

BAFI3200-International Finance

ASSIGNMENT 3



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I. Comprehensive analysis & country risk assessment

In Philippines, snacking industry is expected to grow at CAGR of 8% in 2024-2028 (USDA 2024), evident by 70% of Filipino consume snacks once a day, usually as afternoon snacks (Serafico et al. 2023). Savory snacks dominate 70% of market, with savory biscuits leading at 25% and soft cakes less than 1% (Figure.1). Sweet snacks comprise 30%, with filled biscuits holding 40% (Figure.1). 63% of Filipinos prioritize nutritional benefits (fiber, natural ingredients) in snacks, similar to ASEAN's taste, especially Vietnam (60%) (Table.1). Thanks to zero-tariff trade agreement with ASEAN members, it can fulfill 80% of Filipinos snacking market (Ruiz et al. 2023; USDA 2024).

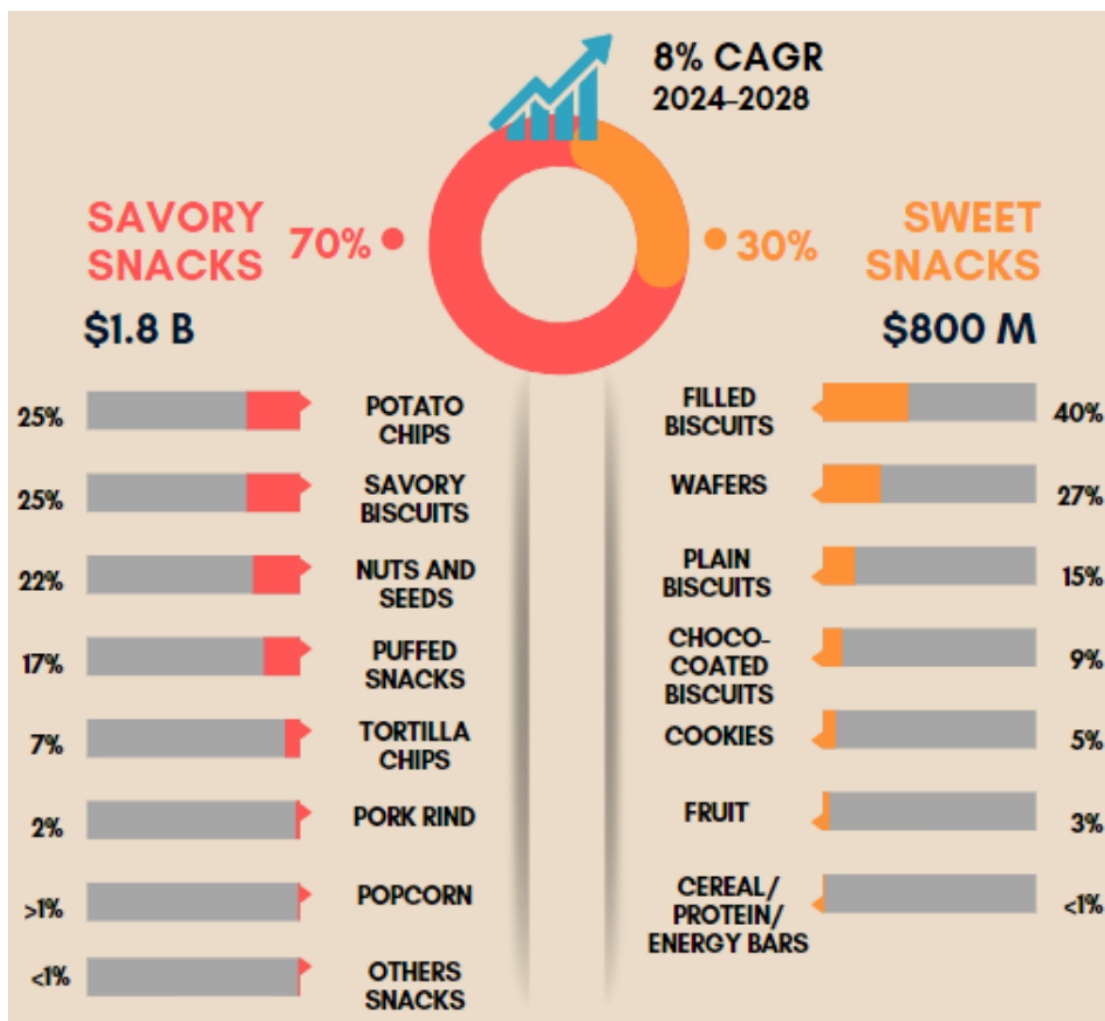


Figure 1. *Snack Foods Market Brief in Phillipines, adapted from USDA (2024)*

Ratio of Snacks Taste Preference Similar to Philippines	Ratio
Vietnam	60%
Indonesia	56%
Malaysia	49%
Thailand	45%

Table 1. *Ratio of Snacks Taste Preference Similar to Philippines, adapted from NIQ (2024)*

Yet, Philippines shows barriers for snacking MNCs to launch business in. Philippines' Economic Zone Authority facilitates investments, offering incentives to export-oriented businesses and service facilities inside selected areas in Special Economic Zones (PEZA 2024). However, this scheme is undermined by Philippines' heavy reliance on remittances, comprising 8.5% of GDP and 7.7% of GNI (BSP 2024), making it vulnerable to external challenges like ongoing Russia-Ukraine and Israel-Palestine wars (Allianz 2024). Besides, Philippines has highest coporation income tax rate and sales tax rate in ASEAN, 25% and 12%, respectively, impactfully eroding MNCs' profit margin in Philippines (Medina 2024; Table.2). Filipinos' high corruption perception (corruption perceptions index ranked 116th out of 180 countries in 2022) and its strict bank secrecy can cause complex due diligence and high compliance costs for MNCs, requiring specialized expertise to satisfy regulatory requirements and protect sensitive information (Coface 2024; Siao 2024). Besides, Philippines's high-level of bureaucracy inducing excessive regulations and paperwork can delay approvals for setting up operations, securing licenses, or making business decisions (SOA 2024). Conclusively, these risks can exacerbate costs of establishing offices and distribution networks in Philippines; yet, Mondelez Kinh Do (MKD)'s viability can be good thanks to Philippines' preference to try imported snacks as aforementioned.

Countries	Sales Tax Rate
Vietnam	10%
Indonesia	11%
Malaysia	10%
Thailand	7%
Singapore	9%

Table 2.

Countries in ASEAN

– Sales Tax Rate comparision, adapted from PwC (2024), IRAS (2024), Avalara (2024)

II. WACC

a. Lending Option

Borrowing in VND aligns with local costs, mitigating currency fluctuation risks on operational expenses. For urgent production expansion, securing loans in Vietnam helps meet immediate needs. Although converting earnings to PHP may expose MNCs to exchange rate risks, hedging can offset this. Ultimately, reducing input costs upfront is a more effective long-term strategy than relying solely on financial tools like hedging. Also, Vietnam's interest rate (6.05%) is lower than the Philippines' (6.212%) (SBV 2024; Ceicdata 2024), combined with strong credit history and relationships with home-country financial institutions, enabling MNCs secure even better borrowing terms. Additionally, MNCs may benefit from favorable tax treatment, such as lower corporate income and sales tax (Table 2 & 3), and government incentives for local production, especially when Kinh Do belongs to Vietnam. Thus, MKD should borrow from Vietnam's banks at 6.05% with 7-year loan tenure, with estimated total interest payments in 7 years depicted in Table.3.

Category	Philippines	Vietnam
Lending Rate	6.21%	6.05%
Total Interest Payment in 7 Years	\$ 1,999,620.00	\$ 1,948,100.00
Referenced Banks	BSP	SBV

Table 3. Lending Rate Comparison, adapted from Ceicdata (2024), SBV (2024)

b. Discount Rate

Since the final products are exported to the Philippines, revenues are in PHP, data to execute WACC will be in Philippines market.

Cost of Equity Components	Value	Details
Risk-free rate of return R_f	6.13%	Risk-free rate is taken from Philippines' Government Bond yield, aligning with risk-free rate of Philippines (MacroMicro 2024).
Market Return R_m	8%	The expected market return is assumed to align with CAGR in the next 7 years (USDA 2024).
Beta of Stock β	0.405	Taken from TradingView (2024).
Cost of Equity	6.887%	This cost of equity incorporates Philippines opportunities and threats for the development of Mondelez's distribution network.

Table 4. Cost of Equity

$$\begin{aligned}
 \text{Cost of Equity } (R_E) &= R_f + \beta(R_m - R_f) = 6.13\% + 0.405 \times (8\% - 6.13\%) \\
 &= 6.887\%
 \end{aligned}$$

- k_e = required return on stock
- R_f = risk-free rate of return
- R_m = market return
- B = beta of stock

Since subsidiary in Philippines mirrors parent company's structure, deploying similar debt and equity weights and costs structure ensures consistency in financial assumptions (FMLP 2024).

$$\text{Discount rate} = \left(\frac{E}{V} \times R_E \right) + \left[\left(\frac{D}{V} \times R_D \right) \times (1 - T) \right]$$

WACC variables	Value	Sources
Weighted Equity ($\frac{E}{V}$)	83.760%	FMLP (2024)
Cost of Equity (R_E)	6.887%	Self-calculation
Weighted Debt ($\frac{D}{V}$)	16.240%	FMLP (2024)
Cost of Debt (R_D)	3.470%	FMLP (2024)
Tax (T)	25.000%	IRAS (2024)
Discount Rate	6.191%	Self-calculation

Table 5. WACC Variable summary for MKD

Conclusively, Mondelez's future CF is discounted at 6.191%, indicating MKD needs to attain minimum 6.191% return on its investments to cover its debt and equity costs.

III. Exchange Rate Forecast

To forecast PHP/USD, VND/USD, macroeconomic variables models are adopted as it has close relationship with change in exchange rate, supported by empirical studies:

Macroeconomic Variables	Expected Sign	Effect on Exchange Rate
Inflation Rate Differential	+ or -	Depreciation if home country owns higher inflation, inducing decrease in demand for its currency; Appreciation if home country has lower inflation, making its currency more attractive (Stylianou 2023).
Interest Rate Differential	+ or -	Currency appreciation because of higher interest rates attracting capital inflows; yet, Lower interest rate depreciates currency exchange rate owing to less demand for currency (Liao 2020).
Relative Trade Balance Change	+ or -	Depreciation if a country has a trade deficit, as it raises supply of the home country's currency in the forex market; Appreciation if a country has trade surplus, as it increases the demand for the home country's currency (Cheng 2020).

Relative Foreign Reserves Change	+ or -	Appreciation if foreign reserves increase, signaling confidence in currency; Depreciation if foreign reserves decrease, potentially signaling economic instability or currency crises (Ito McCauley 2020).
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Table 6. Variables in Macroeconomic Model

a. PHP/USD & VND/USD Forecast

Key Regression Output	
Change in PHP/USD	Change in VND/USD
Model owns Adj R2 of 3.3%, reflecting that 96.7% of PHP/USD change is explained by factors outside of chosen variables. The result discovered that Lagged Interest Differential are significant at 90% confidence level with p-value of 0.097870936.	Model owns Adj R2 of 1.05%, showing that 98.95% of VND/USD change is explained by attributes outside of chosen variables. No variables are found significant to the model, yet, Lagged Interest Differential's p-value of 0.455645013 was the only variable lying in 50% confidence level.
$\Delta(\text{PHPUSD})_t$ $= -0.050539063$ $- 0.0537196\Delta\text{TB}_{t-1}$ $- 0.30351456\Delta\text{INF}_{t-1}$ $+ 0.01007887\Delta\text{IR}_{t-1}$ $+ 0.00567922\Delta\text{FR}_{t-1}$	$\Delta(\text{VNDUSD})_t$ $= -0.3129497$ $- 0.3014677\Delta\text{TB}_{t-1}$ $- 0.96065929\Delta\text{INF}_{t-1}$ $+ 0.00283392\Delta\text{IR}_{t-1}$ $- 0.0046874\Delta\text{FR}_{t-1}$

Table 7. Key Regression Output for Change in PHP/USD and VND/USD

PHP/USD Macroeconomics Model Backtest Errors	
Mean Absolute Error	Mean Squared Error
0.011677542	0.0002271899
VND/USD Macroeconomics Model Backtest Errors	
Mean Absolute Error	Mean Squared Error
0.005288099	0.0064616309

Table 8. MAE, MSE for PHP/USD and VND/USD forecasted values

Overall, errors for both models are minimal, reflecting moderate accuracy level to 2 models regarding predicting PHP/USD, VND/USD (Table.8). However, real-life

events are also considered to make the models more convincing and worthwhile to forecast in 2025-2031.

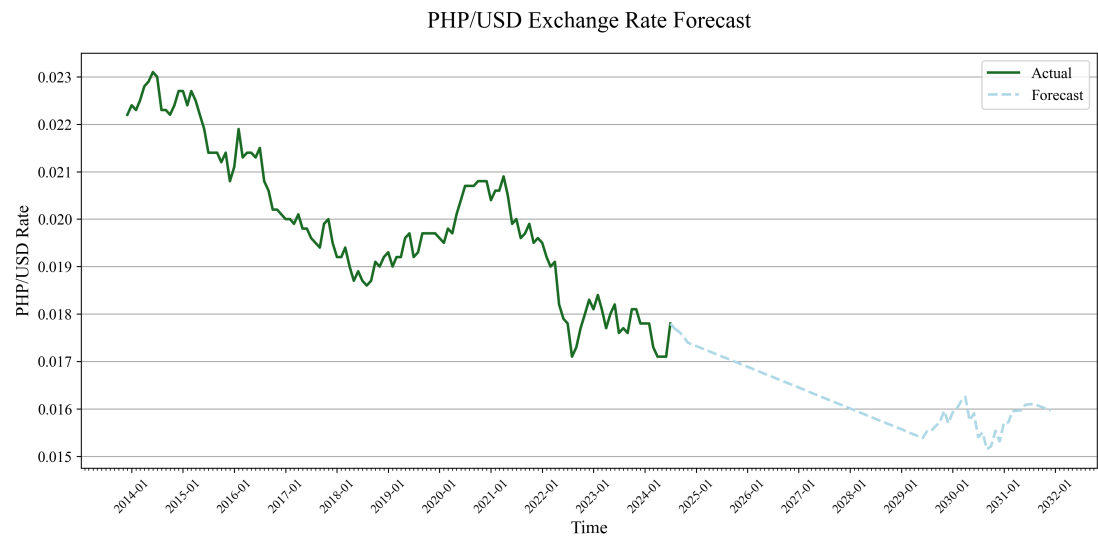


Figure 2. PHP/USD Exchange Rate Forecast

Fed's interest rate hike policy 5.25%-5.50% in 2025 has strengthened USD against many Asian countries' currencies, including the Philippine peso (Davidson 2024). As an oil importing country or region, Philippines has been greatly affected by the increase in oil prices undermined investors' confidence in the Philippine currency, further exacerbating depreciation pressure on Peso (OEC 2024). Philippines' import demand, as reflected 10-year trade deficit in 2014-2024 (IMF 2024), will likely remain amidst slower export growth, causing expansion of its current account deficit, pressurizing Peso to decrease (Phuc 2024). This aligns with macroeconomics model's forecasting. Thus, ***PHP/USD is expected to continue depreciating in 2025-2031.***

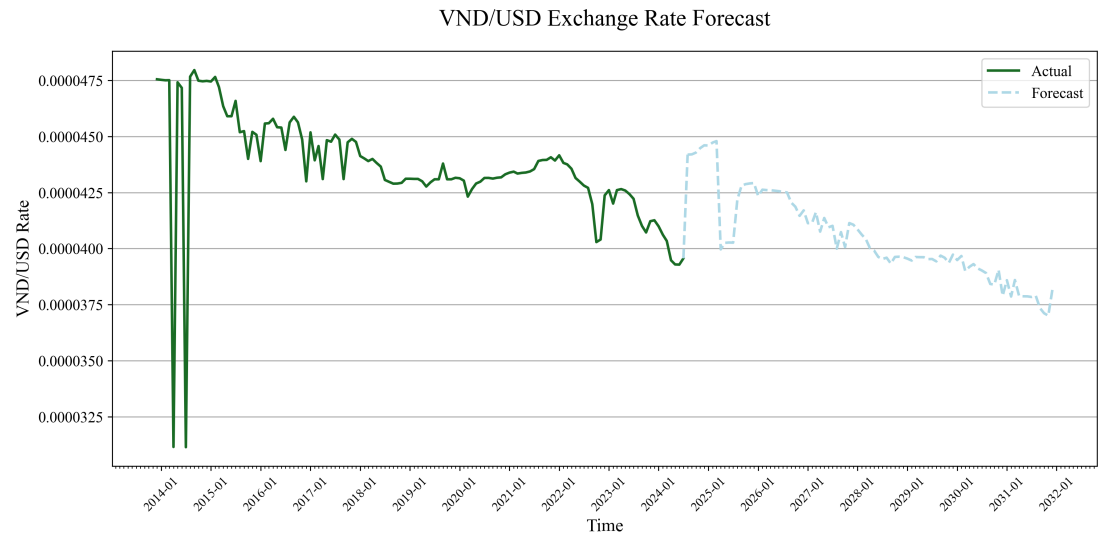


Figure 3. VND/USD Exchange Rate Forecast

Interbank overnight interest rate on the VND is expected to rise to 5% per annum, nearing the USD loan rate of 5.25-5.5% in end/2024-2025 (Quang 2024), potentially narrowing interest rate gap, contributing to VND/USD appreciation, also being supported Vietnam's key transformation into global manufacturer may attract capital inflows which boosts VND demand (VNA 2024). This also validates the pronounced impact of interest rate differential on VND/USD change shown in above model. From 2026 onwards, there's a strong chance Trump could become president, with 51% support, suggesting he may enact his "Make America Great Again" campaign promises, making USD even stronger than now (NPR 2024). Therefore, ***VND/USD will likely appreciate in 2025 then depreciate since 2026 to 2031.***

Although macromodels to forecast change in PHP/USD and VND/USD have most of insignificant variables, macromodels still well-perform thanks to low errors and validated macro-events. So 2 models are still deployed to predict PHP/USD, VND/USD in 2025-2031.

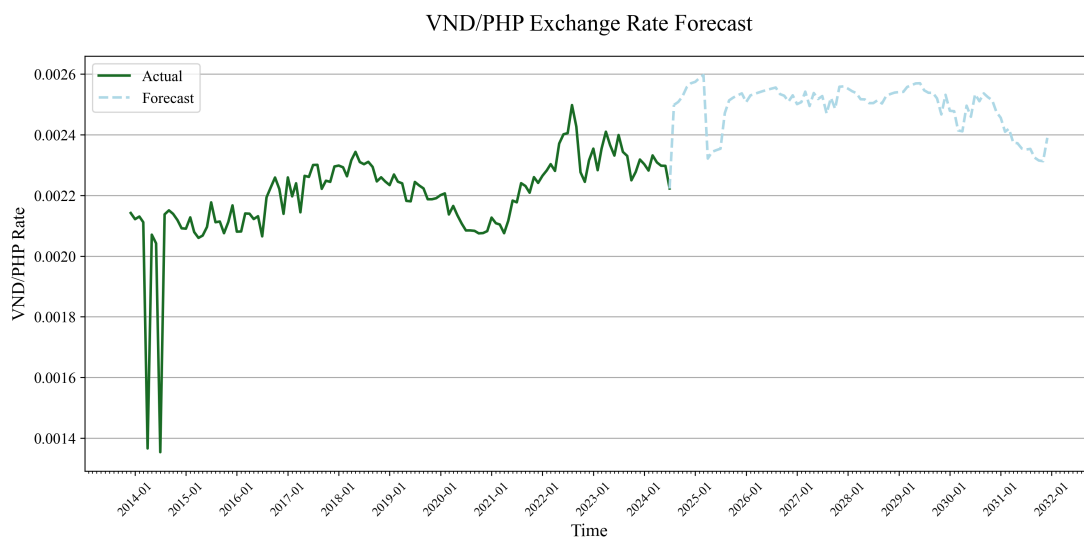


Figure 4. VND/PHP Exchange Rate Forecast

To predict VND/PHP in 2025-2031, we will use PHP/USD and VND/USD forecasted rates to convert. The results seem reasonable thanks to Philippines' easing rice tariff from 35% to 15%, raising demand for VND to import rice (KTSG 2024). As Vietnam

remains the top 1 in rice exporter to Philippines, high demand for VND can be retained for imports (Vu 2024). However, just rice is not enough to maintain VND strength against Philippines, Thus, *VND/PHP is anticipated to appreciate but quite fluctuates in 2025-2031.*

IV. NPV & IRR Analysis

All costs (fixed and variable) are paid in PHP, so Mondelez's financial data is converted from USD to PHP to execute income statement and prediction for 2025-2031 in 7 years. Regarding interest cost, it is calculated in VND then converted into PHP. After cashflow is counted in PHP, it will be converted into USD for parent company for conducting NPV and IRR.

As monthly exchange rates are forecasted, averaging 12 months results can represent exchange rate for 2025:

Year	PHP/USD	VND/USD	VND/PHP
2014	0.0225750	0.0000448	0.0019862
2015	0.0218333	0.0000460	0.0021065
2016	0.0209833	0.0000451	0.0021500
2017	0.0200000	0.0000446	0.0022280
2018	0.0196583	0.0000444	0.0022592
2019	0.0189667	0.0000433	0.0022828
2020	0.0195083	0.0000431	0.0022100
2021	0.0204583	0.0000431	0.0021054
2022	0.0199083	0.0000437	0.0021987
2023	0.0180750	0.0000424	0.0023465
2024	0.0163198	0.0000405	0.0024798
2025	0.0171246	0.0000424	0.0024748
2026	0.0166868	0.0000423	0.0025341
2027	0.0162471	0.0000409	0.0025184
2028	0.0158068	0.0000399	0.0025241
2029	0.0155770	0.0000396	0.0025400
2030	0.0156773	0.0000390	0.0024856
2031	0.0159716	0.0000378	0.0023692

Table 9. PHP/USD, VND/USD, VND/PHP in 2025

Then, financial data is converted from USD to PHP by using PHP/USD of 0.0171246:

Exchange rate USD 0.0171246/PHP	MoonCake	Cosybiscuits	Solite soft cakes	AFC crackers
Expected Volume (kg) to sell in PH in Year 1	402,000	3,718,000	1,619,000	1,133,000
Expected Selling Price per kg (in PHP) in Year 1	654	274	286	309
Percentage on Gross Revenue to pay for the distributor as Commission	25%	25%	25%	25%
Current depreciation of the investment PHP/kg applicable for Year 1	6.423520125	2.919781875	4.087694625	5.83956375
Extra Investment needed in Year 2	1	1.5	1.2	1
Cost of goods sold PHP/kg excluding depreciation and delivery cost	267.4520197	137.2297481	147.1570065	144.821181
Raw material and packing cost (% within COGS)	70%	65%	65%	65%
Other costs (% within COGS)	30%	35%	35%	35%
Annual delivery cost from VN to PH	0.3% Gross Revenue			
Annual overhead cost % of net revenue	10%	10%	10%	10%
Annual advertisement cost % of net revenue	10%	10%	10%	10%

Table 10. Mondelez's financial data converted from USD to PHP

a. Revenue

Revenue	Expected Volume (kg) to sell in PHP in 2026-2031	Demand Growth Rate Assumption
Moon Cake	Only Filipino-Chinese (44.4% of 108.67 million households) celebrate Mid-Autumn Festival in Philippines (Postman 2024; PSA 2024). So, annual Filipino-Chinese population growth (0.679%) will be used to assume as consistent annual sales growth of Moon Cake in Philippines (Macrotrends 2024).	0.679%
Cosy Biscuits	Cosy Biscuits, being sweet biscuits, will likely follow 8% CAGR of overall retail sales of sweet biscuit in the Philippines from 2026 to 2031 (Statista 2024), because retail channels comprise 97% of snacks sales (USDA 2024).	8%
Solite Soft Cake	Soft cakes' convenience and shelf life make them household staples, leading to a 5.3% CAGR growth rate (IMARC 2024), which is assumed to remain increase by 5.3% annually in 2026-2031.	5.3%
AFC Crackers	Similarly, AFC crackers, savory biscuits, will likely follow 4.102% CAGR of overall retail sales of savoury biscuits in Philippines from 2026 to 2031 (Statista 2024), since retail channels comprise 97% of snack sales (USDA 2024).	4.102%

Table 11. Expected Volume (kg) to sell in PHP in 2026-2031

Category	Expected Selling Price per kg (in PHP) in 2026-2031	Price Growth Rate Assumption
Moon Cake	Mooncake prices (seasonal for just Mid-Autumn Festival) tend to inflate 3.23% annually due to high demand (Aug-Sept inflation reflects peak demand), assumed for 2026-2031 growth (PSA 2024).	3.23%
Cosy Biscuits	To impress local tastes and educate customers on Mondelez's new brand entry, pricing must be attractive. A case study is Oishi snacks from Philippines into Vietnam, which has kept just 1-2% price growth in Vietnam since 2014 till 2024 to attract local people (Oishi 2024). Yet, 2% is still added to consider to compensate for any sudden impact like disaster, war that raise the demand to save “temporary hunger”, hence pressurizing selling prices to increase. Cosy biscuits (filled biscuits) lie in the top product demanded in Philippines, as reflected by highest expected assumption in 2025. Thus, annual price growth rate in 2026-2031 is 2%.	2%
Solite Soft Cake	Similar to Oishi case, Solite Soft Cake's selling price should annually rise by 1-2%. However, tariffs and inflation can contribute to raising. And Philippines is	1%

	demanding less sweet cakes, evident by 3rd position in the sales assumption in 2025. Thus, annual price growth rate in 2026-2031 is just 1%.	
AFC Crackers	Explanation is similar to AFC Crackers. Although AFC Crackers are savory, but its taste is not unique compared to other already strong brands in Philippines having large market share like Oishi, Monde Nissin..., evident by 4th position in the sales assumption in 2025. Yetm Thus, annual price growth rate in 2026-2031 is just 1% 2025.	1%

Table 12. Growth in Expected Selling Price per kg in 2026-2031

Demand and selling price growth assumptions are made in Table.11, Table.12. Expected Volume (kg) to sell in PHP is multiplied with expected Selling Price per kg (in PHP) in 2026-2031 to induce gross revenue. Net revenue is calculated after excluding commissions ratio.

b. Expenses

Fixed Costs	Variables Costs
Percentage on Gross Revenue to pay for the distributor as Commission	Raw material and packing cost (% within COGS)
Annual delivery cost from VN to PH	Other costs (% within COGS)
Annual overhead cost % of net revenue	
Annual advertisement cost % of net revenue	

Table 13. Fixed and Variable Costs

Fixed and Variable Costs are depicted in Table.13. Sales increase will translate to higher costs, so average of sales annual growth will be assumed annual variable costs growth in 2026-2031 (4.5205%). Parent Mondelez maintains 10-year contract with a supplier to secure the fix-term deals (DSSmith 2024). Thus, MKD may have signed with agencies, companies to have fixed deals, assuming commission, delivery cost to remain such percentages in 2026-2031 (Table.11, Table.12).

For interest expenses, it is calculated in VND then converted into PHP using rates forecasted in Table.10.

c. Salvage Value

MKD's expansion is assumed to have 2% terminal growth, similar to parent company (VI 2024).

$$\begin{aligned}
 \text{MKD's expansion} &= \frac{FCF_7 \times (1 + \text{Terminal Growth})}{\text{Discount Rate} - \text{Terminal Growth}} \\
 &= \frac{PHP391,764,084 \times (1 + 2\%)}{6.191\% - 2\%} = 9,534,702,116 \text{ PHP} \\
 &= 152,284,448 \text{ USD}
 \end{aligned}$$

d. NPV and IRR

Profitability Metrics	Result
NPV	\$ 115,097,872.00
IRR	57%
Cost of Capital	6.191%

Table 14. NPV and IRR results

Mondelez generates positive NPV of \$115,097,872, with IRR of 57%, much higher than cost of capital (Table.13). This can be thanks to Vietnam's strivings in flavor

innovation utilizing local healthy ingredients, which may successfully attract filipino customers.

IV. Risk Management Plan

This reports only adopts forward hedging due to its effectiveness, evident via study from Bash et al. (2016). Meanwhile, money market hedge requires high regulatory and accounting considerations level, which can tie up capital that MKD might need for operations or growth, disrupting MKD’s expansions (Sarkis and Shu 2008). Option hedges can incur high premium costs, fail to provide adequate protection if the market moves against the company's expectations amidst volatility (Das and Kumar 2023). Thus, forward hedging is mainly adopted.

a. Economic Exposure

Over the 7-year project, cash flow is primarily influenced by PHP/USD as financial records will be converted from PHP to USD. Since PHP is expected to depreciate against USD from 2025 to 2031. Philippines has just been impacted by Typhoon, which can cause businesses vulnerable to excessive costs (Rappler 2024). So, hedging is applied to USD/PHP net revenue, helping MKD acquire more net revenue receivables in USD in 2025 (Table.15; Table.16).

Currency Pair	1-year Forward Exchange
USD/VND	24,590.00
USD/PHP	55.673

Table 15. 1-year Forward Exchange, , adapted from FXempire 2024a, FXempire 2024b (2024)

USD/PHP	Net Revenue Receivables in PHP	Forward rate in USD	Net Revenue Receivables in USD
2025 Forward Exchange Rate	2,097,279,321	55.673	37,671,390
2025 Forecasted Spot Exchange Rate	2,097,279,321	61.27530245	34,227,155.76
2024 Spot rate	2,097,279,321	61.2745098	34,227,598.52

Table 16. 1-year Forward Hedging Calculation

b. Translation Exposure

Translation exposure is the effect of an unanticipated change in the exchange rates on the consolidated financial reports of an MNC. Coming to MKD’s case, interest payment can affect consolidated financial reports in terms of change in VND/PHP for interest payment.

It means when paying in VND then converting into PHP, it will need more PHP to pay for interest costs. Thus, this paper recommends that MKD hedges interest

payment costs to safeguard the required investment for operations. PwC (2024) suggests that MNCs adopt shorter-term hedging (e.g., 1 year) for its flexibility, lower costs, and more accurate cash flow forecasting, reducing risks from long-term uncertainties risks. Vietnam's factory in Hưng Yên was severely affected by a recent typhoon, with ongoing repercussions expected into 2025 recovery (MekongAsean 2024). There is no direct 1-year forward rate for VND/PHP, PHP/USD and VND/USD are adopted to calculate in Table.17.

Currency Pair	1-year Forward Exchange Rate
USD/VND	24,590.00
USD/PHP	55.673
VND/PHP	0.00226405

Table 17. 1-year Forward Exchange Rate, adapted from FXempire 2024a, FXempire 2024b (2024), self-calculation

VND/PHP	Rate	Cost of Buying using 1-year Forward Contract (PHP)
2024 Spot Exchange Rate	0.002480	17,460,234
2025 Forecasted Spot Exchange Rate	0.002475	17,461,338.02
2025 Forward Exchange Rate	0.00226405	15,973,070.62

Table 18. 1-year Forward Contract

Cost of buying PHP using forward contract (VND) can help MKD minimize costs when converting interest payment from VND to PHP (Table.18). Thus, to hedge translation Exposure, 1-year forward fontract is advised to MKD.

Conclusively, with forward hedging intervention, MKD *can save more costs to improve revenues in 2025*.

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VI. Appendices

Macroeconomic Variables	Data Sources and Explanation
Exchange Rate	PHP/USD, VND/USD are taken from Investing (2024)
Inflation Rate Differential	Monthly inflation of Philippines, Vietnam, The U.S from January 2014 to July 2024 are taken from IMF (2024). Data will be used as lagged variables because
Interest Rate Differential	Monthly Interest Rate of Philippines, Vietnam, The U.S from January 2014 to July 2024 are taken from IMF (2024).
Relative Trade Balance Change	Monthly Trade Balance of Philippines, Vietnam, The U.S is calculated by subtracting monthly Total Imports from monthly Total Exports from January 2014 to July 2024 are taken from IMF (2024).
Relative Foreign Reserves Change	Monthly Foreign Reserves of Philippines, Vietnam, The U.S from January 2014 to July 2024 are taken from IMF (2024)
Note: All the variables are lagged to account for their delayed impact on changes in the exchange rate, ensuring that the model accurately reflects the time it takes for these factors to influence currency movements.	

Appendix 1. Macroeconomic Variables in the Forecasting Models

PHP/USD SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.18189514							
R Square	0.03308584							
Adjusted R Square	0.00138374							
Standard Error	0.01533574							
Observations	127							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	4	0.000981801	0.00024545	1.04364818	0.387629054			
Residual	122	0.028692556	0.00023518					
Total	126	0.029674357						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.0505391	0.088880829	-0.568616	0.57066197	-0.226487541	0.12540942	-0.2264875	0.12540942
Relative Trade Balance Change	-0.0537196	0.091589175	-0.5865274	0.55860482	-0.235029484	0.12759036	-0.2350295	0.12759036
Lagged Inflation Differential	0.30351456	0.312651598	0.97077564	0.33358073	-0.31541051	0.92243962	-0.3154105	0.92243962
Lagged Interest Differential	0.01007887	0.006042316	1.66804791	0.09787094	-0.001882496	0.02204024	-0.0018825	0.02204024
Relative Foreign Reserves Change	0.00567922	0.012100502	0.4693375	0.63966612	-0.018274933	0.02963337	-0.0182749	0.02963337

Appendix 2. PHP/USD Regression Macroeconomics Model - Summary Output

VND/USD SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.10281536							
R Square	0.010571							
Adjusted R Square	-0.0221374							
Standard Error	0.08157616							
Observations	126							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	4	0.008602868	0.00215072	0.32318912	0.861973532			
Residual	121	0.805215105	0.00665467					
Total	125	0.813817973						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.3129497	0.478035429	-0.6546581	0.51393044	-1.259346965	0.63344748	-1.259347	0.63344748
Relative Trade Balance Change	-0.3014677	0.468327954	-0.6437107	0.52098124	-1.228646442	0.62571098	-1.2286464	0.62571098
Lagged Inflation Differential	0.96065929	1.593443816	0.60288244	0.54771521	-2.193983036	4.11530161	-2.193983	4.11530161
Lagged Interest Differential	0.00283392	0.003786422	0.74844352	0.45564501	-0.004662299	0.01033015	-0.0046623	0.01033015
Relative Foreign Reserves Change	-0.0046874	0.051720751	-0.0906293	0.92793701	-0.107082283	0.09770745	-0.1070823	0.09770745

Appendix 3. VND/USD Regression Macroeconomics – Summary Output

Total Revenue	Year 0	2025	2026	2027	2028	2029	2030	2031
Moon Cake		402,000	404,731	407,480	410,248	413,035	415,841	418,666
Cosy Biscuits		3,718,000	4,015,440	4,336,675	4,683,609	5,058,298	5,462,962	5,899,999
Solite Soft cake		1,619,000	1,704,807.00	1,795,161.77	1,890,305.34	1,990,491.53	2,095,987.58	2,207,074.92
AFC Crackers		1,133,000	1,179,472.60	1,227,851.38	1,278,214.53	1,330,643.43	1,385,222.83	1,442,040.93
Total Expected Volume (kg) to sell in PH		6,872,000	7,250,772	7,652,398	8,078,313	8,530,047	9,009,228	9,517,592
Moon Cake		262,920,518	273,256,613	283,999,046	295,163,793	306,767,455	318,827,288	331,361,224
Cosy Biscuits		1,020,440,407	1,124,117,152	1,238,327,455	1,364,141,525	1,502,738,303	1,655,416,515	1,823,606,833
Solite Soft cake		463,258,432	492,689,240	523,989,787	557,278,859	592,682,785	630,335,922	670,381,163
AFC Crackers		350,659,964	368,693,519	387,654,494	407,590,585	428,551,938	450,591,281	473,764,051
Gross Revenue in HP		2,097,279,321	2,258,756,524	2,433,970,783	2,624,174,761	2,830,740,481	3,055,171,005	3,299,113,271
Net Revenue		1,566,667,653	1,687,291,124	1,818,176,175	1,960,258,546	2,114,563,139	2,282,212,741	2,464,437,613
Variable Costs								
Moon Cake		107,515,711.9	107,935,023	108,355,970	108,778,558	109,202,794	109,628,685	110,056,237
Cosy Biscuits		510,220,035.5	512,210,062	514,207,682	516,213,092	518,226,323	520,247,405	522,276,370
Solite Soft cake		238,247,193.52	239,176,358	240,109,145	241,045,571	241,985,649	242,929,393	243,876,817
AFC Crackers		164,082,398.07	164,722,319	165,364,736	166,009,659	166,657,097	167,307,059	167,959,557
Total Variable Costs		1,020,065,507	1,066,177,568	1,122,471,744	1,181,738,252	1,244,134,032	1,309,824,309	1,378,983,032
Fixed Cost		843,945,199	908,923,625	979,429,843	1,055,967,924	1,139,089,970	1,229,400,813	1,327,563,180
Interest expense of Vietnam loan in VND		7,055,086,067	13,276,067,477	13,276,067,477	13,276,067,477	13,276,067,477	13,276,067,477	13,276,067,477
Interest expense converted into PHP		17,460,234	32,856,189	32,856,189	32,856,189	32,856,189	32,856,189	32,856,189
Noncash Expense (Depreciation)		26,672,207	28,180,342	29,787,793	31,501,562	33,329,166	35,278,675	37,358,757
Moon Cake		258,225,09	2,599,796.87	261,745,780	263,528,72	265,314,042	267,116,737	268,930,487
Cosy Biscuits		108,557,49.01	117,242,08.93	126,621,45.65	136,751,17.3	147,691,26.68	159,906,56.82	172,267,09.36
Solite Soft cake		6,617,977.60	6,968,730.41	7,338,073.12	7,726,991.00	8,136,521.52	8,567,757.16	9,021,848.29
AFC Crackers		6,616,225.73	6,887,605.44	7,170,116.40	7,464,215.21	7,770,377.15	8,089,097.03	8,420,889.94
Total Expenses		1,908,143,147	2,036,137,724	2,164,545,569	2,302,063,927	2,449,409,356	2,607,359,985	2,776,761,158
Before-tax earnings of subsidiary in PHP		189,136,174	222,618,800	269,425,214	322,110,834	381,331,125	447,811,020	522,352,112
Host Government Tax (25%)		47,284,043	55,654,700	67,356,304	80,527,708	95,332,781	111,952,755	130,588,028
After-tax earnings of subsidiary in PHP		141,852,130	166,964,100	202,068,911	241,583,125	285,998,344	335,858,265	391,764,084
Net Cash Flow to Subsidiary		168,524,338	195,144,442	231,856,704	273,084,688	319,327,510	371,136,940	429,122,841
PHP Remitted by Subsidiary (100% of CF)		168,524,338	195,144,442	231,856,704	273,084,688	319,327,510	371,136,940	429,122,841
Salvage Value								9,534,702,116
Exchange Rate of 1 PHP = 0.017124567 USD		0.017124567	0.016686793	0.01624708	0.015806812	0.015576998	0.015677338	0.015971608
Cash Flows to Parent		2,885,906	3,256,335	3,766,994	4,316,598	4,974,164	5,818,439	159,138,311
PV of Parent Cash Flow		2,717,656	2,887,710	3,145,805	3,394,617	3,683,677	4,057,703	104,510,703
(6.191% of Discount Rate)								
Initial Investment by Parent	(9,300,000)							
Cumulative NPV of Cash Flows		115,097,872						

Appendix 4. Cash Flow of Mondelez Kinh Do when launching subsidiary in Philippines from 2025 to 2031