FINA1109

Managing Your Personal Finances

The Personal Financial Planning Process

- Personal financial planning – process of meeting your life goals through the proper management of your finances
- 4 components of personal financial plan – establish foundation, secure basic needs, build wealth, protect finances
- Key principles of effective decisions –
    - Use reasonable assumptions, outliers matter
    - Apply marginal reasoning – changes because of your decisions, changes 'at the margin'
    - Consider opportunity costs –What else could you have done?
    - Use sensitivity analysis – what if your assumptions are wrong?

5 Steps

Analyse current finances

- Collect, organise all financial information
- Create personal financial statements
- Quantitatively evaluate current financial position to establish a base-line against which you can measure improvement in the future
- Personal cash flow statement – evaluates relationship between income and expenditures
- Personal balance sheet – financial position/net worth, list of assets and debts
    - Liquid assets – cash + near-cash assets that can be easily converted to cash without loss of value, e.g. cheque and savings accounts
- +ve net worth when assets > liabilities and opposite for -ve net worth

Develop Short-term and long-term goals

- Process of setting goals involves an introspective assessment of why you have goals
- Goals change over time, may be influenced by changes in economic circumstances

Identify and evaluate strategies to achieve goals

- Identify alternative strategies for achieving goals and compare the costs and benefits

Establish and implement plan

- Acquire fundamental knowledge and master analytical tools that help you to make effective personal financial planning decisions
- Result: personal financial plan that meets basic household needs, build wealth over time, protects income and assets

Reevaluate and revise plan as needed

- Changes in personal circumstances + economic conditions can affect financial planning objectives and strategies

Time Value of Money

$$PV_0 = \frac{FV_t}{(1+r)^t}$$

- Important to know –
  - Size - how big the amount of money is
    - Larger future cash flows = larger present values
  - Timing – how long it will be before you receive it
    - More cash flow and more frequent = larger present values
  - Risk – how much is being discounted, can also be impatience/inflation
    - Higher risk = higher discount rate = smaller present values

Assessing Your Financial Position

Interest Rate Order of Magnitude Trick

- Divide 72 by the number of years it takes to double a given rate you earn
- Divide 72 by the interest rate to establish how long it will take for your money to double

Inflation

- Inflation – sustained increase in the general price level of goods and services in an economy over a period of time.
  - Appears differently to different people as we all consumer differently
  - Will reduce the value of money UNLESS interest rates are higher than inflation
- Consumer price index – measure that examines the weighted average of prices of a basket of consumer goods and services
  - Weighting of each type of good and service reflects average expenditure of households and not the expenditure of average households
  - Currently – 1.9%
- Cannot compare dollars from different years (nominal!!) to just whether an amount is more/less/same as

- **Nominal** – face value, price when it was issued rather than its current market value
- **Real** – nominal value adjusted for inflation

Saving Money Forever

Financial Ratios

- Can be affected by external factors such as GFC

Equity/net worth ratio

- Net worth to assets vs. net worth to income

$$Net\ Worth\ Ratio = \frac{Net\ worth}{Total\ assets}$$

Liquidity Ratio

- Shows % assets available to cover current debt
- Compares short term assets to short term liabilities

$$Basic\ Liquidity\ Ratio = \frac{liquid\ assets}{monthly\ expenses}$$

- Excludes super + savings, used to figure see no. of months expenses can be paid without income

Savings Ratio

$$Savings\ Ratio = \frac{savings}{net\ income}$$

- Dictated by life-cycle state – may be low or negative for a young couple with small children and for elderly people

Debt Ratio

- Debt ratio measured the % of total assets that you have financed with debt

$$Debt\ Ratio = \frac{total\ debt}{disposable\ income}$$

- Debt payment ratio estimates % of your after-tax income that does to paying required monthly minimum debt payments of all types

$$Debt\ Payment\ Ratio = \frac{total\ monthly\ debt\ payments}{after\ tax\ monthly\ income}$$

Goal Setting

- SMARTER goals – Specific, Measurable, Achievable, Realistic, Time-bound
- Goal decided – implementation plans specify required actions, and how to handle potential obstacles
  - What, why, when, how

Too Much or Too Little Debt

- Credit: able to borrow an amount
  - Provided if, under a contract, payment of a debt owed by one person to another is deferred or one person incurs a deferred debt to another
- Debt: Has been borrowed
- HECS-Help = debt without interest, indexed to inflation
  - Nominal terms – debts increase annually but constant in real terms
  - Repayment change could make the real term cost of loan higher

Purpose

- Smooth consumption – allows you to shift cash from future to the present
- Optimism – expect ourselves to be better off in life in the future
- Sometimes no choice e.g. education, housing
  - Debt = tangible illustration that human capital is a valuable asset

Types

- Pay-day loan – small amount of money from you pay is borrowed with a very high interest rate over a short period of time
  - Establishment fee – up to 20% of loan
  - Account keeping fee – up to 4% per month
- Interest free loan – allow you to buy goods and services now and pay for them later without being charged interest for a set period of time
- Credit card/Store card – issued by particular retail stores or otherwise
- Consumer leases – allows you to hire an item for a period of time, make regular regularly until contract finishes, NOT ownership
- Rent to buy – purchasing arrangement where you can rent an item for a specific time, at the end of the rental period you can continue to rent or buy outright
- Car loan/Home loan
- Consolidation loan – loan to gather all other loans into one

Credit Providers

- Make reasonable inquiries about your financial situation, requirements and objectives
- Take reasonable steps to verify financial situation
- Decide whether the credit contract you are asking for is not unsuitable for you
- Providers must have license (except retail stores + car yards)
- ASK the salesperson to identify the name in your credit contract/rental agreement
  - Get a credit report incl. licence number, contact details, fees and charges, details of your right to complain or written contact details to access their external dispute resolution scheme (EDR)

- Common feeds and charges –
    - Monthly fee for having an account
    - Late payment fees, missed payment fees
    - Feeds for going over credit limit
    - Establishment fees
    - Fees for refinancing
- Other parties may have liability:
    - Co-borrowers – both responsible for joint debt
    - Guarantors – must pay if the borrower does not pay as they are guaranteeing payment of loan
- Secured loans – security offered by borrower, usually leads to a lower interest rate
    - Home used as security in home mortgage → Borrower fails to pay – lender can sell the home, take what is owed and return the remaining cash, net of costs to the borrower
- Unsecured loans – generally for small amounts with higher interest rates than for secured

Credit Reports

- Third-party bodies watching to collate info about you – usually credit reporting agency for credit providers
- Report includes:
    - Personal info – name, address, DOB, license number, workplace address
    - When you applied for credit + amount of money you wanted to borrow
    - Payment defaults - >60 days, >$150, written notification
    - Clearouts – borrower goes missing
    - Repayment history – if >14 days late, but diff for utilities bill
    - Defaults remain on report for 5 yrs, repayment history remains for 2 yrs

Interest

- Price of money – payment made for use of money or earned from investing money
- Rate per annum, can be 'nominal' or 'effective' – exclude or include compounding
- Comparison rate for credit includes interest rates and most fees+charges – common types:
    - RBA cash rate
    - Business rate – e.g. bank accept bill rate and bank lending rate
        - Be wary of special rates that last for short period, fees, penalties
    - Retail interest rates charged to customer
        - Variable, fixed, partially fixed, introductory/discount, flat/simple
    - Note: comparison rate does not include feeds that may not end up being paid such as early payout fees or late payment fees

Debt Diversification

- Diversification can be costly:
  - Level of interest rates vary across debt providers
  - Transaction costs and penalties also vary
  - Some costs are not fixed, not percentage
  - Time is valuable – more effort to repay multiple debts
- Combining long-term debt and short term debt can be costly – stuff like credit card loan will still be outstanding
- Refinance – renegotiate or change a single debt to different terms
  - Could save up to 10k by refinancing but people do not because of:
    - Opportunity costs, upfront costs to refinancing, may not know how to do, certain costs vs uncertain benefits
  - Some people can help such as mortgage brokers but they can be conflicted
- Consolidation – multiple debts into one
  - Cheaper + result in savings BUT facilitators can make it more expensive
  - Could put your deeper in debt by letting you borrow more money
  - Could lose home if unsecured loan
- Managing Debt – contemplate shocks, seek free independent advice
  - Shocks: lose income, interest rates increase, plan to make additional payments
- Borrower's Parley – hardship variation used to propose something to lender in writing

Home Ownership

Rent or Buy Decisions

- Could own outright, own but 'buying back', use for a payment but not own
- Ranking of most valuable asset will change with age and will determine rent/buy decision
    - Human capital when young, family home when older
- Trend: people tend to buy later in life now as marriages occur later

Risk

- Location of house is an investment
- Housing could be overvalued – if real house prices grow at their historical average pace then owning a house is just as expensive as renting AND if prices grow more slowly, the average home buyer would be financially better off renting
- Residential property – volatile market price, difficult to trade due to large costs + diversity
    - Implications – may constrain choices and ability to take opportunities/risks

Affordability

- Varies on where you live
- 30% of gross income used as a benchmark but is more meaningful for lowest 40% of income distribution (30/40 rule)

Financing Purchase

- Buy the residence outright
- Finance acquisition using a home mortgage
    - Deposit ~20% deposit or smaller deposit with mortgage insurance
    - 20-30 yr variable/floating rate loan – secured by 'bricks and mortar'
        - Interest rate may be fixed for a period
- Riskier to have mortgaged residence than outright owned – affected by changes to value
    - If original house price varies by 20% then 'equity' varies from -94% to 106%
- Volatility in equity that you hold in your home increases with the mortgage size relative to home value and with interest rates

Benefits of Home Ownership

- Creates social capital – groups of individuals create a safe desirable living environment
    - Homeowners invest more in their neighbourhoods and engage in civic activities
- Creates value for individual and community

- Encourages saving – want to save but face hurdles such as regular mortgage payments, some consumption/investment, govt helps with no tax on sale gains on family home

Specific Costs

HOME OWNERSHIP	RENTING
Acquisition – stamp duty, legal costs, interest on mortgage	Regular rental payment Bond payment
Continuing costs – rates, property insurance, general maintenance and repairs	Restrictions on what can be done to property Inspections by manager
Costs of upgrade or move to another house	Limited tenure, instability

Tax

- Tax planning – organisation of affairs to minimise tax while complying with tax plans
- Tax avoidance – planning designed to avoid taxes payable under the law
- Tax evasion – unlawfully escaping liability for tax by deliberately avoiding tax
- Types:
  - Income – employment, capital, dividend, interest
  - Indirect – consumption, land, excise taxes, stamp duties
- Fits into stage 3 of personal financial planning process
  - Build wealth by saving and investing to meet goals tax effectively
  - Establish firm foundation – acquire tools and skills to be tax savvy

Income

- Employment income (earned), investment income (unearned)
- If you have franking credit, will be assessed for tax on amount invested and will receive the franking credit and that will be taken away from the tax owed.

• Interest:	**700-241.50 = $458.50**
• Fully Franked Dividend:	**700- 45.00 = $655.00**
• Capital Gain:	**700-120.75 = $579.25**

  - ***If Clare invests $10,000 in XYZ Ltd. and earns a divided of 7%***
    - ***If she receives $700 the company must've made $1000 in profit as they have to pay 30% company tax***
    - ***Clare receives a $700 fully franked dividend PLUS a $300 franking credit***
    - ***Clare is assessed tax on $1000 (34.5% = $345) BUT she will receive the franking credit of $300***
    - ***Her tax is essentially $345 - $300 = $45 so her return is $700 - $45 = $655***
- Capital gain receives a 50% discount, pay tax on half of it
- Can put the asset in someone's name who does not earn enough to pay ta

Average, Marginal, Effective Marginal Tax

- Taxable income = assessable income – allowable deductions
    - Ordinary income – wages, Statutory income – capital gains
    - Deductions – expenses incurred in earning your income
        - Self-education – sufficient connection to job to qualify
            - Includes: fees, texts, computer expenses
        - Car expenses – travel between workplaces qualifies, not commune
- Marginal tax = rate in each income bracket + medicare levy
    - medicare levy (2%) → applies to all incomes not just above threshold
    - medicare levy surcharge → if you earn above a certain amount, govt charges you for not having private health insurance
- Effective marginal tax rate = everything earned and lost to government
- Average tax = amount of tax paid / assessable income

Self-Assessment System

- Claim made is accepted by ATO, without adjustment, notice of assessment issued
- RULES for deductions
    - Make sure you spent and were not reimbursed
    - Make sure related to job + keep record to prove it
        - 2 yr review period, 5 yrs of record keeping

Tax Offsets/Rebate

- Low Income Tax Offset (LITO) – automatically calculated, worth a whole $
    - $445 offset against bill if you earn < $37k
        - enough to pay tax for $2342 income
    - Every dollar above $37k, earn 1.5c less
- Tax free threshold - $18,200 (no tax on this income) + $2,342 = $20,542
- Have to be paying tax to get the offset, but offset is better than deductions

Investments

Major Asset Classes

- **Growth assets** – money invested is returned with the growth of the share
    - Equity (shares), Property
    - assets which include equity strategies, growth opportunities, and agricultural investments
- **Defensive assets** – expect smaller but regular return than growth assets
    - Bonds (fixed interest securities), Cash
    - assets which include absolute return investments
- **Alternative**
- **Infrastructure**

Cash

- Income (variable), liquid, no growth, short-term, risk-free → safe haven
- Govts guarantee $250k per customer per authentic deposit institution
- Ineffective with regards to minimising tax and avoiding inflation

Bonds – Fixed Interest Securities

- Debt, lender, secured/unsecured
- Agreed schedule of interest payments and principal repayments
- All bond details are fixed and do not change but price/value of bond changes
- Low risk but some element of risk – company bonds riskier than govt bonds

Equity – Shares, Stock

- Last to receive returns after all the employees and higher-ranking shareholders
- Have ownership + voting rights BUT no guarantee/commitment for dividends
    - Not all pay dividends

Property

- Rental income, capital gains, residential/commercial
- Normally need to borrow to support

Risk, Return, Diversification

- Greater returns correspond with more risk
- Shares – very variable, high returns + high risk
- Bonds – less variable, lower returns + lower risk
- Diversification = good if different investments do not move in the same way
    - Decreased standard deviation + less variability resulting in less risk
    - Some risk always remains but systematic market risk
- Risks that expose financial capital need to consider risks to human capital
- Labour and wage income could be an investment but is income flexible and is it sensitive to general market conditions

Mechanics of Investments

- Each asset class has its own market, many organised and can only play in them through authorised players
    - E.g. cannot trade individually on ASX
- Primary market – company issues/floats shares → initial public offering
- Secondary market – exchange ownership with other investors, not exchanging with company directly

What is an Index?

- Tracks what happens for some 'groups' of shares
- Market capitalisation – add up what all the companies in the group are worth

Direct Investing

- ASX – can buy stock in companies, or in ASX itself
- CommSec – online broker
- More than 1 stock exchange in AUS e.g. chi-X, National Stock Exchange, Sydney Stock exchange
    - Some companies do not make the requirements for ASX but do for others
    - Institutions prefer to use chi-X

Brokers

- Licensed and approved to trade on behalf of clients
- Full service – buy/sell shares, give recommendations/research, have high fees
- Non-advisory – no advice given, provide online trading facilities, lower fees

How to invest

- Market value – best guess of true value of share
- HEAPS of information available on shares
- Limit price order: capping price you want to pay for shares OR can take market value
- ASX uses a centre point to make trades more likely to happen – allows transactors to meet in the middle
- Holder identification number (HIN) & Shareholder reference number (SRN) identify you and your shareholdings

Property

- Direct investment – involves the purchase of real estate/property
    - Involves deposit + borrowing, so a leverage system which magnifies risk
    - High transaction costs to buy/sell
- Indirect investment – purchase shares or units in a company that invests in property
    - Managed funds, ETFs ➔ lower transaction costs, more liquid
        - E.g. AREITS – Australian Real Estate Investment Trusts Managed Fund

Indirect Investing

Managed Funds

- Investment type where financial institution invites investors to pool money with them to purchase + manage a portfolio of investments
- Unlisted options – buy + sell directly from the fun, can be less flexible
- Listed options – have fees for every transaction, liquid + flexible in trading
- Management Styles:
  - Passive – match the performance of benchmark/index
  - Active (higher fees) – actively trade in order to beat benchmark, involves:
    - Security selection, market timing, asset allocation
- Advantages
  - Instant diversification, can access investment with small amount of funds
  - Wide range of asset classes + investments
  - Funds managed by professional fund manager
- Disadvantages
  - Fees:
    - Management expense ratio (MER) – ongoing to cover cost of managing investment, can vary (0.5-4% p.a.)
    - Indirect costs ratio (ICR) - ratio of management costs not deducted directly from investor's account to average of net assets of fund
      - Includes all indirect costs but industries prefer MER
  - Lack of control + transparency, hard to pick a fund

Exchange Traded Funds

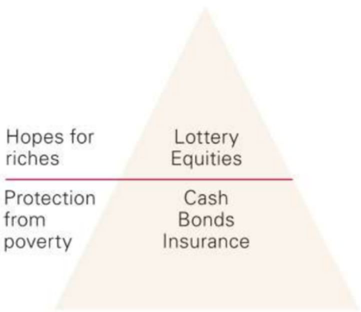
- Funds invest passively, match the ASX, less fees than other passive funds
- Will have to pay another brokerage fee to initiate the transaction

Bonds

- Fixed-interest class securities, long term (exceeding 12 months)
  - Interest payments at either 6 or 12 months
- Often traded through less formal secondary markets
- Households own approx. 0.3% of Australian Bond Market
- More government and corporate bonds traded on ASX

Behavioural Finance

- Kahneman – 2 systems of mind activities:
  - 1 – operates automatically, quickly, with little/no effort and no sense of voluntary control
    - system 1 has systematic errors that can lead to biases
  - 2 – allocates attention to effortful mental activities that demand it, including complex computations
    - system 2 tends to lead to better decisions
- Availability bias – decisions are based on available/most recently observed info
  - Gambler's fallacy – decisions based on incomplete/incorrect data, error in applying the law of averages to small samples
  - Investors are generally overconfident about their knowledge
- Anchoring – tendency to remember the most recent info and anchor onto it
- Herd behaviour – indiv. follow group behaviour without their own critical thinking
  - frenzied buying – stock market bubbles
  - frenzied selling – stock market crashes
- Mental Accounting – tendency to treat dollars differently according to their use
  - Buckets created based on goals/time horizons – retirement, school fees
  - Investors attach different risk tolerances to buckets
  - E.g. creating layered pyramids
    - Loss averse investors tend to create portfolios with view to ensure security and then consider risk when need for financial security is met
    - Decision driven by fear of regret – need to protect minimum acceptable subsistence level of income



- Self-attribution bias – good luck thought to be investor skill rather than actual luck
- Money illusion – wellbeing should be measured in real dollars but people tend to focus on nominal dollars
- Disposition effect – loss averse investors feel losses almost twice as much as gains
  - Less likely to realise losses by selling investments that are doing poorly
  - More likely to realise gains from selling investments that are doing well
- Home bias – investors associate familiarity with low risk
  - focus on domestic markets over internationals markets

Long Term: Retirement

- Theory of Positive Assortative Mating: People match by socio-economic ability
- Single men are more risk tolerant and overconfident while single women are averse
- Creation of a partnership may temper the more extreme behaviour between indivs
    - Marriage results in shared assets and responsibilities

Retirement and Superannuation

- Retirement: Point in your life where you start to draw on your financial capital instead of human capital
- Superannuation: Forced retirement savings
- Defined Benefit Plan: payout depends on how long you/employer contributed, how much contributed, your salary
    - Risk lies with employer and if you die, reduced pension transferred to partner
- Defined Contribution Plan: you contribute yourself, have own account and hold investment risk
- Super is preserved until the condition of release – exceptions for severe financial hardship and compassionate grounds
    - Employee contribution – 9.5% compulsory deferred pay when earn >$450/month
    - Co-contribution – guaranteed 50% p.a. return, every $ put in you receive half from taxpayer deposited into super account per year
    - Super taxed at 15%
- When retiring, options:
    - Take lump sum
    - Rollover –
        - Switch from accumulation to pension
        - Lower tax – from age 60 you pay 0% tax
        - Rules – must spend/withdraw x% depending on age
    - Buy annuity – guarantees fixed annual amount for 5yr/10yrs/life
        - People with annuities are happier but not many buy them

Insurance

- Risk – range of possible outcomes where we can measure the likely probability that the outcome will or will not happen
- Decisions involve – size of potential loss, size of probability of loss
- Risk analysis: exposure, effect, perception, valuation
- Types of risk:
    - Pure – exposes you to losses only
    - Speculative – potentially gives you a loss or a gain

Risk Management

1. Identification of possible risks and loss
    a. Human capital risk
    b. Risk of prolonged illness or injury
2. Evaluate and quantify the potential costs
    a. Costs for medical emergencies or death
3. Management strategy of identified risks
    a. Transfer or minimise the risks
    b. Risks are transferred through insurance
        i. Financial responsibility passed to another party
    c. Principle of good faith
        i. Highest degree of honest imposed on both parties
4. Program review
    a. Reassess to ensure ongoing protection from risk
    b. Note: 14 day cooling period applies to most insurance packages