Discussion of “Does Regulation Matter?

Riskiness and Procyclicality of Pension Asset Allocation”

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Relevance of the paper

Procyclicality is hazardous to your health, and to your wealth

- Procyclical behaviour can amplify shocks
- Procyclical behaviour reduces investment horizons and, as a result, the supply of long-term financing, critical for economic growth
- Procyclical behaviour is about market timing (avoiding temporary market dips); empirical evidence suggests that this is costly

A proper (through-the-cycle) asset allocation is part of the solution

⇒ Similarilities, but also important differences

	Asset allocation	Procyclicality
Nature of problem	Stock	Flow
Decision maker	Asset owner	Asset manager

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Procyclicality indicators

<u>Two benchmarks</u>

- Full rebalancing (FR): constant weights
- Asset drift (AD): no transactions

AD \ FR	0	1
0	Neutral/ countercyclical	"Partial rebalancing"
1	(Economic interpretation?)	Procyclical

From a financial stability perspective, the most relevant benchmark is probably AD

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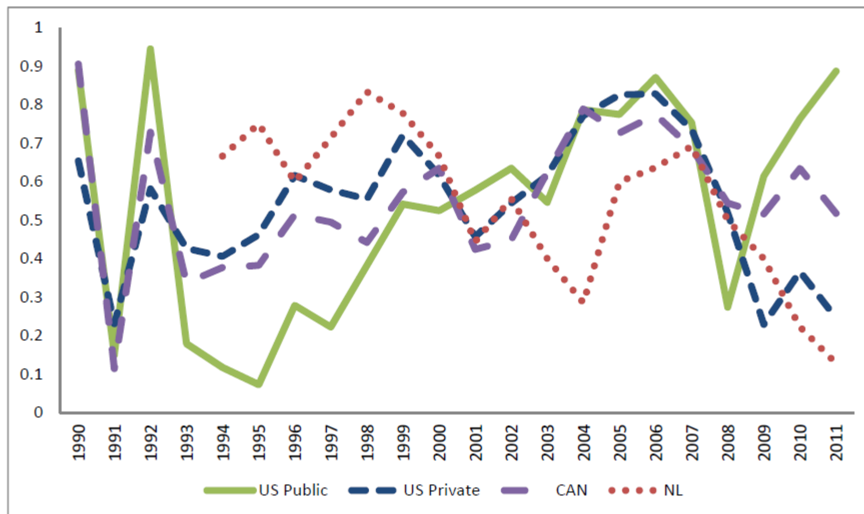
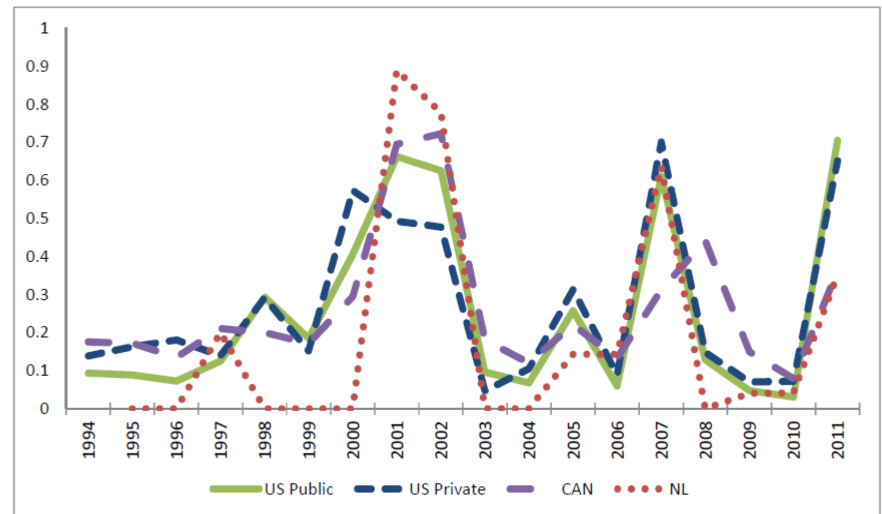
If it ain't Dutch … (1/2)

<u>FR Procyclicality Measure (Fig. 1):</u>
"Dutch pension funds […] were highly countercyclical during the latter period" (i.e., the crisis).

<u>AD Procyclicality Measure (Fig. 2)</u>
"Dutch pension funds are countercyclical."





⇒ *Can we conclude that Dutch pension funds were the "good guys" in the market?*

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If it ain't Dutch … (2/2)

Countercyclical behaviour by Dutch pension funds is good news. However,

- Pre-crisis, Dutch pension funds had higher allocations to illiquid alternatives that they couldn't sell
- Some procyclicality was happening inside asset classes and within trading limits
- Substantial risk taking took place also in "safe" fixed income assets, as these
  - Had short maturities (mismatch with liabilities)
  - Were mostly nominal

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Explaining procyclicality – The challenge

- "Perfect storm" (globally)
  - Low interest rates elevate NPV of liabilities
  - Financial crisis reduces asset values
  - Significant increase in life expectancy
  - Unconventional monetary policy, uncertain inflation outlook
- At (around) the same time (in the Netherlands)
  - Introduction FTK
  - Change in contracts: from final-salary to average-salary DB
  - Consolidation of pension funds
  - Outsourcing of asset management, disentangling funds from service providers
- Complex objectives and constraints (Netherlands)
  - Nominal liabilities, but with a real ambition
  - Solvency add-on for inflation-linked assets
- Data limitations

Results

- At the highest level of aggregation, very little explanatory power of potential drivers of procyclicality
  - Factors statistically different from 0 (at any significance level) at either FR or AD benchmark, show up with opposite sign (not significant) under alternative indicator, and/or with incorrect sign

	Expected sign	Full rebalancing	Asset drift
Quantitative Investment Restrictions	–	0.259	-0.534 **
Excess Liability Discount Rate	≈	0.679 ***	-0.322
Liabilities Recognized in Sponsor's Balance Sheet	+	-0.510 **	0.190
Quantitative Risk-based Capital Requirements	+	-0.375	-1.030 *

- Marginally better results at more granular levels, but still disappointing
- Is there still scope for improvement?

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Potential avenues for stronger results

- Observed/observable variables
  - Instead of a weighted average of (standardised) market value and funding requirement, use *distance* between market value and funding requirement
  - Proportion of assets managed externally (principal–agent problems)
- Unobserved variables
  - E.g., risk tolerance, incentive structures
  - Estimate model in *first differences* (i.e., make fuller use of panel data structure)
- Use continuous instead of binary procyclicality indicator
  - E.g., $PC_{it}^{(l)} = \left(w_{it} - w_{it}^{l}\right) \times r_t^{Mkt}$
- Differentiate between bull and bear markets, and estimate model for two sub-periods

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Concluding remarks

- Procyclicality matters; understanding its drivers is the first step to addressing the problem
- As long-term investors, pension funds can (and should?) invest countercyclically, but do not fully exploit their potential, due to internal and external constraints
- In line with our own experience, stricter regulation has triggered a de-risking of asset allocations, although not necessarily in a procyclical way
- If we torture the data a little more, we may be able to uncover aspects of procyclical behaviour
- Last but not least, I enjoyed reading the paper!

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