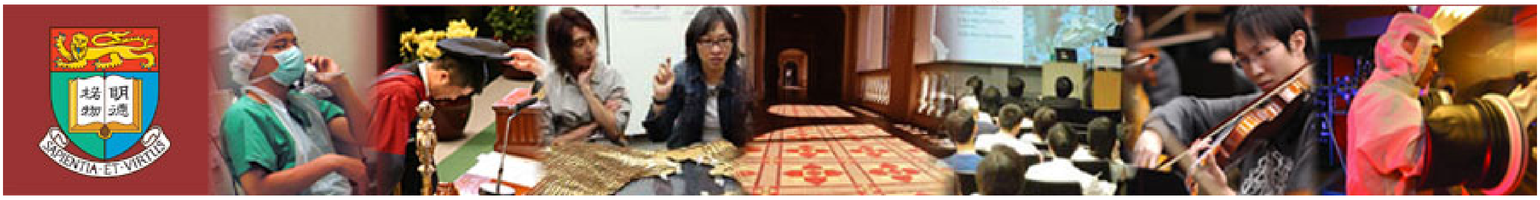

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Investment Banks

Paul Lejot
Asian Institute of International Law
Faculty of Law, University of Hong Kong

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Investment banking is a generic term for transactional activities involving financial intermediation conducted through open markets. It was long associated with a legal demarcation in the US and Japan that separated banks that made loans and took deposits from those that traded in securities, but now denotes risk-based activities in banks of any kind. This chapter explains investment banking practices in terms of reputational capital, and contrasts the transactional skills and innovation found in successful investment banks with concerns as to the societal value of their activities that have developed since the 2007-09 global crisis.

Introduction

Successful investment banking is often creative, demanding and lucrative. It became tarnished by the 2007-09 global financial crisis. Critics and regulators have since questioned the societal value of complex financial transactions, asking whether a small number of prominent investment banks created unwarranted systemic risks by engaging so freely in such deals as to be reckless. In the months that followed the September 2008 failure of Lehman Brothers, then a well-known US investment bank, official enquiries and court hearings in the US, Europe and Asia have opened modern financial practices to public scrutiny as never before. The result may be a period of relatively light risk-taking, intense financial regulation, and then - if investment banking follows the pattern of the last three decades - a new phase of organizational and transactional innovation.

This chapter stresses the importance to investment banks of transaction innovation and reputational capital rather than more conventional explanations of their activities that rely on administrative laws or national practice. The distinction between investment and commercial banks that formed part of US and Japanese law for many years fully cannot explain the factors that drive deal formation or make investment banking either successful in its own terms or parasitical in the wider economy. Until the crisis that traditional distinction also wrongly implied a glamour or sophistication in business practice and resources. Thus commercial banks generate recurring revenue through providing credit to borrowers but investment banks conjure strategies to exploit opportunities in markets and earn fees by being quick-witted and nimble. Investment banks are seldom so gifted in the real world and commercial banks rarely so dull.

Concepts

Investment banking is a form of financial intermediation characterized by the making of non-recurring transactions. Commercial banks rely on continuing interest-earning activities to generate revenue, so that the loan made today creates an endowment of net interest that accrues until it is repaid. Investment banks generate non-recurring revenues from arranging discrete transactions, trading on their own behalf or for clients, or otherwise doing deals. They raise funds through new issues of shares or debt instruments, activities that require an initial commitment of own resources, that is, putting capital at risk to ensure the success of a deal or capture profits. Activity of this kind makes risk management vital to investment banking.

Financial intermediation channels savings into investment. In developed economies it takes place within organizations or through arrays of contracts, that is, through banks and institutional investors such as insurers or pension funds, or in the exchange of securities such as equities or bonds. A stylized model of intermediation is shown in Figure 1. Savings amassed in banks and other intermediaries undergo transformations to provide funding for investment, or flow directly into securities, which are transferable financial instruments or contractual claims against an issuer. Securities are customarily bought and sold openly in organized markets, including stock exchanges and debt capital markets. Investment banking is primarily engaged in this second process.

Insert Figure 1: Simplified Financial Intermediation

Investment banking is driven by innovation in contract design and formation, which in turn is influenced by law and financial regulation. It may seek to take advantage of national or transnational differences in the ways that rules are applied, for example in relation to accounting, taxation or financial governance, processes known generally as regulatory arbitrage. The result is an economic rent that can be unusually lucrative, at least until competition erodes the profits or new regulations remove transaction incentives. This chapter emphasizes these powerful commercial forces. It is not concerned with any single bank except to illustrate how its activities are executed. We characterize investment banking as intermediation that relies on non-recurring revenue sources (even if predictable), as transactionally innovative in relation to law and regulation, and dependent upon reputational and human capital. Investment banks win business by demonstrating transaction prowess to prospective clients. The results can be mixed. A consortium acquisition of Dutch bank ABN Amro Holding in 2007 was notable for transaction strategy, skill and ingenuity but soon after completion destroyed value for investors, hastened the collapse of two of the successful bidders, contributed to a collapse of general confidence and created a considerable burden for the taxpayers of Belgium, the Netherlands and the UK. Great skills were applied for a flawed purpose and the bank that devised and executed the transaction is no longer independent. For further discussion of this topic, see section *Business Streams: Corporate Finance Advisory*.

The traditional categorization of investment and commercial banks originates in US practice from 1933 to the late 1980s. First, US investment banks dealt with arranging securities issues rather than lending, and commercial banks were largely forbidden from dealing in securities. Second, investment banks financed their activities in the wholesale money markets rather than accept deposits from individuals. All laws risk being circumvented by regulatory arbitrage, and so a blurring of the US commercial-investment bank distinction began in the 1980s even while legal restrictions remained in place. This was seen in several developments, with US banks engaging offshore in crossover businesses in London and elsewhere and with all banks replicating with new techniques the products supposedly barred to them by law. Several innovations contributed to the process:

- Commercial banks providing credit lines to underwrite client issues of commercial paper, or short-term corporate promissory notes. This was challenged in the US courts but found permissible.
- Commercial banks increasingly using traditional credit products with great fluidly, an example of a trend to heightened credit risk transfer. Loans were no longer made and held until repayment but bought and sold in the same way as securities.
- Profitability becoming paramount for all banks rather than the delivery of steady utility-type returns, and investment banks increasing their engagement with risk of all kinds, which itself demanded greater capital and necessitated higher returns.
- Financial instruments and techniques converging, through the creation of derivative contracts and with competition from non-US banks not subject to rigid demarcations.
- Structured or securitized transactions allowing investment banks access to lending activities and commercial banks to arranging and selling securities issues, all contributing to the increasing financialization of the global economy.

This analysis is written soon after the most profound changes to the banking landscape since the 1930s. Although the chapter charts the performance of certain investment banks, it is more concerned with the process of investment banking than with any single organization or national corps of banks. The credit collapse that began in mid-2007 intensified 12 months later into a pervasive withdrawal of liquidity from banks of all types and in many countries. Access to wholesale funding is oxygen to all but the most conservative deposit-taking banks, but was especially vital for the prominent, highly-leveraged US investment banks. In a matter of weeks each lost its free-wheeling independence, either collapsing into insolvency (Lehman Brothers), merging with deposit-rich commercial banks (Merrill Lynch), or adopting a more conservative and closely-supervised business model and raising fresh capital from strategic shareholders (Goldman Sachs and Morgan Stanley). Well-resourced competitors responded to fill the resulting vacuum (Barclays Capital, Greenhill, Macquarie and Nomura). All are criticized for contributing to the global crisis, for overpaying their directors and staff, for engaging in conflicted practices or simply for corporate arrogance.

Origins

Modern investment banks have roots in trade-based finance or investment companies in 18th century Europe and North America, among European merchant banking houses and *banques d'affaires* of the 19th century and in the 20th century US model of the corporate finance house and broker-dealer. Merchant banking came to be associated with immense political and financial power, notably with Francis Baring and Nathan Rothschild, the pre-eminent bankers of the 19th century, whose banking partnerships counseled and raised money for governments such that their influence ranked with statesmen. Rothschild's bank became in 1810 an affiliation of partnerships in five European states that was the world's largest and most powerful, and his death in 1836 led to a prolonged loss in market confidence. Similar authority came to be associated in the US with J. Pierpont Morgan, whose banks raised funds on a massive scale for governments and corporations and whose advice was followed implacably in prominent corporate boardrooms.

Morgan's legacy was a trio of banks in New York and London. JPMorgan Chase and Morgan Stanley survive as US banks after much modification while London's Morgan Grenfell was acquired by Deutsche Bank in 1990 and its name later discarded. Reforms introduced by the Roosevelt administration in 1933 created a banking demarcation partly to deny Pierpont Morgan's heirs and competitors the same potential to control American industry and was abolished only in 1999. In September 2008 Goldman Sachs and Morgan Stanley - the two remaining large independent investment banks – were granted bank holding company licenses so that each could accept deposits, submit to federal banking supervision, and gain access to the Federal Reserve's lender of last resort facilities.

Functions & objectives

Successful merchant banks and broker-dealers developed the core activities of modern investment banking, contrasted in table 1 with traditional commercial banking businesses.

Table 1. Core banking functions

Commercial banks	Investment banks
Credit creation and lending	Proprietary trading
Deposit taking	Corporate finance
Money transmission	Securities underwriting
Trade finance	Sales & trading
Money market operations	Structured finance

For large investment banks in the US, Australia, Europe or Japan these functions can include corporate finance and broking, advice on mergers and acquisitions (M&A), fundraising, stock exchange listings, credit rating advice, managing privatization programs for governments, the sale and trading of securities, structured finance, venture capital and fund management. Most investment banks specialize to some degree, so Merrill Lynch is well-resourced in the distribution of securities while Lazard is predominantly a corporate advisory house working in mergers and privatization; Lehman was once a debt capital markets force. The focus of any bank affects its financial shape and funding needs, so that trading-oriented firms such as Barclays Capital or Goldman Sachs will be larger and more capital intensive than advisory specialists such as Greenhill or Lazard.

Modern investment banks differ in one crucial respect from the historic models in that they act not only for clients but engage in risk activities for their own account. This means applying accumulated capital to risk-bearing proprietary trading, investment or arbitrage. Putting the firm's resources at risk can be highly profitable but easily creates conflicts with client interests and duties of care, and must be subject to rigorous internal scrutiny. Some such practices are well-known to market professionals but caused alarm in official post-crisis enquiries. Banks engaged in structured finance through the creation and sale of complex securities were affected by substantial accounting losses in the collapse of confidence associated with US subprime lending in 2007-08 and were later questioned as to whether their interests in creating securities conflicted with fiduciary duties that they might owe to investors or other clients.

Proprietary trading is not new. British, Dutch and French merchant banks and German and Swiss universal banks for which no rigid business demarcations existed often held shares in their corporate clients. Banks in Japan and Korea have been central to the post-1949 organization of major conglomerates though complex cross-shareholdings. Large-scale proprietary trading and private equity investment by banks began to spread from the US in the mid-1980s, and came to represent a significant activity for many investment banks. The reward scenario is simple: investing as principal may generate higher returns than acting merely as transaction arranger, even though the research and deal management demands are similar. The impetus for this trend came from two factors, a progressive deregulation of the global financial sector from the 1980s, and technological growth leading to revolutions in trading and the use of financial derivative contracts. To engage in proprietary activity, to deploy costly technology, and to maximize profits from fundraising for clients all require large-scale use of capital, which is costly and explains increasing concentration within global investment banking.

Investment banks & commercial banks

The divide between commercial and investment banks is one that persists colloquially, in much academic analysis, and for many financial regulators. Their core functions may differ according to the observer, which is important to the analysis shown in table 2.

Table 2. Concepts of commercial and investment banking

Focus	Commercial banks	Investment banks	
Permissible activities under law or regulation	Lending & deposit-taking	Securities underwriting and broking	Traditional categorizations
Credit risk focus	Lending & loan retention	Underwriting & distribution	
Dominant form of intermediation	Internal, based on private information	External, based on public information	
Use of capital	Large, ongoing	Small, temporary	
Revenue sources	Accruing interest; recurring & time dependent	Fees; non-recurring, trading dependent	
Role in national monetary policy	Critical	Negligible	
Access to lender of last resort facility	Yes	No	
Regulatory focus	Maintenance of capital	Market probity; investor protection	
Core function in national & global financial systems	Transaction users	Financial innovators	New approach

The approach in this chapter shown in the final row distinguishes between users and originators of financial instruments and services, and emphasizes innovation in the financial system. Innovatory behavior by investment banks is driven by their need to distinguish themselves from competitors and deter new entrants. Product differentiation is difficult in finance because new ideas and instruments are impossible to protect by copyright, and due to constraints imposed by national regulators. The need for product differentiation explains the importance of reputational capital in capturing clients. Commercial banks exist largely to provide credit to their clients with trade finance and lending, while investment banks market advice and raise funds for their clients by arranging and selling issues of securities to third party investors. Both engage in financial intermediation but the first is contained within an organization and the second is accomplished by transactions conducted across open markets to which many participants have access. An array of techniques has been developed since the 1980s to monitor and manage the risks associated with all these activities.

Traditional credit risk management within bank lenders involves a lengthy time horizon, with changes in exogenous factors such as interest rates or credit quality reflected in marginal adjustments to accelerate loan repayments from one group of borrowers or increase new lending to others. Risk management in investment banks takes a shorter time focus, and is concerned with the effects of exogenous change on the day-to-day value of securities held as inventory or in trading positions and the valuation of other contingent commitments. When the generic commercial bank makes loans, it is assumed to create claims that appear as assets on its balance sheet until extinguished by repayment or some accounting measure to deal with delinquent loans. The result is less uniform when an investment bank arranges an issue of securities. The bank may sell the entire issue and be left with nothing to count as a balance sheet item, in which case it will hope to collect arrangement or underwriting fees. If sales are slow or deliberately managed for trading reasons it may generate additional accrued income from its holdings, or gain if it later sells at improving prices into a rising market. This helps explain the objectives of bought deals or block trading where the bank assumes the risk of an entire issue or large tranche of shares in expectation of placing that inventory profitably. The bank may elect to hold a portion of the issue for its own account to reduce price volatility or provide trading liquidity, or it may be obliged by the contractual terms of its underwriting agreement with the issuer to retain any residual unsold portion of a new issue.

Bank demarcations are now operationally fuzzy. All investment banks with capital resources are likely to lend or extend credit to clients and the largest have for more than a decade been active in underwriting, arranging and distributing loans and other debt instruments not treated in law as securities. Many resourceful commercial banks deal in securities for their clients or their own account. Credit risk transfer has become vital to bank operations in all cases, in that the creation of a financial instrument or claim is distinct from where it resides until maturity. Innovation in financial practices helped remove the division. The creation of liquid money market funds and securitization techniques in the 1980s gave US and other investment banks or broker-dealers the means to compete with commercial banks in collecting savings or lending to consumers. New techniques to help distribute risk allowed commercial lenders for the first time to manage actively both sides of their balance sheets. This promised better returns with acceptable blends of risk. The growth of the syndicated loan markets in the 1980s gave commercial banks a product that could challenge the transaction advantage of investment banks. All financiers became more deal-oriented, focusing on using capital commitments to win transaction mandates with the express intention of distributing the resulting risk among other intermediaries. Loans and bonds grew more commercially fungible, and fluidity of financial claims replaced ‘lend and hold’ banking. This was a revolutionary seizure of investment banking skills by commercial lenders.

Business streams

The most important activities associated with investment banking vary over time and by jurisdiction but generally include:

- Corporate finance advisory.
- Capital creation in equities, debt and derivatives.

- Infrastructural finance.
- Structured finance.
- Securities issuance, sales and trading.
- Proprietary trading.

The discussion here concentrates on the first two. Infrastructural finance refers to long-term investors engaging in specialist funds for corporate finance transactions and capital projects, and is associated especially with Macquarie Bank. Structured finance is the creation and sale of complex debt contracts, some of which became notorious for precipitant losses after the collapse in the subprime US home mortgage market, but includes less challenging and more valuable forms of securitized transactions. For details of this topic within the Handbook see also Schwarcz S., *Securitization and Structured Finance*. It is common for investment banks to engage in asset management and private equity but these are not exclusively investment banking businesses. All these functions are commonly aided by economic and corporate research resources that prepare research for clients, to help win transaction mandates and for the bank's own use. These resources can be extensive and often contribute to the firm's reputational capital but are treated here as secondary to core activities.

Corporate finance advisory

The sale of ABN Amro illustrates a transaction that required many investment banking resource skills. ABN Amro and Barclays Bank announced a consensual merger in early 2007. ABN Amro's boards of directors had been pressured over the bank's poor earnings and share performance: this was their tactical response. Within weeks a counter bid was made by an *ad hoc* consortium of three banks, Royal Bank of Scotland (RBS), Belgium's Fortis, and Spain's Banco Santander Central Hispano (Santander), an arrangement proposed to RBS by Merrill Lynch. Fierce negotiations took place among the parties, with national regulators and through the courts in the Netherlands and US until the RBS group's bid was accepted by ABN Amro shareholders in September. All the events described in this narrative occurred in a period of eroding confidence, making the deal an infamous 'top of the market' phenomenon. Confidence continued falling after the sale closed, and so severely eroded the market capitalization and reserve ratios of the winning banks as to require RBS and Fortis to raise emergency capital within nine months of the takeover in October 2007. Both collapsed within a year of the closing and were taken into state ownership.

The transaction was iconic, as the world's costliest financial sector acquisition and second most valuable purchase of any European company, and the first acquisition of a major bank opposed by its national regulator. It involved three main components central to M&A practice:

- Valuation, corporate advisory resources, disclosure preparation for regulatory purposes, and acquisition transaction management provided to six major public companies in five jurisdictions.
- Transaction strategy and management in matters relating to compliance, regulatory negotiations, official disclosure, and corporate broking and liaison with leading investors.
- Underwriting, arranging and distributing public securities issues for three banks totaling €66 billion, including risk management activities customary for new issues.

If this narrative included the aftermath of ABN Amro's sale, those transactions would include further capital raising for two of the bidders, with one deal for RBS in June 2008 becoming Europe's largest fundraising through a share issue.

The purchase and dismemberment of ABN Amro shows much of the scope of modern investment banking. It involved virtually all senior European and US corporate finance specialists in advising the protagonists, including Merrill Lynch (for the RBS consortium), Barclays Capital, Citigroup, Crédit Suisse, Deutsche Bank, JPMorgan Cazenove and Lazard (for Barclays), and Goldman Sachs, Lehman Brothers, Morgan Stanley, NM Rothschild and UBS (for ABN Amro), as well as two specialist corporate finance advisors, Greenhill & Co and Fox-Pitt, Kelton, and ABN Amro's corporate broker subsidiary, Hoare Govett. The only notable pure investment bank absent from the case was New York-based Bear Stearns, which had no material M&A practice. Bear Stearns became insolvent in March 2008 and was acquired under duress by JPMorgan Chase.

One reason for any corporate bidder or target to pay for such comprehensive advisory coverage is to deny later deal access to a new protagonist. Large acquisitions are impossible without external corporate finance advice because the investment bank advisor stands as a metric and can be judged by investors, the market and its regulators to conform to established legal and customary takeover practice, or be held to account by law, regulators or market sentiment for breaches of practice or warranty, or failures to disclose material events or changes in conditions.

Corporate finance is central to investment bank activities. It can be capital intensive or focused on advisory work, and in each case requires the use of varying skills and risk appetites. It includes advice on corporate strategy, high-level dealings with stakeholders including leading shareholders and governmental agencies, a function known in London as corporate broking, and deal solicitation, client coverage, and transaction dealing for corporate acquisitions and disposals, reorganizations and rescues. It extends to share flotation through initial public offerings (IPOs) or secondary offerings, block trades and vendor placings, valuations, M&A strategy in defense or attack, and coordinating fundraising. Since the 1980s, privatization advice and transaction management has been a substantial business throughout the world, a use of traditional corporate finance resources in a new setting pioneered in the UK by NM Rothschild and Hoare Govett.

The presence in a transaction of an established M&A bank may raise investor confidence in the protagonist or a target defending its independence. The bank provides information resources to investors through reputational capital and in its presence in the deal. Such reputational capital can be ephemeral or confined to specific activities. For example, Merrill Lynch enhanced its M&A and securities underwriting reputational capital by managing ABN Amro's acquisition, but separately in late 2007 and 2008 made very considerable losses through failing to sell its enormous inventory of unwanted structured securities. Merrill Lynch reported in July 2008 a fire sale of securities, write-downs of investments and inventory and an emergency capital raising. The bank sold US$30.6 billion in mortgage-related CDOs for US$$6.7 billion, but was forced to fund part of the purchase, so that the inflow from the sale was US$1.7 billion, or 5.5 per cent of the nominal amount sold. On the same day Merrill Lynch announced a US$8.5 billion issue of new shares. In doing so it was made to compensate the Singaporean state investor Temasek Holdings for losses sustained on its earlier purchases of new Merrill Lynch shares in December 2007 and March 2008. Another Asian sovereign wealth fund manager seemed understandably cautious, saying that 'We have learned a lot from investing in Merrill Lynch and will take a more cautious approach in the future.'

Contested consortium bids are unusual because they introduce contingent risks into complex corporate settings, and were unknown in the financial sector or on the scale needed to secure ABN Amro. Merrill Lynch acted as sole advisor to the trio and principal underwriter to each for a series of equity and regulatory capital issues to fund the bid. This represents an unusually sizeable commitment to support the underwriting and sale of new shares and hybrid securities and resources to manage a multifaceted M&A process. Merrill Lynch needed to convince core bank regulators in Belgium, the Netherlands, Spain and the UK and four sets of shareholders of its ability to manage and complete the acquisition, including many post-closing decisions as to the division of ABN Amro's businesses without offending financial authorities elsewhere that might block the transfer of ABN Amro's operating licenses, and of its confidence in arranging new debt and equity issues to fund the purchase. The dissection of ABN Amro was instrumental to the consortium proposal. Santander alone met its objectives from the outcome. It sold prior to completion its control of ABN Amro's Italian subsidiary, which recouped 50 per cent of Santander's outlay and left it owning ABN Amro's profitable Brazilian subsidiary, the main reason for its participation. Santander and Merrill Lynch were the only winners from the saga, despite the application of enormous reserves of investment banking skill.

Capital creation in equities, debt and derivatives

The creation of new transactions is a setting in which financial innovation and investment bank creativity might be expected to thrive. There have been several lasting results:

- To categorize financial instruments as claims in the form of debt, equity, or derivative contracts, or combinations of these elements.
- To emphasize a convergence between traditional instruments since the late 1970s, and the centrality of credit risk transfer within that process.
- A profusion of new financial instruments, including the emergence of derivatives as a separate new class of capital.
- To assess the behavior of banks and all other financial sector participants through their portfolio choices as to expected risk and return.

The three classes of contemporary capital are defined in Table 3.

Table 3. Elements of capital

Debt instruments	Borrowing contracts, largely subject to intrinsic commercial terms
Derivative instruments	Contracts that alter prevailing risk-return qualities of a portfolio of assets or liabilities
Equity instruments	Collective ownership contracts, rights to ongoing residual income or repayment in winding up, in each case subordinated to other contractual claims

The financial innovations discussed in this section have two main features. None existed until the 1980s or later; all sprang from investment bank activities or transaction solutions. The revenues derived by investment banks from creating or trading these claims varies according to aims and commitments of capital and human resources, but in each bank will arise from the principal sources listed in Table 4. Except in relation to proprietary trading revenues and treasury gains, these sources exclude accruals of income on unsold inventory, where banks profit from inadvertent trading positions.

Table 4. Sources of investment bank trading revenue

Type	Nature of activity
Underwriting fees	Commissions on committing to arrange and execute new issues
Dealing profits	Gains made from block trades, bought deals, or underwritten trades in outstanding securities, inventory valuation gains, market-making gross profits
Broking commissions	Fees charged for transaction execution
Proprietary revenue	Income from deploying risk capital for own account
Treasury gains	Funding or liability management revenue associated with securities activities

The listing of new shares is an important source of corporate finance revenue in all jurisdictions. Dealing in shares in listed companies for third parties and in proprietary trading is significant in investment bank sales and trading activity, with some banks supporting dealings with substantial commitments of capital and human and technological resources. Among the most profitable practices of modern finance have arisen in vertically-integrated banks that shepherd young companies towards IPOs and devote own resources to proprietary venture capital.

Debt market transactions and trading can be both profitable and volatile. Banks earn upfront fees from most issues but competition makes these rewarding only in cases involving complex risks or unusual features. The returns from debt capital market activities generally arise from underwriting risk and managing new commitments. Banks compete to 'buy' new issue mandates at a fixed cost to the issuer, intending to redistribute or 'reoffer' the securities to investors at a profit. As with major loans, upfront bond fees are not paid but in most cases deducted with expenses from the proceeds delivered to the issuer, and are often shared with leading investors.

The final class of capital is the result of innovation typical of successful investment banking. This is shown most clearly in two developments, the creation of global markets in interest rate and currency swaps in the 1980s, and the invention of credit derivatives in the 1990s. The latter is now a global market in insurance-like contracts that allow credit protection to be bought and sold, but began in single transactions as a means to isolate and hedge certain risks embedded in all debt claims. The former originated in a transaction devised in 1981 by Salomon Brothers, later part of Citigroup, which gathered new and outstanding parallel bond issues for two prominent borrowers together with a new mechanism for the exchange of their respective liabilities that became the foundation of today's global over-the-counter (OTC) swaps and derivatives markets. The scheme was a commercial transformation of existing contracts that met the immediate needs of Salomon's clients but which led to radical changes to global financial practice. For details of this topic within the handbook see also Dodd, R., *OTC Derivatives*.

IBM Corporation & the World Bank were highly-rated borrowers. As a US dollar based company and Wall Street bellwether, IBM tended to raise funds from the capital markets in its home currency, but had occasionally borrowed in foreign currencies. The World Bank borrowed in currencies with low nominal interest rates, especially deutschemarks and Swiss francs (the deutschemark was subsumed into the euro in 1999 and abolished in 2001). By the early 1980s regular issuance had tired both markets, and the two borrowers each suffered weakening demand and poorer terms. Each issued seldom in the other's market, creating a potential arbitrage to lessen the total cost of simultaneous new issues with each borrower accessing the other's market. The borrowings would then be exchanged, leaving both IBM and the World Bank more favorably funded. This was the arbitrage that Salomon devised. In each case, issue rarity would improve the price at which the bonds could be distributed.

IBM had deutschemark and Swiss Franc debts outstanding and so only the World Bank needed new funds to make the deal. It borrowed a total of US$290 million in two new issues, one with coupon and maturity dates matching those of an outstanding IBM deutschemark bond, and the second matching dates on IBM's Swiss franc issue. The US dollar net proceeds were sold at spot for deutschemarks and Swiss francs to fund future loans. Both parties now agreed an irrevocable exchange of payments that matched the terms of the four bonds, including both principal and periodic coupons. Each borrower effectively accessed the more favorable market, exchanged the resulting liabilities, and shared the aggregate overall reduction in costs. Figure 2 shows the result in simplified form for the Swiss franc bond and one of the two US dollar issues, with the broken lines indicating the commercial boundaries of the three contracts. The present value of cashflows on the new World Bank US dollar issues were made exactly to match the existing terms of the IBM Swiss franc bonds, taking into account ongoing exchanges of currencies. The same process took place for the US dollar-deutschemark exchange.

Insert Figure 2: Simplified IBM-World Bank Cross-currency Interest Rate Swap

Payments between the counterparties represent the swap, which is intrinsic to the transaction but legally separate from the underlying bonds. The two currency swaps are said to be derivatives of the bonds, and can be contracted entirely separately. Exchanges of interest payments in like currencies form interest rate swaps in the same way. Salomon's transaction was heavily negotiated; similar deals are now commonplace and arranged in minutes by many leading banks. The swaps alone can be transacted automatically and in seconds. The OTC derivatives markets began in the 1980s with derivative contracts relying on the price behavior of underlying assets, but the debt and derivatives markets have developed to a symbiosis, where the price of each instrument influences the other and is mutually beneficial to liquidity.

Markets in information and reputational capital

One theory of lending sees the intermediary performing a function associated with information, and especially differences in the information available to potential debtors and creditors. It focuses on how information asymmetry creates incentives for creditors, debtors, intermediaries and depositors to act in certain ways. The bank provides value by intervening in the savings and investment channel to provide a vetting and monitoring function in lending decisions and administering loans that would be difficult or impossible for creditors at large. It uses skills and experience to price, make and monitor loans more effectively than others, that is, to evaluate and bridge asymmetries in information available to a borrower and potential creditors.

A similar theory has been articulated in relation to investment banking. Through dealings and contacts with borrowers, investors and its competitors, an investment bank creates a market in information, which in turn facilitates securities issuance and investment. Investment banks provide information on prospective transactions or securities issues through the preparation and transmission of research to investors, that is, to provide a market in information. This suggests that the resources marshaled for financial intermediation by investment banks in transaction arrangement, credit research, and in underwriting and distributing issues of securities are valuable to investors and borrowers for identical informational reasons. In particular, the investment bank adds credibility to information provided by a borrower by exploiting its accumulated reputational capital, or the perception of itself and others of skills, trustworthiness, confidence, and competence in the resources it offers to clients or are witnessed from completed past deals. This can be regarded as a positional good, since it concerns not the absolute performance effectiveness of a single investment bank, but the market's perception of that performance in relation to other competitor banks.

A trustworthy and well-resourced bank may be able to convince third party investors that the opportunity that it reveals to them is attractive and meets their preferences; a less well-regarded bank would fail by the same test. This means that there are opposing solutions to financial intermediation, one involving an internal process conducted within a bank lender, and the other organized externally by an investment bank. Whether a borrower chooses one alternative or the other depends on their respective perceived transaction costs. The same considerations face a potential saver given the choice of making a deposit with a commercial bank or buying from an investment bank securities issued by that commercial bank (which are closely related credit risks even given their different priorities in law).

Reputational capital depends on banks demonstrating a consistently high competence in engaging with the market. Intangible capital amassed in this way will be eroded by transactions that fail to match general performance expectations, by engaging in malpractice, or by misjudgments as to price or value. A second conflict occurs when competing investment banks suffer similar losses in reputational capital. Since reputational capital is intrinsically linked to comparisons between firms, there may be cases where the entire industry acts in ways that regulators or clients deplore and where the results lead to changes in practice, rather than a loss of transactional favor by a single bank. Two notable examples of this herd behavior have taken place in the new millennium:

- Conflicts within banks where sell-side research is used habitually to obtain mandates from borrowers. This was exposed among many US and European investment banks after a collapse in technology and internet share prices in 2000. Investors were induced to buy shares by favorable research reports prepared for and paid by issuers, and banks engaged in price manipulation of IPOs to reward leading clients. Twelve prominent banks made payments in 2003 to forestall claims for fraud and misconduct, prominent analysts were convicted of market manipulation and barred from Wall Street, and the banking industry consented to a rigorous separation of research from corporate finance.
- The herd withdrawal of investors and liquidity in 2007-08 was coupled with condemnation of those banks that had arranged and sold highly structured issues. A strong source of revenue quickly became the cause of profound losses. Few investment banks maintained their reputational capital, not least because the structured finance market had been the result of innovation and was central to their interests. Conflicts were equally clear in credit rating agency practice for structured securities. The three leading agencies were so deeply engaged in iterative modeling with banks as to be tantamount to being co-originators. Finally, the practices of banks as distributors of complex transactions to investors appeared to conflict with their position as deal originators, for all such securities are so proprietary as to make it improbable for their being subject to market making – where banks commit to the market to provide prices at which they stand willing to buy or sell securities.

One difficulty in discussing reputational capital in the financial sector is that it may be impossible to measure. Several analysts have sought to identify a causal relationship between the reputation of investment banks and the terms or post-issue performance of the transactions they arrange, but the results may be of limited value due to the difficulty of finding an acceptable proxy for reputation. One method is to identify reputation through surveys, for example asking corporate treasurers their opinions of banks in certain activities. More rigorous (and a marketing tool for all bankers) are performance league tables, showing deals of different types arranged by competing banks. League tables appeared in the early Eurobond markets in the 1970s, published by the financial industry equivalent of celebrity websites, and were often studied more closely by bankers than their clients. Today they are collated by data providers with great attention to detail and cover all transactions that can be aggregated. Tables are ubiquitous in markets for new issues and M&A transactions, measured by number and value of completed deals. Self-selected league tables are intrinsic in client marketing by banks. Industry journal *International Financing Review* publishes over 80 weekly tables of debt and equity issues, analyzed by all significant descriptive variables. League tables are ubiquitous but prone to distortion and are best seen as a proxy for reputational capital for lack of alternatives. Nothing in league tables shows the profitability of transactions or any systemic risk incurred in their execution. At the year's end data compilers are watchful for 'league table deals' or transactions arranged without compensation or with pliable affiliates.

While the value of reputational capital has been tested in only limited circumstances, there is evidence to suggest that it is real. A study of American public companies in 1895-1913 showed that the presence on a company's board of directors of a representative of J.P. Morgan & Co had a significant positive effect on its share price performance, and that this could be attributed not to Morgan possessing monopoly power but to expectations that the Morgan director signified effective monitoring of the company by a trusted advisor. Preservation of reputational capital was so important for Morgan that it refrained from abusing its dominant position, for example, by charging excessive new issue fees or broking commissions, which is an unconventional view of monopoly behavior. A popular finance text, Brealey, Myers & Allen's Principles of Corp Finance, ponders this matter:

> 'There are many successful innovations that cannot be explained [...] Why do investment banks continue to invent, and successfully sell, complex new securities that outstrip our ability to value them? The truth is we don't understand why some innovations in markets succeed and others never get off the ground.'

The answers may not be easily quantified but plausible explanations can be found in this chapter's assessment of reputational capital and market practice:

- Rent-seeking is an important explanation. First, banks seek to differentiate themselves before prospective clients, so that constructing a new label for a transaction or making a contract structure appear to differ from others in a conceptual way may provide a competitive edge of some kind. Second, even with genuine innovation, the demise of legitimate rents tends to happen quickly in that nothing in financial intermediation is protected by copyright and imitation is relatively simple when it relies largely on human capital.
- Given that investors must always deploy funds even in severe downturns or periods of extreme risk aversion, the process of innovation is self-reinforcing. Transactions to conserve wealth can be as rewarding to the arranger as those characterized as aggressive.
- This is not to say that transactional or organizational innovation in investment banking is not genuine but that many finance scholars err in treating one financial instrument as differing materially from others.

One study of securities underwriting behavior found evidence that risk decisions taken by investment banks reflected their concerns as to reputational capital, and may therefore be taken as a proxy indicator of the quality of new issues. Given also that reputational capital is associated with economic rents each bank has an incentive to maintain its reputational capital so as to generate revenue.

Questions, concerns & post-crisis outcomes

In spite of the loss of output and employment associated with the 2007-09 global financial crisis and the costs involved in recapitalizing many of the world's banks, it is unclear whether transactional complexity that results from financial innovation represents a potential welfare cost. The negative view is now held by many leading regulators, and is clearly a popular political cause. The hostile argument is that complex investment banking wastes resources compared to the more productive real economy, partly by creating false incentives for systemically risky activities, notwithstanding evidence from many studies that financial sophistication has a generally positive causal effect on economic development. US and EU post-crisis reforms will constrain banks in their proprietary trading and control of hedge funds. The Volcker rule included in the US Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 requires that by mid-2014 such activities are restricted or prohibited, encouraging banks to limit or devolve their involvement to separate organizations well ahead of the deadline. Implementation of the rule is beset by definitional problems.

This chapter has argued that investment banks can be associated with innovation through new techniques, instruments or forms of investment media. The case study of ABN Amro shows the effectiveness of one such bank. By deploying strong corporate finance and fundraising skills and being willing to accept appreciable underwriting risks in troubled conditions, Merrill Lynch successfully closed a landmark acquisition and pocketed considerable advisory and underwriting fees. This is investment bank practice at its most demanding and resourceful, brilliant in execution but capable of poor results. It is one example of an enduring paradox. If investment banks are innovative, competitive and highly-skilled in transaction and risk management, why is the sector prone to poor management and periodic shocks? Even well regarded banks have been involved in controversial or unethical practices, or ignoring conflicts of interest in acting for clients or in proprietary dealings. Many banks accepted as leaders in their fields since the 1990s no longer exist, as a sample shows:

- Bankers Trust Company, prolific structured debt arranger and derivative specialist. Acquired in 1998 after losses by Deutsche Bank.
- Barclays de Zoete Wedd (BZW), the first integrated UK investment bank and never profitable. Dismembered and sold largely to CS First Boston in 1998.
- Barings & Co, a venerable merchant bank. Destroyed by fraudulent trading to which senior management was blind.

- Bear Stearns & Co, once the fifth largest US investment bank. Collapsed after reckless trading.
- Dean Witter & Co, Kidder Peabody & Co, and Paine Webber & Co, substantial US brokerage firms acquired by competitors after persistently poor results.
- Drexel, Burnham Lambert, leading leveraged finance specialist and high yield bond underwriter, collapsed after persistent fraud.
- Lehman Brothers, Wall Street's fourth largest investment bank, became insolvent.
- Peregrine Investments Holdings, successful Asian corporate finance house made insolvent in 1997-98 by poor risk management in debt securities.
- Salomon Brothers, US debt securities specialist, fined in 1991 for market manipulation and sold to Citigroup, its reputational capital lost.
- Yamaichi Securities, top four Japanese broker, collapsed in 1997 from fraud and losses.

In each case, all or parts of the victim were forcibly acquired. Barings was sold in 1996 for a nominal £1 after its capital was wiped out by catastrophic losses, on a scale that might have been abated by competent risk management. Lehman's ingenuity and management hubris was unable to protect the bank against a total collapse of confidence. Peregrine was successful in Hong Kong corporate finance and broking but broadened its activities, believing that it could compete with non-Asian banks or remain independent only by engaging in fixed income and derivatives, but did so in a way that lacked both competence and sufficient capital. The firm collapsed in late 1997 from losses on those new businesses even as its core businesses continued to flourish. Poor management is common to all these failures. After research and sales conflicts and other malpractice were revealed among US investment banks in 2000-01, The Economist stated in 2001 that 'Investment banks are among the worst-managed institutions on the planet because they are built on a loose confederation of franchises and outsize egos.'

Speculative trading is popularly associated with instability but there may also be a theoretical link with which investment banking is also concerned. That systemic instability may be associated with financialisation and speculation was suggested by economist Hyman Minsky in the early 1980s but his theory was neglected and long untested. Minksy proposed that the behavior of market participants grows less regarding of risk during periods of general appreciating asset prices. This makes precipitant falls in values increasingly likely. When prices fall, traders sell their most valuable or conservative assets because they provide the freest liquidity at the least discount to nominal value, which then intensifies the overall price fall, even though it appears to be irrational herd behavior not predicted by traditional finance theory. Minsky's writings and reputation have been rediscovered as the post-crisis world searches for ways to explain the unfathomable.

A determined effort to lessen the extent of global financialisation would be limiting for investment banks and financial innovation. Post-crisis re-regulation is demanding limits to investment banks' contractual freedom of action, and may lead to a bifurcation of investment banking activity and financial innovation generally. This would produce a limited number of global banks engaged in capital intensive transactions and trading, and a larger number of smaller firms and asset managers engaged in specialist business streams and without the full regulation to which all acknowledged banks must submit. In this way, the investment banking sector may return to its merchant bank partnership roots.

Does the 2008-09 crisis signal the death of investment banking? In the sense of untrammeled financial innovation, the answer may be 'yes' but it is difficult to disinvent practices that have proven profitable for many users, even if the broader welfare effects are questionable. The death of investment banking is unlikely in the sense of an abandonment of functional, product-directed innovation, but it is likely for a time to be accompanied by a closer degree of official supervision. The crisis may well signal the end of the 1990s Anglo-American investment banking model of high balance sheet and credit risk leverage, and of the free manipulation of risk to and from the balance sheets of large intermediaries. What comes afterwards will test investment banking innovation, and the quality of both bank management and national supervision.

Glossary

Arbitrage. Transactions or trading strategies that exploit evident price inconsistencies, especially between separate markets or interfaces.

Bought deal. A transaction in which a bank buys new securities from an issuer at a fixed price, intending to resell the holding at a profit.

Buy-side. Investment bank resources in research, trading or broking directed to issuers and borrowers.

Commitment. Formal willingness to provide credit or acquire risk.

Credit risk transfer. Any commercial process allowing an actor to acquire or shed credit risk, whether or not it involves the movement of a capital sum.

Mandate. Conditional, abbreviated limited life contract containing a client's exclusive transaction instructions to its bank; an arranger's license.

Regulatory arbitrage. Commercial behavior decisively influenced by regulatory conditions or transnational regulatory differences.

Sell-side. Investment bank resources in research, trading or broking directed to investors.

Syndicate. Deal-specific group of banks assembled by an arranger to defray underwrite commitments, and in some cases to apportion distribution.

Trading. Buying or selling securities or other financial claims. Trading can be risk-neutral, conservative or aggressive in either execution or results.

Underwriting. Short-term contingent commitment made by a bank to fund a transaction so as to ensure its completion on agreed terms. The bank would aim to redistribute all or part of the resulting risk.

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Figure 1

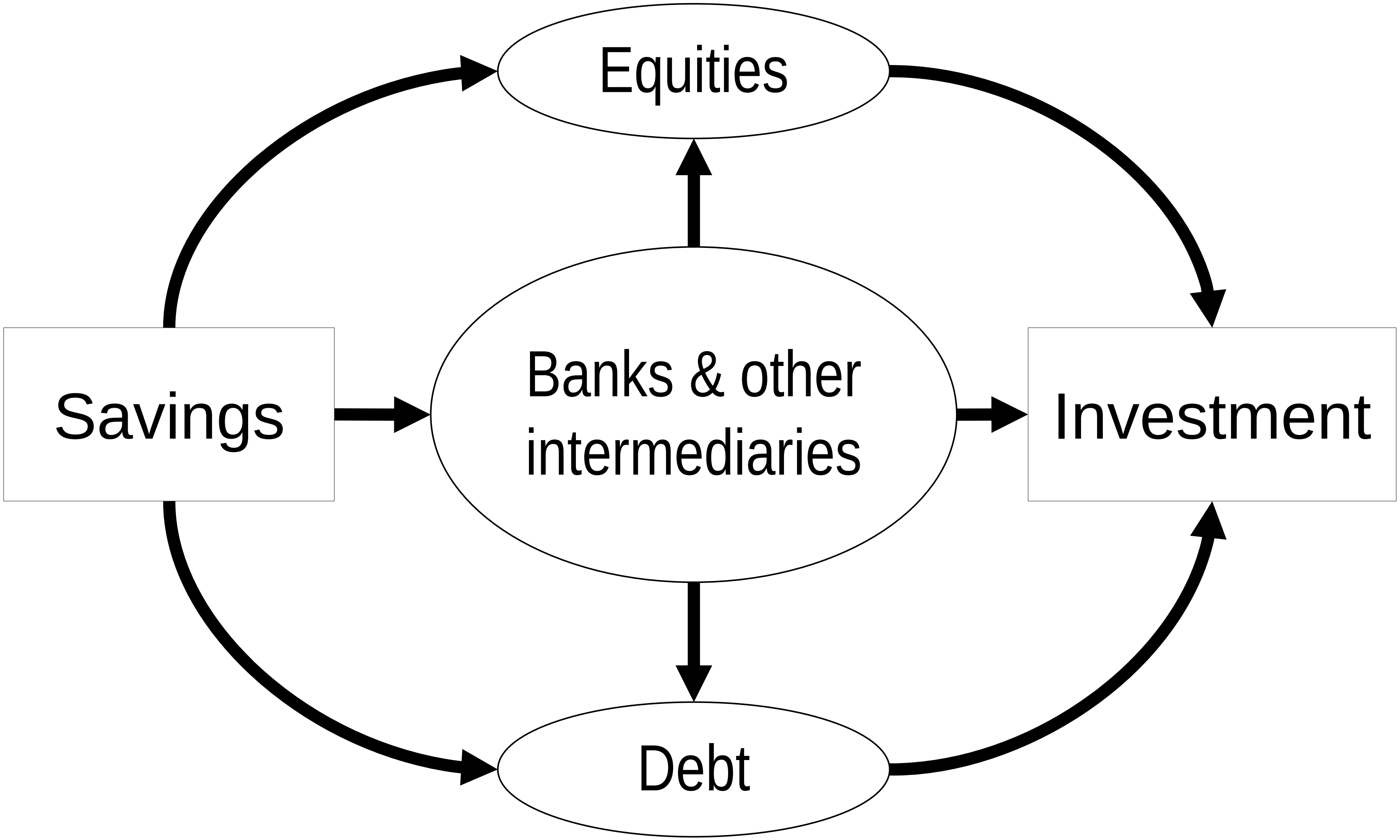
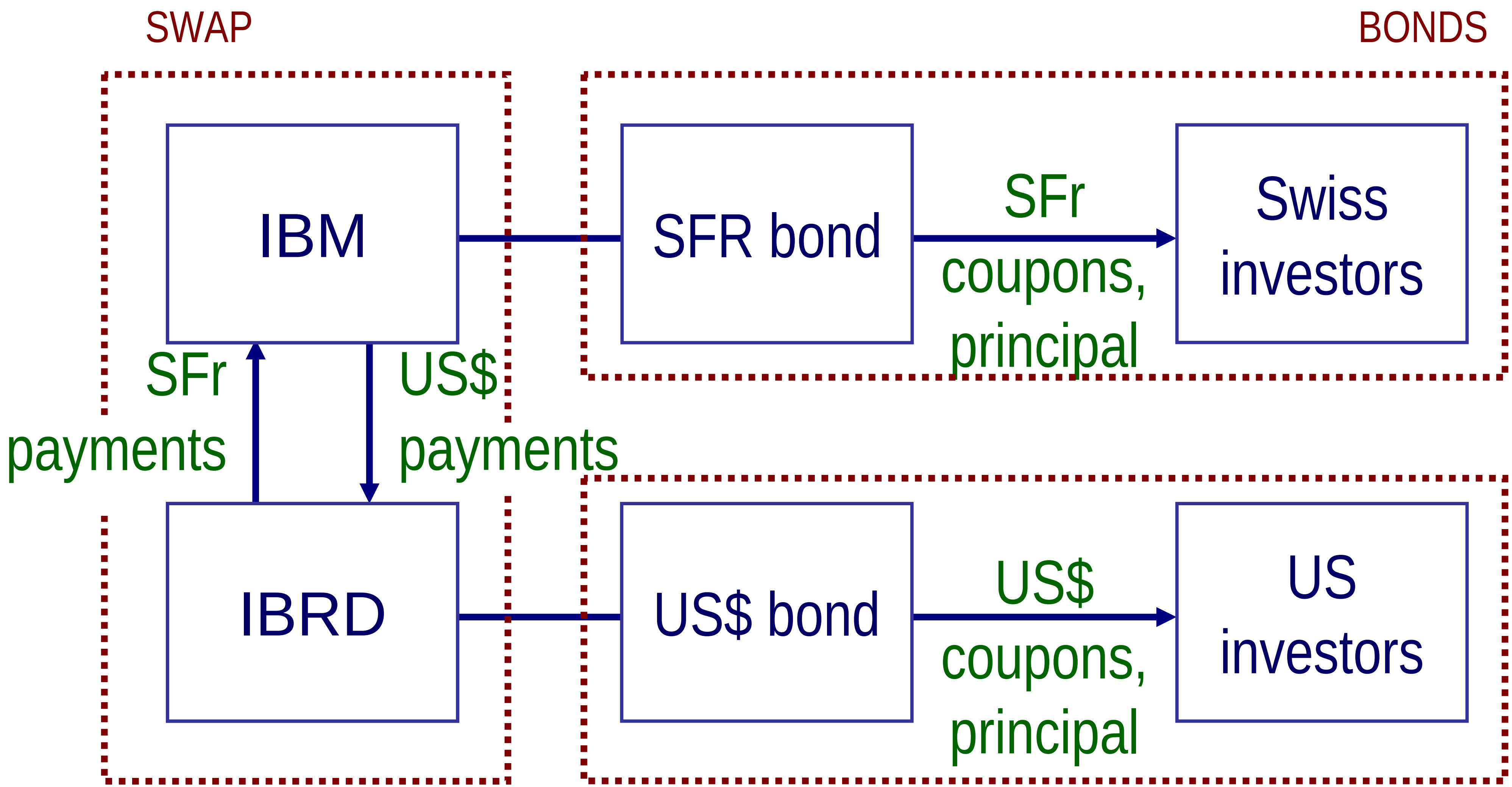

Equities
Savings
Banks & other intermediaries
Investment
Debt

Figure 2


SWAP
BONDS
IBM
SFR bond
SFr
coupons,
principal
Swiss
investors
SFr
payments
US$
payments
IBRD
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