# **Discussion** Is There Too Much Benchmarking in Asset Management?

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- There is "too much benchmarking"
- Why? Investors who design the benchmark do not internalize the impact of the contract on the price of benchmarked assets
- Important topic in normative finance
- Carefully crafted paper  $\Rightarrow$  Significant contribution

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 $\triangleright$  Direct investors, measure  $\lambda_D$ ▶ Payoff:  $x^{\top}(\tilde{D} - S)$ . Fund investors Fund managers, measure  $\lambda_F$  $\Rightarrow$ optimal contract Payoff:  $r_x = x^{\top}(\tilde{D} - S) + \underline{x^{\top}\Delta + \varepsilon}$ difference  $\equiv \alpha$ • Management cost:  $x^{\top}\psi$ Three differences 1.  $x^{\top}\Delta$ : systematic over-/under-performance 2.  $\varepsilon$ : extra risk 3.  $x^{\top}\psi$ : management cost **Remark**: critical that  $\psi$  is private

Manager's (linear) compensation

$$w = \hat{a}r_x + b\left(r_x - r_b\right) + c = ar_x - br_b + c,$$

where  $r_{\mathbf{b}}$  is the compensation of a benchmark portfolio:

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Optimal contract chooses

- 1. *a*: sensitivity to absolute performance
- 2. b: sensitivity to relative performance
- 3. c: transfer
- 4.  $\theta$ : weights in the benchmark portfolio

to maximize

 $U^F + U^M$ 

subject to IC

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$$\begin{aligned} x^{D} &= \Sigma^{-1} \frac{\mu - S}{\gamma} \\ x^{M} &= \Sigma^{-1} \frac{\mu - S + \mathbf{\Delta} - \psi/a}{a\gamma} + \frac{b\theta}{a} \end{aligned}$$

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Markets clear

$$S = \mu - \gamma \Sigma \Lambda \bar{x} + \underbrace{\gamma \Sigma \Lambda \lambda_M \frac{b\theta}{a} + \Lambda \frac{\lambda_M}{a} \left(\Delta - \frac{\psi}{a}\right)}_{\text{contracting}}$$

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 Positive results

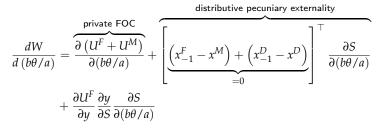
• Benchmarking is optimal: b > 0

Holmstrom 79: use any signal to provide incentives

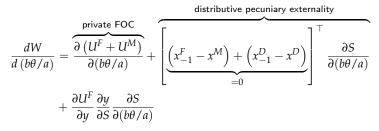
• Weight  $\theta_i$  is higher when  $\Delta_i - \psi_i$  is high

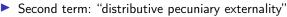
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  - Setting welfare weights to 1, wlog with transfers or even without valuing dollars equally
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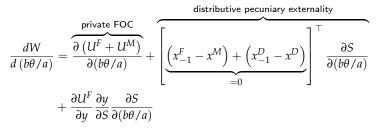
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- Second term: "distributive pecuniary externality"
  - Language from Davila/Korinek 18
  - Zero-sum, since there is a single trading period
- Last term: "frictional/contracting pecuniary externality"
  - Interaction between contracting and equilibrium pricing
  - Similar to collateral pecuniary externalities

## Main Results

# Socially optimal contract features Less skin in the game: a<sup>social</sup> < a<sup>private</sup> Less benchmarking: b<sup>social</sup> < b<sup>private</sup> Lower prices, S<sup>social</sup> < S<sup>private</sup> Lower management costs, ψ<sup>T</sup>x<sup>M</sup><sub>social</sub> < ψ<sup>T</sup>x<sup>M</sup><sub>private</sub> Benchmark puts less weight on attractive assets "Private agents are too aggressive"

- 1. The form of externality identified in this paper is clear
  - Ultimately, contracting features "decreasing returns", so planner wants to do less
  - However, my prior was that the direction of the externality could be *ambiguous* 
    - In particular on prices
  - What if the benchmark portfolio has negative θ? Is this allowed?
  - Wouldn't the planner want to short less, increasing prices?
  - Is there a way to formalize this "decreasing returns" idea?

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  - Is there a way to formalize this "decreasing returns" idea?
- 2. I would have loved to see a worked out example; maybe with two assets
  - ► I didn't get that much intuition out of the (private and social) solutions for a, b, and  $\theta$
  - Additional comparative statics, analytical and/or numerical would help

- 3. Does it matter whether a, b, and  $\theta$  are all endogenous?
  - What if  $\theta$  is given?
  - e.g., fund mandate (SP500, Russell 2000, etc.)
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- 4. Determinants of the optimal corrective regulation?
  - Sufficient statistics? How to measure relevant determinants?
  - Do we have any outstanding estimates?
  - Effects must be proportional to share of benchmarked funds
    - More important in less liquid/high price impact markets

- 5. CARA preferences are tractable...
  - ...but demand effects may be too strong
  - Benchmarking risky assets should not change the price of all risky assets/ aggregate risk premium
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- 6. Introduce further asymmetries
  - Maybe risk aversion
  - Fund investors perhaps more (less) risk tolerant than direct investors
  - Potentially richer implications