

AG313 Assignment:

International Exchange Exposure

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1: Exposure to Foreign Exchange Risk & Effect on Cash Flows

1.1: Developed Markets

1.1.1: Intel

Intel Corporation is an American semiconductor manufacturer based in Silicon Valley, California – participating in a developed market. Intel is internationally diverse, operating in 46 countries around the US, Canada, UK, Asia, South America and Europe. All final Intel revenue is transacted in US\$ however, some operating expenses and capital purchases are transacted in Yen, Yuan and Euros. Much of their debt is also held in these foreign currencies. Additionally, purchase of manufacturing-materials (commodities) are executed in middle eastern currencies – commonly the Israeli Shekel (Intel, 2018). This therefore exposes Intel's cashflows to foreign/domestic exchange rate, interest rate and commodity price fluctuation/volatility when (1) buying materials, (2) manufacturing, (3) selling and (4) financing.

1.1.2: Nestlé

Nestle Group is the world's largest food and beverages company. It has a dominant global presence operating in 187 countries, producing goods from 403 factories located in 84 countries. (Nestle, 2020). As a result of its widespread supply chain, Nestle is susceptible to fluctuations in currencies thus transactional gains or losses arise. The Group is exposed to foreign currency risk through translation also. Despite revenue being generated globally, and with the greatest proportion (45%) being earned in the Americas, risks occur in the consolidation of financial statements. This is a consequence of the Group's headquarters being in Switzerland, thus on consolidation foreign operations reported in their functional currencies are converted into Swiss Francs (CHF), which are not hedged, therefore exposing a threat. (Nestle Group, 2020).

1.1.3: Volkswagen

Volkswagen is impacted greatly by transaction exposure in the FX market; they are a leading MNC in the car manufacturing market comprising twelve brands from seven European countries, Volkswagen Passenger Cars, Audi, SEAT, Bentley, Lamborghini, Porsche and Ducati to name a few (Group, 2020). As a result of their size and the company base being spread globally they have liabilities from import and export of their cars and car parts and their revenues from sales of their product which are constantly being traded in sixteen different currencies and once translated into Euros, their home currency, the exchange rate effects have always proven costly from some regions. SEAT and Bentley are two examples where Volkswagen seen negative exchange rate effects on their operating profit in 2018, however some brands such as Scania take advantage of positive exchange rates from Pound to Euro. In 2019, Volkswagen forecasted that a 10% appreciation in dollar could result in a 449 million loss in earnings after tax, whereas a 10% depreciation could result in a 449 million increase in earnings after tax (Full Speed Ahead to The Future, 2020).

1.1.4: Hennes & Mauritz

H&M is a Sweden multinational company, which is considered to be one of the largest fashion producers with about 3100 stores across 53 countries (Shen, 2014). The company is considered to be one the most valuable companies in the world. Due to the international exposure, the company operates in many different foreign currencies. In other words, half of the company deals are made in Euros. Which makes the variance of the exchange rate for the company one of the major risks that the company could undergo due to the fluctuation of the exchange rate (dos Santos, 2015).

1.2: Emerging Markets

1.2.1: America Movil

America Movil is the top supplier of integrated telecommunication facilities in Latin America. (America Movil, 2020) Although America Movil operate in an emerging market they offer their telecommunications services in 25 countries in Latin America, U.S and Central and Eastern Europe. America Movil report their finances in their home currency, Mexican Pesos (MXN). In 2018, 83.5% of America Movil's total revenue came from subsidiaries based out with Mexico. With the significant majority of America Movil's revenue stemming from exports of their telecommunication services, the business is susceptible to exchange rate fluctuations against the Mexican Pesos (MXN). The effect of operating in foreign currencies can be seen as in the same year America Movil lost MXN\$7.26 million from foreign exchange transactions. (America Movil, 2018)

1.2.2: Gazprom

Gazprom is a Russian based company, supplying gas to over 30 countries. Gazprom use their home currency, Russian Ruble (RUB) when recording transactions in their annual report. 61.6% of Gazprom's revenue and 47.9% of cost of sales and selling expenses come from outside Russia. (Gazprom, 2019). As the bulk of Gazprom's revenue come from export transactions for the sale of oil and petroleum products, the organisation's financial and business activities are affected by changes in currency exchange rates against the RUB. In addition to transactional exposure, Gazprom is also subject to translational exposure on its net investments in foreign operations (Gazprom, 2018).

1.2.3: Naspers

Naspers is a South African based internet group that is one of the largest technology investors in the world. They invest in and create companies across Africa, Europe, Asia and North and

South America, reaching over a billion people globally (Naspers, 2019). In 2016, over 70% of Naspers revenue was sourced from out with South Africa, this caused Naspers to change their reporting currency from South African rand (ZAR), to the United States Dollar (USD) (Naspers, 2016). Naspers' cashflows are therefore highly impacted by foreign exchange rates due to the high levels of transactions that occur between foreign countries. This impact can be seen on the cash flows in 2018 and 2019 as the foreign exchange translation adjustment was \$58 million and -\$133 million respectively (Naspers, 2019).

1.2.4: Samsung

Samsung is a South Korean company, considered to be one of the world's largest electronic devices producers. They produce a variety of consumer and industry electronics and has become one of the most known names in technology, producing about a fifth of South Korea's total exports (Bondarenko, 2018). The company operates globally, having subsidiaries all over the world including Korea, America, Europe, Africa, China and rest of Asia. Due to the international exposure, the company operates in many different foreign currencies which causes different kinds of exposures or risks. One of them is market risks, which is related to the foreign exchange fluctuations. In addition, credit risk and liquidity risk are also a concern (Samsung, 2016). If cash flows are likely to be changed because of changes in exchange rates, this form of Foreign Exchange Exposure is said to be a transaction exposure (Robert et. Al, 2010).

1.2.5: Vale

Vale are a Brazilian company operating in the iron and steel industry. Their aim is to transform natural resources into sustainable developments across different parts of the world (Vale, 2020). Vale being one of the largest mining companies in the world, they have operations across 27 countries. Due to operating in many countries Vale's cash flows are volatile to

different countries' – with their products being mostly priced in the US dollar. On the other hand, their costs and investments are priced in other currencies such as the Brazilian real and the Canadian Dollar (Vale, 2018). Therefore, Vale's foreign exchange gains or losses have changed each year depending on the strength of the Brazilian real against other currencies such as the US dollar and the Canadian Dollar.

1.3: Frontier Markets

1.3.1: Hon Hai Precision

Hon Hai Precision is also known as Foxconn Technology Group is a global nanotechnological development and manufacturing company based in Tucheng, Taiwan (Financial Times, 2020). They are the world's largest supplier of these services, with operations in Asia, South America, North America and Europe. Exporting products to some of the biggest technology companies all over the world. Hon Hai Precision's consolidated financial statements are presented in NTD (Foxconn Technology, 2019). Due to the global dealings of their business, Hon Hai Precision is heavily exposed to both transaction risk which arises from foreign exchange rate fluctuations and translation exposure when they have to convert foreign currencies into their functional currency. Gains and losses resulting from the settlement of these transactions are reported in the statement of comprehensive income. In 2017 they gained 39,898,000 NTD (1.3 million USD) from foreign exchange fluctuations and lost 713,184,000 NTD (23.4 million USD) in 2018 (Foxconn Technology, 2019). The primary foreign exchange risk emerges from translating USD to NTD and USD to RMB.

2: Management Practices for Foreign Exchange Risk

2.1: Developed Markets

2.1.1: Intel

Intel hedge against risk of forecasted non-US\$ cashflows, investments and material (commodity) purchases by entering foreign currency forward/futures contracts which give them greater certainty of price-paid and lower volatility. They hold derivative equity of \$1.4bn as of 2018 and use historic volatility analyses to monitor usage. Intel data suggests an average 20% change in exchange rates could have decreased 2018 EBT by \$46m without these hedging methods. Thus, non-US gains/losses were offset by according hedging tools (Intel, 2018). To combat exposure through fixed-rate investment folio and debt financing, Intel aim to follow 3-month LIBOR by entering interest-rate-swaps which convert outstanding fixed-rate, maturities remaining greater than 6-months, to 3-month US\$ LIBOR. Intel predicted that with a 1% increase in interest rate post-hedge, their investment folio value would have fallen by \$110 in 2018. With the same interest rate change, Intel predicted that swapping fixed-rate debt for floating-rate saved them from a \$215m increase in outstanding debt from 2018.

2.1.2: Nestlé

The organisation uses financial derivatives instruments to mitigate foreign currency risk. This comprises mainly of currency forwards, options and swaps, commodity futures and options and interest rate forward, futures, options and swaps. Nestle manages transactional exposure by maintaining a prudent and systematic hedging policy complimenting the Groups specific business requirements. The Group uses both fair value and cash flow hedges. Fair value hedges are utilised in order to alleviate foreign currency rate risks, whilst cash flow hedges focus on mitigating the risk associated with forecasted transactions. The importance of derivatives to the

group can be highlighted simply by their scale- in 2019, the Nestle Group had 18,724 million derivatives accounted for in their financial statements.

2.1.3: Volkswagen

Volkswagen takes great precedence in managing their exposure to foreign exchange rates; their large diversity of products in many different countries is one important strategy used to minimise the negative effects of exchange rates by spreading their exposure. Another strategy used is hedging exposure; where Volkswagen states that ‘primarily foreign exchange gains come from the fair value measurement of financial instruments used to hedge exchange rates and commodity prices’ (Full Speed Ahead To The Future, 2020).

1.1.4: Hennes & Mauritz

To reduce the risk of the fluctuation of the exchange rate the company uses hedging. H&M hedge using the forward contracts, in other words, the exchange rate would be stable and therefor the profit would increase due to the reduction of risk (H&M, 2019).

2.2: Emerging Markets

2.2.1: America Movil

America Movil appreciate that with the majority of their revenue being exposed to exchange rate fluctuations they have to try and limit the risk as much as possible. They have done this by entering in to derivative contracts in over-the-counter transactions. (America Movil, 2018) Some of these include forward exchange contracts and cross currency swap arrangements. This allows America Movil to reduce the risk of operating in numerous foreign countries by fixing the price of an asset they intend on purchasing and protecting themselves from foreign exchange rate fluctuations on current investments.

2.2.2: Gazprom

To manage transactional exposure, the currency structure of Gazprom's liabilities and revenue are a means of hedging this currency risk. The balanced structure of assets and liabilities in foreign currency compensate one another, minimising the impact of currency market factors (Gazprom 2020). Gazprom also use derivatives to fix the functional currency value of non-functional currency cash flows. There are also restrictions in place for the level of open positions allowed (Gazprom, 2018). Whilst no formal hedging policy is in place to manage translational currency risk, budgeted exchange rates are set and monitored against group performance by management.

2.2.3: Naspers

Naspers understand that they have an extremely high exposure to foreign exchange risks, and they have treasury policies in place to deal with and try to minimise these risks. They use forward exchange contract and cross currency swap agreements to reduce their exposure. The forward exchange contracts help minimise the risk by protecting the group from changes in foreign exchange rates by fixing the price that an asset will be bought at. Cross currency swap agreements are used to minimise the risk by safeguarding the company from changes to foreign exchange rates on investments in foreign countries (Naspers, 2019).

2.2.4: Samsung

To reduce foreign exchange risk arising from operating activities, Samsung's foreign exchange management policy requires current transactions like imports and exports. In addition, the company keep tracks of all the receivables and payables that are in foreign currencies will be converted into the local currency and the impact such conversion will have on the company's profitability positions. The main techniques and instruments that are used are Hedging Techniques which can be classified into Natural Hedging and Financial Hedging (Kim &

Redmond, 2017). Natural hedging technique helps to reduce the difference between cash inflows and cash outflows when dealing in a particular foreign currency. Financial hedging technique used the purchasing of forward contracts, future contracts, swaps and currency options.

2.2.5: Vale

Vale try and combat the potential impact on their cash flows from currency volatility through hedging transactions. Vale will use other derivative instruments such as swap and forward contracts to transfer the debt related to the Brazilian real and will convert it into the US dollar to offset the volatility of the exchange rates. In 2017, Vale changed their debts from the Reais to the US dollar to mitigate any risk from foreign exchange. This comes after Vale saw a considerable loss on their derivative value from \$454m to -\$266m. Vale also use LIBOR as a derivative index for the exposure of loans and financing. Vale's loans mainly consist of export pre-payments and multilateral organisation loans (Vale, 2018).

2.3: Frontier Markets

2.3.1: Hon Hai Precision

Hon Hai Precision understand that they are very susceptible to foreign exchange risk, hence they utilize an extensive financial risk management team to try to identify and mitigate as much of the risk as possible that arises from foreign exchange volatility. The company make use of various derivative instruments to try and minimize their foreign exchange risk by entering into cross-currency swap contracts, foreign exchange contracts and forward foreign exchange contracts that aim to satisfy the company's capital requirement (Foxconn Technology, 2019). In 2018 the company had cross-currency swap contracts selling TWD and buying USD worth 11,795,950,000 NTD (387 million USD) and had foreign exchange contracts totalling 5,554,831,000 NTD (182 million USD) (Foxconn Technology, 2019). Due to the sheer value

of these contracts, Hon Hai Precision want to diminish foreign exchange risk as much as possible, because it can have a substantial impact on the company's cash flows.

3: Cross-Company Comparison

3.1: Developed Markets

It's clear that developed market present far more debt financing, asset purchases, leases and other loans – especially in the context of foreign currencies. This will frequently be due to the exploitation of exchange rate opportunities in seek of minimising costs. Companies operating in developed markets often have the confidence to do this due to belief in the support of their domestic economies, meaning they are willing to make very large transactions in foreign currencies, with great implied risk. Companies operating within a developed market therefore, very frequently hedge risk using various derivatives. The fact that developed market companies translate earnings each year into domestic currency for consolidation, is aided by these derivative methods as gains/losses are offset accordingly. Furthermore, transparency in the relative domestic markets leads to more credibility and therefore long-term relationships with investors (Gaston Gelos, Shang-Jin, 2002). This means the cycle of investment, high foreign debt transaction, and return to domestic currency, will continue – with perhaps less perceived risk. In the case of most developed market companies, imports are seen to be very large – sometimes even larger than exports. This is due to the fact that many of these companies import sometimes more materials to produce their goods than they do; export final goods. The volume of demand in the relative domestic countries also contribute cases in which products are circulated in their domestic countries post-manufacture. This implies that much of the transaction exposure comes at the naturally more risky stages, i.e. when producing – importing materials and debt financing. Hence, the frequent use of spot exchange rate options and floating debt transformation to minimise risk when dealing with risky debt, for example. The developed companies in question often are not exposed to extremely risky currencies (i.e. unstable markets) but discussed methods can help protect against such events.

3.2: Emerging Markets

The most common method of combatting risk within emerging markets is observed to be contracts coming from the forward market and spot exchange rate purchases. This is primarily due to the fact that high volumes of trading – that is selling their final products – takes place in foreign markets. This highlights the idea that exports are often greater than imports in companies operating in emerging markets. We know that this is due to less demand for high quality goods and services in economically less developed areas. Forward contracts and spot ERs are therefore used in these emerging market companies to protect themselves against exchange rate fluctuations and significant future volatility, especially in the context of receiving cash flows for the purchase of their goods. Especially in the context of many emerging companies where there is a higher volume of cash in-flows in foreign currencies than there are in the relative domestic currency. In theory, the unnormalized ratio of number of countries traded to value of derivatives is lower in emerging markets (countries operated in are lower; value of derivatives vary around a roughly equal mean) as emerging markets must take further precautions when intaking cash flows and even consolidating income in foreign currencies.

3.3: Frontier Markets

Again in frontier markets, exports are often greater than imports for the same reasons as seen previously – cash in-flows are sometimes greater in foreign currencies due to less demand in the domestic (frontier) country of origin. In these markets, it is very difficult to maintain consistent projections of future trading as there is huge reliance on more economically developed (i.e. developed markets) being interested in their products/services. Frontier markets attempt to engage in many of the same contracts and swaps etc. which more advanced markets do however, they often invest far more funds in these strategies as their cash flows will

be impacted significantly more than advanced markets'. This is reinforced when observing Hon Hai Precision's \$387 worth of exchange rate swap contracts and their \$182 worth of foreign exchange contracts.

5: Conclusions

Research, also in the context of intuition, says that companies operating in all developed, emerging and frontier markets are exposed to foreign exchange risk. On the surface, we observe developed markets being more-so exposed through purchase of debt, assets, materials and other imports etc. in foreign currencies, where emerging and frontier markets expose themselves to exchange fluctuation risk in the context of cash inflows where they rely on exporting goods and services to foreign – frequently more developed – markets. Developed companies use their leverage and financial position to utilise more overseas development, manufacturing and distribution hubs etc. and therefore find themselves using forward/futures contracts and currency exchange spot rates to protect against cash outflows upon indebteding etc. and inflows upon receipt of purchase. These methods have been proven to be significantly positively impactful when observing final consolidated income. Emerging markets also use various forward contracts and ER swaps however, primarily to protect against inflows – as many of them rely on high volumes of exports to more advanced markets (who have more leverage). Emerging markets are therefore often seen to expend similar amounts of cash on hedging strategies, as developed markets. Even when trading in far less currencies. Frontier markets follow suit to a close degree, regarding emerging markets. Simply on a smaller and more volatile scale.

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6: Appendices

6.1: Market & Industry Type

Company	Market	Industry
Intel	USA: Developed	Semiconductors
Nestlé	Switzerland: Developed	Food Processing
Volkswagen	Germany: Developed	Auto & Truck Manufacturing
Hennes & Mauritz	Sweden: Developed	Apparel
América Móvil	Mexico: Emerging	Telecommunications Services
Gazprom	Russia: Emerging	Oil & Gas Operations
Naspers	South Africa: Emerging	Broadcasting & Cable
Samsung	Korea: Emerging	Technological Manufacturing
Vale	Brazil: Emerging	Iron & Steel
Hon Hai Precision	Taiwan: Frontier	Nanotechnological R&D