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# 1

## Introduction: Risks and Protagonists

Free trade – albeit conducted within different institutional frameworks of varying degrees of openness – have existed over various stretches of human civilization, and have spanned more or less extensive realms. In antiquity, for example, the period of *Pax Romana* (Roman peace) allowed commerce to flourish within the Roman empire, its provinces and dependencies, and beyond to non-Roman trading partners. This era is broadly defined as covering the two-century period extending from the reign of Augustus (27<sup>BC</sup>–AD14) to that of Marcus Aurelius (AD161–180). In more recent times, over long periods of the nineteenth and twentieth centuries, several countries espoused free trade and adopted the gold standard, with little or no regulation on cross-border capital movements.

The last quarter of the twentieth century witnessed the inception of a trend of economic globalization. This modern phenomenon is the outcome of protracted negotiations by the world's major economic nations, which agreed to dismantle gradually or to reduce substantially their protectionist barriers. The World Trade Organization (WTO), the International Monetary Fund (IMF), and other international institutions currently underpin the process of global multilateral freeing of trade in goods, services and capital. The WTO focuses on freeing cross-border trade, while the IMF is concerned primarily with promoting an open and stable multilateral payment system among its member countries (see Chapter 6). Cross-border financial transactions have, since the 1970s, grown considerably faster than world gross domestic product (GDP) in an environment of financial innovation and spectacular advances in information technology (IT) allowing for the instantaneous treatment, communication and diffusion of information.

Proponents of 'free capital movements' have highlighted this phenomenon's contribution to the efficient allocation of resources, based

on comparative advantage and international division of labour. The foregoing benefits have not been without risk to institutions or national/regional economies, however. The risks in question are identified hereafter.

### 1.1 Risks of a financial institution

*Risk* is simply defined as a 'measurable possibility of losing or not gaining value,'<sup>1</sup> whereas uncertainty lacks the attributes of being conceptually identifiable and/or being empirically measurable.<sup>2</sup> At the level of a financial enterprise, risk can be classified into four categories: (i) managerial, organizational, strategic and model-related; (ii) customers'/counter-parties' credit worthiness; (iii) concentration of exposures; and (iv) legal/operational factors. At the country or macro level, risk factors include *inter alia* business turbulences, socio-political upheavals, natural catastrophes or disasters with a human cause.

Figure 1.1 proposes a paradigm for risk management comprising two interrelated major domains. The first domain consists of risk categories (A, B, C and D in the shaded area) that are largely within the direct control of management. They cover (i) credit worthiness of customers and counter-parties; (ii) exposure or concentration of portfolios; (iii) legal/operational risks; and (iv) quality of management – judged notably by reference to its judicious strategies, efficient organization, and sound models.

The second domain covers categories of risk (E and F) that are generated mainly by external forces. These risks pertain to the socio-political and macroeconomic environment, as well as to the volatility of markets (namely, interests, yields, currencies, indices and so on). Several elements of risk can be insured totally or partially, mitigated or transferred through appropriate techniques.

The overriding goal of a private enterprise in a market economy is to create value for its stakeholders, and notably for those risking their capital. In striving for that goal, a financial institution – prompted by prudence – has access to an arsenal of risk mitigation techniques. The cost of these techniques could be more or less onerous, and their ready supply would depend on prevailing conditions. Certain risks are uninsurable: this is notable in the case of reputational and strategic risks – which affect the franchise value of an enterprise. Indeed, reputation is an intangible and precious asset often built up over many years by a visionary management and dedicated quality service. It can be compromised instantly by ignorance or greed, leading to the ruin of the enterprise.

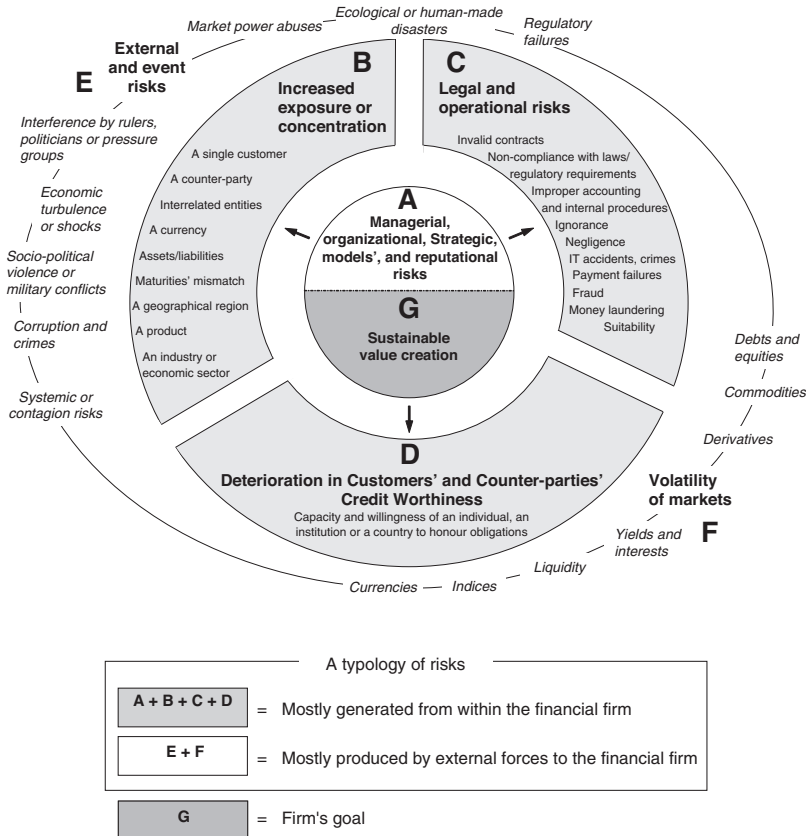


Figure 1.1 A financial institution's universe of risks: a paradigm for risk management

While management in a financial institution focuses on value creation through retaining the risks it can competently and profitably manage within the enterprise, governmental policy in an open-market economy seeks first and foremost to master system-wide risks consistent with optimal stability and sustainable growth. Judicious management pre-requires from the parties concerned to identify clearly and measure accurately all risks and their relationships. However, the analytical unravelling of the knot of risks into its separate elements is not an easy process. Indeed, conceptually distinct elements of risk are in reality difficult to disentangle and assess individually. It is accordingly difficult *ex ante* to estimate the cumulative impact of a spectrum of

risks accurately. This is the case, for example, with the risk of a breakdown of the IT system of a bank, which can upset the activities of the bank as well as those of customers and other banks (see Chapter 3, Section 3.5.4).

## 1.2 Crises

Beyond their benefits, freer and speedier movements of capital flows in open economies have contributed to increasing interdependence among economies and institutions, and to amplifying swings in the financial and real sectors of modern economies – with a potential of producing costly turbulences culminating eventually in financial crises. The latter can be broadly defined as comprising debt defaults, currency crashes and dramatic disruptions in otherwise reasonably functioning markets or systems. They are characterized by generalized failures to honour contractual obligations by individuals, financial and non-financial firms, and governmental entities.

Financial crises over recent decades or centuries have been variously documented.<sup>3</sup> Among early crises, those which devastated the banks of Florence in the fourteenth century (Bardi and Peruzzi, 1348), and the fifteenth century (Medici, 1492) are noteworthy.<sup>4</sup> In more modern times, one crisis with considerable transnational contagious impact can be traced back to the post-Napoleonic Wars' economic boom in Britain fuelled by new industries, and the massive export of British capital to Latin America in the early 1820s, in the wake of that region's liberation from Spanish rule. Britain's growing trade imbalance, however, provoked a drain on the Bank of England's gold stock. To stop that drain, the Bank of England raised its discount rate substantially in the summer of 1825. The London Stock Exchange (which had been experiencing a speculative mania) crashed in October, triggering a bank run that spread to the Continent. The Bank of England failed to stem the banking panic, and its passive attitude led to widespread bankruptcies and a recession. Lending to Latin America was suspended, hurting that region's export industry and the tax proceeds of the debtor governments concerned. This led to generalized defaults on sovereign debt. After this, it took three decades to solve the debt crisis of the region.<sup>5</sup>

The origins of financial crises hitting a given economy can be traced to acute domestic problems or external shocks in various areas. These areas belong to changes in financial conditions, or in real activities. They comprise, notably: the failure of important financial intermedi-

aries, the collapse of confidence in financial markets, the surge in the price of one or more basic commodities, competitive currency devaluations, public policy blunders, default of a sizeable country on its financial obligations, cataclysms, psychological factors (such as herding behaviour, irrational exuberance or panics), speculative attacks, natural catastrophes and wars.

A foreign exchange or currency crisis can be defined as a substantial shift over a given short period by reference to an index which takes into consideration (i) a large devaluation or depreciation in a currency *vis-à-vis* one leading currency or a basket of major currencies used in international trade; and/or (ii) the central bank's intervention to defend the exchange rate by selling large amounts of international reserves or by raising substantially interest rates that absorb pressure on the said exchange rate.

Banking crises can be defined by reference to (a) grave difficulties on the liabilities side of the banking sector which could ultimately lead to a run by depositors on their banks, or to the failure to roll-over inter-bank deposits; and/or (b) severe problems relating to bank exposures to risk – leading to sharp declines in the value of loans, trading portfolios, real estate, and various other assets or collaterals belonging to banks.<sup>6</sup>

Shocks can happen concomitantly or sequentially, and can reinforce the frequency, depth, breadth or duration of crises. Thus, a banking crisis can trigger a currency crisis – and vice versa. Bank intermediation typically accounts for a larger share of the financial sector in developing countries – in comparison with developed economies, where financial markets have a prominent role.

Systemic risk refers to the situation that one or more of the above-mentioned shocks could cause serious damage to the financial system's capacity to function. For example, the financial intermediation and payment system in a country, and eventually beyond,<sup>7</sup> could be disrupted, with significant adverse effects on the real economy. In every financial system where institutions are interlinked through an active interbank market, there is a potential for systemic risk (see Chapter 3).

Systemic risk's negative externalities have a substantial effect on the real economy – namely by contracting national output and destroying employment. This is likely to occur through one or more of these inter-related channels: (i) payment system disruptions (including bank runs) causing the failure of enterprises; (ii) disruption of credit flows to profitable projects; (iii) collapses in asset prices leading to the contraction of wealth and of spending, and to an increase in uncertainty; and (iv) an unexpected sharp fall in consumer confidence and/or investor confidence and spending.<sup>8</sup>

Public policy failures – if left uncorrected – can eventually generate financial crises. Major problems in this field include: (i) unsound macroeconomic policies – for example inflationary policies, excessive public deficits, market distortions, foreign exchange overvaluation *vis-à-vis* major trading partners; (ii) deficiencies in regulatory frameworks – relating to such issues as inadequate capital rules favouring foreign borrowing regardless of risk, unsound credit policies and practices, excessive concentrations of exposures and so on; (iii) widespread deliberate condoning of managers' misconduct – in violation of known rules of prudence and accountability; and (iv) absence of rigorous controls, honest supervision and efficient enforcement systems.<sup>9</sup>

An economic shock with a systemic risk potential can spread beyond a national economy, and 'contaminate' other systems and countries. The most vulnerable countries are those that have fundamental intertwined links (through monetary/financial, trade, or political relationships) with the troubled source, or those that have similar socio-economic conditions. Contagion can be further fanned in an environment of opacity and uncertainty, by irrational or unfounded fears – that is, not related to economic fundamentals. The latter fears provoke increases in risk aversion, loss of confidence, herd behaviour and financial panic, in which expectations of a deterioration become self-fulfilling.

*Country risk* refers to the probability that the economic agents (of the private and public sector) in a given country cannot or will not service or repay their external obligations as contracted. This probability is based on key economic, social and political conditions and events affecting that country<sup>10</sup> (see also Chapter 6). *Sovereign risk* refers to the risk that a particular sovereign government or a sovereign-supported institution is unable or unwilling to honour its repayment obligations (foreign, as well as domestic). Country and sovereign risks are not likely to have a significant spillover impact on other economies, especially if the distressed economy is relatively small, with limited regional or international trading and financial relations. One cannot rule out, however, a herd-like non-rational behaviour of creditors and investors who lump together several emerging economies without objective differentiation of their fundamentals.

The measurement of country and sovereign risks has been clarified after the default of Mexico on its international debt in August 1982, which spread to Latin American and other developing countries world-wide. Before August 1982, US regulators accepted that 'a single US bank may have loans outstanding to 20 different public enterprises in Brazil, none of which exceeds 10 per cent of the bank's capital,

but which taken together may far exceed the limit, and still not be in violation of the rule'.<sup>11</sup> Nowadays, all risk exposures of a financial intermediary to a foreign country are aggregated, and have together not to exceed the prudential ceiling (10 per cent in the above case).

In analysing recent balance of payments'<sup>12</sup> crises in emerging economies, one can identify conceptually two sources of difficulties:

- (i) *Liquidity*: negative changes in sentiment among creditors and investors are not justified by the fundamentals in the country concerned. Financial institutions and investors would ask for reimbursement, and stop new funding. Such an attitude is generally prompted by reasons of increased risk aversion, loss of confidence, contagion from another market, or herd behaviour.
- (ii) *Solvency*: this problem results from the deterioration in the earning capacity (and consequently in the value) of the country's productive assets. A liquidity crisis can provoke a solvency crisis – in so far as the drying-up of finance impairs the normal debt-servicing capacity of the entities concerned, and jeopardizes their productive capacity and net cash flow. This situation would lead eventually to the deterioration in the value of the economy's assets, and ultimately to the insolvency and default of borrowers.<sup>13</sup>

A commonly used sovereign risk indicator is the differential of the yields between a hard currency Treasury Bond (for example, that of the USA) and an equal maturity debtor government's bond denominated in the same currency. The reliability of that indicator is conditional on market participants having access to timely, accurate and complete information on debtor creditworthiness – which is unfortunately not invariably the case. Moreover, investors could assign to a sovereign bond a lower risk premium, in the expectation that the debtor government in question would have the support of major creditor nations or multilateral institutions in troubled periods.<sup>14</sup>

Following the capital account liberalization in several economies since the 1970s, several international investment funds manage financial volatility<sup>15</sup> and return by allocating predetermined specified percentages of their assets across different countries and sectors. Should the market value of a fund's investment in a given country fall in the aftermath of a crisis, the manager of that fund would be induced to rebalance the fund's composition by liquidating a portion of the fund's assets in other countries – notably those with similar risk profiles in favour of safer havens. The countries encountering disinvest-

ments would have their stock prices and currencies put under pressure – especially when liquidity in these countries is strained. This phenomenon of transmission could well be called systemic risk by indirect contagion.<sup>16</sup>

The threat of generalized runs on banks and total collapse of the global financial sector, is remote. It presupposes (i) the existence of open and fully integrated financial markets; and (ii) the absence of governmental actions to check that collapse. The USA, the European Union (EU)<sup>17</sup> and other governments have various tools to control the spread of financial problems, and co-operate to halt or moderate the transnational propagation of systemic risk (see Chapter 6).

Financial crises have cost national economies dear – in both direct resolution costs to the government and other broader costs to society – since the early 1980s. Governmental bail-out costs to financial institutions for Nordic countries (Norway, Sweden and Finland) ranged from 4 per cent to 11 per cent of their gross domestic product (GDP) in the early 1990s. Mexico's financial crisis in the mid-1990s cost its taxpayers 20 per cent of GDP. East Asian countries suffered in 1997–8 even more, with an estimated domestic cost for cleaning the Indonesian financial sector of 50–60 per cent of GDP, compared with about 40 per cent in Thailand, 15 per cent in Korea and 12 per cent in Malaysia.<sup>18</sup>

The foregoing figures exclude the other heavy costs encountered by distressed countries – recession, stagnation or depression, destruction of know-how and of business relations (for example, between defaulting financial institutions and their customers), drastic falls in standards of living, and the ensuing socio-political turmoil – that characterize financial crises.<sup>19</sup> Furthermore, indicated figures exclude forgone opportunities, anarchy and the loss of life. A country crisis can rebound on creditors and trading partners, with a substantial negative impact on the latter.

An empirical study covering a sample of forty-seven banking crises since the mid-1970s found that output losses associated with the crises had been in the range of 15 per cent to 20 per cent of annual GDP. These crises, it is worth noting, could last longer and be costlier in a developed country (for example, Japan) than in some emerging economies.<sup>20</sup>

Financial liberalization has allowed market forces to play a major role in setting the pattern of financial flows. It brought higher levels of growth to several countries.<sup>21</sup> Those with legal-regulatory systems that protect the rights of national and foreign investors are most likely to benefit.<sup>22</sup>

Figure 1.2 presents a sketch of the principal parties in global financial markets of interest to this book. They include governmental entities, private firms and multilateral institutions. Parties that can readily access international private financial markets on competitive terms belong to credit-worthy developed and emerging economies.

Some countries (the shaded area in Figure 1.2) may not be able to tap private international markets directly on the basis of their own

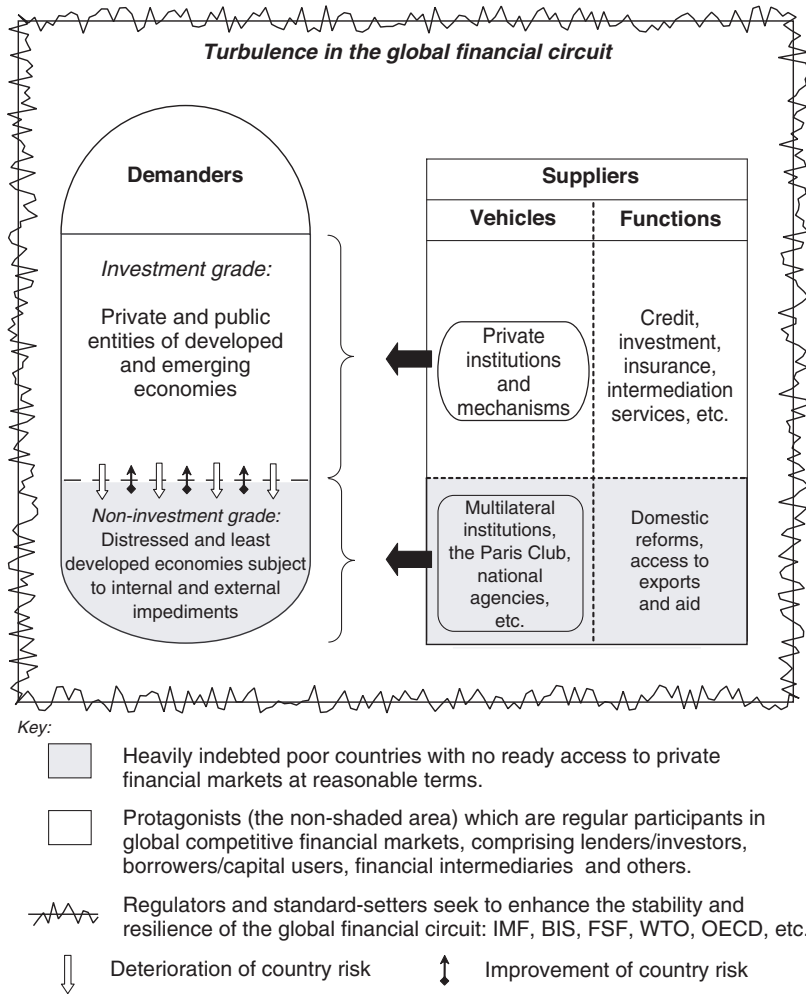


Figure 1.2 Protagonists in global financial markets: a sketch of functions and flows

credit-rating merits. These countries can obtain limited international funding through multilateral development banks (MDBs). The latter's capital is mainly owned by the governments of developed economies. Given their superior credit ratings, MDBs (the largest is the World Bank Group) are able to borrow from world capital markets on more attractive terms than their developing member countries could otherwise obtain directly on the basis of their own credit rating. Nevertheless, the capacity for MDBs' borrowing is constrained by the size of their authorized statutory capital.<sup>23</sup>

Trade and financial openness has, on average, contributed to higher productivity and income per capita.<sup>24</sup> To participate in international financial markets, countries encountering economic problems generally require appropriate domestic reforms and easier access to export markets<sup>25</sup> (see also section 6.1.2 in Chapter 6).

\* \* \*

The universe of risk is vast and dynamic. Continuous research is needed to refine definitions, measures and assessments of risk components, and to identify their interdependencies. As stated by the president of the Risk Management Association, 'risk management is not pure science; rather, it's a finely intertwined helix of analysis, economics, behaviour, chance and experience. And the helix continues to fatten as each element grows in complexity.'<sup>26</sup> Chapter 2 will focus on the role of corporate governance and self-regulation, with special reference to the risk management of financial institutions.

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## Key

f figure/illustration

n note

t table

**bold** extended discussion or heading emphasized in main text

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