**International Financial Management**

**Learning Outcomes**

After completing this module, students will be able to:

1. Describe the importance of free trade and free trade agreements to global economic development.
2. Indicate why a domestic corporation would choose to grow internationally and the forms this expansion might take.
3. Illustrate the use of spot rates, cross rates, forward rates, and bid-ask price quotations in executing foreign currency transactions.
4. Explain the factors that influence foreign exchange rates.
5. Compare the advantages and disadvantages of a fixed and flexible exchange rate system.
6. Summarize the role of buy and sell-side participants in the foreign exchange market.
7. Demonstrate how forward contracts, foreign exchange swaps, currency swaps, and over-the-counter options are used to manage foreign exchange risk.
8. Discuss the different strategies for managing transaction, translation, economic, and political risk exposures.
9. Identify the different sources of business financing available in an international setting.
10. Calculate the net present value of an international project.

**Introduction**

Since globalization began to intensify after World War II, companies have aggressively expanded their international trade and foreign direct investment activities using exports, licensing, franchising, joint ventures, and subsidiaries. Canadian businesses grew and became more efficient by looking beyond their small domestic market and specializing in products where they had a competitive advantage and could generate economies of scale. Firms had little choice in following this path because if they continued to look inward they would have been quickly pushed aside by stronger global competitors. Many domestic companies faltered under this pressure, but more survived and prospered resulting in rapid economic growth, low unemployment, and a rising standard of living for Canadians.

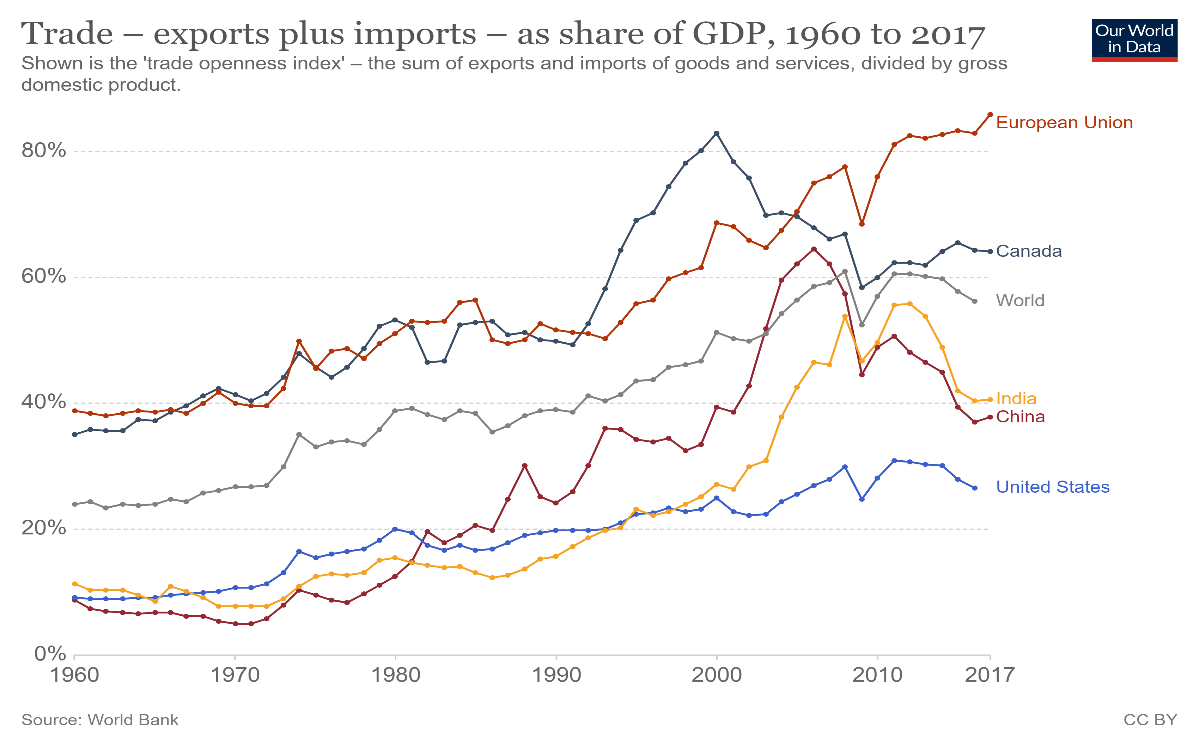
International expansion brought new risks that companies have learned to manage. The most important is the exchange rate risk incurred when they import materials, export products, invest or borrow abroad, or repatriate profits. Political risk is also a problem, especially when entering emerging markets where financial instability and political, ethnic, and social strife are much more common and legal and regulatory systems are still evolving.

The tools for managing exchange rate and political risk have quickly evolved with the expansion of global trade and investment. Currency forwards, futures, swaps, options, and other operational hedging techniques are used. Private and public insurers also provide coverage against potential losses such as asset expropriation or contract cancellation. The cost of capital used to evaluate foreign projects reflects that country’s risk level and not the risk level of an investor’s home country.

* 1. **| Globalization**

The Canadian Economy is heavily dependent on international trade. Based on the trade openness indexes in Exhibit 1 that express a country’s imports and exports together as a percentage of GDP, trade currently accounts for 64% of the Canadian economy. This figure has grown dramatically over the past 60 years. The lower percentages for the U.S., China, and India are explained by their much larger domestic markets which have sufficient volume to support the production of more goods domestically creating less need for trade. The European Union’s trade openness index is much higher than Canada’s because the movement of goods between countries in the EU is counted as imports and exports.

**Exhibit 1: Trade Openness Index from 1960 to 2017**



**Advantages of Free Trade**

Freer trade has led to rising standards of living in both developing and developed nations but great inequities still exist especially for the least developed. Countries can specialize in producing goods where they have a comparative advantage meaning they can produce them more efficiently than other countries. Comparative advantage relates to a country’s natural, human, financial, or capital resources. Some countries are well endowed with natural resources, while others have low-cost labour. The most envied countries are those with a well-educated workforce, superior intellectual property, abundant financial resources, and strong business infrastructure that can make complicated products. These goods are then sold in the larger global market due to lower trade barriers and the proceeds used to import what the country still needs. Being able to access the larger global market means greater economies of scale, additional investments in new technology, new products that are only viable at higher production volumes, and even more specialization as companies can make individual parts instead of entire products. These efficiencies mean a greater variety of high-quality, up-to-date products at lower prices for consumers and are referred to as the gains from trade. Liberal trade policies that encourage the free flow of goods and services between nations also force countries and businesses to be more competitive, innovative, and focused on economic success.

Countries are constantly moving into and out of industries as their areas of comparative advantage change causing considerable uncertainty for business owners and their workers. In response to the concerns of political donors and voters, governments often resort to protectionism to limit imports and save jobs. Trade barriers like tariffs, quotas, or subsidies can provide short-term protection, but they eventually lead to inefficient producers that make products with little consumer appeal. If other countries implement protectionist measures, standards of living will fall as global economic activity contracts. A major goal of free trade is to prevent such a “self-defeating and destructive drift into protectionism.”

**Future of Free Trade**

The COVID-19 pandemic, the rise of China both economically and militarily, and growing concerns about global warming have caused some nations to question the current free trade system. The pandemic exposed that many countries have become too specialized and can no longer produce domestically all the critical food, medical, transportation, and industrial items needed to survive. The global supply chains held during COVID-19 but would likely have collapsed if the pandemic was more serious. Many politicians indicated that once the pandemic was over they would begin to re-think the concept of free trade and ensure that their countries could always produce essential items. The effect on the current free trade system is dependent on how broadly these essential items are defined.

Countries are starting to question their relationship with China and whether they want to be so economically dependent on this non-democratic country given its poor human rights record, government-sponsored industrial espionage program, aggressive territorial claims in the South China Sea, and support for other autocratic regimes. These increasing geopolitical tensions further emphasize the need for countries to be more self-reliant and not aid China in its development by engaging in international trade and investment with them.

Global warming is a major concern of most world leaders, but it is just a symptom of the much bigger problem of overpopulation. Currently, the world has almost eight billion people. A more sustainable population that ensures a reasonable standard of living, basic human rights, cultural diversity, and a biodiverse planet is approximately two billion, which last occurred in 1927. Overpopulation is already a serious concern in many developing countries and is stalling their development efforts and leading to greater internal and external strife. The world’s resources are being consumed far too quickly and many species are disappearing due to lost habitat. The current free trade system must have a more sustainable focus and exclude countries that do not adopt appropriate population control and environmental measures.

If it is difficult to predict how the desire to become more self-sufficient, to address geopolitical concerns, or the need to deal with population growth will affect the free trade movement. Countries may try to become more self-reliant, but pandemic fatigue, financial self-interest, political indecision, and short-sightedness will likely prevent any actions from being taken soon.

**Trade Barriers**

Nations need to expand their domestic markets so they can specialize in the production of goods and services where they have a comparative advantage to maximize their gains from trade. Eliminating trade barriers that prevent the free flow of goods, services, and capital between countries is critical to achieving this objective. National governments impose both tariff and non-tariff barriers to 1) increase employment by protecting domestic producers, 2) give new industries and developing economies an opportunity to grow, 3) ensure industries that are important to national security survive, 4) punish other countries for unfair trade practices, military aggression, or human rights abuses, and 5) raise needed government revenue. Most countries opt for non-tariff barriers as they are easier to justify to exporters, less likely to invite retaliation, and more popular with domestic businesses and consumers as no taxes are levied. The most common trade barriers include:

**Tariffs.** A tax or duty paid on imported products that are passed on to consumers through higher prices making them less competitive with domestic producers. Tariffs can be expressed as a percentage of the product’s value or a dollar amount per item.

**Quotas.** A country protects its domestic producers by limiting the number of products that can be imported over a specified period. With absolute quotas, the countries simply negotiate a quota and the exporting country may divide the quota among its producers who can trade any unused allotments among themselves. The alternative is a tariff-rate quota which charges a lower tariff on imports up to a specified level, and then a higher tariff until the quota is reached.

**Trade licenses.** The quota established for a specific product is divided into separate trade licenses that are auctioned off or sold at a flat rate to domestic companies who want to import the item. The sale of these licenses can lead to political favoritism and bribery.

**Voluntary export constraints.** An importing industry requests an exporting industry to voluntarily curtail its sales to protect its domestic producers. The exporter imposes restrictions to give them greater control over the process and not risk worse terms if the government imposes restrictions.

**Local content requirements.** A country requires exporters to include a certain percentage of domestically manufactured goods or domestically supplied services in their products. They can also specify that the product is made domestically in a joint venture with a local partner or that the exporter transfers an agreed-upon amount of intellectual property to the country to aid in its development.

**Preferential buying programs.**  Governments sponsor “Buy XX” or “Made in XX” programs to encourage consumers to buy domestically grown or manufactured goods. They often stress this lowers transportation costs reducing global warming. Government purchasing programs may also give preference to domestically produced goods and services.

**Rules of origin.** Foreign products should not be exempt from tariffs and quotas or classified as locally made if they have only undergone perfunctory domestic repackaging, labeling, or processing. Imports that have been intentionally transshipped through another trading partner to qualified for their preferred status should be denied. Countries typically indicate what percentage of a product’s value needs to be produced locally or by a trading partner to qualify for special treatment. They may increase these values from say 35% to 50%, exclude certain activities like packaging, or make the calculation of these percentages overly complex to discourage imports and benefit the domestic economy.

**Border delays.** Uncertain delivery times make managing just-in-time inventory and production systems more difficult. Companies must either carry higher safety stocks or look for more reliable domestic suppliers.

**Import standards.**  Products must meet specific packaging, labelling, technical, food safety, and animal health standards and may have to be inspected, tested, and certified. These are referred to as technical barriers to trade (TBT) and sanitary and phytosanitary (SPS) measures. For example, electrical products need to be labelled indicating their power consumption. Food and animal life must be free of additives, contaminants, toxins, and disease-causing organisms such as hormones and antibiotics in meat or residue levels of pesticides in fruits or vegetables. Children’s toys must be safe to operate and free of toxic materials. Live animals may be inspected for diseases before leaving the export country, barred from stopping off in a third country prior to delivery, and quarantined on arrival. Import standards must be rigorous to protect consumers, but unreasonable government regulations, unfair product safety claims, or overly complex processes and documentation are often used to limit imports.

**Import deposits.** Importers are required to deposit with the government a percentage of the value of their imports for a while before it is repaid. This interest-free loan raises the cost of the imports and may create liquidity problems for the business causing them to substitute a domestic supplier.

**Foreign exchange controls.** Governments may manipulate exchange rates to make imports costlier and not supply businesses with sufficient foreign currency to pay for imports.

**Countervailing and anti-dumping duties.** Governments often subsidize their businesses so they can capture a greater share of export markets. These companies may also “dump” their products at below-market prices with the intent of driving domestic producers out of business, monopolizing the market, and eventually increasing prices. Countervailing and anti-dumping duties address these unfair trading practices.

**Sanctions and embargos.** Economic sanctions are used to punish other countries, organizations, or individuals for unfair trade practices, military aggression, or human rights abuses. They include restricting or prohibiting trade, technology transfers, arms sales, financial transactions, or other economic activity. Fixed assets and bank deposits can also be frozen or seized. A trade embargo is a more severe action prohibiting all imports and exports between two countries. With an oil or arms embargo, only trade in specific items is prohibited.

An often-overlooked aspect of free trade is how important the unrestricted movement of financial capital as well as goods, services, and intellectual property between nations is to maximize the gains from trade. Capital needs to flow to where it is most needed and can earn the highest return, but foreign direct investment is often a concern to governments. In developing countries, they worry these investors are only after cheap labour and resources and are not interested in helping the country develop its business infrastructure. Developed countries worry that they will lose their manufacturing and research and development capabilities as well as head office jobs when their major firms are acquired by foreign firms. These investors may also come from hostile nations with poor human rights records where the national government has significant influence over the company’s activities and actively supports them in their expansion.

In response to these threats, countries often bar or limit foreign investments in essential industries, demand that foreign investors take on local partners who may or may not control the new ventures, extract economic benefits such as local hiring, purchasing, or infrastructure construction as a condition of expansion, or pass legislation such as the Investment Canada Act that reviews all foreign investments and only approves those that benefit the country and are not injurious to national security.

**Free Trade Agreements**

A free trade agreement is a pact between two or more countries to increase trade by reducing trade barriers. These agreements are negotiated globally through the World Trade Organization (WTO) or regionally within different trading blocs or custom unions. Custom unions are similar to trading blocs except members maintain a common tariff structure with outside countries. The Canada-United States-Mexico Agreement (CUSMA), Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) are important trade blocs for Canada as it tries to reduce its economic dependence on the U.S. by diversifying its trading partners. The European Union (EU) is a more complex political, economic, and monetary union where its members act, in many respects, as one country.

**World Trade Organization.** The WTO is an international trade organization with 159-member countries accounting for over 96% of global trade and GDP. The organization began in 1995 under the Marrakesh Agreement which superseded the earlier General Agreement on Tariffs and Trade (GATT) of 1948. The WTO’s goal is to increase international trade in goods, services, and intellectual property by removing trade barriers. This is accomplished by facilitating the negotiation of trade agreements between its member countries, monitoring each country’s compliance with these agreements by reviewing their trade policies, and providing a trade dispute resolution mechanism. The WTO currently oversees approximately 60 agreements that were passed by the legislatures of its member countries making them binding on participants. These trade agreements are complex but are founded on five basic principles.

**Trade without discrimination.**  This principle has two parts. The most “favored nation rule” says a country must treat all its trading partners the same. If a country extends one trading partner special treatment such as lower tariffs, it must do the same for all its partners. The WTO allows some exceptions to this rule. Countries can form regional trade agreements where members receive preferred treatment. Exceptions can also be made to aid developing countries, penalize those engaging in unfair trading practices, support consumer or environmental protection measures, and defend national security. The “national treatment policy” states that imported goods, services, and intellectual property must be treated the same as domestically produced items to help eliminate non-tariff barriers. This policy only applies once products enter the domestic market so tariffs can still be levied on imports.

**Freer trade: gradually, through negotiation.** The WTO has negotiated freer trade through the reduction of trade barriers over nine “rounds” of negotiation beginning in 1948. The most current round, the Doha round, began in 2001. Initially, negotiations focused on reducing tariffs but they later expanded to include non-tariff barriers, services, intellectual property, and agricultural subsidies. The highest decision-making body of the WTO, the Ministerial Conference, brings all member countries together every two years. Decisions are made very gradually and typically receive the unanimous approval of all WTO members although some agreements are adopted by smaller groups. Countries are given considerable time to adjust their economies to comply with new requirements.

**Predictability: through binding and transparency.** Businesses must be confident that trade rules will not be changed arbitrarily. Commitments in WTO agreements are binding on countries which means they cannot be altered without negotiation between the nations involved. Tariffs are capped at a certain level and non-tariff barriers such as quotas are becoming less common because of the potential for abuse. Countries must make their trading policies public and the WTO’s Trade Policy Review Mechanism ensures they comply with all trade agreements.

**Encouraging development and economic reform.** The WTO is strongly committed to promoting economic development and reducing inequities through freer trade globally, but it realizes developing countries and those just beginning to transition into market economies require special assistance. These countries are typically given more time to implement new agreements. Countries designated as least-developed by the United Nations receive technical assistance in reforming their trading systems and preferential treatment such as simplified compliance standards, rule waivers, and unilateral duty-free and quota-free access to markets in developed countries. In the latest round, they received greater access for their agricultural products in developed countries. Issues affecting developing nations are receiving more attention as this group now accounts for over two-thirds of the WTO’s membership.

**Promoting fair competition.** True free trade is difficult to obtain given the complexities of the global market, each country’s varying economic, social, and political interests, and the different stages of development. The WTO instead focuses on maintaining “open, fair, and undistorted competition” that achieves most of the benefits of free trade but still permits tariff and non-tariff barriers along with preferences and rule waivers to be fair to all countries and help the WTO reach final trade agreements.

**Canada-United States-Mexico Agreement.** The CUSMA is critical to the Canadian economy as the U.S., with a GDP of over USD 22 billion, is by far Canada’s largest trading partner. In 2019, the U.S. accounted for 74.5% of Canada’s merchandise exports and 63.8% of its merchandise imports while Mexico was only 1.4% and 3.3%.This trade agreement modernizes the previous 1994 North American Free Trade Agreement (NAFTA) which was built on the 1988 Canada-U.S. Free Trade Agreement. Important changes include:

* Stronger protection for intellectual property – copyrights, patents, and tradenames
* Greater enforcement relating to pirated or counterfeit products, theft of trade secrets, and stolen cable or satellite signals
* Enhanced environmental protections
* Improved work regulations and collective bargaining rights in Mexico
* Stricter rules of origin for North American automobile production
* Freer access for U.S. financial services providers
* Greater access to the Canadian dairy market by U.S producers
* Freer movement of digital products
* Higher duty-free limits and simplified rules for online purchases
* No requirement to open a domestic office when trading with a CUSMA member
* Enhanced dispute resolution mechanisms
* More transparency about exchange rate policies and a commitment to refrain from competitive devaluations
* Eliminate unfair subsidies for state-owned enterprises
* Limit the ability to negotiate trade agreements with non-market economies like China

**Canada-European Union Comprehensive Economic and Trade Agreement.**  CETA is a bilateral trade agreement finalized in 2017 that gives Canada greater access to the world’s second-largest import market after the U.S. The agreement dramatically reduces tariffs so 98% of Canadian products can now enter the EU duty-free. The agreement also simplifies the customs process, eliminates unnecessary or discriminatory import requirements, makes it easier to bid on government procurement contracts, gives service providers more business opportunities, allows more professionals to work in the EU temporarily, and provides greater protection for foreign direct investments through an independent dispute resolution system.

**Comprehensive and Progressive Agreement for Trans-Pacific Partnership.** The Asia-Pacific is the world’s fastest-growing region. The CPTPP is a multi-lateral trade agreement signed in 2018 between 11 countries including Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam [Canada](https://en.wikipedia.org/wiki/Canada) that gives Canada access to a trading block of over 500 million potential customers representing 13.5% of the world’s GDP. This agreement was initially the Trans-Pacific Partnership (TPP), which failed when the Trump administration withdrew citing a lack of benefits for the U.S. Members hope the U.S. will eventually join the partnership under the Biden administration, but the formation of the competing Regional Comprehensive Economic Partnership (RCEP) puts this in doubt. The RCEP is a multi-lateral free trade agreement signed in 2020 between 15 countries including Australia, Brunei, Cambodia, China, Indonesia, Japan, Laos, Malaysia, Myanmar, New Zealand, Philippines, Singapore, South Korea, Thailand, and Vietnam. This is the biggest trading bloc in history accounting for 30% of the world’s population and 30% of its GDP and is the first free trade agreement involving China, Japan, and South Korea. Some analysts feel this agreement indicates China’s emergence as the economic and political leader in Asia displacing the U.S.

**European Union (EU).** The EU is a political and economic union of 27-member countries created under the Maastricht Treaty in 1993 that grew out of the European Economic Community (EEC) established by the Treaty of Rome in 1957. The economic union ensures the free flow of goods, services, people, and capital (known as the “four freedoms”) within a single or common market and negotiates common trade, agricultural, fisheries, and development policies for its members. The 27-member countries have a population of over 450 million and a GDP exceeding EUR 17 billion that rivals the U.S. and Chinese economies. The European Common Market has been made every larger through bilateral agreements with aspiring member countries or non-member trade groups such as the European Free Trade Association (EFTA) composed of Iceland, Liechtenstein, Norway, and Switzerland. These countries have access to the common market but are not be part of the European Union Customs Union, so they have their own tariff structures.

There is also a monetary union within the EU called the Eurozone consisting of 19 members who have adopted the Euro as their currency. The European Central Bank (ECB), governed by the head of each country’s central bank, sets a monetary policy for the Eurozone. There is no common fiscal policy but finance ministers do cooperate through the Eurogroup providing peer reviews of each other’s budgets and emergency loans during financial crises in exchange for budgetary reforms. The eight members of the EU that have not joined the Eurozone are expected to join eventually, while other smaller non-member nations have either officially or unofficially adopted the Euro as their currency.

**Exhibit 2: GDP of the World’s Three Largest Trading Groups**

**EU**

**USD 17.13 Trillion**

**CUSMA**

**USD 25.74 Trillion**

**CPTPP**

**USD 29.04 Trillion**

**Balance of Payments**

A country’s balance of international payments summarizes all its financial inflows and outflows with other nations on a quarterly or yearly basis. It consists of the current account and capital and financial account which must net to zero each period. A negative current account balance or current account deficit means that inflows are less than outflows or that a country is spending more than it is earning in a year. A positive current account balance or current account surplus means inflows are greater than outflows or a country is saving. Exhibit 2 gives a breakdown of Canada’s current account balance in 2019.

**Exhibit 3: Canada’s Current Account Balance in 2019**

**(in millions)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Receipts** | **Payments** | **Balances** |
| **Goods and Services** | 737,500 | 774,371 | -36,871 |
| Goods | 598,167 | 613,527 | -15,361 |
| Services | 139,333 | 160,844 | -21,510 |
| **Primary income** | 149,213 | 157,282 | -8,069 |
| Compensation of employees | 1,740 | 7,606 | -5,865 |
| Investment income | 147,473 | 149,676 | -2,203 |
| Direct investment income | 85,122 | 56,163 | 28,959 |
| Portfolio investment income | 39,208 | 68,253 | -29,044 |
| Other investment income | 23,143 | 25,260 | -2,118 |
| **Secondary income** | 15,285 | 17,730 | -2,445 |
| Private transfers | 4,443 | 12,035 | -7,592 |
| Government transfers | 10,842 | 5,696 | 5,147 |
| **Current account balance** | 901,998 | 949,383 | -47,385 |
| Source: Statistics Canada | | | |

Canada had a current account deficit of CAD 47,385 million in 2019. The current account is divided into three components which are goods and services, primary income, and secondary income. Goods and services are the largest components consisting of cash receipts and payments from the export and import of tangible products as well as business services such as consulting fees and personal services such as travel. The net amount for this component only is called the trade balance and can be either a trade surplus or deficit. A merchandize trade surplus or deficit refers to the goods component only which is much larger than services for most countries. Primary income is the compensation Canadian residents receive for foreign employment plus any investment income received for direct investments in foreign companies, portfolio investments in foreign stocks and debt instruments, or royalty income from foreign sources. Secondary income includes one-way international transfers such as financial gifts, worker remittances, and government aid.

Countries with current account surpluses must do something with the foreign currencies they accumulate. Some funds are held as foreign exchange reserves in their central banks while the rest is reinvested or lent to other countries. Businesses make foreign direct investments when they take control of another company. Investment firms make portfolio investments where they do not take control but make passive investments in the stocks and bonds of foreign companies or buy foreign government debt. Banks make deposits in foreign banks or business loans, while companies extend trade credit to foreign firms. Note that the income earned on these investments is a component of primary income in the current account. These investments and lending transactions are summarized in a country’s capital and financial account each period, and the net of the current account and capital and financial account must equal zero. Exhibit 3 gives a breakdown of Canada’s capital and financial account balance in 2019.

**Exhibit 4: Canada’s Capital and Financial Account Balance in 2019**

**(in millions)**

|  |  |
| --- | --- |
| **Capital account** | -89 |
|  |  |
| **Net acquisition of financial assets** | 264,716 |
| Direct investment assets | 101,127 |
| Equity | 95,506 |
| Debt | 5,621 |
| Portfolio investments | 32,960 |
| Foreign debt securities | 27,485 |
| Foreign money market instruments | -1,510 |
| Foreign bonds | 28,995 |
| Foreign equity and investment funds | 5,475 |
| Other Canadian investments | 132,345 |
| Loans | 66,302 |
| Currency and deposits | 27,073 |
| Trade credit and advances | 901 |
| Other accounts receivable | 38,069 |
| Official international reserves | -1,716 |
|  |  |
| **Net incurrence of liabilities** | 315,877 |
| Direct investment liabilities | 59,914 |
| Equity | 63,129 |
| Debt | -3,214 |
| Foreign portfolio investment | 36,165 |
| Canadian debt securities | 38,562 |
| Canadian money market instruments | 4,527 |
| Canadian bonds | 34,035 |
| Canadian equity and investment funds | -2,397 |
| Other foreign investments | 219,798 |
| Loans | 60,067 |
| Currency and deposits | 147,462 |
| Trade credit and advances | 2,832 |
| Accounts payable | 9,437 |
|  |  |
| **Capital and financial account balance** | 51,072 |
| Source: Statistics Canada | |

The net acquisition of financial assets is financial outflows relating to investments or loans by Canadians in foreign countries. Net incurrence of liabilities is financial inflows relating to investments or loans by foreigners in Canada. Netting these two amounts and the capital account balance, the capital, and financial account balance is a net inflow of CAD 51,072 million which approximates the net outflow relating to the current account deficit of CAD 47,385 million. The current account and capital and financial account do not exactly match as it is difficult for governments to accurately measure all transactions. Note that the official international reserves account was stable so the Bank of Canada did not buy or sell foreign currency reserves to manage the country’s balance of payments.

**Rationales for International Expansion**

Companies expand internationally for many reasons.

**Increase sales.** International expansion is beneficial if a firm’s domestic market is small, saturated with competing products, suffering from overcapacity, or growing slowly due to a mature economy or aging population. Foreign markets are often less competitive yielding higher profit margins and the additional sales volume needed to justify new products with higher development costs. Once overseas, companies can develop new products or services and take them back home for sale in their domestic market. Finally, the global expansion allows companies to diversify their sales and manufacturing facilities to cushion the impact of an economic downturn or political strife in any one region.

**Better brand recognition and customer service.** By establishing foreign operations instead of just exporting products from their domestic market, companies better understand the needs of their new customers, provide superior customer service and response times, and develop stronger brand recognition. They also have access to a new group of talented employees that can be used to staff their expanding global operations.

**Cost efficiencies.** Costs can be reduced by moving production to developing countries with lower wages, taxes, and other operating expenses; building a more capable global supplier network with greater price competition; transferring manufacturing closer to new international markets lowering transportation costs; or extracting wage and benefit concessions from domestic workers by threatening to move work abroad.

**Follow customers.** If a supplier’s customers go overseas, the supplier may have no choice but to follow them so they can provide comparable service such as just-in-time delivery. If they do not follow, they may lose that customer in the new market and potentially back in their home market as well.

**Access to natural resources.** Companies expand internationally to secure natural resources that are critical to their core operations such as mineral or oil & natural gas deposits. This is especially important if domestic deposits are non-existent, depleted, or costly to develop.

**Access to technology.** Few companies can develop all the technology they need in-house and must acquire domestic and international firms with the needed expertise. There is a limited pool of talent in the developed world, so engineers, scientists, mathematicians, and programmers are increasingly being found in developing countries such as China and India. Many of these individuals immigrate to developed countries to study before pursuing research careers in industry or academia. Others return home to build up their country’s research and development capacity.

**Government and public scrutiny.** Companies establish production facilities in overseas markets to circumvent import tariffs and quotas. They may move to more tolerant legal jurisdictions to avoid scrutiny of their environmental, animal rights, or human rights records.

**Forms of International Expansion**

A company’s foreign activities can take many forms.

**Exporting**. Goods are sourced domestically and transported to a foreign market for sale. This is the fastest and safest way to enter a new international market as exporters do not have to establish any local production facilities, but they must still find a local agent, broker, or trading company to sell their products. Finding the right company that will not damage the exporter’s brand name is difficult, and exporters have limited control over marketing and distribution, and no direct contact with customers. This makes it difficult to understand their customer’s needs and adapt products to suit local tastes and preferences. Profit margins are also lower due to extra middlemen and higher transportation costs, and tariffs and quotas can limit sales. Once the export venture proves viable, the company may decide to replace the local distributor with its own sales office to address some of these concerns. Another alternative is “piggybacking” on another multinational firm that is already established in the foreign market to sell its products.

**Licensing and franchising agreements.** Licensing is sometimes used by manufacturers to enter foreign markets, while franchising is an option for service businesses. A licensing agreement gives the licensee the right to manufacture the licensor’s products or use their technology in a specific geographical area for a set period. In exchange, the licensor receives an upfront fee plus a percentage of future earnings or a fixed amount per unit produced. Licensing is attractive to firms that want to enter a foreign market quickly at a low cost or do not have sufficient financial resources or expertise to establish their own operations. It is also used to circumvent trade barriers or government restrictions on direct foreign investment and repatriation of profits. The licensing agreement gives the company much less control over sales, marketing, and product quality, and the fees earned are often modest compared to what they could have earned establishing their own operations. There is a risk that the licensee will use the technology and experience to develop alternative products and eventually become a serious competitive threat.

Under a franchise agreement, a business called a franchisor gives a local business person called a franchisee the right to use their brand name, products, and processes, and provides other services such as site selection, training, and advertising in exchange for an upfront fee and a percentage of their revenues or profits. Franchising allows established fast food, retail, or personal services businesses to grow quickly by having the franchisee supply the needed financing when they pay to establish their locations. Franchisors can usually control a franchisee’s product selection and quality through a strong franchise agreement, but the terms may be difficult to legally enforce in a foreign jurisdiction.

**Joint ventures and strategic alliances.** An alternative to licensing is to establish a new business entity in a foreign market with a local partner. Financial, intellectual, and physical assets are pooled together reducing the cost and risks of the project, but this mode of entry is still more expensive than exporting, licensing, or franchising. Partners must share profits and control and intercultural issues often become a problem. The company is viewed as a local entity by consumers which increases the appeal of its products especially if the local partner has a popular brand name. The local partner usually understands consumers and business practices better than the foreign firm. Governments often give joint ventures more favorable treatment and local partners can help the foreign firm navigate a complex regulatory system of licenses and permits which is made more complicated by government corruption. Many developing countries require that foreign companies have a local partner to promote local economic development. Strategic alliances are similar to joint ventures except no new legal entity is established and the relationship is usually for a shorter period.

**Foreign subsidiaries.** Even if a suitable joint venture partner with adequate resources can be found in a developing market, many foreign firms prohibit joint ventures fearing the loss of control and potential theft of intellectual property. Their only option is to establish a wholly-owned subsidiary by acquiring a local firm or launching a new “green field” venture of their own. Acquisitions allow firms to acquire a well-known company with established operations quickly greatly reducing the risks of foreign expansion. These acquisitions are expensive though with take-over premiums averaging 25% on the typical transaction eliminating most if not all of the potential profit. Aligning corporate strategies and integrating operations is difficult but the local knowledge acquired may be valuable. Establishing a new subsidiary is often a better option. It is more complicated to manage initially, and market knowledge will have to be acquired by hiring local employees or consultants, but the firm has more control and greater profit potential as they avoid the take-over premium and retain all profits. Risk can be reduced by dividing the subsidiary’s launch into stages and being prepared to cancel the project if its financial and operations goals are not met at the end of each stage.

When choosing between licensing, franchising, joint ventures, and foreign subsidiaries, the two questions a company should ask itself are: “How much are we willing to commit?” and “How much control do we want?” If its financial resources are limited, then licensing, franchising, or joint ventures are the best options. If control is needed to protect the firm’s brand name and intellectual property and to maximize profits, then establishing a subsidiary is preferred. Developed countries generally do not prevent foreign firms from establishing subsidiaries, but many developing countries insist on them having a local partner. In this case, foreign firms will have to decide whether profit or control is the most important consideration.

**Multinational and Transnational Corporations**

With the growth of free trade, companies have evolved from national firms focused primarily on their domestic markets to fully integrated global operations with their different business functions like administration, research and development, component production, assembly, distribution, and sales spread across the globe. These corporations view the entire world as their market and position resources in whatever location maximizes profits and growth.

A multinational corporation (MNC) operates globally and is traditionally managed from a central headquarters in its home country. With the rapid pace of globalization, the largest MNCs are becoming transnational corporations (TNC). These companies are managed with a global perspective considering the needs of all countries and do not identify with a particular country or region. Instead of a central headquarters, the company is decentralized and managed from multiple locations around the world. Senior management is recruited globally and no favoritism is shown for a particular nation when locating resources.

The rise of TNCs raises some important ethical questions. Do countries want to lose control of their companies and economies to outside powers? Can a country take control of a TNC’s production facilities and technology during a national emergency? Who will tax and regulate them? Will an international government be needed?

**1.2 | Types of Foreign Exchange Rates**

An exchange rate is the price of one country’s currency relative to another country’s currency when it is traded in the foreign exchange market. For example:

CAD/USD 1.2486

This exchange rate quotation means 1 USD buys 1.2486 CAD. The numerator is called the quote (or price) currency and the denominator is the base currency which is always one currency unit. Each of the world’s approximately 180 currencies has a three-letter currency code (ex. CAD for the Canadian Dollar) assigned by the International Standards Organization (ISO). The first two letters are the country name (ex. CA for Canada) and the last letter is the name of the currency (ex. D for dollar). Currencies are assigned numerical codes to make computer processing more efficient. Exhibit 4 provides a listing of some of the most common currencies and their codes.

**Exhibit 5: Currency Codes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Currency Code** | **Currency** | **Currency Code** | **Currency** |
| USD (840) | U.S. Dollar | NOK (578) | Norwegian Krone |
| EUR (978) | Euro | BRL (986) | Brazilian Real |
| JPY (392) | Japanese Yen | SGD (702) | Singapore Dollar |
| GBP (826) | British Pound | MXN (484) | Mexican Peso |
| CHF (756) | Swiss Franc | CNY (156) | Chinese Renminbi |
| CAD (124) | Canadian Dollar | HKD (344) | Hong Kong Dollar |
| AUD (036) | Australia Dollar | INR (356) | Indian Rupee |
| NZD (554) | New Zealand Dollar | KRW (410) | South Korean Won |
| ZAR (710) | South African Rand | RUB (643) | Russian Rubble |
| SEK (752) | Swedish Krona |  |  |

Exchange rate quotations are supplied by the reporting currency dealers who buy and sell currency for their customers in the foreign exchange market. Quotes from different dealers vary for the same currency pairs, but the differences are small due to the efficiency of the currency market. A currency pair refers to the two currencies being traded.

Quotes are customarily taken to four decimal places which are 1/10000th of a currency unit. This is called a pip, or price interest point, and is the smallest price movement an exchange rate can make. In some markets, quotes are taken to five decimal places. For five decimal places, a fractional pip, or a pipette or deci-pip, is used which equals 1/10th of a pip or 1/100000th of a currency unit. Going to five or more decimal places is useful if more precision is required in large currency transactions or to reduce the bid-ask spread. Transactions involving the EUR are usually taken to five places. One exception to the four or five decimal place rule is the Japanese Yen where the number of Yen needed to buy 1 USD is quite high. In this case, the precision of four or five decimal places is unnecessary, so two decimal places are the norm.

News organizations, financial websites, the Bank of Canada, and other organizations distribute these exchange rate quotes to the public and often add their own daily, monthly, and yearly trend data. Quotes are average dealer prices so they do not reflect the rates at which actual currencies traded or could be traded. Companies should refer to the bid-ask quotations supplied by each dealer for exact pricing information.

**Spot Rates**

The spot rate is the price that a pair of currencies trade at today with settlement usually two business days after the trade date or T+2. Settlement is T+1 for the CAD/USD because of the liquidity or size of the market.

**Exhibit 6: Spot Rate Quotations**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **CAD/USD** | **USD/EUR** | **USD/GBP** | **JPY/USD** | **MXN/USD** | **CHF/USD** | **USD/AUD** | **CNY/USD** | **USD/NZD** |
| **Today** | 1.2486 | 1.2074 | 1.38775 | 107.555 | 19.837 | 0.9147 | 0.7743 | 6.4894 | 0.7185 |
| **Week ago** | 1.2506 | 1.1985 | 1.38315 | 108.785 | 19.932 | 0.9202 | 0.7734 | 6.5296 | 0.7143 |
| **Four weeks ago** | 1.2578 | 1.1798 | 1.37890 | 108.655 | 20.594 | 0.9391 | 0.7637 | 6.5423 | 0.7003 |
| Source: Royal Bank of Canada, April 21, 2021 | | | | | | | | | |

Again, the spot rate quotation of 1.2486 CAD/USD in Exhibit 5 means 1 USD would buy 1.2486 CAD today. The spot rate has fallen over the last four weeks, so the USD is depreciating against the CAD as it can be exchanged for fewer CAD. If the spot rate increased, the USD would be appreciating against the CAD as it can be exchanged for more CAD.

If a Canadian company earned USD 10,000 in the U.S., it could convert this profit into CAD 12,486 (i.e. 10,000 x 1.2486). But what if a U.S. company earned CAD 10,000 in Canada and wanted to convert it to USD? The spot rate of 1.2486 is less useful as the company needs an exchange rate that shows how much USD a company will receive for 1 CAD. The spot rate quotation can be inverted so the USD is the numerator and the CAD is the denominator. The quotation of 1.2486 CAD/USD would become 0.8009 USD/CAD (i.e. 1.0000 / 1.2486) which means 1 CAD could be exchanged for 0.8009 USD. If a U.S. company earns CAD 10,000 in Canada, it could convert these profits into USD 8,009 (i.e. 10,000 x 0.8009).

**Quotation Conventions**

Exchange rates are quoted in pairs of currencies such as CAD and USD. Practices vary between markets as to which is the quote currency (numerator) and base currency (denominator).

**Direct quote.** The domestic country’s currency is the quote currency (numerator) and the foreign currency is the base currency (denominator). This ratio measures what a domestic trader would pay for one unit of a foreign currency or receive for one unit of foreign currency. The CAD/USD quote of 1.2486 from Exhibit 5 is a direct quote from the perspective of a Canadian trader. They would pay CAD 1.2486 for 1 USD or receive CAD 1.2486 for 1 USD.

**Indirect quote.** The domestic currency is the base currency (denominator) and the foreign currency is the quote currency (numerator). This ratio measures what a foreign trader would pay for one unit of domestic currency or receive for one unit of domestic currency. The USD/CAD quote of 0.8009 from Exhibit 5 is an indirect quote from the perspective of a U.S. trader. They would pay USD 0.8009 for 1 CAD or receive USD 0.08009 for 1 CAD.

**American quote.** The USD is always the quote currency (numerator) and the other currency is the base currency (denominator). This quotation is of most interest to U.S. traders as it indicates what they would pay or receive for different foreign currencies.

**European quote.** The USD is always the base currency (denominator) and the other currency is the quote currency (numerator). The other currency can be any of the world’s currencies and not just the EUR. This quotation is used by non-U.S. traders as the USD is the world’s most popular currency making up 60% of foreign exchanges reserves and is involved in 88% of all foreign exchange transactions.

**Priority currencies.** The base currency (denominator) is always assigned to the major currency with the highest priority. The major currencies in order of priority are the EUR, GBP, AUD, NZD, USD, CAD, CHF, and JPY. These currencies were selected because they account for most of the trading in the foreign exchange market but otherwise the priority is arbitrary. According to this convention, the possible quotes are:

USD/EUR

JPY/USD

USD/GBP

CAD/USD

USD/NZD

CHF/USD

JPY/EUR

GBP/EUR

CHF/EUR

JPY/GBP

CAD/EUR

JPY/CAD

All other currencies are referred to as minor currencies. For quotes involving major and minor currencies, the major currency is always the based currency. Quotations involving minor currencies only are much less common so there is no convention. The priority currencies convention was followed by the Royal Bank in Exhibit 5.

**Bid-Ask Quotations**

When traders convert currency, the currency dealer quotes two prices. The bid exchange rate is the exchange rate at which they will buy the base currency, while the ask or offer exchange rate is the exchange rate at which they will sell the base currency. The difference between these exchange rates is the bid-ask spread which is the profit earned by the dealer or the customer’s transaction cost. For example, a foreign exchange dealer has a bid price of 1.2486 CAD/USD and an ask price of 1.2491 CAD/USD which represents a bid-ask spread of 0.0005 CAD/USD or 5 pips. If a business wants to buy USD 100,000 to purchase parts from a U.S. supplier, they will buy USD 100,000 at the ask price of 1.2491 CAD/USD or CAD 124,910. To fill this order, the dealer would have to buy USD 100,000 from other traders at the bid price of 1.2486 CAD/USD or USD 124,860. The dealer’s profit on this transaction is CAD 50 (CAD 124,910 – CAD 124,860) or (USD 100,000 x 0.0005). Different dealers display their bid-ask quote using variations of the table in Exhibit 6.

**Exhibit 7: Bid-Ask Quotation**

**Ask price**

**Bid price**

|  |  |  |
| --- | --- | --- |
| **CAD/USD** | | |
| **Sell** | **5** | **Buy** |
| 1.24**86** |  | 1.24**91** |
| **USD:** 100,000 | | |

This is a direct quotation where the quote currency (i.e. numerator) is for the domestic trader and the base currency (i.e. denominator) is for the foreign trader. The part of the exchange rate quotation that is the same is not bolded and is referred to as the “big figure” or “handle.” The remaining digits are bolded and shown as exponents. They are used to calculate the bid-ask spread of 0.0005 which is more simply shown as 5 pips. The order size is USD 100,000 which is the normal lot size for trading currency in the foreign exchange market. The spread is higher if the customer trades in “odd” lots that are lower than the normal lot size. The bid-ask spread can also be stated as a percentage of the ask price for comparison.

The size of the bid-ask spread depends on several factors.

* Bid-ask spreads average between 3 to 5 pips for major currency pairs with high trading volumes such as the USD/EUR, but are higher for transactions involving minor currencies also called exotic currencies like the RUB. More trading volume means greater competition, so dealers pay higher bid prices and receive lower ask prices reducing the spread. With higher volume or market liquidity, dealers can also trade more quickly lowering their transaction costs and risk exposure from changing exchange rates. As discussed, most currency trades have a minimum lot size of 100,000, so trading below that amount will increase transaction costs.
* Bid-ask spreads widen as markets become more volatile during periods of heightened economic and political turmoil. A foreign exchange dealer carries an inventory of foreign currencies so they can fill buy orders from customers quickly. In volatile markets, dealers are more likely to lose money by purchasing currency at more than they eventually sell it for. Dealers manage this risk by demanding a larger bid-ask spread.
* From a North American perspective, European trading begins in the early morning hours while Asian trading does not start till late at night. If a currency trade is not booked during the regular business hours of the exchange that trades predominately in that currency, there is considerably less liquidity and the bid-ask spread will be higher. For example, the EUR is primarily traded in the London foreign exchange market, so a U.S. trader would pay a higher bid-ask spread if they traded EUR late in the day in New York when the London market is not active. The spread is even higher for Hong Kong-based traders.
* Businesses or large institutional investors receive lower bid-ask spreads than smaller traders because of their transaction volume and market sophistication.

**Cross Rates**

As discussed, if a company wants to convert USD to CAD, the USD should be the base currency and the CAD should be the quote currency (i.e. CAD/USD). If it wants to convert CAD to USD, the opposite is true (i.e. USD/CAD). To help companies, financial information providers publish tables containing cross rates. The table in Exhibit 7 shows the base currency across the top of the table and the quote currency down the side. The exchange rates of 1.2486 CAD/USD and 0.8009 USD/CAD previously discussed can be found in this exhibit.

**Exhibit 8: Cross Rates**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **USD** | **CAD** | **EUR** | **MXN** | **JPY** | **GBP** | **CHF** | **AUD** |
| **USD** | 1.0000 | 0.8009 | 1.2074 | 0.0504 | 0.0093 | 1.3878 | 1.0933 | 0.7743 |
| **CAD** | 1.2486 | 1.0000 | 1.5076 | 0.0629 | 0.0116 | 1.7327 | 1.3650 | .9668 |
| **EUR** | 0.8282 | 0.6633 | 1.0000 | 0.0418 | 0.0077 | 1.1494 | 0.9055 | 0.6413 |
| **MXN** | 19.8370 | 15.8874 | 23.9512 | 1.0000 | 0.1844 | 27.5288 | 21.6869 | 15.3598 |
| **JPY** | 107.5600 | 86.1400 | 129.8600 | 5.4200 | 1.0000 | 149.2600 | 117.5900 | 83.2800 |
| **GBP** | 0.7206 | 0.5771 | 0.8700 | 0.0363 | 0.0067 | 1.0000 | 0.7878 | 0.5580 |
| **CHF** | 0.9147 | 0.7326 | 1.1044 | 0.0461 | 0.0085 | 1.2694 | 1.0000 | 0.7083 |
| **AUD** | 1.2915 | 1.0343 | 1.5593 | 0.0651 | 0.0120 | 1.7923 | 1.4119 | 1.0000 |
| Source: Royal Bank of Canada, April 21, 2021 | | | | | | | | |

What if a Canadian trader knows the CAD/USD and USD/EUR exchange rates, but does not know the CAD/EUR? As mentioned, foreign exchange markets are very efficient, so this rate can be calculated using the exchange rates in Exhibit 7 using a process called triangulation. Notice that the USD values cancel out leaving CAD/EUR.

**Forward Rates**

A forward rate is the price that a pair of currencies is expected to trade at on some future date. A company can lock in this rate today by buying a forward contract to eliminate the exchange rate risk so it can focus on operations. Currency dealers typically quote forward rates for major currency pairs in one, three, six, nine, or twelve months maturities, but quotations can be available for up to five or even ten years. Forward rate maturities for minor currencies are shorter because of lower trading volume. For example, a Canadian company negotiated a USD 10 million mortgage loan with a U.S. bank at a more competitive rate to finance a new factory in Canada. Construction will be completed and the loan received in one year. The loan proceeds will be converted into CAD to pay off a bridge loan from a Canadian bank that is being used to finance the factory during construction. The CFO is concerned about fluctuating exchange rates and wants to protect the company, so she locks in an exchange rate in one year instead of accepting the spot rate at that time. According to Exhibit 8, a forward rate of 1.2483 CAD/USD could be negotiated so the USD 10 million mortgage would be converted into CAD 12.4830 million (i.e. 10 million x 1.2483) which approximates the value of the bridge loan. If the spot rate in one year was CAD/USD 1.2479, the opportunity cost of the hedge is positive CAD 4,000 (i.e. (1.2483 – 1.2479) (10 million)). This means the company received more by locking in the forward rate, but it could have received less if the spot rate in one year was above CAD/USD 1.2483. By locking in the forward rate, the company is hedging the transaction by transferring the risk of loss to another party called the speculator.

**Exhibit 9: Forward Exchange Rates**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Spot** | **1 Month** | **3 Months** | **6 Months** | **1 Year** | **2 Years** | **3 Years** | **4 Years** | **5 Years** |
| **Per USD** |  |  |  |  |  |  |  |  |  |
| **CAD** | 1.2486 | 1.2486 | 1.2484 | 1.2484 | 1.2483 | 1.2517 | 1.2587 | 1.2652 | 1.2695 |
| **EUR** | 1.2074 | 1.2082 | 1.2098 | 1.2122 | 1.2175 | 1.2291 | 1.2453 | 1.2663 | 1.2907 |
| **JPY** | 107.5550 | 107.5225 | 107.4572 | 107.3530 | 107.0451 | 106.2998 | 105.0061 | 103.1930 | 101.0000 |
| **GBP** | 1.3878 | 1.3879 | 1.3882 | 1.3885 | 1.3896 | 1.3907 | 1.3940 | 1.4021 | 1.4139 |
| **Per CAD** |  |  |  |  |  |  |  |  |  |
| **USD** | 0.8009 | 0.8009 | 0.8010 | 0.8010 | 0.8011 | 0.7989 | 0.7945 | 0.7904 | 0.7877 |
| **EUR** | 1.5076 | 1.5085 | 1.5103 | 1.5132 | 1.5198 | 1.5385 | 1.5675 | 1.6021 | 1.6386 |
| **JPY** | 86.1405 | 86.1100 | 86.0700 | 85.9900 | 85.7500 | 84.9300 | 83.4200 | 81.5600 | 79.5600 |
| **GBP** | 1.7327 | 1.7329 | 1.7330 | 1.7334 | 1.7346 | 1.7407 | 1.7546 | 1.7740 | 1.7949 |
| Source: Royal Bank of Canada, April 21, 2021 | | | | | | | | | | |

The forward rate for a specific period may be higher (premium) or lower (discount) than the current spot rate depending on the market’s exchange rate expectations. A forward discount for CAD/USD rate means the CAD is expected to appreciate against the USD so the USD will buy fewer CAD. A forward premium means the CAD is depreciating against the USD so the USD will buy more CAD. The expected appreciation or depreciation can be expressed as a percentage of the current spot rate to measure the rate of change. For example, if the 1-year forward rate is 1.2483 CAD/USD and the current spot rate is 1.2486 CAD/USD, the USD is trading at a forward discount of -.0240%.

=-.000240 or -.0240%

Expressed on an annual basis, the forward premium or discount is:

Forward premium (discount) = x

When dealers provide bid-ask quotations for forward rates, they provide the adjustments that must be made to the current spot rate to get the forward rate at different maturities. The adjustment is given in forward points which are the same as pips as shown in Exhibit 5.

**Exhibit 10: Forward Bid-Ask Quotations**

|  |  |
| --- | --- |
| **Maturity** | **Spot Rate or Forward Points** |
| Spot rate (USD/EUR) | 1.3549/1.3651 |
| 1 month | -5.6/-5.1 |
| 3 months | -15.9/-15.3 |
| 6 months | -37.0/-36.3 |
| 12 months | -94.3/-91.8 |

The bid and ask prices for the 3-month forward rate are:

Bid price 1.3549 + () = 1.35331 Ask price 1.3651 + () = 1.36357

The number of decimal places for forward bid-ask quotes can be more than four decimal places to provide greater precision. The JPY/USD spot rate is only quoted to two decimal places, so the forward points would be divided by 100 instead of 10,000.

**1.3 | Determinants of Foreign Exchange Rates**

**Factors Influencing Exchange Rates**

The spot and forward rates for different currency pairs in the foreign exchange market are influenced by multiple factors.

**Absolute purchasing power parity.** This theory states that identical goods should cost the same in two different countries which determines the appropriate exchange rate. For example, a tractor costs USD 50,000 in the U.S. and CAD 65,000 in Canada, so the exchange rate is:

CAD/USD = = 1.30

This means a Canadian farmer could purchase a tractor in the U.S for USD 50,000 or convert their USD 50,000 into CAD at an exchange rate of 1.3 CAD/USD and buy the tractor for CAD 65,000 (USD 50,000 x 1.3) in Canada. Market arbitrage ensures that the costs of identical goods in two different countries are always the same. For example, if Canadian arbitragers can purchase a tractor in Canada at CAD 60,000 and then re-sell it in the U.S. for USD 50,000, they can convert the USD 50,000 into 65,000 CAD at the current exchange rate of 1.3 CAD/USD and earn a profit of CAD 5,000. As this transaction is repeated, tractor prices in Canada will increase due to higher demand, tractor prices in the U.S. will fall due to greater supply, and the demand for CAD will increase causing the currency to appreciate and the CAD/USD exchange rate to fall. This arbitrage will eventually eliminate any potential profits ensuring that the costs of identical items in the two countries remain the same.

Like most theories, absolute purchasing power parity has limitations. It assumes that transaction and transportation costs are zero and that goods are not perishable and can be moved freely between countries with no trade restrictions. Also, the products being compared may not be identical if they are of different quality or have been adapted to suit a particular market. Despite these issues, determining whether currencies are overvalued or undervalued based on absolute purchasing power parity is a useful tool for predicting exchange rate movements. The assumption is that exchange rates will eventually adjust to eliminate any mispricing.

A common way to apply the purchasing power parity theory, at least for educational purposes, is the Big Mac Index developed by The Economist Magazine. For example, a Big Mac cost CAD 6.77 in Canada and USD 5.66 in the U.S. in December 2020 which implies an exchange of 1.20 CAD/USD. The exchange rate was 1.28 CAD/USD in December 2020, so the CAD appears to be undervalued relative to the USD by approximately 6.2%. Over time Canadian companies expect the CAD/USD to fall to 1.20 which means the CAD will appreciate. This makes purchases in the U.S. cheaper for Canadian businesses but reduces the value in CAD of any U.S. sales or profits. As shown in Exhibit 5, the USD was overvalued relative to most major currencies in December 2020.

**Exhibit 11: Big Mac Index**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Country** | **Price of Big Mac in Domestic Currency** | **Price of Big Mac in USD** | **Implied Domestic Currency/USD** | **Actual Domestic Currency/USD** | **Over (+) or Under (-) Valued in % Relative to USD** |
| European Area | EUR 4.25 | USD 5.66 | 0.75 EUR/USD | 0.82 EUR/USD | -8.5% |
| Britain | GBP 3.29 | USD 5.66 | 0.58 GBP/USD | 0.74 GBP/USD | -21.6% |
| Australia | AUD 6.48 | USD 5.66 | 1.14 AUD/USD | 1.30 AUD/USD | -12.3% |
| New Zealand | NZD 6.80 | USD 5.66 | 1.20 NZD/USD | 1.40 NZD/USD | -14.3% |
| Canada | CAD 6.77 | USD 5.66 | 1.20 CAD/USD | 1.28 CAD/USD | -6.2% |
| Switzerland | CHF 6.50 | USD 5.66 | 1.15 AUD/USD | 0.89 CHF/USD | 29.2% |
| Japan | JPY 390 | USD 5.66 | 68.90 JPY/USD | 104.30 JPY/USD | -33.9% |
| Source: Economist | | | | | | |

See the Economist website at [www.economist.com/big-mac-index](http://www.economist.com/big-mac-index) for the most up-to-date Big Mac Index.

To be practical, the absolute purchasing power parity theory should be applied to a representative basket of goods and not just one item. Properly defining the basket is difficult as are dealing with the other limitations including transaction and transportation costs, and trade barriers. As a result, this theory is of limited value in the short to medium term but does seem to apply in the long term.

**Interest rate parity.** This theory states that investors earn the same return on investments of equal risk in two different countries. For example, market arbitragers will sell lower returning bonds driving up the bond yield and buy higher returning bonds driving down the bond yield until the returns are equal.

When investing in a foreign country, the return from the perspective of a domestic investor consists of two components which are 1) the actual return on the investment and 2) any exchange rate gain or loss. The first component is the same for investments of equal risk in the two countries based on interest rate parity, so the difference in return is equivalent to the ratio of the forward and spot exchange rates over the investment period in the second component. The interest rate parity condition is expressed by the following formula:

= ()t

- Return to the home country

– Return to the foreign country

t – Number of years

For example, a Canadian trader invests CAD 1,000 in 1-year, risk-free, USD bonds with an annual coupon rate of 3.00%. The spot rate is 1.2486 CAD/USD and the 1-year forward rate is 1.2436 CAD/USD. According to the interest parity theory, the Canadian investor will earn:

= () rh = .0259 or 2.59%

Double-checking, CAD 1,000 is converted at the spot rate into USD 800.90 (1,000 / 1.2486) at the beginning of the investment. Principal plus interest when the bond matures in one year is USD 824.93 (800.90 x 1.03). This amount is converted at the forward rate into CAD 1,025.88 (824.93 x 1.2436) at the end of the investment. The investment returns 2.59% ((1,025.88 – 1,000.00) / 1,000.00). According to the interest parity theory, investors must earn 2.59%. regardless of whether they invest in Canadian or U.S. risk-free bonds. The actual return of 2.59% is less than the annual coupon rate of 3.00% because the USD depreciated during the bond’s life lowering its return.

**Inflation.** Inflation erodes the purchasing power of a country’s currency.If a country’s inflation rate is higher than another country’s inflation rate, its currency will depreciate relative to the other country’s currency causing its exchange rate to adjust. Take the same example of a tractor that costs USD 50,000 in the U.S. and CAD 65,000 in Canada. Based on absolute purchasing power parity, the exchange rate is:

CAD/USD = = 1.30

If inflation is 4.0% in Canada and 2.0% in the U.S., the cost of the tractors in Canada will rise at a faster rate than in the U.S. causing the exchange rate to rise.

CAD/USD = = 1.33

The higher exchange rate means 1 USD now buys 1.33 CAD instead of 1.30 CAD. The CAD has depreciated against the USD by 2.31% which approximates the difference in inflation rates between the two countries. Absolute purchasing power parity still holds but the differences in inflation are accounted for by changes in the exchange rate. This is called relative purchasing power parity and its general formula states:

Current spot rate () = Expected spot rate

- Inflation in the home country

– Inflation in the foreign country

**Current account deficits.** If a country has a current account deficit, there is less demand for its currency relative to other currencies causing it to depreciate. This makes the country’s exports more affordable and imports more expensive, so the current account deficit shrinks. If a country has a current account surplus, there is more demand for its currency relative to other currencies causing it to appreciate. This makes the country’s exports less affordable and its imports less expensive, so the current account surplus shrinks. Exchange rates adjust in response to the depreciation or appreciation of a country’s currency caused by current account deficits or surpluses.

This explanation of how a current account deficit or surplus affects exchange rates is simplistic. As discussed, a country’s balance of international payments must net to zero. If a country has a current account deficit, meaning it is spending more than it earns, it must compensate by borrowing or receiving investments from foreigners. As long as this continues, the exchange rate will remain stable. A problem may arise if other countries are not willing to lend to or invest in a country with a current account deficit. To keep the balance of payments netting to zero, the country’s currency will depreciate so the current account deficit declines matching the reduced level of borrowing and investment. Other actions like raising interest rates to attract new investments, selling foreign currency reserves to create demand for the domestic currency, or introducing exchange controls to reduce the supply of the domestic currency can also be employed by a country’s central bank to limit the depreciation of its currency.

The U.S. has experienced large current account deficits since 1980, but the value of its currency remains stable and has even appreciated against some major currencies. This is because USDs are held by foreign countries as USD deposits, USD foreign currency reserves, or reinvested in U.S. businesses, stocks, or bonds particularly U.S. government debt. The USD’s role as the world’s currency and the U.S.’s rapidly increasing government debt have made it possible for the world economy to absorb a large amount of USD but eventually, foreigners will hesitate about investing. This will cause the USD to depreciate, so the U.S. central bank will be forced to raise domestic interest rates to attract funds. The higher interest rates and lower asset prices caused by weaker foreign demand may reduce the U.S.’s GDP forcing the country into recession.

**Monetary and fiscal policy.** Expansionary monetary policies and government deficits, if allowed to continue, will lead to higher inflation causing a country’s currency to depreciate. A high-interest rate policy is used by governments to control inflation by slowing domestic growth, but the higher interest rates attract more foreign investors causing the currency to appreciate. A low-interest policy is used to stimulate domestic growth but it discourages foreign investment causing the currency to depreciate. A country’s monetary and fiscal policies have a major impact on the value of its currency.

**Other factors.**  Other factors influence the value of a country’s currency and its foreign exchange rates.

* Currencies of strong economies with excellent growth prospects, low inflation, minimal unemployment, and a strong stock market will appreciate as foreign investors are attracted by the excellent investment opportunities.
* Countries with liberal foreign direct investment policies that welcome investors and place few restrictions on their actions will see their currencies appreciate due to greater capital inflows.
* A country’s currency depreciates during periods of financial instability or political, ethnic, or social strife. Financial crises, foreign wars, civil conflicts, and turmoil between different racial or socio-economic groups cause economic uncertainty limiting international trade and foreign investment.
* Economies that are heavily dependent on commodity exports such as Canada will see their currencies appreciate or depreciate significantly compared to the currencies of other non-resource dependent countries like the U.S. as resource prices rise and fall.
* As part of a “flight to quality” in uncertain times, investors transfer wealth out of their domestic currencies into more stable currencies such as the USD or EUR causing them to appreciate. Gold investments are popular too so the currencies of gold-producing nations rise.
* USD is the major reserve currency for the world’s central banks and financial institutions. It is also used to conduct much of the world’s trade with the price of many commodities like oil and gold denoted in USD. As mentioned, this creates considerable demand for the USD and helps maintain its value despite large U.S. current account deficits.

**Exchange Rate Policies**

All but the smallest countries have a central bank and a monetary system. The Bank of Canada manages Canada’s monetary policy to promote strong domestic growth and a rising standard of living for its citizens while ensuring stable inflation. Most western countries believe an annual inflation target of 2.0% best balances growth with the economic uncertainty caused by high inflation. The Bank of Canada also oversees the domestic payment system, the country’s participation in the international payments system through the Bank of International Settlements (BIS), and implements Canada’s exchange rate policy.

Countries adopt one of two basic exchange rate policies but there is considerable variation in their actions.

**Fixed or pegged exchange rate.** The price of a country’s currency is fixed with the price of another country’s currency, a basket of currencies made up of a country’s major trading partners, or a commodity like gold. Between the end of WWII and 1973, under the Bretton Woods Agreement, the world maintained a fixed exchange rate system with a gold standard that was supervised by the International Monetary Fund (IMF). All countries agreed to peg their currencies to the USD, and the U.S in turn fixed the USD’s value to the price of gold at USD 35 per ounce. The U.S. agreed to keep the price of gold at USD 35 per ounce by buying and selling its gold reserves, while the central banks of other countries agreed to buy and sell their gold and foreign currency reserves to maintain their exchange rates with the USD in a narrow trading band.

The advantage of a fixed exchange system was it eliminated exchange rate risk and the cost of hedging as businesses always knew what they had to pay or would receive in international trade transactions. But countries found this system very difficult to adhere to as exchange rates were not allowed to rise or fall to address domestic economic problems. For example, if a country was experiencing a trade deficit, the value of its currency could not fall to eliminate the deficit by making its exports cheaper and imports more expensive. The only option was to devalue its currency. The gold standard was abandoned in 1973 because of this problem.

Today, many small countries still maintain fixed exchange rate policies by pegging their currencies to the floating values of one of the world’s major currencies such as the USD or EUR. But with this system countries give up the ability to promote their national interests through an independent monetary policy. Governments must also carefully select their fixed exchange rates. Too low of a peg reduces a country’s standard of living as its currency buys less abroad, makes domestic businesses less profitable for foreign investors, and creates trade tensions with other countries that have difficulty competing against its low exchange rate. Too high of a peg results in trade deficits and the exchange rate will be difficult to maintain as countries eventually run out of foreign currency reserves. Countries often find it difficult to maintain a fixed exchange rate and are forced to adjust it upwards or downwards using a formal currency revaluation or devaluation.

Fixed exchange rate systems take two forms. Some countries adopt a “hard peg” where they pass legislation that binds their national government to a specific exchange rate. Others have a “soft peg” which is not legally binding and allows their actual exchange rates to fluctuate around the fixed exchange rate slightly before they adjust them. Central banks manage their country’s exchange rate by buying or selling their foreign currency reserves in open market operations or adjusting their interest rate policy. If the currency is too low, the central bank will use its foreign currency reserves to buy the domestic currency causing it to appreciate. If the currency is too high, the central bank will use the domestic currency to buy other currencies causing it to depreciate. Higher domestic interest rates attract foreign investors creating more demand for the domestic currency causing it to appreciate, while lower rates reduce demand causing it to depreciate.

**Flexible or floating exchange rate.** A country’s exchange rate finds its level through supply and demand forces in the foreign exchange market. Some countries attempt to influence the value of their currencies to promote their national interests. For example, Canadian exporters will benefit if the CAD depreciates relative to the USD allowing U.S. importers to buy Canadian goods more cheaply. U.S. goods will also be more expensive for Canadian importers causing them to seek domestic suppliers. This weak dollar policy makes Canadian producers more competitive, helps stimulate the economy, and reduces domestic unemployment, but it also makes purchasing foreign goods more expensive leading to inflation and a lower standard of living for Canadians. Ideally, a country would like to follow a strong dollar policy where domestic consumers can buy foreign goods cheaply, and foreign customers are willing to pay high prices for the country’s products because of their superior quality and technology. Countries also intervene to protect their currencies when they rise and fall uncontrollably resulting in too much economic uncertainty. A country’s exchange rate is referred to as free-floating if it is allowed to fluctuate freely or a managed or “dirty” float if government intervention is more common.

**Exhibit 12: Exchange Rate Policies Globally in 2018**

|  |  |
| --- | --- |
| Fixed exchange rate | 58.9% |
| Hard peg | 12.5% |
| Soft peg | 46.4% |
| Flexible exchange rate | 34.4% |
| Free float | 16.1% |
| Managed float | 18.2% |
| Other arrangements | 6.7% |
| Source: Annual Report on Exchange Arrangements and Exchange Restrictions | |

According to the IMF, only a third of all countries follow a flexible exchange rate policy, but these are mostly the world’s largest economies like the EU, U.S., Japan, Brazil, Turkey, Russia, India, Mexico, Indonesia, South Korea, Canada, South Africa, Australia, Sweden, Finland, Norway, and New Zealand. Of the world’s largest economies, only China, Switzerland, Hong Kong, and Saudi Arabia have a fixed exchange rate policy along with numerous smaller countries that struggle economically and require the stability of having their currencies pegged to a major currency. The Government of Canada and its central bank are committed to a flexible exchange rate policy free of any intervention except in situations that seriously threaten the sustained long-term growth of the economy. They feel a free-floating exchange rate policy allows the central bank to follow an independent monetary policy that focuses on maximizing growth and stabilizing inflation by adjusting domestic interest rates. They also feel it is the best way for the Canadian economy to react to economic shocks like declining natural resource prices. For example, if commodity prices decline, the resources industry will suffer and the CAD will fall, but other industries like auto manufacturing will benefit from the lower CAD limiting the overall effect on the economy. The Bank of Canada last intervened in the foreign exchange markets in 1998.

Some smaller countries cannot afford to maintain their own currency or central bank, so they officially substitute the currency of one or more countries for their own. They usually adopt a major currency such as the USD (called dollarization) or EUR (called Euroization), or the currency of a larger neighbouring country. This is also done, either officially or unofficially, if the smaller country is suffering from hyperinflation or political instability that renders its currency worthless as a medium of exchange. Adopting another country’s currency brings stability but the country loses autonomy over its monetary policy.

A currency or monetary union is when two or more sovereign countries agree to share a common currency and form a single central bank or committee of central banks that establish a common monetary policy for the union. The Eurozone is the best-known currency union consisting of the 19 members of the EU who have adopted the EUR. Some members of the European Union such as Poland have not joined the Eurozone and maintain their own currencies and have autonomy over their monetary policy. Other examples of monetary unions are the Eastern Caribbean Currency Union (ECCU), Western Africa Economic and Monetary Union (WAEMU), and Central Africa Central Economic and Monetary Community (CAEMC). Each has its own currency which is pegged to either the USD (ECCU) or EUR (WAEMU and CAEMC).

Countries with flexible exchange rates have convertible or “hard” currencies that can be exchanged for other currencies in the foreign exchange market. Those with fixed exchange rates may also have convertible currencies which is important for international trade and foreign investment, but many have non-convertible or “soft” currencies that are for domestic consumption only. Nations experiencing political or financial instability including hyperinflation use “soft” currencies to stabilize their exchange rates and prevent a flight of capital to offshore locations. They also use exchange controls that limit currency purchases and sales and may appoint a government exchanger to authorize and execute all transactions. Businesses who want to trade in countries with non-convertible currencies must negotiate a non-deliverable forward (NDF) which allows them to conduct business in a convertible currency usually the USD.

**1.4 | Foreign Exchange Markets and Transactions**

The foreign exchange market, also known as the currency, forex, or FX market, is the largest financial market in the world with over USD 6.6 trillion of daily trading volume in April 2019. This is up from USD 5.1 trillion in April 2016 according to the Triennial Central Bank Survey of Foreign Exchange Turnover. This survey is the most comprehensive source of information on the size and structure of the global forex market and is published every three years. It is sponsored by the Bank for International Settlements (BIS) whose role is to support the world’s central banks in their pursuit of monetary and financial stability through international cooperation and to act as a bank for its 63-member countries.

Most currency trading in the forex market is in U.S. Dollars, Euros, Japanese Yen, British Pounds, or Swiss Francs. Approximately 88.3% of all trades are between the USD and other currencies while the EUR accounts for 32.3% and the JPY for 16.8%. The USD is the world's reserve currency meaning most international transactions are paid in dollars. Emerging market currencies, including the Chinese Renminbi, are gaining importance and account for 25% of all global turnover. All currency trades involve two currencies such as USD or EUR, so the turnover percentages for all countries add up to 200% and not 100%.

The forex market is highly competitive providing participants with excellent liquidity and low trading costs. There are no official currency exchanges or clearinghouses like stocks or derivatives. Instead, currencies trade electronically in the over-the-counter market through a collection of dealers and brokers located around the world. London is the largest trading center with 43.1% of the trading volume in 2019 followed by New York at 16.5%, Singapore and Hong Kong at 7.6%, and Tokyo at 4.5%. Due to differences in time zones, participants can trade currencies 24 hours a day, five and a half days a week.

The forex market is divided into a sell-side and buy-side. The sell-side consists of reporting dealers that are generally very large, multinational commercial or investment banks that buy and sell currency for their customers or trade currency in their proprietary accounts to earn a profit. As mentioned, the reporting dealers also supply exchange rate quotations for the market.

**Exhibit 13: 10 Largest Currency Traders, June 2019**

|  |  |  |  |
| --- | --- | --- | --- |
| **Rank** | **Institution** | **Country** | **Market Share** |
| 1 | JP Morgan | U.S. | 9.81% |
| 2 | Deutsche Bank | Germany | 8.41% |
| 3 | Citi | U.S. | 7.87% |
| 4 | XTX Markets | Great Britain | 7.22% |
| 5 | UBS | Switzerland | 6.63% |
| 6 | State Street Corporation | U.S. | 5.50% |
| 7 | HC Tech | U.S. | 5.28% |
| 8 | HSBC | Great Britain | 4.93% |
| 9 | Bank of America Merrill Lynch | U.S. | 4.63% |
| 10 | Goldman Sachs | U.S. | 4.50% |

Reporting dealers must be large so they can offer competitive price quotations on their different FX products. Their size provides economies of scale justifying the considerable upfront investment in computer technology. A varied and global client base is also required to source much of the currency needed within the firm instead of trading with other dealers further reducing costs.

The buy-side consists of the clients of sell-side reporting dealers. These clients are divided into non-financial customers and other financial institutions.

**Non-financial customers**

**Corporate accounts.** Major corporations need foreign currency to import goods and services, make business acquisitions abroad, or establish overseas subsidiaries. Foreign currency earned operating overseas subsidiaries needs to be repatriated. Financing raised in other countries must be converted to fund domestic operations. Large MNCs, unlike smaller businesses, transact directly with the reporting dealers.

**Private individuals.** Very high net worth individuals, like major corporations, can trade directly with reporting dealers via their online trading platforms or phone-in orders.

**Governments.** Governments require large amounts of foreign currency to purchase goods and services such as military equipment; maintain foreign military bases, embassies, and consulates; provide foreign aid; or make contributions to international organizations like the United Nations.

**Other financial institutions**

**Non-reporting banks.** Most commercial and investment banks are too small to operate as reporting dealers, but they must still service the foreign currency needs of their commercial and individual clients. Commercial clients need to buy or sell foreign currency but are not large enough to trade directly with a reporting dealer. Individual or retail clients purchase foreign currency to travel aboard or acquire property outside the country. Many hold funds in other currencies to hedge a depreciating domestic currency, earn higher investment returns, guard against political risks at home, or “launder” the proceeds of criminal activities. Individuals are increasingly engaging in speculative currency trading as an alternative to investing in stocks or bonds. These commercial and individual clients usually buy and sell currency through a bank or independent currency broker. Reporting dealers support these banks and brokers by “making a market” in different currency pairs by offering bid-ask prices on an ongoing basis. The reporting dealer trades the currencies and earns the bid-ask spread on the transaction while the bank or broker charges a commission based on the value of the trade.

**Institutional investors.** These “real money investors” include insurance companies, leasing companies, sales financial units, mutual funds, exchange-traded funds, pension plans, and endowments that invest internationally to diversify their portfolios and earn higher returns for their clients. Regulators limit their ability to use financial leverage and derivatives to protect the less sophisticated investors who invest in these funds.

**Hedge funds and proprietary trading firms.** Professional investors often speculate on perceived short or long-term trends in currency prices at hedge funds or proprietary trading firms. Hedge funds follow a broad range of investment strategies including ones involving currency trading. They are not limited in their use of financial leverage or derivatives by regulators because they cater to more sophisticated high net worth individuals or institutions that better understand the risks and can more easily absorb any losses. Propriety currency trading firms, proprietary trading desks at banks, and high-frequency traders speculate for their own accounts and have no outside investors so they also require limited regulation. High-frequency traders use computer-based trading algorithms that involve frequent trades of short duration.

**Central banks.** A country may intervene in the forex market to influence the price of its currency if it feels it is either under or overvalued. A weak currency increases exports but may cause rising inflation and a lower standard of living as imports become more expensive. A strong currency lowers exports that may lead to reduced economic activity and higher unemployment. An unstable currency will make it more difficult for domestic companies to operate internationally causing greater business uncertainty and reduced economic activity. The foreign exchange reserves of the central banks of many developing and energy-rich countries have become quite large due to current account surpluses with most developing countries. These reserves are held primarily in USD and EUR, the forex market’s two most important currencies, so any attempt to reduce these reserves will have a major impact.

**Sovereign wealth funds**. Several energy-rich countries have diverted their current account surpluses into investment funds to increase returns instead of holding foreign exchange reserves. These funds are professionally managed and are operated much like “real money” accounts, although their government sponsors have greater influence over their investment and spending decisions.

**Public sector financial institutions.** International organizations such as the International Monetary Fund, World Bank, European Investment Bank, or Asian Development Bank, and domestic organizations like the Business Development Bank of Canada or the Export Development Corporation regularly buy and sell foreign currency to support development projects abroad.

Exhibit 6 provides a trading breakdown for reporting dealers according to the Triennial Central Bank Survey of Foreign Exchange Turnover in 2019.

**Exhibit 14: Reporting Dealer Trading Breakdown**

|  |  |
| --- | --- |
| **Counterparty** | **Proportion** |
| Other reporting dealers | 38% |
| Non-financial customers | 7% |
| Other financial institutions | 55% |
| Total | 100% |
|  | |
| Other financial institutions |  |
| Non-reporting banks | 24% |
| Institutional investors | 12% |
| Hedge funds and PTFs | 9% |
| Official sector | 2% |
| Other | 8% |
| Total | 55% |

Since the 2004 survey, there has been a significant increase in the proportion of other financial institutions transactions and a decline in the other two categories. More and more, these other financial institutions, particularly institutional investors, hedge funds, and PTFs, are trading using prime forex brokers. This type of broker acts as a middleman between smaller clients and the larger reporting dealers. Trades are made by the client with the prime broker who in turn makes the same trade with the reporting dealer. The prime broker serves an important role by giving smaller organizations direct access to the bid-ask quotations of multiple reporting dealers concurrently so they can secure the best possible price. Reporting dealers benefit by having the prime broker administer these smaller accounts and consolidate their transactions resulting in greater efficiencies.

**Foreign Currency Transactions**

Traders have three motives for engaging in foreign currency transactions. First is the transaction motive where the currency is traded to import goods and services, purchase fixed assets from a foreign supplier, repatriate profits, invest abroad in business operations or financial instruments, or raise needed financing overseas at a lower rate with potentially less stringent regulations. The second motive is to hedge a company’s operations or an investor’s portfolio to control the risks associated with currency fluctuations. The third motive is for investors to profit by speculating on currency movements. These speculators absorb the risks that hedgers are trying to eliminate.

There are four types of foreign currency transactions that make up the trading volume in the forex market. These include:

**Spot trades.** This is an agreement between two counterparties to immediately exchange specified amounts of two currencies at the prevailing spot rate. Spot trades are settled and the currency is delivered within two days, but this may occur faster for some currency pairs like the CAD/USD. The transaction motive is the primary reason for engaging in spot trades.

**Forward contracts.** This is an agreement between two counterparties to exchange specified amounts of two currencies in the future at a forward rate agreed on today. Forward trades are usually settled in 1 month, 3 months, 6 months, 9 months, or 12 months, but this period can be for just a few days or up to 10 years in the case of the four major currency pairs which include the USD and EUR, USD and JPY, USD and GBP, and USD and CHF. Forward contracts are sold primarily by banks and do not typically require an upfront payment, but if a client’s creditworthiness is questioned, a cash deposit or other collateral may be required. The forward contract sets out the currency pair, notional principal which is the amount of currency being traded, settlement date, and delivery rate which is the forward rate. Forward contracts do not have standardized terms, so they trade in the over-the-counter market and not on organized exchanges like future contracts. The counterparties to these contracts are interested in hedging a [foreign exchange](https://www.investopedia.com/terms/f/foreign-exchange.asp) position or speculating on currency movements.

Forward contracts can be settled by 1) having the counterparties deliver the currency to each other or 2) exchanging the difference between the delivery rate and the spot rate in cash when the contract is settled. For example, a Canadian exporter expects to receive USD 10 million in three months. The company plans to convert USD into CAD at that time, so the exporter is exposed to exchange rate risk that they decide to hedge. The exporter enters into a cash-settled currency forward contract to exchange 10 million USD for CAD after three months at a delivery rate of 1.2484 CAD/USD. This means it will exchange 10 million USD for CAD 12.484 million (10 million x 1.2484) after three months. What if the spot rate falls to 1.1837 CAD/USD after three months? If there were no forward contract, the exporter would receive CAD 11.837 million (10 million x 1.1837) by exchanging USD 10 million at the current spot rate. Since there is a forward contract, the exporter would receive CAD 12.484 million.

Under the terms of the contract, the other counterparty must compensate the exporter by making a cash payment equivalent to the difference between the delivery rate and the spot rate. The exporter will receive CAD 0.647 million (CAD 12.484 million – CAD 11.837 million) from the counterparty as a cash settlement. When the exporter converts the USD 10 million into CAD at the spot rate of 1.1837 CAD/USD, they will receive CAD 11.837 million instead of CAD 12.484 million, but the CAD 0.647 million received from the counterparty will increase their net proceeds to CAD 12.484 million. This the same amount that they would have received if they took delivery of the currency. If the USD instead strengthened to 1.2534 CAD/USD, then the exporter would have to make a payment of CAD 0.050 million (10 million x 1.2534 – 10 million x 1.2484) to the counterparty. When the exporter converts the USD 10 million into CAD at the spot rate of 1.2534 CAD/USD, it will receive 12.534 million, but the CAD 0.050 million paid to the counterpart would reduce its net proceeds to CAD 12.484 million. Regardless of the changes in the exchange rate, the exporter receives CAD 12.484 successfully hedging the transaction. The other counterparty is the speculator who attempts to profit from differences in the delivery and spot rates.

**Foreign exchange swaps.** This is an agreement between two counterparties to borrow one currency and lend another on an initial date, and then return them at maturity. In the first leg of the transaction, the equivalent amount of currency in their respective currencies is swapped at the spot rate. In the second leg, these amounts are returned at the agreed-upon forward rate.The amounts swapped serve as collateral for the lending agreement. For example, a Canadian company is planning to expand its operations in Europe and needs EUR. A European company needs CAD to expand its operations in Canada. The counterparties agree to swap 1,000,000 EUR. The agreement has a maturity of six months with a spot rate of 1.5076 CAD/EUR and a forward rate of 1.4830 CAD/EUR. The forward rate is lower as the CAD is expected to appreciate compared to the EUR over the next six months. Initially, the Canadian company receives EUR 1,000,000 and pays CAD 1,507,600 (1 million x 1.5076). At the maturity of the agreement in six months, the Canadian company pays EUR 1,000,000 and receives CAD 1,483,000 (1 million x 1.4830).

Foreign exchange swaps vary in length from one day to several months. Like forward contracts, they allow companies to lock in the forward rate to hedge foreign exchange risk. They also allow them to secure short-term loans in a foreign currency at a more favourable rate than if they borrowed in the foreign market themselves. The counterparties can first raise capital in their own countries at lower a rate and then swap the funds.

**Currency swaps.**  Like foreign exchange swaps, the two counterparties agree to exchange principal amounts in different currencies for a period and then repay them at an agreed-upon forward rate at maturity. With currency swaps, the counterparties also agree to exchange interest payments in different currencies for the same period. Both counterparties could pay either a fixed or floating rate, or one may pay a fixed rate while the other pays a floating rate. The counterparties use these agreements to hedge foreign exchange risk on both the principal and interest and others may hedge against interest rate changes by securing a fixed rate instead of a floating rate for the life of the agreement.

**Over-the-counter currency options.** Call or put options give the buyer the right, but not the obligation, to buy or sell another currency at a certain exchange rate or strike price on or before the specified expiry date. Currency options are used by companies to hedge exchange rate risk or speculate on currency movements. For example, a Canadian company agreed to buy two million shares of a British company for GBP 110 million with settlement in one month. The spot price is CAD/GBP 1.7327, but the company is concerned the CAD will depreciate against the GBP over the next month and it would have to pay more in CAD so it hedged the transaction. The CFO bought a call option to purchase GBP 110 million at a strike price of CAD/GBP 1.7327 that expires in one month. If the CAD did depreciate and the spot rate was CAD/GBP 1.7844 in one month, the Canadian company would pay CAD 196.284 million (110 million x 1.7844) to buy the shares, but would also exercise the call option and receive a payout of CAD 5.687 million (110 million x (1.7844 – 1.7327)). The net cost of buying the shares would be CAD 190.597 million (CAD 196.284 million – CAD 5.687 million) which equals the CAD 190.597 million (110 million x 1.7327) they would have been paid initially if settlement was not deferred. What if the CAD appreciated against the GBP and the spot rate was CAD/GBP 1.7100 in one month. The Canadian company would pay CAD 188.1 million (110 million x 1.7100) to buy the shares, but would not exercise the options contract as it would not be profitable. The net cost of buying the shares would only be CAD 188.1 million which is lower than CAD 190.597.

The protection provided by call or put options is different from forward contracts. In the example, the buyer of the call option is protected from a depreciating currency but still benefits if it appreciates. Options only have to be exercised if they are “in the money” which means the buyer of the option makes a profit. If the options are “out of the money,” the buyer will not exercise them. Why would the other counterparty agree to write an option if they had to compensate the buyer if the exchange rate moved against them, but did not receive anything if the exchange rate moved in their favour? The answer is options are not free. Buyers must pay option writers a premium to fairly compensate them for having to pay out on some contracts.

Consider an example of a put option. A Canadian company sold an asset to a British company for GBP 10 million and the transaction will be settled in one month. The spot price is CAD/GBP 1.7570, but the company is concerned the GBP will depreciate over the next month and it will receive less when it converts the proceeds into CAD. The CFO bought a put option to sell GBP 10 million at a strike price of CAD/GBP 1.7570 that expires in one month. If the GBP did depreciate and the spot rate was CAD/GBP 1.7350 in one month, the Canadian company would convert the GBP into CAD 17.350 million (10 million x 1.7350), but would also exercise the put option and receive a payout of CAD 0.22 million (10 million x (1.7570 – 1.7350). The net proceeds would be CAD 17.570 million (CAD 17.350 million + CAD 0.220 million) which equals the CAD 17.570 million (10 million x 1.7570) they would have received initially if payment was not deferred.

Using derivative securities including forwards, futures, options, and swaps to hedge foreign exchange rate risk is examined further in the Module: Risk Management and Derivatives.

**1.5 | International Risk Exposures**

With the abandonment of the gold standard in 1973, the values of major currencies have been allowed to float. A fixed exchange rate system was replaced by a flexible exchange rate system in most developed countries so exchange rates could rise or fall in response to local economic conditions or external shocks like hyperinflation, oil price increases, or global financial crises. The new floating rate system has responded well to these adverse conditions, but companies must now devote more time to managing exchange rate risk. Exchange rate risk is separated into transaction, economic, and translation risk. Companies that operate internationally are also exposed to political risk.

**Transaction risk.** When companies export products, they are normally paid in their own currencies, and typically pay for imports in the corresponding foreign currencies. Anytime companies agree to receive or make payments in a foreign currency in the future, they are at risk because the exchange rate may change between the initial date of the transaction and the settlement date resulting in a foreign exchange gain or loss – this is called transaction risk. As discussed, companies can hedge exchange rate risk using forward contracts, foreign exchange swaps, currency swaps, or over-the-counter options at little cost, but some businesses may decide not to hedge thinking that any gains or losses will eventually cancel out or that the firm can profit by speculating on exchange rate movements.

Under International Financial Reporting Standards (IFRS), unhedged exchange rate gains and losses are recognized. Unrealized gains or losses are recognized at the end of each accounting period, and an adjustment is made when the transaction is settled in subsequent accounting periods. For example, a Canadian company purchased merchandise for USD 100,000 from a U.S. supplier on September 1 with payment on December 1. The current exchange rate is CAD/USD 1.2486, but it was CAD/USD 1.2493 on December 1. The CAD has depreciated relative to the USD, so the Canadian company will experience a foreign exchange loss. The journal entries would be:

|  |  |  |  |
| --- | --- | --- | --- |
| September 1 | Purchases | CAD 124,860 |  |
|  | 1Accounts payable |  | CAD 124,860 |
|  | 1(100,000) (1.2486) |  |  |
|  |  |  |  |
| December 1 | Accounts payable | CAD 124,860 |  |
|  | 1Foreign exchange loss | CAD 70 |  |
|  | 2Cash |  | CAD 124,930 |
|  | 1(100,000) (1.2486 – 1.2493)  2(100,000) (1.2493) |  |  |

What if the transaction was not settled until February 1 when the exchange was CAD/USD 1.2489? The exchange rate on year-end on December 31 was CAD/USD 1.2498.

|  |  |  |  |
| --- | --- | --- | --- |
| September 1 | Purchases | CAD 124,860 |  |
|  | 1Accounts payable |  | CAD 124,860 |
|  | 1(100,000) (1.2486) |  |  |
|  |  |  |  |
| December 31 | 1Foreign exchange loss | CAD 120 |  |
|  | Accounts payable |  | CAD 120 |
|  | 1(100,000) (1.2486 – 1.2498) |  |  |
|  |  |  |  |
| February 1 | Accounts payable | CAD 124,980 |  |
|  | 1Foreign exchange gain |  | CAD 90 |
|  | 2Cash |  | CAD 124,890 |
|  | 1(100,000) (1.2498 – 1.2489) |  |  |
|  | 2(100,000) (1.2489) |  |  |

All foreign exchange gains or losses are included in the income statement and not in other comprehensive income, so they increase the volatility of net income and earnings per share. Companies have the choice of disclosing these gains or losses as either operating or non-operating expenses which will distort the operating profit margin ratio. The preferred treatment is to classify these transactions as operating expenses since they regularly occur and are part of normal business activities.

**Translation risk**. A corporation must issue consolidated financial statements that combine the assets, liabilities, revenues, and expenses of the parent company with its subsidiaries. For a multinational corporation, a subsidiary’s accounts are in a foreign currency so they must be translated into the parent company’s domestic currency first resulting in a currency translation adjustment in the parent company’s consolidated financial statements – this is called translation risk. A parent company’s domestic currency is usually the presentation or reporting currency that it uses to prepare its consolidated financial statements. It is also typically its functional currency which is the primary currency in which it generates and expends cash.

Foreign subsidiaries are translated using either the current rate method or the temporal method under IFRS. The current rate method is used to translate the financial statements of a subsidiary that operates autonomously in a different functional currency than its parent company, while the temporal method is used to translate a subsidiary that is operationally and financially integrated with its parent company and uses the same functional currency. An autonomous subsidiary typically sets its own prices, determines its costs, sells its products, and raises and services its debt. An integrated subsidiary usually sells its output to the parent company who directly controls most of its operational and financial activities. A German subsidiary of a Canadian construction company that negotiates its own contracts in Europe, completes all construction and raises and services its debt will likely be accounted for using the current rate method. A Mexican subsidiary of a Canadian company that assembles products using Canadian parts for re-sale in Canada will likely be accounted for using the temporal method.

Under the current rate method, the subsidiary operates autonomously so it is recorded at its fair market value like any other passive equity investment. All the subsidiary’s assets and liabilities are translated at the current exchange rate. Revenues and expenses are translated at the exchange rate when the transactions occurred, but the average exchange rate for the year is normally used for practical purposes. Common stock in the equity section of the balance sheet is translated at the historical exchange rate as it is the original cost of the parent company’s investment. The value of retained earnings from the previous year’s translation is used as beginning retained earnings and then adjusted for any adjusted net income. When using the fair value approach to account for an investment, a cumulative unrealized translation adjustment is shown as a separate component of shareholder’s equity to record any changes in the subsidiary’s value each period. If the subsidiary is sold, this cumulative amount is reported as an exchange gain or loss in consolidated net income.

Under the temporal method, the subsidiary is highly integrated with the parent so it is treated as part of its operations. All non-monetary assets and liabilities are translated at the historical exchange rate, while monetary assets and liabilities are still translated at the current exchange rate. Monetary assets and liabilities have a stated value that cannot change in the future. Monetary assets only include cash and accounts receivable, while nearly all current and long-term liabilities are monetary. Non-monetary assets such as inventory and land, building, and equipment are translated at the historical exchange rate to preserve the value of these assets as if the parent company had purchased them. This is appropriate given the subsidiary is an integrated part of the parent’s operations. If non-monetary assets are recorded at their current value which is allowed under IFRS, then the current exchange rate is used. Common stock, retained earnings, revenue and expenses are translated the same way as the current rate method with one exception. Expenses related to assets that were translated at the historical exchange rate like depreciation (i.e. fixed assets) or cost of sales (i.e. inventory) are translated at the historical rate. The translation adjustment is shown as an exchange rate gain or loss in consolidated net income because the subsidiary is an extension of the parent company’s operations which makes this gain or loss part of regular business operations.

Exhibit 7 summarizes the exchange rates used to translate a subsidiary’s financial statement using the current rate and temporal methods.

**Exhibit 15: Translating Financial Statement**

|  |  |  |
| --- | --- | --- |
|  | **Current Rate Method** | **Temporal Method** |
| **Assets** |  |  |
| Monetary assets | Current rate | Current rate |
| Non-monetary assets |  |  |
| Measured at historical cost | Current rate | Historical rate |
| Measured at current value | Current rate | Current rate |
| **Liabilities** |  |  |
| Monetary liabilities | Current rate | Current rate |
| Non-monetary liabilities |  |  |
| Measured at current value | Current rate | Current rate |
| Not measured at current value | Current rate | Historical rate |
| **Equities** |  |  |
| Common stock | Historical rate | Historical rate |
| Retained earnings | Beginning balance plus translated net income | Beginning balance plus translated net income |
| **Revenues** | Average rate | Average rate |
| **Expenses** |  |  |
| Most expenses | Average rate | Average rate |
| Expenses related to assets translated at the historical rate | Average rate | Historical rate |
| **Translation adjustment** | Adjustment to cumulative translation adjustment account in shareholders’ equity | Gain or loss in net income |

Exhibit 8 provides an example of the current rate and temporal methods. Cascade is a U.S. subsidiary of a Canadian company that has just completed its first year of operations. All fixed assets were purchased at the beginning of the year and no dividends were paid. It is translating its financial statements into CAD for inclusion in the parent company’s consolidated financial statements.

**Exhibit 16: Translation of Cascade’s Financial Statement**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Exchange Rates** | | | | | |
| **Date** | | **CAD/USD** | | | |
| 1 January, 2021 | | 1.2486 | | | |
| Average, 2021 | | 1.2161 | | | |
| Weighted average rate when inventory was acquired | | 1.2234 | | | |
| 31 December 2021 | | 1.1835 | | | |
| **Untranslated Financial Statements** | | **Translated Financial Statements** | | | |
| **U.S. Subsidiary** | | **Current Rate Method** | | **Temporal Method** | |
|  | **USD** | **Exchange Rate** | **CAD** | **Exchange Rate** | **CAD** |
| **Income Statement** | | **Income Statement** | | **Income Statement** | |
| Sales | 15,000,000 | 1.2161 | 18,241,500 | 1.2161 | 18,241,500 |
| Cost of sales | 11,250,000 | 1.2161 | 13,681,125 | 1.2234 | 13,763,250 |
| Gross profit | 3,750,000 |  | 4,560,375 |  | 4,478,250 |
| Selling expenses | 937,500 | 1.2161 | 1,140,094 | 1.2161 | 1,140,094 |
| Depreciation | 375,000 | 1.2161 | 456,038 | 1.2486 | 468,225 |
| Operating income | 2,437,500 |  | 2,964,244 |  | 2,869,931 |
| Interest expense | 337,500 | 1.2161 | 410,434 | 1.2161 | 410,434 |
| Income tax | 625,000 | 1.2161 | 760,063 | 1.2161 | 760,063 |
| Income before translation adjustment | 1,475,000 |  | 1,793,748 |  | 1,699,435 |
| Translation gain (loss) | N/A |  | N/A |  | 203,728 |
| Net income | 1,475,000 |  | 1,793,748 |  | 1,903,163 |
| **Balance Sheet** | | **Balance Sheet** | | **Balance Sheet** | |
| Cash | 1,662,500 | 1.1835 | 1,967,569 | 1.1835 | 1,967,569 |
| Accounts receivable | 1,125,000 | 1.1835 | 1,331,438 | 1.1835 | 1,331,438 |
| Inventory | 1,500,000 | 1.1835 | 1,775,250 | 1.2234 | 1,835,100 |
| Total current assets | 4,287,500 |  | 5,074,256 |  | 5,134,106 |
| Plant and equipment | 3,750,000 | 1.1835 | 4,438,125 | 1.2486 | 4,682,250 |
| Less: Accumulative depreciation | 375,000 | 1.1835 | 443,813 | 1.2486 | 468,225 |
| Total assets | 7,662,500 |  | 9,068,569 |  | 9,348,131 |
| Accounts payable | 562,500 | 1.1835 | 665,719 | 1.1835 | 665,719 |
| Total current liabilities | 562,500 |  | 665,719 |  | 665,719 |
| Long-term debt | 3,750,000 | 1.1835 | 4,438,125 | 1.1835 | 4,438,125 |
| Total liabilities | 4,312,500 |  | 5,103,844 |  | 5,103,844 |
| Shareholders’ equity |  |  |  |  |  |
| Common shares | 1,875,000 | 1.2486 | 2,341,125 | 1.2486 | 2,341,125 |
| Retained earnings | 1,475,000 |  | 1,793,748 |  | 1,903,163 |
| Translation adjustment | N/A |  | (170,148) |  | N/A |
| Total shareholders’ equity | 3,350,000 |  | 3,964,725 |  | 4,244,288 |
| Total liabilities and equity | 7,662,500 |  | 9,068,569 |  | 9,348,131 |

A subsidiary has a net asset balance sheet exposure when its assets translated at the current rate exceed its liabilities translated at the current rate. This occurs when a company adopts the current rate approach because all assets and liabilities are translated at the current rate and a firm’s assets should exceed its liabilities. A net liability balance sheet exposure means the liabilities translated at the current rate exceed the assets translated at the current rate. This occurs when a company adopts the temporal approach as cash and accounts receivable are usually less than current and long-term liabilities.

Whether a company has a net asset or liability balance sheet exposure is important because if a subsidiary’s foreign currency appreciates relative to the parent’s domestic currency and it has net asset balance sheet exposure under the current rate method, its assets will be worth more when they are translated into the parent’s domestic currency resulting in a favourable translation adjustment. If the subsidiary has a net liability balance sheet exposure under the temporal method and its foreign currency appreciates, its liabilities will be worth more when they are translated into the parent’s domestic currency resulting in an unfavourable translation adjustment. The reasoning is opposite if the subsidiary’s foreign currency depreciates. If the subsidiary has a net asset balance sheet exposure under the current rate method and its foreign currency depreciates, its assets will be worth less resulting in an unfavourable translation adjustment. If the subsidiary has a net liability balance sheet exposure under the temporal method and its foreign currency depreciates, its liabilities will be worth less resulting in a favourable translation adjustment. In the example in Exhibit 8, the USD depreciated against the CAD, so Cascade had an unfavourable translation adjustment of CAD 170,148 under the current rate method with a net asset balance sheet exposure. Cascade had a translation gain of CAD 203,728 under the temporal method with a net liability balance sheet exposure.

IFRS has clear rules for determining whether a subsidiary should use the current rate or temporal methods, so a company cannot usually change the classification of its subsidiaries to manage its translation risk. But it may be able to change the size of its net asset or net liability balance sheet exposures. For example, if a company is using the temporal method and expects its currency to appreciate, it could reduce its net liability balance sheet exposure by selling some fixed assets (i.e. non-monetary assets) for cash (i.e. monetary assets) making the net liability balance sheet exposure smaller. If a company expects its currency to depreciate, it could increase it net liability balance by issuing debt (i.e. a monetary liability) and using the proceeds to buy fixed assets (i.e. non-monetary asset).

The financial ratios of a foreign subsidiary are also affected by the method its parent company selects to translate its financial statements. A financial ratio will remain the same before and after translation if the numerator and denominator are translated at the same rate. Under the current rate method, all assets and liabilities are translated at the current exchange rate, so ratios incorporating just balance sheet accounts, such as the current ratio (i.e. current assets / current liabilities), will not change. Revenues and expenses are translated at the average exchange rate, so ratios incorporating just these accounts, such as the gross profit margin (i.e. gross profit/sales), will remain the same. Only ratios that mix balance sheet and income statement accounts, such as the total asset turnover ratio (i.e. sales/total assets) will change because the numerator and denominator are translated at different rates. More financial ratios will vary before and after translation under the temporal method because monetary assets, usually cash and accounts receivable, are translated at the current exchange rate while any other assets are translated at the historical rate unless they are measured at current value. Exhibit 9 calculates key financial ratios under the current rate method and temporal method for the example in Exhibit 8.

**Exhibit 17: Financial Ratios and Translation Methods**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Before Translation** | **After Translation**  **Current Rate Method** | **After Translation**  **Temporal Method** |
| **Current ratio** |  |  |  |
| (Current assets / Current liabilities) | 7.62 | 7.62 | 7.71 |
| **Accounts receivable turnover** |  |  |  |
| (Sales / Accounts receivable) | 13.33 | 13.70 | 13.70 |
| **Inventory turnover** |  |  |  |
| (Cost of sales / Inventory) | 7.50 | 7.71 | 7.50 |
| **Fixed asset turnover** |  |  |  |
| (Sales / Fixed assets) | 4.44 | 4.57 | 4.33 |
| **Debt to total assets** |  |  |  |
| (Total debt / Total assets) | 56.28% | 56.28% | 54.60% |
| **Gross profit margin** |  |  |  |
| (Gross profit / Sales) | 25.00% | 25.00% | 24.55% |
| **Operating profit margin** |  |  |  |
| (EBIT / Sales) | 16.25% | 16.25% | 15.73% |
| **Net profit margin** |  |  |  |
| (Net income / Sales) | 9.83% | 9.83% | 10.43% |
| **Return on assets** |  |  |  |
| (Net income / Total assets) | 19.25% | 19.78% | 20.36% |
| **Return on equity** |  |  |  |
| (Net income / Total equity) | 44.03% | 45.24% | 44.84% |

**Economic risk**. Transaction risk is the effect that exchange rate changes have on a firm’s payables or receivables that are denoted in a foreign currency. Translation risk is the effect that exchange rate changes have on a firm’s consolidated financial statements when it has foreign subsidiaries. Both these risks are short to medium term so they can be reliably estimated and potentially hedged.

Economic risk is the effect that long-term changes in exchange rates have on a business’s cash flows and the value of the firm. This risk is more difficult to estimate and financial hedging instruments like forward contracts are not as readily available long-term. Some companies instead employ operational hedging strategies, or natural hedges, where they adjust their operations to reduce economic risk. For example, if a Canadian company has significant sales in the U.S., it would experience a foreign exchange loss if the USD depreciated against the CAD. Instead of buying a forward contract to hedge this risk, the Canadian company could adjust its operations to borrow an equal amount in USD instead of CAD. A foreign exchange gain would be realized since it would take fewer CAD to pay back the USD loan. The foreign exchange gain and loss cancel out and the company would save any hedging costs. This strategy is called cash flow matching which involves matching all cash inflows (i.e. revenues) in another currency with an equal amount of cash flows (i.e. expenses or borrowing) in the same currency. Parties to a contract can also enter into a currency risk-sharing contract where they agree to share exchange rate risk if rates fall outside a certain range. Remember currency trading is a zero-sum game, so the winner will pay the loser and neither party will be worse off.

**Political risk.** When businesses expand internationally through exports or by establishing joint ventures or subsidiaries, they are exposed to more than just exchange rate risk. Political risk is the uncertainties companies face from political events or decisions made by foreign governments or courts that affect their rates of return. These risks are highest in developing markets, but they can also be a concern in advanced economies. Political risks include:

* Countries use currency restrictions to manage their fixed exchange rates which limits a company’s ability to service its foreign debts and pay other expenses.
* Repatriation of profits, dividends, or investment capital is strictly controlled.
* Governments and private companies purposely delay payments to their foreign suppliers.
* Restrictions are placed on the location of new facilities and foreign procurement and hiring to benefit the domestic economy.
* The strong role of the military and organized religion in government, a lack of leadership, frequent elections, political favoritism, corruption, and a strong national sentiment make operating difficult.
* High tariffs and quotas raise the cost and limit the availability of materials and supplies.
* Tax policies are biased against foreign businesses.
* Foreign ownership limits are set low to favour joint venture partners and other local investors.
* Expansionist monetary and fiscal policies or failed economic planning measures cause rapid inflation and economic instability.
* High national debt levels limit a country’s ability to pay its foreign creditors.
* An inefficient workforce and adversarial labour-management relations raise production costs and the frequency of strikes.
* Less friendly governments expropriate business assets, cancel import and export permits, do not honour contractual agreements, or adjust contracts in their favour.
* Business assets are damaged or seized and employees are taken hostage during periods of war, civil war, ethnic strife, terrorism, or high criminal activity.

Some companies ignore political risk treating it like an “act of God” over which they have no control. Others try to actively manage it by purchasing risk assessments from outside consultants or forming their own internal advisory committees made up of senior executives and local managers. Financial information companies provide short-term and long-term political risk rankings for different countries. For example, The PRS Group supplies extensive background information about each country, an 18-month and 5-year political risk forecast based on multiple risk factors, as well as more focused Turmoil, Financial Transfer, Direct Investment, and Export Market Risk Ratings. Samples of their reports are found on the PRS Group website.

Once a company enters a foreign market, it can take several steps to manage political risk.

* Establish a joint venture with a local partner instead of a wholly-owned subsidiary to overcome local resistance. The partner needs to be familiar with the local market and its business practices, popular with consumers, and be on good terms with government officials without being corrupt. A partnership with the government or a domestic bank is also an option if a local partner cannot be found.
* Recruit another major international corporation as a joint venture partner to pool the risks and give the partnership more clout when dealing with the government.
* Be a good corporate citizen by hiring local managers, sourcing materials locally, paying generous wages and benefits, selling products domestically, allowing local ownership in the company, and limiting the repatriation of profits and return of capital. Countries are introducing national entry control systems to regulate the inflow of investment capital and extract the most benefits possible.
* Corporations should borrow a significant portion of the funds needed domestically or from large international lenders to increase their bargaining power in any future dealings with the government. Governments are less likely to renege on their commitments if local investors will be hurt or major international lenders might cut them off from future borrowing. Also, the company should secure its loans with local assets only to minimize any potential losses.
* Structure the subsidiary’s business operations so they are dependent on the parent company. This gives the parent more bargaining power when dealing with the local government and makes their assets less likely to be expropriated. For example, they should have strong contractual agreements, licenses, and patents rights that are protected by international trade organizations like the WTO. Control important inputs, require further processing or assembly of the product in another country before the final sale, and manage transportation to external markets. This is difficult to accomplish with natural resource projects whose output can be easily sold in the global market once the extraction and processing facilities are completed. Public opinion is also more supportive of natural resource expropriation in developing markets as it is generally viewed as foreign exploitation.
* Purchase insurance or negotiate loan guarantees.

As discussed in the Permanent Debt and Equity Financing module, the Export Development Corporation (EDC) is a federal crown corporation established to promote domestic employment by providing businesses with export-related financing and insurance. It insures losses from:

* Bankruptcy or a refusal to pay by a foreign business or government.
* Contract cancellation or a failure to honour agreements.
* Cancellation of government-issued import or export permits.
* Foreign government limitations on the conversion of local currency or the transfer of funds out of the country.
* Foreign government moratoriums on debt repayment.
* Expropriation of assets by foreign governments or damages resulting from political unrest.

Private insurance is available to cover political risks, but the premiums are higher and the terms shorter than those offered by the EDC.

**1.6 | Financial Decisions in an International Setting**

Globalization greatly impacts financial decision-making. Large corporations with the help of their investment bankers often look abroad to invest surplus cash, secure temporary financing, negotiate term or mortgage loans, find venture capital, syndicate loans, place asset-backed securities, arrange project financing, or sell bond and equity issues. When evaluating capital projects in foreign markets, multinational companies must convert cash flow estimates into their domestic currency and adjust the cost of capital to reflect the added risk.

**International Financial Markets**

Large corporations raise debt and equity financing outside of their domestic markets to access additional funds at a lower cost, increase the marketability of their securities further reducing the cost, source capital in a less restrictive regulatory environment, or diversify their funding sources. When interest and principal payments are made in another country’s currency, companies can use these cash outflows to match cash inflows from the same country as part of an operational hedging strategy to manage exchange rate risk. Increasing a multinational corporation’s level of foreign ownership by selling equity overseas helps overcome nationalistic resentment as the company expands internationally and makes customers and employees in these new markets more loyal.

**Long-term debt financing.** There are two types of bonds in the international market – foreign bonds and Eurobonds. Foreign bonds are sold by a company in another country and are denominated in that country’s currency. These bonds are usually registered and underwritten by a syndicate of local investment bankers that adhere to domestic security regulations. Other than having a foreign issuer, they are the same as bonds sold by domestic firms. Foreign bonds are often referred to by a special name depending on what country the bonds are sold in such as Yankee bonds (U.S.), Maple bonds (Canada), Bulldog bonds (U.K.), Mathilda bonds (Australia), Rembrandt bonds (Netherlands), or Samurai bonds (Japan). Domestic investors in these countries use foreign bonds to diversify their portfolios by adding foreign content at a minimal cost while avoiding exchange rate risk, although political risk in the foreign country may still be a concern.

Eurobonds are more popular than foreign bonds because of their flexibility. They can be sold in any country other than the country whose currency the bonds are denominated in. For example, a Canadian company can sell Eurobonds denoted in USD in any country but the U.S. This allows the issuer to raise more capital at a lower cost and to possibly hedge USD cash inflows from other parts of its operations. Issuers can select any currency but most bonds are denominated in USD or EUR because of their popularity and stability. If bonds are denominated in USD, JPY, or GBP, they are normally referred to as Eurodollar, Euro-yen, or Euro-pound bonds. Some Eurobonds are issued in multi-currencies units that combine different currencies to lessen exchange rate risk. The name Eurobond is confusing as these bonds are often not denoted in the EUR or sold in a European country. Euromarkets such as the Eurobond, Eurocurrency, or Euroequity markets only refer to raising financing outside of a country’s domestic market. The prefix “Euro” is used because that is where these markets first originated, but now transactions occur around the world in many countries and currencies.

Eurobonds are sold primarily to sophisticated institutional investors who better understand their risks. As a result, they have lower issuance costs, are subject to fewer disclosure requirements, can be sold quicker, and have more flexible repayment terms compared to foreign bonds. Most Eurobonds are issued as bearer not registered bonds and the interest paid is not subject to any withholding taxes when distributed as these bonds are typically sold in tax haven countries such as Luxembourg. This gives the holders greater anonymity compared to foreign bonds. Eurobonds can be straight, floating-rate, convertible, zero-coupon, mortgage-backed, or dual currency bonds. Dual currency bonds pay principal in one currency and interest in another currency. For example, a company may issue Eurobonds in [USD](https://www.investopedia.com/terms/u/usd.asp) that pay interest in CAD but are redeemed in USD. Such bonds are attractive to borrowers who expect the CAD to depreciate in the near term, but who operate in USD and want to avoid long-term exchange rate risk.

Eurobonds are normally sold publicly but private placements are sometimes used. The Eurobond market is centered in Europe, particularly London, where new issues are sold to the offices of major international investment banks that resell them around the world. Initially, Eurobonds were issued primarily by large U.S. multinational firms, but increasingly smaller domestic and emerging market companies are using them to raise capital. Once issued, Eurobonds trade over-the-counter in major secondary markets in London, Amsterdam, Frankfurt, Zurich, Singapore, and Tokyo.

**Short-term debt financing**. The Eurocurrency market consists of large bank deposits made outside of the country that issues the currency in which the deposits are denominated. For example, a Eurodollar deposit is in USD and outside of the control of the U.S. banking system. Eurodollar deposits are the most common, but deposits can be in any currency such as the Euroyen (JPY), Euroswiss (CHF), Europound (GBP), or Eurocanadian (CAD). These deposits are made with large lending institutions or Eurobanks in major financial centres around the world who then lend the funds to multinational corporations and other borrowers. Interest rates are generally higher for depositors and lower for borrowers because of the economies of scale with these large transactions, the high creditworthiness of the borrowers, and no bank reserve or deposit insurance requirements on foreign deposits. Interest rates are also intentionally kept above U.S. domestic interest rates so there is a constant flow of funds into Eurocurrency deposits.

Lenders provide mostly short-term lines of credit and variable rate loans in different currencies, but they do extend Eurocredits which are long-term loans with maturities of more than a year. Large Eurocredits are often syndicated by multiple lenders to better manage credit risk. Interest rates are based on the London Interbank Offering Rate (LIBOR) plus an interest rate premium that reflects the size of the loan, its maturity, and the creditworthiness of the borrower. LIBOR is the benchmark interest rate at which major international banks in London will lend to each other on short-term loans.

Companies also issue Eurocommercial paper (ECP) which is unsecured and sold at a discount with maturities of up to a year similar to domestic commercial paper. Like Eurobonds, the ECP is denominated in a currency other than the currency of the country where the paper is issued.

**Equity financing.** Companies can normally issue shares in any country as long as they comply with domestic securities regulations. Firms may dual list their shares or simultaneously sell them in two markets at the same time to reduce their issuance costs. Canada and the U.S have a Multi-Jurisdictional Disclosure System (MJDS) where large firms can issue shares concurrently in both countries using the same documentation. Cross-listing is different from dual-listing as the company’s shares are sold in its domestic market first and then listed on a foreign stock exchange to provide greater liquidity. Euroequity is when companies sell their shares at the same time in more than two countries like Eurobonds.

American depository receipts (ADRs) allow foreign companies called sponsors to partner with U.S. financial institutions to sell their shares in the U.S. market. Sponsors incur lower issuance costs because of a simplified regulatory process. Each ADR entitles the investor to one or more shares of a particular foreign company and these trust units trade either over-the-counter (OTC) or on major stock exchanges just like the shares of other U.S. companies. ADRs are issued at three different levels.

**Level 1:** ADRs trade in the U.S. OTC market only. Foreign companies must only provide an English translation of their annual report that complies with their home country’s domestic securities regulations to qualify.

**Level 2:** ADRs trade publicly in the U.S. and consist of existing shares only. Foreign companies must provide an annual report that adheres to U.S. GAAP and follow the stock exchange’s listing requirements.

**Level 3:** ADRs consisting of new shares can be sold in the U.S which allows foreign companies to raise new equity capital. Reporting requirements for these public placements are similar to those followed by other U.S.-based companies.

Most sponsored ADRs are at Level 1, but companies may try to upgrade their status to Level 2 or 3, although most of the advantages of reduced regulation are lost at those levels. Unsponsored ADRs offered by the financial institution alone are much less common and are only allowed at Level I. Service charges may be levied on ADRs to compensate the financial institution. Global Depository Receipts (GDRs) allow companies to sell their shares to investors in two or markets, usually the U.S. and Europe.

**International Cost of Capital**

Developed countries are part of an integrated global economy that operates efficiently according to the interest rate parity theory. This theory states that investors will earn the same return on capital projects of equal risk in two different countries. A company in a developed country should be able to use its domestic cost of capital to evaluate a similar capital project in another developed country. Developing countries are less integrated and economically more unstable with greater political risk than developed countries. A company in a developed country cannot use its domestic cost of capital to evaluate a similar capital project in a developing country. It must be adjusted upward to reflect the project’s higher risk. Two models that incorporate the added risk are:

**Relative volatility.** The capital asset pricing model (CAPM) is used to estimate the cost of common equity for a capital project in a developed country but a ratio relating the higher volatility of the developing country’s equity markets to the lower volatility of the developed countries equity markets is applied to incorporate the added risk of undertaking the same project in a developing country.

kc = kf + Bc (MRP) ()

kc – Cost of common equity

kf – Risk-free rate

Bc – Beta of the firm

MRP – Market risk premium

**Country risk premium.** CAPM is used to estimate the cost of common equity for a capital project in a developed country but a country risk premium (CRP) is added to the MRP to incorporate the added risk of undertaking the same project in a developing country. Adding the CRP directly to the MRP in alternative 1 assumes the size of the CRP varies with the project’s market risk as measured by its beta. With alternative 2, the CRP is added to the cost of equity directly assuming the CRP is not affected by market risk.

Alternative 1 kc = kf + Bc (MRP + CRP)

Alternative 2 kc = kf + Bc MRP + CRP

The CRP is calculated as:

CRP = Sovereign yield spread (

The sovereign yield spread is the difference between the government bond yield in the developing country, denominated in the currency of the developed country, and the government bond yield with a similar maturity in the developed country. This spread measures the default risk differential for government bonds between the developing and developed countries. It is then adjusted by the ratio of the volatility of the developing country’s equity market to the volatility of the developing country’s bond market, denominated in the currency of the developed country, to determine the default risk differential for equity securities. Bonds that are denominated in the currency of the developed country are Eurobonds that are issued and repaid in the developed country’s currency. They are used to eliminate the effect of currency risk.

CRP is a popular method for incorporating the added risk of investing in developing countries, but there are potential problems. If a developing country is perceived to have a greater chance of defaulting on its government bonds, the sovereign yield spread may soar and it will become a less reliable measure of the additional risk faced by investors in the developing country. Developing countries may have no active stock market or an illiquid stock market where shares trade infrequently which will understate the annual standard deviation of the equity index lowering the CRP.

**International Capital Budgeting**

International capital projects are evaluated the same way as domestic projects with a few additional considerations. Special tax rules for foreign income and company practices relating to profit repatriation and transfer pricing can make estimating a project’s future cash flows difficult. Once the future cash flows are estimated, they must be converted into the parent company’s currency before determining the project’s net present value. As discussed, the parent company’s cost of capital must be adjusted upward if the project is in a developing country.

**Income tax.** In Canada, a foreign subsidiary’s profits are first taxed in the host country where it is located and then again in the parent company’s home country when the profits are repatriated. The parent company receives a foreign tax credit for any taxes paid to the host country to avoid double taxation but only if the two countries have negotiated a tax treaty. The tax credit is equal to the foreign taxes paid up to the amount of the Canadian tax liability. If the foreign tax rate is less than the Canadian tax rate, the parent company will pay taxes on the repatriated profits at the higher Canadian rate and receive a tax credit for the foreign taxes paid at the lower rate. In this scenario, the parent company pays taxes at the Canadian rate on its repatriated profits. If the foreign tax rate is higher than the Canadian tax rate, the parent company will pay taxes on the repatriated profits at the lower Canadian rate, but the tax credit is limited to the Canadian tax liability. In this scenario, the parent company pays more than the Canadian tax rate on its repatriated profits. To avoid this problem, Canadian companies are allowed to pool their foreign earnings from high-tax and low-tax countries to utilize any excess tax credits from high-tax countries, but if they cannot the tax credits are lost.

**Profit repatriation.** A parent company does not incur a tax liability in its home country until its subsidiary’s profits are repatriated. If the subsidiary has a lower tax rate than its parent, the parent may defer paying taxes and earn extra income until the profits are repatriated. If the subsidiary has a higher rate, profit repatriation may be delayed until the parent has enough profits from its low tax rate subsidiaries to pool their earnings and use any excess tax credits. To encourage repatriation, some countries have cut the domestic tax rate on foreign earnings. In 2017, the U.S. Tax Cuts and Jobs Act reduced the corporate tax from 35% to as low as 8% on repatriated profits for a limited period. A group of 130 countries making up over 90% of the world’s GDP have agreed to a 15% minimum corporate tax to prevent multinational corporations from “hiding” profits in low tax rate countries beginning in 2023. Tax haven countries do not have to raise their tax rates, but the countries where profits are earned are able to levy additional income taxes to bring the tax rate up to the 15% level.

**Transfer pricing.** If a foreign subsidiary has a higher tax rate than its parent company, the parent may intentionally increase transfer prices for raw materials sold to the subsidiary or lower transfer prices for products sold by the subsidiary to the parent to minimize taxable income in the high-tax jurisdiction. Most host country governments monitor these practices to ensure they receive a fair share of tax revenues. Host countries also limit the profits that parent companies can repatriate to increase domestic investment and support the country’s exchange rate by limiting the sale of its domestic currency. To circumvent these controls, the parent may again increase transfer prices for inputs sold to the subsidiary and decrease transfer prices for outputs purchased from the subsidiary to reduce the subsidiary’s profits

**Converting future cash flows**. Forward exchange rates involving major currency pairs are normally available from currency traders for up to five years but this period falls if minor currencies are involved. Most capital projects have lives that well exceed five years, so forward rates need to be estimated using the interest rate parity formula.

= ()t

- Return to the home country

– Return to the host country

t – Number of years

For example, if a parent company wants to estimate the 10-year forward exchange rate, they need the spot exchange rate (i.e. home currency/host currency) and returns on the 10-year government bonds in the home and host countries which can be estimated from each country’s yield curve. If these amounts were 1.2532, 2.45%, and 2.95%, the forward rate in 10 years is estimated to be 1.1936.

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**1.7 | International Financial Management at a Canadian Company**

To learn more about how international financial management is applied in practice, analysts should consult the investor relations or corporate information section of a company’s website. Here they provide important financial information for their stakeholders such as the annual report, consolidated financial statements, management discussion and analysis, annual information form, management information circular, and other disclosures. These documents can also be found on the System for Electronic Data Analysis and Retrieval (SEDAR) website sponsored by Canada’s securities regulators. In the U.S., similar reports are available on the company’s website or through the Electronic Data Gathering Analysis Retrieval (EDGAR) system hosted by the U.S. Securities Exchange Commission. Magna International provides a practical example of international financial management at a large corporation.

**Magna International**

Magna International is a mobile technology company that manufactures car and light truck systems, components, and tooling for all the major original equipment manufacturers (OEM) focusing on Europe, Canada, U.S., and China. It has approximately 168,000 employees, 335 manufacturing and assembly facilities, and 96 product development, engineering, and sales centers in 28 countries. The company is the world’s third-largest auto parts supplier and achieved record sales and profits of CAD 40.8 billion and CAD 2.3 billion and a return on equity of 19.7% in 2018.

**Exhibit 18: Magna’s Global Facilities**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Canada** | **U.S.** | **Mexico** | **South America** | **Western Europe** | **Eastern Europe** | **Asia** |
| Manufacturing / assembly | 50 | 58 | 31 | 13 | 82 | 36 | 65 |
| Product development / engineering / sales | 11 | 13 | 1 | 2 | 47 | 1 | 21 |

Magna is Canada’s premier multinational corporation. It is registered in Ontario under that province’s Business Corporations Act and has its headquarters in Aurora, Ontario. It began operations in 1961 and prospered first under the 1965 Canada-US Auto Pact, an early auto free-trade agreement, followed by NAFTA and then CUSMA. The company also expanded into Europe and China as these economies grew and free trade expanded particularly in the auto industry. The founder of Magna, Frank Stronach, immigrated to Canada from Austria in the 1950s, so Magna has a strong connection with Europe and a major presence in that market. China has become the world’s largest automobile consumer, so Magna has tried to expand its manufacturing and product development operations in Asia. Auto producers generally produce their vehicles on a just-in-time basis in the markets where they are sold, so suppliers have to establish manufacturing facilities there to shorten the supply chain and provide lower costs and faster delivery. Magna operates globally on a decentralized basis through autonomous divisions to increase its flexibility, customer responsiveness, and productivity. It employs many of the international financial management practices discussed in this module.

**Share listing.** Magna’s common shares are dual-listed on both the Toronto and New York Stock Exchanges. Currently, 77% of all shares are held in Canada and 23% in the U.S. despite having half its sales outside the North American market.

**Financial reporting.**  Magna’s reporting and functional currencies are the USD and it has adopted U.S. GAAP. The USD was chosen because it is the primary currency in which the company generates and expends cash in the global auto industry. Canadian companies who are registered with the Securities Exchange Commission also have the option to adopt U.S. GAAP instead of IFRS because they issue stocks and bonds in the U.S.

**Financing.** Magna’s temporary financing consists of a revolving credit facility of USD 2.75 billion that is syndicated globally among different lenders. The facility has separate tranches for its Asian, Mexican, Canadian, U.S., and European operations that can be drawn in CAD, USD, and EUR. It also has U.S. commercial paper and euro-commercial paper programs that the company and its wholly-owned subsidiaries can use to raise USD 500 million and EUR 500 million or the equivalent in alternative currencies. Magna’s permanent financing consists of senior notes, bank term loans, government loans, and real estate and equipment leases. The senior notes are issued primarily in the U.S. but are sold globally and are denominated in USD, EUR, and CAD. The bank term loans are in CNY, BRL, and INR, while the government loans are in EUR, CAD, and BRL.

**Transaction risk.** Magna is exposed to exchange rate risk when any of its manufacturing facilities contract to deliver products or purchase materials or equipment in a currency other than that facility’s functional currency. It hedges these foreign exchange exposures, which can extend over several years, using mostly forward contracts.

**Translation risk**. Magna translates the financial statements of its numerous foreign subsidiaries using the current rate method as they operate autonomously in a functional currency other than the USD. Translation gains or losses each year are recognized in the cumulative translation adjustment account in shareholders’ equity.

**Economic risk.** Magna acknowledges that significant long-term fluctuations in relative currency values, particularly the USD, CAD, EUR, and CNY, will have a major impact on its profitability and financial position, and may cause it to become uncompetitive in certain geographical regions. Forward contracts are not readily available for long-term periods, but companies do use operational hedging strategies to manage their economic risk. Magna uses cash flow matching where some of its repatriated profits in another currency are matched by borrowing in the same currency.

**Joint ventures.** Magna prefers to establish wholly-owned subsidiaries when entering foreign markets but has had to negotiate joint ventures with Chinese companies to enter that market. They realize that joint ventures have a range of risks, including failure of a joint venture partner to satisfy its contractual obligations; conflicts between partners; differing strategic and financial objectives; delays in decision-making; inability to implement company policies and practices; and not adhering to legal and regulatory requirements.

**Trade agreements and disputes.** Magna recognizes that it has greatly benefited from bilateral and regional free trade agreements, particularly in North American and Europe, that promote the free movement of goods, services, and capital between countries. It also indicates that its operations, profitability, and financial position would be greatly impacted by any attempts to limit free trade globally or by trade disputes between specific countries that reduce the demand for vehicles, interrupt global supply chains, impair the ability to make efficient long-term investment decisions, or increase financial market volatility. Magna also expresses concern that China will become an even greater competitive threat in the future due to its low production costs and improving product development and engineering capabilities. The Chinese government’s “Made in China” policy that encourages more domestic research and development will only accelerate this threat.

**Doing business in foreign markets.** Magna states that expansion into developing countries is an important part of its business strategy, but that it involves additional risks that could adversely affect its operations, profitability, and financial position. These risks may include “political, civil and economic uncertainty and instability; corruption risks; high inflation and the inability to recover inflation-related cost increases; trade, customs, and tax risks; expropriation risks; currency exchange rates; currency controls; limitations on the repatriation of funds; insufficient infrastructure; competition to attract and retain qualified employees; and other risks associate with conducting business internationally.”