Review of Active Management of the Norwegian Pension Fund – Global

Andrew Ang
Michael W. Brandt
David F. Denison

January 20, 2014

Review of
Active Management

Active Management since 2008

- Simpler instruments and less leverage
- Fewer external asset managers
- Lower tracking error
  - 1% expected tracking versus 1.5% hard limit
- Operational Reference Portfolio (ORP)
  - Improved diversification
  - Systematic factor exposures
  - Smart rebalancing

Preliminaries

- Three distinct subsample periods
  - Pre-crisis: Jan 1998 - Dec 2006
  - Financial crisis: Jan 2007 - Dec 2008
  - Post-crisis: Jan 2009 - Jun 2013 (“last 5 years”)
- Small sample especially post crisis
- Real estate excluded from analysis

Fund Active Returns

		Mean	StdDev
Full Sample	Coefficient	0.03	0.22
	P-Value	0.04	
Pre Financial Crisis	Coefficient	0.04	0.11
	P-Value	0.00	
Post Financial Crisis	Coefficient	0.10	0.21
	P-Value	0.00	

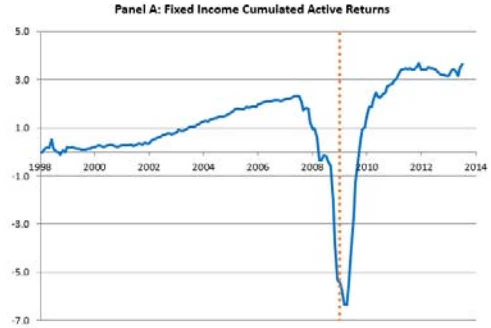
Figure 3: Overall Fund Cumulated Active Returns

5

Fixed Income Active Returns

		Mean	StdDev
Full Sample	Coefficient	0.02	0.33
	P-Value	0.21	
Pre Fin. Crisis	Coefficient	0.02	0.07
	P-Value	0.00	
Post Fin. Crisis	Coefficient	0.17	0.41
	P-Value	0.00	

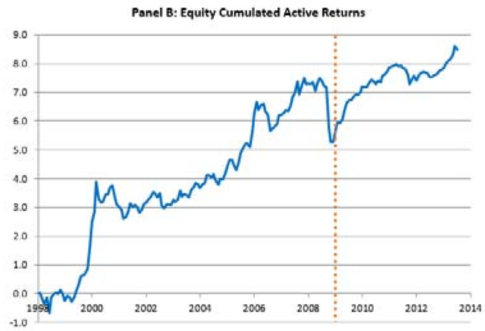
Panel A: Fixed Income Cumulated Active Returns



6

Equity Active Returns

		Mean	StdDev
Full Sample	Coefficient	0.05	0.25
	P-Value	0.01	
Pre Fin. Crisis	Coefficient	0.06	0.26
	P-Value	0.01	
Post Fin. Crisis	Coefficient	0.05	0.12
	P-Value	0.00	



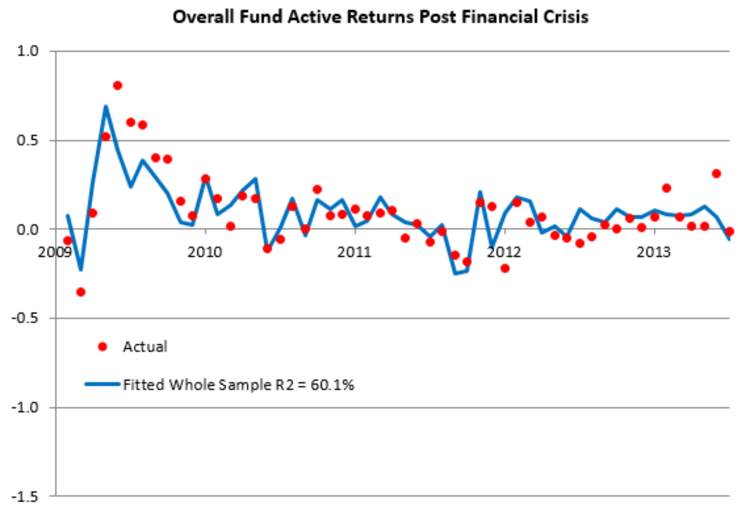
7

Factor Analysis

- To what extent can the active returns be attributed to exposures to established factors?
- Active returns originating from exposures to factors can be a sustainable source of value-added for a long-run investor
- Note: factor tilts are not specified in the Fund's benchmarks

8

Explaining Active Returns



9

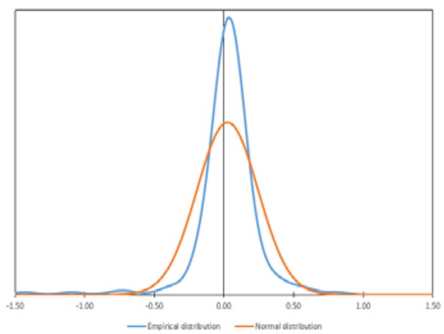
Operational Reference Portfolio

- Excellent development
- Purposes
  - Diversify more widely than standard benchmarks
  - Systematic factor exposure
  - Smart rebalancing
- Issues
  - Verification horizons
  - Governance
  - Tracking error

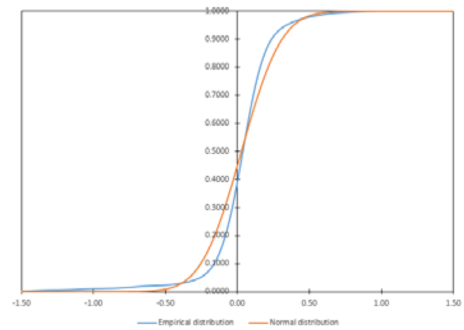
10

Tail Risk

PDF



CDF



11

Active Mandates

Comparative Advantages

- Structural
  - Long horizon, large size, tolerate illiquidity
- Developed
  - Arise from governance, organization, management
  - Dedicated fund manager
  - Transparency
  - Investment mandate
  - Professionalism

Investment Mandate

- Non-investment criteria are important
  - Taken within the context of an investment mandate
- Non-investment mandates are costly
  - Investment restrictions lead to weakly inferior portfolios potentially impairing the welfare of future generations
  - Examples of pension funds and SWFs where non-investment mandates result in diminished returns
- Exception of small environment-related mandate

Opportunity Cost Model

Responsibilities of asset owner/sponsor

- Reference portfolio (RP)
- Constraints
- Active risk appetite parameters

15

Opportunity Cost Model

Responsibilities of fund manager

- Policy portfolio
- Active investment programs
  – Returns exceed Reference Portfolio funding sources
  – Skill-based benchmarks, as needed
- Value added returns net of all costs

16

Opportunity Cost Model

Principles

- Looks through “asset class” labels
- Recognizes bond and equity factor risk exposures of alternative assets
- “Unspanned” risk not in Reference Portfolio is true active management

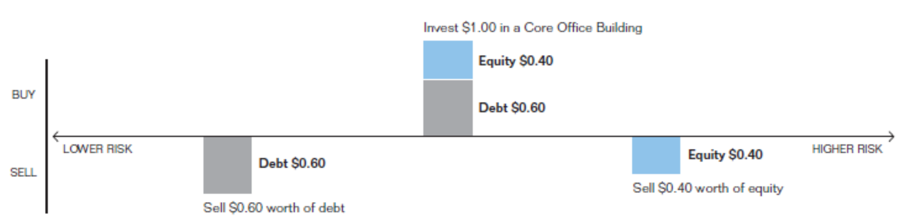
17

Opportunity Cost Model

Total Portfolio Approach

- Fund real estate by a combination of (debt + equity) from the Reference Portfolio

EXAMPLE: FUNDING A REAL ESTATE TRANSACTION USING THE TOTAL PORTFOLIO APPROACH



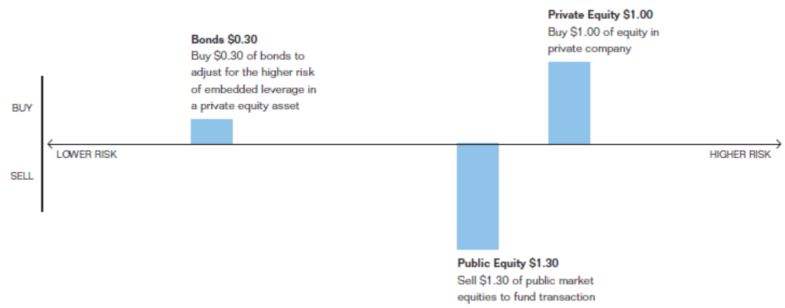
18

Opportunity Cost Model

Total Portfolio Approach

- Fund private equity by a combination of (debt + equity) from the Reference Portfolio

EXAMPLE: FUNDING A PRIVATE EQUITY TRANSACTION USING THE TOTAL PORTFOLIO APPROACH



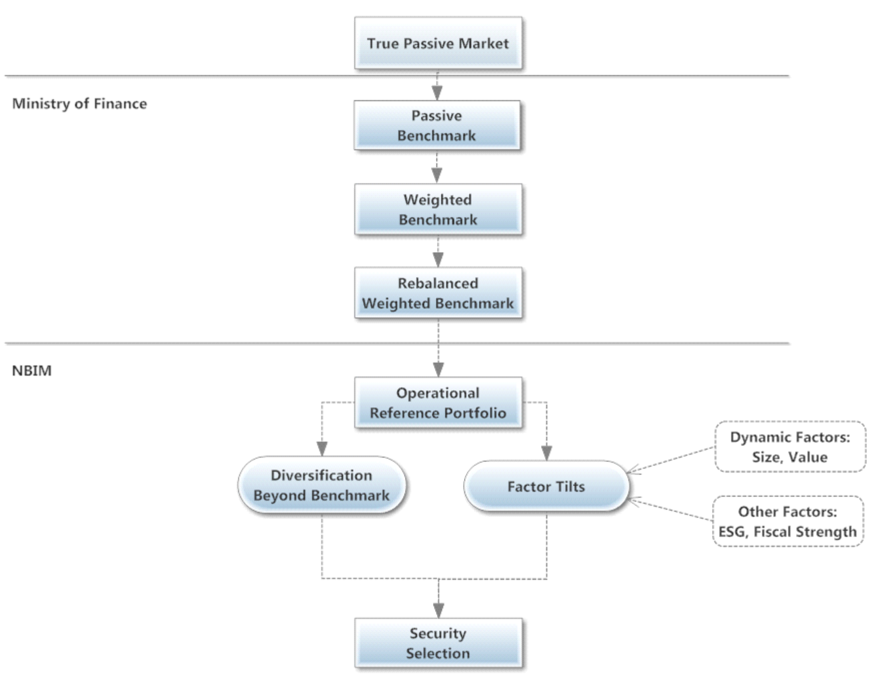
19

Recommendations

Recommendations

- Report each stage of value added
- Adopt the "Opportunity Cost Model" for active management
- Raise risk taking of active management
  - Adopt downside risk measures
  - More transparency of active risk

21



Benefits of Greater Transparency

- Improved diversification and factors will add value, but may result in short-term losses
- Transparency allows proper management of expectations; ability to stay the course
- Does not unfairly penalize NBIM for poor factor performance

23

Opportunity Cost Model: Advantages

- Plays to structural advantages
- Onus is on NBIM to cover costs and beat the Reference Portfolio—raises the bar for active management
- Scalable; includes real estate in the active return
- MoF takes the long-term view and defines the Reference Portfolio and determines risk limits

24

Opportunity Cost Model: Challenges

- Specifying risk limits
- Predicated on having a single, dedicated fund manager
- Maintain investment mandate
- Enhanced role of the ORP
- Ensuring internal competence—good governance is essential
- Gradual increase in Fund's investable universe

Increase Active Risk Taking

- Higher risk taking devoted to improved diversification and factor exposure adds long-term value
- Sufficient large prudent risk buffer
- Positive historical experience
- Greater transparency of active return components
- Includes real estate as an active risk

Adopt Downside Risk Measures

- Care about the distribution of active returns
  - Benchmark deviation volatility or tracking error is a symmetric measure
- Norges Bank should give guidelines on tail behavior of active returns—for both tails, but especially for downside outcomes

27