

FOREIGN TRADE UNIVERSITY HCMC CAMPUS

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FIN 1

Final Assignment

Academic year: 2024-2025

<u>Grade (in number)</u>	<u>Grade (in words)</u>
<u>Examiner 1's signature</u>	<u>Examiner 2's signature</u>
<u>Invigilator 1's signature</u>	<u>Invigilator 2's signature</u>

Course code:

Lecturer:

Student: Nguyen Thai Gia Nhi

HO CHI MINH CITY, JUNE, 2025

TABLE OF CONTENT

TABLE OF CONTENT	2
CHAPTER 1: BACKGROUND INFORMATION	4
I. PROFILE	4
II. FINANCIAL OBJECTIVES	4
1. Establishing the Foundation (Ages 22–30)	4
2. Growing the Family and Preparing for the Future (Ages 31–60)	4
3. Enjoying Life After Retirement (Ages 60–85)	4
III. ASSUMPTIONS	5
CHAPTER 2: FINANCIAL SITUATION.....	7
I. TRADITIONAL BALANCE SHEETS	7
II. ECONOMIC (HOLISTIC) BALANCE SHEETS	7
III. CASH FLOW STATEMENT.....	8
IV. BUDGET STATEMENT.....	8
CHAPTER 3: INVESTMENT	10
I. ASSET ALLOCATION	10
II. MONTE CARLO SIMULATION.....	10
III. RISK TOLERANCE	11
1. Age	11
2. Education	11
3. Health	11
4. Work	11
5. Family	11
IV. ECONOMIC AND POLITICAL CONSIDERING	12
CHAPTER 4: INSURANCE	13
I. RISK MANAGEMENT	13
II. INSURANCE.....	13
1. Health Insurance	13
2. Car Insurance	14
3. Life Insurance	14
3.1. Needs analysis method	14
3.2. Choosing appropriate type	15
3.3. Choosing appropriate plan	15
III. ECONOMIC AND POLITICAL CONSIDERING	16
CHAPTER 5: RECOMMENDATION	17

REFERENCE.....	18
APPENDIX	23
Appendix 1: Inflation	23
Appendix 2: Discount Rate for Human Capital and Pension Value.....	23

CHAPTER 1: BACKGROUND INFORMATION

I. PROFILE

Nhi (22) and Husband (22) have just married. Nhi works as a Junior Financial Analyst with an annual salary of 162.5 million, while Husband works as a Junior Developer with an annual salary of 208 million. They currently live in a rented one-room apartment in Ho Chi Minh City, their annual living expenses are around 330 million and do not own any loans. Nhi and Husband have their own phones, laptops, motorbikes, and a savings account of 60 million. The data reflects 2025 (period 0), with VND as currency.

II. FINANCIAL OBJECTIVES

The family's financial journey has three key stages.

1. Establishing the Foundation (Ages 22–30)

At 28, they plan to purchase a car approximately 500 million. At 30, they aim to buy a 4 billion apartment on an installment plan and set aside funds to cover Nhi's medical and living expenses during pregnancy.

Assuming inflation, the central bank's refinancing rate, and other economic and political factors remain broadly unchanged from 2025, they plan to finance their apartment through BIDV's home-loan package. They will borrow up to 70 % of the property's value at a preferential rate of 5.5 % p.a. for the first three years (Batdongsan, 2025), and have an installment of 20 years to reduce financial pressure (VinHomesMarket, 2021).

2. Growing the Family and Preparing for the Future (Ages 31–60)

At 31, they will welcome their first child and must budget for childbirth and initial care costs. From 32-52, they will provide ongoing financial support as their child grows toward independence. At age 53, they will set aside funds for their child's wedding.

3. Enjoying Life After Retirement (Ages 60–85)

Nhi plans to retire at 60, and Husband at 62. Together, they will enjoy a secure, worry-free retirement. At 71, they will sell their car and embark on a world tour with a budget of around 5.5 billion.

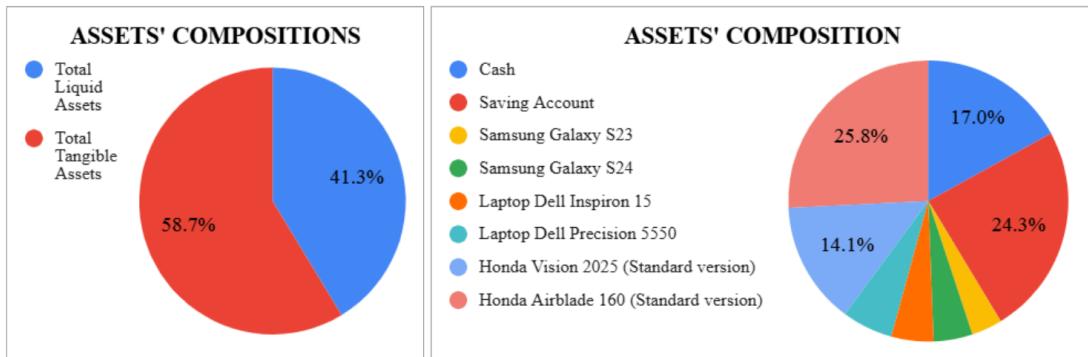
III. ASSUMPTIONS

NUMBER	ASSUMPTIONS
0	Applicable law and insurance policy will not change.
Family	
1	Nhi and Husband are of the same age, marry at 22, get pregnant at 30, live till 85 without any significant health problems.
2	Their parents pay for their marriage, but also take all the profit from the wedding gift money (NiNiStore, 2022).
3	After marriage, they move into the one-room apartment Nhi rents.
4	Nhi and Husband have their own phones, laptops, motorbikes and savings account before marriage but decide to combine them as family's assets for easier control.
5	They do not plan to change motorbikes or car. As carefully maintained, the vehicles are still usable until they die (VnExpress, 2024).
6	When they travel around the world, they ask their child to take care of the home, but still pay for apartment service and other necessary expenses.
Work	
7	Risk premium with occupational income volatility for them is 3%.
8	Nhi (started as a junior financial analyst) and Husband (started as a junior developer) work for average companies with average abilities, so they receive average salaries for their professions.
9	Their salaries are the salaries after their companies pay for social security and other compulsory obligations for laborers, except taxes (LuatVietNam, 2025).
10	Their salaries and expenses increase as inflation rate.
11	When Nhi has her maternity leave, Nhi loses her yearly bonus (thirteen-month salary) for that year (Chu, 2024).
Spending	
12	Fuel and vehicle upkeep expenses already include all compulsory obligations regarding the vehicles (compulsory insurances...).

13	Inflation, refinancing rate and other factors (economic, political...) impacting mortgage rate is fairly stable, it is the same as 2025 when they buy the apartment.
14	Nhi and Husband have an average spending style, so they spend an average amount compared to the general raising their child. They raise the child until he finishes college, give him money for his marriage and even the wedding gift money.
Saving and Investment	
15	The emergency fund is three times the monthly expenses (MoMo, n.d.).
Insurance	
16	Because a 4-seat car can carry up to 5 people (NhaxeHoangDung, n.d.), they buy insurance for 5 people in the car in case they carry people other than their family (friends, colleagues...).
17	Inflation, business operation and other factors (economic, political...) impacting the insurance rate and dividend are fairly stable, it is the same as 2025 when they buy life insurance.
18	In life insurance calculation, the one who dies has joint properties (apartment, car, bond, stock...) in their name as the worst-case scenario. They also write a will for the surviving spouse to inherit all the joint properties.

CHAPTER 2: FINANCIAL SITUATION

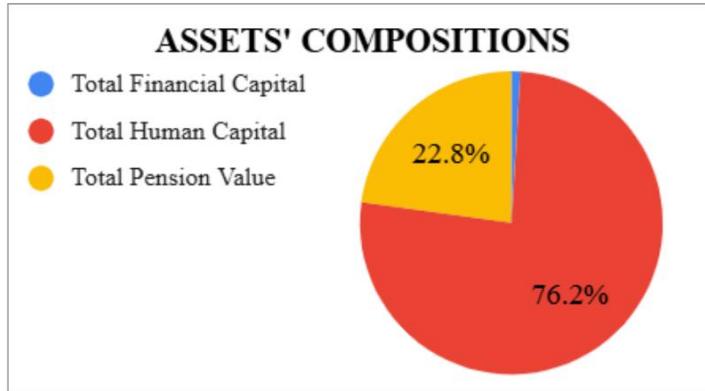
I. TRADITIONAL BALANCE SHEETS



By 2025, the family's total assets are around 245 million, split between liquid (41%) and tangible (59%). Over half of their assets are tied up in depreciating items, with motorbikes at 39.9% and electronics at 18.8%, rather than investments that could appreciate or generate income.

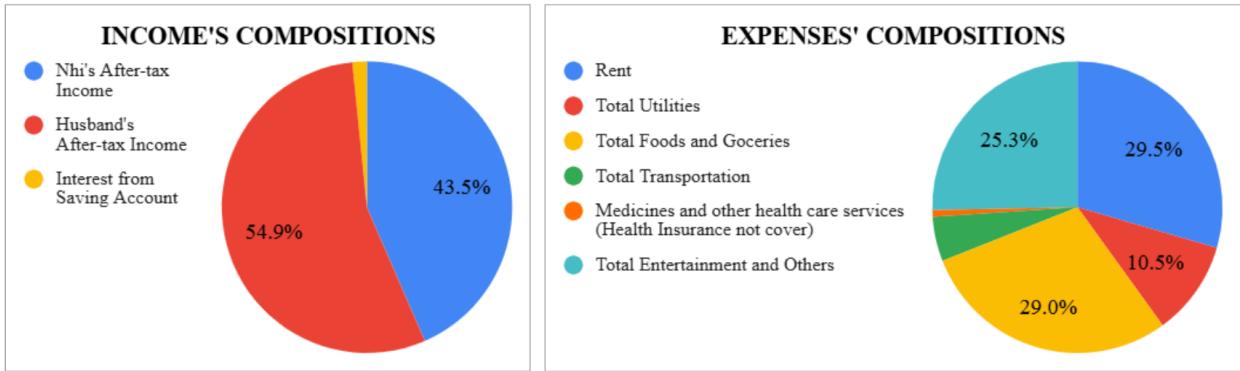
With zero liabilities, they boast a perfect 100% solvency ratio. Their net worth accounts for 100% of total assets, far exceeding the conservative 20 % benchmark (Gaur, 2024).

II. ECONOMIC (HOLISTIC) BALANCE SHEETS



Using risk-free rate (Vietnam 20-Year Government Bond) and risk premium with occupational income volatility as discount rate for human capital, their future earning power comprises 76.2 % of their total economic assets. Any interruption to income like health issues would disproportionately erode their overall wealth. Employer and mandatory pension entitlements offer a sizable retirement buffer of 22.8%. However, when set against lifetime consumption needs, they fall short by around 1.7 billion. Therefore, if they do not have a proper plan for saving and investment, it is difficult to secure long-term solvency.

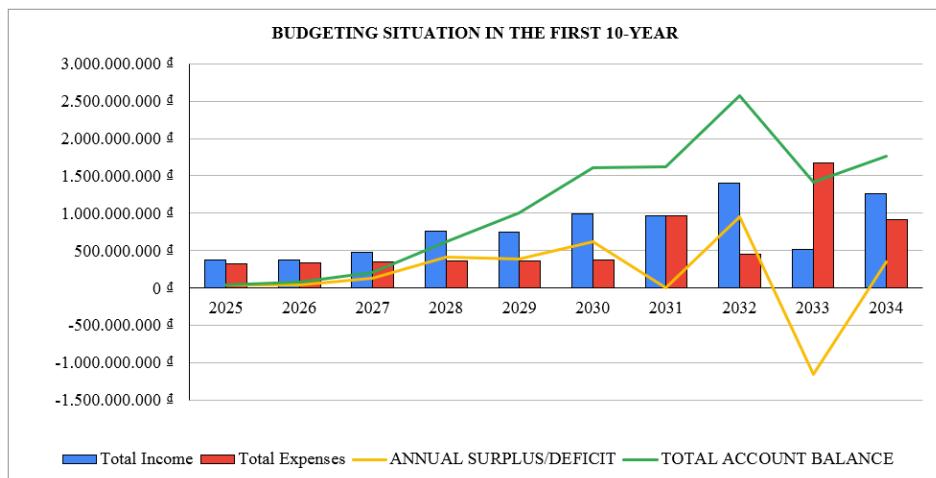
III. CASH FLOW STATEMENT



In 2025, total household income is around 365 million, with the husband contributing 55 % and Nhi 43.5 %, plus a negligible 1 % from savings interest. Living costs consume around 90 % of income, with essential needs are nearly three quarters of total cost. Their liquid assets are around 3.65 months of living costs, this meets the requirement of 3-month emergency buffer (MoMo, n.d.).

However, if this surplus remains flat at 40 million annually, they will accumulate only around 400 million over a decade, not even enough for their planned car purchase at age 28. Therefore, to close their economic net worth shortfall and meet future goals, they need to grow that surplus.

IV. BUDGET STATEMENT



Household income rises from about 370 million in 2025 to roughly 1 billion by 2030, fueled by salary growth and investment gains. A dip in 2033 reflects Nhi's six-month maternity leave, but income bounces back in 2034 when both return to full capacity. Expenses climb gradually with inflation, spike in 2031 for a car purchase, and peak in 2033 for the apartment down-payment and maternity costs. Outside those years, expenses stay under 500 million and the

balance remains positive. If they stick to their savings and investment plan, Nhi and Husband will hit their financial goals.

CHAPTER 3: INVESTMENT

I. ASSET ALLOCATION

Period	Savings Account	Bond	Stock
2025-2036	20%	40%	40%
2037-2063	10%	30%	60%
2064-2088	60%	30%	10%

From 2025-2036, they are conservative. Despite having a stable income, they also have many goals like buying a car, a house and even having a child in 2034. The first three years are the most important for a child to grow up (DanTri, 2008). Any unexpected disruption may affect the plan negatively, so they choose not to put too much into growing yet risky investments like stock.

From 2037-2063, they are balanced as their family's life is getting on track, they have stable income and no major goals. Therefore, they can put more in stock. From 2064-2068, they are very conservative, Nhi and Husband retire at the end of 2063 and 2065, respectively. As they cannot tolerate any financial disruptions, it is necessary to reallocate more funds to savings account. Moreover, they choose DCBF for their bond investment.

II. MONTE CARLO SIMULATION

Resource Available at Retirement

Average	77 300 453 543 ₮
Volatility	21 367 381 388 ₮
25th Percentile	62 077 823 285 ₮
50th Percentile	75 093 444 564 ₮
75th Percentile	90 089 170 378 ₮
95th Percentile	116 178 188 838 ₮
Retirement Expenses	-47 989 854 246 ₮

% Successful	100%
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As Nhi and Husband's economic net worth is around negative 1.7 billion, they aim to save and invest to secure a worry-free retirement. Monte Carlo Simulation shows that their investment planning can guarantee that their goals are 100% achievable. Volatility of 21.4 billion means yearly values may swing around 25–30% around the average, though still above the costs. However, unexpected shocks or early losses may still affect outcomes.

III. RISK TOLERANCE

1. Age

As investors grow older, they favor more stable holdings (Jianakoplos and Bernasek, 2006). Men tend to accept greater risk than women (Fisher and Yao, 2017), though in joint portfolios spouses often arrive at a compromise allocation (Bernasek and Shwiff, 2001).

2. Education

Higher educational attainment accompanies with a greater willingness to assume investment risk (Antwi and Naanwaab, 2022). Stronger financial knowledge and optimism about future economic conditions further boosts one's risk tolerance (Grable, 2000).

3. Health

Health shocks can lead to unexpected medical costs and income loss, households will therefore increase precautionary savings and shift into risk-free assets (Rosen and Wu, 2004). Access to basic health insurance mitigates this risk, helping investors maintain more balanced portfolios.

4. Work

Job-market pressures like automation or younger competition can increase income uncertainty, which can make investors more conservative in their asset choices (Campbell and Viceira, 2005).

5. Family

As the number of dependents grows, investors are typically more conservative, allocating a larger share to fixed-income securities over stocks (Chaulk, Johnson and Bulcroft, 2003).

IV. ECONOMIC AND POLITICAL CONSIDERING

In 2024, the average CPI was around 3.6% and is forecast to remain at 3-4% in 2025 (Phong, 2025), while the average nominal interest rate is only about 5% annually (Nguyễn, 2025) making the real rate insignificant. Therefore, it may reduce incentive to keep money in savings accounts.

Investing in DCBF brings an average return of 8.6% annually (Dragon Capital, n.d.). It also recorded a 4% increase in NAV in 2024 (BIDV, 2024), helping to stabilize fixed income and minimize interest rate risks over medium-long terms.

In 2024, VN-Index rose 12.1% to 1267 points, reflecting post-pandemic recovery and strong FDI inflows (TheInvestor, 2024). However, growth may slow due to global trade tensions. VNDirects (2025) recommends investors maintain a moderate stock allocation, favoring construction and banking. Though politics remain stable (Navarra, 2025), FDI policy shifts could impact business growth, returns, and insurance dividends.

CHAPTER 4: INSURANCE

I. RISK MANAGEMENT

Types	Situation	Classification	Dealing Methods
Earning Risk	Losing jobs due to volatile financial markets, innovative technology, or young generation competition.	Medium Frequency, High Severity.	Avoidance: Continuously improve expertise. Reduction: Buy social insurance. Retention: Saving and investing.
Premature Death Risk	Leaving a financial burden on the family.	Low Frequency, High Severity.	Reduction: Buy life insurance. Retention: Saving and investing.
Longevity Risk	Not having enough money to cover living expenses.	Low Frequency, Low Severity.	Retention: Saving and investing.
Property Risk	Natural disasters and human accidents destroy house and vehicles.	High Frequency, High Severity.	Reduction: Choose a safe area, follow safety rules. Transfer: Buy property insurance. Retention: Emergency Fund.
Health Risk	Force majeure affects work ability.	Low Frequency, High Severity.	Reduction: Maintain a healthy lifestyle. Risk transfer: Buy health insurance. Retention: Saving and investing.

II. INSURANCE

1. Health Insurance

They considered three health plans: the Bronze Package (inpatient and outpatient) from Bảo Việt An Gia, the 5th Package from PVI, and the Standard Pack 1 from PJICO. Nhi and Husband opted for standard health plans, excluding maternity and other inessential things since government-backed coverage meets most needs.

Among these, PVI is the most comprehensive, offering the broadest coverage, Bảo Việt An Gia ranks in the middle, while PJICO has the lowest. All three plans share several strengths, including reliable customer service, efficient claims processing, and a similar set of core benefits.

However, Bảo Việt An Gia is the insurance with the most exclusions, especially in the first year and common diseases (respiratory, digestive, bone and joint...). PJICO and PVI have a standard exclusion list, PVI is the package with the least exclusions and is more friendly to new buyers.

For premiums adjusted with age, Bảo Việt An Gia experiences the steepest increases, PJICO falls in the mid-range, and PVI keeps the lowest premiums across all age ranges. Additionally, while only PJICO provides family discounts, these are typically tied to specific eligibility conditions. Given PVI's superior benefits and minimal exclusions, they chose it.

2. Car Insurance

They consider three options from Bảo Việt, PVI, and PJICO. All three providers offer similar coverage aspects and exclusion lists, ensuring a consistent level of protection across the board.

When comparing fees adjusted by the vehicle's age, Bảo Việt charges the highest premiums, followed by PVI, while PJICO offers the most affordable rates. However, for fees based on the insured amount per person in the event of an accident, the order shifts with PVI charges the highest, PJICO falls in the middle, and Bảo Việt offers the lowest fees.

They ultimately chose PJICO, which offers a favorable fee structure, especially for cars with more years of usage. Moreover, because a 4-seat car can carry up to 5 people (NhaxeHoangDung, n.d.), they also buy insurance for 5 people in the car in case they carry people other than their family (friends, colleagues...).

3. Life Insurance

3.1. Needs analysis method

Sum Insured Needed when Die in 2034	Amount
Nhi dies	1 854 780 257 ₫
Husband dies	2 801 585 393 ₫

In needs analysis method calculation, they assume a worst-case scenario in which the deceased spouse holds all jointly owned assets (apartment, car, bond, and stock) solely in their name. They also prepare a will, ensuring that all joint assets will be inherited by the surviving spouse.

While the financial impact of the husband's premature death would be more severe, requiring one and a half times the support needed compared to Nhi's passing (the amount may vary with investment returns but insignificantly), they choose to insure both, preparing for all possible outcomes and ensuring comprehensive protection for their family.

3.2. Choosing appropriate type

Term Life Insurance provides coverage for a specific period and pays a death benefit if the insured passes away during that time. It does not build cash value (Kagan, 2022). Premiums are based on factors like age and health and increase upon renewal due to higher age-related risk. This type is best suited for young families with limited budgets or financially secure older individuals (Billingsley, Gitman and Joehnk, 2017).

Whole Life Insurance provides lifelong coverage with a death benefit and cash value (Kagan, 2022). Premiums are fixed and can follow different payment plans: single, limited, or continuous (Billingsley, Gitman and Joehnk, 2017). It suits those with long-term responsibilities and the ability to pay higher premiums.

Universal Life Insurance combines lifelong protection with flexible premiums and savings, though it has higher fees. It's best for those wanting both insurance and investment options (Billingsley, Gitman and Joehnk, 2017).

Given concerns about early death and the burden on the surviving partner, especially with a child, they choose 25-year term insurance. It provides affordable protection until their child is independent and future support for his wedding, while keeping insurance costs affordable.

3.3. Choosing appropriate plan

They considered three options: An Bình Thịnh Vượng from Bảo Việt, An Bình Ưu Việt from AIA, and Phú-Bảo An from Prudential.

Regarding provider credibility, Bảo Việt benefits from a strong domestic reputation, an extensive nationwide network, and solid brand recognition. AIA brings international reputation, a

large office system, and government-recognized social activities. Prudential boasts global experience and numerous awards for service quality and community responsibility.

Phú-Bảo An offered the longest coverage period, followed by An Bình Thịnh Vượng. An Bình Uỷ Việt, however, has standard package of maximum 15 years, extendable with riders but not beyond 20 years, falling short of the 25 years they need. Therefore, it was excluded from consideration.

An Bình Thịnh Vượng offers flexible term-life options and high death benefits, though costs vary by financial status. An Bình Uỷ Việt allows conversion to other AIA products without medical reassessment, but has limited critical illness and hospital benefits. Phú - Bảo An has fixed premiums and flexible terms, but at a high cost.

Finally, over a 25-year pay period, Phú-Bảo An's annual premium runs about twice that of An Bình Thịnh Vượng. Although An Bình Uỷ Việt's base rate is low, adding necessary riders drives up its total expense. Balancing all mentioned factors, Nhi and Husband selected An Bình Thịnh Vượng as their optimal solution.

III. ECONOMIC AND POLITICAL CONSIDERING

Economic downturns have reduced households' ability to pay premiums, with real earnings falling 6% in the last recession (ILO, 2022). In 2024, CPI averaged 3.6% (Phong, 2025), while the VND depreciated by 4-5% against the USD (VnBusiness, 2024), raising costs and forcing insurers to raise premiums. Despite low unemployment around 2.27% in 2024 (Nhân Dân, 2024), any rise would force families to drop riders or lower coverage, widening the protection gap. Natural disasters cause annual losses of 1–1.5% of GDP (Chương Phượng, 2024), also contribute to increasing property-premium.

Fraud further strains the system, auto-insurance scams account for about 15% of claims (Kim Lan, 2025), and profiteering appears in 2–6% of health records (Nam, 2025). Therefore, Nhi and Husband should prioritize reputable, well-capitalized companies to minimize this risk.

Despite stable domestic politics (Navarra, 2025), global trade tensions and FDI policy shifts can raise input costs, impacting insurance premiums and benefits.

CHAPTER 5: RECOMMENDATION

Despite having a negative economic net worth in 2025, Nhi and Husband can still meet their financial objectives with their investment plan. By maintaining a healthy lifestyle, securing comprehensive insurance, saving consistently, and investing properly, they can manage risks and stay on track. However, this plan assumes stable conditions and does not fully account for sudden shocks like major illness, accidents, unemployment, or unplanned events. Therefore, they should review and adjust their plan regularly to stay resilient in case of unexpected changes.

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APPENDIX

Appendix 1: Inflation

Inflation rates from 2021–2030 come from Statista (2024). From 2031 onward, the ten-year average rate is applied. Each year, Nhi and Husband's salaries and living expenses are then adjusted by that rate to keep the projections updated.

Year	Rate
2021	1.84%
2022	3.16%
2023	3.25%
2024	3.62%
2025	2.95%
2026	2.49%
2027	2.80%
2028	2.90%
2029	2.90%
2030	2.90%
2030 Afterwards	2.88%

Appendix 2: Discount Rate for Human Capital and Pension Value

The risk premium on Nhi and Husband's salaries is the 20-year Vietnamese government bond yield of 3.474 on TradingView (2025) and an assumed 3% income-related premium. Moreover, the same risk-free rate is also used for calculating the pension value.

	Rate
Risk Free Rate (Vietnam 20-Year Government Bond)	3.474%
Risk premium with occupational income volatility	3.00%