Defining Financial Stability

This chapter proposes a definition of financial-system stability that has practical and operational relevance and that encompasses many of the relevant features of the existing policy literature. Financial stability is defined as the ability of the financial system to facilitate and enhance economic processes, manage risks, and absorb shocks. Moreover, financial stability is considered a continuum, changeable over time and consistent with multiple combinations of finance’s constituent elements.

As noted, there is, as yet, no general agreement on what financial stability exactly means. Some have defined it in terms of what it is not—a situation in which financial imbalances impair the real economy, for example, when information problems undermine the financial system’s ability to allocate funds to productive investment opportunities. A similar approach is taken by those focusing on systemic risk, specifically with regard to financial problems that stem from links between financial institutions or markets and that have a potentially large adverse impact on the real economy. Haldane (2004) defines financial stability using a simple model in which asset prices serve to secure the optimal level of savings and investment. Others take a macro prudential viewpoint and specify financial stability as limiting risks of significant real output losses associated with episodes of systemwide financial distress.

43 Attempts to define financial stability have been made recently, but most accommodate a particular theme of a paper or speech. In addition, most authors prefer to define financial instability or systemic risk. See the annex to this chapter for a selection of these definitions.
45 Crockett, 1997; Davis, 2002.
46 Mishkin, 1999.
47 De Bandt and Hartmann, 2000; Group of Ten, 2001; Hoelscher and Quintyn, 2003; Summer, 2003.
This chapter first briefly collects some of the main conclusions from the previous chapters that are relevant for designing a framework for safeguarding financial stability, in particular some of finance’s strengths and weaknesses. These attributes serve as both practical and analytical focal points for developing a concept of what the financial-stability challenge is, especially in the absence of a widely accepted definition of financial stability, a concept of equilibrium, and an analytical framework for safeguarding stability. Explanations of “financial system” and “systemic risk” follow. After this groundwork, the chapter provides a broad definition of financial stability and discusses the meaning of some of the language in the definition. The chapter also makes the case that financial stability occurs along a changeable continuum or range of conditions of the constituent parts of the financial system, as opposed to a single configuration or state of these parts as is most often used in microeconomic and macroeconomic models. Several complexities of the definition are identified in the succeeding section. The final section explains why it is more productive to anchor the analysis in a definition of financial stability rather than financial instability.

The Strengths and Weaknesses of Finance

In developing a framework for safeguarding financial stability and especially in developing a working definition of financial stability, it is useful to review some of the ideas developed and observations made in Part I of this study. These particular ideas can be understood either as prerequisites or as relevant concepts for designing and implementing a framework.

First, a barter economy is less effective and efficient in allocating scarce resources than is an economy that incorporates the ability to use financial claims on future real resources. A discussion of financial stability must necessarily take place within the context of a monetary economy in which a legal tender as money is universally accepted as the economy’s unit of account and means of payment.

Second, fiat money (or any other legal tender) is not necessarily the most desirable store of value—except in the very short run or during episodes of financial distress and dysfunction. As suggested in Chapter 2, throughout recorded history, human ingenuity has driven an evolutionary process of finance to overcome this persistent deficiency. Modern finance provides substitutes for legal tender, including the various derivative forms of money such as bank demand deposits, that provide temporary and reversible intertemporal means-of-payment and store-of-value services. These substitutes are promises to pay legal tender in the future, and are designed in part to facilitate intertemporal resource allocations.
Third, as discussed in Chapter 3, many of the services provided by money (as legal tender) and finance are both private and public goods. Their private-good nature arises out of the provision of benefits to individuals in their private affairs, benefits that convey only to the counterparts engaged in specific transactions. Money and finance separately and jointly provide public goods as well, because they allow multilateral trade and exchange to be more efficient, in part by eliminating the need for Jevons’ “double coincidence of wants,” both sectorally at moments in time and intertemporally. In addition, finance provides public goods beyond those of money as legal tender: by enhancing and distributing the public-good characteristics of legal tender, finance enlarges society’s opportunities for, and efficiency in, intertemporal economic processes such as trade, production, wealth accumulation, economic development and growth, and social prosperity. In sum, the universal acceptability of money as legal tender and the existence of an effective process of finance together create an environment that provides collective benefits to all members of society.

Fourth, an alternative and useful way of understanding finance is to bring to the surface one of its defining characteristics. Unlike money as legal tender—which eliminates the element of human trust in trade and exchange—finance involves human promises to pay back specific amounts of money as legal tender in the future. In this way, finance intrinsically embodies uncertainty (about human trust). Modern financial systems have evolved to provide beneficial and necessarily imperfect ways of transforming this fundamental uncertainty into quantifiable and priceable risks, such as default risk; and, through social arrangements (both markets and financial institutions), this uncertainty is transformed into market risk, liquidity risk, and so on. In less traditional but no less appropriate terms, modern finance provides societies with effective, albeit imperfect, mechanisms for transforming, pricing, and allocating economic and financial uncertainties and risks.

Finally, there are both potential benefits and costs associated with finance because finance intrinsically embodies uncertainty. On the one hand, finance enhances the private and social benefits of money, in part by enlarging the pool of liquidity available for production, consumption, and exchange, and in part by facilitating and enhancing the efficiency of intertemporal economic processes. In effect, the willingness to engage in finance (that is, to take the leap of faith) and accept the uncertainty of trust has created social welfare gains far beyond what fiat money alone could provide.

49Diamond and Dybvig (1983) and Diamond and Rajan (2001) explore this in the context of bank intermediation.
On the other hand, trust is fragile: it can, and often enough does, become a source of potential financial instability, which can in the wrong circumstances affect both individual and social welfare. To the extent that doubts about human trust are transformed by the financial system into market and other financial risks, they too can become companion sources of instability—even more so if a society’s financial market mechanisms are impaired and unable to effectively reallocate and price such doubts. How such doubts propagate through the financial system is an important determinant of whether they either self-correct and remain isolated and harmless or become widespread, harmful, and perhaps even systemic. Because finance supports and facilitates real economic processes, these potential instabilities may well extend to the real economy.

Bringing “Financial System” and “Systemic Risk” into Focus

Recall from Part I that the key functions of a financial system are to facilitate and enhance economic processes; to price, manage, and allocate risks; and to help the economy absorb and dissipate shocks from both within and outside the economic system. But what do we mean by “financial system” and “systemic risk?”

Financial System

Broadly, the financial system comprises three separable but closely related components.

First are financial intermediaries that pool funds and risks, then allocate them to their competing uses. Increasingly, financial institutions provide a range of services, not just the traditional banking services of taking deposits and making loans. Now institutions such as insurance companies, pension funds, hedge funds, and financial-nonfinancial hybrids (such as General Electric) each supply diverse financial services.

Second are financial markets that directly match savers and investors, for example, through the initial issuance and sale of bonds or equities directly to investors. Financial markets also allow investors to rebalance their portfolios continuously as economic and financial conditions change, to achieve a more desirable balance of risk and return. This rebalancing of portfolios in and across financial markets facilitates the repricing and redistribution of assets and risks within the economic system.

Third is the financial infrastructure, including both privately and publicly owned and operated institutions—such as clearance, payment, and
settlement systems for financial transactions—as well as monetary, legal, accounting, regulatory, supervisory, and surveillance infrastructures.\textsuperscript{50}

Notably, both private and public persons own and invest in financial institutions; participate in financial markets; and either own, regulate, or participate in vital components of the financial infrastructure. Governments borrow in markets, hedge risks, operate through markets to conduct monetary policy and maintain monetary stability, and own and operate payment and settlement systems.

Accordingly, \textit{the financial system consists of the monetary system with its official understandings, agreements, conventions, and institutions as well as the processes, institutions, and conventions of private financial activities}.\textsuperscript{51} Any analysis of how the financial system works and how well it is performing its key functions requires an understanding of these components.

\textbf{Systemic Risk}

According to the Group of Ten report (Group of Ten, 2001, pp. 126–127) on financial consolidation and risk,

Systemic financial risk is the risk that an event will trigger a loss of economic value or confidence in, and attendant increases in uncertainty about, a substantial portion of the financial system that is serious enough to quite probably have significant adverse effects on the real economy. Systemic risk events can be sudden and unexpected, or the likelihood of their occurrence can build up through time in the absence of appropriate policy responses. The adverse real economic effects from systemic problems are generally seen as arising from disruptions to the payment system, to credit flows, and from the destruction of asset values.

The Group of Ten study notes that this definition encompasses much of what is in the literature but is stricter in two respects. First, the negative externalities of a systemic event extend into the real economy. They are not confined to the financial system. Second, this extension into the real economy occurs with relatively high probability. The emphasis on real effects reflects the view that it is the output of real goods and services and the accompanying employment implications that are the primary concern of economic policymakers. “In this definition, a financial disruption that does not have a high probability of causing a significant disruption of real economic activity is not a systemic risk event” (p. 127).

\textsuperscript{50}On the role of the legal system see, for example, Levine (1999), Leahy and others (2001), and Beck, Demirgüç-Kunt, and Levine (2003).

\textsuperscript{51}This particular formulation is an adaptation of “international financial system” from Truman (2003).
Defining Financial Stability and Examining Its Key Implications

As noted earlier, there is no widespread agreement on a useful working definition of financial stability. Some authors define financial instability instead of stability, and others prefer to define the problem as one of managing systemic risk rather than as maintaining or safeguarding financial stability.52 This book takes a positive approach in that it focuses on safeguarding financial stability while recognizing that understanding and trying to identify the boundary between stability and instability is the essence of both maintaining stability and managing systemic risk. The justification for taking this approach is discussed later in this chapter.

Definition of Financial Stability

With this in mind, financial stability can be defined as follows:

Financial stability is a situation in which the financial system is capable of satisfactorily performing its three key functions simultaneously. First, the financial system is efficiently and smoothly facilitating the intertemporal allocation of resources from savers to investors and the allocation of economic resources generally. Second, forward-looking financial risks are being assessed and priced reasonably accurately and are being relatively well managed. Third, the financial system is in such condition that it can comfortably if not smoothly absorb financial and real economic surprises and shocks.

If any one or more of these key functions is not being satisfactorily achieved and maintained, it is likely that the financial system is moving in the direction of becoming less stable, and at some point might exhibit instability. For example, inefficiencies in the allocation of capital or shortcomings in the pricing of risk can, by laying the foundations for imbalances and vulnerabilities, compromise future financial system stability.

All three of these aspects of the definition can and do encompass both endogenous and exogenous elements. For example, surprises that can impinge on financial stability can emanate both from within and from outside the financial system. Moreover, the intertemporal and forward-looking aspects of this particular definition of financial stability emphasize that threats to financial stability arise not only from shocks or surprises but also from the possibility of disorderly adjustments of imbalances that have built

52See, for example, the definitions surveyed in the annex to this chapter. Davis (2002) develops a taxonomy of instability.
up endogenously over time—because, for example, expectations of future returns were misperceived and therefore mispriced.53

A more compact way of defining financial stability that is still consistent with the inclusion of endogenous and exogenous elements follows:

A financial system is in a range of stability whenever it is capable of facilitating (rather than impeding) the performance of an economy, and of dissipating financial imbalances that arise endogenously or as a result of significant adverse and unanticipated events.

Note three important features of the fuller definition that are expressed more explicitly in this compact definition. First, the phrase “range of stability” signifies that financial stability (and instability) occurs along a continuum. As will be described more fully later in this section, the continuum can be conceived of, and in principle measured, as a corridor representing the many different ways in which the constituent parts of the financial system (institutions, markets, and infrastructure) can satisfactorily perform their key functions (facilitating real economic processes, pricing and managing risks, and absorbing and dissipating economic shocks).

Second, the phrase “facilitating (rather than impeding) the performance of an economy” means, among other things, that finance is contributing to (not hampering) the efficient allocation of real resources, the rate of growth of output, and the processes of saving, investment, and wealth creation—and may also include other observable and measurable aspects of economic performance.

Third, the term “dissipate financial imbalances” signifies a movement along the continuum in the direction of stability (away from boundaries) through self-corrective mechanisms—through asset price adjustments and portfolio flows, for instance. Such corrections could include the exit and entry of market participants (financial institutions or nonfinancial entities acting on behalf of others or individuals acting directly in the markets).

A more general definition that does not require the specification of what constitutes a financial system follows:

Financial stability is a condition in which an economy’s mechanisms for pricing, allocating, and managing financial risks (credit, liquidity, counterparty, market, and so forth) are functioning well enough to contribute to the performance of the economy.

53 That financial stability should not be thought of simply as a static concept of shock-absorption capacity has been emphasized by, among others, Minsky (1982) and Kindleberger (1996).
Analytical Features and Implications

Several important analytical features or implications of this definition of financial stability merit further consideration. In effect, these analytical characteristics provide the conceptual muscle needed to better understand the nature of the financial-stability challenge; they are also essential for designing the practical framework for safeguarding financial stability that is developed and examined in Chapter 6.

Facilitation of real economic processes

Judgments about the performance of the financial system must be based on how well the financial system is facilitating economic resource allocation, the savings and investment process, and, ultimately, economic growth. The links go both ways—the real economy can be affected by the financial system, and the performance of the financial system can be affected by the performance of the real economy. A framework useful for assessing financial stability must take heed of these two-way links.

Disturbances in financial markets or at individual financial institutions need not be considered threats to financial stability if they are not expected to damage economic activity at large. In fact, the incidental closing of a minor financial institution, a rise in asset-price volatility, and sharp and even turbulent corrections in financial markets may be the result of competitive forces, the efficient incorporation of new information, and the economic system’s self-correcting and self-disciplining mechanisms. By implication, in the absence of contagion and the high likelihood of systemic effects, such developments are welcome—even healthy—from a financial-stability perspective. Just as in Schumpeterian business cycles (Schumpeter, 1934), where the adoption of new technologies and recessions have both constructive and destructive implications, a certain amount of instability can be tolerated from time to time because it may encourage long-term financial system efficiency.

Systemic perspective

Financial stability is a broad concept, encompassing the different parts of the financial system—infrastructure, institutions, and markets. Because of the links between these components, expectations of disturbances in any one component can affect overall stability, thus requiring a systemic perspective. Consistent with the definition of the financial system, at any given time stability or instability could be the result of either private institutions and actions, or official institutions and actions, or both simultaneously or iteratively.
Mutual dependence of financial and monetary stability

Financial stability not only requires the financial system to adequately fulfill its role in allocating resources, transforming and managing risks, mobilizing savings, and facilitating wealth accumulation and growth, but also requires that within this system the flow of payments throughout the economy functions smoothly (across official and private, retail and wholesale, and formal and informal payment mechanisms). Smooth functioning requires that money—both central bank money and derivative monies, such as demand deposits and other bank accounts—adequately fulfills its roles as means of payment and unit of account and, when appropriate, as a short-term store of value. In other words, financial stability and monetary stability overlap to a large extent.54

Preventive and remedial dimensions of financial stability

Financial stability requires the absence of financial crises and the ability of the financial system to limit and deal with the emergence of imbalances before they constitute a threat to stability. In a well-functioning and stable financial system, this occurs in part through self-corrective, market-disciplining mechanisms that create resilience and that endogenously prevent problems from festering and growing into systemwide risks. In this respect, there may be a policy choice between allowing market mechanisms to work to resolve potential difficulties and intervening quickly and effectively—through liquidity injections via markets, for example—to restore risk-taking or to restore stability. Thus, financial stability has both preventive and remedial dimensions.

The continuum of financial stability

Given that finance is dynamic—including intertemporal transactions and innovations—financial stability can be considered to occur along a continuum that is changeable over time and that dynamically reflects different possible combinations of conditions of the financial system’s constituent parts. Along this continuum, a multidimensional range or corridor of stability may be identified within which the financial system broadly performs its key tasks. In observable states outside this range, aggregate production is substantially below its potential because funds are not being

54See Padoa-Schioppa (2003), Schinasi (2003), and Chapter 7 of this book for discussions of the role of central banks in financial stability.
channeled to profitable activities, risks are not being managed, and shocks are not being absorbed.

This continuum for financial stability is multidimensional and occurs, in principle, across a multitude of observable and measurable variables. The set of variables must encompass a subset that quantifies, however imperfectly, how well finance is facilitating economic and financial processes such as savings and investment, lending and borrowing, liquidity creation and distribution, asset pricing, and, ultimately, wealth accumulation and growth.

As a continuum, financial stability is broad and imprecise—the financial system may not return to a single and sustainable position or path after a shock or perturbation such as might result with other (Newtonian) concepts of equilibrium and stability used in economic or financial analysis and models, and in many other disciplines. The proposed definition is consistent with a financial system in a perpetual state of flux and transformation while its ability to perform its key functions remains well within a set of tolerable boundaries—within a corridor defined over a set of measurable variables—that are consistent with it successfully carrying out its important facilitative and efficiency-enhancing roles. Observable states approaching these boundaries would indicate that the financial system is losing some of its ability to perform. Observations outside these boundaries would indicate that the system is no longer effectively facilitating economic processes, perhaps because aggregate production is substantially below its potential if funds are not being channeled to profitable activities, if risks are not being managed, and if shocks are not being absorbed. In such cases, remedial action would be called for, which in the extreme would mean crisis resolution and restoration.

To illustrate the multidimensional nature of the definition and the continuum, consider a simple two-dimensional example. In assessing the joint stability of financial markets and financial institutions, one might be able to identify combinations of interest rate spread volatility (as a possible market source of instability) and banking system capital (as an institutional source of shock-absorptive capacity) that are consistent with the financial system continuing effectively to facilitate efficient resource allocation. Likewise, other combinations could be identified that would not be consistent with stability. The former would constitute the range of stability and the latter would fall outside this range.

A more comprehensive set of factors could be envisioned for determining a grid over which a continuum is defined. In principle, this multidimensional approach could be generalized and made amenable to theoretical and empirical model building. For example, one could define a set of \( n \) variables that encompass all relevant measures of the components of financial stability. The range of stability could be defined as a subset of
$n$-tuples bounded by $n$ functions (most likely nonlinear) defining the limits of stability in terms of $n$ variables. Statistical tools could be used to select such factors by considering historical episodes of both stability and instability, in part by using forward-looking, market-determined expectations of future outcomes and matching them with actual outcomes. This methodology could, theoretically, also help to establish estimates of boundaries or zones separating stability from potential instability.

To illustrate further the concept of a continuum, consider the health of an organism, which also occurs along a continuum. A healthy organism can usually reach for a greater level of health and well-being, and the range of what is normal is broad and multidimensional. In addition, not all states of un-health (or illness) are significant, systemic, or life threatening. Some illnesses, even temporarily serious ones, allow the organism to continue to function reasonably productively and return to a state of health without permanent damage. One implication of the financial-stability continuum is that maintaining financial stability does not necessarily require that each part of the financial system operate persistently at peak performance; the financial system can operate on a “spare tire” from time to time (Greenspan, 1999).

The concept of a continuum is relevant because finance fundamentally involves uncertainty, is dynamic (that is, it is both intertemporal and innovative), and is composed of many interlinked and evolutionary elements (infrastructure, institutions, markets). Accordingly, financial stability is expectations based, dynamic, and dependent on many parts of the system working reasonably well. What might represent stability at one time might be more stable or less stable at some other time, depending on other aspects of the economic system—such as technological, political, and social developments. Moreover, financial stability is consistent with various combinations of the conditions of its constituent parts, such as the soundness of financial institutions, financial market conditions, and the effectiveness of the various components of the financial infrastructure.

**Endogenous threats to financial stability**

The proposed definition leaves open the possibility that the financial system could impede the performance of the economy endogenously, even in the absence of unanticipated events or shocks, for example, through the accumulation of imbalances caused by asset mispricing or other market imperfections. This is consistent with ample historical evidence that financial systems, particularly banking systems, are prone to the build-up of imbalances (credit-risk concentrations or illiquidity, for example) and even instability. Banks internalize the fragilities associated with the properties of
liquidity, and are therefore prone to instability themselves.\textsuperscript{55} Banks, other financial institutions, and even markets can be regarded as social arrangements—or as clearinghouses—for assessing, pricing, and trading human promises necessarily involving uncertainty and risk, including uncertainty about the fundamental element of trust in financial contracts. Social arrangements and institutional features of economic systems try to internalize the potential adverse consequences of negative externalities associated with the frailties of human trust. A tangible example is that banks internalize the potential adverse consequences of failures of trust by economizing on information about large pools of debtors and their ability to pay future claims or promissory notes. In internalizing these elements of financial risk and uncertainty, financial institutions and markets themselves embody the potential for financial fragility, which ultimately finds its source in a failure of human trust in some meaningful way (for example, a default).

\textit{Embodiment of externalities in finance}

The definition of financial stability accommodates the idea examined in Chapter 3 that certain aspects of finance embody either negative or positive externalities. Thus, improvements in the ability of finance to facilitate rather than impede economic processes—including providing greater financial stability—is welfare improving because it enhances the efficiency of resource allocation (and pricing), especially intertemporally. Some points along the continuum of financial stability are more welfare improving (and efficiency enhancing) than others, and some points along the continuum of instability are to be avoided, seemingly at all costs.\textsuperscript{56} Thus, in moving from a condition of stability to instability, the contribution of the financial system to aggregate economic welfare is reduced.

\textit{Normative implications}

The concept of financial stability encompasses the normative property that the process of finance functions well enough to perform its main facilitative purposes successfully. A stable financial system enhances economic performance in many dimensions, whereas an unstable financial

\textsuperscript{55}See Diamond and Rajan (2001, 2002).

\textsuperscript{56}There would seem to be a trade-off in financial systems between financial stability and efficiency, but this is difficult to analyze given that there are different concepts of both stability and efficiency. The theoretical banking literature includes some work on this, but none could be found applicable to the financial-system level.
system detracts from economic performance. In this sense the definition is “normative.” Ultimately, financial instability (unlike physical instabilities such as earthquakes, floods, and sunspots) can be dealt with through massive intervention by authorities, including by redefining the rules of the marketplace. Such measures would be “last resort” reforms to prevent the economic system from collapsing—as it did, for example, during the Great Depression in the 1930s and more recently in Asia during 1997–98.

**Corollary Definitions**

To illustrate the broad nature of this definition of financial stability, two corollary definitions are useful:

A financial system is entering a range of instability whenever it is threatening to impede the performance of an economy.

A financial system is in a range of instability when it is impeding performance and threatening to continue to do so.

Taken together, a good understanding of financial stability and instability can serve to define boundaries around the scope of the analysis. The safeguarding of financial stability should not be understood as zero tolerance of bank failures or as avoidance of market volatility but it should avoid financial disruptions that lead to real economic costs.57

**Practical Implications of Financial-System Complexities**

The definition of financial stability involves several complexities with practical significance for assessing risks to the smooth functioning of the financial system and for the contribution public policy can make to ensuring financial stability.

First, developments in financial stability cannot be summarized in a single quantitative measure. Most economic policy objectives (price stability, unemployment, external or budgetary equilibrium, and so on) have a generally accepted measure, even if still subject to methodological and analytical controversy. By contrast, no unequivocal unit of measurement for financial stability yet exists.58 This reflects the multifaceted nature of financial stability—it relates to both the stability and resilience of financial institutions, and to the smooth functioning of financial markets and settlement systems.

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57Papers that focus on aspects of systemic risk are: De Bandt and Hartmann (2000); Hoelscher and Quintyn (2003); and Summer (2003).

58See Haldane (2004), which sets out how this might be done for financial stability.
over time. Moreover, these diverse factors also need to be evaluated for their potential ultimate influence on real economic activity. Although this may fall short of specifying a multidimensional financial-stability continuum, much progress can be made in developing composite indicators or benchmarks for financial stability, especially by considering historical episodes of both stability and instability and by comparing market-determined expectations with actual outcomes. However, the establishment of measures is further complicated by the fact that policy actions have actually been successful in preserving financial stability—disturbances are not observed and the actual value of any indicator, or for that matter, of relevant policies is difficult to establish empirically.59

Second, changes in financial stability are inherently difficult to forecast. Assessing the state of financial stability should not only take stock of disturbances as they emerge, but also indicate the risks and vulnerabilities that could lead to such disturbances in the future. A forward-looking approach is therefore needed to establish the buildup of risks and imbalances and to take account of the transmission lags in policy instruments. The challenge is that financial crises are inherently difficult to predict because of many factors—contagion effects and nonlinearities in the relationships between the constituent parts of finance, for instance. In addition, risks to financial stability often reflect the far-reaching consequences of unlikely events, implying that the focus of attention should not be the mean, median, or mode of possible outcomes or states but the entire distribution of them, and in particular the left “tail,” composed of very low probability and negative, high-cost events, such as a major financial crisis. Beyond this, the distribution of possible outcomes may be subject to greater fundamental uncertainty (in the sense of Knight [1921]) than traditional macroeconomic projections, reflecting lack of knowledge about the actual shape of the probability distribution governing relevant factors (such as operational, reputation, or contagion risk). Thus, forecasts of financial stability might be inherently less reliable than forecasts of monetary or macroeconomic stability, for which there are well-worked and more reliable models and more timely and useful data. In the large sets of financial indicators now being used by central banks and international financial institutions, the relationships between indicators and financial-stability conditions may not be strong or robust enough to be reliable for assessments and predictions. Nevertheless, in looking at a broader array of indicators, in developing better analytical frameworks, and in using sophisticated statistical tools, there

59Measurement and modeling issues are discussed more fully in Chapter 6.
may be scope for improving the ability to monitor and assess financial stability in the future.

Third, as a policy objective, financial stability is only partly controllable. The policy instruments that can be used to safeguard financial stability generally have other primary objectives, such as protecting the interests of deposit holders (prudential instruments), fostering price stability (monetary policy), or promoting a swift settlement of financial transactions (policies governing payment and settlement systems). In addition to timing lags, the impact of these policy instruments on financial stability is thus often indirect; in some cases, financial-stability objectives may cause friction with the instrument’s initial objective. Moreover, changes in financial stability are highly susceptible to exogenous shocks—ranging from natural catastrophes to abrupt swings in market sentiment—further limiting their controllability.

Fourth, policies aimed at financial stability often involve a trade-off between resilience and efficiency. Measures to enhance financial stability often require weighing the pursuit of an efficient allocation of financial resources against the ability to exclude or absorb shocks to the financial system. This implies a risk-return judgment that is difficult to make in a fully objective manner. For instance, in the sphere of prudential policies, higher solvency requirements will reduce the risk of a bank not being able to absorb an adverse shock, but will also imply capital costs and forgone investment opportunities. Similarly, exchange restrictions may reduce or exclude certain risks related to international capital flows, but may also limit the efficiency of the domestic financial market.

Finally, policy requirements for financial stability may be time inconsistent. Because some public policy instruments to safeguard financial stability circumvent market forces, the short-term stability gain may come at the cost of a longer-term stability loss. In particular, measures such as the provision of lender-of-last-resort finance or deposit guarantee may undermine market discipline, thereby creating moral hazard or adverse selection. This intertemporal trade-off is a fundamental issue in financial-system policy making.

In Defense of a Positive Approach: Why Focus on Stability and Not on Instability?

In defining the relevant concepts and in designing financial-system policies, policymakers and their respective institutions typically concentrate efforts on identifying, monitoring, and analyzing the sources of financial instability. The primary objective of doing so is to prevent instability, and failing this, at least to understand it sufficiently to minimize its adverse
consequences for markets, the economy, and society more broadly. Indeed, an important part of the framework for safeguarding financial stability developed in Chapter 6 is a process of identifying sources of risks and vulnerabilities within the financial system that could threaten stability.

Such an approach is justified on two grounds, one political and the other practical. First, if instability were to arise without forewarning and impose severe costs on society at large, politicians and policymaking institutions would most likely be held accountable. Second, if the history of finance has taught us any great lessons, the most indelible is that finance is prone to instability. This lesson was reinforced in the logic presented in Part I. What better reasons could there be for policymakers to desire a framework in which they could strive to understand the sources and costs of financial instability, and the possible means to prevent these sources from occurring?

The incentive to think in terms of instability rather than stability has led to a rich menu of alleged sources of financial instability. The most often cited include natural tendencies of financial institutions toward excessive competition, concentrations of power, and oligopoly or near-monopoly; inherent negative externalities; information asymmetries; and related or resulting occurrences of adverse selection, resource misallocation, risk mispricing, and market failures. Given this list, it is not surprising that financial-system policies inevitably devolve into measures to ward off the potential negative consequences of these alleged deficiencies of finance.

Most systematic treatments of financial-stability issues, in fact, take this negativist approach. While useful, this focus on instabilities fails in one important respect, resulting in consequences for how one thinks about the financial system and how one designs financial-system policies.

The negativist approach conceals in the background an important and defining feature of finance—that finance is a public good (and not a public bad). Finance, when properly scaled to the needs of society, bestows both tangible and intangible benefits—in the large to society and in the small to individuals—on almost all aspects of political, economic, social, and cultural life. Without it, what are now modern economies and societies would be far less advanced, effective, and efficient organisms.

That deficiencies and limitations of finance might from time to time reduce the potential benefits of this public good clearly needs to be reckoned with. Should these deficiencies, though, be the defining focus of policy and the core elements of an analytical framework for understanding how the benefits of finance can be enhanced and not just preserved? Or is there a better alternative, one that leverages the truism—tempered by historical experience—that finance is a process that produces allocative efficiency and critically supports other important processes such as economic growth, wealth accumulation, and, ultimately, human well-being?
The operational implications of shifting the emphasis toward the positive aspects of finance, and away from factors that detract from its effectiveness, may not be obvious. Accentuating the positive aspects of finance and financial systems—the public goods provided by them—leads to an analysis of financial systems that tries to answer questions such as the following:

- From a social, systemic point of view, what is most important and beneficial about finance?
- How should policies be designed to produce the highest probability of preserving these important and useful features, and thereby maintain the benefits of finance?
- How can the benefits of finance be optimized for the economic system and society as a whole?

This represents a positive approach to analyzing financial stability issues.

Regarding finance and an effective and robust financial system as a public good means that policy’s role is to ensure, in a positive way, that private incentives and rules of the game encourage and support the production by society of at least an adequate supply of the public good. This contrasts sharply with the approaches now taken, which cast the main objective of financial policies to be placing limits on finance in ways that can ultimately undermine the ability of finance to provide the optimal amount of public good.

It might be that these two approaches in practice lead to the same place—a policy framework and set of institutional arrangements that provide the mechanisms for ensuring financial stability. But the positive approach is a more constructive one because financial stability is something that needs to be nurtured, protected, and preserved, stemming in part from its intimate connection to money, but also from the great improvements in allocative efficiency it permits. It seems that the negative approach regards the management of market imperfections and other market failures as the immediate objective, perhaps leading to complacency and no full appreciation for the beneficial role of finance in fostering growth in modern economies and in raising living standards in developing economies.


This annex provides an overview of definitions or descriptions of financial stability by a selected group of officials, central banks, and academics.60

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60Some authors choose not to define financial stability and instead use the concept of systemic risk. See Oosterloo and de Haan (2003) for a discussion of this concept.
Most of these definitions envision financial stability as the absence of instability, and thus can be associated with the negativist approach discussed in the chapter.

**John Chant (Bank of Canada)**

Financial instability refers to conditions in financial markets that harm, or threaten to harm, an economy’s performance through their impact on the working of the financial system . . . Such instability harms the working of the economy in various ways. It can impair the financial condition of non-financial units such as households, enterprises, and governments to the degree that the flow of finance to them becomes restricted. It can also disrupt the operations of particular financial institutions and markets so that they are less able to continue financing the rest of the economy . . . It differs from time to time and from place to place according to its initiating impulse, the parts of the financial system affected, and its consequences. Threats to financial stability have come from such diverse sources as the default on the bonds of a distant government; the insolvency of a small, specialized, foreign exchange bank; computer breakdown at a major bank; and the lending activities of a little-known bank in the U.S. Midwest. (Chant, 2003, pp. 3–4)

**Andrew Crockett (Bank for International Settlements and Financial Stability Forum)**

[We can] define financial stability as an absence of instability . . . a situation in which economic performance is potentially impaired by fluctuations in the price of financial assets or by an inability of financial institutions to meet their contractual obligations. I would like to focus on four aspects of this definition. Firstly, there should be real economic costs . . . Secondly, it is the potential for damage rather than actual damage which matters . . . Thirdly, my definition refers . . . not just to banks but to non-banks, and to markets as well as to institutions . . . Fourth, my definition allows me to address the question of whether banks are special . . . [A]ll institutions that have large exposures—all institutions that are largely interconnected whether or not they are themselves directly involved in the payments system—have the capacity, if they fail, to cause much widespread damage in the system. (Crockett, 1997, pp.1–2)

**Deutsche Bundesbank**

The term financial stability broadly describes a steady state in which the financial system efficiently performs its key economic functions, such as allocating resources and spreading risk as well as settling payments, and is able to do so even in the event of shocks, stress situations and periods of profound structural change. (Deutsche Bundesbank, 2003, p. 8)

Wim Duisenberg (European Central Bank)

[Monetary stability is defined as stability in the general level of prices, or as an absence of inflation or deflation. Financial stability does not have as easy or universally accepted a definition. Nevertheless, there seems to be a broad consensus that financial stability refers to the smooth functioning of the key elements that make up the financial system. (Duisenberg, 2001, p. 39)]

Roger Ferguson (Board of Governors of the U.S. Federal Reserve System)

It seems useful . . . to define financial stability . . . by defining its opposite, financial instability. In my view, the most useful concept of financial instability for central banks and other authorities involves some notion of market failure or externalities that can potentially impinge on real economic activity.

Thus, for the purposes of this paper, I’ll define financial instability as a situation characterized by these three basic criteria: (1) some important set of financial asset prices seem to have diverged sharply from fundamentals; and/or (2) market functioning and credit availability, domestically and perhaps internationally, have been significantly distorted; with the result that (3) aggregate spending deviates (or is likely to deviate) significantly, either above or below, from the economy’s ability to produce. (Ferguson, 2002, p. 2)

Michael Foot (U.K. Financial Services Authority)

[We have financial stability where there is: (a) monetary stability; (b) employment levels close to the economy’s natural rate; (c) confidence in the operation of the generality of key financial institutions and markets in the economy; and (d) where there are no relative price movements of either real or financial assets within the economy that will undermine (a) or (b).

The first three elements of this definition are, I hope, non-contentious. In respect of (a) and (b), it seems implausible to define financial stability as occurring in a period of rapid inflation, or in a mid-1930s style period of low inflation but high unemployment.

Similarly in respect of (c), it would be strange to argue that there was financial stability in a period when banks were failing, or when normal conduits for long-term savings and borrowing in either the personal or corporate sectors were seriously malfunctioning. Such circumstances would mean the participants had lost confidence in financial intermediaries. It would mean, almost certainly, that economic growth was being damaged by the unavailability or relatively high cost of financial intermediation.

This leaves us with (d) . . . I would say that there are four main channels by which changes in asset prices might affect the real economy: by changing household wealth and thereby consumption . . . ; by a change in equity prices . . . ; by their impact on firms’ balance sheets which can then affect corporate spending . . . ; by their impact on capital flows, with for example inflows of capital—as during the dot.com boom in the US—strengthening the domestic currency. (Foot, 2003, pp. 2–3)
Andrew Large

In a broad sense . . . think of financial stability in terms of maintaining confidence in the financial system. Threats to that stability can come from shocks of one sort or another. These can spread through contagion, so that liquidity or the honoring of contracts becomes questioned. And symptoms of financial instability can include volatile and unpredictable changes in prices. Preventing this from happening is the real challenge. (Large, 2003, p. 170)

Frederick Mishkin (Columbia University)

Financial instability occurs when shocks to the financial system interfere with information flow so that the financial system can no longer do its job of channeling funds to those with productive investment opportunities. (Mishkin, 1999, p. 7)

Norges Bank

Financial stability means that the financial system is robust to disturbances in the economy, so that it is able to mediate financing, carry out payments and redistribute risk in a satisfactory manner. (Norwegian Central Bank, 2003)

Tommaso Padoa-Schioppa (European Central Bank)

[Financial stability is] a condition where the financial system is able to withstand shocks without giving way to cumulative processes which impair the allocation of savings to investment opportunities and the processing of payments in the economy.

The definition immediately raises the related question of defining the financial system . . . [which] consists of all financial intermediaries, organized and informal markets, payments and settlement circuits, technical infrastructures supporting financial activity, legal and regulatory provisions, and supervisory agencies. This definition permits a complete view of the ways in which savings are channeled towards investment opportunities, information is disseminated and processed, risk is shared among economic agents, and payments are facilitated across the economy. (Padoa-Schioppa, 2003, p. 22)

Anna Schwartz (National Bureau of Economic Research)

A financial crisis is fueled by fears that the means of payment will be unobtainable at any price and, in a fractional reserve banking system leads to a scramble for high-powered money. It is precipitated by actions of the public that suddenly squeeze the reserves of the banking system . . . The essence of a financial crisis is that it is short-lived, ending with a slackening of the public’s demand for additional currency. (Schwartz, 1986, p. 11)
According to our own definition at the Nederlandsche Bank, a stable financial system is capable of efficiently allocating resources and absorbing shocks, preventing these from having a disruptive effect on the real economy or on other financial systems. Also, the system itself should not be a source of shocks. Our definition thus implies that money can properly carry out its functions as a means of payment and as a unit of account, while the financial system as a whole can adequately perform its role of mobilizing savings, diversifying risks and allocating resources. Financial stability is a vital condition for economic growth, as most transactions in the real economy are settled through the financial system. The importance of financial stability is perhaps most visible in situations of financial instability. For example, banks may be reluctant to finance profitable projects, asset prices may deviate excessively from their underlying intrinsic values, or payments may not be settled in time. In extreme cases, financial instability may even lead to bank runs, hyperinflation, or a stock market crash. (Wellink, 2002, p. 2)