Case Study – Can I Retire in 10 Years Time?

Table of Content

Case Study – Can I Retire in 10 Years Time? 1

Background information 2

Preparing the Financial Statement 2

Financial Statement with New House Instalment expenses 2

Preparing the Net Worth Statement (NWS) 4

Net Worth Analysis excluding the Property 4

Retirement projection 4

Can Ms Lee retire without leveraging on her properties? 5

Can Ms Lee retire leveraging on her properties? 5

Net Worth Analysis including the Property (with Mortgage) and reinvesting into Stocks with higher Return Rates 5

Background information

The following information was provided by Ms Lee for the preparation of the Financial Statement and Net worth Statement

For Financial Statement			For Net Worth Statement	
Income	**RM**		**Assets**	**RM**
Monthly income	4,800		EPF Acccount 1	60,000.00
Net Income	4,130		Fixed Deposit	5,000.00
			Public Mutual	1,500.00
Expeses			Blue Chip Shares	52,350.00
Insurance	350		PRS	1,500.00
Maxis	50			
Parents	756			
Self expense	280			
Petrol	130			
Kid educare	200			
Assessment	34			
New house installment	1,100.00	*Starting 2020*		

Preparing the Financial Statement

Based on the information provided, the financial statement is prepared by detailing monthly income and monthly expenses. Yearly income and yearly expenses are computed by multiplying the monthly amount by 12.

Financial Statement with New House Instalment expenses

2020 onwards							
Incomes	**Monthly**	**Yearly**		**Expenses**	**Monthly**	**Yearly**	
Gross salary	4,800.00	57,600.00		Insurance	350	4,200.00	
Net Income	4,130.00	49,560.00		Maxis	50	600	
				Parents	756	9,072.00	
				Self expense	280	3,360.00	
				Petrol	130	1,560.00	
				Kid educare	200	2,400.00	
				Assessment	34	408	
				New house instalment	1,100.00	13,200.00	<<<<< NEW FROM 2020
Total	4,130.00	49,560.00		Total	2,900.00	34,800.00	
				Savings			
					1,230.00	14,760.00	

Preparing the Net Worth Statement (NWS)

Based on the information provided, the NWS is prepared by listing segregating assets and liabilities. The Rate of Return (%) and Interest Rates (%) are included to compute the Return on Net Worth (RONW).

- The Rate of Return can be obtained based on historical performance of the assets (e.g. EPF dividend for the past 5 years ~5-6% each year).
- The interest rates can be obtained based on the existing mortgage interest rate.

Net Worth Analysis excluding the Property

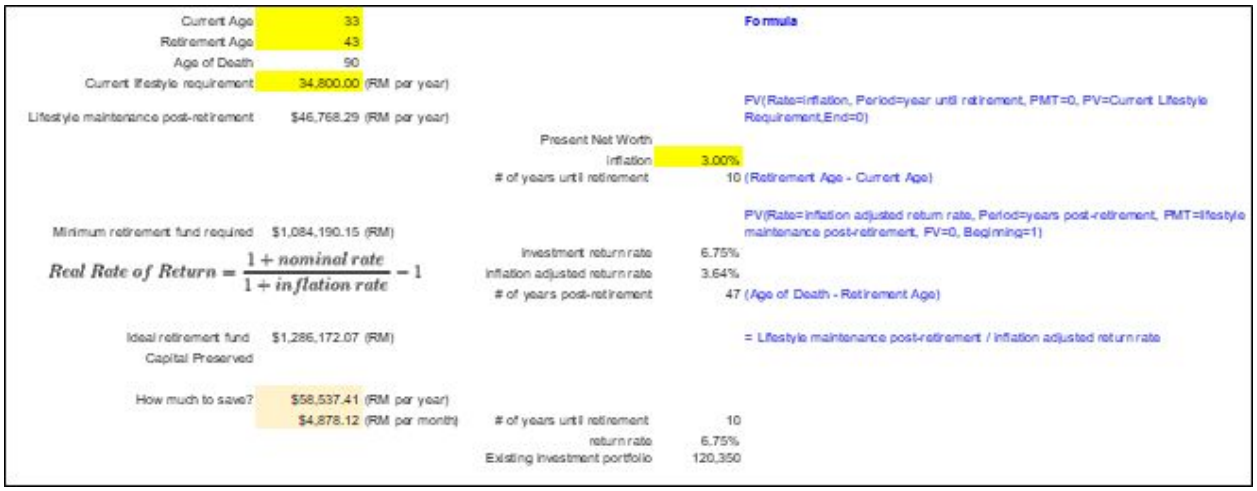
Net Worth Analysis		Date	03/01/2018					
Assets	Market Value	Return Rate (%)	Annual Return (RM)		Liabilities	Outstanding Loan	Interest Rate (%)	Annual financing cost (RM)
EPF Account 1	60,000.00	6.00%	3,600.00		Mortgage 1		4.50%	0.00
Fixed Deposit	5,000.00	3.00%	150.00		Mortgage 2		4.50%	0.00
Public Mutual	1,500.00	6.00%	90.00					
Blue Chip Shares	52,350.00	8.00%	4,188.00					
PRS	1,500.00	6.00%	90.00					
Stocks (from refinancing)		8.00%	0.00					
Property1		4.80%	0.00					
Property2		5.00%	0.00					
Total Assets	**120,350.00**		**8,118.00**		**Total Liabilities**	**0.00**		**0.00**
					Total Net Worth	**120,350.00**		
					RONW	**6.75%**		

Retirement projection

Based on the information listed in the Financial Statement and Net Worth Statement, input the following information into the Retirement Projection calculator to calculate the “How much to save?”.

- Insert items highlighted in yellow (i.e. Current Age, Retirement Age, Current Lifestyle Requirement, and Inflation rate)
- Other values will be automatically computed based on the information updated in the Financial Statement and Net Worth Statement.

Can Ms Lee retire without leveraging on her properties?



Current Age	33			Formula
Retirement Age	43			
Age of Death	90			
Current lifestyle requirement	34,800.00 (RM per year)			
Lifestyle maintenance post-retirement	$46,768.29 (RM per year)			PV(Rate=inflation, Period=year until retirement, PMT=0, PV=Current Lifestyle Requirement,End=0)
		Present Net Worth		
		Inflation	3.00%	
		# of years until retirement	10	(Retirement Age - Current Age)
Minimum retirement fund required	$1,084,190.15 (RM)			PV(Rate=inflation adjusted return rate, Period=years post-retirement, PMT=lifestyle maintenance post-retirement, FV=0, Beginning=1)
$Real\ Rate\ of\ Return = \frac{1 + nominal\ rate}{1 + inflation\ rate} - 1$		Investment return rate	6.75%	
		Inflation adjusted return rate	3.64%	
		# of years post-retirement	47	(Age of Death - Retirement Age)
Ideal retirement fund Capital Preserved	$1,286,172.07 (RM)			= Lifestyle maintenance post-retirement / inflation adjusted return rate
How much to save?	$58,537.41 (RM per year)			
	$4,878.12 (RM per month)	# of years until retirement	10	
		return rate	6.75%	
		Existing investment portfolio	120,350	

Based on the Retirement Projection Calculator, Ms Lee **will not** be able to retire Ms Lee will need to save RM4,878.12 per month instead of the current RM1,230.

Can Ms Lee retire leveraging on her properties?

Now, lets assume Ms Lee's Property 1 is worth RM400,000 and Property 2 is RM800,000. The loan for Property 2 is RM700,000 with an interest rate of 4.5%. Ms Lee has decided to refinance Property 1 at RM350,000 at 4.5% interest rate.

Based on the RM350,000 obtained from refinancing, Ms Lee has reinvested the amount into blue chip stocks with a positive return rate of 8%. *Note: Ms Lee was able to rent Property 1 at RM1,600 per month which amounts to 4.8% return per annum.*

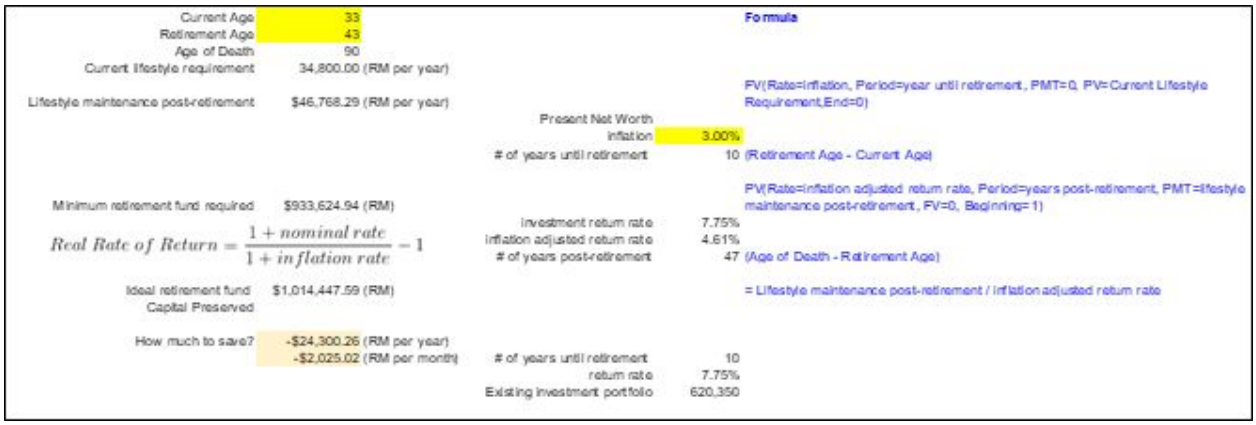
The revised Net Worth Statement will be as below:

Net Worth Analysis including the Property (with Mortgage) and reinvesting into Stocks with higher Return Rates

Net Worth Analysis Date 3/1/2018

Assets	Market Value	Return Rate (%)	Annual Return (RM)	Liabilities	Outstanding Loan	Interest Rate (%)	Annual financing cost (RM)
EPF Account 1	60,000.00	6.00%	3,600.00	Mortgage 1	350,000.00	4.50%	15,750.00
Fixed Deposit	5,000.00	3.00%	150.00	Mortgage 2	700,000.00	4.50%	31,500.00
Public Mutual	1,500.00	6.00%	90.00				
Blue Chip Shares	52,350.00	8.00%	4,188.00				
PRS	1,500.00	6.00%	90.00				
Stocks (from refinancing)	350,000.00	8.00%	28,000.00				
Property 1	400,000.00	4.80%	19,200.00				
Property 2	800,000.00	5.00%	40,000.00				
Total Assets	**1,670,350.00**		**95,318.00**	**Total Liabilities**	**1,050,000.00**		**47,250.00**
				Total Net Worth	**620,350.00**		
				RONW	**7.75%**		

Based on the revised Net Worth statement, the Retirement Projection Calculator will be updated to the following as well:



				Formula
Current Age	33			
Retirement Age	43			
Age of Death	90			
Current lifestyle requirement	34,800.00 (RM per year)			
Lifestyle maintenance post-retirement	$46,768.29 (RM per year)			FV(Rate=inflation, Period=year until retirement, PMT=0, PV=Current Lifestyle Requirement,End=0)
		Present Net Worth		
		Inflation	3.00%	
		# of years until retirement	10	(Retirement Age - Current Age)
Minimum retirement fund required	$933,624.94 (RM)			FV(Rate=inflation adjusted return rate, Period=years post-retirement, PMT=lifestyle maintenance post-retirement, FV=0, Beginning=1)
$Real\ Rate\ of\ Return = \frac{1 + nominal\ rate}{1 + inflation\ rate} - 1$		Investment return rate	7.75%	
		Inflation adjusted return rate	4.61%	
		# of years post-retirement	47	(Age of Death - Retirement Age)
Ideal retirement fund Capital Preserved	$1,014,447.59 (RM)			= Lifestyle maintenance post-retirement / Inflation adjusted return rate
How much to save?	-$24,300.26 (RM per year)			
	-$2,025.02 (RM per month)	# of years until retirement	10	
		return rate	7.75%	
		Existing investment portfolio	620,350	

By leveraging on her existing properties and reinvesting the money from the mortgage into higher returns assets, based on the Retirement Projection Calculator, Ms Lee **will** be able to retire Ms Lee immediately as she already has adequate savings to retire.

Assumptions not included in the above computation:

- Increasing EPF amount as Ms Lee will still be working for the next 10 years
- Increasing investment in Blue Chip shares for the next 10 years