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8 Managing Complexity in the Financial Services Industry

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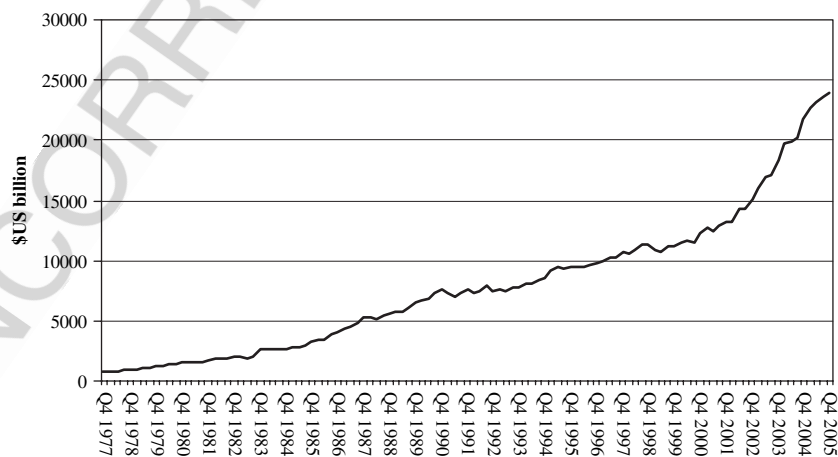
The most important factor driving complexity in the financial services (FS) industry is internationalization. In the last twenty years, we have witnessed a process that has changed the corporate landscape. This process entails two complementary phenomena: firms seeking capital abroad and investors looking for diversification opportunities in overseas markets. FS companies are playing an essential role in shaping both.

As firms grow bigger, the need for external funds has increased dramatically. Local markets cannot satisfy the needs of firms for external capital. In some emerging markets, illiquidity, a lack of investor protection and transparency, and unavailability of capital have forced firms to cross borders and seek financing in larger, more liquid markets, where capital is not scarce and when investors are willing to provide funds at a relatively low cost.

At the same time, as interactions among firms in a local market have increased, investors have realized that they can achieve a better trade-off between risk and return

01 in markets overseas. Nowadays, companies in a local market co-move much more than
 02 they did just twenty years ago; hence, investors' desire for diversification potential is
 03 not found domestically. Not surprisingly, emerging markets have performed extremely
 04 well. The International Federation of Stock Exchanges reports that in 2005, countries
 05 like Colombia, Brazil, and the Czech Republic have returned almost 100% in a year
 06 in local currency. Not surprisingly, the total value of shares traded has increased by
 07 386% in Colombia in the first quarter of 2006 relative to the same period in 2005. In
 08 Athens, where the market returned 32% in 2005, share trading has increased by 80%
 09 from January to June 2006. The *Financial Times* reported on 25 April 2006 that US
 10 investors allocated more than twice the amount to international mutual funds than
 11 they did to domestic funds.

12
 13 What is the role of FS firms in this world? The World Trade Organization reports
 14 that international financing provided by financial institutions¹ is estimated at \$6.4
 15 trillion, of which \$4.6 trillion is attributed to international lending. Total world banking
 16 assets amount to \$20 trillion, insurance premiums are at \$2 trillion, stock market
 17 capitalization is at over \$10 trillion, and the market value of listed bonds is at around
 18 \$10 trillion. In parallel with the increased internationalization of markets, FS firms
 19



34 **Figure 8.1** International positions of BIS banks

35 Source: Bank of International Settlements

01 have reached double-digit growth since 2002.² Today, the industry is worth around
02 \$560 billion in revenues per year. Europe and North America account for 48% and
03 44% respectively of the value generated by the industry, while Asia-Pacific represents
04 3.20%.³ FS firms bring firms and investors together; i.e. they bring the demand for
05 funds together with the supply of funds. Complexity in this industry is thus driven by
06 the complexity of the needs and characteristics of both parties. Figure 8.1 illustrates
07 the process of internationalization of FS firms.
08
09

10 **Complexity drivers in the FS industry**

11 ***Diversity***

12
13
14 The usual drivers of internal diversity are at play in the FS industry. The process
15 of internationalization described above shapes the environment in which financial
16 firms operate. The market requirements for personnel capable of responding to the
17 demands of international investors have transformed global banks into small replicas
18 of the United Nations. Management systems differ across firms and countries because
19 historically banks have played different roles. In Germany and Japan, for example,
20 the banking sector is an important player in the governance of corporations, while
21 in the Anglo-Saxon system, the financial and real activities have generally been
22 separated.
23

24 What distinguishes the internal diversity of FS from the typical bricks-and-mortar firm
25 is the impact of macroeconomic factors on the balance sheet of FS firms. To illustrate
26 this assertion, consider the case of a firm operating in the automobile industry. For
27 such a company, the timing of cash flows is relevant to the extent that the business
28 cycle determines the demand for automobiles in the near future. Once financing needs
29 have been forecast and satisfied, the difference between selling a car today and selling
30 a car five years from now is determined by the discount rate the firm uses – its cost
31 of capital. Therefore, the uncertainty for the firm is cash flows, and hence the risk
32 for the firm comes from the asset side of the balance sheet. It is true that there is
33 financial uncertainty (for instance, uncertainty over interest rates), which makes the
34 firm's liabilities risky. However, this source of risk is not firm-specific and can be
35 alleviated if, for instance, the company is financed with long-term securities.

01 In banks, interest rates determine firm profits and also the financial costs. Banks
02 essentially make money by borrowing funds from the public (deposits, debt, and equity)
03 and lending it back to the market (loans). To the extent that the lending rate exceeds
04 the borrowing cost, the bank is profitable, and profitability depends essentially on the
05 ability of the bank to play with the yield curve. As interest rates vary, depending on the
06 term of the loan, the timing of cash flows in financial firms is extremely important,
07 and the time dimension is another specific factor of complexity for these firms. Playing
08 with the time horizon of cash flows and financing costs is an important aspect of the
09 banking activity. Indeed, banks essentially borrow short-term and lend long-term. The
10 implication of this strategy is that shocks to interest rates affect bank profitability much
11 more than in any other industry. We will analyse later how FS firms cope with this.

12
13 The second important determinant of internal diversity in FS firms is their growth
14 strategy, based on acquisitions, especially cross-border acquisitions. For instance, Citi-
15 group merged with KorAm of South Korea, Banamex from Mexico, and Computershare
16 of Australia in recent years.⁴ Also Grupo Santander acquired Abbey National Bank
17 of the UK, Banco de Venezuela, and Banca Tota y Açores of Portugal. Consolidation
18 results from the need to build larger businesses, to widen geographic scope, and to reach
19 customers worldwide. More recently, financial firms are seeking entry into China and
20 Russia, markets that were previously not accessible.

21
22 As a result of these cross-border acquisitions, five institutions account for 68% of the
23 assets of the globally diversified FS firms today: Citigroup (19%), ING Group (15%),
24 Fortis (13%), Instituto Finanziario Industriale (11%), and JP Morgan Chase (10%).
25 More importantly, integration across borders brings about complexity: complexity in
26 managerial cultures, complexity in the role of FS firms in the economy, and complexity
27 as employees need to move between countries.

28
29 As with internal diversity, the sources of external diversity in FS firms are not specific:
30 heterogeneous customer needs, differing cultural values, stakeholder interests that
31 usually clash, competitors' differing strategies, and so on. The diversity that arises from
32 heterogeneous customer needs is illustrated in Figure 8.2. This shows the percentage
33 of assets held by the FS sector in 2004 in the US, by type of activity. FS firms provide
34 different types of services, from pensions to banking, and cater to different groups of
35 customers, from governments to individuals.

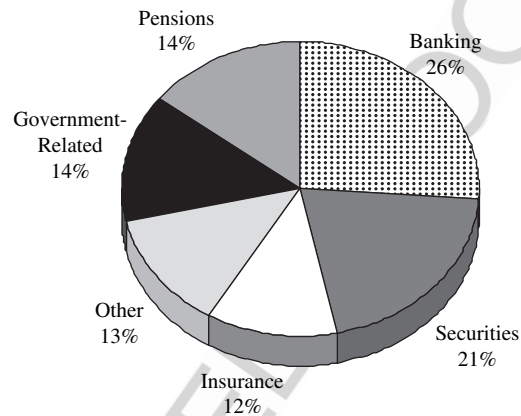


Figure 8.2 Assets of the financial services sector, 2004

Source: Board of Governors of the Federal Reserve System

There is, however, an incremental effect of the legal environment on financial firms. Today, a single financial transaction is subject to several legal regimes, depending on the nationality of the parties, the site of the transaction, and the location of the assets involved. The cost of compliance with multiple regulations becomes tangible as firms are required to report to different local authorities, forced to comply with sometimes contradictory provisions, and exposed to the possibility of a change in the law that makes previous attempts to comply useless. There is no way for FS firms to migrate to the most favourable legal system: their nature as financial intermediaries requires their presence in several countries, as has been discussed before.

The effect of regulation on the day-to-day operations of a financial firm is not the only issue. The financial sector is over-regulated in many countries in the world, and the entry strategy of FS firms in those countries is determined by legal issues. In China, foreign banks and insurance companies cannot directly own local financial intermediaries; therefore, foreign institutions participate in the Chinese financial system either through small stakes or through joint ventures with Chinese banks. In Europe, a series of merger attempts have recently been witnessed, not only in the financial sector, which have been blocked by national governments wanting to protect their 'national champions'. Banks belong in this category. Last year the press followed the scandal in Italy

01 where the governor of the Central Bank, Antonio Fazio, favoured two Italian banks –
02 Banca Popolare Italiana (BPI) and the insurance group, Unipol – which were targeting
03 Banca Antonveneta and BNL, respectively. This defence was used as a means to avoid
04 these two Italian banks ending up in foreign hands, as a Dutch (ABN AMRO) and a
05 Spanish bank (Banco Bilbao Vizcaya Argentaria, BBVA) were after Banca Antonveneta.
06

07 ***Interdependence***

08
09 FS firms are essentially intermediaries; hence, they connect and transfer risks across
10 market players. This adds complexity to their activity, for a shock to either a supplier of
11 funds or a creditor becomes a risk to the FS firm. Examples in recent years abound. The
12 case that had the most impact was Long Term Capital Management, whose financial
13 troubles started as several positions were unwound sequentially. The failures of Enron
14 and Parmalat also resulted in severe financial troubles for Arthur Andersen, Citigroup,
15 Bank of America, etc. The risk for FS firms is essentially systemic and the profitability
16 of the sector is highly correlated with the performance of the market.
17

18 ***Ambiguity***

19
20 It is thought that ambiguity in the FS sector is a natural consequence of the large scale
21 at which these firms operate. HSBC, for instance, operates in several countries, several
22 market segments, several customer segments, and under several regulatory regimes.
23 In this setting, the information available is complex and always gives a distorted
24 picture of the company. More importantly, such a large scale poses a challenge for
25 management in the way that information flows from the bottom of the organization up
26 and from regional managers to headquarters. In a similar vein, in large organizations,
27 and especially in banks, it is of the outmost importance to be able to convey clear
28 messages from top management to the bottom of the organization, especially when the
29 organization operates on a large scale.
30

31 **How do FS firms deal with complexity?**

32
33
34 As FS firms operate in different countries, markets, customer segments, and under
35 different legal regimes, the only way for them to survive in such a complex world is to

01 *standardize* their activities and procedures. As seen below, in some cases standardiza-
02 tion has resulted from the voluntary and proactive decisions of financial institutions and
03 from the contribution of international organizations and regulators in other cases. In
04 all cases, FS firms have simplified their reporting, risk policies, and management strate-
05 gies. The main result of this trend has been *convergence*: FS firms are larger and fewer
06 than only a few years ago, and they behave more and more alike. There is convergence
07 in risk policies, legal regimes, sustainability policies, and performance indicators.

09 **Standards in risk management**

11 The Basel Committee is the pioneer in the standardization of Bank Risk Policies. The
12 Basel I system of 1988 established a procedure for banks to manage their risks by
13 forcing them to maintain a certain percentage of their assets as capital. This well-
14 known system has created more problems than it has solved because it did not give
15 clear guidelines on the risk characteristics of certain bank instruments, it did not take
16 into account the diversification potential of other instruments, and it created, in some
17 cases, the wrong incentives by inducing banks to take excessively low risk levels.⁵

18
19 In the Basel II system, the objective was to align required capital more closely to a
20 bank's own risk estimates. The finalized Basel II Accord was released in June 2004,
21 and it is expected to be fully implemented by the end of 2007. Basel II is based on three
22 pillars:

- 23
- 24 • minimum capital requirements;
- 25 • supervisory review;
- 26 • market discipline.

27
28 Banks are required to assess three types of risk: credit risk, market risk, and operational
29 risk, and they are obliged to hold at least 8% of the weighted risk as capital. As with
30 the previous system of 1996, banks are allowed to value credit and market risk using
31 a proprietary system, which must be approved by the regulator. For credit risk, banks
32 can opt into one of three systems:

- 33
- 34 • A standardized approach similar to the old system. The bank allocates a risk
35 weight to each of its assets and off-balance-sheet positions and produces a sum

01 of risk-weighted asset values. A risk weight of 100% means that an exposure is
02 included in the calculation of risk-weighted assets at its full value.

- 03 • A foundation internal rating-based (IRB) approach. Under the IRB approach, banks
04 will be allowed to use their internal estimates of borrower creditworthiness to
05 assess credit risk in their portfolios, subject to strict methodological and disclosure
06 standards. Distinct analytical frameworks will be provided for different types of
07 loan exposures, e.g. corporate and retail lending where the loss characteristics are
08 different.⁶
- 09 • An advanced IRB approach. Lenders with the most advanced risk management and
10 risk modelling skills will be able to move to the advanced IRB approach, under
11 which the banks will estimate their probability of default (PD), the expected loss
12 given default (LGD), exposure at default (EAD), and maturity of the loan (M). In
13 the foundation IRB approach, LGD, EAD, and M cannot be estimated by the bank –
14 they are explicitly determined by the regulator.

15
16 For operational risk, banks can also opt into one of three different systems. Under the
17 basic indicator approach, a supervisory factor (called 'alpha') is applied to the total gross
18 income to deliver the capital requirement. Under the standardized approach, the gross
19 income is split over eight different business lines, namely corporate finance, trading and
20 sales, retail banking, commercial banking, payment and settlement, agency services,
21 asset management, and retail brokerage. A different factor (called 'beta') is applied
22 to each different business line. The most advanced option for determining regulatory
23 capital for operational risk consists of a class of approaches referred to as the advanced
24 measurement approaches (AMA). Under the AMA, the regulatory capital require-
25 ment is calculated on the basis of the banks' internal operational risk measurement
26 systems.⁷

27
28 The internal systems developed by FS firms to calculate their required capital are called
29 economic capital (EC) methodologies. Economic capital is primarily used by financial
30 institutions to support decisions about what business lines or transactions to pursue. A
31 firm defines its economic capital as owners' equity, retained earnings, and subordinated
32 debt. Then the approach consists of identifying within the firm those business lines
33 that offer the best use for capital in terms of risk. In order to make such an assessment,
34 banks employ risk-adjusted performance metrics like return on risk-adjusted capital
35 (RORAC) and risk-adjusted return on capital (RAROC).

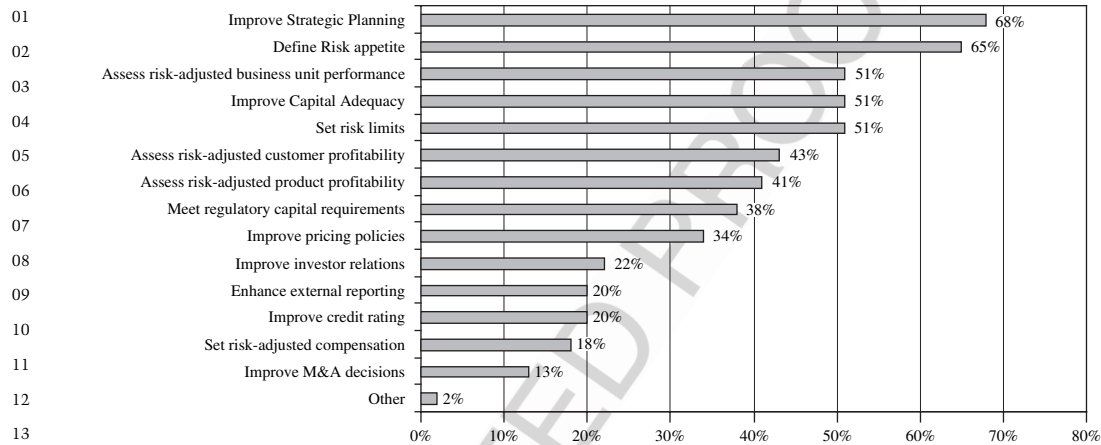


Figure 8.3 Reasons to adopt an economic capital system

Source: PriceWaterHouseCoopers

In 2005, PriceWaterhouseCoopers surveyed industry participants in their use of economic capital (EC) systems.⁸ Figure 8.3 illustrates the effectiveness of EC systems at eliminating complexity in the FS industry. Most of the respondents (50–60%) report that their objective for implementing EC is to improve strategic planning, assess performance, and set risk limits.

A final point should be made on corporate risk management. One important trend in past years is that the pricing and management of credit risk has become more market oriented. The adoption of economic capital systems is just one example. The development of derivative markets is an important consequence of such a trend, which by itself affects financial firms as well as firms in the real sector. The market approach has increased financial stability and reduced complexity in transactions, because pricing is more transparent and efficient. In this setting, a large group of rational market participants sets prices, and new products are created as demand arises. Of course, increased complexity in the transactions calls for a new role for financial regulation, which is aimed at creating new standards of practice.

Standards in regulation

To simplify financial transactions, countries and legal systems are converging towards a unique legal financial system. What are the principles illuminating this convergence? Above all, investor protection is paramount. The objective of financial regulation must ultimately be to protect shareholders against the egoistic behaviour of directors who seek to benefit themselves rather than maximize the value of the company. Some supranational institutions, like the World Bank, have been pioneers in the effort to standardize the rules protecting investors because, as the Bank recognizes, 'The improvement of corporate governance contributes to the development of capital markets, both private and public.'

A good example is listing standards. In the last few years, especially following the passing of the Sarbanes Oxley Act, non-US firms have started reviewing the costs and benefits of having their stock listed on US markets. ITV, Britain's largest commercial TV broadcaster, decided to deregister its stock in 2005, arguing that the reporting obligations imposed by the US SEC (Securities and Exchange Commission) were 'very costly'. ITV estimated that they were saving \$13 million over two years as a result of this decision. Multinational firms like BMW and Samsung have long refused to list in the US. A number of European companies are considering whether to terminate their listings, arguing that the costs outweigh the benefits, and they are actually claiming that there may be no benefit at all. In Europe, new markets with very strict listing requirements have failed to attract companies and investors.⁹

The convergence of the norms of good governance, in short, starts by assuming that certain systems are better than others, independent of the particular circumstances of a country or a company. The systems that work are, apparently, those of the more developed countries, i.e. the United States and the United Kingdom. Several proposals for corporate reform in Europe – including those in France, Germany and Spain – establish certain recommendations based on the international studies available. What do these fundamentally academic studies suggest? What is known nowadays is that the value of companies in countries with better governance systems is, other things being equal, higher; the companies invest more efficiently, the allocation of resources

01 is therefore more efficient, and, finally, growth rates are greater. It is also known
02 that in Anglo-Saxon countries, there is more transparency and shareholders are better
03 protected.

04
05 There are two fundamental problems in all these statements that make the tendency
06 to copy what works in other markets dangerous. First of all, the 'international studies'
07 referred to above are based on comparing countries. Indeed, in the United Kingdom,
08 the shareholders are better protected than in Venezuela. In comparing both countries,
09 the stock exchange capitalization in the United Kingdom represented 137% of the
10 average GDP between 2001 and 2003; in Venezuela, it represented only 4.5% of the
11 GDP. Also, the British economy grew 2% annually between 2001 and 2003, whereas
12 the Venezuelan economy grew at a negative annual rate of 5%. It is tempting to
13 admit that the World Bank is right and that a causal relation exists between the
14 transparency of the markets and economic growth. Nevertheless, the GDP per capita
15 in the United Kingdom is eight times greater than in Venezuela and it is probably
16 certain that the least developed countries have worries other than the relationship
17 between directors and shareholders. This explains why their corporate governance
18 systems are weaker. In other words, it is not known what was first – the egg or
19 the hen.

20
21 The second problem is that, to date, there is not a conclusive study that demonstrates
22 that the improvements in corporate governance in a country help the development
23 of financial markets. The conclusion of the studies made in some Eastern European
24 countries that have carried out deep legislative reforms based on the American model
25 is discouraging. Russia is a good example. One could borrow from Katherina Pistor,
26 a legal scholar from Columbia University, and say that in all transplants there are
27 sometimes rejections.

28
29 Why do I think that we must be cautious when we assume that it is best for
30 a company to have a small board of directors and that there must be fluid
31 communication between the institutional investors and the firm, or that, when a
32 company goes bankrupt, it is better to leave the control in the hands of the direc-
33 tors and not of the creditors? (These are, by the way, some of the axioms that
34 companies are importing and legislators are trying to impose.) There are several
35 reasons:

01 • In the first place, the Anglo-Saxon model of corporate governance considers maxi-
02 mizing shareholder value as the only objective of the director. With this objec-
03 tive in mind, there is no room for the employees, the current and potential
04 customers of the company, or even the firm's creditors. Allen and Gale chal-
05 lenge in a recent article the view that this system is socially optimal, especially
06 when markets are not perfect.¹⁰ For them, an alternative system of 'interest
07 groups' (the *stakeholder system*) that prevails in Germany and Japan, and in which
08 workers participate in the governance of the company, produces better results in
09 the long term. The simple reason is that the directors have shorter-term objec-
10 tives than those of employees. With virtually no investor protection, the benefits
11 of Toyota have increased 8 % per year from 1999 to 2005. In the same period,
12 the benefits of General Motors – a poster-child of good governance – have fallen
13 23 % per year.

14 • The second reason why convergence is dangerous is that the Anglo-Saxon system
15 works in markets in which the ownership of the company is dispersed and where
16 there is no concentration of significant share blocks. Therefore, the conflict of
17 interest to avoid is the one that exists between the directors and the shareholders.
18 In the ten largest US companies, the three majority shareholders have on average
19 20 % of the capital. In countries as different as Spain and Venezuela, this number
20 is 51 %. In Greece, on average 60 % of the shares in the largest 50 companies
21 are held by shareholders who own at least a 5 % block. The relevant conflict of
22 interests in Greece, Venezuela, and Spain is not, therefore, the one that exists
23 between directors and shareholders, but between majority shareholders and minority
24 stockholders.

25 What can be worrisome is that the new legal codes in Europe and Asia ignore this
26 feature of the financial markets. With regard to the recommendation that companies
27 be fluid in their communication with institutional investors, the Spanish code of
28 good governance declares that '[. . .] we did not ignore that this legal initiative
29 always involves the risk of access to sensitive information [. . .]. These are, however,
30 smaller risks that can always be alleviated with the formulation of some norms of
31 conduct.'

32 • Finally, good governance systems are effective only when there is a supervisory
33 agency that is independent from the political power. The reason is that governments
34 also have their objectives, depending on their political sign. The example of the
35 Italian banking system described above is a good illustration.

01 In sum, the process of convergence towards a unique system of financial regulations
02 seems natural. The important question to ask ourselves is 'Which system is that?' If
03 we do not take into account the specifics of every country and every legal system, we
04 will create more problems than solutions. Regulators need to consider the importance
05 of ownership concentration in corporations, the role of institutional investors, the
06 long-term objectives of the society as a whole, and the degree of intervention by the
07 government in the financial system.

08
09 Finally, it is not clear that a system of protection for minority shareholders is desirable
10 at all. One of the best-performing companies in the US, Wal-Mart, recognizes as its
11 immediate goal the well-being of the consumers, not of the shareholders, and it is
12 well known that Enron and WorldCom were exemplary companies in terms of good
13 governance.

14 ***Standards in corporate sustainability: the equator principles***

15
16
17 In the last decade, corporations around the world have become especially concerned
18 about sustainability, i.e. the willingness to preserve the long-term welfare of a
19 firm's shareholders by guaranteeing the preservation of the corporate assets. As
20 financial intermediaries, corporate sustainability is especially important for FS
21 firms. They are providers of financing and, therefore, they promote certain invest-
22 ments at the expense of others. Sustainability has become one of the key
23 issues in project selection, and the standardization process described above has
24 also included this aspect in the activity of FS firms. In 2005, the financial
25 industry agreed on some basic principles called the Equator Principles, which
26 are an industry benchmark for determining, assessing, and managing social and
27 environmental risk in project financing. In the preamble of the principles it
28 states:

29
30 The Equator Principles Financial Institutions (EPFIs) have consequently adopted these
31 Principles in order to ensure that the projects we finance are developed in a manner
32 that is socially responsible and reflect sound environmental management practices. By
33 doing so, negative impacts on project-affected ecosystems and communities should
34 be avoided where possible, and if these impacts are unavoidable, they should be
35 reduced, mitigated and/or compensated for appropriately. We believe that adoption

01 of and adherence to these Principles offers significant benefits to ourselves, our
02 borrowers and local stakeholders through our borrowers' engagement with locally
03 affected communities. We therefore recognise that our role as financiers affords
04 us opportunities to promote responsible environmental stewardship and socially
05 responsible development. As such, EPFIs will consider reviewing these Principles from
06 time-to-time based on implementation experience, and in order to reflect ongoing
07 learning and emerging good practice.¹¹
08

09 What are the main implications of standards of sustainability? First of all, they indi-
10 rectly affect the entire corporate sector, whether it be financial firms or not, since the
11 Principles dictate who gets financing and who does not. Second, within the industry
12 the Equator Principles act as both a factor of convergence and as a motor of competi-
13 tion. As the Principles are adopted voluntarily by banks and financial institutions, they
14 all end up applying the same policies. As sustainability becomes an intangible asset
15 priced by the market, FS firms compete on their implementation. The *Financial Times*
16 is now publishing an annual ranking of 'Sustainable Banks'. In the annual reports,
17 banks, especially in Europe, compete for the best image in sustainability. The Equator
18 Principles are one of the best examples of how FS firms are coping with the complexity
19 involved in their businesses.
20
21
22

23 ***Standards in objectives: key performance indicators in the*** 24 ***financial services industry*** 25

26 One consequence of the enlargement of the financial sector is that determining
27 objectives at the firm level has certainly become complicated. Firms now operate
28 in several countries and, as shown above, in many different activities. Should the
29 objective of an FS firm be to maximize growth? Increase revenues or size? Maxi-
30 mize customer satisfaction? Maximize stock returns? More importantly, how can
31 certain objectives empower employees to achieve their goals? In financial firms, this
32 is extremely difficult, since it may be hard for a loan officer in a bank to assess
33 the impact on the profitability of the firm. Top managers in financial firms have
34 become more and more concerned about a clear definition of their key performance
35 indicators (KPIs).

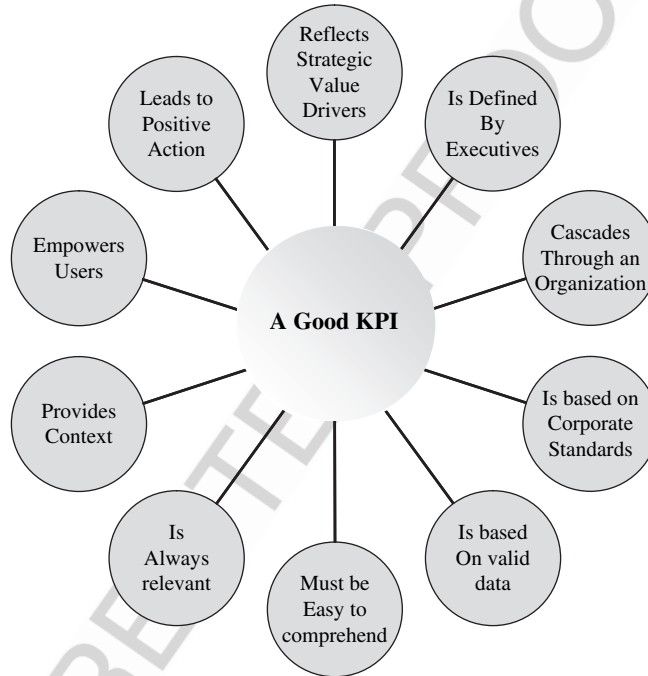


Figure 8.4 Definition of a good key performance indicator
Source: TDWI

Figure 8.4 describes the criteria that a good KPI must satisfy. These criteria apply to financial service firms in particular. Because KPIs are dictated top-down, but are implemented and reported bottom-up, they standardize the corporate activity within the firm and reduce complexity by focusing on information that is most relevant and on the firm's activities that really matter. Moreover, because there is also convergence in KPIs across financial firms, they reduce market uncertainty and, therefore, reduce complexity in the industry.

To summarize, KPI definitions are among the best strategies that financial firms have envisaged to reduce complexity. They help investors and employees and they contribute to more efficient competition among firms.

Conclusion

This chapter focused on the financial services industry. The particular challenges that financial service firms face when coping with diversity, interdependence, and ambiguity have been stressed and it was found that, given their role as financial intermediaries, complexity in this industry generally has broader implications. It was argued that the main instrument that the industry has found to deal with complexity is standardization. In the last decade, the industry has been transformed through a process of standardization in risk management practices, convergence in regulation, standardization in performance measures, and the establishment of common principles of corporate sustainability. Some light has been shed on the impact that these practices have had in financial service firms and also on the corporate sector at large.

References

- ¹ Includes only banks reporting to the Bank for International Settlements.
- ² Source: Datamonitor report.
- ³ Source: Datamonitor report.
- ⁴ Source: Datamonitor report.
- ⁵ See A. Bris and S. Cantale, 'Bank Capital Requirements and Managerial Self-Interest', *Quarterly Review of Economics and Finance*, 2004, **44**(1), 77–101.
- ⁶ Source: Bank of International Settlements.
- ⁷ Source: European Central Bank.
- ⁸ See PriceWaterhouseCoopers, 'Effective Capital Management: Economic Capital as an Industry Standard?', 2005.
- ⁹ See *The Financial Times*, Mastering Series, May 2006.
- ¹⁰ Allen, F. and Gale, D., 'A Theory of Comparative Corporate Governance', working paper, 2001.
- ¹¹ Source: <http://www.equator-principles.com/principles.shtml>.