



Asset Liability Management



Asset Liability Management of Matching is trying to match your cash inflows with your cash outflows with out leaving a negative gap

You need to know your needs (wants and desires) and their timing to understand your cash outflows (liabilities or future liabilities), similarly you need to know your income and its timing (assets and its investments)

Objective: maximize expected long run wealth at the horizon, risk adjusted.



3 Step Process to Investing

Define

- Define your needs and objectives.
- Needs are a function of Wants and Desires
- Wants and Desires are a function of disposable income and age
- Examples
 - A lower middle class eight year old saving for ice cream that he wants to have on the coming weekend
 - A middle class young professional who wants to buy a slick wrist watch in a couple of months
 - A middle class 45 year old who wakes up to need for retirement planning
 - A middle class 35 year old who wants to save for children's education
 - An upper class 25 year old who wants to save For the heck of it



3 Step Process to Investing

Evaluate

- Identify your needs – wants and desires, put in an order of priority. This provides and objective to your investments
- Discover your resources to match of priorities
- Match assets along with liabilities with cognizance of cash inflows and outflows and risks
 - A lower middle class eight year old saving for ice cream that he wants to have on the coming weekend
 - ❖ Stuffing cash in a box
 - A middle class young professional who wants to buy a slick wrist watch in a couple of months
 - ❖ Perhaps borrowing from a credit card and matching a current liability with an expected asset
 - A middle class 45 year old who wakes up to need for retirement planning
 - ❖ A mix of stocks and fixed income, starting higher with stocks and lowering as retirement approaches
 - A middle class 35 year old who wants to save for children's education
 - ❖ Same as above, would perhaps add precious metals and currencies
 - An upper class 25 year old who wants to save For the heck of it
 - ❖ Currencies, exotic derivatives, stocks precious metals



Risks to consider

- A lower middle class eight year old saving for ice cream that he wants to have on the coming weekend
 - ❖ Stuffing cash in a box - Risk of cash getting stolen
- A middle class young professional who wants to buy a slick wrist watch in a couple of months
 - ❖ Perhaps borrowing from a credit card and matching a current liability with an expected asset - does have the required cash in time to make payments
- A middle class 45 year old who wakes up to need for retirement planning
 - ❖ A mix of stocks and fixed income, starting higher with stocks and lowering as retirement approaches - Price volatility, credit in fixed income, interest rates volatility
- A middle class 35 year old who wants to save for children's education
 - ❖ Same as above, would perhaps add precious metals and currencies - as above
- An upper class 25 year old who wants to save For the heck of it
 - ❖ Currencies, exotic derivatives, stocks precious metals - as above

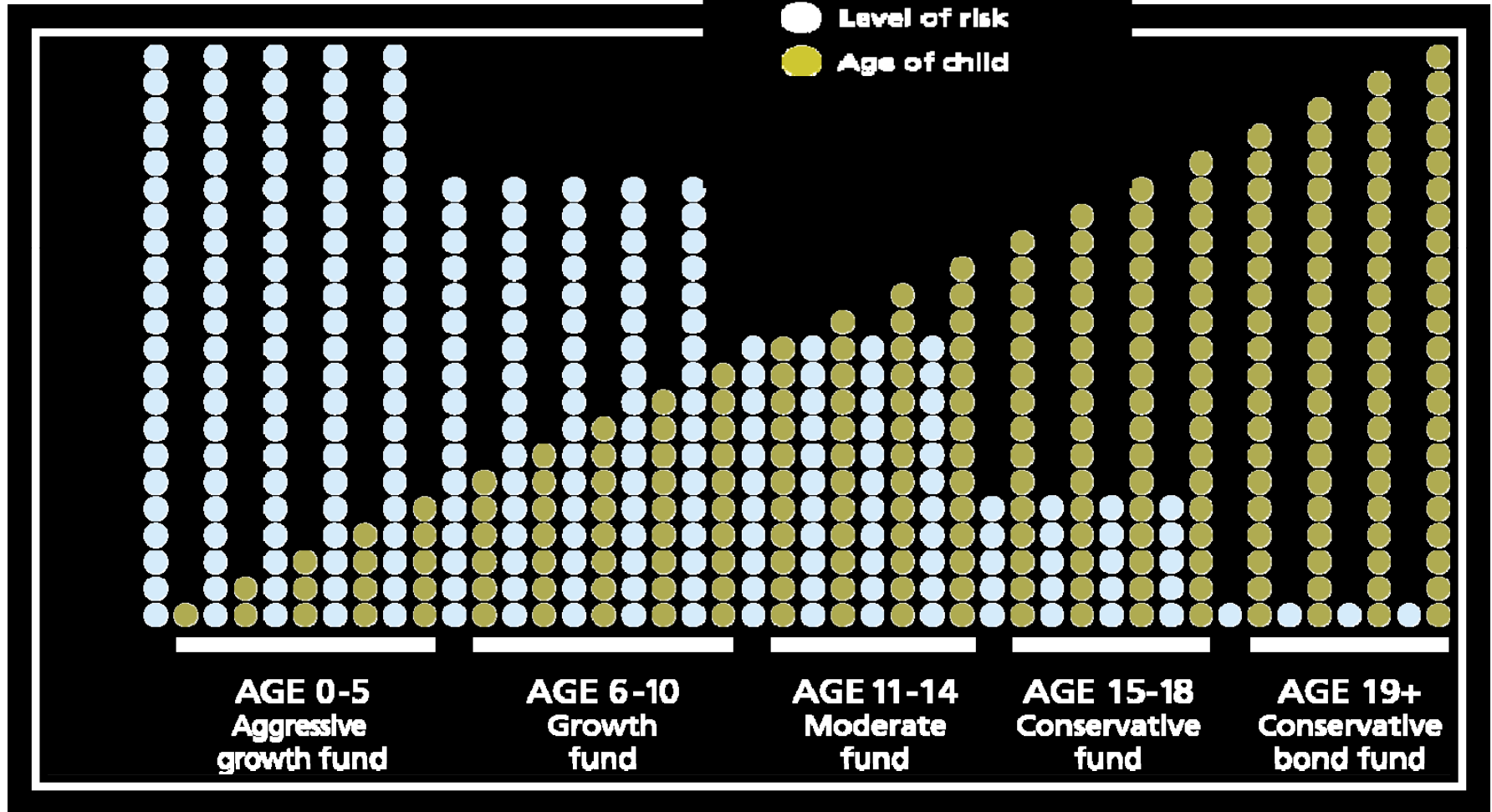


Investment Process

Successful investing and wealth creation depend on:

- Adhering to a goal-based strategic asset allocation
- Diversification across asset classes, styles, and sizes
- Utilizing professional research and money managers to implement the asset allocation model
- Investing on a regular, systematic basis
- Rebalancing on a regular basis with cash flow to bring your portfolio back in line with your target allocation
- Monitor investment performance on an ongoing basis and recommend adjustments as warranted

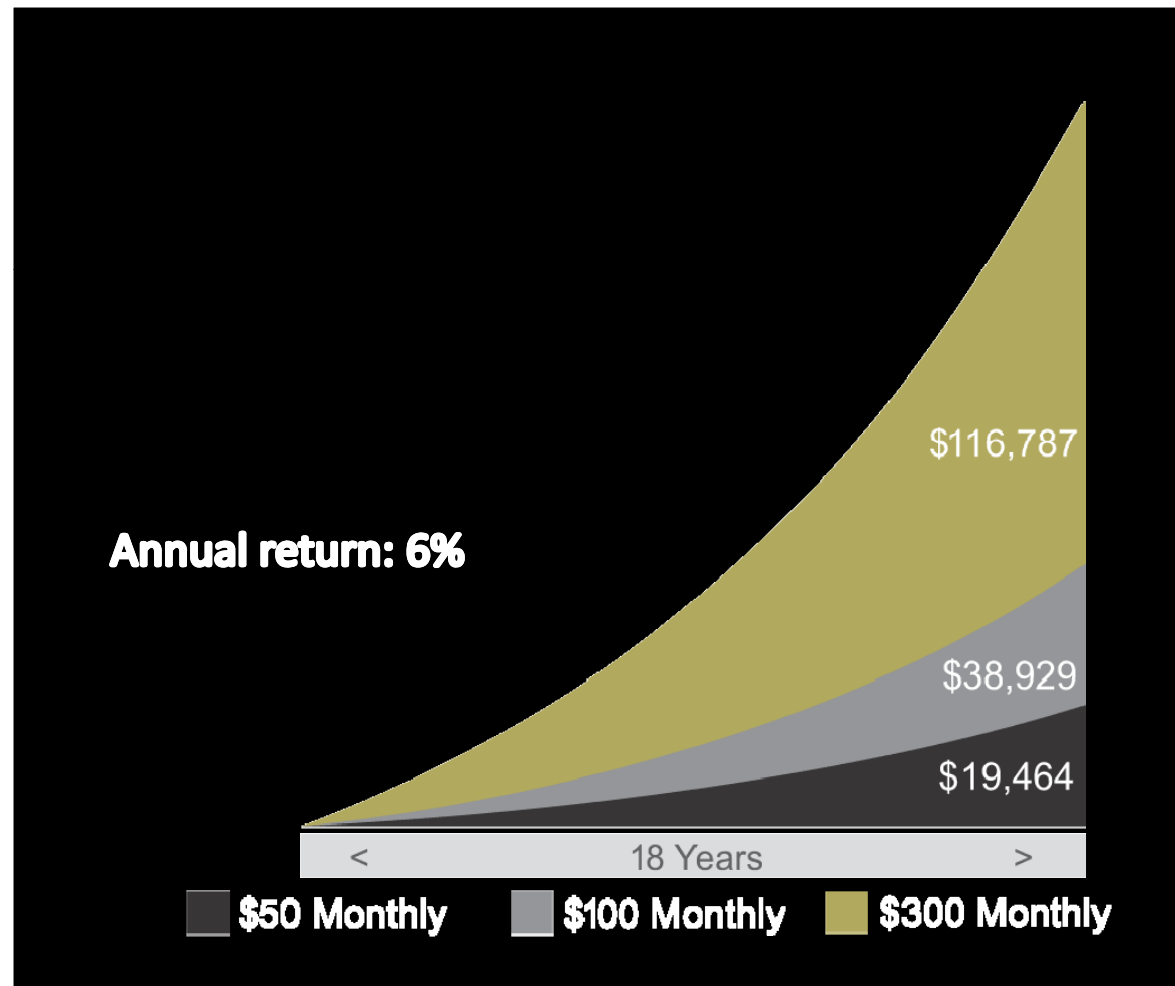
Saving for College Age-based investment option





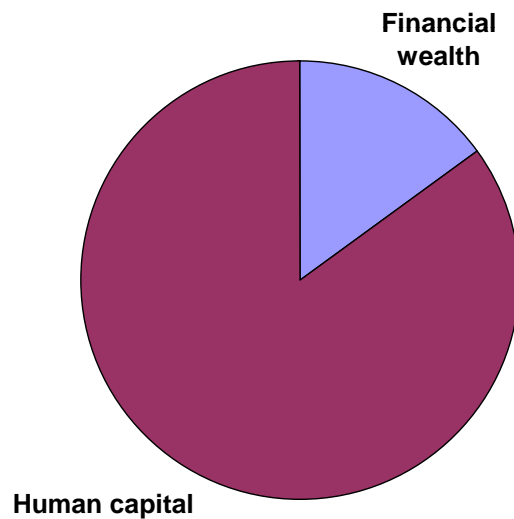
College Education Variables to Consider

- Depreciation Risk
- Inflation Risk
- Death of a provider
- Cash flow Planning

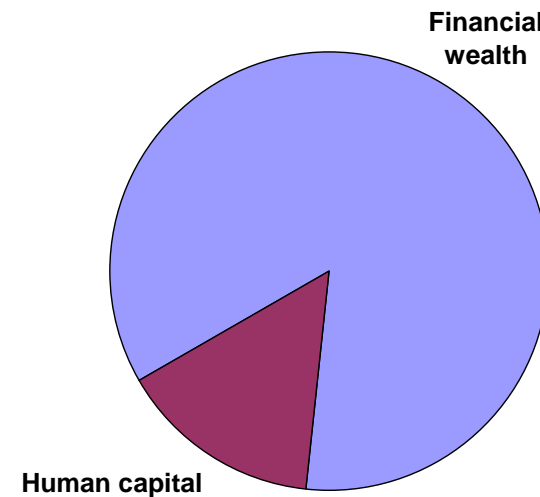


Why age-based investing makes sense: Human Capital

Balance sheet of a typical individual investor



When young



When close to retirement



Life-Cycle Funds for Retirement Planning

- Life-cycle funds are leading examples of a first-generation of age-based plan investment options.
- Life-cycle funds provide automatic rebalancing towards a target asset mix that becomes increasingly conservative as the fund approaches its target maturity date.
- There are multiple funds, one for each target date.
- Plan participants choose (or are assigned) the fund that best matches their anticipated retirement date. From there, the fund puts the participant in “autopilot” regarding portfolio diversification and rebalancing till the participant retires.



Projected Cash Outflows are future liabilities

Matching these with appropriate assets is

Asset Liability Management

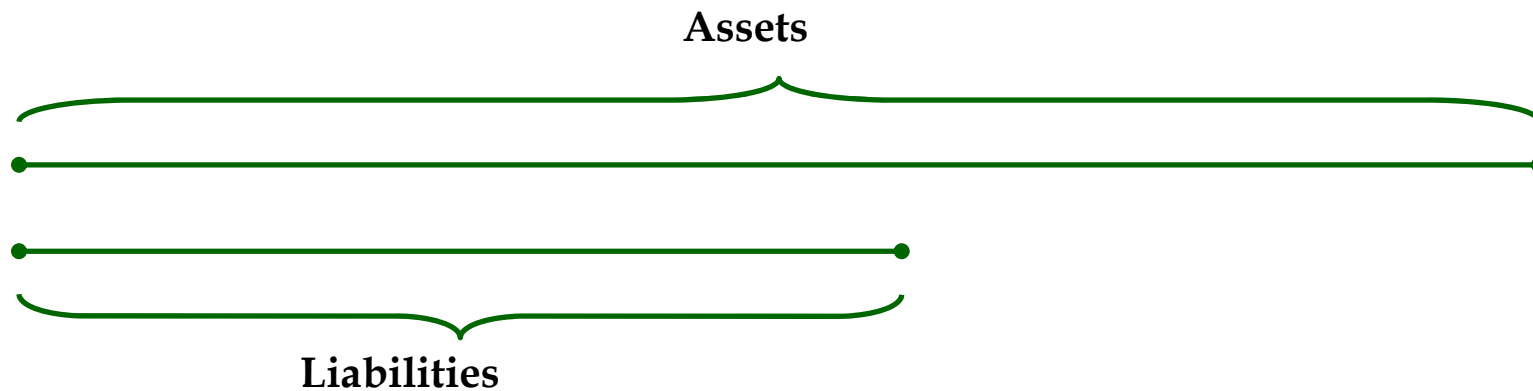


Asset-liability management:

The practice of managing a business so that decisions on assets and liabilities are coordinated.

Or more broadly, the ongoing process of formulating, implementing, monitoring, and revising strategies related to assets and liabilities in an attempt to achieve financial objectives for a given set of risk tolerances and constraints.

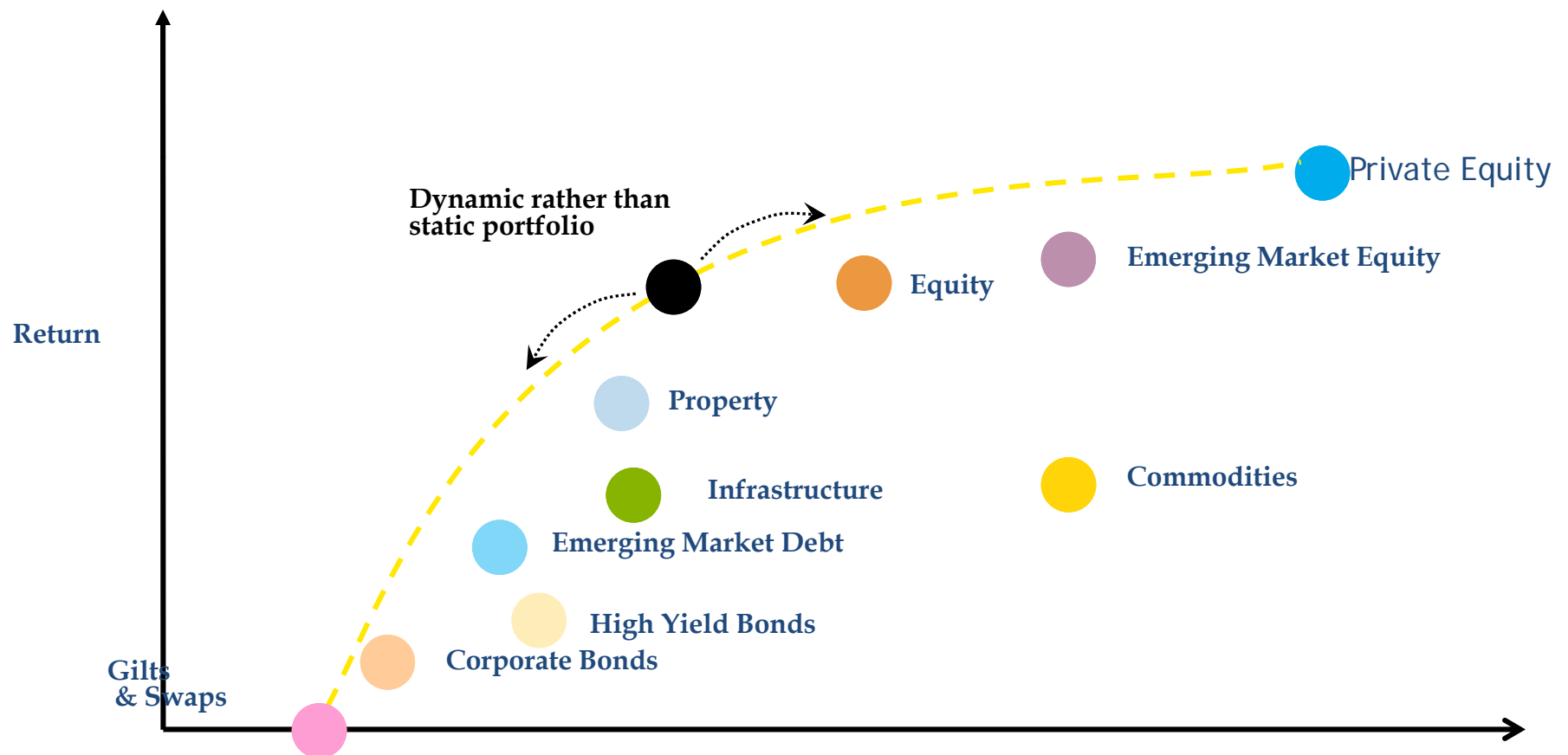
Introduction



A mismatch in assets and liabilities exposes the financial institution to interest rate risk.

Dynamic portfolio allocation process

As the return target changes, so must the portfolio allocation





Liability driven investment

What are the benchmarks?

Investment objective = meet liabilities

or alternatively

Investment objective = liabilities + outperformance of x% p.a.

Source: Barclays Global Investors