Central banks and banking regulation: Historical legacies and institutional challenges

Jacint Jordana and Guillermo Rosas

Introduction

This chapter deals with an institutional singularity in the world of financial regulation that has multiple implications for the governance of finance, both at the domestic and global levels. On the one hand, we find central banks in charge of banking regulation; on the other hand, there are countries in which banking regulation is in the hands of separate regulatory agencies, without depending formally on central banks. Between these extreme ideal types, there are also cases of hybrid configurations where responsibilities are shared or fragmented among different agencies (i.e. the central bank may be responsible for controlling systemic financial risks, while a separate regulatory agency controls everyday operations). Why do different institutional models for the regulation of banks and financial services persist worldwide nowadays? Why have these divergent models been adopted by different countries? Lengthy disputes have emerged about the pros and cons of different institutional configurations to better regulate and supervise financial sectors, but the policy implications of each model remain largely in dispute (Goodhart 2002, Melecky and Podpiera 2013, Masciandaro 2006, Dincer and Eichengreen 2012). More importantly, what are the economic consequences of different institutional designs? In particular, is it the case that some setups promote financial stability at the expense of limited or over-regulated credit flows? Is the pursuit of inflation control compromised by the pursuit of financial stability when banking regulation is housed within a country's central bank? Or are there institutional setups that promote access to credit, financial stability, and price stability?

Here we explore the current divide and present an institutional portrait of the situation of banking regulation around the world. To this purpose, we will employ an original data set of regulatory agencies that includes yearly variations in their institutional design from the early 1970s to 2015 for over 100 countries. After detailing the characteristics of the data set and providing a descriptive overview of the institutional variety in banking regulation in the first two sections, in section three we will focus on the different institutional developments related to the central banks as supervisory authorities. After discussing the reasons for such institutional divergence in regulatory models, in the fourth part of the paper we briefly consider some potential consequences of these alternative models and attempt to lay out an agenda for further research into these important questions. First, we will concentrate on arguments about their impact on domestic policies—monetary policy and banking policy, basically—and second, we will focus on the financial international architecture to discuss the implications of such institutional divergence for the global governance of finance. We conclude by raising a few open questions regarding this institutional puzzle in financial governance and claiming the need for a more focused and robust study of this issue and of its implications.

Measuring institutional models in banking regulation

In many countries, central banks have regulatory powers in finance. Not all cases are identical: while almost all powers are concentrated in central banks in some countries, elsewhere central banks share regulatory responsibilities with other regulatory agencies. There are also countries where central banks are scarcely involved in financial regulation, which is delegated to dedicated agencies—either a single, multi-area agency or a collection of specialized agencies.

We have gathered an original data set to obtain a better sense of the variety of institutional designs in financial regulation. Our sample of countries has a global focus, including about 100 cases. It includes all countries in the world with over 20 million inhabitants in the year 2000, plus other countries from four different regional entities: Latin America (Community of Latin American and Caribbean States), Africa (African Union), Europe (European Union) and Southeast Asia (Association of Southeast Asian Nations). However, we excluded countries with a gross domestic product below 100 billion US dollars in the year 2000.

We consider in our analysis a period ranging from 1971 to 2015. In our data set, we identify who oversees banking regulation and define three institutional options: oversight by the executive (i.e. ministry, directly), the central bank, or a separate regulatory agency. For the latter two cases, we assess whether they have some level of formal independence from the government or not. We also track changes over time in these variables. Many changes have occurred during the period under examination, and our variables allow us to capture when the central bank or the regulatory agency becomes independent—a very common trend—but also when responsibilities have shifted from one institutional option to another.

Our main variable is simply the year of creation of a new banking regulatory authority in a specific country or the year in which an existing entity is tasked with banking regulation. For each country included in our dataset, we identify the major public institution responsible for banking regulation each year from 1971 to 2015, regardless of whether this institution had a broader regulatory scope or not (for example, an integrated financial regulatory authority carries out banking regulation among other responsibilities). Then we identify if this institution is a ministry, a central bank, or a separate regulatory agency.

When the central bank is responsible, we record the year since it assumed regulatory responsibilities for banking supervision, as opposed to the year of creation of the central bank.

Similarly, when responsibilities for banking regulation are granted to a pre-existing agency, we record the year in which legislative action was taken to add these responsibilities. We consider that a banking regulatory agency exists when an organizational unit is clearly and formally separated from a departmental/ministerial structure, regardless of the prevalence or not of hierarchical links of the newly created organization to the executive or the legislative. Such organizations need to comply with four conditions for us to consider them regulatory agencies:

- The focus of the authority is devoted to regulatory tasks and activities (rule supervision, rule enhancement, rule definition, etc.).
- The organization is a public entity: it carries public tasks, their employees are public servants (tenured or not), and the budget is under public control.
- The organization is a stable institution of public nature regulated by public legal acts and ordinances.
- The organization has a national scope, covering all the territory of a country.

For our second variable, we define a simple dichotomous index based on the existence or not of a fixed term for the main person in charge of the regulatory agency. This is our indicator of delegation. We focus on the main person in charge of the agency with a full-time position—the chairperson, president, or director—without regard for how this person is named or elected. When there was not an identifiable head of the regulatory agency, but a board taking responsibility jointly, we took as a value for our indicator the year of introduction of a fixed term period for the board members. Relying on the existence of a fixed term strikes us as a more objective procedure to build an indicator of autonomy, at least more so than considering explicit declarations of independence, which are difficult to compare and evaluate across different administrative contexts. In fact, we exclude formal declarations of independence as a criterion for identifying the creation of an autonomous agency.

We do not purport to measure the relative degree of independence of agencies, but to check whether they have some formal capacity for autonomous decision-making. We chose to use the existence of a fixed term as a proxy for the introduction of delegation because the cost of removing the person in charge of the agency when there is a fixed term increases very intensively in most political environments. Furthermore, Hanretty and Koop (2012: 210) offer evidence that the existence and length of board member terms is the aspect that best predicts the overall independence of an agency, and Jordana et al. (2018) shows that the introduction of fixed terms correlates with many other independence markers in regulatory agencies. The use of a single indicator of agency autonomy is undoubtedly a highly simplified procedure to talk about a complex issue, especially since scholars often point to the multiple dimensions of the concept of institutional independence. However, our aim is to isolate a key characteristic that might be found in very different settings—across sectors and countries—and that conveys a similar meaning regarding the connection between the agency and the political system. In doing so, we introduce a basic distinction in the role of regulatory agencies, identifying the moment in which the traditional hierarchical relationship to the executive vanishes. In many cases, a fixed term was introduced after the creation of the agency, often in the context of major reforms oriented to increase the credibility of the regulatory agency.

We coded a third indicator, separate regulation, as 1 for countries in which monetary policy decision-making structures are separate from financial policy decision-making structures, and 0 when both issues remain under the same institutional umbrella (Jordana and Rosas 2014). This indicator identifies cases in which two separate agents have distinct responsibilities: one for monetary policy, the other for banking stability. When a non-independent central bank and a non-autonomous regulatory agency have distinct responsibilities, we still coded this configuration as 0, inferring that a single agent controls both institutions. We awarded the same code 0 to situations in which the executive has control over decisions of banking regulation and monetary policy, but also when both policies are under the responsibility of the central bank. This variable is very helpful in discussing the consequences of different institutional models of banking regulation, as we will show later.

We coded the degree of institutional fragmentation in financial regulation as a fourth indicator. We aim to observe if all areas of financial regulation are under the same institutional umbrella (the executive, the central bank, or a unified agency) or if different entities are responsible for different areas of financial regulation (for example, we might find a central bank that is responsible for banking regulation, an independent agency devoted to capital markets regulation, and the executive as the direct regulatory authority for pensions, insurance, and other secondary financial markets). We elaborate a scale of fragmentation, from 1 (null fragmentation) to 4 (high fragmentation) that covers the 101 countries during the entire period under scrutiny. From these data, we prepared a very simple index of fragmentation; summing all country scores to have a single aggregate value for each year, and then dividing by the total number of countries in the dataset.

Finally, we acknowledge that the distribution of regulatory responsibilities on banking and other financial areas can overlap. In fact, there are many cases of hybrid configurations where responsibilities are shared or fragmented among different agencies (i.e. the central bank may be responsible for controlling systemic financial risks, while a separate regulatory agency controls everyday operations). There are various countries where central banks—which often focus on prudential regulation—share banking regulation responsibilities with independent agencies as well. At this point, our indicators do not capture overlap well, and we recognize this as an area for future improvement.

Evolution of institutional designs in banking regulation

In our sample, we found that a couple of large institutional transformations occurred in banking regulation from 1920 to 2015. First, a glance at Figure X.1 shows a gradual increase in the number of countries that transferred regulatory powers on banking from the executive to a separate public agency. By the 1970s, about half of the countries under consideration had already transferred these powers. For 30 countries, such responsibilities were transferred progressively to central banks—in many cases already existing institutions. However, for the remaining 20 countries these responsibilities went to newly created regulatory agencies that were separate from central banks, a move that in fact occurred before World War II.

<FIGURE X.1 ABOUT HERE>

Then in the early 1990s, quite abruptly, many institutional changes occurred almost simultaneously reducing the direct regulatory role of the executive (and all but eliminated it since the 2000s). These sudden changes also moved in different directions: while 30 additional countries transferred regulatory powers to their central banks, more than 20 other countries decided to create new separate agencies for banking/financial regulation. Several contextual factors accelerated these changes, from the fall of the Soviet Union to the acceleration of worldwide agency diffusion during the 1990s or the popularization of new economic monetary policy doctrines. All these moves, in sum, consolidated the separation of banking regulation away from conventional ministries in the executive but also led to two new regulatory governance models in this sector.

How did the creation of separate banking agencies occur across different regions in the world? Consider Figure X.2, which displays the establishment of banking regulatory agencies separate from the executive in different world regions. In this figure, we do not distinguish between central banks and regulatory agencies, but focus only on the year in which a country decided to transfer regulatory powers from the (finance) ministry to an institution outside the executive.

<FIGURE X.2 ABOUT HERE>

Figure X.2 shows that Africa and Europe contributed to the large explosion of changes in the early 1990s. In the first case, this is related to the transfer of banking regulatory powers to already existing supranational central banks in several parts of Africa in the late 1980s and early 1990s; as for Europe, the disintegration of communist regimes in 1990 triggered several new cases of regulatory delegation in Eastern Europe. In contrast, Latin America and Southeast Asia placed banking regulation out of the hands of the executive at a steady pace. A few latecomers moved their regulatory structures to separate institutions, but not in a sudden move.

In any case, as can be observed in Figure X.2, all regions completed almost simultaneously the process of separation of banking regulation by the 2000s, ending a diffusion process that lasted almost a century. Regarding the territorial distribution of institutional models in the 2000s, there is also a clear pattern for each world region (see Figure X.3). Africa shows a monopoly of banking regulatory powers attached to the central bank, while in Latin America, in contrast, banking regulation is in most cases in the hands of a regulatory agency that is independent from the central bank. Asia has more countries in which banking regulation is based within central banks than in separate agencies. Among European countries, we find a more even distribution: sixteen countries have a central bank with banking regulation responsibilities, while 13 have a separate regulatory agency. While many countries with separate regulatory agencies are in North and Central Europe, almost all Southern European countries adopted the central bank model.

<FIGURE X.3 ABOUT HERE>

Masciandaro and Romelli (2017) compiled a data set on central banking as regulatory authority that covers 105 countries and measured the level of unified financial regulation within the central bank. They found that large banking crises do trigger transformations in financial supervisory structures, moving financial supervision from the executive—or from separate agencies—to the central bank. They also found two other variables to be significant: the level of central bank independence, which exerts a positive effect on the likelihood that financial supervision is moved to the central bank, and the level of economic development, which exerts a negative influence (as more development, less probable to move regulation towards the central bank).

Beyond these propensities, we argue that the divide of institutional models in banking regulation is quite stable over time, a trait that reinforces the importance of path dependence effects in banking supervisory structures. During recent decades, the number of countries that have switched institutional models for banking regulation (once delegation was established to an agency or central bank) has been in fact quite small. From 1971 onwards, only 22 changes occurred, and 16 of them involved moving regulatory powers from the central bank to an independent regulatory agency. We identified only six cases in which the move was in the inverse direction, i.e. from an independent regulatory agency to a central bank.

Most of these changes (60 per cent) have occurred in Europe, and there, most of them have been back and forth institutional switches. For example, both the United Kingdom (UK) and Ireland kept banking supervision in the hands of their central banks during many decades before switching in 1997 and 2002, respectively, to a separate financial regulator. However, these countries decided to transfer banking regulatory responsibilities back to their central banks after the 2008 global financial crisis (in 2013 and 2010, respectively). Hungary and

Russia behaved similarly during the 2000s. In many other European countries, frequent debates arise as to the appropriate transformation of the existing institutional setup (e.g. in Germany after the 2010 elections, see Engelen 2011). In contrast, the switches in less developed countries often occurred in the context of much larger institutional or political changes.

From these observations, we may infer that changes in institutional models of banking regulation are rare events. Deciding which actor is tasked with regulatory authority creates significant institutional path dependence. Subsequent grants of independence are not that relevant, as in many cases independence does not alter the institutional pattern previously adopted by each country. Thus, if independence over monetary policy was granted to the central bank, implicitly it was also granted over its banking regulation responsibilities. As for regulatory agencies, where these already existed, they were simply granted autonomy; where they were not in place, new agencies with fresh delegation of responsibilities were created, and were eventually entitled with independence. Diffusion effects may also be important in explaining why countries adopt one model over the other: Masciandaro and Romelli (2017) find that geographic proximity and trade linkages are relevant in determining institutional choice. Given the high concentration of institutional switches in Europe that we have uncovered, we can testify to the probable presence of diffusion effects in major institutional changes.

The turn towards independence in banking regulation is also an interesting phenomenon. Regardless of whether responsibilities for bank regulation are in a central bank or a separate agency, grants of independence are strongly clustered in a short period that started in the late 1980s. As can be observed in Figure X.4, before the 1980s, less than 10 countries had awarded independence to the authorities in charge of banking regulation, most of them central banks. However, from the late 1980s until the early 2000s almost 70 more countries granted independence to their regulators. In a significant number of these cases, countries granted more autonomy to their central banks, an institutional requirement for monetary policy that became mainstream at that time (Marcussen 2005), but also because of the strong diffusion mechanisms that were operating in this sector at that time (Polillo and Guillén 2005). However, in many other countries in which regulation was assigned to separate agencies and not the central bank, a parallel diffusion mechanism occurred and formal independence protections were provided to them as well (Gilardi 2005; Jordana, et al. 2011).

<FIGURE X.4 ABOUT HERE>

In any case, as can be seen in Figure X.4, nowadays only about 20 per cent of the countries in our sample lack formally independent banking regulators, and this situation has become quite stable since the early 2000s. Most of the remaining cases of non-independent agencies or central banks are linked to the persistence of authoritarian regimes, although there are a few cases of old separate banking regulatory agencies that have somehow resisted the turn towards independence. To conclude this section, we underscore that the large turn towards independence occurred in fact as a combination of granting independence to central banks—for reasons unrelated to banking regulation—and the simultaneous worldwide creation of many new regulatory agencies in finance that mimicked the pressure towards delegation to autonomous agencies that predominated at that time.

Central banks as financial regulators: Examining institutional variations

The new central banks established by public authorities that replaced private ones were pace-setters in shaping regulatory structures during the twentieth century. From a policy sector approach, it is essentially this sector that gave birth to the regulatory state (Levi-Faur, 2011).

The first cases of publicly-controlled central banks emerged in the late nineteenth and early twentieth centuries. Most of them were created initially as combined public–private institutions and only a few decades later were nationalized in the sense that the state took complete control over them. A third wave of institutional transformation for central banks started in the late 1980s, when they were granted formal independence, while those that did not receive formal independence were instead fully nationalized.

Since the early twentieth century, two options were open for banking regulation in parallel with the institutional development of central banks. The dominant Anglo-Saxon doctrine prescribed that regulation for financial services should remain separate from central banks, since some central banks included private bank owners in their board at that time. Specialized regulatory institutions in the financial sector were first introduced in Latin America in the 1920s. They were strongly influenced by North American designs, mostly a consequence of the missions of Edwin Walter Kemmerer, a Princeton University professor who acted as a consultant for many governments at that time (Drake 1989). On the other hand, there are cases of central banks that were nationalized early in the twentieth century that were also awarded regulatory responsibility for the financial sector. This was the case, for example, in Spain, France, and Italy, but also in Argentina and Brazil, which were less susceptible to Anglo-Saxon influence.

Since the late 1980s, and in parallel with large transformations in global financial markets, a new architecture for financial regulatory supervision emerged that was based on the integration of different sector agencies (banking, insurance, securities, and pensions). Starting with Norway, Iceland, Sweden, and Denmark, the 1997 decision of the UK to transfer banking supervision from the Bank of England to a new agency with responsibility over all financial areas represented a turning point in the diffusion of this new institutional model (Taylor and Fleming 1999; Kranke 2005; Masciandaro et al. 2008). Later, the Scandinavian institutional model was followed by many other countries, particularly in Europe but also in other parts of the world, including developed and developing countries, as a response to the emergence of financial conglomerates and the experience of banking crises (Čihák, M., Podpiera 2008),.

The integration process did not always move towards the unified model for financial services, since national traditions were also very relevant in shaping new institutional developments (Lütz, 2004). In many countries, central banks remained responsible for financial supervision, defining a different institutional architecture. For example, the central bank took over regulation over the entire financial sector in countries like Ireland or Slovakia. We also find many other countries that decided to merge supervision over only two sectors, but not over the whole financial area, within a single agency (Herring and Carmassi, 2008). Masciandaro et al. (2008) argue that the persistence of separate agencies for each sector is most likely when the central bank has a relevant role in financial supervision. To the contrary, when the central bank is not involved in supervisory tasks, the creation of a multi-sector agency charged with financial supervision is more feasible, and this allows these authors to talk about a 'central bank fragmentation effect' (Masciandaro, 2006; Freytag and Masciandaro, 2007).

We observe variations in both the Anglo-Saxon and Scandinavian models of institutional banking supervision design. When banking regulation is the responsibility of central banks, we find cases in which the central bank monitors a semi-autonomous department attached to the institution, but also cases in which supervision is carried out by a central unit within the bank under direct control of the governor. We also find a variety of institutional designs in cases in which central banks are not involved in banking regulation. There are countries in which a single regulatory agency supervises the whole financial area, while other countries have more focused regulatory institutions. For example, we see cases of regulatory institutions that combine banking regulation and insurance, or banking regulation and pensions, among many other possible combinations (Jordana and Levi-Faur, 2010).

More recently, an unconventional institutional architecture has emerged in which agencies are divided between those in care of economic risks of financial crisis—or macroprudential regulation—and those that conduct business supervision focused on the solvency of individual institutions—microprudential regulation. In several cases, central banks act as the agency responsible for preserving systemic stability throughout different financial sectors, while financial authorities outside the central bank take care of the operational risk of financial entities and of consumer protection. In a few cases, business regulation and consumer protection are also separated from banking supervision proper and carried out by a separate agency responsible for the whole financial area, as in Australia and the Netherlands (Herring and Carmassi, 2008). Masciandaro and Quintyn (2009) refer to this architecture as the 'horizontal (peaks) model', in which each regulatory goal is controlled by a different regulatory agency. In contrast, what they call the 'vertical (silos) model' corresponds to the more traditional regulatory architecture in which each financial sector is under full responsibility of a single regulatory agency. In between there are 'hybrid models', which integrate several sectors, and the 'unified model', in which a single regulatory agency oversees all financial sectors.

Among these recent institutional innovations, we find a similar novelty in the United States (US) and the UK, where new agencies tasked with protecting the interests of financial consumers were created after 2008. The establishment of the Consumer Financial Protection Bureau in the US as mandated by the Dodd—Frank Act represented a significant transformation in the regulatory governance of financial services, increasing fragmentation, but also providing additional strength to the regulatory system (Kastner 2016).

A major consequence of the agencification processes that occurred intensively in the financial sector during the 1990s and early 2000s was an increase in the fragmentation index of this sector (Figure X.5). As many new agencies were created in insurance, pensions, or securities and exchange, among other financial subsectors, fragmentation obviously increased. The creation of separate agencies in banking regulation, as well as the allocation of such responsibilities to the central bank, also pushed in the direction of large regulatory fragmentation in many countries. Thus, in 15 years, from 1986 to 2001, the index moved from 1.92 points to 2.64, an increase of 30 per cent.

<FIGURE X.5 ABOUT HERE>

In more recent years, this index has remained quite stable, and even slightly retreated. This is likely the result of the emergence of many multi-sector agencies, particularly in small and medium-sized countries, that were eventually integrated into a single regulatory agency for all financial subsectors; we even find cases of central banks that agglutinated regulatory responsibilities for all financial subsectors (Jordana and Levi-Faur 2010). This trend probably compensated during these years for the continuous and more visible pattern of new agency creation in different subsectors of finance that also continued during the 2000s, particularly in world regions like Africa and Asia where the executive had still retained responsibilities for some of these subsectors.

Consequences of institutional arrangements

Our data set allows ample opportunities to describe how the institutional structures to pursue financial regulation have changed over the past half-century; for several variables, we have been able to extend information back in time for a full century. This information will prove useful as we continue to explore what the consequences are of the process of agencification in banking regulation. As we discussed in previous sections, this process of agencification is unique among other areas where the state has developed regulatory capacity. The reason is that agencification in banking regulation has been characterized by two institutional models that vary according to different historical and economic circumstances. The effects of each institutional model on banking regulation performance are not completely clear. Consider the issue of fragmented versus unified regulatory authorities. Some authors argue that separate regulators also provide some advantages, for example the ability to manage and compartmentalize sensible information, to accumulate experience within each sector, to limit risks of generalized inefficiency, or to provide more check and balances among public agencies (Monkiewicz 2007). Also, some authors argue that institutional differences in the level of fragmentation are not very significant at all, and that the quality of supervisory personnel, or their independence, are more relevant characteristics (Herring and Carmassi, 2008). In addition, Goodhart (2002) argues that in developing countries, where qualified human resources are scarce and institutions tend to be weak, it is better to concentrate all capabilities within the central bank to make regulation stronger; in fact, Dincer and Eichengreen (2012) found some evidence supporting this pattern.

Such arguments about regulatory fragmentation and effectiveness are not very different to those in the field of utilities regulation (Jordana and Levi-Faur, 2010). However, the singular role that central banks play in financial regulation is not replicated by anything similar in utilities. Previous research has provided mixed results regarding the potential impact of financial supervisory architecture on the performance of a country's financial system. Arnone and Gambini (2007) and Čihák and Podpiera (2007) both found that integrated supervision and involvement of central banks correlated with better compliance with the Basel principles of banking supervision, but not necessarily with better performance. Dincer and Eichengreen (2012) found that banks are better capitalized when the central bank is the supervisory authority, but also that bank credit to the economy is appreciably inferior when the lead supervisor is the central bank. At this point, the database we have constructed can help us continue to explore correlational patterns in the distribution of fragmentation, on the one hand, and a panoply of economic outcomes such as financial stability, capitalization of financial intermediaries, and access to credit, on the other.

A related major discussion concerns potential conflicts between the goals of avoiding banking crises and promoting price stability when both goals are vested within the central bank. The debate concerns whether it is best to have separate agencies to pursue both goals or to have all authority over financial stability and price stability concentrated in the central bank (Copelovitch and Singer 2008, Ioannidou 2005, Goodhart and Schoenmaker 1995, Di Noia and Di Giorgio 1999). In the latter view, the central bank oversees inflation and supervises bank regulation within the same organization and under a single command but cannot necessarily avoid conflict between these goals. This is the so-called conflict of interest hypothesis; if this hypothesis is correct, we would expect a negative correlation between price stability and bank stability (in other words, a positive correlation between inflation and solvency) in countries with unified agencies. Countries with unified monetary-cum-banking authority would tend to carry out a more expansive monetary policy in the hope of reducing episodic instances of financial distress; alternatively, they could privilege price stability, but this comes at the expense of promoting financial instability.

In this paper, we do not present evidence to confirm or discard the conflict of interest hypothesis. However, there is some evidence suggesting that regulatory central banks show a greater propensity to sacrifice some levels of banking stability in order to keep inflation under control (Rosas and Jordana 2016), a finding consistent with Copelovitch and Singer's (2008) result that central banks with regulatory and supervisory responsibilities allow higher rates of inflation than central banks without these responsibilities. More generally, these findings show that institutional designs in regulation do matter and that the role of central bank in financial regulation is not neutral—and not only because of the fragmentation effect. These results also make sense from the logic of prioritizing goals, as far as monetary control appears to be a major goal in central banks, while banking stability is a goal pursued by a specific department or unit within the bank. Although these appear to be mere academic disputes about how to fine-tune central bank intervention in the economy, the underlying dilemma can be significant in cases where banking systems are unstable and no clear alternative is in sight. Separate agencies, with their specific objectives and multiple ways of implementing them, do not appear to suffer this trade-off directly, although they may suffer difficulties related to institutional weakness and coordination under political tensions. Again, our data set provides an important resource with which to describe how the incidence of episodes of financial distress, systemic banking crises, inflationary crises, et cetera varies among different institutional setups for bank regulation.

Finally, another consequence of central bank involvement in banking regulation is observable at the global governance level (cf. Singer 2007). We argue that there is a collective action problem related to the heterogeneity of banking supervisors. On the one hand, there is a well-established and funded international organization involving all central banks in the world, the Bank of International Settlements (BIS), established in 1930. BIS is very active in support of global banking regulation, as can be clearly observed through the activity of the Basel Committee on Banking Supervision, but does not easily integrate national agencies with supervisory responsibilities that remain separate from central banks. On the other hand, there is no formal international organization of banking regulators in the world, precisely because enormous institutional differences across countries have created very complex barriers to establishment of a single association that are not easy to overcome. There are multiple international networks of banking regulatory authorities (Jordana, 2017), as well as informal international organizations, but not an integrated organization capable of distilling compromises and facilitating commitments among their members. Only the Financial Stability

Board and their recent Regional Consultative Groups can be seen as an attempt to coordinate banking regulation that loosely integrates the two types of supervisory institutions.

Admittedly, our data set is not conducive to generate descriptive inferences about questions of global financial governance. Furthermore, the data set can only help us advance the research agenda on the institutional causes of economic consequences to the extent that we develop a sound understanding of the processes that led to the adoption of different models. We think that processes of diffusion and emulation drive a large number of recent decisions to dramatically alter regulatory institutions, which suggests that indicators such as the number of neighbouring countries that have adopted a new institutional setup can eventually be used as instruments for institutional change. This step is extremely important, as we lack in this literature opportunities to build credible causal inference designs.

Concluding remarks

This chapter has analysed the process of agencification of banking regulation that expanded during the twentieth century and progressively reached almost all countries around the world. Undoubtedly, this was a vigorous diffusion process, probably one of the first among several similar processes that led to agencification in many other economic sectors during the final decades of the last century (Jordana et al. 2011). However, banking regulation has an institutional particularity, a singular characteristic not present in other sectors: the existence of two main options—central banks or separate banking agencies—gave policy makers a choice in how to delegate responsibility for banking regulation. The reasons why policy makers chose one option over the other are complex. Rather than providing a complete answer to the question of institutional choice, we considered several arguments about the reasons why institutional convergence has not occurred. Territorial proximity and historical path dependence are likely drivers behind each of these options, but the search for a country-specific optimal model was also a relevant factor in many countries. It is also important to note, however, that the presence of two institutional options did not prevent the global diffusion of an independent agency model since the late 1980s.

A consequence of providing independence both to central banks and to banking regulatory agencies was the emergence of multiple principals in financial regulation, each one following autonomous decision procedures. Such fragmentation laid bare the emergence of divergent goals among regulators in the financial sector, especially when several agencies, among them the central bank, operated in different financial areas. This is an important problem that increased in recent years because of the universalization of agencification and the independence model.

To cope with the problem of fragmentation of financial markets, which has grown concomitantly with the sophistication of the banking sector and the fusion of different sub-sectors in the financial area, a tendency has appeared to create integrated financial agencies that oversee insurance, banking, pensions, security and exchange, et cetera. Here, two options were also possible: to establish a separate and independent agency, or to attach an integrated regulatory unit within the central bank. The first option involved the risk of institutional weakness, predominantly in developing countries, but the second option raised another problem. When banking regulation is placed within the scope of the central bank, then a conflict of interest might emerge between the two different goals, monetary policy and banking regulation, ascribed to the central bank.

Considering these dilemmas, we observe that banking regulatory authorities operate under a variety of institutional configurations, where fragmentation represents a dimension in such variations and the presence of central bank as regulator another. It is difficult to argue which one is more effective. There is probably no optimal institutional design, and evidence in favour of the relative effectiveness of one institutional model over others is still scant. Here we have presented a picture of the vast amount of institutional variation around the world, and we have also provided a comprehensive view of the different institutional designs and how they have evolved throughout time.

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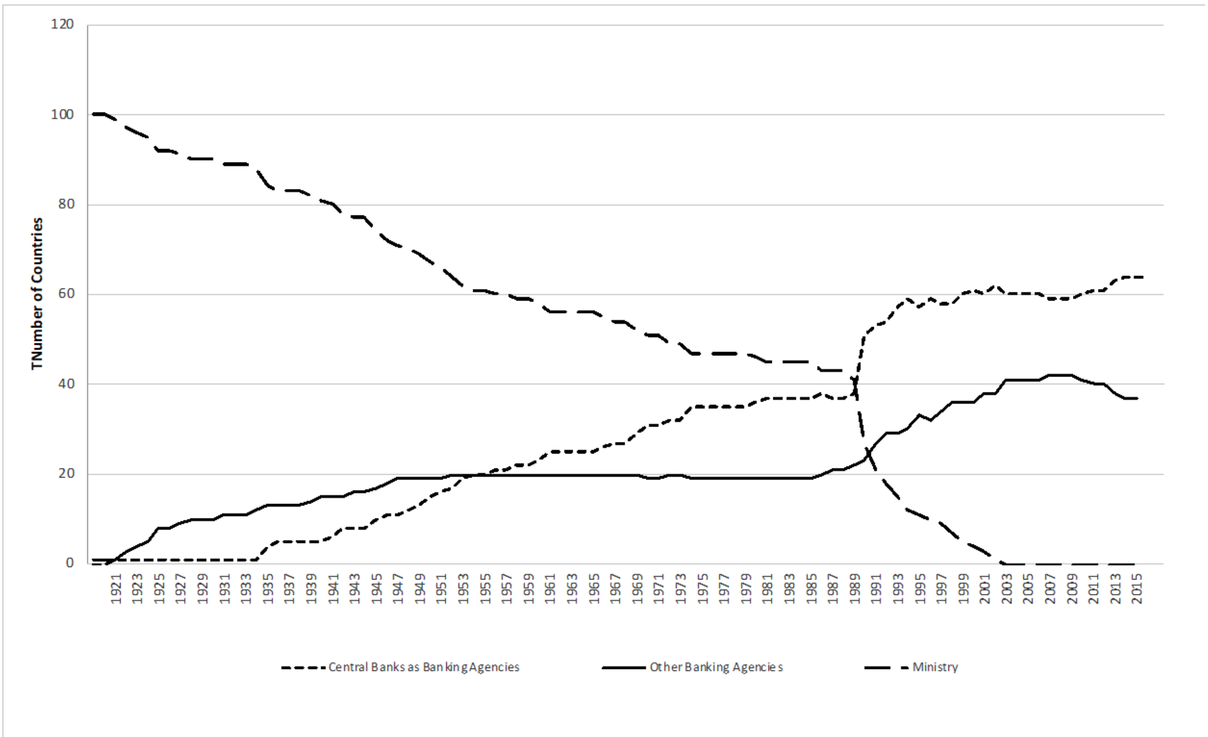

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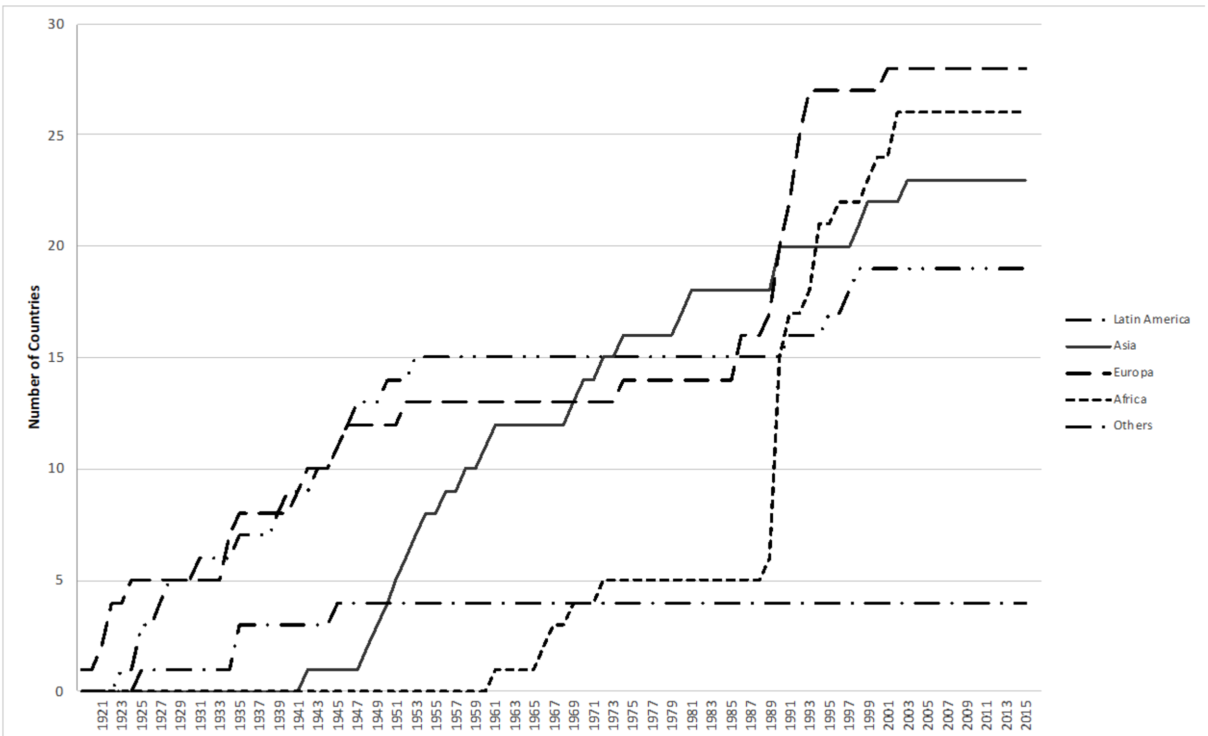

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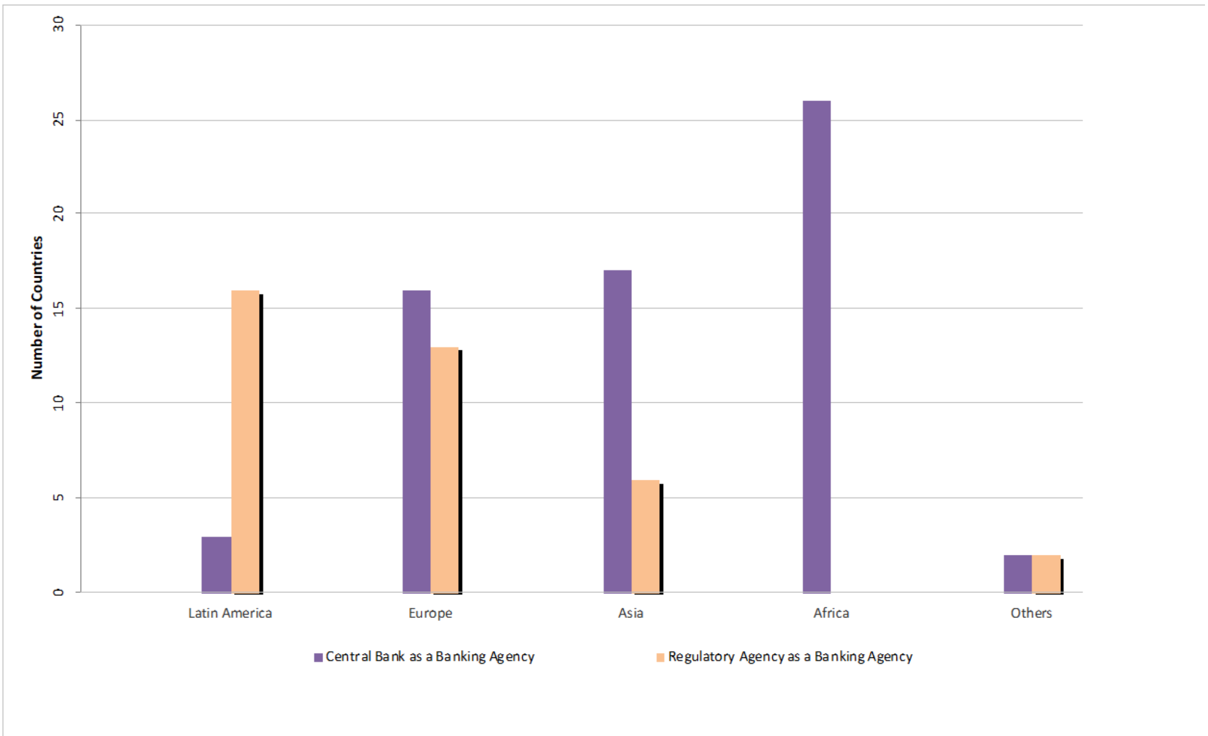
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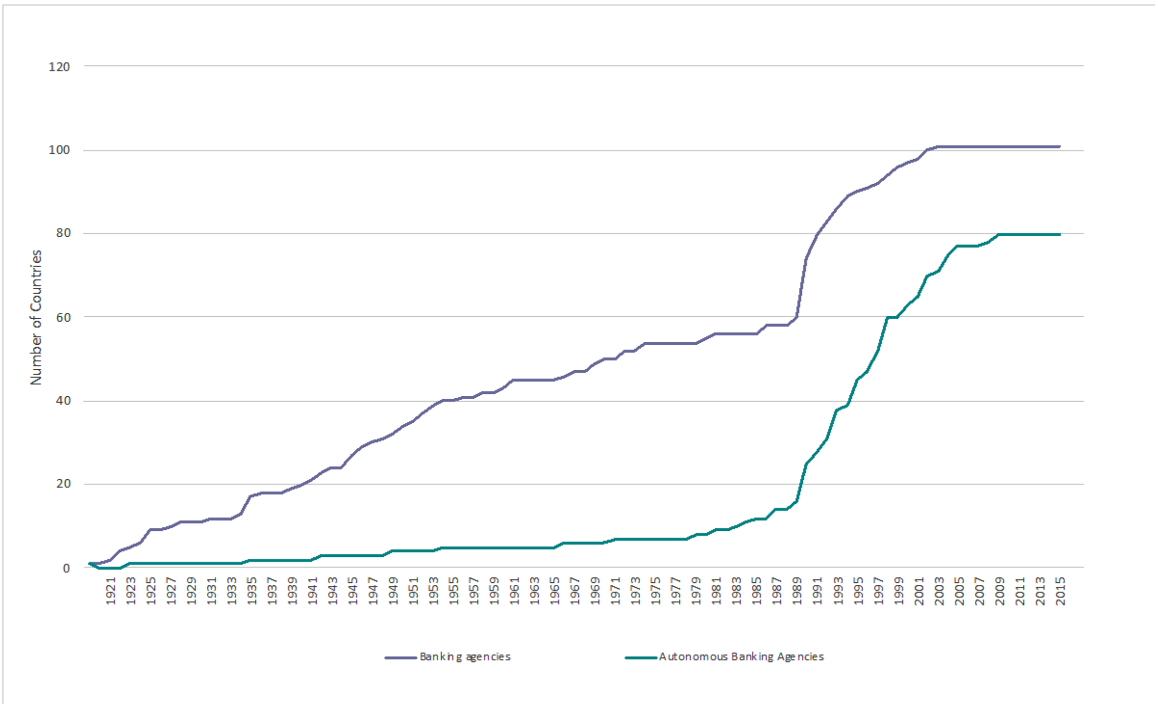
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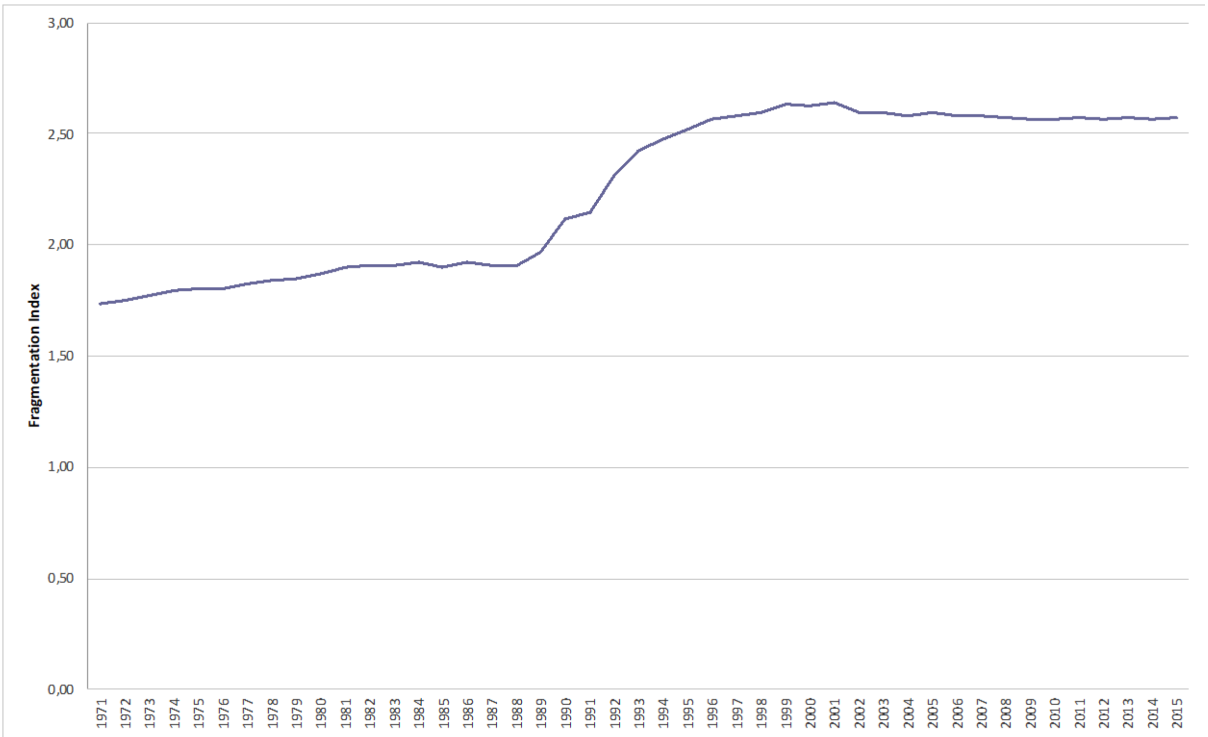
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