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The Political Economy of Finance

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The Political Economy of Finance

Enrico Perotti

Abstract

This survey reviews how recent political economy literature helps to explain variation in governance, competition, funding composition, and access to credit. Evolution in political institutions can account for financial evolution, and, unlike time-invariant legal institutions or cultural traits, is critical to understanding rapid changes in financial structure, such as the Great Reversal in the early 20th century. Future research should model the sources and consequences of financial instability, and predict how major redistributive shocks will shape regulatory choices and financial governance.

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Introduction

In the literature inspired by North (1980), economic exchange is understood to be shaped by political, legal, and cultural institutions. Institutions are combinations of formal norms and informal “rules of the game”, both highly persistent as they are deeply embedded in social expectations. These rules complement contracts and laws in allocating value and risks between transacting parties, and thus provide economic incentives to cooperate as well as to invest.

The quality of institutions can explain economic renewal and growth across countries through the formation of productive capital in all its forms. Thus real investment, financial development, technology, and education (as accumulated human capital) are endogenous “manifestations” of growth, rather than primary determinants.

What institutions are critical for finance? Financial contracting enables a separation of ownership and control, separating income and control rights over assets and allowing diversification and specialization; protection of investor rights is necessary to induce investors, and affects the size of intermediated capital as well as its composition and allocation. Prudential regulation has a complementary role, containing any negative spillovers for the rest of the economy.

What institutions shape the financial rules of the game? The literature has identified three main candidates: legal, cultural, and political institutions (La Porta et al., 1998; Acemoglu and Johnson, 2005; Rajan and Zingales, 2003a; Guiso, Paziienza and Zingales, 2004). The contributions of different type of institutions are hard to disentangle, as it is in part a matter of how such institutions are defined.¹ Investor protection requires not only legal rules, but also enforcement, and thus supporting political institutions. Legal origins have been proposed as a key determinant of financial development (LaPorta et al., 1997, 1998). While no one disputes the fact of larger capital markets in common law countries, the arguments and historical interpretation of why such countries may be better at supporting finance are very controversial. LaPorta et al. (2007) now favor a cultural interpretation, and “adopt a broad concept of legal origin as a style of social control of economic life”.² Persistent cultural values such as religion or social capital do appear to affect financial development, for example, by providing trust and social support for contractual enforcement or resistance to abuse (Stulz and Williamson, 2003; Guiso et al., 2004; Licht et al., 2011). As extensive reviews already exist (e.g. Beck, Demirgüç-Kunt, and Levine, 2003, Acemoglu and Johnson, 2005, LaPorta et al., 2007), this review will focus on identifying distinctive effects of political institutions on financial structure. This is understood as a broader concept than financial development, usually defined as capital market scale, since it includes breadth of access, competition and issues of stability.

¹ Contractual enforcement requires both legal rules and executive support. Judicial review may be seen as either a legal or a political institution limiting government discretion. Ideological preferences may reflect economic interests as well as cultural values. Informal political institutions include cultural attitudes that facilitate citizen mobilization against abuse.

² This is consistent with evidence that voluntary adoption of legal codes has stronger effects than their imposition by conquering colonial powers (Berkowitz, Pistor, and Richard, 2002).

Our starting insight is that the time-invariant nature of such institutions as legal origin and persistent cultural characteristics make them poor candidates to explain phases of rapid financial evolution.³ The evolution of political institutions has long been seen by historians as a key factor in explaining such shifts as the emergence (and decline) of modern banking and public debt in free Italian cities during the Renaissance, the early development of financial activities in the Netherlands and Britain (relative to more autocratic European countries [North and Weingast, 1989; de Vries and van der Woude, 1997]), and even the regression in the scale and role of private corporations in Ancient Rome in the transition from the republican system to the empire (Malmendier, 2005). Here I will summarize this view, as well as adding the recent economic insight on how the impact of major shocks to financial structure differs depending on the underlying political institutions (Rajan and Zingales, 2003; Acemoglu et al., 2005; Perotti and von Thadden 2006; Dari-Mattiacci et al., 2013).

We first review conceptual models on how the distribution of political power affects finance. The starting point is the insight that an unconstrained autocracy undermines financial accumulation (North and Weingast, 1986). Historically, once royal power becomes subject to the law, only a small economic elite are enfranchised. This phase of financial development exhibits limited competition, preferential access and limited entry (Acemoglu, 2008; Perotti and Volpin, 2012). Over time, political broadening under the pressure of emerging groups promotes more intermediated savings as well as broader access to credit (Benmelech and Moskowitz, 2007; Rajan and Ramcharan, 2011).

While broader participation tends to lead to financial deepening, the relationship is not necessarily monotonic. Financial structure differs markedly across democracies, and these differences are explained only in part by legal differences (LaPorta et al., 1997, 1998). Structural differences actually increased in the early 20th century (Rajan and Zingales, 2003), when the distinction between market- and bank-based systems emerged, leading to the “Varieties of Capitalism” view in political science (Soskice and Hall, 2001). Recent models of democratic choice provide testable interpretations, relevant as they are able to explain observed variation also across civil law countries. Broader suffrage makes median income voters the pivotal group. Political factors such as the electoral system or the system of wealth distribution shape political preferences and government decisions on regulation and investor rights (Pagano and Volpin, 2005; deGryse, Lambert and Schwienbacher, 2012). A majority in a more unequal society may prefer a more corporatist model which limits competition and risk and offers more non-market solutions, e.g. delegating long term savings to a state pension system (Perotti and von Thadden, 2006; Perotti and Schwienbacher, 2011). Such a political majority may arise from an alliance of inside capital and inside labor prevailing over dispersed investor and consumer interests (Pagano and Volpin, 2005). I review how well these interpretations can be supported by studying how variation in redistributive shocks across countries relates to such countries’ subsequent financial reversals.

³ Of course, legal rules and laws do evolve in response to economic pressure (Horwitz, 1976) and thus act as a proximate cause of financial evolution. A purely functional view of legal change should be balanced by the degree of legal autonomy (Harris, 2000), related to political institutions constraining executive power.

This survey does not set out to cover the literature on financial development and economic growth (Levine, 2004), nor the lobbying models in the public choice literature, nor normative explanations of financial structure. It is beyond its scope to explain the roots of political institutions or their evolution.⁴ It does not seek to disentangle political ideology from economic preferences. Ideologies at the extreme of the political spectrum share a preference for limits to free trade and competition. Inside labor and inside capital may form corporatist alliances against small investors (Pagano and Volpin, 2005; Pagano and Volpin, 2006), just as right wing governments may distort financial market outcomes to ensure re-election (Aghion and Bolton, 1990; Biais and Perotti, 2002).⁵

In Section One I discuss the emergence of limited government as the creation of safe property rights for at least a subset of the population, and as a precondition for financial development. Section Two discusses the ways in which regimes are constrained as political participation increases. Section Three focuses on variation in financial structure across representative democracies.

1. Political Regimes and Financial Structure

Our point of departure is that financial accumulation and intermediation concerns fungible, transferable wealth uniquely vulnerable to expropriation. Thus, a requirement for developing financial contracting is the limiting of opportunism by some institutional force. While a variety of society-based enforcement mechanisms may exist, contracting among strangers in anonymous markets--the essence of financial intermediation--cannot thrive without reliable enforcement of contractual and property rights.

From anarchy to autarchy

Anarchy arises when no central authority achieves a monopoly on violence, a situation described by Olson (1993, 2000) as “roving banditry”. Under anarchy, no entity can credibly guarantee property rights; competition among warring factions implies that any delay in seizing assets weakens the ability to fight. Anarchy thus prevents transactions and thereby undermines accumulation. Indeed, in periods in which there were no stable state institutions,

⁴ Initial conditions, such as legal origin or climate have been proposed (LaPorta et al., 1997 and 1998; Engermann and Sokoloff, 1997 and 2002; Acemoglu et al., 2001). Political evolution is often explained as a response to competitive pressure, either from internal opponents (Acemoglu and Robinson, 2006) or from external political or economic competitors (e.g. Keyssar, 2000). External shocks, whether negative (wars) or positive (trade and technological revolutions) may also strengthen specific interests (e.g. Rajan and Zingales, 2003; Acemoglu et al., 2005).

⁵ Political ideology is not easily defined, and is poor at explaining historical turning points. Radical liberalizations in Europe and Latin America have often been implemented by left-wing governments, while corporatist policies constraining product and financial markets are generally the work of conservative parties. For a broader view on this theme, see Gourevitch and Shinn (2008).

such as the early Middle Ages, no records exist of financial transactions. Private property rights over land, previously well defined under the Roman Empire, took centuries to be clearly re-established. No arms-length transactions could exist among strangers. Trade was local and cash based, and the rare contracts for long distance trade were enforced via clan linkages (see Greif, 1993) or by religious associations, such as the Templars.

Anarchic societies cannot sustain economic development. At some point power becomes concentrated by foreign conquest or by an authoritarian leader who defeats or co-opts other factions. Olson (1993, 2000) and McGuire and Olson (1996) suggest that dictators were preferable to anarchy achieved by “stationary bandits” who established military superiority over competitors. A stable dictator may prey upon the economy at a long-run revenue-maximizing rate, protecting some property rights and even investing in some public goods. Yet problems persist, and the situation deteriorates when competition for power reduces the planning horizon.⁶

As the allocation of local power became more stable in Europe, some contract-based finance emerged as merchant courts were formed in market towns. “Free cities” were run by merchants who had paid or fought off the local lord in order to enjoy protection from expropriation. It is in these cities that the modern public debt market was created and built up on an historically unprecedented scale. Some of the funds accumulated by merchants were lent to kings. But periods of peaceful accumulation were followed by sudden royal defaults or seizures. In their search for funding for war and lifestyle, the autocratic kings of France, Britain and Spain routinely bankrupted their Genoese, Florentine and Jewish bankers. They also debased their coinage, and sold unique privileges and monopoly rights. These entitlements themselves were often seized or reassigned, especially when autocrats came under military pressure.

Inability to commit destroys private finance, and reduces state funding. The absence of safe payment and credit mechanisms reduces economic activity and military capacity. Stable autocratic regimes can only create some financial accumulation via direct state control, i.e. through royal mints or royal banks.⁷ These autocratic regimes also seek control over finance to maintain bargaining power over the private elite, thereby precluding the creation of power centers that may challenge their authority, as in Tsarist Russia (Anan’ich, 1999). Contemporary examples include Iraq under Saddam Hussein or Haiti under François and Jean Claude Duvalier. These countries had no financial markets, but managed a small state banking sector.

⁶ During the Mexican Revolution of 1910-20, competing factions preyed upon banks in their fight for territorial control (Maurer, 2002); banks were at greater risk than capital in manufacturing, mining, or agriculture (Haber, Razo and Maurer, 2003). As real asset value depends on the application of specific skills, this reduces the incentive to expropriate them (Rajan and Zingales, 2003a) relative to financial capital, which is easily redeployable.

⁷ Early examples were the creation, by Egyptian pharaohs and Mesopotamian rulers, of state controlled granaries, which lent to farmers at high rates while providing a basic payment system.

In political science, the consensus is that no single formal institution, whether a constitution, electoral suffrage, or the existence of political parties, marks the transition to limited government and democracy. It is worth noting that totally unconstrained dictators are quite rare, as autocrats usually face competition for power;⁸ Historically, most dictators are removed not by uprisings or democratic transitions but by internal coups (Tullock, 1987) that re-establish autocratic regimes under new strongmen. Competition for power forces dictators to share power with individuals in organizations such as the military, the police, and the bureaucracy. Authoritarians often use constitutions, staged elections, and political parties to align the incentives of these critical supporters. As potential veto players, they must be granted some share in the wealth captured by the political system. Privileges for this political elite include monopoly rights, barriers to entry, or preferential fiscal and legal treatment. These privileges reward investment under high expropriation risk and their removal may trigger a withdrawal of support (Haber, Razo, and Maurer 2003). They can thus support a modest amount of politically protected investment even under unlimited government.⁹

A classic example of economic entrenchment via control over finance is Mexico during the regime of Porfirio Díaz (1876-1911). The Mexican dictator created a highly oligarchic financial market to compensate bankers for expropriation risk (Maurer and Gomberg, 2005), and bankers aligned politicians' incentives by giving them lucrative positions on bank boards (Maurer, 2002). The concentrated banking industry controlled access to capital, and sustained high concentration in downstream industries (Maurer and Haber, 2007). In contrast, the distribution of power was decentralized in federalist Brazil, which led to less concentrated access to opportunities, more developed financial markets, and a more competitive industrial sector in the nineteenth century.

In conclusion, societies with unchecked governments are dominated by a personal alliance between a political elite and an entrenched economic elite, and maintain both high oligopolistic rents and barriers to entry, and financial systems that privilege connected individuals. Dictators thus cannot easily gain support by promising a broadening of access to opportunities. Lack of commitment under absolute control causes the failure of the Coase theorem, under which market contracting can resolve any inefficiency (Acemoglu, 2003). Supporting investment, therefore, requires the devolution of political power. Acemoglu and Robinson (2006) show how a ruling elite will agree to an expansion of political rights to credibly limit executive power in the future. Vesting some power to a broader group constrains the executive ability of any rival who may seize power in the future, and be tempted to expropriate the old elite.

⁸ The idea that pure autocratic rulers are inherently insecure was common among thinkers of antiquity, such as Thucydides, Plato, and Aristotle (Ober, 1998), and is one of the central preoccupations of Machiavelli's *The Prince* (2005). See also Tullock (1987); Bueno de Mesquita et al. (2003); and Haber (2006).

⁹ Recent examples of shared control over the financial system by an economic and a political elite have emerged in Liberia, Indonesia and Russia.

The emergence of limited government

Limited government arises when the authority of public officials is constrained by institutions that grant political power to some fraction of the population. This group will form an economic elite that defines its status by explicit rules and property rights rather than by political appointment or personal privileges.

The first recorded example of such a government is the rule of Athens by citizen assemblies (Ober, 1988). In the modern world, a powerful merchant class ruled the Italian city-states, such as Genoa or Venice, and the Dutch Republic, sustaining financial development and the first large scale markets in public debt. As no political power could expropriate lenders well represented in government, development of public and private finance could take place (de Vries and van der Woude, 1997; Neal, 1990; Dari Mattiacci et al., 2013).

The classic study of limited government remains North and Weingast's (1989) analysis of England's Glorious Revolution. After 1688, the Crown could no longer call or disband parliament, which gained the exclusive authority to raise new taxes and to audit Crown expenses. The Crown also lost prerogative powers over courts, and was made subject to the common law, while the judiciary was made independent. Parliament created the Bank of England, to which it delegated financing of expenditures, thereby tying the hands of future Parliaments to repay its creditors.¹⁰ This allowed the British Government to borrow from private capital markets on a scale—and at rates—unimaginable prior to 1688, thereby financing England's rise to global military hegemony.¹¹

The safeguards for state debt repayment did not extend to private capital issues. At the time, a few colonial enterprises were allowed to be incorporated.¹² Yet the full development of private bond and equity markets, necessary to sustain England's subsequent industrial revolution, had to wait until the interests of the entrepreneurial class became better represented. Historically, parliaments had been an occasional gathering of aristocrats and landowners to negotiate their financial arrangements with the king. Even after parliament wrestled control from the king in 1688, its composition included only the richest members of the emerging classes. As of 1828, the right to vote in the UK was still limited to less than 20% of the male population. Suffrage was only extended to citizens without property over the course of the 19th century.

¹⁰ Stasavage (2003) shows that Parliament constrained debt default because lenders were able to join coalitions with other legislators, trading support on other issues in exchange for debt repayment. Jha (2012) offers evidence that support for Parliament rule was boosted by the development of joint stock companies, which enabled anyone to invest in trade and helped overcome traditional merchant-landowner differences.

¹¹ Earlier, the Dutch Republic had a limited government regime, which gave it an early advantage over England and autocratic European powers with regards to private colonial investment in Asia (Dari Mattiacci et al., 2013).

¹² A clear relationship of private capital and limited government is found in cross-section analysis (Barth, Caprio, and Levine, 2006) and within countries over time (Haber, North, and Weingast, 2007).

Until then, financial regulation still reflected the interests of an oligopolistic elite, anxious to guard access to finance. Limited liability was granted extremely sparingly upon an act of Parliament. The Bank of England was for centuries the sole bank with corporate status allowed to operate in London. All other banks of issue had to operate as partnerships with at most six partners, and thus forego limited liability and liquid tradeable shares. Cottrell and Newton (1999) argue that excessive privileges for the Bank of England had a deleterious effect on Britain's early financial development.

Summerhill (forthcoming) describes the related example of Imperial Brazil (1822-1889), where both Parliament and the Council of State limited the Crown. In contrast to twentieth century Brazil, the state never defaulted on its public debt and enjoyed low borrowing rates. Yet safe property rights for investors in public debt did not lead to broad access to credit. The political agreement that avoided public default also allowed incumbents to limit competition, by restrictive incorporation laws or limited chartering of private banks.

Brazil's private sector finance developed only after the fall of the creation of a federal republic in 1888. The central government lost its monopoly on bank chartering and incorporation laws after the 1891 Constitution gave out to its regional economic elites. The federal government quickly pushed through a series of financial reforms which expanded bank charters and created an inclusive incorporation law, extending limited liability for shareholders while strengthening creditors rights (Haber 1998, 2003; Musacchio, 2007). Within three years, the number of banks in Brazil nearly tripled, and massive equity issues generated a rapid spurt in industrial development. Haber (1997, 1998, 2003) contrasts Brazil's thriving financial markets with autocratic Mexico, where emerging sectors such as the textile industry were much more concentrated, as well as less efficient.

In conclusion, the early stages of limited government entrench strong rights for an economic elite that is broader and more efficient than a royal court, but soon forms a political block restraining further financial development and entry. Oligarchic economies seek to maintain strong protection of traditional property rights (e.g. land ownerships and land servitudes), while discouraging institutions that may grant access to opportunities for emerging groups (commercial codes, education, banking competition).¹³ Acemoglu (2008) argues that autocracies may invest more at low stage of development if democratic voting under high inequality would produce very high redistributive taxes, but will ultimately lag behind others. Technological progress demands human capital accumulation and specialization (Aghion, Alesina and Trebbi, 2007).

2. The Broadening of Political Participation

A significant increase in political participation in Europe took place during the nineteenth century. The French Revolution delivered a violent shock to the traditional *ancien regime*, abolishing aristocratic privileges, redistributing church land, and streamlining access to jus-

¹³ A politically connected elite, whose interests are guaranteed via direct arrangements with public officials, prefers weaker property rights that enable it to prey on the assets of other members of society (Sonin, 2003).

tice with the *Code Civil*.¹⁴ After the Restoration, European countries responded to increasing political unrest by first employing a repressive approach, but soon had to relent and broaden political participation. After the Paris revolution of 1830 and a period of increasingly frequent riots, the traditional British elite saw the necessity of granting a progressive expansion of political rights to reflect the emergence of industrial and commercial interests accompanying the Industrial Revolution. The 1832 Reform Act was a first step in a process of expanding suffrage rights for males beyond property owners, in the process creating a political basis for broader access to economic opportunities. France and other continental European states mirrored this trend. The broadening of voting rights was even faster in the US, where most states moved towards broad suffrage rules during the first half of the nineteenth century. A key driver of political change was competition between the new states joining the Union; to attract scarce population and capital (Keyssar, 2000) some chose to grant voting rights to new residents even if they were not property owners. This exogenous process enabled Benmelech and Moskowitz (2005) to create a panel test to validate the association between suffrage laws and financial regulation within the same country. Their results conclusively show that as local suffrage broadened, US states voted in legislation that improved access to finance and relaxed bank charter rules, usury, and incorporation law to include less wealthy entrepreneurs.¹⁵

In more traditional Europe, the second half of the nineteenth century saw the political emancipation of the merchant and industrial class, which reinforced demand for financial reforms. Thanks to its earlier development of limited government, Britain had an advantage in financial contracting, but even its financial system needed to become more open and competitive to satisfy a booming demand for capital. At the same time, there was strong pressure for legal development. English and American courts moved away from traditional notions protecting established rights and servitudes, for instance in land use and strict liability, which constrained the more intense use of assets required by industrial activities. Horwitz (1976) illustrates the evolution of legal practice from a rigid view of property rights typical of an agrarian society toward a more utilitarian view. This view could support a more intensive use of common resources as required by the interests of an entrepreneurial class.¹⁶

These interests soon became enshrined in commercially oriented legislation and more open regulation in Continental Europe, as in the case of France under Napoleon III.¹⁷ Incorporation laws and bank chartering were relaxed, and capital markets funded rapid capital accumulation in Continental Europe as well as Japan. Funding for rapid industrial

¹⁴ The Code Civil introduced standard contracts and limited judge discretion. While this may have limited contractual innovation, it facilitated enforcement among unequal parties (Gennaioli and Perotti, 2012).

¹⁵ This association persisted after general suffrage. Rajan and Ramcharam (2011) show that concentrated land ownerships across US counties both in the 1880s and 1930s help explain local financial competition.

¹⁶ Unlike what has been posited in the legal origins literature, most common law judges were quite resistant, and state codification was necessary for legal innovation (Horwitz, 1976).

¹⁷ For an analysis of the late XIX century progress in financial legislation in France, see Lamoreaux and Rosenthal (2004); on Germany, see Franks, Mayer and Wagner (2006). These accounts show how investor

catch up was led in Germany by investment banks, which relied massively on bond markets to channel savings to industry. But Britain's early advantage in financial development was rapidly eroded by the late 19th century.

At the turn of the 19th century, the codification movement sought to increase access to contractual enforcement, and to reduce the cost of transacting. By the end of the century, even common law countries had introduced commercial codes, necessary to standardize contracts and improve access to legal enforcement, and these codes facilitated trade among diverse individuals across greater distances. The 1871 Bill of Exchange Act in the UK finally eliminated the risk of legal challenges to promissory note holders due to traditional common law contracting rules. This removed obstacles to freely negotiable securities, and enhanced the liquidity of financial claims (Gennaioli and Perotti, 2012).¹⁸

Until WWI, all western countries and Japan boasted rapid capital market development, which was reinforced by free movement of capital under the gold standard. Before considering the dramatic consequences of the world wars on financial structure in democracies, let us review the progression of financial development elsewhere.

Financial development in emerging countries

Among developing countries, a simple classification of financial structure distinguishes between a state-dominated model and a business-group model, the latter of which prevails in more developed capital markets. This distinction matches a political economy interpretation, where state banking and governance under autocracies evolve with political liberalization towards a culture of concentrated corporate ownership by a connected elite.¹⁹ As more recent research has focused on the second form of governance, it will be the focus of this review.

A favorable interpretation of family-controlled business groups is that because of poor enforcement of investor rights, assigning bank control to cohesive groups of owners reduces moral hazard, as large investors will make better decision with their own money. While there is evidence that a larger equity stake improves value incentives, in many countries large owners tend to be able to control large firms with little own capital, thanks to equity pyramids, cross holdings and high leverage provided on favorable terms. Recent evi-

protection in these countries improved rapidly as demand for capital rose, and that disclosure standards and contractual flexibility were comparable to those in the UK.

¹⁸ State codification was needed as no private solution was possible under common law. Private agents could not instruct judges to ignore rules on ownership transfer or liability. This helps explain the central role played by UK and US security laws in supporting investor protection, just as in civil law countries (Dams, 2006; Jackson and Roe, 2009). It is inconsistent with the legal origins view that judge-made law offered an important advantage for financial contracting relative to civil law systems based on statutory law.

¹⁹ In an extensive cross section study of 65 countries, Caprio, Laeven and Levine (2007) show that more autocratic countries have more state banks. In countries with poor investor protection, most private banks have concentrated control by a family or business group. In contrast, large blocks in individual banks are very rare in the most developed countries.

dence suggests that insiders with more control than income rights have poor incentives, and may tunnel corporate resources to fully owned companies.

This suggests a regulatory bias when insiders are allowed to control huge resources without much own capital. Claessens, Djankov, and Lang (2000) show that over two-thirds of East Asian firms are controlled by shareholders with small stakes. Claessens, Djankov, Fan, and Lang (2002) show how relative firm value increases with their ratio of cash flow to control rights. A broad review on business groups and growth (Morck, Wolfenzon, and Yeung, 2006) finds that narrow control over finance leads to misallocation of resources. This suggests that concentrated ownership may be associated with regulatory capture and privileged access.

If concentrated ownership does not contain moral hazard, is tighter financial regulation a solution? The evidence is not supportive. More autocratic countries have less permissive bank entry policy, and impose stricter restrictions (Barth, Caprio, and Levine, 2006). This is associated with less bank stability and more corruption in lending, and lower credit market development. Thus, very restrictive rules create rents but do not prevent instability, suggesting restrictive formal rules reflect poor institutions and are not a legitimate regulatory response.²⁰ This is consistent with Djankov et al. (2003), whose review on recent evidence suggests that restrictive regulation in developing countries reflects political opportunism rather than an optimal response to greater moral hazard, driven by exogenously poor rules and enforcement.

Entrenched interest may pursue weak financial regulation in order to limit access to finance for less established competitors--such regulation is an invisible but effective barrier to entry (Rajan and Zingales, 2003). Even business group apologists cite political access as a main comparative advantage (Khanna and Yafeh, 2007). Much recent evidence shows how firms with political connections enjoy favorable access with state banks. They appear to receive larger loans, and are less likely to repay, even though they carry similar interest rates to comparable borrowers (Faccio, 2006; Khwaja and Mian, 2004; Chiu and Joh, 2004). Fisman (2001) reveals significant value of political connections for Indonesian firms. Claessens, Feijen and Laeven (2006) show how Brazilian firms connected to political candidates exhibit excess returns upon their election, and subsequently gain more access to credit. Khwaja and Mian (2005) explore how connected firms obtain more financial access from Pakistani state banks, though they have much higher default risk. Faccio (2006) points out that politically connected firms are common in countries where weak limits on the executive allows for high degrees of corruption. Faccio, Masulis, and McConnell (2005) show how politically connected firms are significantly more likely to be bailed out in distress, yet exhibit worse performance afterwards.

A natural test of a causal link between political institution and financial structure is whether evidence suggests that the comparative advantage of groups declines with greater accountability and trade openness. In Chile, business groups close to the dictator Pinochet enjoyed remarkable privileges for many years. In a flawed privatization program in the 1970s,

²⁰ For an extensive review of the evidence, see Morck, Yeung and Wolfenzon (2006).

these groups were allowed to capture control of many firms and banks with borrowed money. This led to a major bank collapse in the early 1980s and a forced renationalization of banks. The relative valuation of group firms declined in the period 1980-1990, as major political reforms progressively led to a return to democracy (Khanna and Palepu, 2000). The subsequent re-privatization took place under a democratizing government that sought to broaden financial participation by granting shares to pension funds (Biais and Perotti, 2002).

A similar progression may be seen in the democratic transition in Korea. Until the early 1980s the government dictated the allocation of financial credit, favoring the *chaebol* business groups. In these years the chaebol enjoyed their highest relative valuation and the easiest access to state banking credit (Lee, Ping and Lee, 2001). In the early stage of democratization, reforms sought to target broader access (bank privatization, freer entry, interest rate liberalization) were distorted by special interests (Lee 2005). As a result, most chaebols maintained favorable access to credit. After the overleveraging revealed by the 1997 Asian crisis (Campbell and Keys, 2002), public opinion pressed to adopt stronger regulatory and governance standards. As a result, Korea has enjoyed a faster recovery than its neighbors, and a considerable broadening of its financial system.²¹

While this literature is largely empirical, recent work models the dynamics of captured finance. Acemoglu (2005) and Caselli and Gennaioli (2005) consider the consequences of family-based ownership structures. A key vulnerability associated with politically connected groups is that heirs to a family firm will have less talent than other managers. Dynastic management may then reduce firm value (Morck, Yeung and Wolfenzon 2006). Caselli and Gennaioli (2005) model the incentive to lobby for better financial access by groups wishing to divest. They conclude that legal reform aimed at improving access to finance by facilitating transfer of ownership, may over time meet less entrenched opposition than entry deregulation. This points to the suppression of competition as the main cost of captured regulation. Entry is an important form of economic renewal and contributes to economic growth (e.g. Hause and Du Rietz, 1984; Johnson, McMillan and Woodruff, 2002; Klapper, Laeven and Rajan, 2006). Recent evidence corroborates the notion that autocratic regimes establish high barriers to entry. Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2002) show that entry costs are very high in developing economies, and particularly so in corrupt countries. Onerous regulations may be created to extract bribes (Shleifer and Vishny, 1993) and maintain high rents. Fisman and Sarria-Allende (2004) and Klapper, Laeven, and Rajan (2004) show that onerous barriers appear to reduce growth and entry in naturally high entry sectors and do not seem justified for reasons of public welfare.²²

A model of captured financial regulation is developed and tested in Perotti and Volpin (2007, 2012). Wealthier agents do not need much external finance and naturally form

²¹ A broader review of the negative evidence on entrenched business groups on growth is offered by Morck, Wolfenzon, and Yeung (2006).

²² High financial barriers to entry in developing countries are puzzling in view of the evidence, taken from micro credit, of very high marginal profitability of small projects by the poor (Banerjee and Duflo, 2005; De Mel, McKenzie, and Woodruff, 2006).

a lobby for weak investor protection, to limit access to funding for other entrants. Greater accountability allows citizens to punish captured policies that benefit few producers. A higher shadow cost of entry barriers increases required bribes and induces lobbyists to accept more competition. An empirical test requires studying the relationship between accountability, entry rates, and competition intensity.²³ Controlling for country and industry effects, Perotti and Volpin (2007) find that entry rates and producer numbers are lower when investor protection is weak, particularly in sectors that are more dependent upon external finance.

A more direct test requires showing that more accountable countries have better investor protection. However, accountability is hard to measure objectively. Corruption measures are very correlated with the logarithm of per capita income (Svensson, 2005), but as they are survey based, they may be seen as endogenous (Glaeser et al., 2004). Indeed, proxies of democratic quality perform well in regressions for investor protection, but are no longer significant once a general control for institutional quality, such as GDP per capita, is introduced. Perotti and Volpin (2012) use a measure of access to information for voters, an indispensable factor for scrutiny of public choices. The diffusion, independence and overall freedom of the media are shown to increase political accountability, which in turns increases creditor protection and entry.²⁴ Critically, it remains a very significant determinant of effective investor protection even after controlling for per capita income and legal origin. The significant negative effect of state ownership of the press provides additional evidence; importantly, the effect of diffusion of the press is not due to differences in education levels.

3. Political Choices in Democracies

The scale of financial markets appears to predict future investment, and to improve its allocation (Rajan and Zingales, 1998; Wurgler, 2000; Fisman and Love, 2005). This is consistent with the notion that more external finance relaxes funding constraints and enhances competition. The emerging empirical evidence suggests that financial barriers matter significantly for new firm creation and economic growth (Rajan and Zingales, 1998; Beck, Levine and Loyaza, 2000).

This raises the question of whether citizens in democratic countries actively push for well regulated financial liberalization. As in any classic common good context, a central problem is the lack of incentives by dispersed voters relative to strong incentives by established interests. The public choice literature produced much evidence of the ability of lobbies to influence public policy in financial markets. In the finance literature, Black and Strahan (2002) examine the regulatory changes across US states that enable greater local

²³ Bebchuk and Neeman (2005) show how investor protection is held up by lobbyists for insiders able to use firm resources, and can easily fend off outside investors with limited stakes and reduced incentives.

²⁴ A recent literature shows how important it is for dispersed agents to monitor policy choices via the media (Besley, Burgess, and Prat, 2006; Dyck, Moss, and Zingales, 2004). Media diffusion is correlated with subjective quality measures, such as press freedom, and with measures of political accountability in the Polity IV database (Djankov et al., 2001).

bank competition, and showing how they impacted growth and the number of state level firms. They also establish that states with stronger agricultural interests resisted liberalization.

Rajan and Ramcharam (2011) show that concentration in land ownership across US states helps explain how restrictive local banking legislation was early in the last century. Counties with concentrated land holdings had disproportionately fewer banks per capita. This was in turn negatively correlated with subsequent manufacturing growth.

Yet as democracies matured over the nineteenth and twentieth centuries, financial development and breadth of access did not always exhibit steady progress. While democracies tend to generate financial systems that distribute capital more broadly than autocracies, a democratic majority does not necessarily seek to achieve the broadest degree of financial development possible. The variation in financial depth, diffusion of shareholdings, and concentration of control among democracies is remarkable. Recent theoretical literature offers a novel foundation for the classic distinction between shareholder and stakeholder capitalist systems, often obscurely explained as arising from different social preferences. Political explanations seem natural candidates to account for the negative correlation between the degree of investor protection and labor protection across countries.²⁵ Explicit models need to be validated by assessing their ability to explain structural breaks in financial structure, and in particular the Great Reversal identified by Rajan and Zingales (2003), to which I will return.

Modeling democratic choice may take two approaches. In the first approach, a democratic majority requires a coalition across multiple constituencies holding different views on financial structure. In the second approach, voters differ only with respect to their endowment, and the will of a majority depends on the view of the median voter.

The seminal work by Pagano and Volpin (2005) exemplifies the first approach, where a democratic majority requires a political alliance. If interests are very differentiated, electoral structure (e.g. majoritarian versus proportional systems) shapes the way preferences are aggregated, and thus determines major political choices.²⁶ In a political alliance, some interest group may be numerically modest but enjoy political influence. In this model, a political equilibrium arises among three social groups: inside capital (controlling shareholders), outside capital (minority investors) and inside labor (workers). Poor minority investor protection is the result of an alliance of workers and inside investors, seeking to protect labor and control rents against minority investors. In particular, proportional voting pushes political parties to cater more to the preferences of groups with homogeneous preferences, such as controlling shareholders and employees. Under a majoritarian system, by contrast, there is keen competition for the votes of pivotal districts where no focused interest group is dominant. Therefore dispersed investors may be essential in choosing elected politicians

²⁵ The normative approach by Allen and Gale (2003) shows that bank-centered systems may be preferred because they absorb intertemporal risk better than market-based systems, which do best at intratemporal risk sharing.

²⁶ Recent evidence points to a higher degree of redistributive public spending in proportional versus majoritarian systems (Persson and Tabellini, 2003).

in a majoritarian system. Compellingly, Pagano and Volpin provide evidence of a negative correlation between minority investor protection and labor protection laws. They also document that, in contrast to majoritarian systems, proportional representation systems provide poor protection to minority shareholders, while employees yield stronger protection.

This approach contributes important insight into how electoral structure may explain features of stakeholder or shareholder oriented systems. For a richer analysis of possible alliances in which the pivotal role of labor interests is recognized, see Gourevitch and Shinn (2005).²⁷ This line of research offers useful insight, relying on a presumption that electoral rules are predetermined. We turn to models seeking to explain variation in financial development over time.

A fundamental approach assumes homogenous preferences in a population with different endowments (Perotti and von Thadden, 2006). In a democratic voting model, all voters have a mixed identity as investors and workers. Voters holding inside capital have limited political power by themselves, so the level of investor protection is determined by the preferences of the median voter. This approach allows one to study the effects of large shocks associated with income or redistributive effects, on the preferences of a democratic majority.

A first and immediate result is that individuals with lower financial wealth prefer high labor rents to higher financial returns. This suggests that a political majority will be less favorable to stock market investors as suffrage is expanded to workers, as found in the empirical analysis of DeGryse, et al. (2012).

The more interesting implications of the model concern the effect of wealth distribution on the regulatory and corporate governance regime. An economy with more concentrated financial wealth will exhibit political support for a greater role for banks over minority equity investors. It may also explain greater support for large shareholders over dispersed ownership, and for a government role in governance. The intuition is that a less wealthy median voter is mostly concerned about labor income risk over financial returns (Perotti and von Thadden, 2006). Next to higher labor rents and lower product market competition, a majority would prefer a governance system where more control rights are assigned to investors who share their aversion to risk. In contrast, more voters in a society where the median voter has more financial wealth will support low labor rents and (dispersed) equity control, which favors more financial risk taking and higher average returns. In this context, the financial participation of the middle class is critical. If the median voter has a sufficient financial stake, a majority will support dispersed equity control, which results in riskier but more profitable investment at the cost of greater labor risk-bearing. In contrast, when financial wealth is concentrated, a political majority has more firm-specific human capital than financial capital, and therefore opposes rights for market investors.²⁸ The attitude of a politi-

²⁷ See also Rajan (2012) for an application to resisting education reform.

²⁸ Biais and Mariotti (2009) investigate the related issue of political choice over bankruptcy rules. Tough creditor protection reduces competition and thus favors more established producers. The authors also examine the implications for labor interests.

cal majority over competition will be similarly affected by the relative interest in protecting inside labor rents over financial returns.

This approach predicts a clustering of governance, competition and labor laws broadly consistent with the classic bank- versus market-centered systems, a well-researched view in political science. Still, some external variation is indispensable to test a political preference hypothesis. The next subsection seeks insight from the impact of major economic shocks on democracies in the early 20th century.

The great reversals

A major challenge is the need to explain the remarkable rise and decline of public capital markets in Continental Europe and Japan in the first half of the 20th century. Rajan and Zingales (2003) show that in 1913 many civil law countries were more financially developed than the US or the average common law economies. Together with the UK, France, Belgium and Austria led the table of financial development. German and Japanese industry raised a massive amount of equity and bond market financing. Yet in subsequent decades, capital markets in many European countries (and, after WWII, Japan) shrank dramatically. At the same time the governance mode shifted towards bank, family, or state control. In contrast, other democracies experienced further market development via new regulation created to strengthen minority investor and disclosure rights.

While some of the 1913 data has been criticized (LaPorta et al., 2007), it is clear that at that time there was no advantage in financial development for common law countries relative to the 1970s. Some factor other than legal origin must have contributed to changes in financial structure in a subset of countries.

Rajan and Zingales argue that this shift was driven by the Great Depression. The crisis led to drastic trade barriers that weakened the principle of free competition and entry, and strengthened the bargaining power of established firms. Nationalistic feelings caused by economic insecurity were hijacked by domestic incumbents. This explanation is consistent with an increase in industrial concentration that favored incumbents. Incumbent also sought to limit financial market access. To explain the different outcome across countries, Rajan and Zingales subscribe to the legal origins interpretation that civil law countries were more vulnerable to such regulatory capture, because of their greater reliance on codified regulation.²⁹ This view has appeal, but is not supported by two key factors.

First, the evolution of investor protection in common law countries after the 1929 crash was driven by legislation, both in the UK (especially the new corporate law code after WWII) and the US, where the mandatory disclosures required by the Securities Act of 1933 are widely credited with significant improvement in minority protection, as well as improving the accuracy of pricing of securities (Simon 1989). The Glass Steagall Act also led to

²⁹ Rajan and Zingales also show how this was tempered by openness to trade, which limited insider rents and increased competition. Countries may differ in their natural openness (e.g. city states built around a port), but trade openness is arguably an endogenous political choice.

increased financial competition in the US by breaking up the large universal banks. The relative improvement in investor protection in Anglo-Saxon countries after WWII occurred because other countries did not upgrade their disclosure legislation.

Second, this view cannot explain the path followed by civil law countries that remained market oriented, such as the Netherlands, Switzerland, Sweden and Denmark. These countries maintained broad financial markets throughout the period, in marked contrast to neighbors with similar geography, culture, and openness (Belgium, Austria and Finland) and earlier comparable—or even more developed—financial structure. Thus a legal explanation, even one augmented by shocks altering the political framework, cannot suffice.

Perotti and von Thadden (2006) offer a purely political explanation for the structural break in the democratic voting model. In a democratic voting equilibrium, greater wealth inequality shifts the distribution of voter preferences for labor rents and financial structure. As labor income cannot be diversified, less wealthy citizens prefer higher wages and less risky choices, even at the cost of lower financial returns. Such choices are ensured by assigning a dominant governance role to banks (or large shareholders) rather than diffused shareholders, who are diversified and prefer more profitable, but also riskier, strategies.

Prior to WWI, limited suffrage ensured a relatively wealthy median voter and support for equity control and shareholder rights. For the previous fifty years, Europe had been at peace. Industrial productivity rose rapidly, albeit with wide swings, and prices were stable or declining. Price stability ensured financial stability for the middle class, who saved via deposits, bonds, rental income or other long-term nominal assets. Stock market crises, bank failures, and railway bankruptcies affected mostly wealthy individuals.

The destruction of World War in 1914 caught Europe by surprise. The human and physical toll was immense. Warring countries spent heavily, and imposed price controls; when these were lifted after the war, prices rose.

The second shock was economic, as war destruction forced inflationary financing in the hardest hit countries. WWI developed unexpectedly into a major onslaught with devastating damage. Government spending rose sharply during the war, and afterwards hard hit countries faced intense fiscal pressure. Budget deficits rose sharply in countries that had suffered heavy damage, loss of territory and colonies, or faced massive reparations. Suffrage was expanded as veterans came back from the front, and higher social spending was sustained by fears of a socialist uprising.³⁰ Additional pressure for social spending came under the pressure of socialist movements, popular among demobilized troops.

In many cases, spending could not be fiscalized, and monetary printing was the only short-term solution. The defeated nations of Austria and Germany suffered devastating hyperinflations, while winners such as Italy, Belgium and France experienced massive price

³⁰ Lindnert (1994) argued that the Great War forced elites to open up the political system as compensation for the suffering the mobilized masses, opening the door to social programs and labor-friendly legislation.

jumps.³¹ The inflationary shocks were exogenous to legal or political institutions at the time, and can be largely explained by the extent of war damage (Perotti and Schwienbacher, 2007).

While all social classes suffered, the devaluation of long-term nominal assets hit the financial holdings of the pivotal middle and lower middle class especially hard.³² Similar price shocks devastated other countries affected by civil war, such as Greece, Spain, and Finland, as well as Japan with the 1946 hyperinflation.

The evidence suggests that countries with impoverished middle classes shifted support away from financial markets with dispersed shareholders towards a more corporatist system of financial allocation, with a central role for large owners, banks, and the state. This transformation accelerated with the Great Depression, which created immense pressure for social and economic reforms. In some hard-hit countries, support grew for a suppression of economic freedoms and a shift of corporate control to the state or to financial institutions, as the average citizen sought more stabilizing governance structures and greater social insurance at the cost of less free markets. The result was a greater politicization of control, suppression of (foreign) competition, and the emergence of stronger social insurance programs typical of a corporatist economy.³³

In contrast, the UK did not suffer direct damage, and managed to finance expenditures via public debt. Its non-European, Anglo-Saxon allies—such as the US and Australia—avoided war destruction, as did the Netherlands, Scandinavia, and Switzerland. Inflation was modest and soon under control, and a financially stable middle class maintained support for financial markets.³⁴ Stronger minority investor protection was strengthened in these coun-

³¹ Lord Keynes was prescient in his influential *The Economic Consequences of the Peace* (1919): “Lenin...declared that the best way to destroy the Capitalist System was to debauch the currency. By a continuing process of inflation, governments can confiscate, secretly and unobserved, an important part of the wealth of their citizens. By this method they not only confiscate, but they confiscate arbitrarily... There is no subtler, no surer means of overturning the existing basis of society than to debauch the currency... The various belligerent Governments, unable, or too timid or too short-sighted to secure from loans or taxes the resources they required, have printed notes for the balance... In Germany total expenditure...in 1919-20 is estimated at 25 milliards of marks, of which not above 10 milliards are covered by previously existing taxation. This is without allowing anything for the payment of the indemnity. In Russia, Poland, Hungary, or Austria such a thing as a budget cannot be seriously considered to exist at all... But who can say how much is endurable, or in what direction men will seek at last to escape from their misfortunes?”

³² In 1924 a prominent German economist wrote that “there has been an appropriation of property in few but strong hands. The financial property of the middle class...has been destroyed. This appropriation refers mainly to big business. Small and medium-size entrepreneurs have not been expropriated, but have been brought more strongly under the influence of big business. Because of this, the distribution of wealth has become much more unequal” (Eulenburg, 1924).

³³ A similar change took place in Japan after the post WWII hyperinflation. The country moved from a tradition of vibrant market funding to a corporatist model dominated by banks, a stable labor market, and intensive government intervention in the economy.

³⁴ In fact, US Liberty Bonds were broadly promoted financial participation, increasing the diffusion of holdings of financial securities from 30 thousand to 20 million households.

tries, with the UK's Company Law and the establishing of the Securities and Exchange Commission in the US in 1933. The US also limited banks' role in corporate control with the Glass Steagall Act.

A test of the structural break

Massive unemployment during the Great Depression had also a major effect. It led across the board to more generous social programs, beginning with the US, with its 1935 Social Security Act, and followed by all democracies in the subsequent twenty years. The design of this massive change in financial structure was clearly driven by political preferences.

A natural test for a "structural break in political support" hypothesis is pension structure. This has the broadest political significance, as universal pension systems include most individuals, carry large fiscal benefits, and dominate old age income for older citizens. The cross-country variation in pension assets dwarfs the variation in financial development. The composition of its financing (pay as you go versus private capitalized funds) is politically sensitive. For this reason, the choice of pension funding will necessarily reflect a political choice, but it will also shape financial participation in, and thus public attitudes to, capital markets. Pension structure may create persistence, as it defines long-term interests. So what explains the initial assignment of pension contributions between the state and the private sector?

The common view that pension systems diverged early on is not accurate. The employer-funded pension system set up in Germany under Bismarck to protect very old workers was very modest. Pensions were minimal and could be drawn only upon reaching 70 years of age, an uncommon age to reach at a time. The program had no redistributive feature (Lindert, 1994).³⁵ In all countries that followed this example, such as Austria, France, and Italy, pensions remained private liabilities until the Great Depression. Both common and civil law states had a minimal role in retirement, except for civil servants and war widows. So what can account for the massive variation in pension structure?

By the early 1950s, almost all developed economies created their own system, choosing different degrees of private funding. Perotti and Schwienbacher (2008) present evidence suggesting that countries that had experienced massive price shocks chose a predominantly state funded pension system. The effect is economically and statistically very significant: a large shock is associated with a lower stock of private retirement assets equal to 58% of GDP. The effect is not limited to countries that experienced extreme hyperinflation.

The modern universal pension system arose after the massive unemployment in the Great Depression, starting with Social Security in the US. By the early 1950s, all developed countries had been prompted by a large inflationary shock to design a retirement system. The original national orientation has persisted (Mulligan and Sala-i-Martin, 2004), so it is

³⁵ In contrast, the so-called Beveridgean system in Britain was redistributive as it targeted the very poor.

possible to classify the initial historical choice by current measures of private pension funding.

Schwiebacher and Perotti (2011) show how countries in which the middle class had kept its savings chose to rely on market funding for these initiatives, as financial markets enjoyed a broader political support. By contrast, hard hit countries employed a more corporatist framework for pensions and entrusted them to the state. Hard hit countries also exhibited a strong correlation with social spending levels, state ownership of industry, and employment protection, even after controlling for legal origin or electoral rules. Schwiebacher and Perotti also establish that the inflationary shocks were exogenous to contemporaneous political variables, and were clearly driven by objective measures of war destruction.

Strikingly, the choice between private and public pension funding has no correlation with legal origin, nor is the decision affected by variables suggested in the literature, such as religion, demography, the history of stock returns, or pre-WWI equity market development. Redistributive shocks remain the most significant explanation, even after controlling for electoral structure (Tabellini and Persson, 2004). They help address the puzzle of financial structure variation across very similar civil law countries (such as Finland and Denmark or Sweden, Belgium and the Netherlands, and Switzerland and Austria).

It is hard to disentangle economic and cultural consequences of major price and war shocks. Shocks may undermine confidence on self-reliance, and lead to a view of the state as providing mutual insurance against systemic instability. Indeed, uncertainty aversion (Hofstede, 2001) is negatively correlated with hyperinflationary episodes, and is significantly and negatively correlated with the stock of pension assets. Yet its effect loses significance once price shocks are introduced (Schwiebacher and Perotti, 2011). In conclusion, uncertainty aversion does not predict the effect of the shocks on pension funding.

Political shocks may also account for the variation in concentration of ownership documented in La Porta et al. (1998). The emergence of corporatism was associated with increased concentration of ownership in most countries, very visibly in Sweden and Italy (Hogfeldt, 2003; Aganin and Volpin, 2003). Increasing concentration of control emerged as political forces weakened the role of dispersed financial investors. The emerging corporatist system favored weakening minority protection and sought political influence on corporate decisions by negotiating with large owners or dominant bankers. Undiversified large owners could be trusted to take a more conservative approach than markets, just as banks did.

Roe (2003) agrees that the shift in corporate governance resulted from war shocks, but as the result of private rather than political choices. He argues that war devastation led to a rise in ideological polarization between labor and corporate owners. In response to socialist activism, companies required more active and engaged shareholders with controlling stakes to counter the influence of organized labor.

While this sounds plausible, surely an increase in the concentration of control to confront labor interests had to be acceptable to a political majority. So this view may be completed as saying that large shocks to pivotal voter groups shifted economic interests

and thus ideology. In both Perotti and von Thadden (2006) and Pagano and Volpin (2005), a shift in the percentage of voters who are investors favors a political majority supporting more stability, higher labor rents, and less minority investor protection.

Other models of democratic voting on public policy choices

Wealth allocation may even be exploited politically to alter electoral outcomes and garner support for preferred policies. Aghion and Bolton (1990), motivated by Reagan's deficit spending politics, show how a right wing party seeking reelection may seek excess public debt to align the preferences of the median class voters against redistributive macroeconomic policies.

Biais and Perotti (2002) apply this Machiavellian logic to privatization policy in a democracy. Since state control enables labor and other insider interests to be favored directly, less wealthy voters may resist privatization to favor larger rents to SOE labor funded by taxation. In fact, in an unequal society the median voter may never choose to elect a privatizing government unless the inefficiency of state control passes some threshold. At the point at which the middle class feels excessively burdened, a right wing government may be elected with a mandate to privatize. Reelection policy would involve a strategic privatization program allocating enough shares to the median class to induce a political shift away from left wing parties whose policy would reduce the values of shareholdings. The authors show that to induce middle class voters to buy enough shares to shift political preferences, strategic rationing and underpricing should increase with wealth inequality. Interestingly, the evidence suggests that right wing privatizing governments underprice more and target more individual investors, and that underpricing is increasing in income inequality (Megginson et al., 2004).

There have been several examples of conservative governments that deliberately pursued a more diffused distribution of ownership to counter socialist or populist opposition.³⁶ An interesting early example was Japan after WWII. After the US military administration seized control of shares in large companies belonging to zaibatsu owners (who were accused of collaborationism with the military), they proceeded to distribute shares among the population.³⁷ Other examples of large-scale episodes of ownership distribution were the Thatcher and Chirac privatization programs, the Chilean privatization program, and voucher schemes in Russia and the Czech Republic. In these programs (with the exception of Russia)

³⁶ Privatization may also be captured, in which case insiders reaped more of the gains, as it has been often the experience within Latin America and many transition economies. This had repercussions on public support for privatization and reform in Latin America (Birsall and Nellis, 2002). In Russia, privatization of valuable firms at low prices and asset stripping by managers has led to even higher inequality than before (Perotti, 2002), and contributed to low political support for a market economy.

³⁷ Most Japanese, impoverished by the war, sold their shares rapidly, much like Russian workers in the early 1990s. Governance came in the hand of bank-led consortia based on crossholdings, or keiretsu. This ownership structure supported corporatist policies consistent with Japanese political preferences.

various constraints or incentives were introduced to avoid rapid resale ahead of elections, ranging from direct contribution of shares to pension funds (Chile), delay on distributing shares until after the election (Czech Republic), and financial incentives (UK and France in 1986-1987).

These models rely on the argument that financial structure is shaped by the economic and financial interests of the middle class. Yet for specific policies and historical events to leave a persistent effect, there must be forces that reinforce their effect over time. Pagano and Volpin (2006) offer one such explanation: better investor protection induces companies to issue more equity and thereby leads to a broader stock market and more liquidity, which expands the shareholder base and increases support for shareholder protection. Similarly poor investor protection may be self-reinforced, for instance via the choice to use state funding for pensions. The authors offer supporting evidence of a growing trend in equity issuance in Europe after years of growing stock market participation, and increasing political acceptance of foreign takeovers.

Median voter models share the assumption that voters directly choose policies and laws, an unrealistic assumption. Public scrutiny and direct citizen choice are hindered by limited information and coordination problems. Yet democratic voting models are useful benchmarks, and most relevant in times of crises or distress, when voter attention to financial issues is high and coordination among citizens is heightened.

The political roots of financial instability

We next review how political institutions may shape not just the distribution of access, but also of risk and return.

Incentives to create risk are critical to explain financial crises. The traditional literature attributes instability to either market or public failures. Budget and foreign exchange crises in emerging countries have long been regarded in the so called Washington consensus as the outcome of short-sighted macroeconomic policy, following excess public spending, (foreign) borrowing or monetary creation. These endogenous choices may be simply the outcome from autocratic or unaccountable regimes keen to expropriate resources. Banking crises are more likely in countries with worse political institutions and weak investor protection (Demirguc-Kunt and Detragiache, 1998; Bekaert, Harvey, and Lundblad, 2006). Johnson, Boone, Breach, and Friedman (2000) show that weak corporate governance explains exchange rate drops during the Asian Crisis better than exchange rate policy, government borrowing, or foreign lending.

Acemoglu et al. (2003b) compare the explanatory power of actual policy choices against the quality of political institutions and legal regimes. Their striking conclusion is that financial instability appears better explained by the quality of political institutions than by actual policy choices.

Roe and Siegel (2011) offer a rigorous empirical analysis of how political instability distorts the process of financial development. Conflicts over political power clearly cause financial distress, not least because they create redistributive risk for investors. Their results indicate a clear direct impact of politics on financial markets. Their rigorous approach relies on exogenous determinants of political strife such as ethnic/linguistic fractionalization and inequality, drawn from the related literature. They are able to show how political conflictuality relates robustly to income inequality.³⁸

An interesting question raised by this line of inquiry is to what extent political instability decreases with more democratic accountability. The traditional view is that financial crises reflect weak institutions and will decline as countries develop political accountability and stability. Greater constraints on executive power should lead to a stabilized macroeconomic framework. As politicians withdraw from direct control over banks, private banking should enhance efficiency and reduce instability (LaPorta et al., 2002; Djankov et al., 2003b).³⁹

Yet this is not fully consistent with the frequency and size of banking crises in middle income countries in the transition process to democratization and stable macro policy. Financial stability appears quite vulnerable precisely as countries privatize their banks, as in Chile, Russia, Mexico or Korea. Of course, all this could be attributed to regulatory inexperience. But since the 2007-08 crisis in highly developed countries, there is a recognized need to better understand the causes of excess risk creation beyond “poor institutional quality”. This promising and timely research agenda is in its infancy.

Perotti, Volpin and Vorage (2012) model a simple conceptual framing endogenizing risk-taking as a function of political accountability. The general conclusion of this model endogenizing lobbying pressure is that each regime produces its own sort of instability. An unlimited government chooses state control over banks to extract larger rents. Indeed, state banks dominate in autocratic countries (Caprio, Laeven, and Levine, 2007). In a system with an unconstrained executive power, instability arises from political expropriation funded via bank or fiscal default or inflation.

As political accountability rises, politicians become more concerned with social welfare, measured by bank efficiency, access to credit and stability. Politicians choose to allow private bank control at an intermediate stage of political accountability, when regulatory capture is still a serious risk. At this endogenous transition point, control will be assigned to groups willing to bribe in exchange for gaining privileged access. While these private banks are more efficient, political support for concentrated control leads to captured access

³⁸ Claessens and Perotti (2007) offer a more general review of the evidence on the link between inequality and financial development, without seeking to establish causality.

³⁹ State banks are often seen as a tool to collect resources (Gordon and Li, 2006). Even development banks do not appear to broaden access to finance, and tend to become rapidly decapitalized. State banks tend to lend more to state owned enterprises (Sapienza, 2004) or firms with political connections but less likely to repay, even though they pay lower rates than comparable borrowers (Faccio, 2006; Faccio, Masulis, and McConnell, 2005; Khwaja and Mian, 2004; Chiu and Joh, 2004; Claessens, Feijen, and Laeven, 2006).

to credit and related lending. The model predicts a jump in financial instability risk around privatization, as shareholders care for efficiency but do not internalize welfare losses arising from default. This is consistent with the cross country evidence on banking crises in privatizing countries at intermediate levels of accountability with a prevalence of family-controlled banks (Morck, Yavuz, and Yeung, 2011), where financial instability appears as high as in systems dominated by state banking.⁴⁰ Empirical evidence suggests the specific channel of related lending, specifically in countries with weak institutions (Cull, Haber, and Imai, 2011). The experience of the political transition of many middle-income countries such as Russia, Chile, Mexico and Korea appears consistent with this framework (LaPorta et al., 2003; Perotti, 2002; Lee, 2005).

Finally, in highly accountable systems, politicians come under pressure to allow broader access to credit and greater entry (Acemoglu, 2008; Perotti and Volpin, 2007). In principle, they also seek to limit risk taking. However, this conflicts with the goal of promoting competition, associated with easier bank entry and broader ownership. While this increases productive efficiency, it also produces its own source of risk. As more competition reduces rents, and thus incentives for solvency, an increasingly competitive banking system leads to greater risk-taking incentives even in accountable countries (Perotti, Volpin, and Vorage, 2012).

As instability has social costs, the government should increase oversight to compensate for growing risks. But democratic systems are vulnerable to pressure for broader access to credit for marginal borrowers. Unequal systems may be particularly vulnerable political incentives to promote a debt-based broader home ownership (Biais and Perotti, 2002; Rajan, 2011). This may lead to laxer standards, higher debt for financially weaker firms and households, and excessive risk creation.

Many commentators attribute the US real estate crisis in part to a deliberate push by the US government to promote home ownership for poorer households. Mian and Sufi (2009) show how economically disadvantaged areas experienced an abnormal boost to subprime mortgage lending, unrelated to their repayment capacity. Mian et al. (2012) show how US legislative voting on regulation encouraging subprime lending reflected industry contributions. Igan et al. (2012) show that mortgage lenders particularly active in lobbying were distinguished by faster credit expansion and higher losses. From a more historical perspective, Rajan and Ramcharam (2011) show how those US states that had encouraged bank entry and become more financially developed enjoyed both more credit in the land price boom in the 1920s and a more severe bust. They also demonstrate that these shocks appear to have had persistent long-term effects.

To what extent do political factors and opportunistic risk-taking overshadow traditional explanations on bank risk choices reflecting poor private governance? Beltratti and Stulz (2011) offer some clear answers, suggesting an alignment of shareholder and manager interest in the run-up to the crisis. Banks strongly in market favor in 2006 had especially poor returns in the crises. Even more explicitly, banks with better governance in the sense of

⁴⁰ A remarkable study of such a process following bank privatization is offered in LaPorta et al. (2003).

more shareholder-friendly boards performed worse. Overall, this evidence suggests bankers made choices consistent with shareholder preferences, reflecting highly leveraged risk-taking and possibly bailout expectations. Interestingly, banks in countries with stricter capital requirement regulations and more independent supervisors performed better.

The risk of financial instability persists across political regimes but it evolves, reflecting new rules of the games. Specifically, it appears to evolve from expropriation risk towards capture of access in democratizing countries. In highly accountable political systems, the risk appears to be excess credit creation, the outcome of a combination of regulatory capture and populist policies.

Conclusion

This survey has focused on the recent literature adding a broader perspective to the classic institutional view of limited government (North and Weingast, 1989) as critical to the development of the financial system. Recent theoretical work offers novel explanations of the broader financial structure and its evolution. Political economy models offer further insight beyond the descriptive wisdom on the “continental European/Japan vs. the Anglo-Saxon model,” and can better be assessed empirically. Models on the role of special interests and alliances in shaping financial access and regulation explain not only the scale but also the scope of financial intermediation, particularly the distributive effects on access and risk. But their distinct contribution is in the promise of explaining financial evolution. Explicit models define specific predictions on how political changes shape financial structure. Structural breaks such as the Great Reversals cannot be explained by time invariant legal or cultural characteristics. While these are often interpreted as ideological changes in response to shocks (i.e. Roe, 2003), to an economist such changes are endogenous. They may reflect shifts in economic preferences by pivotal groups, as in Perotti and von Thadden (2006) and Pagano and Volpin (2005), or changes in the balance of political power, as in Rajan and Zingales (2003).

This approach holds some promise in describing the dynamic process of financial development in emerging countries. While it presents a skeptical view of reforms in a weak institutional environment, it can help to focus on policy choices more resistant to regulatory capture.

Promising further research would study the political determinants of financial instability. So far this has been explored mostly at the cross-country level and in the context of developing countries. Deposit insurance and tighter regulation since the 1930s—a political response to saver concerns—reduced the frequency of banking crises in developed countries. However, since decades of financial liberalization ushered in the dramatic 2007-08 financial crisis, there is no longer any question that system-wide risk buildup affects all economies. The challenge is to understand the roots of instability across societies, and how endogenous risk-taking arises under different rules of the game.

Finally, the political economy approach can also offer insight on how such a large redistributive shock will affect political choices. A popular backlash against financial markets may have effects resembling the interwar experience. It may ultimately distort regulatory choices in favor of entrenched interests. Or it may create a general dependence on sovereign borrowing, ultimately crowding out private credit and reducing economic recovery and innovation.

References

- Acemoglu, Daron, Philippe Aghion, and Fabrizio Zilibotti. "Vertical Integration and Distance to Frontier." *Journal of the European Economic Association* 1, no. 2-3 (2002): 630-638.
- Acemoglu, Daron. "Oligarchic versus democratic societies." *Journal of the European Economic Association* 6, no. 1 (2008): 1-44.
- Acemoglu, Daron, and Simon Johnson. "Unbundling Institutions." *Journal of Political Economy* 113, no. 5 (2005): 949-995.
- Acemoglu, Daron, Simon Johnson, and James Robinson. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 91, no. 5 (2001): 1369-1401.
- Acemoglu, Daron, Simon Johnson, and James A. Robinson. "Reversal of fortune: Geography and institutions in the making of the modern world income distribution." *The Quarterly Journal of Economics* 117, no. 4 (2002): 1231-1294.
- Acemoglu, Daron, Simon Johnson, and James A. Robinson. "Institutions as a fundamental cause of long-run growth." *Handbook of Economic Growth* 1 (2005): 385-472.
- Acemoglu, Daron, Simon Johnson, James Robinson, and Yunyong Thaicharoen. "Institutional causes, macroeconomic symptoms: volatility, crises and growth." *Journal of Monetary Economics* 50, no. 1 (2003): 49-123.
- Aganin, Alexander, and Paolo Volpin. "The history of corporate ownership in Italy." In *A History of Corporate Governance around the World: Family Business Groups to Professional Managers*, 325-366. Chicago: University of Chicago Press, 2005.

- Aghion, Philippe, and Patrick Bolton. "Government domestic debt and the risk of default: a political-economic model of the strategic role of debt." *Public Debt Management: Theory and History* (1990): 315.
- Allen, Franklin, and Douglas Gale. *Comparative Financial Systems*. Cambridge, MA: MIT Press, 2003.
- Almeida, Heitor, and Daniel Wolfenzon. "A theory of pyramidal ownership and family business groups." *The Journal of Finance* 61, no. 6 (2006): 2637-2680.
- Almeida, Heitor, and Daniel Wolfenzon. "Should business groups be dismantled? The equilibrium costs of efficient internal capital markets." *Journal of Financial Economics* 79, no. 1 (2006): 99-144.
- Anan'ich, Boris. "State Power and Finance in Russia, 1802-1917: The Credit Office of the Finance Ministry and Government Control over Credit Institutions." In *The State, the Financial System, and Economic Modernization*, edited by Richard Sylla, Richard Tilly, and Gabriel Tortella, 210-223. Cambridge, UK: Cambridge University Press, 1999.
- Banerjee, Abhijit, and Esther Duflo. "Growth Theory Through the Lens of Development Economics." In *Handbook of Economic Growth. Vol. 1A*, 473-552. Elsevier Science, 2005.
- Barth, James R., Gerard Caprio, and Ross Levine. *Rethinking Bank Regulation: Till Angels Govern*. Cambridge, UK: Cambridge University Press, 2006.
- Bebchuk, Lucian, and Zveski Neeman. "A political model of investor protection." Mimeo, Harvard Law School, 2006.
- Beck, Thorsten, Asli Demirgüç-Kunt, Luc Laeven, and Ross Levine. "Finance, Firm Size, and Growth." World Bank Working Paper No. 3485, 2005.
- Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine. "Law, endowments, and finance." *Journal of Financial Economics* 70, no. 2 (2003): 137-181.
- Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine. "Law and finance: why does legal origin matter?" *Journal of Comparative Economics* 31, no. 4 (2003): 653-675.

- Beck, Thorsten, Asli Demirgüç-Kunt, and Vojislav Maksimovic. "Financial and legal constraints to growth: does firm size matter?" *The Journal of Finance* 60, no. 1 (2005): 137-177.
- Beck, Thorsten, Asli Demirguc-Kunt, and Maria Soledad Martinez Peria. "Banking Services for Everyone? Barriers to Bank Access and Use Around the World." World Bank Working Paper No. 4079, 2006.
- Beck, Thorsten, Ross Levine, and Norman Loayza. "Finance and the Sources of Growth." *Journal of Financial Economics* 58, no. 1 (2000): 261-300.
- Bekaert, Geert, Campbell R. Harvey, and Christian Lundblad. "Growth volatility and financial liberalization." *Journal of International Money and Finance* 25, no. 3 (2006): 370-403.
- Beltratti, Andrea, and René M. Stulz. "Why did some banks perform better during the credit crisis? A cross-country study of the impact of governance and regulation." Working Paper No. w15180, National Bureau of Economic Research, 2009.
- Benmelech, Efraim, and Tobias J. Moskowitz. "The political economy of financial regulation: evidence from US state usury laws in the 19th century." *The Journal of Finance* 65, no. 3 (2010): 1029-1073.
- Berglöf, Erik, and Enrico Perotti. "The governance structure of the Japanese financial keiretsu." *Journal of Financial Economics* 36, no. 2 (1994): 259-284.
- Bertrand, Marianne, Antoinette Schoar, and David Thesmar. "Banking Deregulation and Industry Structure: Evidence from the French Banking Reforms of 1985." Mimeo, University of Chicago, 2003.
- Berkowitz, Daniel, Katharina Pistor, and Jean-Francois Richard. "Economic development, legality, and the transplant effect." *European Economic Review* 47, no. 1 (2003): 165-195.
- Besley, Timothy, and Andrea Prat. "Handcuffs for the grabbing hand? Media capture and government accountability." *The American Economic Review* (2006): 720-736.
- Biais, Bruno, and Thomas Mariotti. "Credit, wages, and bankruptcy laws." *Journal of the European Economic Association* 7, no. 5 (2009): 939-973.

- Biais, Bruno, and Enrico Perotti. "Machiavellian privatization." *The American Economic Review* 92, no. 1 (2002): 240-258.
- Birdsall, Nancy and John Nellis. "Winners and Losers: Assessing the Distributional Impact of Privatization." Center for Global Development Working Paper No. 6, 2002.
- Black, Sandra E., and Philip E. Strahan. "Entrepreneurship and bank credit availability." *The Journal of Finance* 57, no. 6 (2002): 2807-2833.
- Bolton, Patrick, and Howard Rosenthal. "Political intervention in debt contracts." *Journal of Political Economy* 110, no. 5 (2002): 1103-1134.
- Botero, Juan C., Simeon Djankov, Rafael La Porta, Florencio López-de-Silanes, and Andrei Shleifer. "The regulation of labor." *The Quarterly Journal of Economics* 119, no. 4 (2004): 1339-1382.
- Broz, J. Lawrence, and Richard S. Grossman. "Paying for privilege: the political economy of Bank of England charters, 1694–1844." *Explorations in Economic History* 41, no. 1 (2004): 48-72.
- Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Silverson, and James D. Morrow. *The Logic of Political Survival*. Cambridge, MA: MIT Press, 2003.
- Caballero, Ricardo J., and Arvind Krishnamurthy. "International and domestic collateral constraints in a model of emerging market crises." *Journal of Monetary Economics* 48, no. 3 (2001): 513-548.
- Caballero, Ricardo J., and Arvind Krishnamurthy. "Excessive dollar debt: Financial development and underinsurance." *The Journal of Finance* 58, 2 (2003): 867-894
- Calomiris, Charles W. and Eugene N. White. "The Origins of Federal Deposit Insurance." In *The Regulated Economy: A Historical Approach to Political Economy*, edited by Claudia Goldin and Gary D. Libecap, 145-188. Chicago: University of Chicago Press, 1994.
- Caprio, Gerard, Luc Laeven, and Ross Levine. "Governance and bank valuation." *Journal of Financial Intermediation* 16, no. 4 (2007): 584-617.
- Caselli, Francesco, and Nicola Gennaioli. "Dynastic Management." CEPR Paper No. 3767, 2005.

- Cetorelli, Nicola, and Philip E. Strahan. "Finance as a barrier to entry: Bank competition and industry structure in local US markets." *The Journal of Finance* 61, no. 1 (2006): 437-461.
- Chiu, Ming Ming, and Sung Wook Joh. "Loans to distressed firms: Political connections, related lending, business group affiliations and bank governance." Mimeo, Chinese University of Hong Kong, 2004.
- Claessens, Stijn. "Access to financial services: A review of the issues and public policy objectives." *The World Bank Research Observer* 21, no. 2 (2006): 207-240.
- Claessens, Stijn, Simeon Djankov, and Larry HP Lang. "The separation of ownership and control in East Asian corporations." *Journal of financial Economics* 58, no. 1 (2000): 81-112.
- Claessens, Stijn, Simeon Djankov, Joseph PH Fan, and Larry HP Lang. "Disentangling the incentive and entrenchment effects of large shareholdings." *The Journal of Finance* 57, no. 6 (2002): 2741-2771.
- Claessens, Stijn, Feijen, Erik and Laeven, Luc. "Political connections and preferential access to finance: The role of campaign contributions," *Journal of Financial Economics*, Elsevier 88, no. 3 (2008): 554-580.
- Claessens, Stijn, and Enrico Perotti. "Finance and inequality: Channels and evidence." *Journal of Comparative Economics* 35, no. 4 (2007): 748-773.
- Clarke, George R. G., Robert Cull, and Mary M. Shirley. "Bank privatization in developing countries: A summary of lessons and findings." *Journal of Banking & Finance* 29, no. 8 (2005): 1905-1930.
- Cottrell, P.L., and Lucy Newton. "Banking Liberalization in England and Wales, 1826-1844." In *The State, the Financial System, and Economic Modernization*, edited by Richard Sylla, Richard Tilly and Gabriel Tortella, 75-117. Cambridge, UK: Cambridge University Press, 1999.
- Cull, Robert, Stephen Haber, and Masami Imai. "Related lending and banking development." *Journal of International Business Studies* 42, no. 3 (2011): 406-426.

- Dam, Kenneth W. "The Law-Growth Nexus: the Rule of Law And Economic Development." The Brookings Institution, 2006.
- Dari-Mattiacci, Giuseppe, Oscar Gelderblom, Joost Jonker, and Enrico Perotti. "Emergence of the Corporate Form", Working Paper, University of Utrecht, 2013.
- Degryse, Hans, Thomas Lambert, and Armin Schwienbacher. "Suffrage Institutions and Financial Development: Does the Middle Class Have a Say?" Mimeo, Université Lille, 2012.
- De Mel, Suresh, David McKenzie, and Christopher Woodruff. "Returns to Capital in Micro-enterprises: Evidence from a Field Experiment." Mimeo, World Bank, 2006.
- Demirgüç-Kunt, Asli, and Enrica Detragiache. *Financial liberalization and financial fragility*. No. 1917, World Bank Publications, 1998.
- De Soto, Hernando. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York: Bantam Books, 2000.
- De Vries, Jan, and Ad van der Woude. *The First Modern Economy: Success, Failure, and Perseverance of the Dutch Economy, 1500-1815*. Cambridge, UK: Cambridge University Press, 1997.
- Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. "The regulation of entry." *The Quarterly Journal of Economics* 117, no. 1 (2002): 1-37.
- Djankov, Simeon, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. "Courts." *The Quarterly Journal of Economics* 118, no. 2 (2003): 453-517.
- Djankov, Simeon, Edward Glaeser, Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. "The new comparative economics." *Journal of Comparative Economics* 31, no. 4 (2003): 595-619.
- Durnev, Art, Kan Li, Randall Morck, and Bernard Yeung. "Capital markets and capital allocation: Implications for economies in transition." *Economics of Transition* 12, no. 4 (2004): 593-634.
- Dyck, Alexander, David Moss, and Luigi Zingales. "Media versus Special Interests." Mimeo, University of Toronto, 2004.

- Easterly, William, and Ross Levine. "Tropics, germs, and crops: how endowments influence economic development." *Journal of Monetary Economics* 50, no. 1 (2003): 3-39.
- Engerman, Stanley L., and Kenneth L. Sokoloff. "Factor Endowments, Institutions, and Differential Paths of Growth Among New World Economies: A View from Economic Historians of the United States." In *How Latin America Fell Behind: Essays on the Economic Histories of Brazil and Mexico, 1800-1914*, edited by Stephen Haber, 260-304. Stanford, CA: Stanford University Press, 1997.
- Engerman, Stanley L., and Kenneth L. Sokoloff. "Factor endowments, inequality, and paths of development among new world economics." Working Paper No. w9259, National Bureau of Economic Research, 2002.
- Eulenburg, Franz. "Die sozialen Wirkungen der Währungsverhältnisse." *Jahrbücher für Nationalökonomie und Statistik* 122 (1924): 748-794.
- Faccio, Mara. "Politically connected firms." *The American Economic Review* (2006): 369-386.
- Faccio, Mara, Ronald W. Masulis, and John McConnell. "Political connections and corporate bailouts." *The Journal of Finance* 61, no. 6 (2006): 2597-2635.
- Feijen, Erik, and Enrico Perotti. "The Political Economy of Financial Fragility." Discussion Paper, No. 05-115/2, Tinbergen Institute, 2005.
- Fisman, Raymond. "Estimating the value of political connections." *American Economic Review* (2001): 1095-1102.
- Fisman, Raymond, and Vanessa Love. "Patterns of Industrial Development Revisited: The Role of Finance." Policy Research Working Paper No. 2877, World Bank, 2005.
- Fisman, Raymond, and Virginia Sarria-Allende. "Regulation of Entry and the Distortion of Industrial Organization." Working Paper No. 10929, National Bureau of Economic Research, 2004.
- Fogel, Kathy, Randall Morck, and Bernard Yeung. "Big Business Stability and Economic Growth; Is What is Good for General Motors Good for America?" Working Paper No. 12394, National Bureau of Economic Research, 2006.

- Galor Oded, Omer Moav, and Dietrich Vollrath. "Inequality in Land Ownership, the Emergence of Human Capital Promoting Institutions and the Great Divergence." Working Paper, Brown University, 2006.
- Gatell, Frank Otto. "Sober Second Thoughts on Van Buren, the Albany Regency, and the Wall Street Conspiracy." *The Journal of American History* 53, no. 1 (1966): 19-40.
- Gelfer, Stanislav, and Enrico Perotti. "Red barons or robber barons? Governance and investment in Russian financial-industrial groups." *European Economic Review* 45, no. 9 (2001): 1601-1617.
- Gennaioli, Nicola, and Enrico Perotti. "Codification, Access to Justice and Contractual Innovation." Mimeo, University of Amsterdam, 2012.
- Glaeser, Edward L., and Andrei Shleifer. "Legal origins." *The Quarterly Journal of Economics* 117, no. 4 (2002): 1193-1229.
- Glaeser, Edward, Jose Scheinkman, and Andrei Shleifer. "The injustice of inequality." *Journal of Monetary Economics* 50, no. 1 (2003): 199-222.
- Glaeser, Edward L., Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. "Do institutions cause growth?" *Journal of Economic Growth* 9, no. 3 (2004): 271-303.
- Gourevitch, Peter, and James Shinn. *Political Power and Corporate Control: the New Global Politics of Corporate Governance*, Princeton, NJ: Princeton University Press, 2005.
- Gordon, Roger, and Wei Li. "Tax Structures in Developing Countries: Many Puzzles and a Possible Explanation." Working Paper No. 11267, National Bureau of Economic Research, 2005.
- Gopalan, Radhakrishnan, and Todd Gormely. "The Going Public Decision and the Role of Public Equity Markets in Emerging Economies." Mimeo, Washington University, 2007.
- Greif, Avner. "Contract enforceability and economic institutions in early trade: The Maghribi traders' coalition." *The American Economic Review* (1993): 525-548.

- Guiso, Luigi, Paola Sapienza, and Luigi Zingales. "Does local financial development matter?" *The Quarterly Journal of Economics* 119, no. 3 (2004): 929-969.
- Guiso Luigi, Paola Sapienza, and Luigi Zingales. "The Role of Social Capital in Financial Development." *American Economic Review* 94, no. 3 (2004): 526-556.
- Guiso, Luigi, Sapienza, Paola, and Luigi Zingales. "Cultural Biases in Economic Exchange." Working Paper No. 11005, National Bureau of Economic Research, 2006.
- Guiso, Luigi, Paola Sapienza, and Luigi Zingales. "Trusting the stock market." *Journal of Finance* 63, no. 6 (2008): 2557-2600.
- Haber, Stephen. "Industrial concentration and the capital markets: A comparative study of Brazil, Mexico, and the United States, 1830–1930." *The Journal of Economic History* 51, no. 03 (1991): 559-580.
- Haber, Stephen. "Financial Markets and Industrial Development: A Comparative Study of Government Regulation, Financial Innovation, and Industrial Structure in Brazil and Mexico, 1840-1930." In *How Latin America Fell Behind: Essays on the Economic Histories of Brazil and Mexico, 1800-1914*, edited by Stephen Haber, 146–178. Palo Alto, CA: Stanford University Press, 1997.
- Haber, Stephen. "The Efficiency Consequences of Institutional Change: Financial Market Regulation and Industrial Productivity Growth in Brazil, 1866-1934." In *Latin America and the World Economy Since 1800*, edited by John H. Coatsworth and Alan M. Taylor, 275-322. Cambridge, MA: Harvard University Press, 1998.
- Haber, Stephen. "Banks, Financial Markets, and Industrial Development: Lessons from the Economic Histories of Brazil and Mexico." In *Macroeconomic Reform in Latin America: The Second Stage*, edited by José A Gonzalez, V. Corbo, A. O. Krueger and A. Tornell, 259-293. Chicago: University of Chicago Press, 2003.
- Haber, Stephen. "Mexico's experiments with bank privatization and liberalization, 1991–2003." *Journal of Banking & Finance* 29, no. 8 (2005): 2325-2353.
- Haber, Stephen. "Authoritarian Government." In *The Oxford Handbook of Political Economy*, edited by Barry R. Weingast and Donald Wittman. Oxford, UK: Oxford University Press, 2006.

- Haber, Stephen. "Political Institutions and Financial Development: Evidence from the Political Economy of Banking Regulation in the United States and Mexico." In *The Politics of Financial Development*, edited by Stephen Haber, Douglass C. North, and Barry R. Weingast. Palo Alto, CA: Stanford University Press, 2007.
- Haber, Stephen, Herbert S. Klein, Noel Maurer, and Kevin Middlebrook. *Mexico Since 1980*. Cambridge, MA: Cambridge University Press, 2008.
- Haber, Stephen, Douglass C. North, and Barry R. Weingast. *Political Institutions and Financial Development*. Stanford, CA: Stanford University Press, 2007.
- Haber, Stephen, Armando Razo, and Noel Maurer. *The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico, 1876-1929*. Cambridge, UK: Cambridge University Press, 2003.
- Halac, Marina, Sergio L. Schmukler, Eduardo Fernández-Arias, and Ugo Panizza. "Distributional effects of crises: the financial channel." *Economia* (2004): 1-67.
- Harstad, Bard, and Jakob Svensson. "Bribes, Lobbying and Development." Discussion Paper No. 5759, Centre for Economic Policy Research, 2006.
- Harris, Ron. *Industrializing English Law; Entrepreneurship and Business Organization*. Cambridge, UK: Cambridge University Press, 2000.
- Hause, John C., and Gunnar Du Rietz. "Entry, industry growth, and the microdynamics of industry supply." *The Journal of Political Economy* 92, no. 4 (1984): 733-757.
- Henry, Peter B. "Capital Account Liberalization, the Cost of Capital and Economic Growth." *American Economic Review* 93, no. 2 (2003): 91-96.
- Hofstede Geert. *Culture's Consequences; Comparing Values, Behaviors, Institutions and Organizations across Nations*. 2nd edition. Thousand Oaks, CA: Sage, 2001.
- Högfeldt, Peter. *The History and Politics of Corporate Ownership in Sweden*. Working Paper No. 10641, National Bureau of Economic Research, 2004.

- Horwitz, Morton J. *The Transformation of American Law, 1780-1860*. Cambridge, MA: Harvard University Press, 1976.
- Igan, Deniz, Prachi Mishra, and Thierry Tresselt. "A Fistful of Dollars: Lobbying and the Financial Crisis", *NBER Macroeconomics Annual*, University of Chicago Press, vol. 26(1), pages 195 - 230.
- Jackson, Howell E., and Mark J. Roe. "Public and private enforcement of securities laws: Resource-based evidence." *Journal of Financial Economics* 93, no. 2 (2009): 207-238.
- Johnson, Simon, Peter Boone, Alasdair Breach, and Eric Friedman. "Corporate governance in the Asian financial crisis." *Journal of financial Economics* 58, no. 1 (2000): 141-186.
- Johnson, Simon, John McMillan, and Christopher Woodruff. "Entrepreneurs and the ordering of institutional reform: Poland, Slovakia, Romania, Russia and Ukraine compared." *Economics of Transition* 8, no. 1 (2000): 1-36.
- Johnson, Simon, John McMillan, and Christopher Woodruff. "Property Rights and Finance." *American Economic Review*, 92 (2002): 1335-1356.
- Johnson, Simon, Peter Boone, Alasdair Breach, and Eric Friedman. "Corporate governance in the Asian financial crisis." *Journal of Financial Economics* 58, no. 1 (2000): 141-186.
- Keyssar, Alexander. *The Right to Vote: The Contested History of Democracy in the United States*. New York: Basic Books, 2000.
- Khanna, Tarun, and Krishna Palepu. "Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups." *The Journal of Finance* 55, no. 2 (2000): 867-891.
- Khanna, Tarun, and Yishay Yafeh. "Business groups in emerging markets: Paragons or parasites?." *Journal of Economic Literature* 45 (2007): 331-372.
- King, Robert G., and Ross Levine. "Finance and growth: Schumpeter might be right." *The Quarterly Journal of Economics* 108, no. 3 (1993): 717-737.
- Khwaja, Asim Ijaz, and Atif Mian. "Do lenders favor politically connected firms? Rent provision in an emerging financial market." *The Quarterly Journal of Economics* 120, no. 4 (2005): 1371-1411.

- Klapper, Leora, Luc Laeven, and Raghuram Rajan. "Entry regulation as a barrier to entrepreneurship." *Journal of Financial Economics* 82, no. 3 (2006): 591-629.
- Kroszner, Randall S., and Philip E. Strahan. "What drives deregulation? Economics and politics of the relaxation of bank branching restrictions." *The Quarterly Journal of Economics* 114, no. 4 (1999): 1437-1467.
- Lamoreaux, Naomi. *Insider Lending: Banks, Personal Connections, and Economic Development in Industrial New England*. Cambridge, UK: Cambridge University Press, 1994.
- Lamoreaux, Naomi, and Jean-Laurent Rosenthal. "Corporate Governance and the Plight of Minority Shareholders in the United States Before the Great Depression." Working Paper No. 10900, National Bureau of Economic Research, 2004.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. "Legal determinants of external finance." *The Journal of Finance* 52, no. 3 (1997): 1131-1150.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny. "Law and finance." *Journal of Political Economy* 106 (1998): 1113-1155.
- La Porta, Rafael, Florencio Lopez-De-Silanes, and Andrei Shleifer. "Corporate ownership around the world." *The Journal of Finance* 54, no. 2 (1999): 471-517.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. "Government ownership of banks." *The Journal of Finance* 57, no. 1 (2002): 265-301.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Guillermo Zamarripa. "Related lending." *The Quarterly Journal of Economics* 118, no. 1 (2003): 231-268.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. "What works in securities laws?" *The Journal of Finance* 61, no. 1 (2006): 1-32.
- La Porta, Rafeal, Florencio Lopez-de-Silanes and Andrei Shleifer. "The Economic Consequences of Legal Origins." *Journal of Economic Literature* (2007).
- Lee, Keun, M. Peng and K. Lee. "Institutions and Changing Performance of Corporate Groups: The Case of the Chaebol in Korea." Mimeo, Korea Institute of Finance, 2001.

- Lee, Chung. "The political economy of institutional reform in Korea." *Journal of the Asia Pacific Economy* 10, no. 3 (2005): 257-277.
- Levine, Ross. "Law, Endowments and Property Rights" *Journal of Economic Perspectives* 19, no. 3 (2005): 61-88.
- Levine, Ross. "Finance and Growth: Theory and Evidence." In *Handbook of Economic Growth. Vol. 1A*, edited by Philippe Aghion and Steven Durlauf, 865-934. Elsevier Science, 2004:
- Licht, Amir, Jordan Siegel, and Shalom Schwartz. "Egalitarianism and international investment." *Journal of Financial Economics* 102, no. 3 (2011): 621-642.
- Lindert, Peter H. "The rise of social spending, 1880-1930." *Explorations in Economic History* 31, no. 1 (1994): 1-37.
- Machiavelli, Niccolo. *The Prince*. Oxford, UK: Oxford University Press (2005).
- Malmendier, Ulrike. "Roman Shares." In *The Origins of Value: The Financial Innovations that Created Modern Capital Markets*, edited by W. Goetzmann and G. Rouwenhorst, 31-42, 361-365. Oxford, UK: Oxford University Press, 2005.
- Malmendier, Ulrike. "Law and Finance" at the Origin?" *Journal of Economic Literature* 47, no. 4 (2009): 1076-1108.
- Maurer, Noel. *The Power and the Money: The Mexican Financial System, 1876-1932*. Palo Alto: Stanford University Press, 2002.
- Maurer, Noel, and Andrei Gomborg. "When the state is untrustworthy: Public finance and private banking in Porfirian Mexico." *The Journal of Economic History* 64, no. 4 (2004): 1087-1107.
- Maurer, Noel, and Stephen Haber. "Related lending and economic performance: Evidence from Mexico." *The Journal of Economic History* 67, no. 3 (2007): 551-581.

- McGuire, Martin C., and Mancur Olson. "The economics of autocracy and majority rule: the invisible hand and the use of force." *Journal of Economic Literature* 34, no. 1 (1996): 72-96.
- McMillan, John, and Christopher Woodruff. "The Central Role of Entrepreneurs in Transition Economies." *Journal of Economic Perspectives* 16, no. 3 (2002): 153-170.
- Meggison, William L., Robert C. Nash, Jeffrey M. Netter, and Annette B. Poulsen. "The choice of private versus public capital markets: Evidence from privatizations." *The Journal of Finance* 59, no. 6 (2004): 2835-2870.
- Mian, Atif, Amir Sufi and Francesco Trebbi, "The Political Economy of the US Mortgage Default Crisis." *American Economic Review* 100, no. 5 (2010): 1967-98.
- Mian, Atif, and Amir Sufi. "The consequences of mortgage credit expansion: Evidence from the US mortgage default crisis." *The Quarterly Journal of Economics* 124, no. 4 (2009): 1449-1496.
- Mian, Atif, Amir Sufi and Francesco Trebbi. "The Political Economy of the Subprime Mortgage Credit Expansion." Working Paper, University of Chicago, 2012.
- Modigliani, Franco, and Enrico Perotti. "Security markets versus bank finance: legal enforcement and investors' protection." *International Review of Finance* 1, no. 2 (2000): 81-96.
- Morck, Randall, Daniel Wolfenzon, and Bernard Yeung. "Corporate Governance, Economic Entrenchment, and Growth." *Journal of Economic Literature* 43 (2006): 657-722.
- Morck, Randall, and Bernard Yeung. "Family control and the rent-seeking society." *Entrepreneurship Theory and Practice* 28, no. 4 (2004): 391-409.
- Morck, Randall, M. Deniz Yavuz, and Bernard Yeung. "Banking system control, capital allocation, and economy performance." *Journal of Financial Economics* 100, no. 2 (2011): 264-283.
- Musacchio, Aldo. "Law, Politics, and Finance: Creditor Rights, Contract Enforcement, and the Rise and Decline of Bond Markets in Brazil, 1850-2002." In *The Politics of Financial Development*, edited by Stephen Haber, Douglass C. North, and Barry R. Weingast. Palo Alto: Stanford University Press, 2007.

- Neal, Larry. *The Rise of Financial Capitalism: International Capital Markets in the Age of Reason*. Cambridge, MA: Cambridge University Press, 1990.
- Ng, Kenneth. "Free Banking Laws and Barriers to Entry in Banking, 1838–1860." *The Journal of Economic History* 48, no. 04 (1988): 877-889.
- North, Douglas C. "Institutions." *Journal of Economic Perspectives* 5, no. 1(1991): 97-112.
- North, Douglass C., William R. Summerhill, and Barry R. Weingast. "Order, Disorder, and Economic Change: Latin America versus North America." In *Governing for Prosperity*, ed. Bruce Bueno de Mesquita and Hilton L. Root, 17-58. New Haven, CT: Yale University Press, 2000.
- North, Douglass C., and Barry R. Weingast. "Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England." *The Journal of Economic History* 49, no. 4 (1989): 803-832.
- Ober, Josiah. *Political Dissent in Democratic Athens*. Princeton, NJ: Princeton University Press, 1998.
- Olson, Mancur. "Dictatorship, Democracy, and Development." *American Political Science Review* 87, no. 3 (1993): 567-576.
- Olson, Mancur. *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*. New York: Basic Books, 2000.
- Pagano, Marco, and Paolo Volpin. "The political economy of finance." *Oxford Review of Economic Policy* 17, no. 4 (2001): 502-519.
- Pagano, Marco, and Paolo F. Volpin. "The political economy of corporate governance." *American Economic Review* (2005): 1005-1030.
- Pagano, Marco, and Paolo Volpin. "Shareholder Protection, Stock Market Development, and Politics." *Journal of the European Economic Association* 4, no. 2-3 (2006): 315-341.
- Perotti, Enrico. "Lessons from the Russian meltdown: The economics of soft legal constraints." *International Finance* 5, no. 3 (2002): 359-399.

- Perotti, Enrico, and Armin Schwenbacher. "The political origin of pension funding." *Journal of Financial Intermediation* 18, no. 3 (2009): 384-404.
- Perotti, Enrico, and Ernst-Ludwig von Thadden. "The political economy of corporate control and labor rents." *Journal of Political Economy* 114, no. 1 (2006): 145-175.
- Perotti, Enrico, and Paolo Volpin. "Investor Protection and Entry." Discussion Paper No. 07-006/2, Tinbergen Institute, 2007.
- Perotti, Enrico, and Paolo Volpin. "Politics, Investor Protection and Competition." Mimeo, London Business School, 2012.
- Perotti, Enrico, Paolo Volpin and Marcel Vorage. "The Politics of Bank Ownership and Financial Stability." Mimeo, London Business School, 2012.
- Persson, Torsten, Gerard Roland, and Guido Tabellini. "Separation of powers and political accountability." *The Quarterly Journal of Economics* 112, no. 4 (1997): 1163-1202.
- Persson, Torsten, and Guido Tabellini. *The Economic Effects of Constitutions*. Cambridge, MA: MIT Press, 2003.
- Rajan, Raghuram. "Rent preservation and the persistence of underdevelopment." *American Economic Journal: Macroeconomics* 1, no. 1 (2009): 178-218.
- Rajan, Raghuram. *Fault Lines*. Princeton, NJ: Princeton University Press, 2011.
- Rajan, Raghuram, and Luigi Zingales. "Financial Dependence and Growth." *American Economic Review* 88, no. 3 (1998): 559-86.
- Rajan, Raghuram, and Luigi Zingales. "The great reversals: the politics of financial development in the twentieth century." *Journal of Financial Economics* 69, no. 1 (2003): 5-50.
- Rajan, Raghuram, and Luigi Zingales. *Saving Capitalism from Capitalists*. New York: Random House Business Books, 2003.

- Rajan, Raghuram, and Rodney Ramcharan. "Land and credit: A study of the political economy of banking in the united states in the early 20th century." *The Journal of Finance* 66, no. 6 (2011): 1895-1931.
- Rajan, Raghuram and Rodney Ramcharan, "The Anatomy of a Credit Crisis: The Boom and Bust in Farm Land Prices in the United States in the 1920s." Working Papers no. 18027, National Bureau of Economic Research, 2012.
- Roe, Mark. *Political Determinants of Corporate Governance: Political Context, Corporate Impact*. Oxford, UK: Oxford University Press, 2003.
- Roe, Mark, and Jordan Siegel. "Finance and Politics: A Review Essay Based on Kenneth Dam's Analysis of Legal Traditions in 'The Law-Growth Nexus'." *Journal of Economic Literature* (2009): 781-800.
- Roe, Mark, and Jordan Siegel. "Political instability: effects on financial development, roots in the severity of economic inequality." *Journal of Comparative Economics* 39, no. 3 (2011): 279-309.
- Rousseau, Peter, and Richard Sylla. "Financial Systems, Economic Growth, and Globalization." In *Globalization in Historical Perspective*, edited by Michael Bordo, Alan Taylor, and Jeffrey Williamson, 373-413. Chicago: The University of Chicago Press, 2003.
- Sapienza, Paola. "The effects of government ownership on bank lending." *Journal of Financial Economics* 72, no. 2 (2004): 357-384.
- Shleifer, Andrei, and Robert W. Vishny. "Corruption." *The Quarterly Journal of Economics* 108, no. 3 (1993): 599-617.
- Sonin, Konstantin. "Why the rich may favor poor protection of property rights." *Journal of Comparative Economics* 31, no. 4 (2003): 715-731.
- Soskice, David W., and Peter A. Hall. *Varieties of capitalism: the institutional foundations of comparative advantage*. Oxford, UK: Oxford University Press, 2001.
- Stasavage, David. *Public Debt and the Birth of the Democratic State: France and Great Britain, 1688-1789*. Cambridge, UK: Cambridge University Press, 2003.

- Stulz, Rene M., and Rohan Williamson. "Culture, openness, and finance." *Journal of Financial Economics* 70, no. 3 (2003): 313-349.
- Summerhill, William R. *Inglorious Revolution: Political Institutions, Sovereign Debt, and Financial Underdevelopment in Imperial Brazil*. Cambridge, UK: Cambridge University Press, forthcoming.
- Svensson, Jakob. "Eight questions about corruption." *The Journal of Economic Perspectives* 19, no. 3 (2005): 19-42.
- Sylla, Richard. "Political Economy of Financial Development: Canada and the United States in the Mirror of the Other, 1790–1840." *Enterprise and Society* 7, no. 4 (2006): 653-665.
- Temin, Peter. "The economic consequences of the bank war." *Journal of Political Economy* 76 (1968).
- Triner, Gail. *Banking and Economic Development: Brazil, 1889-1930*. London: Palgrave MacMillan, 2001.
- Tullock, Gordon. *Autocracy*. Boston: Kluwer Academic Publishers, 1987.
- Wallis John, and Weingast, Barry R. "Equilibrium Impotence: Why the States and Not the American National Government Financed Infrastructure Investment in the Antebellum Era." Working Paper no. 11397, National Bureau of Economic Research, 2005.
- Wright, Robert E. "Bank Ownership and Lending Practices in New York and Pennsylvania, 1781-1831." *The Business History Review* 73, no. 1 (1999): 40-60.
- Wurgler, Jeffrey. "Financial Markets and the Allocation of Capital." *Journal of Financial Economics* 58, no. 1-2 (2000): 187-214.