These policy problems are ultimately rooted in financial markets' reflexive nature: lacking a solid anchor outside of market participants' assessments, valuation routines shape rather than describe

the financial system. Policymakers thus must ensure valuation routines have the ‘right kind’ of performative effects, in other words ensuring that they contribute to stable and efficient markets. But if we take the insights of the heterodox economics and SSF-literature seriously, there do not appear to be fool-proof solutions here. Market reflexivity introduces a fundamental problem for regulators: there appears to be a highly ambiguous link between valuation practices and financial market stability. And it is far from obvious how prescriptive regulators should be. Hard wiring valuation techniques reinforces their procyclical effects, but a laissez-faire approach could still lead to private sector herding.

So at least theoretically, there are clear policy dilemmas flowing from valuation practices’ performative effects. To assess whether and how these issues affect the policy process required an empirical assessment of the regulation of valuation. Accounting practices, credit rating issuance and usage, and banks’ risk modelling routines substantially differ, suggesting that the regulatory problems they introduce could also differ in important ways. Similarly, while market reflexivity surely matters for public actors’ valuation practices, this need not necessarily have the same implications as the regulation of private actors’ practices.

In other words, we have good theoretical reasons to assume that market reflexivity introduces comparable regulatory difficulties for the various valuation routines, but this required prying open the issues at stake to see how exactly how reflexivity and performativity issues play out. Moreover, these issues might play out differently over time: as financial markets, activities, and valuation techniques change, so will the regulatory issues. All this suggested the need to investigate the time- and issue-specific regulatory dilemmas pertaining to financial valuation.

2.5.3 Regulators’ perception of valuation problems

Ex ante, it is an open question to what extent policymakers recognize these valuation problems, and what influence this recognition has on their decisions regarding valuation policies. If we draw on the policy paradigm-variant within the constructivist IPE-literature, we would expect these dilemmas to play a minimal role before the financial crisis. This literature suggests that regulators were under the spell of a neoclassical economics philosophy, making it unlikely that they recognized the valuation problems outlined above – or (if they did) at least unlikely they considered them to be very problematic (cf. Mügge 2011a). The extent to which the crisis triggered a shift in regulators’ appreciation of these problems would then depend on whether they abandoned pre-crisis pro-market ideas and subscribed to a heterodox economics-take on financial market functioning.

However, as pointed out in section 2 of this chapter, regulators might have been much more pragmatic in rule development than the policy paradigm-perspective suggests. Indeed, while pro-market thinking certainly put a mark on pre-crisis policies, it is far from obvious that policymakers will have only paid attention to neoclassical economics textbooks. And while pre-crisis economic thinking paid scant attention to finance and its role in the economy, policymakers still had to develop and implement rules to tackle real-world problems. As financial economics was dominated by formal mathematical modeling, its relevance for policymakers finding solutions to these problems might have been limited. All this suggests that there might have been quite some regulatory pragmatism. The take-away message is that it is an empirical question how financial regulators think about financial valuation problems, and how these ideas relate to regulatory issues that likely flow from reflexivity and performativity.

This also does not imply that regulators only recognize these valuation dilemmas if they fully subscribe to heterodox economics reasoning. While I used insights from heterodox economics and social studies of finance to unearth potential dilemmas in regulating financial valuation, it is possible that regulators debate such problems in terminology different from the heterodox accounts. Just as regulators may be aware of policy dilemmas that are absent in neoclassical thinking, they may also be only limitedly influenced by alternative, heterodox accounts. Once again, this suggested the imperative to empirically investigate whether policymakers identified the valuation problems discussed above, how these assessments have changed over time, and how all this affected financial policymaking.

2.5.4 Implications for governance processes and policy output

As financial valuation practices form the financial system's core, policymakers must design rules to influence these. The valuation problems outlined above suggest the absence of a straightforward regulatory approach conducive to financial stability. Even if we would simplify matters by assuming that regulators have no other concerns than stability, it is far from obvious that there is a clear solution to valuation problems.

What does this imply for policy dynamics over time, and policy output at any point in time? Regarding the former, I expected frequent policy reversals and *ad hoc* modifications. Firms' valuation approaches and their concomitant behavior change over time, thereby altering financial market functioning. Crucially, rules on valuation approaches may over time lead to unintended consequences, potentially undoing the regulatory approaches' initial benign effects. I expected financial valuation rules to be constantly subject to policy debate; they are perpetually work in

progress. It suggests that solutions “should often have a temporary character, either because they are designated as temporary from the outset or turn out to be so through frequent policy reversals and backtracking by regulators” (Stellinga and Mügge 2017: 401-402). Particularly intractable valuation dilemmas may simply be often deferred: as regulators fail to develop convincing solutions, they will kick the can down the road. I thus expected the policy process to be unstable; with rules constantly subject to modification and perpetual controversy over their financial stability implications.

In terms of policy *output* (at any point in time), the implications are less clear cut. Market reflexivity suggests regulators will opt for mixed approaches. Regulators have clear incentives to neither completely support nor fully reject public prescriptiveness in the domain of financial valuation. They should fear excessive private discretion, lest firms’ opportunism becomes a financial stability threat. Yet a very high degree of public prescriptiveness increases the risk of publicly mandated herding. So, this implies regulators will allow scope for private discretion, while refraining from completely delegating valuation responsibilities to the banks. To the extent that regulators mandate specific valuation routines, they can be expected to lean towards market-based valuation approaches. Yet they should be reluctant to hard-wire market-based valuation routines, as this may put market procyclicality – a destabilizing feedback loop between market functioning and firms’ behavior – in overdrive. This suggests that they aim for rules that encourage prudent valuation routines that neither excessively rely, nor completely ignore recent market trends. In short, I expected regulators to prefer compromises and mixed approaches.

Still, the implications for the policy process over time are more important than the implications for the policy output at any specific juncture. While financial valuation practices’ performative effects introduce specific regulatory dilemmas, this does not imply that it *forces* regulators to embrace a specific policy approach. Crucially, to the extent that regulators acknowledge these valuation dilemmas, there are good reasons to expect a certain indeterminacy in terms of the policy output: as regulators realize there is no one right solution to the valuation problem, they may choose from several (flawed) solutions at any point in time. And regulators are not always fully in control here. Political demands for action may force them to opt for a seemingly ‘strict’ solution. But over time this solution should again become subject to policy debate, as regulators will be confronted by its unintended consequences. In short, the key regulatory implication pertains to the policy process – reopened debates and further (*ad hoc*) modifications – rather than to the specific policy output at any particular point in time.

2.5.5 Private actors' preferences and influence

The material interest-strand of the IPE-literature suggests that private actors play a significant (if not leading) role in policymaking arenas. The regulatory capture account suggests that powerful financial firms want to skew regulation to their benefit, thereby harming public interests. Firms surely favor those rules that boost their profitability or enhances their competitiveness vis-à-vis foreign or domestic actors. But it is not immediately evident what this implies for their regulatory preferences on financial valuation. On the one hand, we may expect firms to favor a high degree of discretion on valuation practices as this will minimize compliance costs, thereby boosting profitability. We may expect them to want freedom to choose valuation methods that fit business model most, or that will improve their financial situation given general economic circumstances. On the other hand, it is unlikely that they will favor unlimited discretion: firms often favor some degree of public guidance, lest regulators will 'arbitrarily' interfere in their business practices. In other words, we may expect firms to favor a balance between discretion and public guidance. How that plays out in regulatory debates depends on the issue at stake: it requires empirical analysis.

Surely there are ample examples of financial firms succeeding in bending the rules to their advantage, even if this later turns out to be clearly harmful for financial stability. But when looking at financial firms' role in policymaking, we cannot a priori assume that public and private interests will necessarily be opposed. Given banks' key importance for the economy's functioning, regulators have an interest in financial firms' viability – especially when they are deemed systemically important. This implies that regulators will want to know how rules play out on the ground. If banks make plausible claims that the rules are harmful for a significant share of the sector, regulators may – from a stability point of view – reconsider their approach. This means that we cannot just assume that when public and private interests converge, the regulator was captured.

2.6 Focus and methods

2.6.1 Case selection

To assess the ways in which valuation dilemmas stemming from market reflexivity influence the regulatory process and policy output, I have studied multiple policy domains where valuation routines stand central. I have focused on three valuation issues that are central to financial market functioning: accounting for financial instruments; the issuance and use of credit ratings; and the assessment of credit, market, and liquidity risks of banks' assets and liabilities. I have thus studied

accounting standard setting, the regulation of credit rating agencies, and the development of capital and liquidity standards. An additional key research focus has been the ways in which bank regulators themselves aim to assess financial values and risks. I have looked at developments in banking regulators' attempts to measure and mitigate systemic risks – practices that got a great boost after the crisis exposed fundamental shortcomings in supervisors' ability to identify the build-up of systemic financial imbalances.

I have thus focused on a variety of valuation-relevant policy domains, rather than on only one of them. I have studied the decade leading up to and following on the global financial crisis of 2007-9. This twenty-year time-frame allowed for assessing the extent to which regulators already before the crisis dealt with firms' valuation routines. The thesis is thus certainly not a crisis-only study, although most of the empirical analysis focuses on post-crisis reforms. By focusing on the crisis-aftermath we could identify to what extent the crisis triggered substantive reforms of the regulation of valuation practices. While the crisis certainly exposed fundamental flaws in these practices, the underlying valuation problems suggested that regulatory solutions would be not be coming easily.

These issues are addressed in regulatory frameworks that differ in terms of distribution of responsibilities, the actors involved, and the object of regulation. For example, whereas banking regulators are in charge of the development of rules for banks' risk models (Tarullo 2008), accounting standard setters develop international rules how firms should value their assets and liabilities (Botzem 2011), and securities markets regulators are in charge of developing rules for credit rating agencies (Kruck 2011). The private actors directly affected also differ markedly. And the valuation practices as such are of course not identical: valuing assets is a different activity than issuing a credit rating or measuring systemic risks. Yet despite this variety, market reflexivity implies that these practices might introduce similar regulatory problems.

I have focused mostly on the European Union context. Given the key importance of international rules for EU policy, and vice versa (Mügge 2014; Quaglia 2014b), the research also has involved a study of regulatory initiatives at the global level. The precise balance in the focus (EU context versus global context) depended on the policy issue at hand. So, while for accounting and bank capital regulation there is a long established global governance framework, this was less the case for the credit rating agency regulation or the development of policies aimed at preventing systemic risk. The choice for a focus on European policies rather than American ones – the obvious

alternative – was ultimately arbitrary. Similar dynamics should feature in the American case, although the thesis does not demonstrate this.

As I have focused on the link between valuation issues and financial stability, specific attention for *banking* regulators was warranted. Given banks' central role in this system – and their inherent fragility – safeguarding financial stability in many ways implies safeguarding the banking sector's stability. At least since the late 1980s, the Basel Committee on Banking Supervision (BCBS) – part of the Bank for International Settlements (BIS) – has occupied a central place in standard setting (Tarullo 2008). While this body has no 'formal' power – it cannot force member states to adopt its standards – in practice its standards are widely used as governments translate these standards into national laws, or as financial firms voluntarily choose to comply with them (Singer 2007). So, an analysis of financial valuation issues required paying close attention to how the BCBS deals with them. At the European level, the relevant actors are the European Banking Authority (EBA; previously the CEBS) and the ECB.

Banking regulators are, of course, not always in complete control over the regulation of market participants' valuation approaches. Accounting standard setters are responsible for developing the relevant accounting rules for financial instruments. Here the key actors are the IASB and the (American) Financial Accounting Standards Board (FASB). At the European level, the EFRAG plays an important role by assessing whether the IASBs standards are compliant with European rules. The regulation of CRAs is predominantly the prerogative of securities markets regulators. Here we should look at the work of the IOSCO at the global level, and the European Securities and Markets Authority (ESMA; previously the CESR) at the European level.

As these regulatory agencies have broader (or other) considerations than financial stability, and as their rules may transcend the banking sector, it is not obvious that regulatory dynamics on financial valuation issues will be fully dominated by banking regulators' concerns. Yet while this surely affects the politics of financial valuation, this does not make the valuation issues outlined above any less relevant. Regulators might have other objectives than ensuring financial stability, yet its fundamental importance might still induce them to take stability considerations into account when designing the rules.

Similarly, banking regulators' preferences need not necessarily conflict with those of the other agencies. For example, banking regulators might agree with accounting standard setters that firms should present a fair picture of their financial position, even if they disagree on the rules' more detailed aspects. If considerations do conflict, banking regulators may have multiple routes to

influence the work of these other agencies. They can influence others through formal partnerships, such as the Joint Forum, where international banking regulators cooperate with securities markets regulators and insurance supervisors. They also exert influence through the work of the Financial Stability Board (previously Financial Stability Forum). Finally, they may simply opt for ad hoc interventions, such as submitting comment letters to regulatory proposals.

These considerations generated a focus on the following policy domains and valuation issues:

- Accounting for financial instruments: the two most relevant valuation issues are the choice of valuation method (fair value accounting versus historical cost accounting) and the extent to which firms may provision for loan losses. The empirical focus has mainly been on EU agencies' attempts to influence the work of the International Accounting Standards Board.
- Credit rating issuance and usage: the key valuation issues pertain to the extent to which ratings are hardwired in regulation and private sector contracts, the methodologies that credit rating agencies use, and rating diversity. The empirical focus was on EU's regulation of CRAs' methodologies, the removal or insertion of regulatory references to credit ratings, and EU's attempts to set-up a European credit rating agency to challenge the Big Three.
- The assessment of banks' liquidity and credit risks: the issues here are firms' discretion to identify their asset portfolios riskiness in the context of bank liquidity and capital adequacy regulation. The empirical focus was on whether policymakers should become more prescriptive in how banks do this, or whether they should take a hands-off approach.
- Supervisors' measurement and mitigation of systemic risks: the issue here is supervisors' ability to measure systemic risks, and how policymakers embed systemic risk measurements and mitigation techniques in financial regulation. The focus has been on the development of an EU macroprudential policy framework.

These cases have allowed me to trace key regulatory issues pertaining to financial valuation as they unfolded over time. From the 1980s onwards, banking sectors changed tremendously under influence of new technologies, financial globalization, and liberalization. The extent to which past accounting practices were suitable for the 'brave new world of market-based finance' became a key regulatory concern. As banks became more and more involved in capital market activities, banking regulators and accounting standard setters both worried whether traditional, cost-based accounting practices were still suitable. This led to a debate on the extent to which mark-to-market accounting should play a more prominent role. While mark-to-market accounting gained

prominence before the crisis, this expansion was not unchecked: banks could still value a great chunk of their assets without reference to market prices. Still, the crisis challenged the expanded scope of market-based accounting, with subsequent clashes between banks, their regulators, and accounting standard setters over its suitability for the banking business (see chapter 3).

As banking transformed before the crisis, regulators also increasingly paid attention to banks' risk management practices. Of specific importance in this regard was the development of the Basel II capital adequacy standard. This standard gave banks with advanced risk management practices more freedom to calculate required capital using their own risk assessments. The standard also increased regulatory reliance on credit ratings. One reason for these changes was that this would better align public regulation with private risk assessment techniques. However, the crisis exposed serious shortcomings of regulatory reliance on both ratings and firms' internal risk models. Although I do address aspects of regulatory reliance of banks' risk models (in chapters 4 and 6), I have focused mainly on the regulatory debates concerning credit ratings. I have studied to what extent the crisis triggered fundamental reform in the domains that are arguably at the heart of the performativity problem: rating agencies' methodologies, their ratings' homogeneity, and widespread reliance on them (see chapter 4).

The financial crisis heightened regulatory awareness for issues that had before escaped the attention of global regulatory forums, such as the ways bank manage their liquidity risks. Before the crisis, banks and their regulators assumed that solvent banks would always be able to refinance themselves (limiting funding risks). If they needed to meet payment commitments related to the withdrawal of funds, they could always sell assets in well-functioning markets (limiting market risks). The crisis showed otherwise. As a result, banking regulators took up the task to design rules to ensure banks hold a sufficient amount of liquid assets to meet funding withdrawals, and to ensure that they have sufficiently stable funding sources. I have focused on regulatory requirements on liquid asset requirements. The key valuation dilemma here was that labeling assets as 'liquid' *affects* their liquidity. In other words, liquidity regulation has performative effects (see chapter 5).²

Finally, the crisis showed that financial supervisors needed to become more active in (systemic) risk management and mitigation themselves. Under the banner of the 'macroprudential turn' in

² Chapter 5 also includes a discussion of post-crisis reforms of CRAs and international accounting standards, reflecting its origin as a stand-alone article.

financial regulation, policymakers have made attempts to design ways to measure and mitigate systemic risks. Specifically, banking supervisors aimed to limit financial markets' boom-bust nature by having regulatory requirements operate countercyclically, becoming more stringent when systemic risks build up, and more lenient when they materialize. This, however, required designing ways to measure systemic risks. Here I also expected regulatory problems pertaining to financial market reflexivity to come to the fore (see chapter 6).

2.6.2 The research approach

The empirical research was mostly of a qualitative nature, as I deemed this the most obvious approach to study the link between valuation dilemmas, policy processes, and regulatory outcomes. As stated above, it required prying open the issues at stake to see how valuation problems influence financial governance. The empirical research involved both studying policy developments over time, and a detailed analysis of policy output at any point in time. This involved some degree of process tracing: a systematic examination of diagnostic evidence to answer specific research questions (Collier 2011). But as my most important research objective was to find evidence whether valuation problems – ultimately stemming from market reflexivity – exert a significant influence on policy processes, I refrained from overly detailed historical analyses or a step-by-step tracing of policy developments.

A first step was to identify and interpret the relevant valuation dilemmas. The selection of the most relevant valuation issues was mainly inductive: by analyzing post-crisis regulatory debates (e.g. Brunnermeier et al. 2009; FSA 2009b), I got a good sense of the fundamental issues pertaining to valuation. This allowed identifying how policymakers addressed these valuation issues before the crisis, and in what regulatory forums these debates played out. To understand precisely what was at stake required a detailed analysis of specialized reports and academic publications on the topic at hand. Distilling the valuation problems' essence from these technical debates required a degree of abstraction and simplification. In other words, while a specific valuation problem often had many different facets, it helped to frame it as an opposition between a limited set of policy choices (for example, market-based versus regulator-designed valuation methods).

Analyzing how specialized reports and academic publications report on valuation problems has less to say about the ways in which regulators and other stakeholders interpret these issues. This required assessing how these dilemmas came back in policy debates. This necessitated analyzing policy proposals and debates, and how news media reported on them. I could also rely on regulators' and private actors' public statements on policy issues. Financial rulemaking generally

involves a long process involving consultations, roundtables, and public debates. Policymakers often publish statements explaining regulatory proposals. And public and private actors often get the opportunity to respond to rule-proposals through comment letters. Such public statements are useful resources to tease out how regulators and firms interpret, frame, and respond to the valuation dilemmas at stake.

Focusing on public reports on policy debates obviously has limitations. Most importantly, from a strategic point of view, actors will not always express all their wishes or concerns. To get a better understanding of how valuation dilemmas' affect the policy processes, I have done 21 semi-structured interviews with regulatory agencies and private sector representatives, involving 29 respondents. Given the political sensitivity of the issues, in each case I have asked whether they would prefer anonymity, which all of them did. I can therefore only disclose that the interviews took place in 2016 in Amsterdam, Basel, Brussels, Frankfurt, London, Paris, and Madrid. Of these 21 interviews, seven interviews were with private sector representatives: four from the banking and investment sector, and three with credit rating agency representatives. Of the public agencies, nine were with banking regulators, and five with securities markets regulators.

These interviews had two main goals. First, to get a better understanding of public and private actors' interpretation of the valuation problems at stake. This involved asking general questions on the valuation issues that financial policy addresses, and the potential upsides and downsides of specific regulatory approaches. A second objective was to get a better understanding how these valuation problems affected policy processes. This required asking more specific questions about the policy process: I have asked regulators what role previously adopted rules played, whether this affected policymakers' desire for alternatives, why they opted for reforms, or why they refrained from pursuing alternative courses of action. Similarly, I have asked private sector stakeholders why they embraced or rejected specific proposals. As such, the overarching goal was to get a more general sense of how regulators interpreted the policy dilemmas and how this affected the policy process. The interviews are thus complementary to, rather than a substitution for, the analysis of published material.

To select the respondents, I have firstly analyzed publicly available documents on the policy processes to identify what regulators and private actors were involved, or which actors would likely have an important stake in the relevant valuation issue. I have then approached some of these agencies to request an interview with a representative. Through these respondents I have often acquired the contact details of people at other relevant agencies. The goal has not been to

get a representative selection of all relevant stakeholders. Again, the interviews' main purpose is to get a good sense of the policy dilemmas and their influence on the policy process. This means that I have limited the interviews to those regulatory agencies and private actors that arguably played the most important role in the policy process, and who could thus be expected to have the best grasp of the issues involved.

Of course, even if we find evidence of regulators identifying valuation problems and indications that this results in reopened debates, ad hoc modifications, and half-baked reforms, this can still be congruent with other IPE-accounts on financial governance. For example, lack of post-crisis reforms on a valuation issue might merely be the result of regulatory capture. To ascertain whether policy outcomes that, for example, benefit private financial firms are clear examples of regulatory capture, or whether they indicate that regulators were unable to find a better solution, again required prying open the issues at stake. If banking regulators at a particular point in time are able to formulate a clear and coherent regulatory solution to a valuation problem, only to abandon it in favor of firms' self-interested wishes, this suggests a degree of regulatory capture. However, if we find clear signs of regulators being aware of policy dilemmas and therefore shy away from reforms that potentially conflict with private wishes, I argue that the case is much stronger for reflexivity itself as a driver of regulatory caution.

Notwithstanding this last point, I want to stress that the overarching research goal was *not* to find the 'one and only' causal explanation for specific policy outcomes through a formal refutation of 'rival hypotheses'. While in the empirical chapters I do challenge the way in which some IPE-accounts have addressed and explained (post-crisis) regulatory reforms, this is not to say these accounts are completely off the mark. Indeed, many aspects that these IPE-accounts highlight – for example the key importance of private actors for financial regulation – are compatible with my account stressing valuation dilemmas. Instead, I wanted to assess whether a focus on market reflexivity and concomitant valuation dilemmas helps us better understand the relevant policy processes than if we focus only on private sector bargaining, regulatory ideas, or institutional path-dependencies.

2.7 Conclusion

In this chapter I have reviewed IPE-approaches to identify potential explanations for the thesis' main topic: regulators' apparent inability to design coherent and effective financial valuation approaches. While these theories point at many relevant factors for why this might be the case, these obstacles are generally *external* to financial market functioning: power-politics between

countries with different regulatory traditions, regulators' lack of resources, private interest bargaining, or policymakers' embrace of a specific policy paradigm. These factors surely are of key importance, but they do not really provide a clear explanation why regulating financial valuation practices would be particularly problematic. Put differently, what is it about financial valuation that makes it so difficult to regulate?

Rather than focusing immediately on the relevant rule-making processes and the various stakeholders active therein, I have proposed to first take a step back and look at the *substance* of financial valuation. If we follow the heterodox economics accounts of Minsky and Soros and conceptualize markets as reflexive (self-referential), unstable systems, we see financial valuation practices in a whole new way. Rather than *reflecting* risks and values, these practices *shape* them. Following insights of the SSF-literature, we can call them performative: valuation routines change the reality they purportedly merely describe. What is crucial here, however, is that this perspective also shines a different light on the governance problem. If financial valuation practices *influence* values and risks, is it obvious which ones will contribute to financial stability? How can regulators ensure that valuation practices' performative effects are conducive to a stable system?

In the final part of this chapter, I have thus detailed the empirical questions pertaining to the governance of financial valuation that flow from this 'reflexivity-perspective'. While financial markets' reflexive nature should in principle confront financial policymakers with fundamental problems, it is an empirical question to what extent they recognize these problems and how they deal with them. Nor is it evident how financial firms deal with these problems, and how this feeds back into their policy preferences. I have thus translated the reflexivity-perspective in empirical questions for specific policy domains that are key to financial market functioning: accounting standards for financial instruments, credit rating agency regulation, capital and liquidity requirements for banks, and the design of policies aimed at mitigating systemic risk. The next chapters will present these empirical findings, starting with the problem of accounting for financial instruments.