CHAPTER

18

Cross-Border Mergers and Acquisitions
Analysis and Valuation

Courage is not the absence of fear. It is doing the thing you fear the most. **—Rick Warren**

INSIDE M&A: CHIP INDUSTRY CONSOLIDATION

KEY POINTS

- Industry consolidation often is an important factor in triggering merger waves.
- Market value can be grown dramatically through an aggressive and well executed acquisition strategy
- Differences in corporate tax rates among countries can give foreign acquirers an edge in acquiring domestic firms

With a market value of less than $3.5 billion, chip maker Avago Technologies (Avago) was viewed as a modest competitor in the semiconductor industry when it went public in 2009. By 2015, the firm's market value exploded to $35 billion. The rapid expansion of the firm's market value in 6 years reflected its successful growth through acquisition strategy.

Avago's strategy emphasizes acquiring complementary businesses, quickly paring overlapping costs, and selling off businesses no longer critical to its growth plan. In the past 4 years, Avago acquired five companies that helped it further its motion control encoder technology and optical fiber technology. During the same period, Avago sold several noncore businesses enabling it to focus on strengthening its remaining businesses and to pay off debt incurred in making prior acquisitions.

The aggressive pace of acquisitions was fueled by historically low cost debt financing during this period, a rapidly appreciating share price, and low tax rates. Avago's share price has grown at an approximate 39% compound annual average rate since its 2009 IPO when it traded

at $17.38 per share before rising to $128.48 in mid-2015. The rapid growth in its share price has made its stock attractive to target firm shareholders and as such a solid acquisition currency.

On May 28, 2015, Avago announced its biggest deal ever and the largest in the history of the semiconductor industry when it purchased Broadcom Technologies (Broadcom) for $37 billion offering the firm's shareholders a combination of cash and stock. The combined firm will be named Broadcom Ltd. and will have annual revenue of $15 billion. This deal propelled the newly formed company to the top ranks of semiconductor makers, although it will still be behind Intel and Qualcomm in terms of revenue. Synergies are estimated at $750 million annually. The strategic fit appears greatest between Broadcom's broadband, infrastructure and networking businesses and Avago's handset business. Some portion of the purchase price can be recovered by the divestiture of such Broadcom units as its connectivity division.

The latest acquisition by Avago illustrates the wave of consolidation that swept over the computer chip industry. In recent years chip makers have turned to buying growth to cut costs using mergers to combine sales forces and back end operations. By achieving larger scale, the chip makers can remain attractive to customers wanting to reduce the number of their suppliers. The deal also enables the new company to free up billions in cash that was previously trapped overseas and helps to eliminate potential US tax liabilities. Many multinational US firms have been reluctant to repatriate their foreign earnings to the US due to the 35% applicable tax rate, the highest among developed countries. According to SEC filings, Broadcom is no exception. As of 2014, Broadcom had $3.13 billion of cash and cash equivalents held by its foreign subsidiaries.

The Broadcom and Avago merger closed in March 2016. Since Broadcom was acquired by a foreign incorporated business, the combined firms can have tax free access to Broadcom's foreign cash holdings and earnings and the ability to reduce the tax rate through "earnings stripping." Earnings stripping refers to a US subsidiary of a foreign firm paying excessively high interest on loans from its parent or selling its output to the parent at below market prices. Both tactics reduce taxable earnings reported to US taxing authorities. While technically not a tax inversion in which a US firm acquires a foreign firm and then incorporates in the foreign firm's tax jurisdiction, this transaction in which a foreign firm acquires a US firm offers many of the same tax benefits. Corporate consolidated earnings in Singapore (where Avago is domiciled) are taxed at a modest 5% rate, well below US corporate tax rate. The resultant lower effective tax rate for the consolidated Avago and Broadcom businesses gave Avago a decided advantage in what it could justify paying for Broadcom over other potential suitors not having similar tax advantages.[1]

CHAPTER OVERVIEW

Crossborder M&A's have become increasingly important in recent years increasing their share of global M&A activity. This chapter addresses the implications for crossborder deals of the backlash against globalization in recent years, as well as deal structures, financing, valuation, and execution in both developed and emerging countries. Throughout the chapter,

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[1]On April 5, 2016, the US treasury introduced new regulations giving the government more authority to treat interest payments on intercompany cash transfers as dividend payments, not deductible under US law. The new rules apply to intercompany loans after that date. How this will impact this and future deals will depend on how the rules are applied. For more detail, see Chapter 12.

the term *local country* refers to the target's country of residence, while *home country* refers to the acquirer's country of residence. *Developed countries* are those having significant and sustainable per capita economic growth, globally integrated capital markets, a well-defined legal system, transparent financial statements, currency convertibility, and a stable government. According to the World Bank, *emerging countries* have a growth rate in per capita gross domestic product significantly below that of developed countries and often lack many of the characteristics of developed countries.

Foreign investment has traditionally flowed from developed to developing countries; however, in recent years there has been a trend toward capital flowing from emerging market investors to developed countries.[2] The portion of foreign direct investment consisting of M&A's flowing from emerging market countries to developed countries has exceeded M&A's share of capital moving into emerging markets.[3] Consequently, special attention in this chapter is given to dealing with crossborder M&A's involving emerging countries. A chapter review (including practice questions with answers) is available in the file folder entitled "Student Study Guide" on the companion website to this book (https://www.elsevier.com/books-and-journals/book-companion/9780128016091).

GLOBALIZATION: THE ELEPHANT IN THE ROOM?

Globalization refers to the economic integration of the world economy characterized by the increasingly unfettered flow of products and services among countries. Since WWII, multilateral trade agreements have resulted in a reduction in barriers to entering both developed and emerging domestic economies and the subsequent increase in global trade. Financial markets have displayed similar global integration such that fluctuations in financial returns in one country's equity and bond markets impact returns in similar markets in other countries.

So-called *globally integrated capital markets* provide foreigners with unfettered access to local capital markets and provide local residents access to foreign capital markets and ultimately a lower cost of capital. Unlike globally integrated capital markets, *segmented capital markets* exhibit different bond and equity prices in different geographic areas for identical assets in terms of risk and maturity. Arbitrage should drive the prices in different markets to be the same (differing only by transaction and hedging costs), since investors sell those assets that are overvalued to buy those that are undervalued. Segmentation arises when investors are unable to move capital from one market to another due to capital controls, prefer to invest in their local markets, or have better information about local rather than more remote firms.[4] Investors in segmented markets bear a higher level of risk by holding a disproportionately large share of their investments in their local market as opposed to the level of risk if they invested in a globally diversified portfolio. Investors and lenders in such markets require a higher rate of return on local market investments than if investing in a globally diversified portfolio of stocks and bonds. As such, the cost of capital for firms in segmented markets, having limited access to global capital markets, often is higher than the global cost of capital.

[2]Chari et al., 2012.

[3]Rabbiosi et al., 2012.

[4]Kang and Kim, 2008.

Proponents of globalization argue that it has raised standards of living in both developed and emerging nations and helped emerging nations to catch up to developed economies by increasing employment, per capita income, as well as technological and cultural exchange. Critics argue that globalization weakens country sovereignty and enables developed economies to outsource domestic jobs to areas where the cost of doing business is cheaper in terms of labor costs and regulations. Critics also contend that it has disproportionately benefitted firms in Western countries at the expense of developing economies. Global capital markets, so their argument goes, also transmit disruptions rapidly in capital markets in major economies throughout the world, as evidenced by the global meltdown in the equity and bond markets in 2008 and 2009.

Between 1988 and 2008, gains in inflation adjusted income appear to be greatest in emerging market countries (mostly Asian and some Eastern European, South American, and Latin American countries) benefitting the poor, middle class, and the highest income earners. Unlike their counterparts in emerging nations, middle class income earners in developed countries have shown little growth (and in some cases declines) in real income since the late 1980s. Some observers use this information to illustrate what they view as the ills of globalization without establishing a causal link between globalization and income redistribution.

Individual country social economic policies are likely to explain the changing global income distribution more than simply the growth in international trade and the greater integration of the global economies.[5] Blaming globalization is an oft used excuse to reduce pressure on governments to make the appropriate decisions to alleviate growing income disparities.

Whether globalization is an important factor in redistributing income or not perception is what matters. The rise in populism in the United States culminating in the election of Donald Trump as president in 2016 and efforts to restrict labor mobility among some European Union countries in the wake of mass migration from the Middle East and elsewhere underscore the extent of public unrest. The resulting backlash against globalization is likely to make countries more wary of liberalizing trade agreements. The European Union and the United States have run into major difficulties in the passage of the Transatlantic Trade and Investment Partnership (TTIP). While many governments have approved the TTIP, the United States has refused to approve the trade pact. The failure to approve this agreement could slow future trade induced global economic growth.

The impact of these developments on M&A's is less certain. Slower global growth is likely to undermine gains in foreign direct investment, including M&A's. However, with growth rates among countries varying widely, the pressure to pursue crossborder deals will remain high in the absence of factors that make such deals less attractive. Such factors could include "exit" taxes (taxes imposed on firms wanting to relocate outside a country) and limitations on earnings repatriation. However, the motives for international expansion are numerous and will continue to drive foreign direct investment in the foreseeable future. These are discussed next.

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[5]The focus by the world's major central banks on suppressing interest rates to zero or negative levels has penalized the poor who are more likely to invest in fixed income securities while inflating equity markets to the benefit of the wealthy. Differences in educational attainment represent another factor looming large in explaining differences in labor force quality and in turn income distribution. US test scores in math and reading continue to decline relative to major developed countries despite the United States spending more per pupil than many other countries.

MOTIVES FOR INTERNATIONAL EXPANSION

Firms expand internationally for a variety of reasons. While some are similar to those motivating M&A's between firms within a country's borders (see Chapter 1), factors contributing to crossborder M&A's in some instance may be quite different.

Geographic and Industrial Diversification

Firms may diversify by investing in different industries in the same country, the same industries in different countries, or different industries in different countries. Firms investing in industries or countries whose economic cycles are not highly correlated may lower the overall volatility (i.e., risk) in their consolidated earnings and cash flows and, in turn, reduce their cost of capital[6] and also their risk of default.[7] This is something that a firm may not be able to achieve by diversifying within its home country.

Accelerating Growth

Foreign markets represent an opportunity for domestic firms to grow. Large firms experiencing slower growth in their domestic markets have a greater likelihood of making foreign acquisitions, particularly in rapidly growing emerging markets.[8] US firms have historically invested in potentially higher-growth foreign markets. Similarly, the United States represents a large, growing, and politically stable market. Consequently, foreign firms have increased their exports to and direct investment (including M&A's) in the United States.

Industry Consolidation

Industries which are global in scope often require crossborder M&A's to consolidate. Excess capacity in many industries often drives M&A activity, as firms strive to achieve greater economies of scale and scope as well as pricing power with customers and suppliers. The highly active consolidation in recent years in the metals industries (e.g., steel, nickel, and copper) represents an excellent example of this global trend. Global consolidation also is common in the financial services, media, oil and gas, telecommunications, and pharmaceuticals industries.

Utilization of Lower Raw Material and Labor Costs

Labor cost differences are likely to be larger between countries and regions, since labor and other resources often tend to be less mobile across political boundaries. Emerging markets offer low labor costs, access to inexpensive raw materials, and low levels of regulation.

[6]Studies show that diversified international firms often exhibit a lower cost of capital than do firms whose investments are not well diversified (Stulz, 1995a, 1995b; Stulz and Wasserfallen, 1995. In contrast, Krapl (2015) finds little empirical support for risk reduction through international diversification.

[7]Koerniadi et al., 2015.

[8]Graham et al., 2008.

Shifting production overseas allows firms to reduce operating expenses and become more competitive globally. The benefit of lower labor costs is overstated because worker productivity in emerging countries tends to be significantly lower than in more developed countries.

Leveraging Intangible Assets

Firms with expertise, brands, patents, copyrights, and proprietary technologies seek to grow by exploiting these advantages in emerging markets. Foreign buyers may seek to acquire firms with intellectual property so that they can employ such assets in their own domestic markets.[9] Firms with a reputation for superior products in their home markets might find that they can apply this reputation successfully in foreign markets (e.g., Coke and McDonald's). Firms seeking to leverage their capabilities are likely to acquire controlling interests in foreign firms.

However, as Wal-Mart discovered, sometimes even a widely recognized brand name is insufficient to overcome the challenges of foreign markets. Shortly after selling its 16 stores in South Korea in 2006 due to their poor profitability, the firm announced it was selling its operations in Germany to German retailer Metro AG. Wal-Mart had been unable to adapt to the ferocity of German competitors, the frugality of German shoppers, and the extent to which regulations, cultural differences, and labor unions would impede its ability to apply in Germany what had worked so well in the United States.

Minimizing Tax Liabilities

Firms in high-tax countries may shift production and reported profits by building or acquiring operations in countries with more favorable tax laws. Evidence supporting the notion that such strategies are common is mixed, with more recent studies showing a greater tendency of firms to shift their investments from high-tax countries to lower-tax countries and to pursue M&A transactions, in part due to their favorable tax consequences.[10] In particular, domestic firms with large cash holdings held in their foreign subsidiaries are more inclined to make acquisitions in foreign countries, if tax rates in their home country exceed significantly foreign tax rates. However, abnormal returns on the announcement date for such acquirers often are lower than for similar acquisitions made in their home countries as investors may feel that tax considerations rather than synergy was the primary motivation for such takeovers.[11] So called corporate tax inversions (companies relocating their headquarters to take advantage of more favorable country tax rates) are discussed in detail in Chapter 12.

[9]Eun et al., 1996.

[10]Salihu et al. (2015), Zodrow (2010), Overesch (2009), and Servaes and Zenner (1994) found a positive correlation between cross-border investment (including mergers and acquisitions) and differences in tax laws. However, Dewenter (1995) found little correlation.

[11]Hanlon et al., 2015.

Seeking More Management Friendly Environments

While corporate tax inversions are generally driven by potential tax savings, senior management may see additional benefits of changing the country in which the firm is incorporated. Dutch politicians have been touting the benefits of Dutch corporate law to global corporations in an effort to turn the Netherlands into a management-friendly environment. Mylan Labs set up a Dutch foundation known as a "Stichting" which is a takeover defense comparable to a US style poison pill. The foundation has the right to receive preferred shares with multiple voting rights that allow it to block any deal by outvoting other shareholders. Mylan's board triggered the foundation's special voting rights to oppose an unwanted takeover bid by Israel's Teva Corp in 2015. Cable firm Altice switched its domicile in 2015 through a merger from Luxembourg to the Netherlands so that it could introduce a dual class share structure (which is barred in Luxembourg) giving the firm's chairman Patrick Drahi 92% of the firm's voting power while owning 58.5% of the firm.

Avoiding Entry Barriers

Market entry barriers often are less onerous within a country's borders than between countries. Quotas and tariffs on imports imposed by governments to protect domestic industries often encourage foreign direct investment. Foreign firms may acquire existing facilities or start new operations in the country imposing the quotas and tariffs to circumvent such measures.

Fluctuating Exchange Rates

Changes in currency values have a significant impact on where and when foreign direct investments are made. The appreciation of foreign currencies relative to the dollar reduces the overall cost of investing in the United States. The impact of exchange rates on crossborder transactions has been substantiated in a number of studies.[12]

Following Customers

Often suppliers are encouraged to invest abroad to satisfy better the immediate needs of their customers. For example, auto parts suppliers worldwide have set up operations next to large auto manufacturing companies in China.

COMMON INTERNATIONAL MARKET ENTRY STRATEGIES

The method of market entry chosen by a firm reflects the firm's risk tolerance, perceived risk, competitive conditions, and overall resources. Common entry strategies include mergers and acquisitions, greenfield, or solo ventures, joint ventures, export, and licensing.

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[12]Boateng et al., 2014; Erel et al., 2012; Georgopoulos, 2008; and Vasconcellos and Kish, 1998.

In a greenfield or solo venture, a foreign firm starts a new business in the local country, enabling the firm to control technology, production, marketing, and product distribution. Firms with significant intangible assets (e.g., proprietary know-how) are frequently able to earn above-average returns, which can be leveraged in a greenfield or start-up venture.[13] However, the firm's total investment is at risk. M&A's can provide quick access to a new market; however, they often are expensive, complex to negotiate, subject to myriad regulatory requirements, and beset by intractable cultural issues. Joint ventures allow firms to share the risks and costs of international expansion, develop new capabilities, and gain access to important resources but often fail due to conflict between partners.[14] Firms often choose a joint venture over an acquisition as the preferred market entry strategy when the risk of loss of intellectual property to a JV partner is less than the potential for expropriation by the local country's government.[15]

Multinational corporations headquartered in emerging markets often use cross border acquisitions as a means of entering developed country markets. Such acquisitions allow these companies to rapidly become more competitive against dominant firms in developed countries by acquiring brands, technologies, management know how, and other skills they may lack.[16]

Exporting does not require the expense of establishing local operations; however, exporters must establish some means of marketing and distributing their products at the local level. The disadvantages of exporting include high transportation costs, exchange rate fluctuations, and possible tariffs placed on imports into the local country. Moreover, the exporter has limited control over the marketing and distribution of its products in the local market.

Licensing allows a firm to purchase the right to manufacture and sell another firm's products within a specific country or set of countries, with the licensor paid an upfront sum plus a royalty on each unit sold. Licensing also may involve firms interested in extracting natural resources within specific countries.[17] The licensee takes the risks and makes the investments in facilities for manufacturing, marketing, and distribution of goods and services, making licensing possibly the least costly form of international expansion. Licensing is a popular entry mode for smaller firms with insufficient capital and limited brand recognition.[18] Disadvantages include the lack of control over the manufacture and marketing of the firm's products in other countries. Licensing often is the least profitable entry strategy because the profits must be shared between the licensor and the licensee. Finally, the licensee may learn the technology and sell a similar competitive product after the license expires.

STRUCTURING CROSSBORDER DEALS

This section provides an abbreviated discussion of those aspects of deal structuring discussed in Chapters 11 and 12 most applicable to crossborder transactions.

[13]Brouthers and Brouthers, 2000.

[14]Zahra and Elhagrasey, 1994.

[15]Bodnaruk et al., 2016.

[16]Anderson and Sutherland, 2015.

[17]In early 2017, British Petroleum traded a 2% stake in the company plus a fee on each barrel of oil or oil equivalent produced to license the right to extract oil and gas from onshore oil fields in the United Arab Emirates over a 40 year period.

[18]Hitt and Ireland, 2000.

Friendly Versus Hostile Deals

Crossborder takeovers are most often friendly transactions. This reflects a combination of factors including cultural antipathy toward hostile takeovers and government protectionism. Government intervention in hostile deals is more likely if a foreign bidder is involved, if it is a large transaction, and if the target firm's country is experiencing high unemployment.[19]

Bidding Strategies

As with domestic deals, international mergers and acquisitions commonly employ toehold investment tactics and termination fees to reduce the likelihood of competition in bidding for a target. If a bidding contest does occur, the use of these tactics increases the probability that the initial bidder will be successful. There is little evidence that high initial bids prevent bidding competition. The successful participant in a bidding contest is generally the one who includes the most cash in the offer price. Serial acquirers are more likely not to participant in bidding contests and are more likely to complete transactions.[20] Finally, US bidders tend to offer lower purchase price premiums when they are relatively unfamiliar with the culture of the target firm's country. Why? Because the greater uncertainty that anticipated synergies cannot be realized due to cultural factors on a timely basis or at all reduces the acquirer's confidence it can earn back the premium paid. However, this uncertainty does not appear present when foreign firms acquire US targets.[21]

Acquisition Vehicles

Non-US firms seeking to acquire US companies often use C corporations rather than limited liability companies or partnerships to acquire the shares or assets of US targets. They are relatively easy to organize quickly, since all states permit such structures and no prior government approval is required. There is no limitation on non-US persons or entities acting as shareholders in US corporations, except for certain regulated industries. A limited liability company is attractive for JVs in which the target would be owned by two or more unrelated parties, corporations, or nonresident investors. While not traded on public stock exchanges, LLC shares can be sold freely to members. This facilitates the parent firm's operating the acquired firm as a subsidiary or JV. A partnership may have advantages for investors from certain countries (e.g., Germany), where income earned from a US partnership is not subject to taxation. A holding company structure enables a foreign parent to offset gains from one subsidiary with losses generated by another, serves as a platform for future acquisitions, and provides the parent with additional legal protection in the event of lawsuits.

US companies acquiring businesses outside the United States encounter obstacles atypical of domestic acquisitions. These include investment and exchange control approvals, tax clearances, clearances under local competition (i.e., antitrust) laws, and unusual due diligence problems. Other problems involve the necessity of agreeing on an allocation of the purchase

[19]Rowoldt and Starke, 2016.

[20]Bessler et al., 2015.

[21]Lim et al., 2016.

price among assets located in various jurisdictions and compliance with local law relating to the documentation necessary to complete the transaction. Much of what follows also applies to non-US firms acquiring foreign firms.

The laws governing foreign firms have an important impact on the choice of acquisition vehicle, since the buyer must organize a local company to hold acquired shares or assets in a way that meets local-country law. In common-law countries (e.g., the United Kingdom, Canada, Australia, India, Pakistan, Hong Kong, Singapore, and other former British colonies), the acquisition vehicle will be a corporation-like structure, which is similar to those in the United States. In civil-law countries (which include Western Europe, South America, Japan, and Korea), the acquisition will be in the form of a share company or limited liability company. *Civil law* is synonymous with *codified law*, *continental law*, or the *Napoleonic Code*. Practiced in some Middle Eastern Muslim countries and some countries in Southeast Asia (e.g., Indonesia and Malaysia), Islamic law is based on the Koran.

In the European Union, there is no overarching law or EU directive requiring a specific corporate form. Rather, corporate law is the responsibility of each member nation. There is evidence that differences in corporate law across member nations have hindered progress toward a more active European M&A market, since both individual country and EU level laws must be considered.[22] In an effort to adapt to this complexity, smaller enterprises often use a limited liability company, while larger enterprises, particularly those with public shareholders, are referred to as *share companies*. The rules applicable to limited liability companies tend to be flexible and are particularly useful for wholly owned subsidiaries. In contrast, share companies are subject to numerous restrictions and securities laws. However, their shares trade freely on public exchanges.

Share companies are more regulated than US corporations. They must register with the commercial registrar in the location of their principal place of business. Bureaucratic delays from several weeks to several months between the filing of the appropriate documents and the organization of the company may occur. Most civil-law countries require that there be more than one shareholder. Usually there is no limitation on foreigners acting as shareholders. Limited liability companies outside the United States are generally subject to fewer restrictions than share companies. A limited liability company typically is required to have more than one quota holder (i.e., investor). In general, either domestic or foreign corporations or individuals may be quota holders in the LLC.[23]

Form of Payment

US target shareholders often receive cash rather than shares in crossborder deals.[24] Shares and other securities require registration with the Securities and Exchange Commission and compliance with all local securities (including state) laws if they are resold in the United States. Acquirer shares often are less attractive to potential target shareholders because of the absence of a liquid market for resale or because the acquirer is not recognized by the target firm's shareholders. In buying non-US firms, target shareholders of public companies are

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[22]Moschieri and Campa, 2014.

[23]For an excellent discussion of corporate structures in common-law and civil-law countries, see Truitt (2006).

[24]Ceneboyan et al., 1991.

more likely to receive cash while equity is more commonly paid to shareholders of private firms.[25] Acquirer equity often is used in deals involving private targets because of the difficulty in valuing such firms. Target shareholders will provide more accurate information since the eventual value of their acquirer shares will reflect the acquirer's success or failure.

Form of Acquisition

Share acquisitions are generally the simplest form of acquisition in cross-border deals, because all target assets and liabilities transfer to the acquirer by "rule of law." Acquirers tend to opt for owning 100% of the target's equity when the target is in a related industry and the acquirer is highly familiar with the country in which the target resides.[26] Asset purchases result in the transference of all or some of the assets of the target firm to the acquirer. The major disadvantage of a share purchase is that all the target's known and unknown liabilities transfer to the buyer. When the target is in a foreign country, full disclosure of liabilities is limited and some target assets transfer with tax liens or other associated liabilities. Asset sales often are more complicated in foreign countries when the local law requires that the target firm's employees automatically become the acquirer's employees. Mergers are not legal or practical in all countries, often due to the requirement that minority shareholders agree with the will of the majority vote. There is some evidence that acquirers able to purchase selected target assets in cross-border deals fare better as measured by financial returns than those that undertake mergers or stock purchases.[27] Why? Perhaps because of the difficulty of performing adequate due diligence when the acquirer is less familiar with the culture and financial transparency may be limited.

Tax Strategies

Tax-free reorganizations, or mergers, are often used by foreign acquirers of US firms. The target firm merges with a US subsidiary of the foreign acquirer in a statutory merger under state laws. To qualify as a US corporation for tax purposes, the foreign firm must own at least 80% of the stock of the domestic subsidiary. As such, the transaction can qualify as a Type-A tax-free reorganization (see Chapter 12).

Another form of deal structure is the taxable purchase, which involves the acquisition by one company of the shares or assets of another, usually in exchange for cash or debt. Target firm shareholders recognize a taxable gain or loss on the exchange. The forward triangular merger is the most common form of taxable transaction. The target company merges with a US subsidiary of the foreign acquirer, with shareholders of the target firm receiving acquirer shares, as well as cash, although cash is the predominant form of payment. This structure is useful when some target company shareholders want shares while others want cash.

Hybrid transactions represent a third form of transaction used in crossborder transactions. This type of structure affords the US target corporation and its shareholders tax-free treatment while avoiding the issuance of shares of the foreign acquirer. A hybrid transaction may

[25]Bae et al., 2013.

[26]Chiara Di Guardo et al., 2016.

[27]Jory et al., 2016.

be taxable to some target shareholders and tax free to others. To structure hybrid transactions, some target company shareholders may exchange their common shares for a nonvoting preferred stock while the foreign acquirer or its US subsidiary buys the remaining common stock for cash. This transaction is tax free to target company shareholders taking preferred stock and taxable to those selling their shares for cash.[28]

FINANCING CROSSBORDER DEALS

Debt is most often used to finance crossborder transactions. Sources of financing exist in capital markets in the acquirer's home, the target's local country, or in some third country. Domestic capital sources available to crossborder acquirers include banks willing to provide bridge financing and lines of credit, bond markets, and equity markets.

Debt Markets

Commonly used to finance crossborder deals, Eurobonds are debt instruments expressed in terms of US dollars or other currencies and sold to investors outside the country in whose currency they are denominated. A typical Eurobond transaction could be a dollar-denominated bond issued by a French firm through an underwriting group. The underwriting group could comprise the overseas affiliate of a New York commercial bank, a German commercial bank, and a consortium of London banks. Bonds issued by foreign firms and governments in local markets have existed for many years. Such bonds are issued in another country's domestic bond market, denominated in its currency, and subject to that country's regulations.[29]

Equity Markets

The American Depository Receipt (ADR) market evolved as a means of enabling foreign firms to raise funds in US equity markets. ADRs represent the receipt for the shares of a foreign-based corporation held in a US bank, entitling the holder to all dividends and capital gains. The acronyms ADS and ADR often are used interchangeably. The Euroequity market reflects equity issues by a foreign firm tapping a larger investor base than the firm's home equity market.[30]

Sovereign Wealth Funds

Sovereign wealth funds (SWFs) are government-backed or government-sponsored investment funds whose function is to invest accumulated reserves of foreign currencies. For years,

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[28]For an excellent discussion of the different tax laws in various countries, see PriceWaterhouseCoopers (2015).

[29]Bonds of a non-US issuer registered with the SEC for sale in the US public bond markets are called *yankee bonds*. Similarly, a US company issuing a bond in Japan would be issuing a "samurai" bond.

[30]If the acquirer is not well known in the target's home market, target shareholders may be able to sell the shares only at a discount in their home market. The buyer may have to issue shares in its home market or possibly in the international equities market and use the proceeds to acquire the target for cash. Alternatively, the acquirer may issue shares in the target's market to create a resale market for target shareholders or offer target shareholders the opportunity to sell the shares in the buyer's home market through an investment banker.

such funds, in countries that had accumulated huge quantities of dollars, would reinvest these funds in US Treasury securities. However, in recent years, such funds have become more sophisticated, increasingly taking equity positions in foreign firms and diversifying their currency holdings. Empirical studies show that the motives for making such investments are to earn high financial returns rather than to steal intellectual property or to threaten the national security of countries in which they invest.[31] Moreover, SWFs tend to target "strategic industries," such as telecommunications, financial, natural resource, and utilities in countries displaying sustainable economic growth and whose governments are relatively unlikely to prevent such investments for political reasons.[32] In addition to providing a source of capital, SWFs, as politically connected large investors, may contribute to the value of a firm in which they invest by providing access to the SWF's home market and to government-related contracts.[33]

PLANNING AND IMPLEMENTING CROSSBORDER TRANSACTIONS IN EMERGING COUNTRIES

Entering emerging economies poses challenges not generally encountered in developed countries. What follows is a discussion of how to deal with the inherent political and economic risks in such endeavors.

Political and Economic Risks

Political and economic risks are often interrelated. Examples of political and economic risk include excessive local government regulation, confiscatory tax policies, restrictions on cash remittances, currency inconvertibility, restrictive employment policies, expropriation of assets of foreign firms, civil war, or local insurgencies, and corruption. Another, sometimes overlooked, challenge is the failure of the legal system in an emerging country to honor contracts.[34]

Unexpected changes in exchange rates can influence the competitiveness of goods produced in the local market for export to the global marketplace. Changes in exchange rates alter the value of assets invested in the local country and earnings repatriated from the local operations to the parent firm in the home country. Not surprisingly, the degree of economic and political freedom correlates positively with foreign direct investment. When property rights are respected and earnings repatriation is unrestricted, foreigners are inclined to invest in the local country.[35]

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[31]Alhashel, 2015.

[32]Boubaki et al., 2016.

[33]Sojli and Tham, 2010.

[34]Khanna et al., 2005.

[35]Berggren and Jordahl (2005) demonstrate a strong positive relationship between foreign direct investment and the Heritage Foundation's Freedom Index. This index contains about 50 variables divided into 10 categories, measuring various aspects of economic and political freedoms.

Sources of Information for Assessing Political and Economic Risk

Information sources include consultants in the local country, joint venture partners, a local legal counsel, or appropriate government agency, such as the US Department of State. Other sources of information include the major credit-rating agencies, such as Standard & Poor's, Moody's, and Fitch IBCA. Trade magazines, such as *Euromoney* and *Institutional Investor*, provide overall country-risk ratings updated semiannually. The Economic Intelligence Unit also provides numerical risk scores for individual countries. The *International Country Risk Guide*, published by the Political Risk Services Group, offers overall numerical risk scores for individual countries as well as separate scores for political, financial, and economic risks.

Using Insurance to Manage Risk

The decision to buy insurance depends on the size of the investment and the level of risk. Parties have a variety of sources from which to choose. For instance, the export credit agency in a variety of countries, such as Export Import Bank (United States), SACE (Italy), and Hermes (Germany), may offer coverage for companies based within their jurisdictions. The Overseas Private Investment Corporation is available to firms based in the United States, while the World Bank's Multilateral Investment Guarantee Agency is available to all firms.

Using Options and Contract Language to Manage Risk

When adequate due diligence is impractical, acquirers may include a put option in the purchase agreement, enabling the buyer to require the seller to repurchase shares from the buyer at a predetermined price under certain circumstances. Alternatively, the agreement could include a clause requiring a purchase price adjustment.

HOW ARE CROSSBORDER TRANSACTIONS VALUED?

Crossborder deals require converting cash flows from one currency to another. Also, discount rates may be adjusted for risks not found when the acquirer and target are in the same country.

Converting Foreign Target Cash Flows to Acquirer Domestic Cash Flows

Cash flows of the target firm can be expressed in its own currency, including expected inflation (i.e., nominal terms), its own currency without inflation (i.e., real terms), or the acquirer's currency. Real cash flow valuation adjusts all cash flows for inflation and uses real discount rates. M&A practitioners utilize nominal cash flows, except when inflation rates are high. Under these circumstances, real cash flows are preferable. Real cash flows are determined by dividing the nominal cash flows by the country's gross domestic product deflator or some other broad measure of inflation. Future real cash flows are estimated by dividing future nominal cash flows by the current GDP deflator,[36] increased by the expected rate of inflation.

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[36]The GDP deflator is the ratio of current dollar GDP to real or constant-dollar GDP and measures the percent change in prices between the current period and some prior "base" period.

Real discount rates are determined by subtracting the expected rate of inflation from nominal discount rates.[37]

It is simpler to project the target's aggregate cash flows (rather than each component separately) in terms in its own currency and then convert the cash flows into the acquirer's currency. This requires estimating future exchange rates between the target (local) and the acquirer's (home) currencies, which are affected by interest rates and expected inflation in the two countries. The current rate at which one currency can be exchanged for another is called the *spot exchange rate*. Conversion to the acquirer's currency can be achieved by using future spot exchange rates, estimated either from relative interest rates (the interest rate parity theory) in each country or by the relative rates of expected inflation (the purchasing power parity theory).

When Target Firms Are in Developed (Globally Integrated) Capital Market Countries

For developed countries, the interest rate parity theory provides a useful framework for estimating *forward currency exchange rates* (i.e., future spot exchange rates). Consider a US acquirer's valuation of a firm in the European Union (EU), with projected cash flows expressed in terms of Euros. The target's cash flows can be converted into dollars by using a forecast of future dollar-to-euro spot rates. The *interest rate parity theory* relates forward (future) spot exchange rates to differences in interest rates between two countries adjusted by the spot rate. Therefore, the dollar/euro exchange rate $(\$/€)_n$ (i.e., the future, or forward, exchange rate), n periods into the future, is expected to appreciate (depreciate) according to the following relationship:

$$(\$/€)_n = \{(1+R_{\$n})^n/(1+R_{€n})^n\}\times(\$/€)_0 \qquad (18.1)$$

Similarly, the Euro-to-Dollar exchange rate $(€/\$)_n$, n periods into the future, would be expected to appreciate (depreciate) according to the following relationship:

$$(€/\$)_n = \{(1+R_{€n})^n/(1+R_{\$n})^n\}\times(€/\$)_0 \qquad (18.2)$$

Note that $(\$/€)_0$ and $(€/\$)_0$ represent the spot rate for the Dollar-to-Euro and Euro-to-dollar exchange rates, respectively; $R_{\$n}$ and $R_{€n}$ represent the interest rate in the United States and the European Union, respectively. Eqs. (18.1) and (18.2) imply that if US interest rates rise relative to those in the European Union, investors will buy dollars with Euros at the current spot rate and sell an equivalent amount of dollars for Euros in the forward (future) market n periods into the future in anticipation of converting their dollar holdings back into euros. According to this theory, the dollar-to-euro spot rate will appreciate and the dollar-to-euro forward rate will depreciate until any profit due to the difference in interest rates is eliminated.[38] Exhibit 18.1 illustrates how to convert a target company's nominal free cash flows to the firm

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[37]Nominal (real) cash flows should give the same NPVs if the expected rate of inflation used to convert future cash flows to real terms is the same inflation rate used to estimate the real discount rate.

[38]Equilibrium between forward exchange rates and spot rates adjusted for the ratio of US interest rates to those in Eurozone countries will in practice be restored by a combination of appreciating dollar-to-Euro spot rates, depreciating dollar-to-Euro forward rates, and declining US interest rates and increasing Eurozone interest rates. Interest rates on US bonds decline as the investors bid up their prices, and interest rates on comparable Eurozone bonds increase as investors sell these bonds and invest the proceeds in the United States.

EXHIBIT 18.1 CONVERTING EURO-DENOMINATED INTO DOLLAR-DENOMINATED FREE CASH FLOWS TO THE FIRM USING THE INTEREST RATE PARITY THEORY

	2012	2013	2014
Target's Euro-Denominated FCFF Cash Flows (Millions)	€124.5	€130.7	€136.0
Target Country's Interest Rate (%)	4.50	4.70	5.30
US Interest Rate (%)	4.25	4.35	4.55
Current Spot Rate ($/€) = 1.2044			
Projected Spot Rate ($/€)	1.2015	1.1964	1.1788
Target's Dollar-Denominated FCFF Cash Flows (Millions)	$149.59	$156.37	$160.32

Note: Calculating the projected spot rate using Eq. (18.1):

$$(\$/€)_{2012} = \{(1.0425)/(1.0450)\} \times 1.2044 = 1.2015$$

$$(\$/€)_{2013} = \{(1.0435)^2/(1.0470)^2\} \times 1.2044 = 1.1964$$

$$(\$/€)_{2014} = \{(1.0455)^3/(1.0530)^3\} \times 1.2044 = 1.1788$$

(FCFF) expressed in Euros (i.e., the local country or target's currency) to those expressed in dollars (i.e., home country or acquirer's currency).

When Target Firms Are in Emerging (Segmented) Capital Market Countries

Cash flows are converted, as before, using the interest rate parity theory or the purchasing power parity theory. The latter is used if there is insufficient information about interest rates in the emerging market. The *purchasing power parity theory* states that the percentage difference in the forward rate relative to the spot rate should over time equal the difference in expected inflation rates between countries. That is, one currency appreciates (depreciates) with respect to another currency according to the expected relative rates of inflation between the two countries such that an identical good in each country will have the same price. To illustrate, the Dollar/Mexican peso exchange rate, $(\$/Peso)_n$, and the Mexican Peso/Dollar exchange rate, $(Peso/\$)_n$, n periods from now (i.e., future exchange rates) is expected to change according to the following relationships:

$$(\$/Peso)_n = [(1+P_{US})^n/(1+P_{MEX})^n] \times (\$/Peso)_0 \tag{18.3}$$

and

$$(Peso/\$)_n = [(1+P_{MEX})^n/(1+P_{US})^n] \times (Peso/\$)_0 \tag{18.4}$$

where P_{US} and P_{MEX} are the expected inflation rates in the United States and Mexico, respectively, and $(\$/Peso)_0$ and $(Peso/\$)_0$ are the dollar-to-peso and peso-to-dollar spot exchange rates, respectively. If prices in the United States are expected to rise faster than those in Mexico for the same goods and services, other things equal, holders of pesos will buy dollars

EXHIBIT 18.2 CONVERTING PESO-DENOMINATED INTO DOLLAR-DENOMINATED FREE CASH FLOWS TO THE FIRM USING THE PURCHASING POWER PARITY THEORY

	2012	2013	2014
Target's Peso-Denominated FCFF Cash Flows (Millions of Pesos)	P1050.5	P1124.7	P1202.7
Current Mexican Expected Inflation Rate = 6%			
Current US Expected Inflation Rate = 4%			
Current Spot Rate ($/Peso) = 0.0877			
Projected Spot Rate ($/Peso)	0.0860	0.0844	0.0828
Target's Dollar-Denominated FCFF Cash Flows (Millions of $)	$90.34	$94.92	$99.58

Note: Calculating the projected spot rate using Eq. (18.3):

$$(\$/Peso)_{2012} = \{(1.04)/(1.06)\} \times 0.0877 = 0.0860$$

$$(\$/Peso)_{2013} = \{(1.04)^2/(1.06)^2\} \times 0.0877 = 0.0844$$

$$(\$/Peso)_{2014} = \{(1.04)^3/(1.06)^3\} \times 0.0877 = 0.0828$$

to purchase US goods and services before they rise in price and sell an equivalent amount of Dollars for Pesos in the forward exchange market before the dollar depreciates. This causes the Dollar/Peso spot rate to decline (i.e., the Dollar to appreciate against the Peso) and the forward Dollar/Peso exchange rate to increase (i.e., the Dollar to depreciate against the Peso).

See Exhibit 18.2 for an illustration of how this might work in practice.

Selecting the Correct Marginal Tax Rate

Global businesses generally pay taxes using either the worldwide or territorial tax regimes. The current *worldwide or global tax system* taxes businesses on income earned in their home country and on the income they earn in foreign countries. In contrast, the *territorial tax system* taxes income earned by both domestic and foreign firms operating within a country's borders only on what they earn in that country and excludes most foreign-earned income. That is, only profits earned by domestic and foreign firms in that country are taxed under the territorial tax system.

Multinational firms headquartered in countries with a worldwide tax system can be put at a significant competitive disadvantage to those incorporated in countries using a territorial tax system. For example, Proctor & Gamble and Unilever both sell soap worldwide but their profits are taxed quite differently. US based P&G has to pay taxes on its worldwide profits while Unilever pays taxes mostly in the United Kingdom and the Netherlands, where it has coheadquarters. Consequently, P&G is at a competitive disadvantage since its tax burden is significantly higher.

The US worldwide system taxes the domestic and foreign income of businesses with US headquarters. Businesses can claim a "foreign tax credit" for taxes that their foreign subsidiaries pay in other countries. This credit limits double taxation. Where the foreign tax rate exceeds the US rate, no US liability is generated. In the more common circumstances where the US tax rate is greater, US businesses owe a residual tax on their foreign earnings equal to the difference between the US tax rate (35% at the time of this writing)[39] and the tax that their subsidiaries paid in the foreign country where they earned the income.

Instead of a pure territorial system, most countries use an exemption system under which foreign income is mostly exempt from taxation. The exemption is generally 95% of foreign earnings. Consequently, most foreign firms pay only a small token tax if they bring their after-tax profits back to their home country. US firms must pay the difference between the US tax rate and the tax that they have already paid. For example, French and US firms investing in Ireland pay a corporate tax of only 12.5%. The French firm can then repatriate its after-tax profit to France by paying 5% on those repatriated profits. The US firm has to pay an effective marginal tax rate of 22.5% equal to the difference between the US 35% corporate tax and the 12.5% Irish tax. The huge difference provides a major incentive for US firms to retain foreign earned profits outside the United States.

The selection of the right marginal tax rate for valuation purposes thus depends on where most of the taxes are actually paid. If the acquirer's country exempts foreign income from further taxes (or applies only a token tax rate) once taxed in the foreign country, the correct tax rate would be the marginal tax rate in the foreign country because that is where taxes are paid. If the marginal tax rate in the acquirer's country is higher than the target's country rate and taxes paid in a foreign country are deductible from the taxes owed by the acquirer in its home country, the correct tax rate would be the acquirer's marginal effective tax rate. That is, the difference between the acquirer's marginal tax rate in its home country less the tax rate paid in a foreign country.

Estimating the Cost of Equity in Crossborder Transactions

The capital asset pricing model or a multifactor model (e.g., CAPM plus a firm size adjustment) often are used in developed countries with liquid capital markets.[40] For emerging nations, estimating the cost of equity is more complex, with at least 12 separate approaches employed.[41] Each method attempts to adjust the discount rate for potential capital market segmentation and specific country risks. Still other methods attempt to include emerging-country risk by adjusting projected cash flows. In either case, the adjustments often appear arbitrary.

Developed economies seem to exhibit little differences in the cost of equity, due to the relatively high integration of their capital markets with the global capital market. Thus, adjusting the cost of equity for specific country risk does not seem to make any significant difference.[42] For emerging-market countries, the existence of segmented capital markets,

[39]The election of Donald Trump as US president may mean that US corporate tax rates could be cut substantially in 2017, perhaps as low as 15%.
[40]Graham and Harvey, 2001.
[41]Harvey, 2005.
[42]Koedijk et al., 2002; Bodnar et al., 2003.

political instability, limited liquidity, currency fluctuations, and currency inconvertibility seems to make adjusting the target firm's cost of equity for these factors desirable but often impractical.[43]

The following discussion incorporates the basic elements of valuing cross-border transactions, distinguishing between the different adjustments made when investing in developed and emerging countries. Nonetheless, considerable debate continues in this area.

Estimating the Cost of Equity in Developed (Globally Integrated) Countries

What follows is a discussion of how to adjust the basic CAPM formulation for valuing cross-border transactions when the target is located in a developed country. The discussion is similar to the capital asset pricing model formulation (CAPM) outlined in Chapter 7, except for the use of either national or globally diversified stock market indices in estimating beta and calculating the equity market risk premium.

Estimating the Risk-Free Rate of Return (Developed Countries)

The risk-free rate generally is the local country's government (or sovereign) bond rate whenever the projected cash flows for the target firm are expressed in local currency.[44] Risk-free rates usually are US Treasury bond rates if projected cash flows are in dollars.

Adjusting CAPM for Risk (Developed Countries)

The equity premium, the difference between the return on a well-diversified portfolio and the risk-free return, is the additional return required by investors to buy stock. When capital markets are fully integrated, equity investors hold globally diversified portfolios, resulting in high a correlation between individual country equity indices and global indices. Therefore, an equity premium may be estimated by regressing the firm's share price against a well-diversified portfolio of US equities, another developed country's equity portfolio, or a global equity portfolio.[45]

The CAPM also should be adjusted for the size of the firm, which serves as a proxy for factors such as smaller firms being subject to higher default risk and generally being less liquid than large capitalization firms. See Table 7.1 in Chapter 7 for estimates of the amount of the adjustment to the cost of equity to correct for firm size, as measured by market value.

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[43]Bodnar et al. (2003).

[44]The debt crises in many developed countries in 2010 and 2011 suggest that using a government bond rate as a risk-free rate in countries not having their own currencies (e.g., Eurozone countries) is questionable. Such countries cannot repay their debt by simply "printing" money. In July 2012, the Spanish government's 10-year bond rate was 6.95% and the cost of default insurance (i.e., the amount investors pay others to insure against default) was 564 basis points, or 5.64%. Known as the *credit default swap* (CDS) rate, this figure is the difference between a bond rate and a presumed risk-free rate, which in Europe was the German government bond rate. To investors, the implied risk-free return on 10-year Spanish debt was 1.31% (i.e., 6.95%–5.64%), assuming the German government will not default. Alternatively, either the US Treasury bond rate adjusted for differences in inflation between countries [see Eq. (18.6)] or a large corporation's borrowing rate within the local country could be used as a risk-free rate.

[45]In the United States, an example of a well-diversified portfolio is the Standard & Poor's 500 stock index (S&P 500); in the global capital markets, the Morgan Stanley Capital International World Index (MSCI) is commonly used as a proxy for a well-diversified global equity portfolio.

Global CAPM Formulation (Developed Countries)

In globally integrated markets, systematic risk is defined relative to the rest of the world. An asset has systematic risk only to the extent that the performance of the asset correlates with the overall world economy. When using a global equity index, the CAPM often is called the *global* or *international capital asset pricing model*. If the target firm's risk is similar to that faced by the acquirer, the acquirer's cost of equity may be used to discount the target's cash flows.

The global capital asset pricing model for the target firm may be expressed as follows:

$$k_{e,\text{dev}} = R_f + \beta_{\text{devfirm,global}}(R_m - R_f) + \text{FSP} \tag{18.5}$$

where

$k_{e,\text{dev}}$ = required return on equity for a firm operating in a developed country
R_f = local country's risk-free financial rate of return if cash flows are measured in the local country's currency or the US Treasury bond rate if in dollars
$(R_m - R_f)$ = difference between the expected return on the global market portfolio (i.e., MSCI), the US equity index (S&P 500), or a broadly defined index in the target's local country and R_f. This difference is the equity premium, which should be approximately the same when expressed in the same currency for countries with globally integrated capital markets.
$\beta_{\text{devfirm,global}}$ = measure of nondiversifiable risk with respect to a globally diversified equity portfolio or a well-diversified country portfolio highly correlated with the global index
Alternatively, $\beta_{\text{devfirm,global}}$ may be estimated indirectly, as illustrated in Eq. (18.7).
FSP = firm size premium, reflecting the additional return smaller firms must earn relative to larger firms to attract investors

An analyst may wish to value the target's future cash flows in both the local and home currencies. The Fisher effect allows the analyst to convert a nominal cost of equity from one currency to another. Assuming the expected inflation rates in the two countries are accurate, the real cost of equity should be the same in both countries.

Applying the Fisher Effect

The so-called Fisher effect states that nominal interest rates can be expressed as the sum of the real interest rate (i.e., interest rates excluding inflation) and the anticipated rate of inflation. The Fisher effect can be shown for the United States and Mexico as follows:

$$(1 + i_{US}) = (1 + r_{US})(1 + P_{US}) \quad \text{and} \quad (1 + r_{US}) = (1 + i_{US})/(1 + P_{US})$$
$$(1 + i_{MEX}) = (1 + r_{MEX})(1 + P_{MEX}) \quad \text{and} \quad (1 + r_{MEX}) = (1 + i_{MEX})/(1 + P_{MEX})$$

If real interest rates are constant among all countries, nominal interest rates among countries will vary only by the difference in the anticipated inflation rates. Therefore,

$$(1 + i_{US})/(1 + P_{US}) = (1 + i_{MEX})/(1 + P_{MEX}) \tag{18.6}$$

where

i_{US} and i_{MEX} = nominal interest rates in the United States and Mexico, respectively
r_{US} and r_{MEX} = real interest rates in the United States and Mexico, respectively
P_{US} and P_{MEX} = anticipated inflation rates in the United States and Mexico, respectively

If the analyst knows the Mexican interest rate and the anticipated inflation rates in Mexico and the United States, solving Eq. (18.6) provides an estimate of the US interest rate (i.e., $i_{US} = [(1 + i_{MEX}) \times (1 + P_{US})/(1 + P_{MEX})]–1$). Exhibit 18.3 illustrates how the cost of equity estimated in one currency is converted easily to the cost in another using Eq. (18.6). Although the historical equity premium in the United States is used in calculating the cost of equity, the historical United Kingdom or MSCI premium also could have been employed.

Estimating the Cost of Equity in Emerging (Segmented) Capital Market Countries

If capital markets are segmented, the global capital asset pricing model must reflect the tendency of investors in individual countries to hold local country rather than globally diversified equity portfolios. Consequently, equity premiums differ among countries, reflecting the nondiversifiable risk associated with each country's equity market index. What follows is a discussion of how to adjust the basic CAPM formulation for valuing cross-border deals when the target is located in an emerging country.

Estimating the Risk-Free Rate of Return (Emerging Countries)

Data limitations and the absence of a legal procedure to deal with sovereign debt (i.e., government issued debt) in default often preclude using the local country's government bond rate as the risk-free rate. There is no court to approve a debt restructuring plan to reduce, wipe out, or convert debt to equity as with commercial bankruptcies. Troubled countries negotiate directly with lenders to restructure debt by reducing the amount owed, lowering the interest rate, and extending the maturity of the debt or some combination

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EXHIBIT 18.3 CALCULATING THE TARGET FIRM'S COST OF EQUITY IN BOTH HOME AND LOCAL CURRENCIES

Acquirer, a US multinational firm, is interested in purchasing Target, a small UK-based competitor, with a market value of £550 million, or about $1 billion. The current risk-free rate of return for United Kingdom 10-year government bonds is 4.2%. The anticipated inflation rates in the United States and the United Kingdom are 3% and 4%, respectively. The size premium is estimated at 1.2%. The historical equity risk premium in the United States is 5.5%.[a] Acquirer estimates Target's β to be 0.8, by regressing Target's historical financial returns against the S&P 500. What is the cost of equity ($k_{e,UK}$) that should be used to discount Target's projected cash flows when they are expressed in terms of British pounds (i.e., local currency)? What is the cost of equity ($k_{e,US}$) that should be used to discount Target's projected cash flows when they are expressed in terms of US dollars (i.e., home currency)?[b]

$$k_{e,UK} \text{ [see Eq.(18.5)]} = 0.042 + 0.8 \times (0.055) + 0.012 = 0.098 = 9.80\%$$

$$k_{e,US} \text{ [see Eq.(18.6)]} = [(1 + 0.098) \times (1 + 0.03)/(1 + 0.04)] - 1 = 0.0875 \times 100 = 8.75\%$$

[a]The US equity premium or the UK equity premium could have been used, since equity markets in either country are highly correlated.

[b]The real rate of return is the same in the United Kingdom (r_{UK}) and the United States (r_{US}). $r_{UK} = 9.8\%–4.0\% = 5.8\%$, and $r_{US} = 8.8\%–3.0\% = 5.8\%$.

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of all three. Recent rulings by US courts may make the restructuring of sovereign debt increasingly difficult.[46]

As an alternative to the local country government bond rate, the US Treasury bond rate often is used to estimate the risk-free rate if the target firm's cash flows are in terms of local currency. To create a local nominal interest rate, the Treasury bond rate should be adjusted for the difference in the anticipated inflation rates in the two countries using Eq. (18.6). Alternatively, the risk-free rate can be estimated using the buildup method as the sum of the expected inflation rate and the expected real rate. The analyst can add the expected inflation rate for the country to the US Treasury inflation-adjusted bond rate (i.e., Treasury inflation-protected securities, or TIPS). For example, the expected inflation rate for Angola in June 2012 was 12%, and the five-year rate on 10-year US treasury inflation-indexed securities (the real rate) was 2.38%.[47] Therefore, the estimated risk-free rate for Angolan government bonds at that time was 14.38%.

Adjusting CAPM for Risk (Emerging Countries)

Systematic risk for a firm operating primarily in its emerging country's home market, whose capital market is segmented,[48] is measured mainly with respect to the country's equity market index ($\beta_{\text{emfirm,country}}$) and to a lesser extent with respect to a globally diversified equity portfolio ($\beta_{\text{country,global}}$). The emerging-country firm's global beta ($\beta_{\text{emfirm,global}}$) can be adjusted to reflect the relationship with the global capital market as follows:

$$\beta_{\text{emfirm,global}} = \beta_{\text{emfirm,country}} \times \beta_{\text{country,global}} \tag{18.7}$$

The value of $\beta_{\text{emfirm,country}}$ is estimated by regressing historical returns for the local firm against returns for the country's equity index.[49] The value of $\beta_{\text{country,global}}$ can be estimated by regressing the financial returns for the local-country equity index (or for an index in a similar country) against the historical financial returns for a global equity index.[50] Due to the absence of historical data in many emerging economies, the equity risk premium often is estimated using the "prospective method" implied in the constant-growth valuation model. As shown in Chapter 7, Eq. (7.14) in Chapter 7, this formulation provides an estimate of the present value of dividends growing at a constant rate in perpetuity. That is, dividends paid in the current period (d_0) are grown at a constant rate of growth (g) such that d_1 equals $d_0(1 + g)$.

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[46]The International Monetary Fund often provides loans to countries similar to debtor in possession financing, with the IMF repaid before other lenders. Bondholders agreeing to restructure plans often receive partial payment of what they are owed while lenders who hold out may receive nothing. In late 2014, US courts ruled in the case of debts owed by the Argentine government that holdouts cannot fare worse than those who agree to a restructure plan, making reaching negotiated settlements with governments in default extremely difficult.

[47]The 5-year TIPS rate is used because the TIPS rate in June 2012 was an artificially low −1.5% (a 0.98% nominal rate less the 2.48% change in the CPI) due to efforts by the US Federal Reserve to reduce .S Treasury bond rates through "Operation Twist."

[48]An analyst can determine if a country's equity market is segmented from the global equity market if the two markets are relatively uncorrelated. This implies that the local country's equity premium differs from the global equity premium, reflecting the local country's systematic risk.

[49]Absent sufficient data, $\beta_{\text{emfirm,country}}$ may be estimated using the beta for a similar local or foreign firm.

[50]Alternatively, a more direct approach is to regress the local firm's historical returns against the financial returns for a globally diversified portfolio of stocks to estimate $\beta_{\text{emfirm,global}}$. Furthermore, the β between a similar local or foreign firm and the global index could be used for this purpose.

Assuming the stock market values stocks correctly and we know the present value of a broadly defined index in the target firm's country (P_{country}) or in a similar country, dividends paid annually on this index in the next period (d_1), and the expected dividend growth (g), we can estimate the expected return (R_{country}) on the stock index as follows:

$$P_{\text{country}} = d_1/(R_{\text{country}} - g) \quad \text{and} \quad R_{\text{country}} = (d_1/P_{\text{country}}) + g \tag{18.8}$$

From Eq. (18.8), the equity risk premium for the local country's equity market is $R_{\text{country}} - R_f$, where R_f is the local country's risk-free rate of return. Exhibit 18.4 illustrates how to calculate the cost of equity for a firm in an emerging country in the absence of perceived significant country or political risk not captured in the beta or equity risk premium. Note that the local country's risk-free rate of return is estimated using the US Treasury bond rate adjusted for the expected inflation in the local country relative to the United States. This converts the US Treasury bond rate into a local-country nominal interest rate.

Adjusting the CAPM for Country or Political Risk (Emerging Countries)

A country's equity premium may not capture all the events that could jeopardize a firm's ability to operate, such as political instability, limits on repatriation of earnings, capital controls, and the levying of confiscatory or discriminatory taxes. Such factors could increase the firm's likelihood of default. Unless the analyst includes the risk of default by the firm in projecting a local firm's cash flows, the expected cash flow stream would be overstated to the extent that it does not reflect the costs of financial distress.

If the US Treasury bond rate is used as the risk-free rate in calculating the CAPM, adding a country risk premium to the basic CAPM estimate is appropriate. The country risk premium (CRP) often is measured as the difference between the yield on the country's

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EXHIBIT 18.4 CALCULATING THE TARGET FIRM'S COST OF EQUITY FOR FIRMS IN EMERGING COUNTRIES

Assume next year's dividend yield on an emerging country's stock market is 5% and that earnings for the companies in the stock market index are expected to grow by 6% annually in the foreseeable future. The country's global beta ($\beta_{\text{country,global}}$) is 1.1. The US Treasury bond rate is 4%, and the expected inflation rate in the emerging country is 4%, compared to 3% in the United States. Estimate the country's risk-free rate (R_f), the return on a diversified portfolio of equities in the emerging country (R_{country}), and the country's equity risk premium ($R_{\text{country}} - R_f$). What is the cost of equity in the local currency for a local firm ($k_{e,\text{em}}$) whose country beta ($\beta_{\text{emfirm,country}}$) is 1.3?

Solution

$$R_f = [(1 + 0.04)((1 + 0.04)/(1 + 0.03)) - 1] = 0.0501 \times 100 = 5.01\%$$

$$R_{\text{country}} \; [\text{see Eq.} (18.8)] = 5.00 + 6.00 = 11.00\%$$

$$R_{\text{country}} - R_f = 11.00 - 5.01 = 5.99\%$$

$$\beta_{\text{emfirm,global}} \; [\text{see Eq.} (18.7)] = 1.3 \times 1.1 = 1.43$$

$$k_{e,\text{em}} = 5.01 + 1.43(5.99) = 13.58\%$$

sovereign or government bonds and the US Treasury bond rate of the same maturity. The difference, or "spread," is the additional risk premium that investors demand for holding the emerging country's debt rather than US Treasury bonds.[51] Standard & Poor's (www.standardardandpoors.com), Moody's Investors Service (www.moodys.com), and Fitch IBCA (www.fitchibca.com) provide sovereign bond spreads. In practice, the sovereign bond spread is computed from a bond with the same maturity as the US benchmark 10-year Treasury bond used to compute the risk-free rate for calculating the cost of equity.

While political risk has traditionally been associated with emerging countries, there have been an increasing number of instances in recent years of political risk associated with equities and sovereign bonds in developed countries. The sovereign bond crisis in Spain and Italy following the global recession in 2008–09 caused government bond rates to rise and stock prices to fall until it became clear that the Eurozone would remain intact. Similarly, the decision by the United Kingdom to exit the European Union in 2016 triggered concern about the long-term health of the British economy. Consequently, the adjustments for political risk suggested in this section also can apply to developed countries as well.

Global CAPM Formulation (Emerging Countries)

To estimate the cost of equity for a firm in an emerging economy ($k_{e,em}$), Eq. (18.5) can be modified for specific country risk as follows:

$$k_{e,em} = R_f + \beta_{emfirm,global}(R_{country} - R_f) + \text{FSP} + \text{CRP} \qquad (18.9)$$

where

R_f = local risk-free rate or the US Treasury bond rate converted to a local nominal rate if cash flows are in the local currency [see Eq. (18.6)] or to the US Treasury bond rate if cash flows are in dollars

$(R_{country} - R_f)$ = difference between expected return on a well-diversified equity index in the local country or a similar country and the risk-free rate

$\beta_{emfirm,global}$ = emerging country firm's global beta [see Eq. (18.7)]

FSP = firm size premium, reflecting the additional return that smaller firms must earn relative to larger firms to attract investors

CRP = specific country risk premium, expressed as the difference between the local country's (or a similar country's) government bond rate and the US Treasury bond rate of the same maturity. Add to the CAPM estimate only if the US Treasury bond rate is employed as a proxy for the local country's risk-free rate.

Estimating the Local Firm's Cost of Debt in Emerging Markets

The cost of debt for an emerging market firm (i_{emfirm}) should be adjusted for default risk due to events related to the country and those specific to the firm. When a local corporate bond rate is not available, the cost of debt for a specific local firm may be estimated by using an interest rate in the home country (i_{home}) that reflects a level of creditworthiness comparable to

[51]A country risk premium should not be added to the cost of equity if the risk-free rate is the country's sovereign or government bond rate, since the effects of specific country or political risk would be reflected already.

that of the firm in the emerging country. The country risk premium is added to the appropriate home country interest rate to reflect the impact of such factors as political instability on i_{emfirm}. Therefore, the cost of debt can be expressed as follows:

$$i_{\text{emfirm}} = i_{\text{home}} + \text{CRP} \tag{18.10}$$

Most firms in emerging markets are not rated; to determine which home-country interest rate to select, it is necessary to assign a credit rating to the local firm. This "synthetic" credit rating is obtained by comparing financial ratios for the target firm to those used by US rating agencies. The estimate of the unrated firm's credit rating may be obtained by comparing interest coverage ratios used by Standard & Poor's to the firm's interest coverage ratio to determine how S&P would rate the firm. Exhibit 18.5 illustrates how to calculate the cost of emerging-market debt.

Exhibit 18.6 illustrates the calculation of WACC in cross-border transactions. Note the adjustments made to the estimate of the cost of equity for firm size and country risk. Note also the adjustment made to the local borrowing cost for country risk. The risk-free rate of return is the US Treasury bond rate converted to a local nominal rate of interest.

Table 18.1 summarizes methods commonly used for valuing cross-border M&As for developed-country and emerging-country firms. The WACC calculation assumes that the firm uses only common equity and debt financing. Note that the country risk premium is added to both the cost of equity and the after-tax cost of debt in calculating the WACC for a target firm in an emerging country if the US Treasury bond rate is used as the risk-free rate of return. The analyst should avoid adding the country risk premium to the cost of equity if the risk-free rate used to estimate the cost of equity is the local country's government bond rate. References to home and local countries in Table 18.1 refer to the acquirer's and the target's countries, respectively.

Evaluating Risk Using Scenario Planning

With countries like China and India growing at near-double-digit rates, the future may be too dynamic to rely on discounted cash flows. As an alternative to adjusting the target's

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EXHIBIT 18.5 ESTIMATING THE COST OF DEBT IN EMERGING MARKET COUNTRIES

Assume that a firm in an emerging market has annual operating income before interest and taxes of $550 million and annual interest expenses of $18 million. This implies an interest coverage ratio of 30.6 (i.e., $550 ÷ $18). For Standard & Poor's, this corresponds to an AAA rating. According to S&P, default spreads for AAA firms are 0.85 currently. The current interest rate on US triple A–rated bonds is 6.0%. Assume further that the country's government bond rate is 10.3% and that the US Treasury bond rate is 5%. Assume that the firm's marginal tax rate is 0.4. What is the firm's cost of debt before and after tax?

Solution

$$\text{Cost of debt before taxes [see Eq. (18.10)]} = 6.0 + (10.3 - 5.0) = 11.3\%$$
$$\text{After-tax cost of debt} = 11.3 \times (1 - 0.4) = 6.78\%$$

EXHIBIT 18.6 ESTIMATING THE WEIGHTED AVERAGE COST OF CAPITAL IN CROSS-BORDER TRANSACTIONS

Acquirer Inc., a US-based corporation, wants to purchase Target Inc. Acquirer's management believes that the country in which Target is located is segmented from global capital markets because the beta estimated by regressing the financial returns on the country's stock market with those of a global index is significantly different from one.

Assumptions: The current US Treasury bond rate (R_{US}) is 5%. The expected inflation rate in the target's country is 6% annually, as compared to 3% in the United States. The country's risk premium (CRP) provided by Standard & Poor's is estimated to be 2%. Based on Target's interest coverage ratio, its credit rating is estimated to be AA. The current interest rate on AA-rated US corporate bonds is 6.25%. Acquirer Inc. receives a tax credit for taxes paid in a foreign country. Since its marginal tax rate is higher than Target's, Acquirer's marginal tax rate of 0.4 is used in calculating WACC. Acquirer's pretax cost of debt is 6%. The firm's total capitalization consists only of common equity and debt. Acquirer's projected debt–to–total capital ratio is 0.3.

Target's beta and the country beta are estimated to be 1.3 and 0.7, respectively. The equity premium is estimated to be 6% based on the spread between the prospective return on the country's equity index and the estimated risk-free rate of return. Given Target Inc.'s current market capitalization of $3 billion, the firm's size premium (FSP) is estimated at 1.0 (see Table 7.1 in Chapter 7). What is the appropriate weighted average cost of capital Acquirer should use to discount target's projected annual cash flows, expressed in its own local currency?

Solution

$k_{e,em}$ [see Eq. (18.9)] = {[(1 + 0.05) × (1 + 0.06)/(1 + 0.03)]–1} × 100[a] + 1.3 × 0.7 (6.0) + 1.0 + 2.0 = 16.52%

i_{local} [see Eq. (18.10)] = 6.25 + 2.0 = 8.25%

$wacc_{em}$ [see Eq. (7.4)] = 16.52 × (1 – 0.3) + 8.25 × (1 – 0.4) × 0.3 = 13.05%

[a]Note that the expression {[(1 + 0.05) × (1 + 0.06)/(1 + 0.03)]–1} × 100 represents the conversion of the US Treasury bond rate to a local nominal rate of interest using Eq. (18.6). Also note that 1.3 × 0.7 results in the estimation of the target's global beta, as indicated in Eq. (18.7).

cost of capital, the acquirer may incorporate risk into the valuation by considering different economic scenarios for the emerging country. Variables defining alternative scenarios could include GDP growth, inflation rates, interest rates, and foreign exchange rates. For example, a best-case scenario can be based on projected cash flows, assuming the emerging market's economy grows at a moderate real growth rate of 2% per annum for the next five years. Alternative scenarios could assume a 1–2-years recession. A third scenario could assume a dramatic devaluation of the country's currency. The NPVs are weighted by subjectively determined probabilities. The actual valuation of the target firm reflects the expected value of the three scenarios.[52]

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[52]Note that if a scenario approach is used to incorporate risk in the valuation, there is no need to modify the discount rate for perceived political and economic risk in the local country. See Chapter 8 for how to use decision trees.

TABLE 18.1   Common Methodologies for Valuing Cross-Border Transactions

Developed Countries (Integrated Capital Markets)	Emerging Countries (Segmented Capital Markets)
Step 1. Project and Convert Cash Flows	**Step 1. Project and Convert Cash Flows**
a. Project target's cash flows in local currency. b. Convert local cash flows into acquirer's home currency, employing forward exchange rates projected using interest rate parity theory.	a. Project target's cash flows in local currency. b. Convert local cash flows into acquirer's home currency, using forward exchange rates. Project exchange rates, using purchasing power parity theory if little reliable data on interest rates available.
Step 2. Adjust Discount Rates	**Step 2. Adjust Discount Rates**
$k_{e,dev} = R_f + \beta_{devfirm,global}{}^a (R_m - R_f) + FSP$ i = cost of debt[c] $WACC = k_e W_e + i(1 - t) \times W_d$	$k_{e,em} = R_f + \beta_{emfirm,global}{}^a (R_{country} - R_f)^b + FSP + CRP$ $i_{local} = i_{home} + CRP$ $WACC = k_e W_e + i_{local}(1 - t) \times W_d$
a. R_f is the long-term government bond rate in the home country. b. $\beta_{devfirm,global}$ is nondiversifiable risk associated with a well-diversified global, United States, or local-country equity index. c. R_m is the return on a well-diversified United States, local, or global equity index. d. FSP is the firm size premium. e. t is the appropriate marginal tax rate. f. W_e is the acquirer's target equity–to–total capital ratio, and W_d is $1 - W_e$.	a. R_f is the long-term government bond rate in the local country or the US Treasury bond rate converted to a local nominal rate if cash flows in local currency or if cash flows in dollars, the US Treasury bond rate. Note that if the local risk-free rate is used, do *not* add CRP. b. $\beta_{emfirm,global}$ is nondiversifiable risk associated with target's local-country β and local country's global β. c. $R_{country}$ is the return on a diversified local equity index or a similar country's index. d. CRP is the country risk premium. e. i_{home} is the home-country cost of debt. f. i_{local} is the local-country cost of debt.

[a]*β may be estimated directly for firms whose business is heavily dependent on exports or operating in either developing or emerging countries by regressing directly the firm's historical financial returns against returns on a well-diversified global equity index. For firms operating primarily in their home markets, β may be estimated indirectly by using Eq. (18.7).*
[b]*($R_{country} - R_f$) also could be the equity premium for well-diversified United States or global equity indices if the degree of local segmentation is believed to be small.*
[c]*For developed countries, either the home-country or local-country cost of debt may be used. There is no need to add a country risk premium as would be the case in estimating a local emerging country's cost of debt.*

While building risk into the projected cash flows is equivalent to adjusting the discount rate in applying the DCF method, it also is subject to making arbitrary or highly subjective adjustments. What are the appropriate scenarios to be simulated? How many such scenarios are needed to incorporate risk adequately into the projections? What is the likelihood that each scenario will occur? The primary advantage of adopting a scenario approach is that it forces the analyst to evaluate a wider range of possible outcomes. The major disadvantages are the substantial additional effort required and the degree of subjectivity in estimating probabilities.

EMPIRICAL STUDIES OF CROSS-BORDER TRANSACTIONS

While cross-border M&As occur for reasons similar to domestic transactions, crossborder deals generally involve additional costs and complexities. These are due to geographical and cultural differences, differences in corporate governance and stakeholder protections, under-developed capital markets in emerging economies, and currency fluctuations.

Erel et al. (2012) in a sample of 56,978 crossborder M&As between 1990 and 2007 found that 80% of completed deals targeted a non-US firm and 75% involved non-US acquirers. Moreover, the vast majority of the deals involved private firms as either the target firm or the acquiring firm. Private firms made up the preponderance of targets in cross border deals due to concern about the lack of transparency (and in turn reliable data) of public firms and because private firms often sell at a substantial discount from their true value, especially in illiquid markets (i.e., those in which private firms often are difficult to sell).[53] Cultural and political compatibility seemed to be important in determining the geographic location of firms involved in crossborder transactions. M&As are more likely to occur between firms located in countries that commonly trade with one another and are relatively close geographically. Familiarity with a country's language,[54] legal institutions, customs and values contributes to higher announcement-date returns in cross-border deals[55] due to the greater likelihood of realizing potential synergies.[56] Reflecting the aforementioned cultural, legal, and language differences, the deal completion rate is likely to be less when the acquirer is from a more developed country and the target is domiciled in an emerging country.[57]

International Diversification May Contribute to Higher Financial Returns

Empirical studies suggest that international diversification may increase financial returns by reducing risk if economies are relatively uncorrelated. Higher financial returns from international diversification may also be due to economies of scale and scope, geographic location advantages associated with being nearer customers, increasing the size of the firm's served market, and learning new technologies.[58] Multinational firms also may be able to reduce risk, because they can more readily alter investment strategies by exiting poorly performing businesses in one country and reinvesting in more attractive opportunities in other countries. These "real options" to defer, abandon, expand capital projects can be implemented only if the firm has the financial resources to pursue such options.[59] Shutting down or deferring a project is not costless as contracts have to be negotiated and local laws addressing how employees are treated must be obeyed.

There is significant controversy about whether returns are higher for multinational companies that diversify across countries[60] or across industries.[61] Buyers of targets in segmented markets realize larger abnormal returns than if they were to buy firms in globally integrated countries, since targets in segmented markets benefit from the acquirer's lower cost of capital.[62]

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[53]Bae et al., 2013.

[54]Kedia and Reddy, 2017.

[55]Ahern et al., 2015.

[56]Capron and Guillén, 2009.

[57]Lim et al., 2016.

[58]Zahra et al., 2000.

[59]Aabo et al., 2016.

[60]Isakov and Sonney, 2002.

[61]Diermeier and Solnik, 2001.

[62]Francis et al., 2008.

Returns for Crossborder Deals Consistent with Those for Domestic Deals

Both shareholders of target and bidder firms on average benefit from takeovers. Like domestic takeovers, shareholders of target firms in crossborder M&As earn substantial abnormal returns. Such returns for shareholders of US targets of foreign buyers range from about 23%[63] to about 40%.[64] Domestic bidders on average earn slightly higher positive announcement date returns than crossborder acquirers.[65] However, crossborder deals involving public acquirers and large public targets often experience abnormal announcement date financial returns that are zero to somewhat negative, particularly when such transactions are paid for with acquirer equity.[66] Over the long-term, cross-border deals in which the form of payment is primarily equity frequently underperform largely cash financed transactions.[67] This is consistent with the greater complexity of integrating large transactions and the tendency of public acquirers using overvalued stock to overpay for the target firm.

However, the use of acquirer stock in cross-border deals may be appropriate when the target firm's governance practices are problematic (i.e., the target firm's financial statements are suspect and the target is only willing to allow the acquirer to perform limited due diligence) and the local country's shareholder protections are limited or poorly enforced. Offering to exchange acquirer shares for target shares gives target shareholders choosing to retain their shares in the combined firms an incentive not to over value their shares, because both the acquirer and target firm shareholders will share in any postclosing losses if the acquirer overpays.[68]

Acquirers of targets in emerging countries often earn abnormal returns of 1.65% to 3.1%, well in excess of the average cross-border or domestic deal. This improvement may be attributable to the achievement of control, improved governance practices, the elimination of minority shareholders, and the encouragement of investment in the target by the parent.[69] Gains tend to be larger if the acquirer has significant prior experience in the target's home country.[70] Large public companies in particular often show positive announcement date returns on takeovers in weak governance countries, contrary to the negative returns they often realize in countries with strong governance standards. Why? Because such firms often are politically connected enabling them to expedite the takeover process. Also, lenders in countries with weak lender protections may require higher levels of collateral to finance takeovers and larger firms are in a better position to satisfy this requirement.[71]

In a massive study consisting of 263,461 domestic and cross-border deals (both public and private) in 47 countries between 1992 and 2011, Yilmaz and Tanyeri (2016) confirmed the findings of earlier extensive global studies[72] that on average both target and bidder shareholders

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[63]Kuipers et al., 2009.

[64]Seth et al., 2000; Eun et al., 1996; Servaes and Zenner, 1994.

[65]Mateev and Andonov, 2016.

[66]Ellis et al., 2011.

[67]Dutta et al., 2013.

[68]Huang et al., 2017.

[69]Barbopoulos et al., 2013.

[70]Aybar and Thanakijsombat, 2015.

[71]Humphery-Jenner and Powell, 2014.

[72]Ellis et al., 2011; Erel et al., 2012; Netter et al., 2011.

benefit in takeovers. Specifically, abnormal returns around the announcement date average 6.9% (13% for public targets) for target shareholders and 1.4% for bidder shareholders.

Improving Corporate Governance Creates Significant Shareholder Value

Abnormal financial returns to acquirers are greater if the acquirer is from a country with stronger governance controls and the target is in a country with weaker governance standards. Country governance standards in this context often refers to the existence of laws governing the property rights of shareholders and bondholders, transparent accounting practices, and the extent to which the court systems in these countries enforce such laws. Acquirers located in countries having effective governance practices often exhibit superior shareholder protections, financial transparency, and management practices than those located in countries in which corporate governance is not taken as seriously.

Having control enables the acquirer, having the stronger governance standards, to impose its stricter management practices and shareholder protections on the target, often resulting in better long-term operating performance.[73] However, the premium paid for the target firm may be substantially reduced if there is a significant risk of government expropriation of the acquirer's investment at a later date. Similarly, cross-border deals made by emerging country acquirers are associated with positive abnormal returns of 1.1% on the announcement date when the target firm is located in a country whose governance and shareholder protections are viewed as stronger than in the acquirer's home country. Investors see the acquirer adopting the stronger governance practices of the target firm.[74] Investors tend to react more positively to large cross-border acquisitions in which the emerging market acquirer has prior local market experience, is able to exploit a higher growth opportunities, and which is financed with debt. The rigors of meeting principal and interest repayments limits management's ability to misuse cash.[75]

For good corporate governance practices (e.g., financial transparency) to affect firm value, a country must recognize the importance of the rule of law (e.g., a legal system willing to recognize and protect shareholder rights). Aggrieved shareholders should feel a reasonable lawsuit would be objectively reviewed in a country's courts. When firms from developed markets acquire firms from emerging markets, the rule of law in the emerging market target country has a significant positive impact on the post-acquisition performance.[76] Why? The existence of corporate laws protecting shareholder rights and a court system willing to enforce infractions of such laws reduces the risk of expropriation by the emerging country's government. This is turn can lower the firm's cost of financing future projects.

While cross-border deals represent an important channel for spreading good governance practices from countries with strong investor protections to firms in countries with weaker protections, the tendency of foreign acquirers to "cheery pick" firms may hinder this process. That is, foreign acquirers tend to purchase the better performing firms leaving largely

[73]Erel et al., 2012; Martynova and Renneboog, 2008b; Moeller et al., 2005; Yen and Andre, 2010.
[74]Bhagat et al., 2011.
[75]Aybar and Thanakijsombat, 2015.
[76]Thenmozhi and Narayanan, 2016.

untouched the poorer performing firms, which may have the greatest need for improved corporate governance.[77]

Foreign Institutional Ownership May Promote Crossborder M&A Activity

Cross-border deals often involve significant foreign institutional ownership intent on facilitating a change in control in firms located in countries having weak corporate governance or legal institutions.[78] The foreign institutional investors facilitate change-of-control deals by serving as intermediaries between buyers and sellers and by supplying information not publicly available. In doing so, the institutional investors hope to raise the value of investments they may have in firms with subpar governance by forcing them to adopt more rigorous governance practices because of the change in control.

M&As in "Frontier Economies" May Result in the Highest Acquirer Financial Returns

"Frontier economies" are those whose stage of economic development precedes emerging economies as described earlier in this chapter. Examples include such economies as Albania, Bangladesh, Botswana, Cyprus, Estonia, Lithuana, Romania, and Sri Lanka. Their financial markets are viable but tend to be smaller and less liquid than emerging or developed economies, and they exhibit higher risk due to frequent political unrest, currency risk, and limited shareholder protections. However, they do offer acquirers the potential for higher returns due to above average growth, a greater ability to dominate markets, and the potential for transferring their competitive advantage from their home countries. Cross-border merger activity in these countries is relatively new having begun in the late 1990s. Target firms in these "frontier economies" usually receive the lowest premiums for their shares. Acquirers from the United States, United Kingdom, Canada, and other developed and emerging countries can earn the high positive abnormal returns when they bid for target firms in frontier markets.[79]

SOME THINGS TO REMEMBER

Motives for international corporate expansion include a desire to accelerate growth, to achieve diversification, to consolidate industries, and to exploit natural resources and lower labor costs available elsewhere. Other motives include applying a firm's brand name or intellectual property in new markets, minimizing tax liabilities, following customers, and avoiding tariffs and import barriers. Alternative entry strategies include exporting, licensing, alliances or joint ventures, solo ventures or greenfield operations, as well as M&As. The basic differences between within-country and cross-border valuation methods is that the latter involves converting cash flows from one currency to another and adjusting the discount rate for risks common in cross-border deals.

[77]Kim and Lu, 2013.

[78]Andriosopoulos et al., 2015; Ferreira et al., 2010a.

[79]Vagenas-Nanos, 2016.

CHAPTER DISCUSSION QUESTIONS

18.1 Discuss the circumstances under which a non-US buyer may choose as its acquisition vehicle a US corporate structure; a limited liability company; or a partnership.

18.2 What factors influence the selection of which tax rate to use (i.e., the target's or the acquirer's) in calculating the weighted-average cost of capital in cross-border transactions?

18.3 Discuss adjustments commonly made in estimating the cost of debt in emerging countries.

18.4 Find an example of a recent cross-border transaction. Discuss the challenges an analyst might face in valuing the target firm.

18.5 Discuss the various types of adjustments for risk that might be made to the global CAPM before valuing a target firm in an emerging country. Be specific.

18.6 Do you see the growth in sovereign wealth funds as important sources of capital to the M&A market or as a threat to the sovereignty of the countries in which they invest?

18.7 What factors contribute to the increasing integration of the global capital markets?

18.8 Give examples of economic and political risk that you could reasonably expect to encounter in acquiring a firm in an emerging economy. Be specific.

18.9 During the 1980s and 1990s, changes in the S&P 500 (a broadly diversified index of US stocks) were about 50% correlated with the MSCI EAFE Index (a broadly diversified index of European and other major industrialized countries' stock markets). In recent years, the correlation has increased to more than 90%. Why? If an analyst wishes to calculate the cost of equity, which index should he or she use in estimating the equity risk premium?

18.10 Comment on the following statement: "The conditions for foreign buyers interested in US targets could not be more auspicious. The dollar is weak, M&A financing is harder to come by for financial sponsors (private equity firms), and many strategic buyers in the United States are hard-pressed to make acquisitions at a time when earnings targets are being missed."

Answers to these Chapter Discussion Questions are found in the Online Instructor's Manual for instructors using this book (https://textbooks.elsevier.com/web/Manuals.aspx?isbn=9780128016091).

END OF CHAPTER CASE STUDY MAJOR REGULATORY AND INTEGRATION HURDLES FOR THE ANHEUSER-BUSCH INBEV AND SABMILLER MERGER

Case Objectives: To illustrate challenges common to cross-border M&As including

- Regulatory obstacles;
- Challenges of postmerger integration efforts; and
- The impact of regulatory and postmerger considerations on recovering the purchase price premium.

While the motives that drive cross-border deals may be compelling, the challenges of closing and postmerger integration often are underestimated, especially if the participants are doing business in