

Reforming Pensions

Peter Diamond
CUNY
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Pension plans

Traditional contributory plans

- Defined contribution (DC)
- Defined benefit (DB)

Hybrid contributory plans

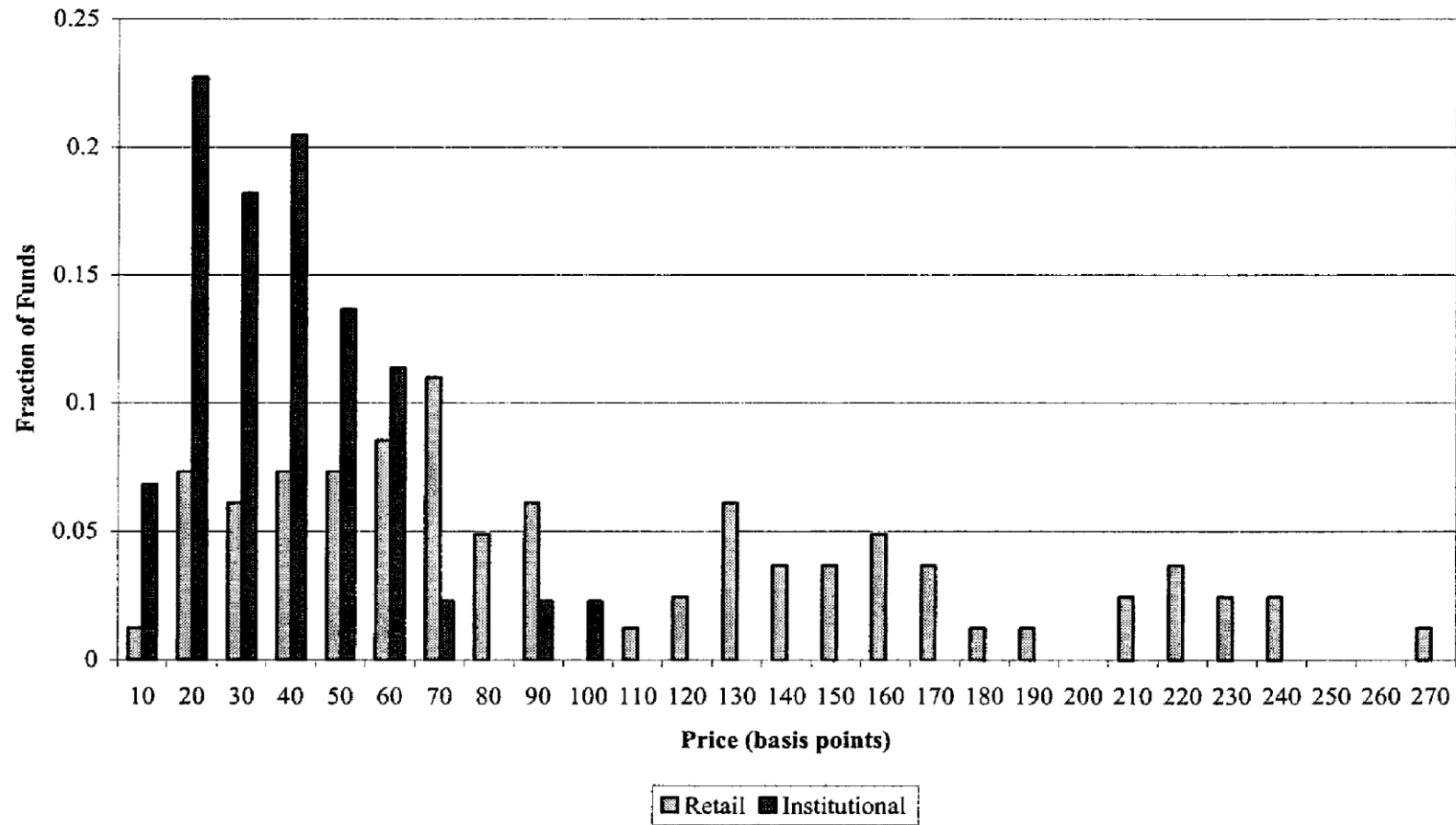
- Notional defined contribution (NDC)
- Risk-sharing
 - Target benefit, defined ambition, collective DC

Non-contributory plans

Issues

- Improve DC accumulation
- Increase use of indexation in DB:
 - demography
 - financial balance

2000 Price Histograms Retail and Institutional S&P 500 Funds



Source: Figure II., Hortacsu, A. & Syverson, C., 2003. Product Differentiation, Search Costs, and Competition in the Mutual Fund Industry: A Case Study of the S&P 500 Index Funds.

Decline in Value of Accounts Due to Fees After a 40-Year Work Career ^a

Type and Level of Fees	Percentage Decline in Account Value Due to Fees
Front-load fees (% of new contributions) of:	
1 percent	1 %
10 percent	10 %
20 percent	20 %
Annual management fees (% of account balance) of:	
0.1 percent	2.2 %
0.5 percent	10.5 %
1.0 percent	19.6 %

a. Assuming real wage growth of 2.1 percent and a real annual return on investments of 4 percent. With a larger difference between the rate of return and the wage growth rate, the charge ratio with annual management fees is slightly larger, and conversely.

How banks design financial products

The headline rate - a high return under their best-case scenario — is part of a complex payoff formula.

Based on a text analysis of the payoff formulas of the 55,000 products issued in Europe from 2002 to 2010.

In the cross section, the headline rate is positively correlated with the level of complexity and risk.

Claire Célérier, Boris Vallée, CATERING TO INVESTORS THROUGH SECURITY DESIGN: HEADLINE RATE AND COMPLEXITY, November 1, 2016

The “Compound Interest” question

“Let’s say you have 200 dollars in a savings account. The account earns 10 percent interest per year. How much would you have in the account at the end of two years?”

Correct	Incorrect	Do not know
17.8%	78.5%	3.2%

Source: Table 1. Lusardi, A. & Mitchell, O.S., The Importance of Financial Literacy: Evidence and Implications for Financial Education Programs

DC accumulation approaches

- Wide market access to providers:
Australia, Hong Kong
- Small number of dedicated provider firms: Chile
- Single central organizer:
Sweden: Premium Pension, UK: NEST, US: TSP

All involve limits on allowable investments, with varying degrees of limitation.

Overview of the Hong Kong Mandatory Provident Fund System

Findings of the Cost Study probably suggest that **it is not enough merely to rely on market forces to drive down fee levels of MPF funds.**

Source: Legislative Council Secretariat IN07/12-13, Research Division,

Hong Kong Fund Expense Ratio (FER %) (as of June 2016)

Fund Type	Number of Funds	Average	Lowest	Highest
Equity	180	1.58	0.63	2.29
Mixed Assets	183	1.72	0.70	2.11
Bond	49	1.38	0.78	1.90
Guaranteed	27	2.08	1.29	3.75
Conservative	12	0.69	0.13	1.21
Money Market and Others	13	1.17	0.60	1.39

Hong Kong Fund Expense Ratio (FER %)

Average Fund Expense Ratio (FER %): 1.45%

The average FER is the average of the FERs of all MPF constituent funds, weighted by their respective net asset values, with their financial periods ending on [1 December 2018] to [30 November 2019].

Australia Productivity Commission Draft Report, April 2018

Superannuation: Assessing Efficiency and Competitiveness

- While some funds consistently achieve high net returns, a significant number of products ... underperform markedly
- Fees remain a significant drain on net returns.
- Members lack access to quality, comparable information to help them find the best products.
- Inadequate competition, governance and regulation have led to these outcomes.

DC accumulation approaches

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Sweden, UK, US

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The demonstration effect of Chile

- Peru (1993), Argentina (1994), Colombia (1994), Uruguay (1996), Bolivia (1997), Mexico (1997), El Salvador (1998), Ecuador (2001), Costa Rica (2001), the Dominican Republic (2003–05), and Panama (2005–07)
- Hungary (1998), Poland (1999), Latvia (2001), Bulgaria (2002), Estonia (2002), Lithuania (2004), Slovakia (2005) and Romania (2008).
- China (1998) and Hong Kong (2000).

Chile: Auction Mechanism (2008 reform)

AFPs bid for all new entrants to the labor force over a two-year period, who have to stay with the winning bidder for at least 18 months.

The AFP has to offer the same low commission to its existing members and to any new members.

After 18 months, the AFP can increase its commission for all members, preserving uniformity.

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Sweden: Premium Pension in 2016

- Government collects contributions and does record-keeping.
- A government fund competes with the private funds and provides the default.
- 843 private funds administered by 108 management companies
 - 573 equity funds
 - 97 mixed funds
 - 41 generation funds
 - 132 interest funds

Sweden: Premium Pension fees, 2016

- Administration cost: 0.07%.
- Rebate on the ordinary expenses of the funds, equivalent to a reduction in fund management fees of about 0.49 percentage points.
- The capital management fee is 0.23 percent (excluding transaction costs of .05).
- AP7 default funds yearly fees:
Equity Fund 0.14% and Fixed Income Fund 0.05%.

UK: National Employment Savings Trust (NEST)

- Choice from small number of funds
- Employers
 - 100% online platform
 - Employers face compliance costs but no charges
- Members
 - Annual management charge 0.3%
 - Temporary 1.8% charge on contribution (covering startup costs, after which it stops)

U.S.: Thrift Savings Plan Funds

- Government Securities Investment (G) Fund
 - Fixed Income Index Investment (F) Fund
 - Common Stock Index Investment (C) Fund
 - Small Capitalization Stock Index (S) Fund
 - International Stock Index Investment (I) Fund
- and
- Lifecycle funds, which are invested in the individual TSP funds

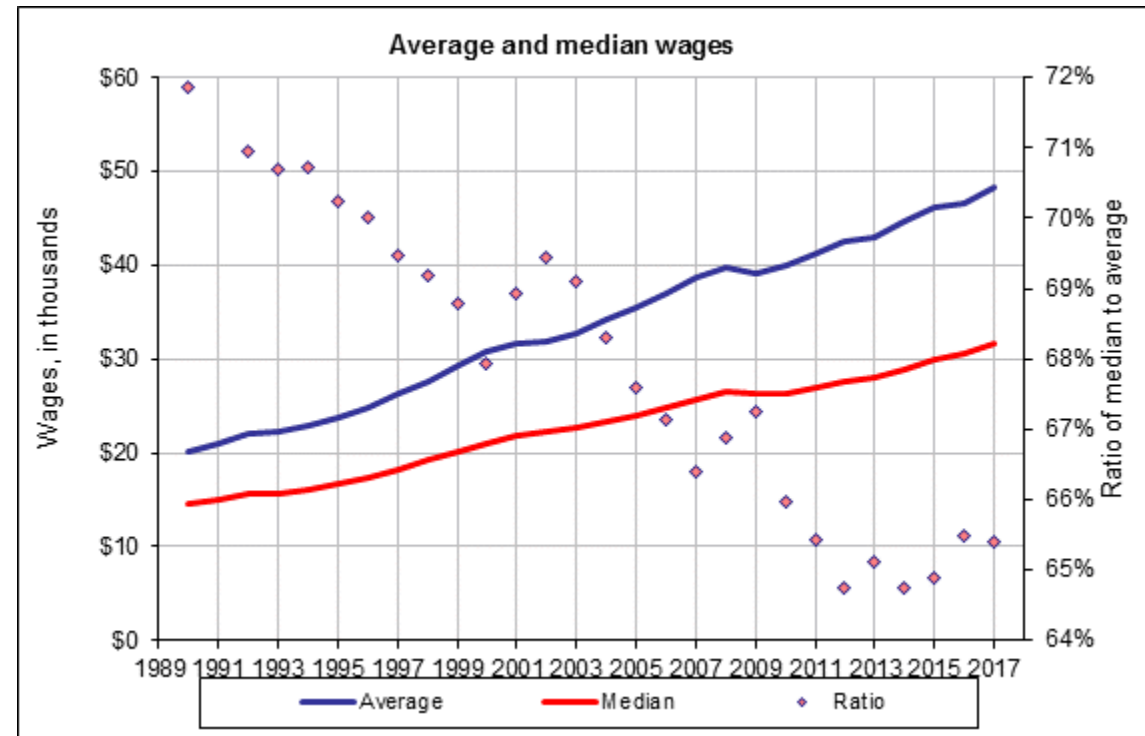
Issues

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- **Increase use of indexation:**
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Legislative history

- 1972: automatic indexing of benefits in payment for inflation and of maximum taxable earnings for average earnings, beginning in 1975
 - but benefits overindexed
- 1977: automatic wage indexing for initial benefit determination
- 1983: funding for baby boomers

Median and Mean Earnings, US



Social Security Cost-Of-Living Adjustment, US

- Current law: CPI-W:
 - Consumer Price Index for Urban Wage Earners and Clerical Workers.
- Johnson: Chained CPI (C-CPI-U):
 - OACT estimates a decrease of 0.3 percentage point per year.
 - Increase benefits for all beneficiaries who have been eligible for at least 20 years.
- Larson: CPI-E:
 - OACT estimates an increase of 0.2 percentage point per year.

Attempts to address actuarial imbalance

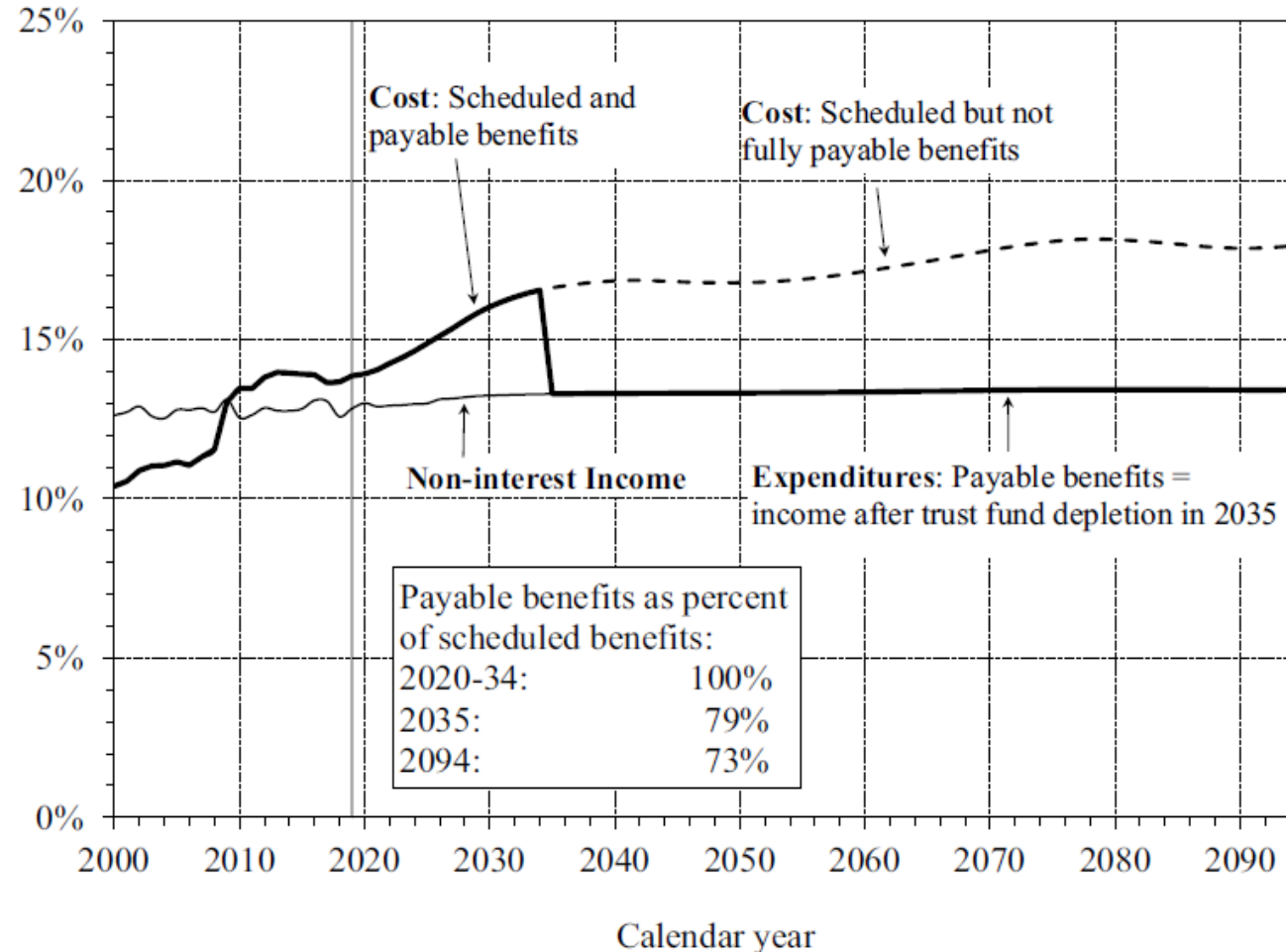
- Clinton: Advisory Council 1994-96
- Bush: President's Commission to Strengthen Social Security, 2001
- Obama: National Commission on Fiscal Responsibility and Reform (Simpson-Bowles), 2010

THE 2020 ANNUAL REPORT OF THE BOARD OF TRUSTEES

- Asset reserves at the end of 2019 of \$2.9 trillion, equal to nearly 3 years of costs.
- Projection that the combined trust funds will be depleted in 2035.
- The projected 75-year actuarial deficit is 3.21 percent of taxable payroll.

OASDI Income, Cost, and Expenditures as Percentages of Taxable Payroll

[Under Intermediate Assumptions]



Source: Figure II.D2. *The 2020 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*. 2020. Social Security Administration.

Increase in Full Retirement Age (FRA) Lowers Retirement Benefits at Any Age Claimed



Gregory et al., 2010.

Indexing for demographic changes

- Netherlands: AOW pension age will be decided about 5 years in advance.
As from 2022, it will be linked to life expectancy.
- Sweden, Italy NDC: Life expectancy affects initial benefit level.
- Latvia NDC: Notional interest rate indexed for growth in aggregate contributions.
- Germany: Pension point value is indexed to gross wage growth adjusted for changes in the contribution rate and changes in the dependency ratio.
- US proposal (Diamond and Orszag): Life expectancy affects both initial benefit levels and contribution rates to share increased 75-year projected cost

Indexing for financial balance in national plans

- Sweden Inkomstpension: If measured assets are less than measured liabilities, reduce the indexation of pensions in payment and of pension balances (the notional interest rate).
- Canada Pension Plan: If, as projected in the triennial actuarial report, the contribution rate required to sustain the CPP over the next 75 years is higher than the legislated contribution rate, and no agreement is reached, then the contribution rate is increased by $\frac{1}{2}$ of the excess over three years and benefits are frozen until next review in 3 years.

