Investing in India through Mutual Funds

A Process to Add <u>Reliability</u>, <u>Compatibility</u> and <u>Predictability</u>

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Process Snapshot

1. <u>Risk Tolerance</u>
   a) Psychometric Profiling using Finametrica
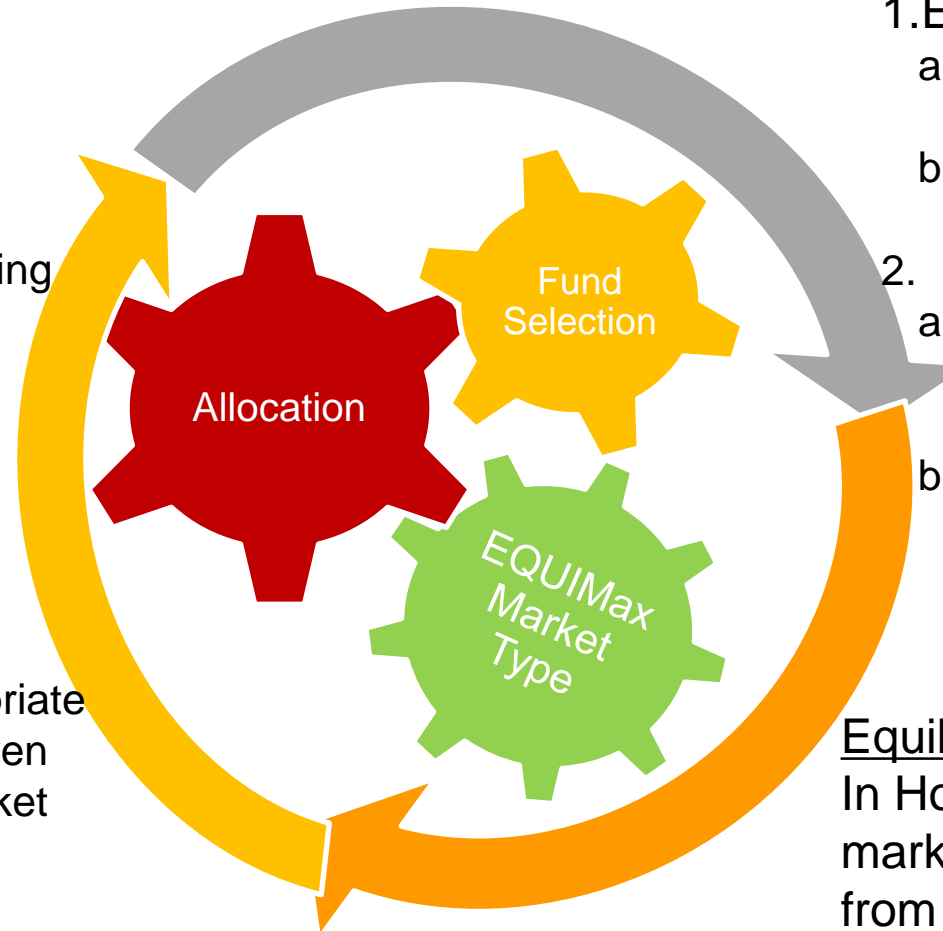2. <u>Risk Capacity</u>
   a) In House profiling
3. <u>Risk Required</u>
   a) Based on expected return calculations
4. <u>Allocation</u>
   a) Determining appropriate equity allocation given risk profile and market type
   b) Debt allocation is a residual decision

Allocation

Fund Selection

EQUIMax Market Type

<u>Fund Selection</u>
1. Equity
   a) Forward-looking based on market type
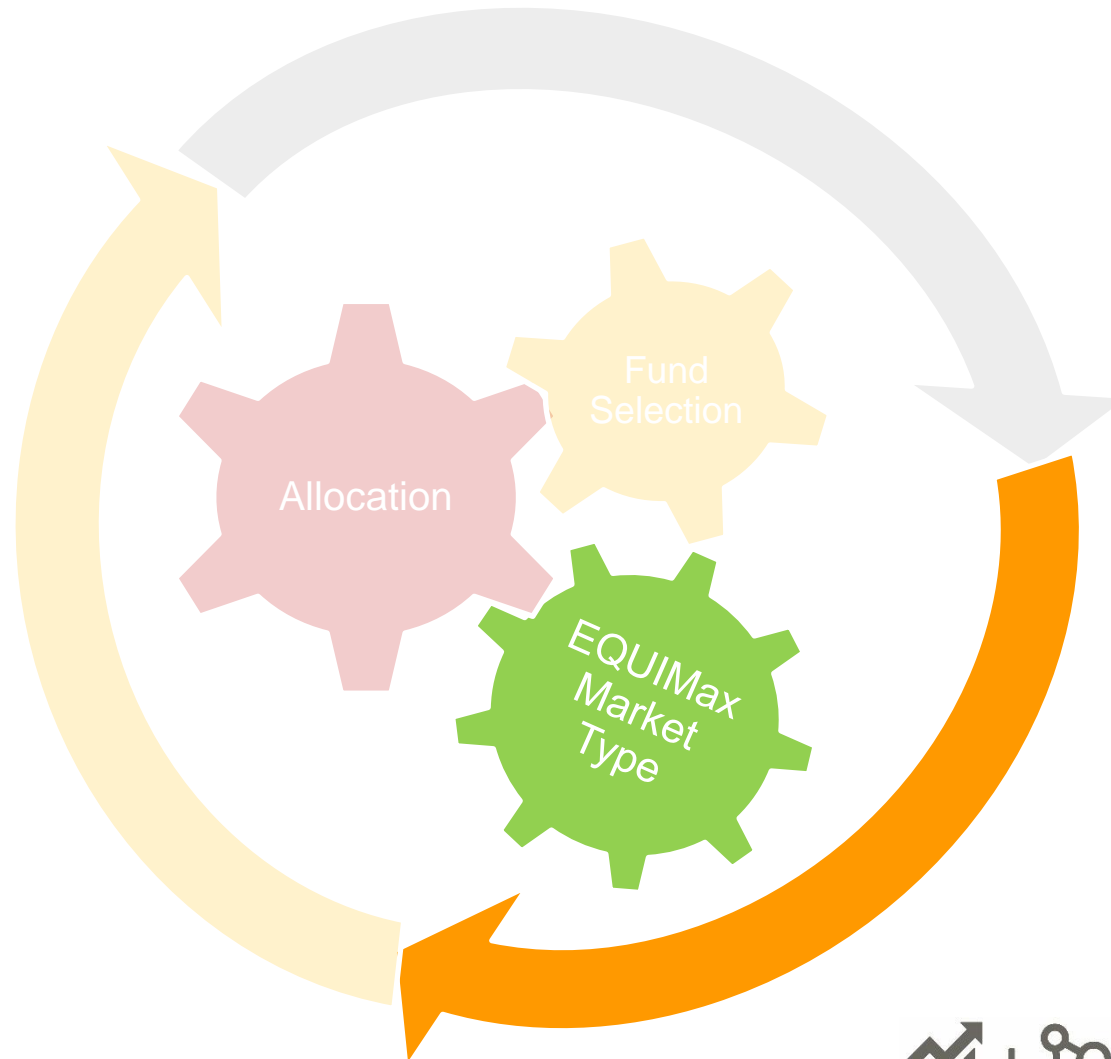   b) Based on reliability rather than absolute returns
2. Debt
   a) 50:50 allocation to dynamic and medium-term bond funds
   b) Selection based on best and worst period performances for dynamic and credit profile for medium-term funds

<u>EquiMax</u>
In House model of equity market attractiveness going from 1 (invest/add) to 6 (exit/reduce)
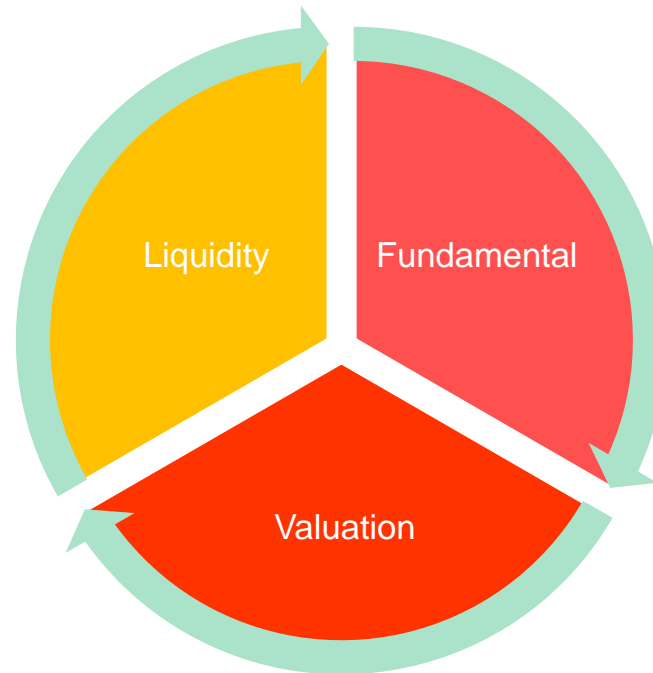
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EQUIMAX MARKET TYPE

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EquiMax Parameters

Assessment of money making opportunities for money to flow into India equities

Liquidity

Fundamental

Valuation

Balance Sheet and P&L determinants

Historic Valuations (no forward look) and possibility of expansion

Equity Indices classified into six types from Mtype1 to Mtype 6 based on variables selected from the above three areas on daily basis

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EquiMax- Rolling 1Y Returns (Nifty)

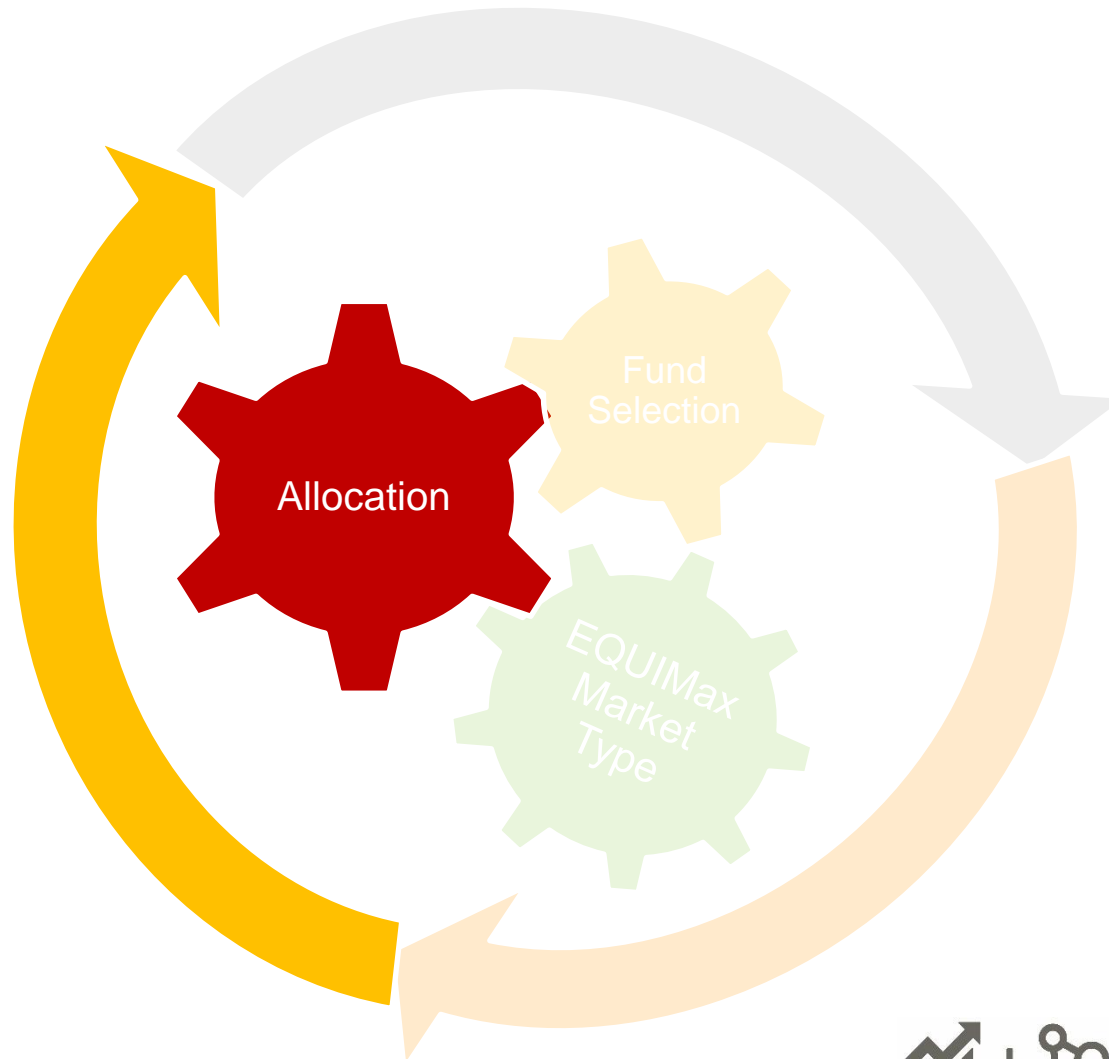| Mtype	Instances	Average	Max	Min	Neg Prob
1	917	51%	105%	-5%	2.0%
2	408	28%	86%	-17%	3.2%
3	525	21%	58%	-10%	4.6%
4	778	12%	56%	-26%	10.9%
5	708	2%	48%	-41%	45.9%
6	884	-17%	44%	-56%	87.9%
TOTAL	4220	15%	105%	-56%	29.4%

Hold, add if index falls, reduce if it rises

Buy or be at higher end of decided allocation range

Sell or be at lower end of decided allocation range

- Nifty data up to Dec 6, 2017. Model formulation and calculations in-house

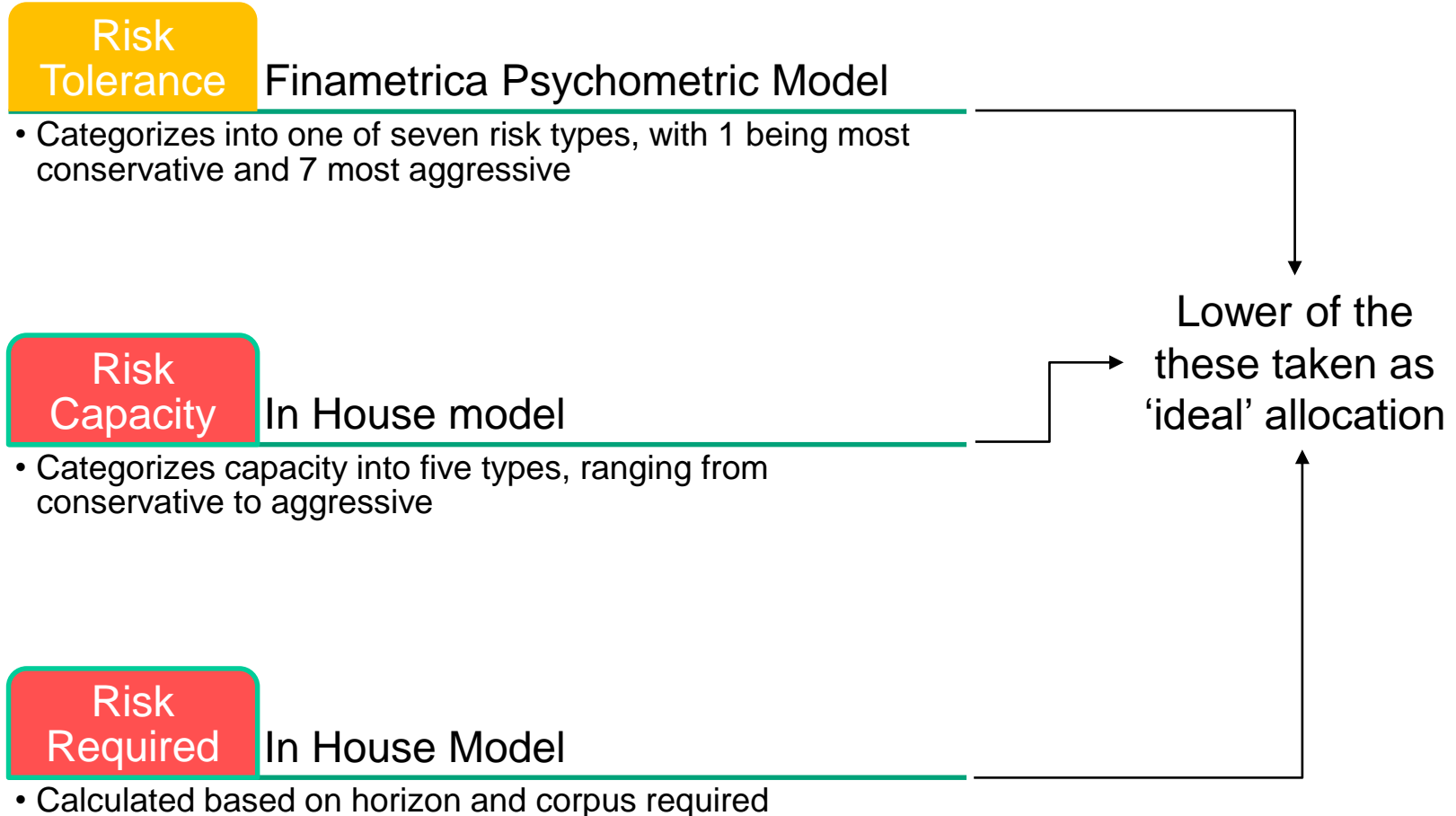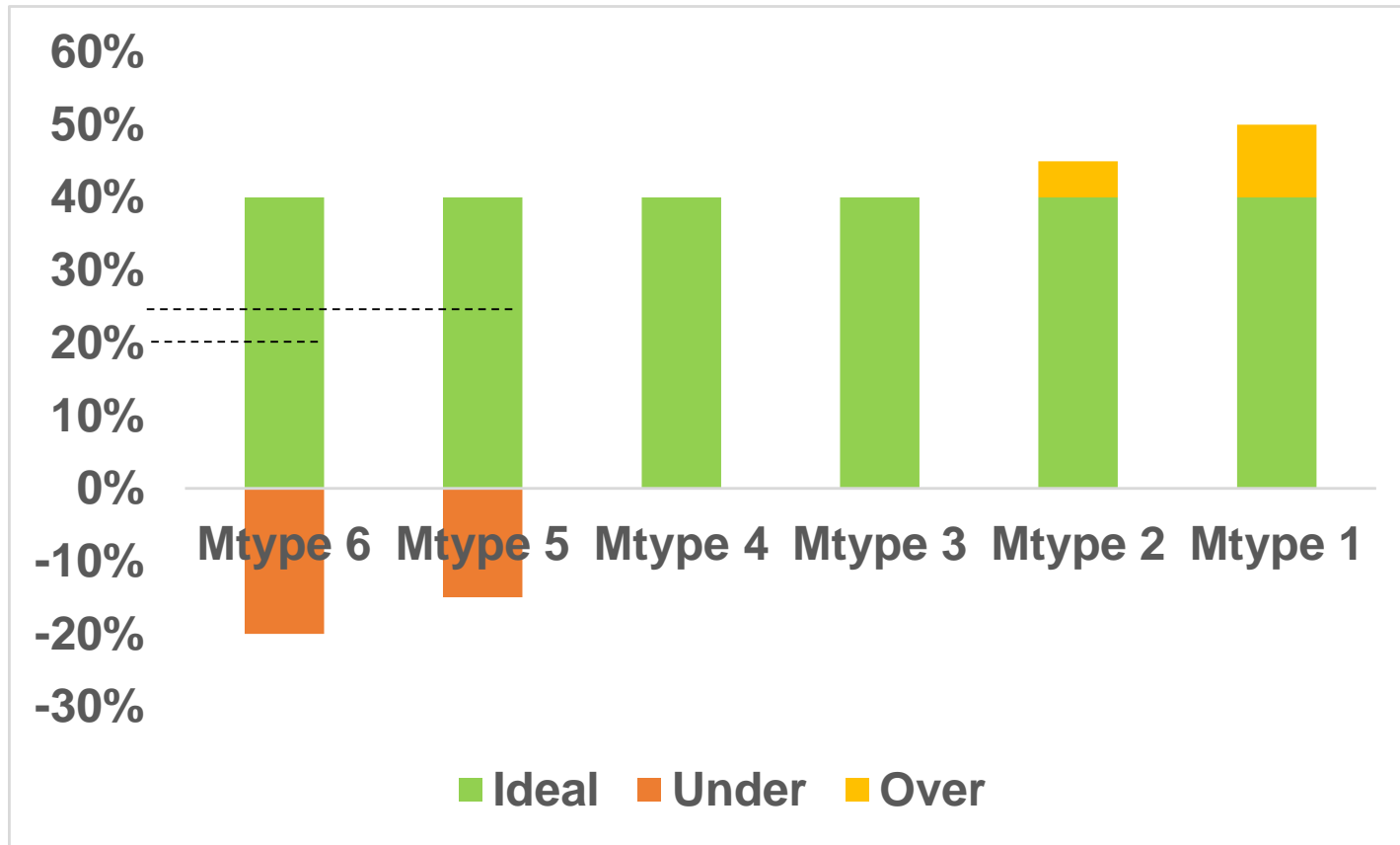Data, Strategy and Customization for Growth

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ALLOCATION

Allocation

Fund Selection

EQUIMax Market Type

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Determing Allocation

Risk Tolerance — Finametrica Psychometric Model
- Categorizes into one of seven risk types, with 1 being most conservative and 7 most aggressive

Risk Capacity — In House model
- Categorizes capacity into five types, ranging from conservative to aggressive

Risk Required — In House Model
- Calculated based on horizon and corpus required

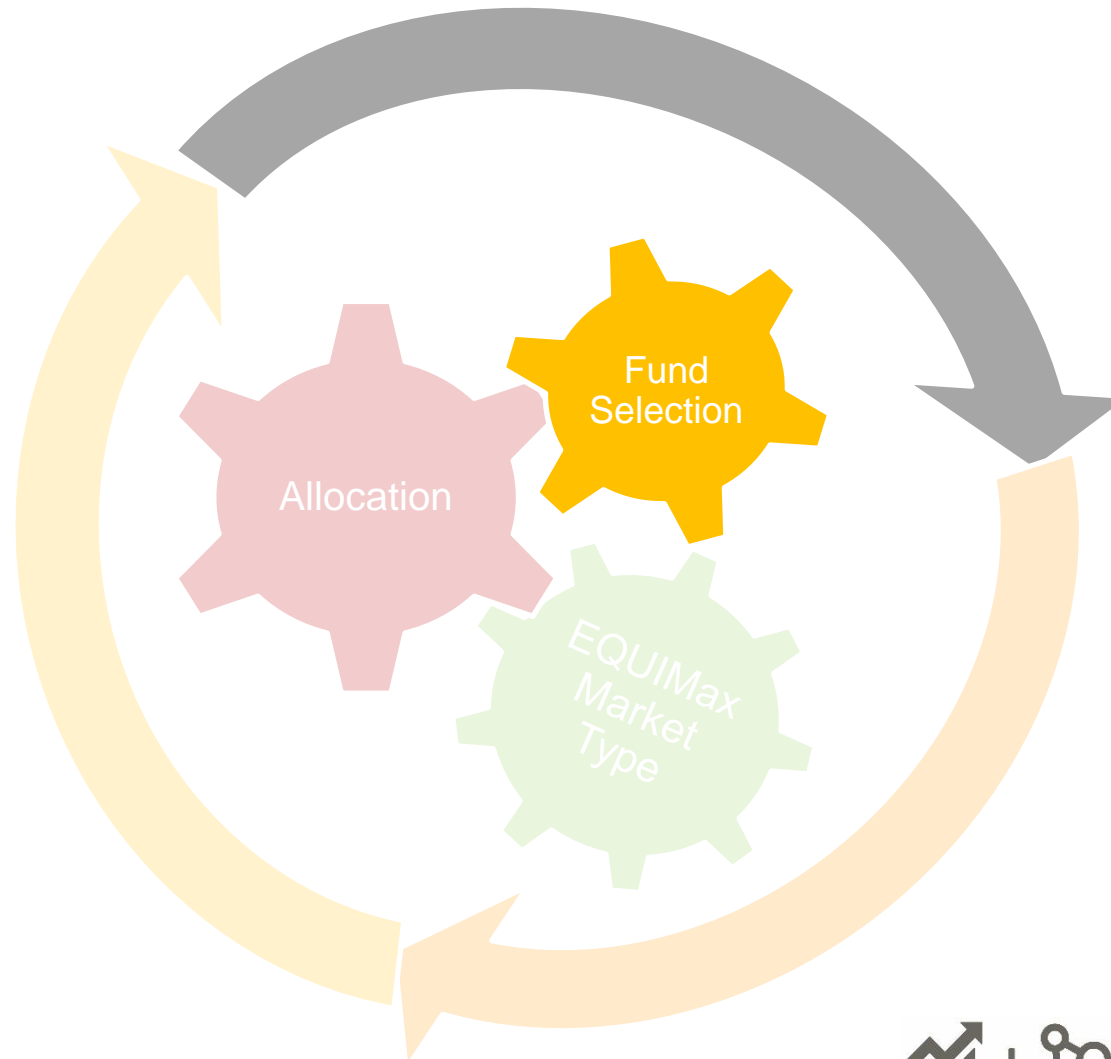Lower of the these taken as 'ideal' allocation

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Executing Allocation- An Illustration

Equity Allocation- Ideal taken as 40%

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FUND SELECTION

Equity Fund Selection

Rolling Returns- Fund vs Index

Outperformance x 1

+

Underperformance x 1.5

/

Volatility of 1 Year returns for Fund

=

Fund Score for given Mtype

Rolling Returns- Recent vs Overall

Score for all rolling returns x1

+

Score for rolling returns since 2010 x2.5

=

Final Score

Fund Grouping by history for Ranking

Count of Fund Rolling Return to Index >50%

Count of Fund Rolling Return to Index 30%-50%

Count of Fund Rolling Return to Index 10%-30%
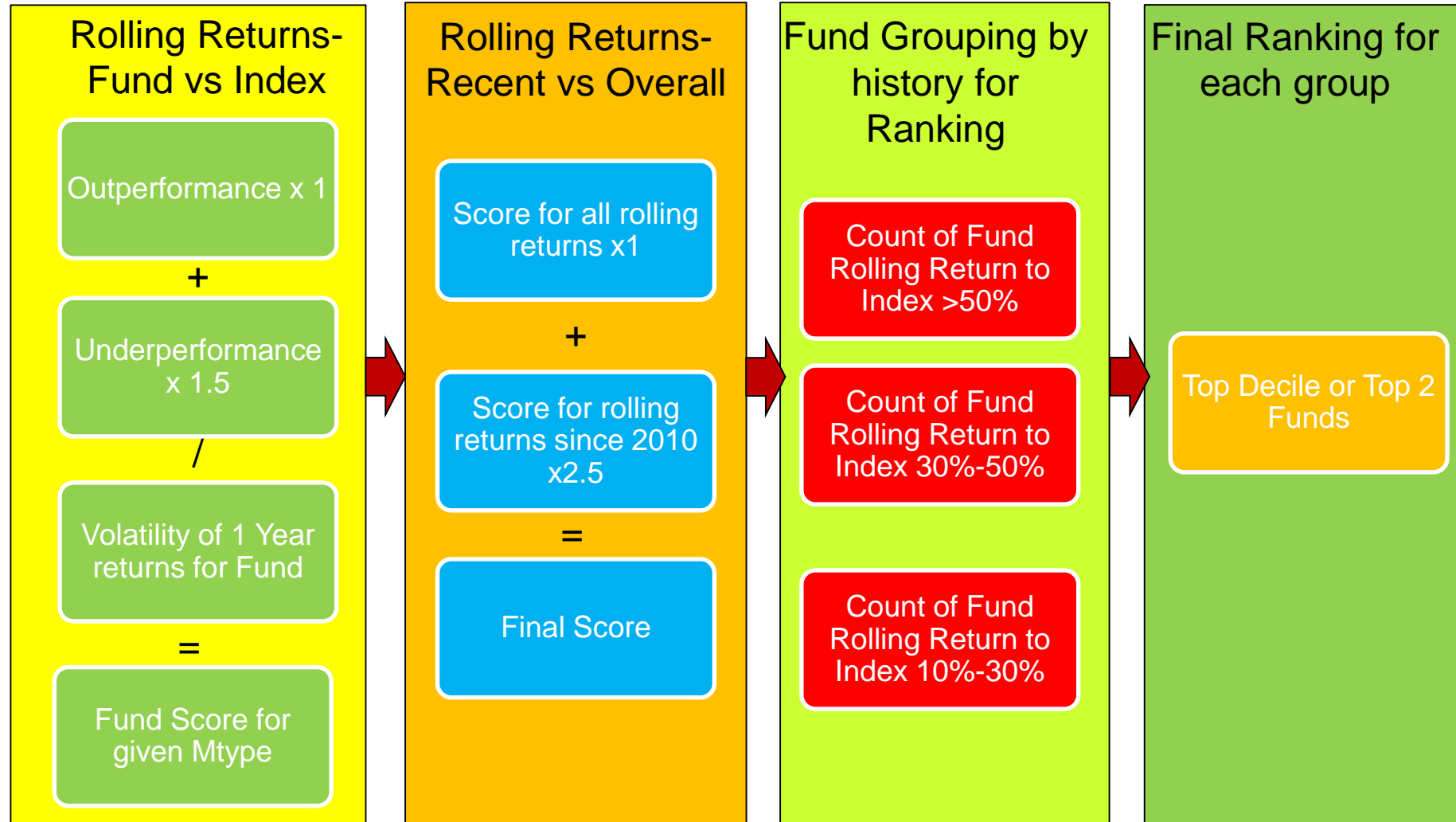
Final Ranking for each group

Top Decile or Top 2 Funds

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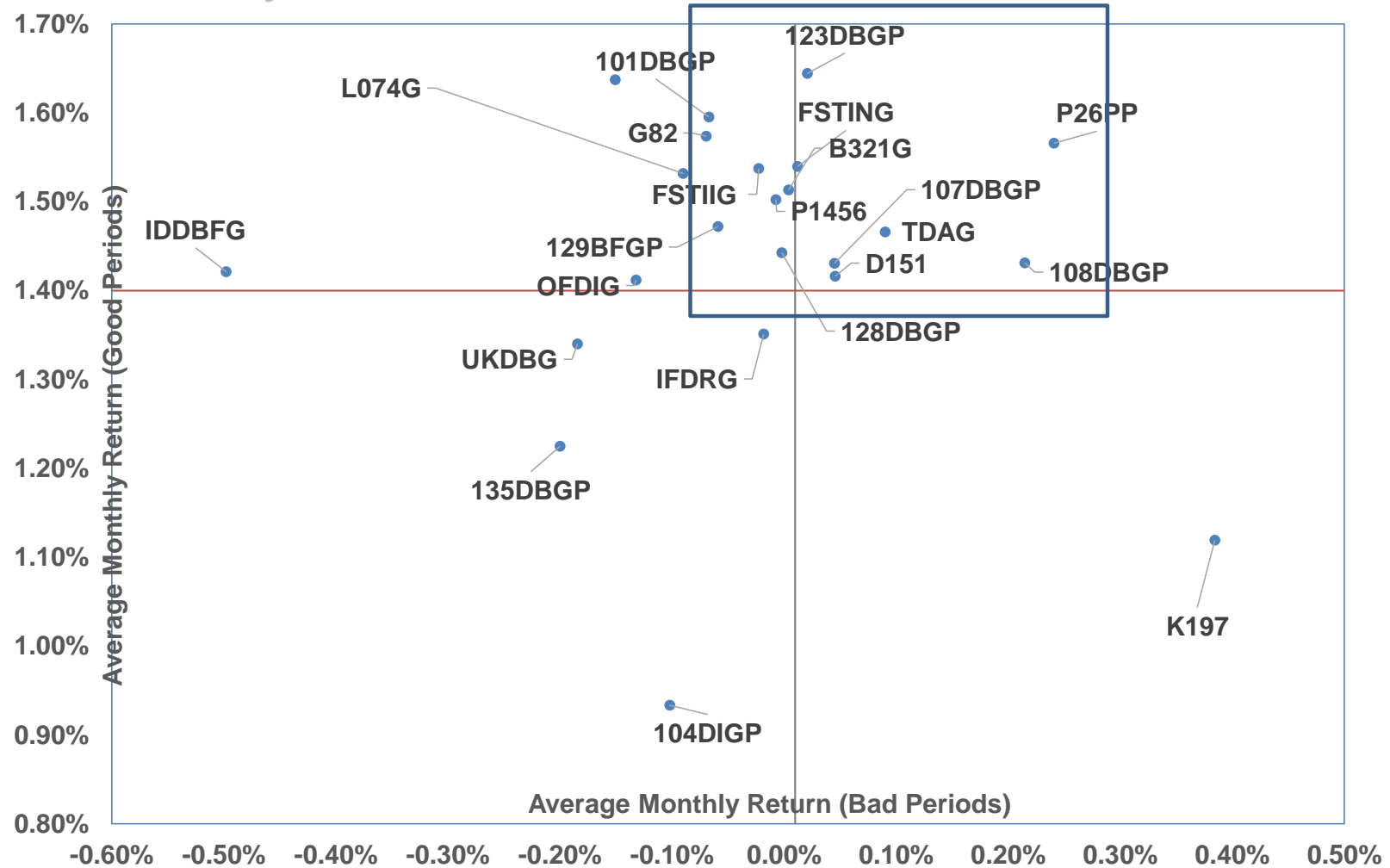
Debt Fund Selection

Methodology

- The monthly return of each fund was computed on a daily basis, from 18th July 2012 to 30th Nov 2017.

  - This gives us 1291 one-month returns for each fund.

  - Each of these 1291 periods were also categorized as good (The adjusted* yield on benchmark 10 Year Gsec came down over the month) or bad (the benchmark yield went up).
    - ❑ There were 615 periods when the yields rose (bad)
      - ❖ Average rise across these periods was 0.18%
      - ❖ The maximum rise (i.e. worst one-month period) was for the month ended Aug 20, 2013- yield rose 1.32%
    - ❑ There were 676 periods where the yields went down (good).
      - ❖ Average fall over these periods was 0.16%.
      - ❖ The best month (i.e when the benchmark yield fell the most) was during the period ended 19th Sep 2013- yield fell by 1.22%.

- Returns of fund categories as well as individual funds within each category were compared across these periods to isolate their performance characteristics

  - This was then used to shortlist the optimal funds in each category based on how they performed in the good and bad periods

Debt Fund Selection
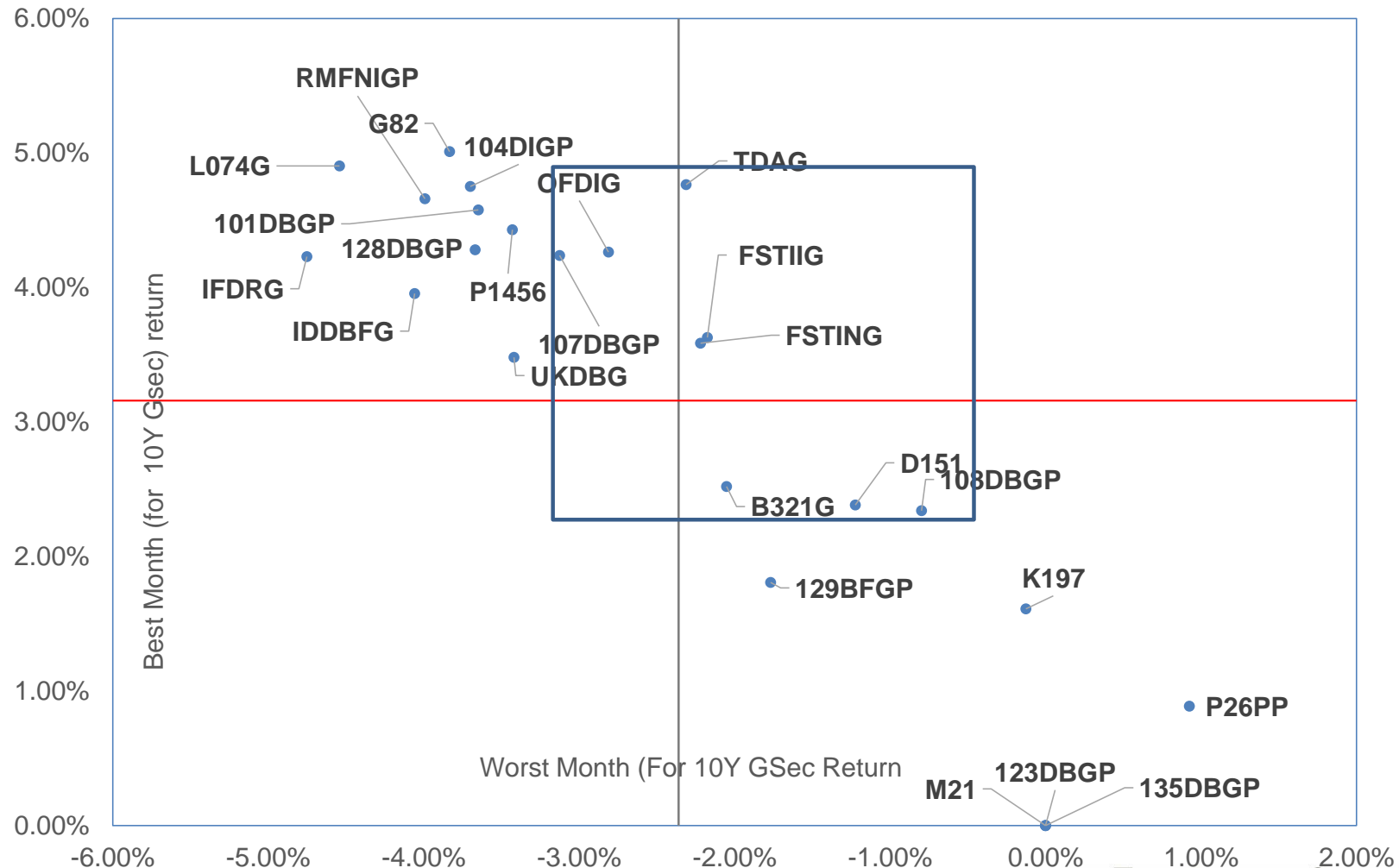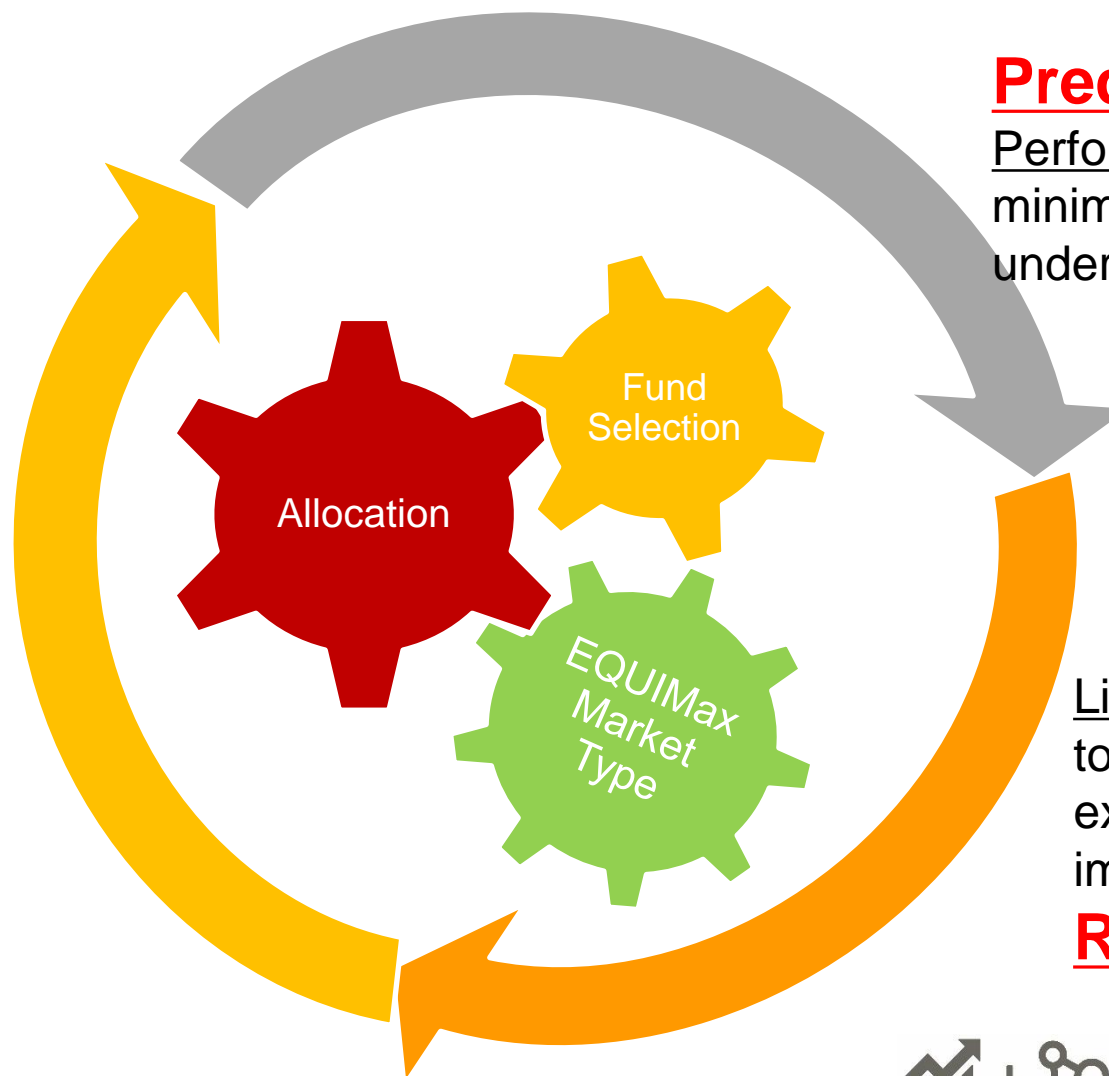## Illustration- Dynamic Bond Funds

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Debt Fund Selection (contd)

Illustration- Dynamic Bond Funds

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In Summary

Predictable
Performance to minimize risk of under-performance

Dynamic Allocation to be **compatible** with the investor's tolerance and capacity

Limited Timing to reduce extremes and improve **Reliability**

Fund Selection

Allocation

EQUIMax Market Type

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Process snapshot

EquiMax
In House model of
market types
1 (invest) to 6 (exit)

Market
Type

Markets

Allocation
Determining appropriate
allocation given risk
tolerance and capacity

Asset
Allocation

Portfolio
Design

Funds

Selection
Determining reliable
funds in each category
given market tyoe

Fund
Selection

Tax
Considerations

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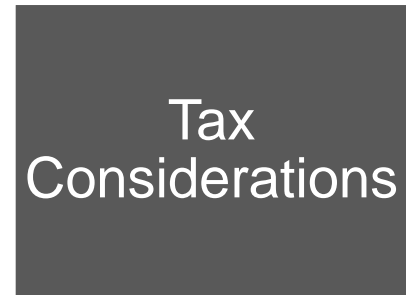
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