Investment Selection – A focus on Alternatives

Mary Cahill & Ciara Connolly

On the process of investing

"We have no control over outcomes, but we can control the process. Of course outcomes matter, but by focusing our attention on process we maximise our chances of good outcomes"

"Psychologists have long documented a tendency known as outcome bias. That is the habit of judging a decision differently depending upon its outcome"

"A sound process can generate poor results, just as a bad process can generate good results"

" We are an industry that is obsessed with outcomes over which we have no direct control. However, we can and do control the process by which we invest. This is what we should focus upon"

James Montier

Active vs Passive

A passive investment strategy aims to mimic the performance of a specified index, for example the S&P 500 or the FTSE 100. Exchange traded funds (ETFs) have become very popular vehicles for investors looking to invest passively. The manager of an ETF aims to deliver the investor the performance they would have achieved had they held all the assets in the same proportion as the index which is being replicated.

An active investment strategy aim to outperform (not mimic or match) the performance of a benchmark or a specified index. The active fund manager will aim to do this by selecting investments which they believe will outperform the broader market.

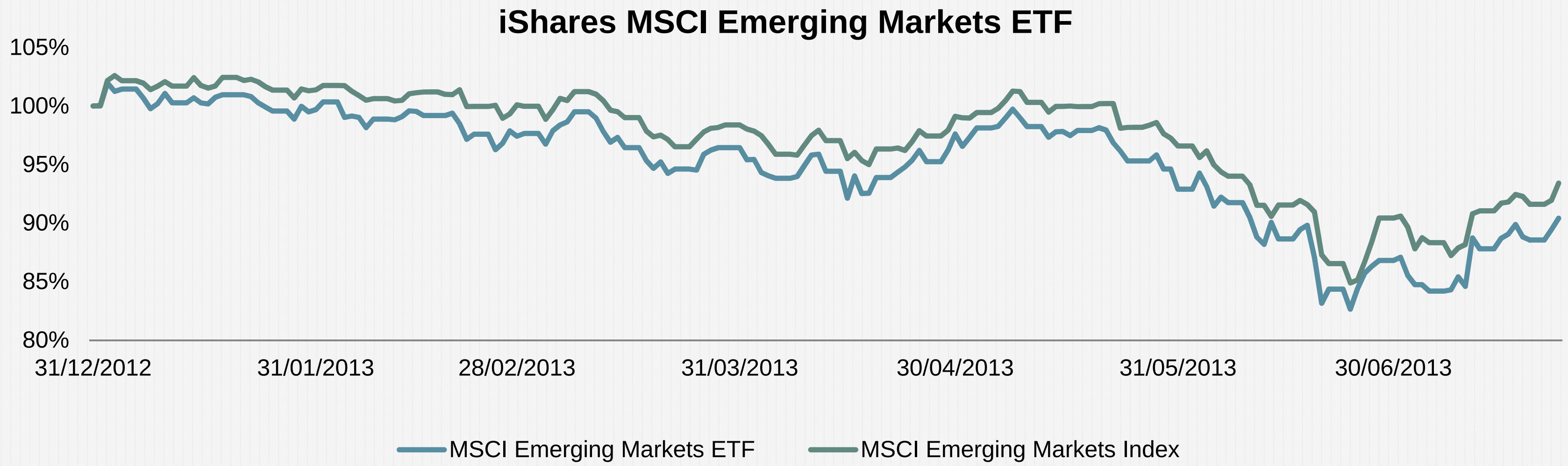
Active vs Passive

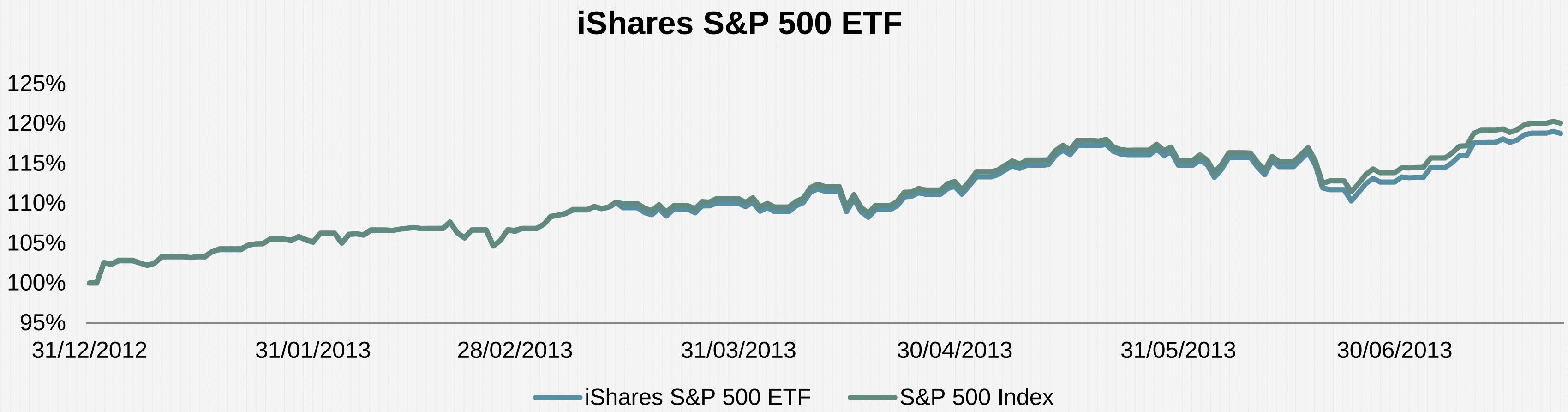
Active	Passive
Higher costs	Low costs
Experienced Manager	No investment management required
Has the ability to outperform and underperform	Closely matches performance of an index – will never outperform
Can be more concentrated portfolios	No control on stocks held

Which is better, active or passive

- Consider it a “when and where“ rather than “either or”
- Passive more effective in developed, efficient markets such as US large caps
- Active better suited to markets in less developed or less efficient such as small, mid cap or emerging markets
- A common statistic : 2 in every 3 active managers underperform

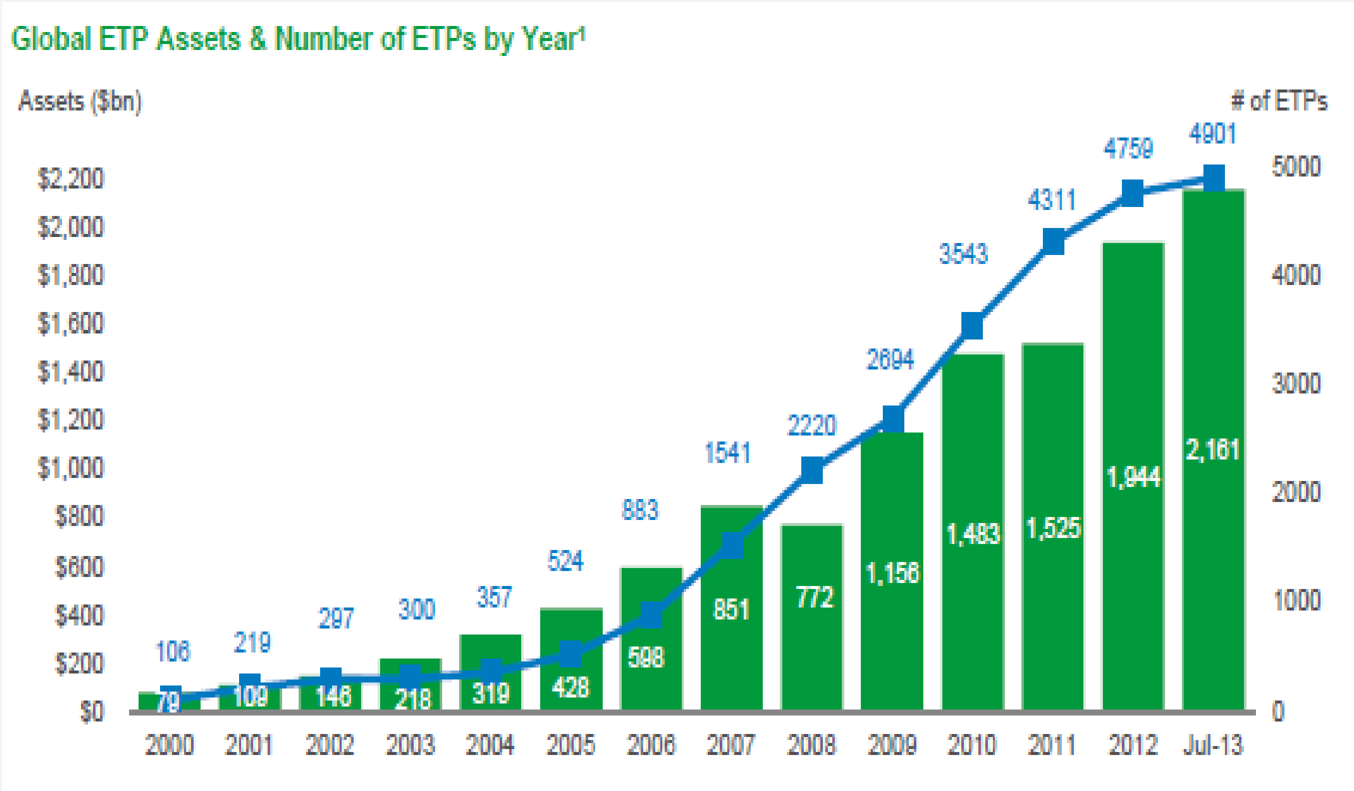
Tracking errors





A word of warning on ETFs

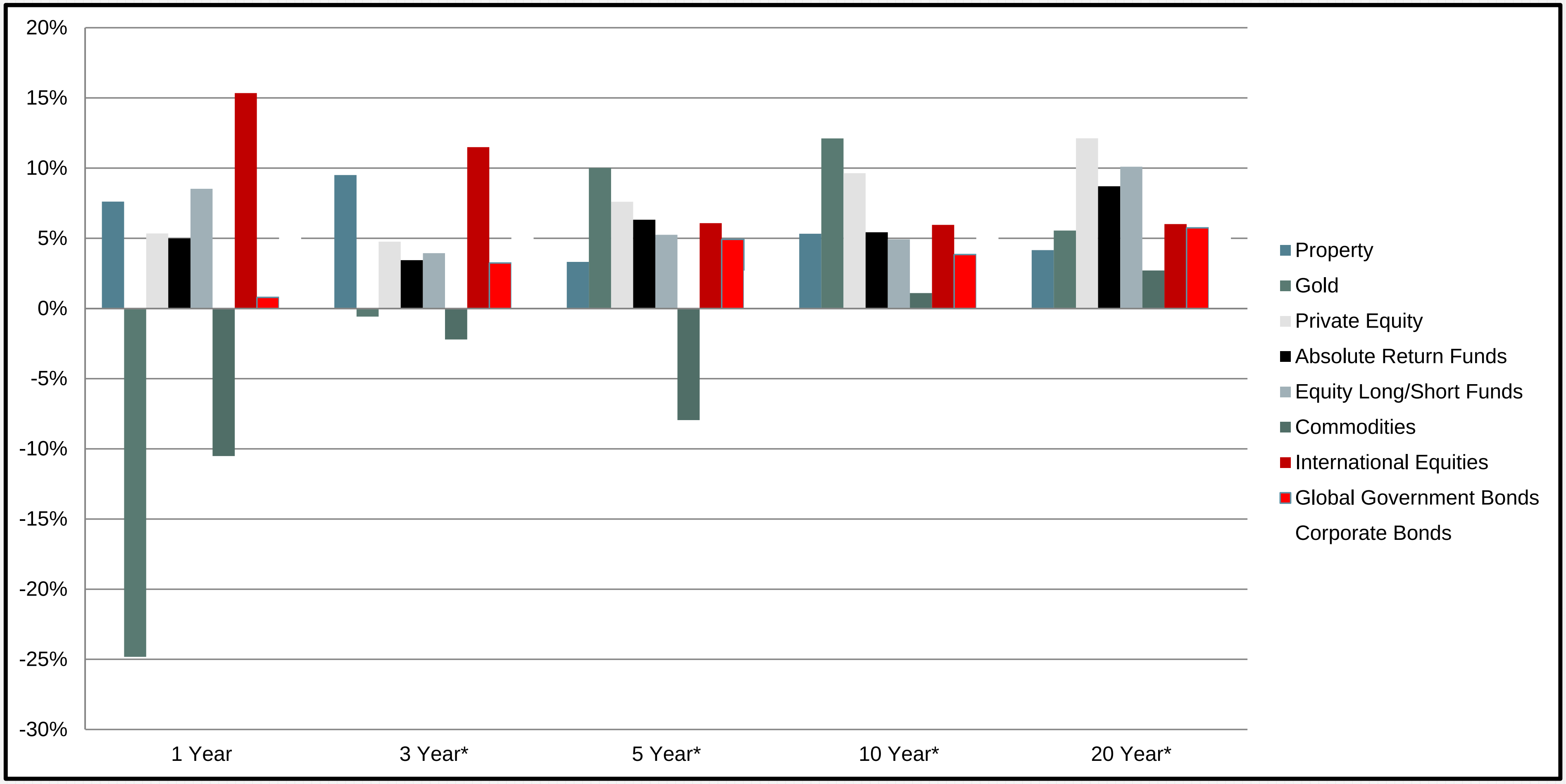
- Sampling or derivatives to replicate performance?
- Tracking errors
- Counterparty risk



A Brief Overview of the Alternatives

PRIVATE EQUITY	Private equity is any type of equity or equity-like investment in a company that is not listed on any stock exchange.
REAL ESTATE	Real estate investing involves the purchase, ownership, management, rental and/or sale of real estate for profit.
COMMODITIES	Commodities can generally be described as consumable or transformable assets. You can consume a commodity such as corn as either feedstock or food stock. Alternatively you can transform commodities like crude oil in to gasoline and other petroleum products.
INFRASTRUCTURE	The basic physical systems of a business or nation. Transportation, communication, sewage, water and electric systems are all examples of infrastructure. These systems tend to be high-cost investments, however, they are vital to a country's economic development and prosperity. Infrastructure projects may be funded publicly, privately or through public-private partnerships.
HEDGE FUNDS	There is no widely agreed definition of a hedge fund. A hedge fund is a type of private investment vehicle that invests in a portfolio of assets with the goal of generating positive returns independent of the direction of the general market. Hedge funds often use advanced investment techniques such as leverage, short selling and derivatives to generate these returns. Hedge fund can also be characterised by a number of operational commonalities such performance fees, investor 'lock ups' and limited liquidity.

Returns from Alternative & Traditional Investments (annualised)

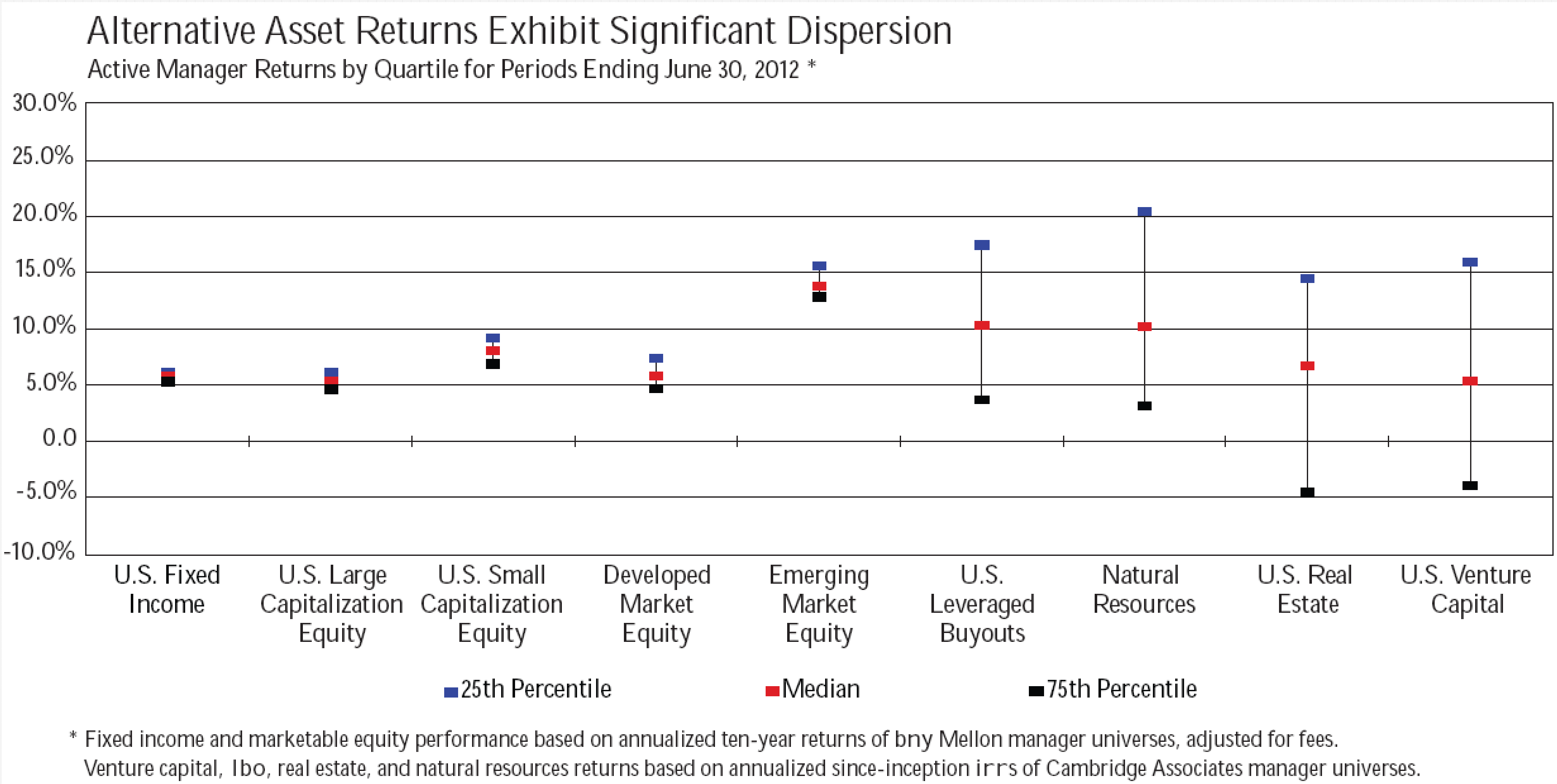


Reasons to invest

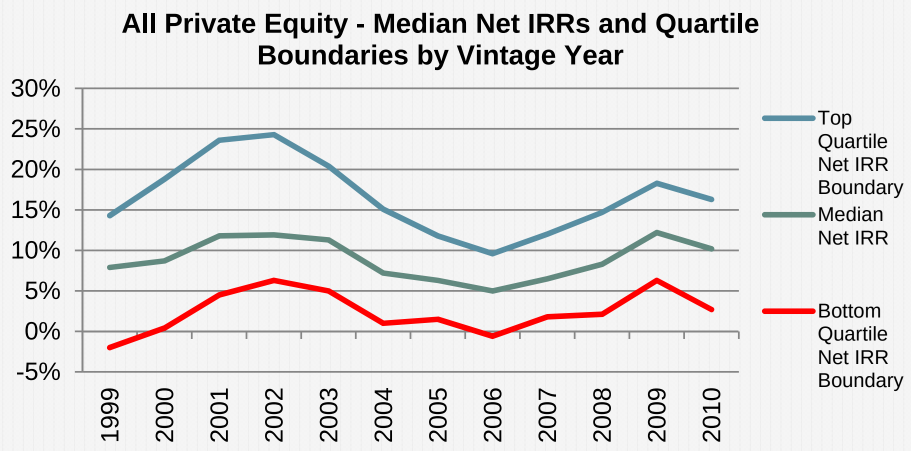
Diversification – alternatives assets have a correlation of less than 1 to traditional assets

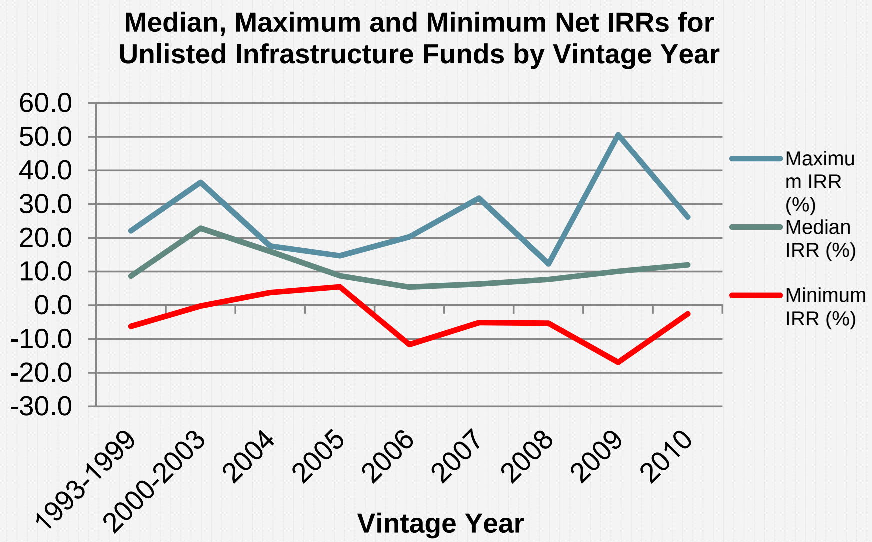
	Other reasons to invest
Private Equity	Amplify returns
Real Estate	Income Amplify returns
Commodities	Inflation protection Downside protection
Infrastructure	Income Inflation protection
Hedge Funds	Amplify Returns

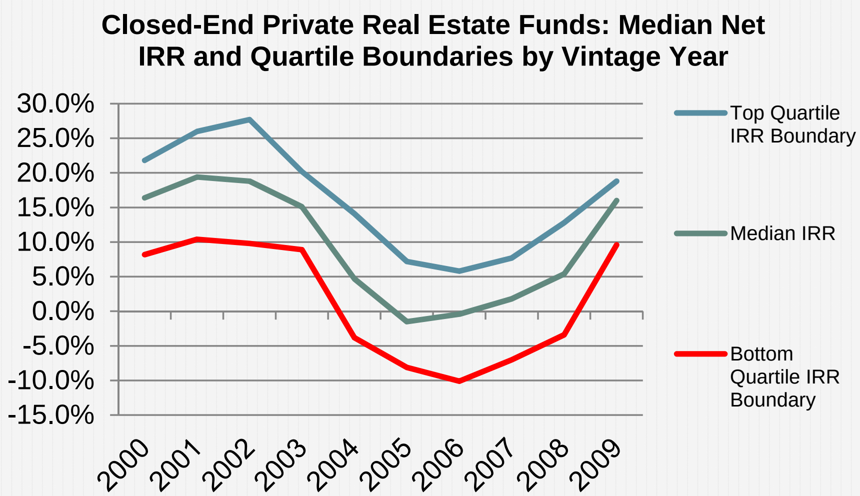
Performance Dispersion



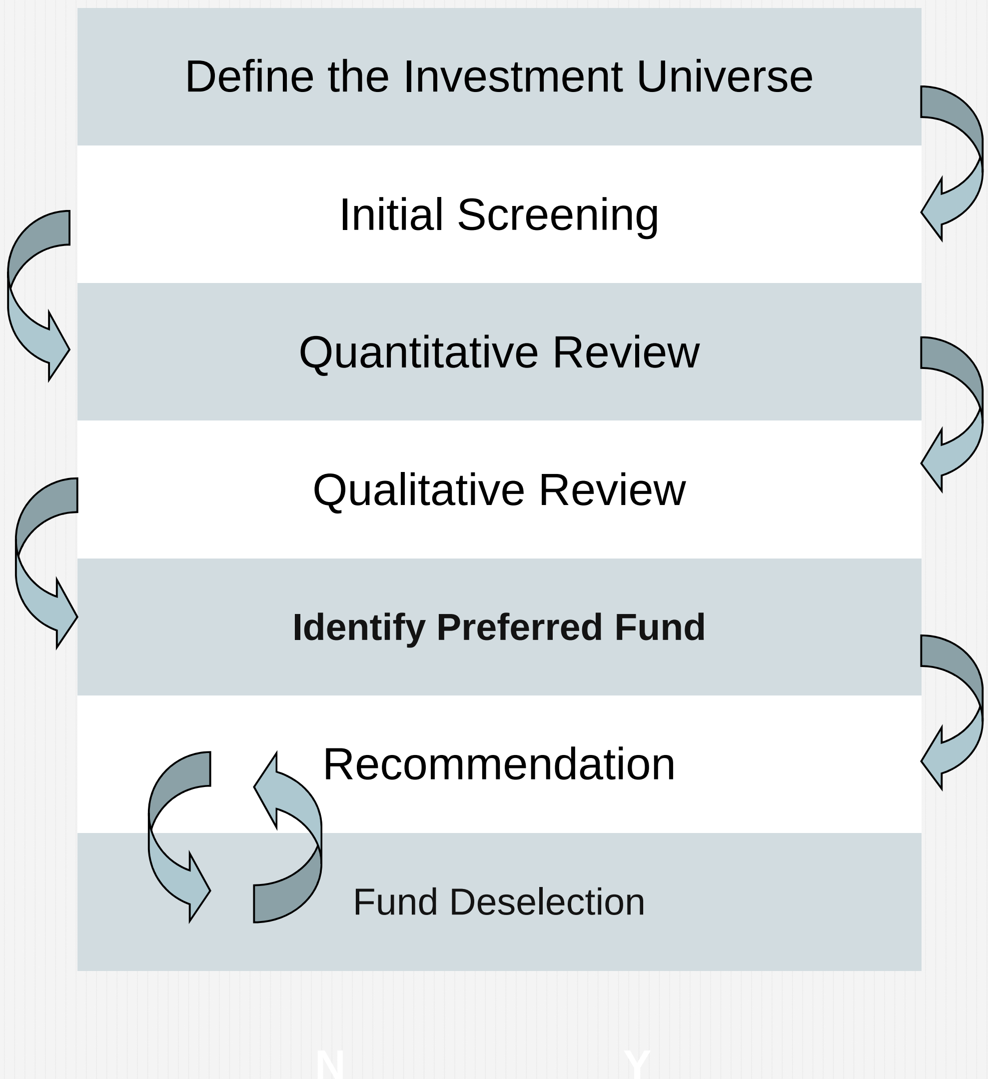
2 in every 3 active managers underperform , let's find the one that does outperform!



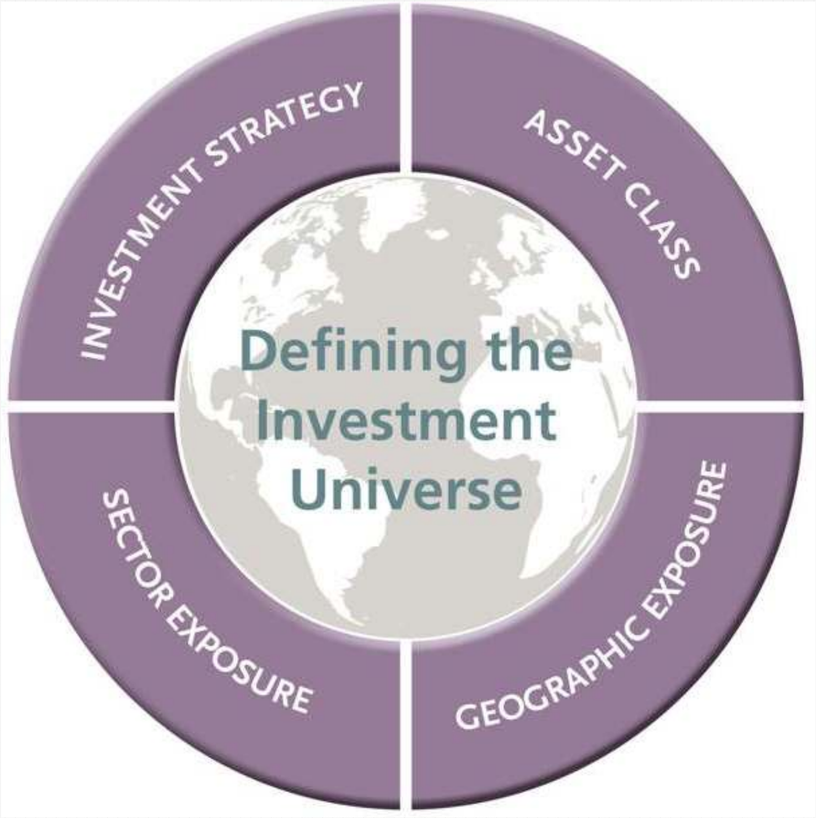




Fund Selection Process



Define the Investment Universe



Initial Screening

Track Record	➢ Sufficient track record ➢ Evidence of outperformance of its benchmark
Fund AUM	> may differ by strategy
Fund Manager Experience	> years lead fund manager experience within the same team > years lead fund manager experience managing funds with similar exposure/strategy
Investment Research Ratings	Ratings from tools such as Morningstar or Lipper
Accessibility	Some funds may only be available to certain investors or may be hard or soft closed.

Quantitative Review

Quantitative factors are mainly used in the early stage screening process.

These factors are considered relative to peers and the fund's benchmark.

CREATE A SHORTLIST BASED ON:	
Returns	Consistent returns, outperformance of peers and benchmark
Risk Metrics	Standard deviation, maximum drawdown…
Risk/Return Measures	Sharpe ratio, annualised alpha…
Liquidity Measures	Fund size, volume of shares traded, market listings…
Fees / Costs	Pay only when it is justified by performance

Measuring Returns

- There can be a tendency to look at 1 year, 3 year and 5 year returns, indeed most factsheet provide this information only but is that sufficient?

- Time horizon should matter – how has the fund performed historically over:
  - Rolling years – 1 year, 3 year, 5 year
  - How about during bull or bear markets
  - Does it protect on downside/upside

- How has the fund performed relative to its peers?

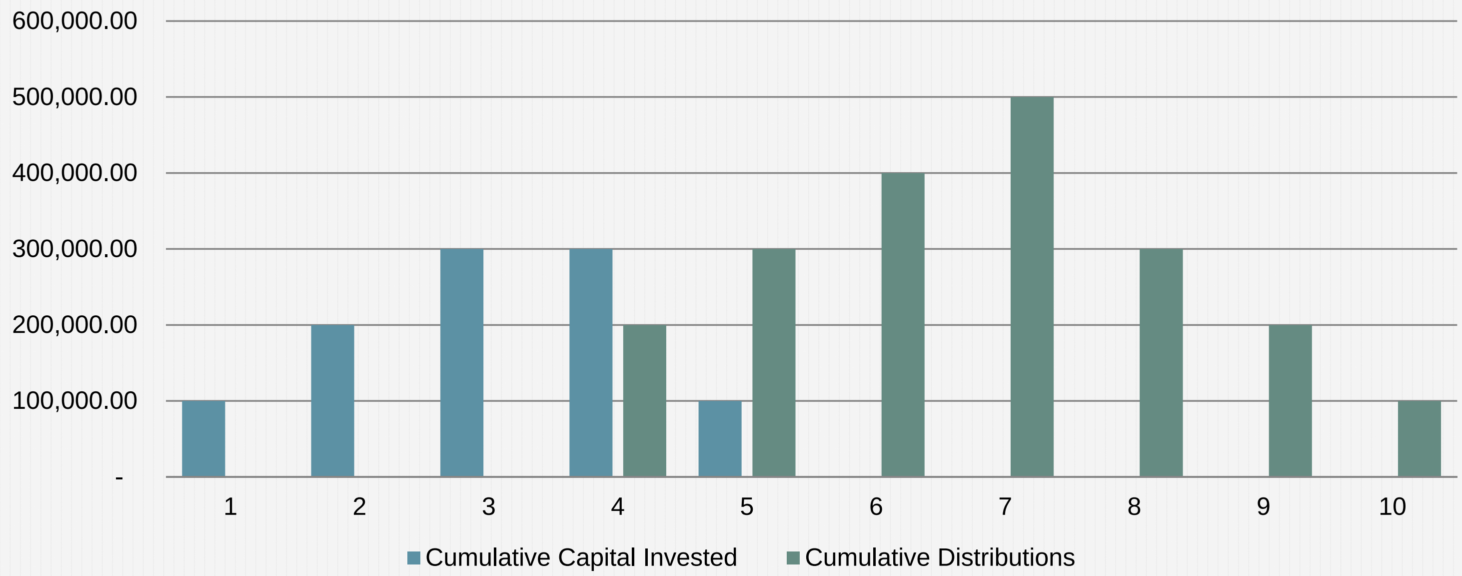
- How has the fund performed relative to its benchmark?

Measuring Returns - Alternatives

Private Equity/ Opportunistic real estate	Funds are closed ended and operate on a commitment basis where the capital is drawn down over an investment period (typically 5 years) and returns are distributed once assets are sold over the fund term (typically 10 years). Measured by vintage year of fund (the year in which the fund was launched). J-curve effect distorts initially Timing of calls and distributions may distort calendar year IRRs thereafter Access to data is difficult and where available it is incomplete. Performance is not publically reported. Indeed unless the fund is fund raising it may not be provided at all. Cambridge Associates Benchmark is best available– survivorship bias, relying on private equity funds to provide data Valuation methodology is not transparent or common across managers. Very subjective. Really returns are not known until the assets are realised. Time lags in reporting. Overall performance may not provide full picture.

Typical cashflow for a private equity fund

Commitment Amount:	1,000,000
Overall Multiple on Invested Capital:	2x
Investment Period:	5 Years
Fund Term:	10 Years
AMC:	1.5% of commitment amount during investment period 1% of invested amount thereafter



J- Curve

Commitment Amount: 1,000,000
Overall Multiple on Invested Capital: 2x
Investment Period: 5 Years
AMC: 1.5% of commitment amount during investment period
1% of invested amount thereafter

As invested capital is low initially but fees are charged on the commitment amount, this causes negative performance in the early stages of the investment.

Year	Cumulative Amount Invested	AMC	Fees as a % of Amount Invested
1	100,000	15,000	15.0%
2	300,000	15,000	10.0%
3	600,000	15,000	2.5%
4	800,000	15,000	1.9%
5	750,000	15,000	2.0%
6	550,000	5,500	1.0%
7	300,000	3,000	1.0%
8	150,000	1,500	1.0%
9	50,000	500	1.0%

Private Equity Fund X Historical Performance

Calendar Year Performance	Vintage Year	2012	2011	2010	2009	2008	Aggregate IRR as at March 2013
Fund I	1990	n/a	n/a	n/a	n/a	n/a	31.9%
Fund II	1994	0.53%	37.35%	227.05%	-13.44%	143.54%	41.5%
Fund III	2000	34.35%	34.60%	175.74%	-27.75%	-12.54%	28.3%
Fund IV	2005	15.63%	31.53%	41.67%	5.26%	-11.00%	16.1%
Fund V	2007	14.11%	8.52%	55.93%	7.49%	-29.81%	17.6%

Aggregate annual IRR (Inception to Date)	Vintage Year	2012	2011	2010	2009	2008	Aggregate IRR as at March 2013
Fund I	1990	31.9%	31.9%	31.9%	31.9%	31.9%	31.9%
Fund II	1994	25.10%	25.11%	25.10%	24.90%	24.99%	41.5%
Fund III	2000	20.55%	20.52%	20.42%	19.30%	20.27%	28.3%
Fund IV	2005	11.89%	11.50%	8.68%	1.13%	-0.51%	16.1%
Fund V	2007	10.44%	9.61%	8.02%	-9.91%	-21.24%	17.6%

Measuring Returns - Alternatives

Private Equity/ Opportunistic real estate	Funds are closed ended and operate on a commitment basis where the capital is drawn down over an investment period (typically 5 years) and returns are distributed once assets are sold over the fund term (typically 10 years). Measured by vintage year of fund (the year in which the fund was launched). J-curve effect distorts initially Timing of calls and distributions may distort calendar year IRRs thereafter Access to data is difficult and where available it is incomplete. Performance is not publically reported. Indeed unless the fund is fund raising it may not be provided at all. Cambridge Associates Benchmark is best available– survivorship bias, relying on private equity funds to provide data Valuation methodology is not transparent or common across managers. Very subjective. Really returns are not known until the assets are realised. Time lags in reporting. Overall performance may not provide full picture. Many VC funds for example are living off the one hit wonder.

Measuring Returns - Alternatives

Real Estate – Prime/Core Funds	Can be difficult to obtain data and can also be incomplete. Opportunistic funds more difficult but prime benchmarks such as the IPD add value for core. Subjective valuation methodology – usually quarterly Time lags Costs- acquisition and selling costs
Infrastructure	Difficult to obtain data and incomplete. Many infrastructure funds are relatively new and direct asset performance is not reported. No illiquid benchmark. Listed infrastructure indices consists of listed equities increasing correlation to equities. Subjective valuation methodology

Measuring Returns - Alternatives

Commodities	Spot or futures exposure Futures return = price + collateral yield + roll yield Cross commodity comparison? Individual commodities tend to have a low correlation to each other Cross index comparison? Different weightings in indces means different results

Measuring Returns - Alternatives

Hedge Funds	Access to data can be difficult. Performance is not publically reported. Unless the fund is “open, the fund manager may not provide information. HFRI benchmarks best available – survivorship bias and backfill bias Different strategies make cross comparisons pointless Suffer from statistical anomalies

Risk Measures

	Mary's Fund	Ciara's Fund
Volatility (standard Deviation)	Lower	Higher
Beta (systematic risk)	Higher	Lower
Alpha	Lower	Higher
Sharpe Ratio (total risk)	Equal	Equal
Information Ratio (risk-adjusted alpha)	Lower (-)	Higher (+)
Treynor (systematic)	Lower (+)	Higher (-)

Risk/Return Measures – Alternative Assets

- Where benchmarks are not reliant benchmark related measures can also not be reliant.

- For illiquid asset classes, risks taken more appropriately measured by looking at the underlying assets

- In private equity or real estate, risk could be assessed more qualitatively – high levels of leverage, concentration in one sector, departure for core expertise.

- For infrastructure, concentration on one geographical area may be a concern due to political risk.

Risk/Return Measures – Alternative Assets

- Commodities can suffer from large fluctuations in price and suffer from skewness and kurtosis.
  - some commodities cannot have negative inventories therefore supply and demand is immediately translated into price
  - Can be more volatile in the short term
  - Governments cannot use fiscal policy to stablise the market
  - One off events such as drought (corn) or war (oil) are hard to predict.
  - Contango term structure – if the term structure remains in contango for consecutive periods, the roll loss increases dramatically

Liquidity Measures

- Fund Size
- Volumes traded
- Restrictions – lock ups, redemption fees, bid/offer spreads
- Listed / Regulated exchange

Private equity	Closed ended illiquid asset class. A small secondary market exists but relationship based.
Real estate	Prime funds can provide quarterly liquid although many close in times of high distress. Opportunistic funds are closed ended and illiquid.
Infrastructure	Generally close ended and illiquid.
Hedge Funds	Soft close/Hard close, Lock ups, subscription fees, redemption fees
Commodities	Generally liquid

Fees/Costs

- Are lower fees better?
- Incentivise the fund manager(s) (Performance Fees)
- Alignment of interest
- Are higher fees justified by higher performance?

Private equity	1.5% on commitment amount during investment period. 1-1.5% on investment amount thereafter. Carry interest 20% s.t. hurdle of 8%
Real estate	Prime funds generally 1-1.5% of NAV. High upfront and redemption costs. Opportunistic funds can operate similar to private equity
Infrastructure	Funds tend to operate similar to private equity
Hedge Funds	2% AMC and 20% performance fee generally s.t. a high water mark
Commodities	NAV

Qualitative Review

Quantitative analysis alone (e.g. highest risk adjusted returns in the past 1,3,5 years) will not necessarily indicate a strong performer going forward.

There needs to be reasons to believe that returns are sustainable – generally qualitative factors.

Investment Process & Philosophy
Terms and Structure
Ownership structure
Operational Risk & Governance
Assets Under Management
Manager assessment
Investors
Transparency

Qualitative Review

Investment Process & Philosophy

- Do they have a well-defined intelligent process?
- Interviews with other members of the team can often provide insight into consistency of philosophy or process.
- Define the investment style, is there style drift?
- Examine the performance and risk measures for evidence of a consistent process
- An historical attribution analysis should aid style consistency
- Who are the decision makers? If more than one how is a conflict handled?
- Risk control is an important part of the process.
- Buy and sell disciplines
- Does the manager fully understand where their alpha is coming from?

Qualitative Review

Terms and Structure of the Fund

- Subscription and redemptions
- Minimum investment sizes
- Lock ups
- Regulated/Offshore
- Eligibility criteria – institutional/exempt investors
- Tax

Ownership Structure

- Have the firm's owners conflicting goals with investment managers – e.g. growing AUM to increase revenue is not always appropriate for some strategies e.g. small cap
- Is the firm a target for a takeover or buyout – may benefit funds (more resources) or could lead to loss of key employees
- Employee ownership may be important for retention of staff or commitment of fund manager
- Is the firm expanding – does this put pressure on resources

Qualitative Review

Operational Risk

- The potential for fraud, costly errors or insolvency doesn't show up in the performance figures
- Institutional firms may be generally considered to have the processes and controls in place but not always
- An independent audit of operational processes and controls can provide comfort.
- Regulated or unregulated.
- Points to look at include

1. Is there a dedicated risk resources
2. Is there a formal compliance policy
3. Any outstanding legal or regulatory issues
4. Background checks on key employees
5. Trade operations – straight through processing, daily reconciliations, cash controls
6. Counterparty exposures
7. Service providers fit for purpose and interviewed/verified
8. Valuation process
9. Conflicts of Interest
10. Corporate Governance
11. Insurance

Qualitative Review

12. Terms and financing arrangements

13. Review of audited financial statements

14. Infrastructure, security and disaster recovery policies

15. Board Independence

16. Operating expenses

17. Investment Restrictions

18. Reporting consistencies/ Unusual items in accounts, Unusual accounting policies, related party transactions, performance reconciliation, Fee reconciliation

Assets Under Management

- A decline steep or steady always warrants investigation
- but a steep increase also does – are there sufficient resources to manage the increase, can the strategy or fund manager deploy the extra capital (e.g. illiquid strategies)
- How important is the AUM of the fund to the overall AUM of the firm.

Qualitative Review

Manager assessment

- Years of tenure at the firm
- Years running the fund
- Manager decisions – One Manager, Co Managers, Team
- Manager responsibilities – investment decisions, risk controls, other funds
- Reporting lines
- Key man provisions
- Employee turnover

Investors

- Types of investors
- Concentration of investors
- Employee investment in fund

Qualitative Review

Transparency

- Quality of fund reporting
- Accessibility to manager and team
- Clarity on fund positions

Monitoring Existing Investments

REVIEW OF FUND RECOMMENDATIONS

QUARTERLY REVIEW PROCESS

Peer Group Analysis

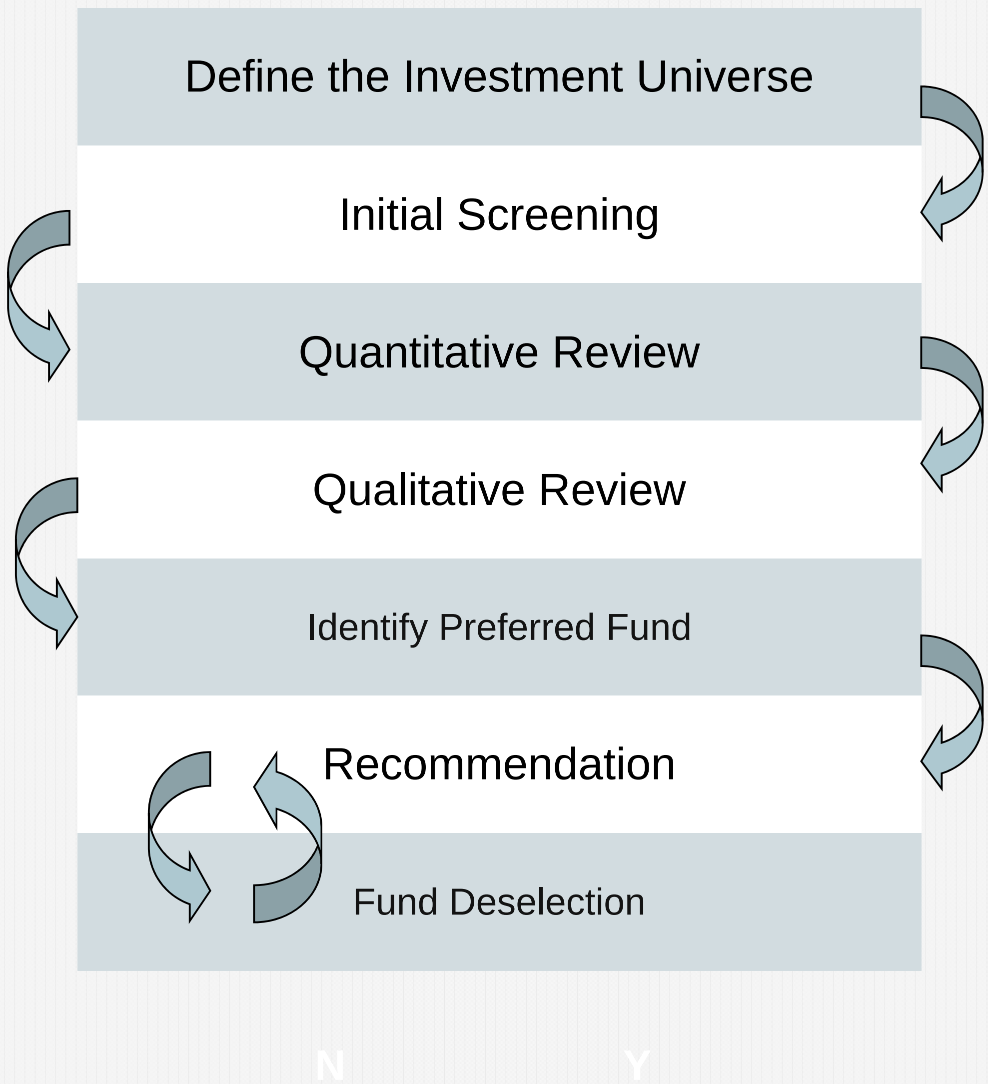
Reports with supporting analysis

Investment decision revisited

Outcome:

Exit, Hold, Increase Allocations, Reduce Allocations

Fund Selection Process



Reasons for Fund De-Selection

What are the factors that could trigger an exit of a fund investment?

Style drift – departure from normal investment strategy

Changes in the fund's fee structure

Departure of key investment professionals

Outperformance of a peer with sufficient grounds to believe relative underperformance of the existing fund will continue

Prolonged period of underperformance of benchmark / peers

Reduced transparency

Significant increase in level of risk assumed by the fund

Summary

- Passive strategies may be more appropriate to very efficient developed markets.
- Having a robust investment selection process is essential to identifying which investment managers are most likely to outperform
- Quantitative measures are useful in providing general information regarding the fund but qualitative measures will provide the necessary insight in order for an informed decision to be made
- Adding alternative assets to portfolios helps improve diversification and should help reduce portfolio risk
- Identifying the right fund manager is even more essential due to large dispersions on manager performance
- Quantitative measures can have their limitations in assessing alternative assets, particularly illiquid assets
- But a robust qualitative process should enable a more complete analysis of the fund.
- The job is not complete on investment, an ongoing monitoring and fund de-selection process is essential.