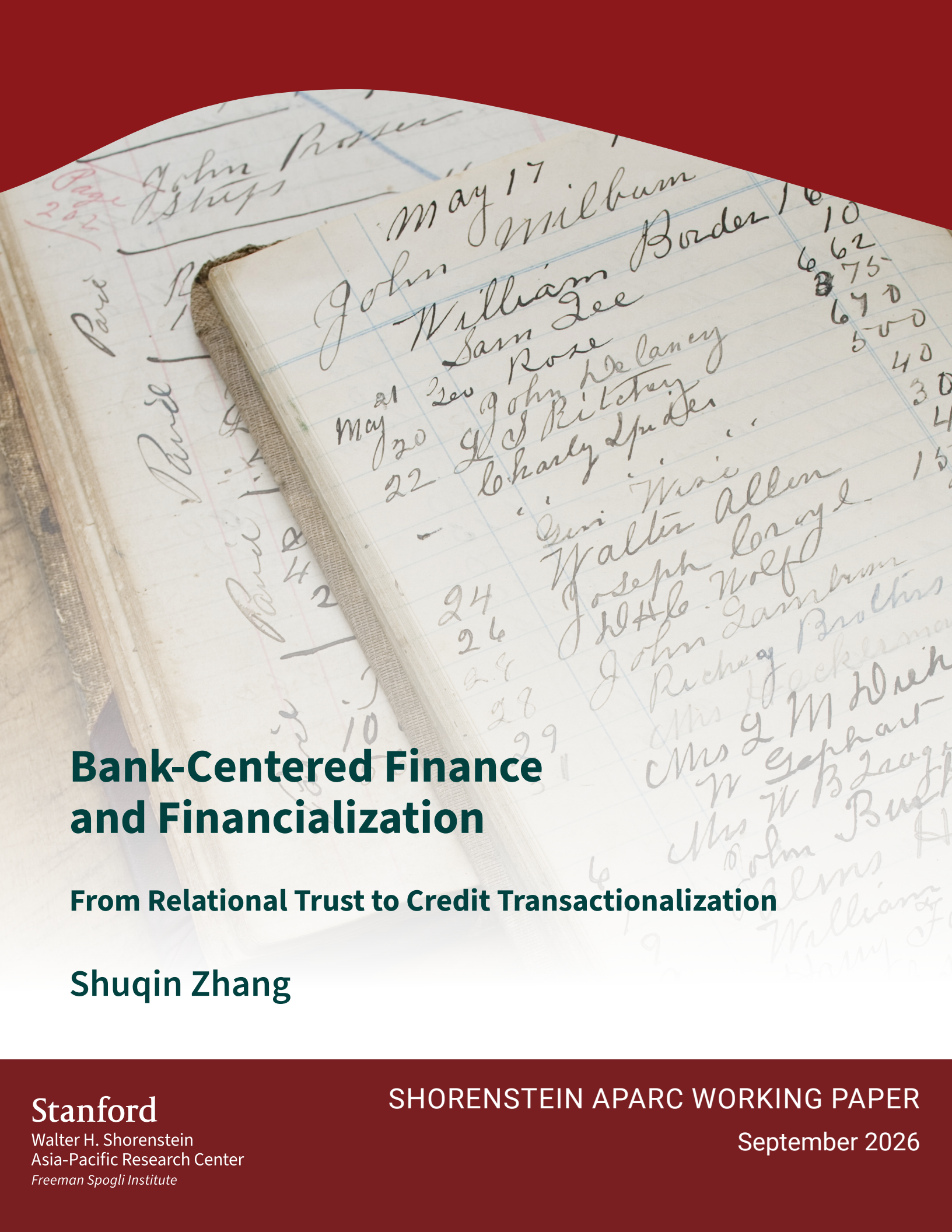




Bank-Centered Finance and Financialization

From Relational Trust to Credit Transactionalization

Shuqin Zhang

Stanford

Walter H. Shorenstein
Asia-Pacific Research Center
Freeman Spogli Institute

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Shorenstein Asia-Pacific Research Center
616 Jane Stanford Way E301
Stanford, CA 94305-6055

650.723.9741 | aparc.fsi.stanford.edu

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About the Author

Shuqin Zhang currently serves as an associate professor in the School of Sociology and Psychology at Central University of Finance and Economics in Beijing. From 2025 to 2026 he was a visiting scholar at Shorenstein APARC, where he conducted research on financial institutions and financial market operations from an organizational sociological perspective.

Summary

This paper considers whether financialization is a necessary stage of financial modernization. It argues that comparisons of financial systems should not stop at the structural distinction between bank finance and market finance, or between indirect and direct finance. Instead, they should examine how credit is identified, recognized, constrained, and circulated, and how credit risk is allocated. A bank-centered system produces credit through relational trust, organizational review, continuous monitoring, and the internalization of risk. A financialized system expands credit circulation through standardization, assetization, securitization, and market transactions. Evidence from Germany, Japan, China, and the United States suggests that bank-centered finance and financialization are not lower and higher stages of the same developmental path, but two different modes of credit organization. The key issue in financial modernization is not a choice between banks and markets, but how institutional boundaries are reorganized between credit embeddedness and credit mobility.

Bank-Centered Finance and Financialization

From Relational Trust to Credit Transactionalization

Finance is one of the most important institutional arrangements in modern economic life. It transforms savings into investment, distributes risk, facilitates payment and settlement, and allocates resources. More fundamentally, it organizes relations among states, firms, households, and markets. For late-developing countries and transitional economies, the modernization of the financial system is not merely a technical question. It concerns development models, industrial structures, state capacity, and the social distribution of risk. This raises a theoretical question: Does a modern financial system necessarily entail the expansion of capital markets, the growth of financial assets, greater securitization, and more intensive financial trading? In other words, is financialization a necessary stage of financial modernization?

This question matters because discussions of the “modern financial system” often contain an implicit directional assumption. Financial development is frequently understood as a process in which financial markets deepen, instruments become more complex, the share of direct finance rises, capital markets become stronger, and risk pricing becomes more sophisticated. The comparison between bank-based and market-based systems has long been a classic theme in the study of financial development (Zysman 1983; Levine 2002; Allen and Gale 2000). In some developmentalist or market-efficiency accounts, bank-based systems are often treated as arrangements characteristic of an early stage of financial development, whereas market-based systems are viewed as more mature, efficient, and modern. Yet comparative research on financial systems has not shown that market-based systems are naturally superior. Rather, it emphasizes that financial structures are embedded in state-market relations, industrial structures, and institutional arrangements. Equating the expansion of financial markets with

financial modernization, therefore, obscures the distinct institutional logics underlying financial systems.

The United States is often taken as the paradigmatic case of the modern financial system. Since the 1970s, the United States has moved from a regulated postwar bank-centered system toward a financialized system centered on capital markets, securitization, institutional investors, shareholder value, and household debt. Existing research has examined this transformation from several perspectives. Krippner (2005) shows that the U.S. economy has increasingly depended on financial channels for profits since the 1970s. Epstein (2005) defines financialization as the growing importance of financial motives, markets, actors, and institutions in the operation of the economy. Davis (2009) demonstrates the expanding organizational power of financial markets over firms, households, and social life. Van der Zwan (2014) summarizes financialization research along three lines: the financialization of accumulation, the shareholder-value turn in corporate governance, and the financialization of everyday life. These studies provide an important basis for understanding U.S. financialization. They also show that financialization is not simply an increase in the size of the financial sector, but a rise in the role of financial logics in economic and social life.

However, if financialization is understood only as the expansion of the financial sector, the dominance of financial capital, or a symptom of capitalist crisis, a more basic sociological question may be missed: How does financialization change the organization of credit? Finance shapes modern economies not only by mobilizing funds but also by continuously producing, confirming, and transforming credit. Corporate finance, household debt, government bonds, capital-market transactions, and the circulation of financial assets all presuppose institutionalized credit relations. Credit is not merely an economic capacity to repay. It is a fact that must be confirmed through social relations, organizational judgments, legal contracts, market devices, and institutional trust (Carruthers and Ariovich 2010). To understand financialization, therefore, it is not enough to examine the growth of financial assets, financial profits, or capital markets. We must also ask: How is credit produced? Who is qualified to be recognized as creditworthy? Who bears credit risk? And how are credit relations reorganized?

This paper, therefore, returns financialization to the basic question of how credit is organized. This perspective helps avoid a linear understanding of financial modernization as a movement from banks to markets, from indirect finance to direct finance, or from relationship-based finance to transaction-based finance. The key issue in comparing financial systems is not only the relative scale of bank finance and capital markets, but how different institutional

arrangements identify, recognize, and constrain credit, and how they allocate risk. Bank-centered, market-centered, and hybrid systems across countries may not represent different stages of the same developmental path. Rather, they may be distinct institutional arrangements that differ in how they organize credit.

From this sociological perspective, the paper reconsiders the relationship between bank-centered finance and financialization. It does not assume that financialization is the inevitable direction of financial modernization, nor that bank-centered finance must be replaced by capital-market finance. Instead, it asks how different financial systems organize credit, distribute risk, and shape relations among states, firms, households, and markets. This question provides the theoretical starting point for the analysis that follows.

Theoretical Perspective: Trust, Credit, and the Institutional Organization of Finance

The financial system discussed in this paper is not merely an intermediary mechanism connecting suppliers and users of funds. It is an institutional arrangement organized around credit. It determines who can be recognized as trustworthy, how future repayment capacity is identified and acknowledged, how credit risk is constrained and distributed, and whether debt relations can be transformed into financial objects that circulate and trade. To understand differences among financial systems, it is necessary first to distinguish between trust and credit, and then to explain how credit is produced through institutional arrangements.

Trust and Credit: Two Institutional Responses to Uncertainty

Trust and credit are often used interchangeably in everyday language, but they should be distinguished analytically. Trust is, first of all, a relational expectation under uncertainty. Actors cannot fully know the future or control the behavior of others, yet they act on the basis of past interactions, reputational accumulation, shared norms, or institutional guarantees. In his discussion of the money economy, Simmel (2004) already observed that although money formalizes and abstracts exchange relations, modern exchange does not thereby escape trust. On the contrary, trust in performance, promises, and future payment remains a crucial condition for the expansion of the money economy. Luhmann (1979) understands trust as a mechanism for reducing social complexity, enabling actors to act under incomplete information and uncertain outcomes. Giddens (1990) further extends trust to the abstract systems of modern society: people often do not know specific experts, managers, or trading partners, but they

still rely on law, expertise, monetary systems, technologies, and organizational procedures to sustain everyday life.

Credit is closely related to trust, but it is not trust itself. Credit is better understood as a socially and institutionally recognized qualification for future repayment. It refers to the capacity of a subject to fulfill debts, pay interest, repay principal, or honor promises in the future, and to have that capacity accepted by others as credible. Credit, therefore, has a temporal structure: it brings future income, future returns, and future repayment capacity into the present, enabling economic capacity not yet realized to be mobilized in advance. Corporate loans, mortgages, consumer credit, government bonds, and capital-market transactions all rest on some institutionalized recognition of future repayment. Carruthers and Ariovich (2010) argue that money and credit are not purely economic techniques but deeply social institutional arrangements in modern economic life. Credit relations bring the future into the present and make uncertain futures available for present calculation and organizational action.

Research on information asymmetry in financial economics also shows why credit relations cannot be reduced to simple price transactions. Stiglitz and Weiss (1981) show that interest rates do not clear credit markets in the same way that prices clear ordinary commodity markets, because borrower quality, adverse selection, and moral hazard affect lending decisions. Diamond's (1984) model of delegated monitoring explains why financial intermediaries exist: they can monitor borrowers on behalf of dispersed investors, thereby reducing information and monitoring costs. Fama (1985) and Rajan (1992) further explain the distinctive position of banks in credit relations through bank loans, inside information, and creditor power. Taken together, these studies show that credit relations always involve information asymmetry, uncertainty about commitment, and risk distribution.

Credit has sociological significance because it is not a naturally given economic attribute. It is an institutional fact that is identified, assessed, recorded, and recognized. Whether a firm or an individual "has credit" depends not only on objective repayment capacity, but also on how banks, rating agencies, investors, regulators, accounting systems, and market intermediaries interpret that capacity. In this sense, credit is both an economic resource and a social classification. Fourcade and Healy (2013) show that scores, ratings, and actuarial classifications in modern markets do not merely describe existing attributes; they also shape future life chances. Credit is therefore not simply repayment capacity. It is a social qualification confirmed by institutional devices.

This distinction clarifies the relationship between trust and credit. Trust can support the formation of credit, but once credit is institutionalized, standardized, and formalized, it can gain a degree of mobility independent of concrete trust relations. Credit can be embedded in concrete relations, organizational review, and reputational judgment; it can also be transformed into scores, ratings, prices, contracts, and assets. Differences among financial systems lie precisely in how they connect trust and credit. Some systems rely more heavily on ongoing relations and organizational judgment to recognize credit; others rely more on abstract institutional devices to identify, express, and transfer credit.

Credit Organization: From Repayment Qualification to Institutional Arrangement

If credit is an institutionally recognized qualification for future repayment, the core function of financial systems is not only to allocate funds but to organize credit. To organize credit is to use a set of institutional devices to transform uncertain future returns, repayment capacity, and default risk into economic relations that can be identified, constrained, distributed, and circulated. This process includes at least four links: credit identification, credit constraint, risk allocation, and credit circulation. Together, they form the basic mechanism through which this paper understands financial systems.

Credit Identification: Soft Information, Standardized Information, and Classification

The first step in credit organization is to make future repayment capacity visible. A borrower's future income, a firm's operating capacity, or a government's fiscal commitment cannot be directly observed. It must be made recognizable through information production and judgment before it can be acknowledged as credit. Credit identification can rely on relational or standardized information; it can be carried out through internal bank judgment, or through public disclosure, credit scoring, rating models, and market prices.

The literature on relationship lending provides an important basis for understanding credit identification. Petersen and Rajan (1994) and Berger and Udell (1995) show that long-term relationships between banks and firms affect loan access, borrowing costs, and loan terms. Boot (2000) argues that the core of relationship banking lies in the accumulation of proprietary information through repeated interaction with borrowers. Berger and Udell (2002, 2006) further conceptualize bank lending as a set of lending technologies, in which relationship lending exists alongside financial-statement lending, asset-based lending, and credit-scoring lending. These

studies show that banks are not simply funding intermediaries; they are information-producing organizations.

Research in economic sociology further shows that this information production is not merely technical, but is embedded in social relations and organizational networks. Granovetter's (1985) discussion of embeddedness provides a basic perspective for understanding relationship lending. Uzzi's (1999) study of corporate financing shows more directly that embedded ties between banks and firms affect access to capital and borrowing costs. Embedded relations not only transmit information; they also produce trust, reputation, and financeability. Mizruchi and Stearns (2001) similarly show that bank lending is not a purely technical calculation of risk, but is conducted through organizational relations, professional judgment, and social networks. Relationship lending, therefore, is not simply a substitute for market prices. It is a mechanism through which social embeddedness produces credit qualification.

At the same time, credit identification increasingly relies on standardized and calculable forms. Credit reports, credit scores, rating models, and big-data risk control transform borrowers into comparable, ranked, and priced risk objects. Poon's (2009) study of U.S. consumer credit scoring shows that credit scores are not merely loan-approval tools. They turn consumers into comparable, rankable, and priceable risk objects, and create technical conditions for consumer credit and mortgage loans to enter capital markets. Sutherland (2018) examines whether credit-reporting technologies weaken relationship lending, suggesting that standardized information may alter the structure of bank-borrower relations. Developments in fintech, alternative data, and machine-learning models further extend credit assessment to consumption records, digital traces, platform behavior, and other nontraditional data. Aggarwal (2021) shows that algorithmic credit scoring raises questions not only about efficiency and financial inclusion, but also about discrimination, transparency, and responsibility.

Credit identification is therefore never purely technical. Whether it relies on soft information in bank relationships or standardized data in scoring models, it defines credit boundaries: who can be seen, who can be evaluated, who is treated as lower risk, and who can obtain funds only at a higher cost. Credit identification is simultaneously a process of social classification and opportunity allocation.

Credit Governance: Contracts, Monitoring, and Institutional Control

Once credit has been identified, it must be constrained. Recognizing a subject as creditworthy does not eliminate risk. Financial institutions must use contracts, collateral, guarantees,

monitoring, regulation, disclosure, and market discipline to constrain default risk. Different forms of constraint generate different credit relations and different structures of responsibility.

Research on agency problems and incomplete contracts provides an important foundation for understanding credit constraints. Jensen and Meckling (1976) show that financing arrangements are institutional tools for addressing conflicts of interest. Aghion and Bolton (1992) argue that financial contracts involve the allocation of control rights across different states of the world. Hart and Moore (1994, 1998) emphasize that, under incomplete contracts, collateral, liquidation threats, and the transfer of control rights are central to debt governance. Credit is not simply a relation of “borrow and repay.” It is a control mechanism organized around future uncertainty.

Credit can be constrained through continuous monitoring or through contracts and market discipline. The former emphasizes information updates, risk monitoring, and behavioral constraint after loans are issued; the latter emphasizes contractual terms, disclosure, price changes, rating adjustments, and investor exit. The two are not simple substitutes; they are often combined in different ways across financial systems. The central issue is how future uncertainty is transformed into governable risk and who has the power to redefine debt relations when risk changes.

From the perspective of institutional sociology, credit constraint also concerns authority, rules, and legitimacy. Debt contracts not only specify repayment obligations but also define procedures after default. Collateral and guarantees not only reduce lending risk but also reshape the resources that borrowers can mobilize. Regulation and disclosure not only improve transparency but also determine which risks become formally visible and which remain in institutional shadows. Credit constraint is, therefore, not merely a matter of enforcing financial contracts. It is a question of how financial institutions incorporate future risk into organizational governance.

Risk Allocation: Balance Sheets, Market Transfer, and State Backstops

Every credit relation contains the possibility of non-repayment. A financial system must therefore identify and constrain credit, but it must also determine who bears the risk. Risk can remain on the balance sheet of a lending institution or be transferred to other investors or public institutions through guarantees, insurance, securitization, derivatives, and market transactions. Risk allocation is not merely a technical arrangement. It is a redefinition of institutional power and responsibility.

In a more traditional lending relation, a lender issues and holds a loan, so risk largely remains on its balance sheet. This arrangement strengthens incentives for screening and monitoring,

but it may also delay the recognition of risk. In more marketized arrangements, credit risk can be split and transferred through securitization, guarantees, insurance, credit derivatives, and secondary trading. Risk transfer can expand credit supply and investor participation, but it can also disperse responsibility and blur the lines among originators, lenders, rating agencies, and final investors.

Minsky (1986) reminds us that financial systems tend to underestimate risk and expand leverage in prosperous periods, normalizing increasingly fragile debt structures. Pistor's (2013) legal theory of finance emphasizes that the enforceability and liquidity of financial assets depend heavily on legal structures, and that financial systems are hierarchical: in crises, the state and central bank often become the ultimate providers of liquidity and credit support. Mehrling (2011) similarly shows that credit and liquidity in modern finance are not simply spontaneous market outcomes but are closely tied to central banks, dealer systems, and lender-of-last-resort arrangements. Risk allocation, therefore, concerns not only private contracts but also public authority and institutional backstops.

This point is central to the paper. The differences among financial systems lie not only in financing channels but also in the organization of risk responsibility. Whether credit risk is held by banks, borne by market investors, transferred through insurance and derivatives, or returned to the state and central bank during a crisis is crucial for understanding the institutional logic of financial systems.

Credit Circulation: Assetization, Infrastructure, and Tradability

Credit relations do not naturally possess liquidity. For a concrete debt relation to become a financial object that can be held, pledged, transferred, and traded in markets, it must go through processes of standardization, quantification, legalization, and infrastructuralization. Only when debt relations are converted into comparable risk grades, enforceable legal contracts, tradable asset forms, and clearable market objects can credit detach from the original relation between creditor and debtor and gain mobility.

Financial sociology research and market studies provide important explanations of this process. Callon (1998) argues that markets are not naturally given arenas of exchange but are constituted by economic knowledge, calculative devices, technical tools, and institutional arrangements. MacKenzie (2006) further shows that financial models do not merely describe markets; they also help shape them. Knorr Cetina and Preda (2005) show that modern financial markets depend on abstract devices such as screens, price flows, trading systems, and expertise. The

tradability of credit is therefore not a natural property but an institutional outcome produced by law, models, ratings, accounting, trading platforms, and clearing mechanisms.

Credit ratings and market infrastructure are particularly important. Sinclair (2005) shows that rating agencies do not merely provide information; they also perform credit governance in global capital markets. Ratings compress complex debt relations into grade signals that investors can understand, allowing debt to circulate across regions and institutions. Credit circulation is thus not simply the result of market demand; it is built on an infrastructure of classification, measurement, rating, contracts, and trading systems.

Recent work on assetization pushes this issue further. Langley (2021) argues that scholars of financialized capitalism should examine not only the expansion of financial markets but also how things are turned into assets. Birch and Ward (2024) stress that assets are organized around capitalizable income streams and property claims over future returns. Golka et al. (2024) further argue that assetization is not merely a technical process but also a site of financial power struggles. For this paper, the assetization literature suggests that the mobility of credit does not come simply from market demand; it arises from the institutional capacity to transform future repayments, debt relations, and income expectations into asset forms.

The key question of credit circulation is therefore not simply whether credit can be traded, but what kind of credit can be traded, through what devices, and how risk and responsibility are redistributed after trading. Once credit is assetized and transactionalized, monitoring, trust, and responsibility from the original relation may be reorganized. Credit circulation can expand financing capacity, but it can also produce dispersed responsibility and systemic fragility.

Analytical Framework: Embeddedness, Boundaries, and Mobility

On this basis, the paper understands credit organization through three dimensions.

The first is the degree of credit embeddedness. Credit always requires some basis of trust, but trust can be embedded in various institutional relations. It may be embedded in long-term bank-firm relations, or in state regulation, legal contracts, rating systems, trading platforms, and market liquidity. Different degrees of embeddedness imply different forms of knowledge. Some credit is based primarily on soft information, organizational experience, and relational judgment; other credit is based more on standardized data, model calculation, and market prices. The former is more likely to generate durable commitments; the latter more easily enables cross-regional, cross-institutional, and anonymous credit circulation.

The second dimension is credit boundaries. Every credit system not only produces credit but also defines credit qualification. Who can be seen, who can be evaluated, who can be recognized as creditworthy, and who can obtain low-cost funds are questions of credit boundaries. These boundaries may be shaped by collateral, organizational reputation, industrial position, state backing, rating grades, credit scores, and market expectations. A credit system appears to allocate funds, but it also classifies firms, households, and governments, shaping their access to future economic opportunities. Credit organization is, therefore, also a system of social classification and opportunity allocation.

The third dimension is the form of credit mobility. Credit can be held or transferred; it can remain within a specific relationship or enter market trading; it can remain tightly bound to concrete actors or be abstracted into assets and risk grades. Different forms of mobility generate different institutional consequences. When credit is overly embedded in concrete relations, it may produce relational lock-in, hidden risk, and soft budget constraints. When credit is excessively detached from concrete relations, it may generate dispersed responsibility, short-termism, and systemic fragility. The key question is not whether credit should be mobile, but within what institutional boundaries credit should circulate and how risk and responsibility are reorganized in that process.

The analysis that follows, therefore, does not treat bank-centered systems and financialized systems as a simple contrast between tradition and modernity or between low and high stages of development. It treats them as two different modes of credit organization. The purpose is not to decide whether banks or markets are superior, but to examine how different financial systems organize credit, structure trust, and distribute future risk.

Producing Credit Through Trust: The Institutional Logic of Bank-Centered Finance

A bank-centered system, as used here, does not refer simply to a financial structure in which banks account for a large share of financing. Nor does it refer only to “indirect finance” as opposed to “direct finance.” It refers to a financial arrangement that produces credit through relational information, organizational review, continuous monitoring, and institutional embeddedness. In such a system, credit is not primarily discovered through immediate prices in anonymous markets. It is identified, recognized, and constrained through ongoing relations between banks and firms, banks and states, banks and industrial organizations, and banks and local communities.

Thus, this section does not ask in general terms whether banks or markets are better. It examines how bank-centered systems produce credit boundaries in different institutional environments. Credit boundaries refer to which actors are more easily seen by banks, recognized as credit-worthy, and incorporated into long-term financing relations, and which actors are excluded because they lack collateral, relationships, organizational position, or state backing. The financial systems of Germany, Japan, and China all exhibit bank-centered features, but they differ significantly. Germany represents a relationship-banking system embedded in coordinated capitalism. Japan represents a main-bank system embedded in corporate groups and crisis governance. China represents a bank-dominated system embedded in state development strategies, local government credit, and collateral logics. These three forms show how bank-centered systems produce credit through relational trust while also defining credit qualification, sedimenting risk, and generating institutional tensions.

Bank-Centered Systems as Relationship-Based Credit Organization

From the perspective of credit organization, the key to bank-centered systems is not that banks replace markets, but that banks identify and manage credit through continuing relationships. Market prices aggregate public information, but many factors that matter for credit judgment do not appear fully in public prices. The stability of a firm's operations, managerial reputation, industrial relations, local resources, supply-chain position, repayment willingness, and restructuring potential in crisis are often recognized through long-term interaction and organizational review. Bank-centered systems transform future uncertainty into credit relations that can be lent against, monitored, and adjusted.

This point extends the earlier discussion of credit identification. Relationship-based credit not only provides information; it also produces boundaries. The more banks rely on long-term relationships, organizational experience, and institutional embeddedness, the more they tend to identify actors already located within existing networks. Stable firms, manufacturing sectors, large corporate groups, state-owned sectors, local government platforms, and actors with collateral are more easily incorporated into credit relations. New firms, asset-light firms, and actors without historical records or organizational backing may find it more difficult to be recognized as creditworthy. Bank-centered credit production is therefore not fully open. It reduces uncertainty through relationships and, at the same time, uses them to define the threshold for entry into the credit system.

Differences in financial structures among major economies provide a basic background for this discussion. Measured by bank credit to the private sector as a share of GDP and the market capitalization of listed companies as a share of GDP, the United States shows a clear advantage in capital markets; Germany and China have relatively smaller stock markets and still attach high institutional importance to bank credit; Japan displays a mixed structure, with both substantial bank credit and a large stock market.

TABLE 1 Bank credit and stock market capitalization in major economies, 2023–24

Country	(1)	(2)	Financial-structure characteristics
United States	46.84	216.29	Highly developed capital markets; bank credit is relatively less dominant.
Germany	76.38*	43.63	Bank credit remains institutionally important; stock market is relatively limited.
Japan	120.47	156.69	Bank credit and capital markets coexist; historically shaped by the main-bank tradition.
China	194.17	62.72	Bank credit is highly important; capital markets remain supplementary.

Note: Column headings are as follows: (1) Bank credit to the private sector divided by GDP (%) (2) Market capitalization of listed companies divided by GDP (%). Data used is latest available.

*Data is from 2023; all other figures are from 2024.

Source: World Bank n.d.; compiled by MacroVedia.

These data do not prove that any country is a pure bank-centered system. They do, however, suggest that major economies have not simply converged toward the U.S. model of market-centered finance. More importantly, the institutional meaning of bank credit should not be assessed by scale alone. It must be understood through how credit is identified and organized. Germany, Japan, and China reveal that bank-centered finance is not a single model. It forms distinct credit boundaries in different institutional environments.

Three Credit Boundaries in Bank-Centered Finance

The following three cases do not represent a simple ranking of bank-centered systems. They show how credit boundaries are produced in different institutional settings. Germany illustrates a credit boundary organized around *Mittelstand* firms, local banks, and industrial coordination. Japan illustrates a credit boundary organized around main-bank ties, corporate groups, and crisis governance. China illustrates a credit boundary organized around state strategy, local government credit, and collateral logics.

Germany: Mittelstand Firms, Hausbanks, and Industrial Coordination

Germany's *Hausbank* system is an important reference point for understanding bank-centered finance. Its significance lies not merely in bank size or lending volume, but in relatively stable relational financing between banks and firms. Deeg (1999) shows that German banks were deeply embedded in corporate finance and industrial coordination. Vitols (2005) argues that changes in the German banking system must be understood through varieties of capitalism and institutional complementarities. Hall and Soskice (2001) emphasize that the institutional strengths of coordinated market economies such as Germany arise from complementarities among finance, vocational training, corporate governance, and labor relations.

The key point is not that banks simply replace capital markets, but that relationship banking and manufacturing organization developed institutional complementarities in German industrial development. Manufacturing firms, especially the Mittelstand, often rely on accumulated technical expertise, stable employment, supply-chain ties, and incremental innovation. These qualities may not be fully visible in short-term market prices, but they can be recognized through continuing bank-firm relations, local knowledge, and industry-specific expertise. Hausbanks are not only providers of loans; they are organizational nodes in long-term finance, information accumulation, and supervisory coordination. Credit is not merely a figure in financial statements; it is a relational qualification generated by a firm's position in industrial networks, local economies, and long-term operations.

The financing structure of German small and medium-sized enterprises (SMEs) also illustrates the importance of this relationship-based credit organization. The OECD's (2026) SME financing report shows that in 2023, loans from banks and savings banks covered about 32 percent of financing requirements for German SME investment projects. Loans remained the most important external source of finance for German SMEs. Public funds were another important external source, accounting for about 13 percent of total investment financing. This structure shows that German SME finance does not rely entirely on anonymous capital markets. It is jointly supported by bank loans, savings banks, public funds, and industrial institutions.

Yet the German model is changing as well. Braun (2020) describes the transformation of German finance as one of "strong firms, weak banks," arguing that the growing strength of large firms and export sectors has loosened traditional bank-firm relations. Deeg and Hardie (2016) remind us that bank relationships should not be equated automatically with the supply of patient capital; who supplies patient capital, and under what institutional conditions, must be analyzed concretely. Schmidt (2019) further argues that the German financial system has

become hybrid: savings banks and cooperative banks continue to play a lending role, while large private banks have gradually retreated from their former dominant position in corporate finance and governance.

The German case, therefore, has a double significance. It shows that bank-centered finance can be embedded in advanced capitalism and can support manufacturing and SME credit through relational information. It also shows that relationship banking is not a static arrangement. It changes with corporate internationalization, capital-market development, and the profit pressures of banks themselves. Germany's credit boundaries are continually reshaped through manufacturing networks, local banks, public funds, corporate internationalization, and bank marketization.

Japan: Main Banks, Corporate Groups, and Crisis Governance

Japan's main-bank system provides another form of bank-centered finance. In the decades before the 1990s, it was especially deeply embedded in corporate groups, cross-shareholdings, and crisis governance. Aoki et al. (1994) show that the main bank was not only a lender but also an important organizer of corporate monitoring, information aggregation, and crisis management. Hoshi et al. (1990) further show that bank relationships reduced the costs of financial distress because main banks held firm-specific information and could coordinate creditors, participate in restructuring, and monitor management.

The importance of the Japanese case lies in its clear demonstration of ex post governance. In anonymous capital markets, investors can usually exit by selling securities. In a main-bank system, however, the long-term creditor relation between banks and firms makes simple exits more difficult. When firms face distress, main banks may participate in debt restructuring, creditor coordination, managerial monitoring, and even rescue. The Japanese main-bank system, therefore, not only produces credit before distress but also maintains credit *after* distress. Through long-term debt relations and organizational embeddedness, it turns corporate crisis into a governable credit relation.

This model was closely connected to Japan's postwar corporate group structure. Main banks, corporate groups, cross-shareholdings, and long-term employment jointly constituted a relatively stable governance arrangement. Banks provided not only funds but also an organizational trust endorsement: firms could obtain credit partly because they were located within main-bank, corporate-group, and industrial networks. Credit was not an isolated attribute of an individual firm; it was a relational qualification organized by the bank-corporate group-industrial network. Japan's credit boundaries thus formed around corporate groups, main-bank ties, and

organizational affiliation. Firms inside these networks could obtain long-term funds and crisis support more easily; firms outside them could not access the same organizational backing.

The Japanese case also demonstrates the risks of relational credit. After the asset bubble burst in the 1990s, the Japanese banking system faced prolonged problems of nonperforming loans. Caballero et al. (2008) show that banks continued lending to inefficient firms with weak prospects, delaying exit and industrial restructuring while crowding out healthier firms. Peek and Rosengren (2005) similarly argue that impaired banks continued to lend to troubled firms, producing credit misallocation. Recent work continues this line of inquiry. Nakamura (2023) reexamines the long history of zombie firms in Japan since the 1970s, showing that zombie firms were not limited to the “lost decade” but reappeared in different forms during the main-bank era, after the bubble burst, and after the global financial crisis. This suggests that although the Japanese main-bank system has changed, tensions among bank relations, shareholder governance, corporate rescue, and allocative efficiency remain significant issues in Japan’s financial system.

The Japanese case thus reveals a core contradiction of bank-centered finance. Long-term relations in the main-bank system can reduce the costs of financial distress and provide rescue and coordination in crisis. But when rescue turns into repeated rollover lending and protection of inefficient firms, relational credit can become a soft budget constraint and delay the exit of inefficient firms.

China: State Embeddedness, Local Credit, and the Logic of Collateral

China’s bank-dominated system is a distinctive form of bank-centered finance. Unlike Germany’s coordinated–capitalist relationship banking or Japan’s corporate-group main banking, China’s bank-centered system is more deeply embedded in state development strategies, local government credit, state-owned enterprise credit, land credit, real-estate collateral, and macroeconomic management. It is not simply a firm-bank relationship, nor is it traditional private-relationship banking. It is a state-embedded form of credit organization.

China’s financial system has long centered on bank credit. He and Wei (2023) show that although China has stock markets, bond markets, and shadow-banking channels, these channels remain intertwined with a massive banking system. Song et al. (2011) show that the allocation of financial resources in China is closely related to state-owned enterprises, private firms, factor prices, and the structure of growth. Early on, Allen et al. (2005) argued that Chinese economic growth cannot be fully explained by conventional law-and-finance theories, and that institutional arrangements outside the formal financial system also matter. These studies suggest that

China's bank-centered system cannot be understood only by the scale of lending. It must be understood through institutional relations among the state, banks, firms, and local governments.

The distinctiveness of China's bank-dominated system lies first in the relation between credit production and state capacity. Bank credit is oriented not only toward firm profitability, but also toward national development goals, local growth tasks, and macroeconomic management. Infrastructure construction, industrialization, urbanization, real-estate expansion, and countercyclical regulation have all depended on large-scale credit mobilization through the banking system. Second, credit production is closely connected to collateral. Land, real estate, state-owned assets, and implicit government guarantees have long formed important credit foundations for the expansion of bank lending. Third, bank credit is deeply connected to local public finance. Local government financing vehicles, land finance, and urban-investment debt have tied bank credit, local fiscal systems, and the real-estate cycle together.

Data also show the centrality of bank lending in China's aggregate financing. At the end of 2024, China's aggregate financing to the real economy stood at RMB 408.3 trillion. RMB loans to the real economy stood at RMB 252.5 trillion, accounting for about 61.8 percent of the total. Even as bond markets, stock markets, and other financing channels have developed, bank lending remains the core channel of credit organization in China.

TABLE 2 Renminbi loans in China's aggregate financing to the real economy, end of 2024

Indicator	Amount	Share of aggregate financing stock
Aggregate financing to the real economy	RMB 408.3 trillion	100%
RMB loans to the real economy	RMB 252.5 trillion	About 61.8%
Other financing channels	About RMB 155.8 trillion	About 38.2%

Source: National Bureau of Statistics of China 2025.

The key significance of the Chinese case is that credit boundaries are not primarily defined by private bank-firm relationships. They are shaped by national strategies, ownership structures, local government credit, and collateral systems. State-owned enterprises, local government platforms, infrastructure projects, and actors with land or real estate collateral are more easily incorporated into bank credit systems. Asset-light firms, technology-innovation firms, and small- and medium-sized private enterprises often face greater informational uncertainty and financing constraints. China's bank-centered system thus produces credit while also constructing credit boundaries around state endorsement, collateral, and local development tasks.

After the 2008 global financial crisis, these features became more evident. Chen et al. (2020) show that the loan expansion associated with China's post-crisis stimulus was institutionally linked to the subsequent rise of shadow banking. Cong et al. (2019) show that credit expansion under stimulus was not evenly distributed across firms but was associated with political connections, firm attributes, and resource allocation structures. Zhang and Tsai (2024) further argue that Chinese shadow banking served not only the financing needs of private firms but also local public finance and land finance, creating a bifurcated structure of "enterprise shadow" and "fiscal shadow." These studies show that China's bank-centered system is not confined to the formal banking sector; it extends through local governments, financing platforms, real estate, and shadow banking.

China's state-embedded banking system now faces pressure to reorganize its credit foundations. The correction in real estate markets weakens the logic of land and property collateral. Local debt and risks associated with local government financing vehicles (LGFVs), including urban-investment platforms,¹ reveal the boundaries of local government credit. Traditional bank risk-control models have difficulty identifying the creditworthiness of technology-innovation firms and asset-light firms. Financing constraints for SMEs show that bank-centered systems remain limited in identifying non-collateralized, non-state, and non-relationship-based credit. China's financial problem is therefore not simply that capital markets are underdeveloped, nor that direct finance is insufficient—the existing bank-based credit organization is confronting new economic and risk structures.

Institutional Tensions of Relational Credit

The cases of Germany, Japan, and China show that bank-centered finance is not a single institutional form. It can exist in coordinated capitalism, corporate-group systems, and state-embedded developmental arrangements. These cases share one basic proposition: bank-centered systems produce credit through relational trust. Yet that trust is always embedded in specific organizational and institutional structures. It therefore both produces credit and defines credit boundaries.

1 Urban-investment platforms, commonly known in Chinese as *chengtou* (城投), are a specific type of LGFV used by local governments to finance infrastructure, land development, and related public projects. Although formally corporate entities, they have often relied on land-related revenues and implicit local government backing.

TABLE 3 Credit organization in three types of bank-centered systems

Type	Basis of credit identification	Credit boundary	Main advantage	Main risk
Germany: relationship banking	Hausbanks, local knowledge, industrial networks, SME operating records	Manufacturing, SMEs, industrial-coordination networks	Supports incremental innovation and long-term investment	Weakening bank role; loosened relations after firm internationalization
Japan: main banking	Main-bank relations, corporate groups, cross-shareholdings, crisis-governance experience	Corporate groups and main-bank networks	Reduces distress costs and provides ex post governance	Zombie lending and protection of inefficient firms
China: bank-dominated system	National strategy, local government credit, SOE credit, land and real-estate collateral	SOEs, local platforms, infrastructure, collateral-rich actors	Supports developmental mobilization and macroeconomic management	Local debt, real-estate risk, and financing constraints for private and asset-light firms

Source: Author.

Taken together, these three systems reveal three tensions inherent in relational credit: the tension between informational advantage and credit boundaries, between risk internalization and risk concealment, and between long-term commitment and exit difficulty.

First, there is tension between informational advantage and credit boundaries. Bank-centered systems are strong in accumulating soft information through long-term interaction and identifying credit qualities that public market prices cannot capture. The relation between German Hausbanks and SMEs, Japanese main banks and corporate groups, and Chinese state banks and state-owned enterprises, local governments, and infrastructure projects all demonstrate this informational advantage. Yet relationships can also solidify credit boundaries. Actors already inside bank networks, corporate groups, state projects, or collateral systems can obtain credit more easily and continuously. New firms lacking historical records, organizational backing, government credit, or collateral may be excluded. Relational trust reduces uncertainty, but it can also lock credit qualification into existing organizations and sectors.

Second, there is tension between internalizing risk and concealing it. Bank-centered systems typically require banks to hold loans and bear default risk, thereby giving them incentives to continuously monitor borrowers. Risk internalization strengthens screening and post-lending supervision and avoids excessive fragmentation and transfer of credit risk. Yet when risk is sedimented within bank balance sheets, corporate-group relations, or state regulatory systems, it

can be recognized only with delay. Japan's nonperforming loans and zombie firms show how banks may sustain inefficient firms through rollovers and continued lending. China's local debt and real-estate risks show that when bank credit is tied to local finance, land collateral, and policy goals, risks may be temporarily stabilized through restructuring, swaps, or implicit guarantees without truly disappearing.

Third, there is tension between long-term commitment and exit difficulty. Bank-centered systems can support long-term investment because banks need not express judgment through immediate exit. German relationship banks in coordinated capitalism, Japanese main banks in corporate rescue, and Chinese bank finance for infrastructure and industrial policy all show that bank-centered systems can provide longer-term credit support under certain conditions. This commitment is important for manufacturing upgrading, infrastructure, and incremental innovation. Yet long-term commitment can weaken exit mechanisms. When firms, local government platforms, or inefficient sectors expect continued lending even after failure, credit relations may weaken market discipline and produce soft budget constraints, inefficient investment, and resource misallocation.

The double-sided character of bank-centered finance is therefore not simply a matter of advantages and disadvantages. It arises from the structural contradiction of relational credit. Credit needs trust, but excessive reliance on relational trust can allow existing relations to monopolize credit qualification. Credit needs risk-bearing, but when risk is too deeply lodged in banks, corporate groups, and state systems, risk recognition may be delayed. Credit requires a long-term commitment, but when that commitment becomes over-institutionalized, exit and resource reallocation may be weakened. The institutional logic of bank-centered finance unfolds through these tensions.

These tensions help explain the institutional appeal of financialization. Financialization attempts to overcome the limits of relational credit through market prices, ratings, securitization, and trading mechanisms. It seeks to detach credit from concrete bank relations and turn it into a comparable, divisible, priceable, and mobile financial asset. Financialization does not eliminate credit problems. It organizes credit in another way, one that also contains its own vulnerabilities.

Credit Transactionalization: The Emergence of a Market-Centered System

The key feature of a market-centered system is not simply the expansion of capital markets, the rise of financial profits, or the complexity of financial instruments. It is the gradual extraction of credit from concrete bank relations, local knowledge, and continuous monitoring, and its transformation through institutional devices into financial assets that can be rated, divided, securitized, and traded.

The United States is the most important empirical setting for this transformation. Yet the point here is not to write a financial history of the United States. The United States is used as a case of the formation of credit transactionalization. The question is not merely what happened at which moment in U.S. financial history. It is how credit originally embedded in bank balance sheets and lending relations became an object that could be priced, held, pledged, transferred, and traded in markets. How did this transformation change the positions of financial institutions, firms, and households? Why did it reduce the need for direct relational trust while creating greater dependence on ratings, models, liquidity, and market infrastructure?

A Market-Based Exit: The Loosening of the Regulated Banking Order

The formation of U.S. financialization must first be understood in relation to the pressure on the postwar regulated banking order. The postwar U.S. financial system did not exclude capital markets, but commercial banks, thrift institutions, and regulated financial intermediaries still played important roles in credit creation, housing finance, corporate finance, and community finance. Interest-rate regulation, separation of financial activities, deposit insurance, local banking structures, and relatively stable corporate financing relations constituted the institutional foundation of the postwar financial order. This was not a purely marketized credit system; it was a credit organization constrained by state regulation and institutional rules.

After the 1970s, this credit organization came under pressure. High inflation, high interest rates, stagflation, pressure on industrial profits, the reorganization of the dollar system, and fiscal strain made it increasingly difficult for the regulated banking system to absorb funds and organize credit stably. In a high-interest-rate environment, banks and thrift institutions constrained by deposit-rate regulation could not pay depositors competitive returns. Funds flowed into money market funds, commercial paper, repurchase agreements, and other market-based instruments. Financial disintermediation emerged: savers and investors no longer had

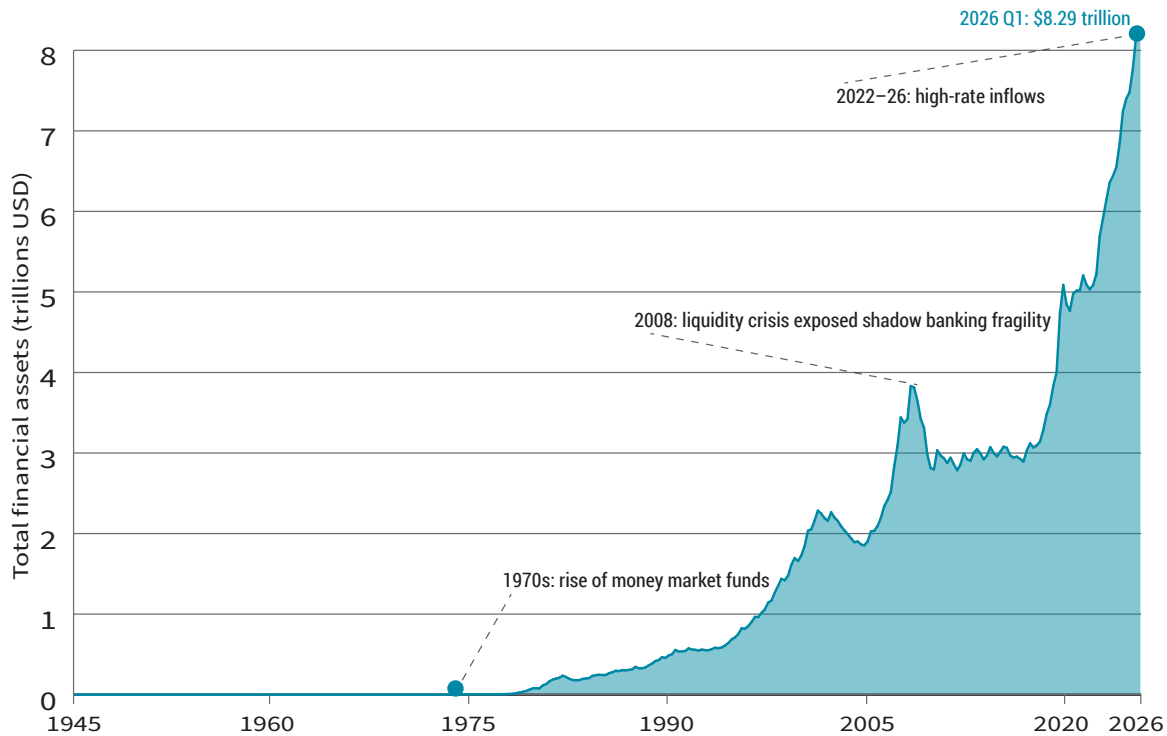
to enter the credit system through bank deposits, but could seek higher returns and more flexible liquidity in money and capital markets. The rise of market-based intermediation and shadow-banking chains also reorganized the institutions through which liquidity and credit were created, funded, and transmitted (Adrian and Shin 2010; Pozsar et al. 2010).

Krippner's (2011) explanation of U.S. financialization is especially instructive. She argues that U.S. financialization was not a single plan designed in advance by policymakers, but rather an outcome that emerged as the state sought to manage post-1970s economic, social, and political problems. In this sense, financialization emerged in response to pressure: in the face of slowing growth, distributive conflict, inflation, and fiscal constraint, financial-market expansion became an institutional path for temporarily displacing conflict and reorganizing resources. Helleiner (1994) similarly shows that the opening and expansion of financial markets were closely linked to state policy, the dollar system, and changes in the international political economy, rather than to a natural evolution of markets.

Figure 1 shows the long-term growth of U.S. money market fund assets. Its significance is not merely that money market funds grew in scale, but that funds formed a new market-based liquidity pool outside the bank deposit system. Money market funds began to rise after the 1970s. The liquidity pressures surrounding the 2008 crisis exposed structural vulnerabilities in money market funds and their dependence on short-term liquidity (Bouveret et al. 2022). After 2022, high interest rates again led to large inflows into money market funds. A market-centered system does not simply abolish banks. Rather, it continuously generates “deposit-like” arrangements and short-term liquidity mechanisms outside the banking system.

From the perspective of credit organization, the expansion of money market funds means changes in the sources of credit funding and the basis of liquidity. Traditional bank-centered systems organize credit through deposits, loan relations, and regulatory frameworks. Money market funds, commercial paper, repurchase agreements, and securitization instruments allow funds to bypass bank balance sheets and re-enter credit circulation through market channels. Banks remain present, but they are no longer the sole center of credit organization. Credit increasingly depends on market prices, short-term funding, institutional investors, and financial products.

FIGURE 1 Total assets of U.S. money market funds, 1945 Q4–2026 Q1



Source: FRED 2026.

Credit Assetization: From Loan Relations to Tradable Securities

The core mechanism of credit transactionalization is securitization. In traditional bank lending, loans are ongoing credit relations between banks and borrowers. Banks originate loans, hold loans, monitor borrowers, and bear losses when borrowers default. Credit is embedded in concrete relations: banks must examine borrower income, assets, operations, collateral, and willingness to repay, and they must continue to monitor and manage risk after lending.

Securitization changes this logic. Through securitization, loans are no longer merely relational claims on bank balance sheets. They can be pooled, transferred to special-purpose vehicles, divided into securities with different risk grades, and sold to investors. Mortgages, auto loans, credit card receivables, student loans, and other future cash flows can, under certain conditions, be transformed into asset-backed securities. Credit is abstracted from concrete lending relations and becomes a financial asset that can be rated, tranced, priced, insured, transferred, and traded.

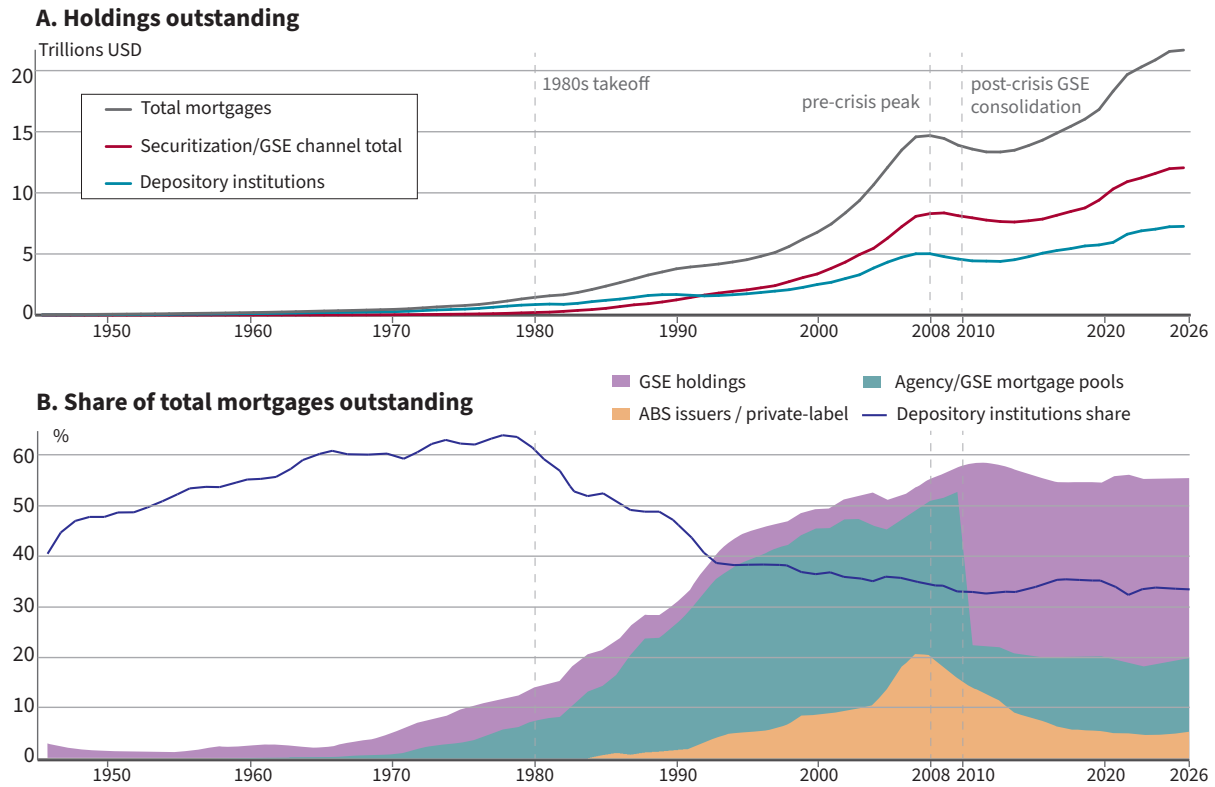
This change is often described as a shift from “originate and hold” to “originate and distribute.” In the former model, banks originate loans and continue to bear risk, giving them incentives to screen and monitor. In the latter, loan originators can sell loans into securitization chains, and credit risk can be split, packaged, and transferred to different investors. The institutional innovation of financialized systems lies in making credit risk detachable from the original lending relation and mobile in markets.

Figure 2 shows the changing structure of U.S. mortgage holdings. The share of mortgages held by depository institutions has declined steadily since the 1980s, while government-sponsored enterprises (GSEs), agency/GSE mortgage pools, and issuers of asset-backed securities have become increasingly important. Mortgages have not disappeared, nor have banks exited from housing finance. Rather, the mode of credit holding, risk allocation, and liquidity organization has changed. Household mortgages have gradually moved from claims on bank balance sheets into GSE channels, securitized pools, and market-trading systems.

The institutional meaning of figure 2 is that credit transactionalization is not simply an increase in lending volume; it is a change in the carrier structure of credit relations. Mortgage loans originally linked households, lenders, and collateral. Securitization and GSE channels pooled large volumes of mortgages and used future repayment cash flows as the basis for securities or tradable assets. Investors do not purchase loan relations with specific households. They purchase financial products composed of many mortgages. They do not need to know the borrower, the local community, employment conditions, or the borrower’s actual living situation. They rely instead on ratings, models, collateral prices, credit enhancement, GSE backing, and market liquidity to evaluate securities.

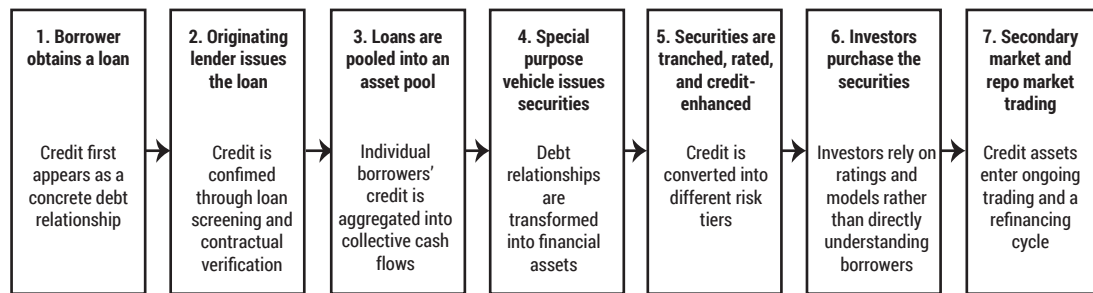
Figure 3 summarizes the institutional mechanism of credit securitization. It includes loan origination, loan pooling, the formation of asset pools, issuance by special-purpose vehicles, tranching and rating, investor purchase, and secondary-market and repo-market trading. Each step reshapes the existence of credit: borrower credit is transformed from a concrete debt relation into collective cash flows, from collective cash flows into financial assets, from financial assets into risk grades with different prices, and finally into continuous trading and refinancing cycles.

FIGURE 2 Changes in the holding structure of U.S. mortgages, 1945–2026



Source: Federal Reserve, Financial Accounts of the United States, Z.1, F.45.S, Total Mortgages.

FIGURE 3 The Institutional Mechanism of Credit Securitization



Source: Author.

This process is the key mechanism of credit transactionalization. Once credit is institutionally confirmed, it can detach from the relation between the original creditor and debtor and become a comparable, divisible, saleable, and pledgeable financial object. Ratings, models, and legal contracts are central to this process. Ratings compress complex debt relations into risk grades that investors can recognize. Models provide calculative frameworks for tranching, risk pricing,

and secondary-market trading. Special-purpose vehicles (SPVs) and legal contracts allow debt relations to detach from original loans and enter market circulation. Credit transactionalization is therefore not simply financial product innovation. It is the institutional process through which credit acquires a tradable form.

The institutional meaning of securitization is thus not merely the creation of new financing channels. It reorganizes credit production. It replaces relational screening and continuous monitoring in bank-centered systems with standardization, ratings, and trading mechanisms. Credit no longer depends primarily on a bank's long-term knowledge of specific borrowers, but on a set of abstract devices: credit scores, asset-pool design, risk tranching, model pricing, legal contracts, credit enhancement, guarantee structures, and secondary-market liquidity. The credit-organizing capacity of the market-centered system is formed through these devices.

The Diffusion of Credit Transactionalization: Corporate Valuation and Household Debt

Credit transactionalization is not confined to financial institutions. It extends outward through corporate governance and household life, incorporating nonfinancial firms and ordinary households more deeply into capital and credit markets. The institutional consequence of U.S. financialization is that capital-market valuation no longer operates only inside the financial sector; it gradually becomes an organizing principle for firms, household debt, and everyday life.

Firms: From Production Organizations to Market-Valuation Objects

Financialization first changed corporate organization. Since the 1980s, institutional investors, securities analysts, merger markets, stock options, share repurchases, and shareholder-value ideas have reshaped U.S. corporate governance. Firms are increasingly evaluated by stock prices, market capitalization, return on capital, earnings per share, and shareholder returns. Lazonick and O'Sullivan (2000) describe this shift as one from "retain and reinvest" to "downsize and distribute": profits are used less for long-term productive capacity, employment stability, and organizational accumulation, and more for dividends, repurchases, and capital-market returns. Fligstein (1990, 2001) shows that the dominant conception of corporate control in the United States moved from manufacturing control and sales control to financial control. Davis (2009) further argues that financial markets changed not only corporate finance but the organizational form of the firm itself.

From the perspective of credit organization, corporate financialization means that firms themselves are revalued by capital markets. In bank-centered systems, corporate credit is primarily

understood as a firm's ability to fulfill debts, maintain cash flows, and secure bank confidence in its long-term operations. In financialized systems, corporate credit is increasingly linked to market valuation, investor expectations, security prices, and shareholder returns. Firms are not only production organizations; they become asset portfolios, return objects, and valuation targets in capital markets. Managers are expected not only to organize production, coordinate labor, and develop markets, but also to manage capital-market expectations, maintain share prices, improve financial indicators, and respond to institutional investors. Given high returns in financial markets, the latter group of responsibilities can sometimes become more important than the former.

Share repurchases are an important expression of this shift. Lazonick (2014) criticizes large U.S. corporations for using substantial profits for buybacks and shareholder distributions, thereby weakening long-term investment, innovation, and labor income growth. Lin and Tomaskovic-Devey (2013) show at the organizational level that financialization is closely related to income inequality: financial income, financial payments, and capital-market orientation change the internal distribution of resources within nonfinancial firms. The key issue is not whether firms "engage in financial activities" in a narrow sense, but whether they are reorganized by capital-market credit and valuation logics. Firms are increasingly required to become objects that produce capitalizable returns, tradable equity, and expected cash flows.

Corporate financialization is therefore an extension of credit transactionalization. Capital markets not only provide funds to firms; they also shape corporate behavior through stock prices, bond ratings, the cost of capital, takeover pressure, and investor evaluation. Corporate credit is no longer produced only in bank-firm relations. It is continuously produced among securities markets, analyst reports, rating agencies, institutional investors, and governance rules. Credit detached from bank relations does not disappear; it re-enters the firm through market valuation and financial asset prices.

Households: The Creditization and Assetization of Future Income

Financialization also profoundly changed household life. Mortgages, credit cards, auto loans, student loans, pensions, mutual funds, insurance, and household asset allocation have drawn ordinary households more deeply into financial markets. Households are no longer merely wage earners and savers. They are debtors, investors, and bearers of asset-price fluctuations. Martin (2002) argued early on that financial logic had entered everyday life, requiring individuals to manage risk, plan for the future, and bear uncertainty as if they were investors. Langley (2008)

analyzes the relation among personal finance, securitization, and everyday life, showing how household debt and financial asset allocation connect ordinary people to capital markets.

From the perspective of credit organization, household financialization means that future household income is institutionally mobilized in advance. Mortgages connect future wages, real-estate prices, and long-term debt. Credit cards and consumer credit connect everyday consumption to future repayment capacity. Student loans connect educational investment to future labor-market income. Pensions and mutual funds connect household wealth accumulation to capital-market performance. Household credit is not only a bank's assessment of personal repayment capacity; it also becomes a base asset that can be securitized, priced, and traded in capital markets.

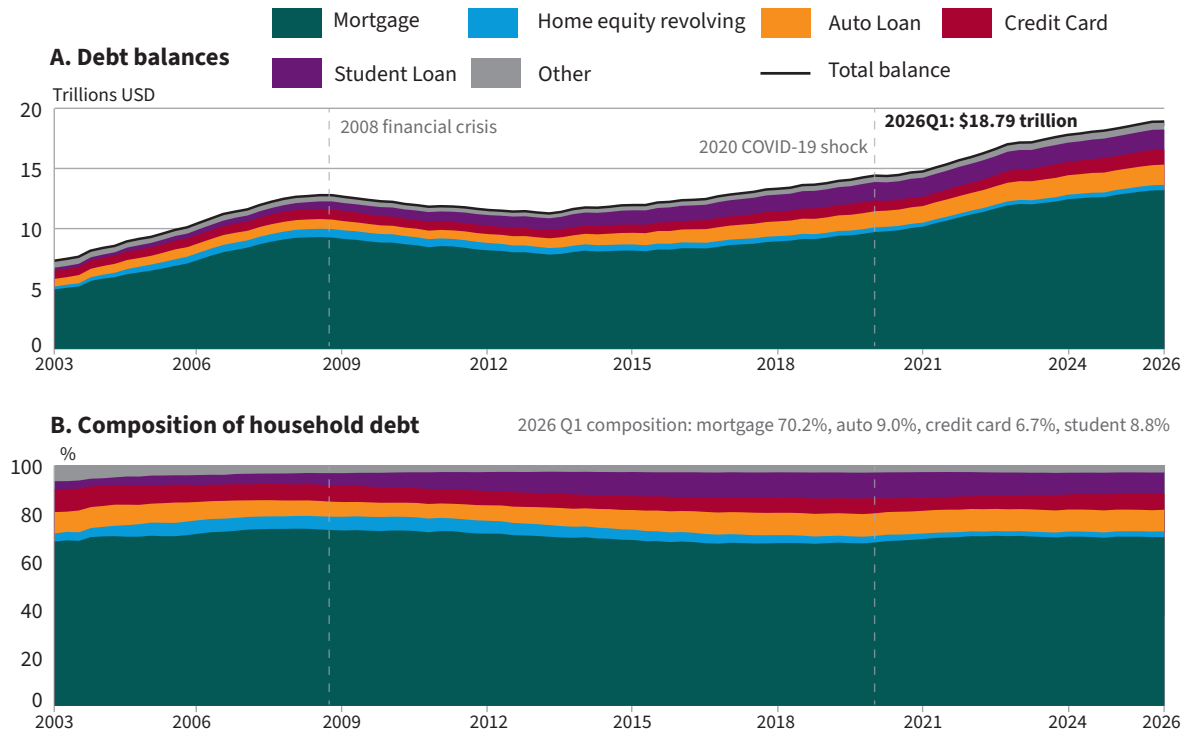
Figure 4 shows the historical structure of U.S. household debt. Its significance is not merely that household debt has increased over the past twenty years, but that household life has become organized through multiple credit relations. Mortgages have remained the main component of household debt, meaning that future household income, housing assets, and real-estate prices are bound together over the long term. At the same time, auto loans, credit cards, and student loans bring education, transportation, and everyday consumption into credit systems. Households not only bear debt passively; through housing assets, pension accounts, mutual funds, and insurance products, they also enter capital-market risk distribution.

The U.S. case is not distinctive simply because household debt is large. Figure 5 compares household credit-to-GDP ratios in China, the United States, Japan, and Germany. The United States is not always dramatically higher than the other countries; Japan, Germany, and China have all had relatively high levels of household credit at different moments. China's household credit-to-GDP ratio rose rapidly after 2008, showing that households have become more deeply incorporated into housing and consumer credit systems. Household financialization should therefore not be understood simply as "Americans are the most indebted."

The level of household debt and the organization of household debt are not the same. The distinctiveness of the United States lies not in household credit-to-GDP always being the highest, but in the deeper credit-transaction chain linking household debt, mortgages, securitization markets, pension assets, mutual funds, and capital markets. Japan, Germany, and China also experienced household credit expansion, but their modes of credit organization differ. Household credit in Japan and Germany is more deeply embedded in banks and housing-finance institutions, while China's household credit expansion is closely connected to real estate, mortgage lending, and the restructuring of household balance sheets. The key feature of the U.S. experience is

that future household income and housing assets are not only debtified; they are more fully incorporated into securitization and capital-market circuits.

FIGURE 4 Historical changes in the structure of U.S. household debt, 2003–26



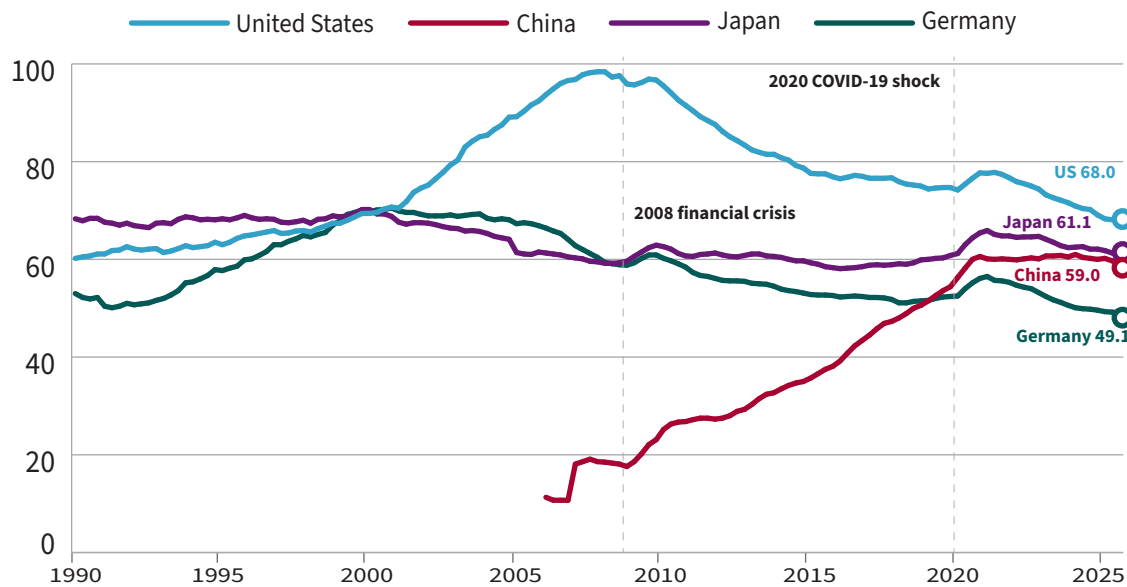
Source: Federal Reserve Bank of New York Consumer Credit Panel/Equifax.

The social consequences of household financialization are not limited to the scale of debt. More importantly, credit becomes a mechanism for reorganizing life chances. Who can obtain a mortgage, at what interest rate, whether refinancing is possible, whether one can enter a better neighborhood, and whether one can finance education all depend on credit scores and risk classifications. Wherry and Chakrabarti (2022) treat credit as a sociological object that both creates opportunity and produces inequality. Kus (2015) shows that the expansion of household debt is closely related to changes in welfare states, credit-market institutions, and public policy. Karaagac (2020) connects debt to care, family responsibility, and everyday life, showing that household financialization enters social reproduction itself.

Household financialization is therefore not a secondary phenomenon. It is a crucial channel through which credit transactionalization extends into social life. Future income, housing assets, and consumption capacity are transformed into credit resources that can be assessed,

priced, securitized, and traded. The market-centered system organizes not only capital, but also the future of everyday life.

FIGURE 5 Household credit-to-GDP ratios in China, the United States, Japan, and Germany



Source: BIS Total Credit to Households and NPISHs. Latest observation: 2025 Q3.

The Paradox of Credit Transactionalization: Displacing Relational Trust and Relying on Abstract Institutional Trust

Credit transactionalization contains a deep paradox: it appears to reduce the importance of trust, but in fact changes the form of trust. Bank-centered systems rely on relational trust between banks and borrowers. Banks need to know specific borrowers, firms, communities, and operating conditions. Market-centered systems reduce the need for this direct relational trust. Investors do not need to know specific borrowers, their life situations, corporate operations, or local social relations. They rely on ratings, models, prices, contracts, collateral structures, clearing mechanisms, and market liquidity.

This is why financialization tends to displace relational trust. This does not mean that financialization requires no trust at all. It means that it reduces reliance on direct relational trust among transacting parties. Investors no longer focus on the actual operating situation of specific borrowers; they focus on whether claims transformed into financial assets can be priced, sold, pledged, and traded in markets. Financialization replaces direct relational trust with abstract institutional trust, allowing credit to circulate quickly among strangers, across distance, and in highly anonymous markets.

Yet this abstract institutional trust is internally fragile. Rating agencies, risk models, and market prices are not external descriptions of risk; they participate in the organization and distribution of risk. MacKenzie (2006) argues that financial models are performative: they do not merely depict markets, but help shape them. Under certain conditions, performativity may become counterperformativity, when the widespread use of models changes market behavior and undermines the conditions under which the models were originally valid. Credit transactionalization has a similar mechanism. When market actors generally believe that ratings, models, collateral prices, and liquidity can disperse risk, their actions may amplify leverage, weaken screening, generate one-way trades, and accumulate credit risk within the market system.

The 2008 financial crisis exposed this paradox. It was not simply the result of defaults on certain loans within the traditional banking system. It was the collapse of abstract institutional trust within credit-transaction chains. Gorton (2010) and Gorton and Metrick (2012) interpret the crisis as a run on the shadow-banking system, especially a breakdown of trust in securitized banking built from securitized assets and repo financing. Assets once regarded as safe, liquid, and pledgeable suddenly became opaque and difficult to value. Investors no longer trusted ratings, collateral prices, or the continuity of market liquidity. Credit had been widely dispersed through trading, but when trust collapsed, risk quickly reconcentrated.

TABLE 4 Abstract trust devices and their fragilities in credit transactionalization

Abstract trust device	Relational mechanism replaced or weakened	Fragility during crisis
Credit ratings	Direct judgment of borrowers and loan quality	Rating lags, conflicts of interest, underestimation of risk
Risk models	Bank experience and relational screening	Model homogeneity, underestimation of tail risk, counterperformativity
Collateral prices	Judgment of income, operations, and repayment willingness	Falling housing prices undermine collateral foundations
Tranching structures	Banks holding loans and monitoring borrowers	Risk is divided, but responsibility becomes dispersed
Legal contracts and SPVs	Bank balance-sheet relations	Separation of rights and responsibilities; weakened monitoring
Repo markets	Traditional deposit funding and bank liquidity management	Run on short-term funding; rising collateral haircuts
Market liquidity	Long-term relations and post-lending monitoring	Liquidity disappears suddenly during crisis

Source: Author.

Financialization, therefore, does not eliminate credit problems. It changes their form. The risk in bank-centered systems is that relational credit can lead to lock-in, concealment, and soft budget constraints. The risk in market-centered systems is that once credit becomes excessively abstracted and transactionalized, the institutional trust that sustains credit trading may suddenly collapse. The former suffers from credit that is too deeply embedded in concrete relations; the latter from credit that is too detached from concrete relations. These are not simple opposites of tradition and modernity. They are different credit organizations with different risk structures.

Credit transactionalization certainly improves credit mobility, expands financing channels, and transfers risk across a wider set of investors. But it also builds the financial system on more complex, abstract, and market-confidence-dependent foundations. The more financialization tries to escape direct relational trust, the more it depends on ratings, models, contracts, liquidity, and regulatory endorsement. In this sense, the market-centered system is not a higher-stage substitute for bank-centered finance. It is a financial arrangement with its own logic of credit organization and its own institutional fragilities.

Conclusion and Discussion: Reorganizing Credit Relations Between Bank-Centered Finance and Financialization

This paper began with the question of whether financialization is a necessary path of financial modernization. It has sought to return comparisons of financial systems to the organization of credit. The central argument is that bank-centered systems and financialized systems are neither lower nor higher stages of financial development, nor are they simply indirect and direct finance. They are two different modes of credit organization. The former produces credit through relational embeddedness, organizational judgment, and risk internalization. The latter expands credit mobility through standardization, assetization, securitization, and market transactions. Both seek to solve the same basic problem in modern finance: how uncertain future repayment capacity can become credit relations that are recognized, constrained, and circulated, and how the risks attached to them are allocated in the present.

The theoretical contribution of this paper is not to compare yet again whether banks or markets are more efficient, but to understand the financial system as an institutional arrangement for organizing the future. Finance does not merely transform savings into investment or allocate capital through prices. It institutionalizes future income, returns, risk, and responsibility. Who

is recognized as creditworthy, who is excluded from credit boundaries, where risk is located, whether debt can become an asset, and who bears final responsibility in crisis are central sociological questions of modern finance.

Financialization Is Not the Universal Path of Financial Modernization

The U.S. experience of financialization shows that capital-market expansion, securitization, shareholder-value governance, and household financialization can improve credit mobility, expand financing channels, and transfer risk across a wider set of market actors. Yet this model was an institutional transformation generated under specific historical conditions: the loosening of the postwar regulated banking order, inflation and fiscal pressure since the 1970s, financial disintermediation, the rise of institutional investors, regulatory adjustment, and the turn to neoliberal policy. It is not the natural endpoint of financial modernization. It is a credit organization strategy produced under specific crisis pressures.

The experiences of Germany, Japan, and China further show that modern financial systems do not necessarily converge toward U.S.-style financialization. German relationship banking is embedded in manufacturing, the *Mittelstand*, and coordinated capitalism. The Japanese main-bank system was historically embedded in corporate groups, cross-shareholdings, and crisis governance. China's bank-dominated system is embedded in state development strategies, local government credit, state-owned enterprise credit, and collateral logics. They differ from one another, but all show that banks can remain important cores of modern credit organization. Bank-centered finance is not a residue of insufficient financial development. It is a way of processing information uncertainty, long-term investment, and risk governance in specific institutional environments.

This does not mean that bank-centered finance is inherently superior. Its advantages come from credit embeddedness, and so do its risks. Relational trust helps banks identify soft information, support long-term investment, and maintain crisis governance; it can also solidify credit boundaries, delay risk recognition, and create soft budget constraints. The advantages of financialized systems come from credit mobility, and so do their risks. Credit transactionalization can improve liquidity, expand risk sharing, and enhance asset pricing; it can also disperse responsibility, intensify short-termism, generate asset bubbles, and lead to the systemic collapse of abstract institutional trust. The key question in financial modernization is therefore not whether banks or markets are better, but how a society establishes institutional boundaries between credit embeddedness and credit mobility.

The Institutional Tension Between Credit Embeddedness and Credit Mobility

The comparison between bank-centered finance and financialization ultimately points to three broader institutional tensions.

The first is the tension between embeddedness and disembeddedness. Credit cannot exist entirely apart from social relations and institutional foundations. Bank-centered systems identify credit through long-term relations, organizational review, state backing, and industrial networks, turning uncertain futures into something that can be judged, monitored, and committed to. Yet when credit is overly embedded in concrete relations, existing relations can become barriers to credit qualification. Financialized systems attempt to abstract credit from concrete relations and move it through scores, ratings, models, asset pools, and trading platforms into broader market circuits. Yet when credit becomes too disembedded, continuous monitoring and responsibility are weakened, and credit trading becomes increasingly dependent on the stability of abstract devices.

The second is the tension between long-term commitment and exit mechanisms. Bank-centered systems can provide patient capital because banks do not need to express judgment through immediate exit; they can adjust loans, restructure debt, and support firms over long relationships. This commitment is important for manufacturing, infrastructure, and incremental innovation. But if long-term commitment lacks exit boundaries, it can become protection for inefficiency and an accumulation of risk. Financialized systems strengthen exit mechanisms. Investors can express judgment by selling securities, rebalancing portfolios, and repricing risk, thereby increasing market discipline and capital mobility. Yet when exit becomes the dominant logic, financial systems become more vulnerable to short-termism and liquidity dependence. If markets exit simultaneously, liquidity can disappear quickly.

The third tension is that between state capacity and market autonomy. Bank-centered systems are especially likely to connect with development goals, industrial policy, and macroeconomic management. They can mobilize savings through banks, allocate long-term credit, and stabilize economic fluctuations. But they may also embed financial risk in fiscal systems, local governments, and policy goals. Financialized systems expand financial autonomy through market prices, institutional investors, and asset trading, making credit allocation more dependent on dispersed investors and market signals. Yet market autonomy does not mean state withdrawal. In crises, central banks, regulators, and fiscal authorities often become the ultimate support for

liquidity and credit. Financial systems are never a simple division between state and market. They are about how states organize, authorize, constrain, and backstop credit relations.

Credit Reorganization in China's Financial Modernization

This theoretical perspective is useful for understanding China's financial reform. China has long formed a financial structure centered on bank credit. The banking system has played a crucial role in high savings mobilization, infrastructure construction, industrialization, urbanization, state-owned enterprise financing, local development, and countercyclical management. It is not only a tool for allocating funds, but also an organizational carrier of state capacity, local development, and industrial policy. Yet the credit foundations of this bank-centered system are changing. Real estate adjustments weaken land and property collateral. Local debt and risks associated with local government financing vehicles reveal the limits of local government credit. Traditional bank risk-control models have difficulty assessing the creditworthiness of technology and innovation firms, asset-light firms, private firms, and SMEs. China's problem is not simply an insufficient share of direct finance; it is the challenge of how existing credit organization can adapt to new industrial and risk structures.

In this context, China needs to develop capital markets, venture capital, long-term funds, and multi-layered direct financing systems to support high-risk, long-cycle, and asset-light innovation. But this does not mean that China should replicate U.S.-style financialization. The U.S. experience shows that credit assetization and transactionalization can improve liquidity but may also detach credit from concrete production relations and real repayment foundations, thereby generating asset bubbles and systemic fragility. The key issue for China is not a simple shift from banks to markets. It is how to reorganize credit relations among banks, capital markets, policy finance, the regulatory state, and industrial strategy.

In this sense, a modern financial system with Chinese characteristics can be understood as an ongoing reconstruction of credit organization. It needs to preserve the role of banks in basic credit provision, financial stability, policy transmission, and inclusive finance. It also needs to develop the role of capital markets in innovation finance, risk sharing, and long-term capital formation. It must increase credit mobility and risk-pricing capacity while preventing credit assetization from detaching from the real economy and avoiding idle financial circulation, excessive leverage, and systemic risk. It should not be a simple continuation of traditional bank-centered finance, nor a simple copy of U.S.-style credit transactionalization. It is a reallocation of credit boundaries among relational trust, abstract institutional trust, and state institutional trust.

It is also important to note that China's ongoing reorganization of credit increasingly combines the banking system with digital platforms, credit-information infrastructures, and algorithmic risk control. Platform transaction records, payment data, logistics data, and consumer behavior data are becoming new bases for identifying credit for asset-light firms, small businesses, and individual consumers. This computational credit identification attempts to compensate for the traditional banking system's reliance on collateral, government backing, and historical financial records. Yet it is not the same as U.S.-style securitized credit trading. Because digital-finance platforms remain within a strong regulatory and financial-security framework, China's digital credit expansion is better understood as computational credit under state regulation rather than fully marketized credit transactionalization. It suggests that the future of China's financial system will depend not only on the division of labor between banks and capital markets, but also on how relational trust, abstract institutional trust, state institutional trust, and emerging forms of platform-based credit calculation are recombined.

Financial modernization, then, is not a process of convergence toward a predetermined model. It is a continuous reconstruction of the institutional relationship between credit and trust. Bank-centered finance reminds us that credit requires relations, organizations, and institutional embeddedness. Financialized systems remind us that credit mobility also requires standardization, assetization, and market infrastructure. The key analytical question is how a society manages the tension between credit embeddedness and credit mobility, balances long-term commitment and exit mechanisms, and builds institutional boundaries between financial innovation and financial stability. In this sense, the comparison between bank-centered finance and financialization is not merely a comparison of financial structures. It is a sociological question about how modern economic societies organize the future, recognize credit, and distribute risk.

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Stanford

Walter H. Shorenstein
Asia-Pacific Research Center
Freeman Spogli Institute

Shorenstein Asia-Pacific Research Center
616 Jane Stanford Way E301
Stanford, CA 94305-6055
650.723.9741 | aparc.fsi.stanford.edu