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OPINION

Finance: trick or treat?

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During the past two decades, financial transactions have grown much faster than global output. This article, the first in a series of schools briefs about the world of finance, looks at the role that the financial system plays in a modern economy

THEODORE ROOSEVELT, an American president, once claimed that there was no moral difference between gambling on cards or horses and gambling on the stockmarket. Jacques Chirac, the current president of France, has denounced currency speculators as "the AIDS of the world economy". Bankers are widely condemned either as greedy usurers or as incompetent fools. At best, the financial system is seen as a wasteful sideshow that relies on churning money earned in "real" businesses and adds no economic value. At worst, it is portrayed as an irrational casino, in which 22-year-old traders are able to bankrupt economies. Might we be better off without all the financiers?

A stockmarket crash or a run of bank failures can clearly do serious economic harm. The worst recessions in history, including the Great Depression in the 1930s and, more recently, Japan's stagnation during the 1990s and East Asia's slump in 1997-98, all followed financial crises. Yet this brief will explain that, for all its failings, the financial system provides services that are vital for long-term economic growth.

Finance has existed in some form since the dawn of recorded history. Credit was used in agriculture in Mesopotamia in 3000BC. Banks existed in Egypt in 200BC. Even derivatives are not new: futures contracts were traded on the Amsterdam exchange in the 17th century. There is nothing inherently new about borrowing, lending and investing.

Even so, in "Hamlet", Polonius advised his son "neither a borrower nor a lender be". If everybody followed that advice the financial system would not exist. Most people, however, need to borrow or save at some time in their life—from taking out a student loan or home mortgage to paying into a savings account or a pension fund. Even share ownership is no longer the preserve of a rich few.

America will enter the 21st century with half of all households owning shares directly or through mutual funds, compared with 25% in the mid- 1980s and only 5% in the 1950s.

The past two decades have, indeed, seen something of a financial revolution. Advances in computing and telecoms, financial innovation and liberalisation of capital controls have combined to reduce the costs of financial transactions. There has been a corresponding explosion in the volume of transactions. Since 1980 the global stock of financial assets (shares, bonds, bank deposits and cash) has increased more than twice as fast as the GDP of rich economies, from \$12 trillion in 1980 to almost \$80 trillion today. The volume of trading in financial securities has increased even faster (see chart 1). Note that the markets for bonds and foreign exchange have far higher turnover (ie, are more "liquid") than does the equity market.

The go-betweens

Financial firms come in many shapes and sizes, but they all serve the same purpose: to channel funds from those who wish to save to those who need to borrow. In many ways, finance is like any other market, matching demand and supply—in this case of loanable or investable funds. However, financial markets are special in one crucial way: they link the present and the future, allowing savers to convert current income into future spending, and borrowers to do the reverse. By acting as a channel through which savings can finance investment, the financial system helps to spur growth.

In doing this, financial institutions can be divided into two broad types. First, savers provide money indirectly to borrowers through intermediaries, such as banks, savings-and-loan associations (building societies), mutual funds and pension funds. Banks, for instance, take deposits from savers, which they use to make loans to borrowers. Mutual funds sell "units" to the public and invest the proceeds in different securities.

The second type of institution is one where savers provide money to firms or governments directly through financial markets. These include the stockmarket, the bond market (government and corporate) and the money market for short-term securities, such as commercial paper. Alongside these markets stand other markets such as those for foreign exchange; and for various instruments derived from standard securities, such as futures, swaps and options (collectively known as "derivatives"), all meant to help the primary markets to work more efficiently.

In a classic analysis of the financial system*, Robert Merton and Zvi Bodie, two American economists, identify several important functions that financial intermediaries and markets perform:

- **Clearing and settling payments.** Cheque accounts, credit cards and wire transfers provide means of payment for the exchange of goods and services, and financial assets. The total value of financial payments in America has jumped from around five times GDP in the mid-1960s to around 80 times today (see chart 2). Wire-transfer systems such as FedWire and CHIPS (the Clearing



House Interbank Payments System) account for about 85% of all payments by value; cheques and credit cards account for only 13%. But by volume, however, cheques and credit cards account for 98% of transactions.

- **Pooling of savings.** If the owner of a factory had to rely entirely on his own savings, he would be unable to make large capital investments. Big firms such as GM or IBM could not exist. Instead, the financial system gives entrepreneurs access to the savings of millions of households. The pooling of savings makes financial assets much more liquid. If you invest all your savings in a neighbour's factory, it is difficult to get your money back quickly if you need it. Financial markets and intermediaries allow people to hold assets in more liquid form, such as shares or bank deposits. By pooling the funds of small savers, mutual funds also reduce transaction costs (eg, brokers' fees) through economies of scale. There has been an increasing concentration of assets in the hands of mutual funds, pension funds and insurance companies. Institutional investors now manage more than two-fifths of American households' financial assets, twice as much as in 1980.

Savers do not like to relinquish control of their savings for long periods, so increased liquidity makes it easier for firms to finance long-term investment. Sir John Hicks, a British economist, argued that the increased liquidity of capital markets and not technological innovation was the critical new ingredient that ignited growth in 18th-century England. Most of the early manufactured products had been invented earlier, but large-scale capital investment was impossible without liquid capital markets. Without a financial revolution, the industrial revolution might never have taken place.

- **Transfers across time and space.** Financial intermediaries and markets allow individuals to reallocate consumption over their lifetimes. For instance, the young may borrow to buy a house, and the middle-aged may save for their retirement. Likewise a newly emerging economy often requires large amounts of capital to support growth, but more mature economies will tend to have surplus income. An efficient financial system ensures that savings can flow to the most productive industry or economy.

- **Pooling of risk.** It is risky for an individual to invest all his savings in a single firm, because it could go bust. Financial intermediaries such as mutual funds allow individuals to reduce their risks by diversifying their investment portfolios. By pooling the risks of millions, insurance companies are able to sell protection against future loss—whether through fire, burglary or death. Derivatives can also help firms to manage their risks. For example, a risk-averse firm might use derivatives to hedge against a possible rise in interest rates by shifting the risk to an investor more willing to take it.

- **Reduce information costs.** The financial system communicates information about borrowers' creditworthiness. Prices of securities provide signals that assist managers in making investment decisions and households in making savings decisions, helping to ensure that funds are efficiently allocated. Banks and capital markets help to reduce "information asymmetries" caused because a borrower tends to know more about his prospects than a lender. An individual finds it costly to obtain information on a borrower's creditworthiness. If a financial intermediary does it on behalf of thousands of such small savers, search costs are reduced. This is not to say that markets are perfect at processing information. They can often be subject to herd behaviour that drives asset prices out of line with fundamentals.



Follow the money

Several empirical studies have confirmed that there is a strong link between financial development and economic growth. Countries with well-developed banking systems and capital markets tend to enjoy faster growth than those without. A study† by two economists, Ross Levine and Sara Zervos, examines 47 economies over the period from 1976 to 1993. They find that stockmarket liquidity (the value of shares traded relative to stockmarket capitalisation) and the size of the banking sector (measured by lending to the private sector as a percentage of GDP) are good predictors of future rates of growth—even after controlling for other factors such as the initial level of income, education and political stability.

In rich economies the assets of financial intermediaries and the size of stock and bond markets all tend to be bigger in relation to GDP than in poor ones. In emerging economies, the banking system is often quick to develop, but capital markets take longer because they need a financial infrastructure that provides, among other things, adequate accounting standards, a legal system that enforces contracts and protects property rights, and bankruptcy provisions.

In a recent speech Alan Greenspan, chairman of America's Federal Reserve, stressed the importance of a diversified financial system, which, he argued, helps to cushion an economy in times of stress. For example, when America's banks got into trouble in 1990 as a result of the property bust, capital markets provided an alternative source of finance. And last autumn, when capital-market liquidity dried up, America's banks took up some of the slack.

In contrast, Japan, more heavily dependent on bank lending and with poorly developed corporate-debt markets, has suffered a prolonged credit crunch. East Asia is another example of how countries with narrow capital markets and few alternatives to banks can suffer deep recessions. During the boom times, nobody worried about Asia's dependence on bank lending. "The lack of a spare tyre", said Mr Greenspan, "is no concern if you do not get a flat." Japan and, later, East Asia, found out they were missing one too late.

Financial futures

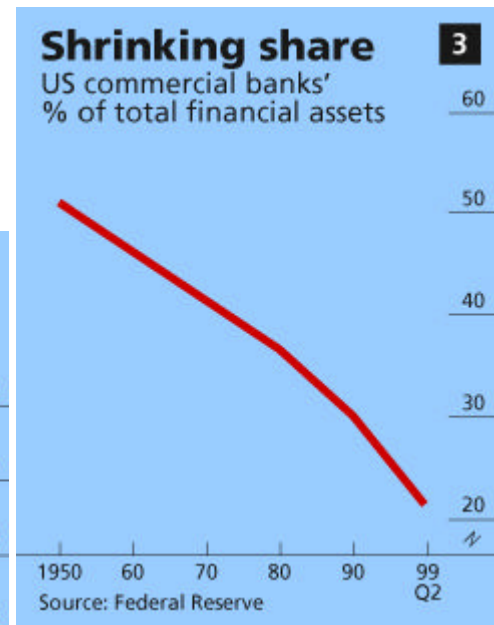
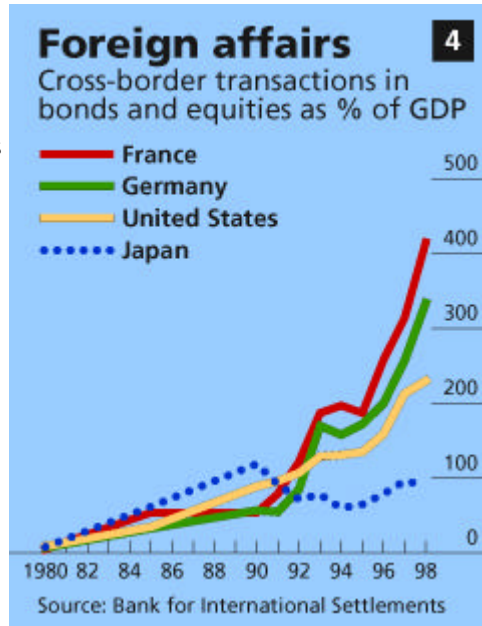
Future briefs in this series will examine in detail how the various financial markets and institutions work. However, the financial world is constantly changing, and never faster than now. There are four particular trends that are making life harder for financial firms—and for central banks and financial regulators, who act as guardians of the financial system.

First, communications technology means that information is transmitted faster and traders and investors can also respond instantly to news. Nathan Mayer Rothschild used carrier pigeons for a high-speed report on the Battle of Waterloo. Today, he and everybody else would get the news almost as it happened.

Second, in many countries there has been a shift from banks and other depositary institutions, the traditional focus of financial regulation, to capital markets. This is most pronounced in America, where commercial banks' share of total financial assets has fallen from half in 1950 to barely one-fifth today (see chart 3). The spread of information and the growth of the Internet may act together to squeeze further the position of traditional financial intermediaries.

Third, the dividing line between different types of financial intermediaries and between different markets is becoming blurred. In America, many mutual funds and stockbroking firms now offer checking accounts. And around the world, different sorts of institutions, such as banks and insurers, are forming gigantic financial alliances.

Last, but by no means least, international liberalisation is creating a global capital market. Cross-border transactions in bonds and shares, for instance, have increased rapidly (see chart 4). In theory, the more internationally integrated financial systems become, the easier it will be for funds to flow to the most productive investments—to the benefit both of savers and borrowers, and of economies as a whole. Unfortunately, as international capital has become highly mobile, so the risk has risen that departing capital may cause a financial crisis, as countries in Asia and Latin America have painfully discovered. In a global capital market, the reward for good economic policies has increased, but so too has the punishment for imprudent ones. Efficiency has its price.



*"A Conceptual Framework for Analysing the Financial Environment", published in "The Global Financial System: a Functional Perspective". Harvard Business School Press, 1995.

†"Stockmarket, Banks and Economic Growth". American Economic Review, June 1998