

The Long and the Short of Emerging Market Debt

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Presentation

1. Motivation
2. Data and Methodology
3. Maturity Structure of Chilean MFs and PFAs
4. What Drives the Maturity Structure?
5. Conclusions

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1. Motivation: Why Short-Term Debt?

- ✦ Long-term financing is important
- ✦ Allows large investments, with long-term returns
- ✦ Permits better risk management
- ✦ Reduces risk of crises
- ✦ Why do emerging countries borrow short-term?
- ✦ Why do maturities remain short despite efforts?

1. Motivation: Why Short-Term Debt?

- ✦ Literature has focused on three fronts
 - Demand side of funds (debtors)
 - Commitment device
 - Supply side of funds (creditors)
 - Investor risk aversion
 - Market discipline
 - Agency problems
 - Systemic side
 - Coping device

1. Motivation: Still Many Unknowns

- ✦ Emphasis on supply side, but little evidence
 - Evidence on prices and quantities, not investor behavior
- ✦ Many unanswered questions
 - How do investors invest? How long?
 - How do investors manage risk?
 - Do investments vary by investor type and with shocks?
 - Does the investment horizon vary by instrument?
 - Are investments affected by liquidity risks?
 - Are decisions constrained by instrument availability?
 - What incentives do investors face?

1. Motivation: What this Paper Studies

- ✦ Difficult to answer all existing questions
- ✦ Key to start: Analyze what investors actually do
- ✦ This is the focus of this paper
- ✦ The paper studies actual portfolios
 - Chilean pension funds
 - Chilean mutual funds
 - Chilean insurance companies
 - US mutual funds
- ✦ Need to resort to regulated institutional investors

1. Motivation: What this Paper Studies

- ✦ Many advantages of analyzing these data
 - Institutional investors: ones expected to be long term
 - Chile has unique institutions and macro stability
 - Chile has tried to develop markets and extend maturities
 - Pension vs. mutual funds vs. insurance companies vs. US
 - Rich and unique data, difficult to access and process
- ✦ Data
 - Asset level allocation/portfolios
 - Monthly and daily frequencies
 - Large number of funds, many years

1. Motivation: Contribution of the Paper

- ✦ Many potential research projects with these data
 - “Pension Funds and Capital Market Development” (Raddatz and Schmukler)
- ✦ Special interest on pension funds
 - Thought to be longest investors
 - Most detailed and comprehensive information
- ✦ This paper
 - Step to understand supply side of funds
 - Focus on maturity structure

1. Motivation: Contribution of the Paper

- ✦ Stylized facts on maturity structure
 - Distribution of asset allocation
 - Comparisons across institutional investors
- ✦ Explore potential drivers of maturity structure
 - Instrument availability
 - Rebalancing
 - Asset allocation and risk management
 - Outflows
 - Managerial incentives

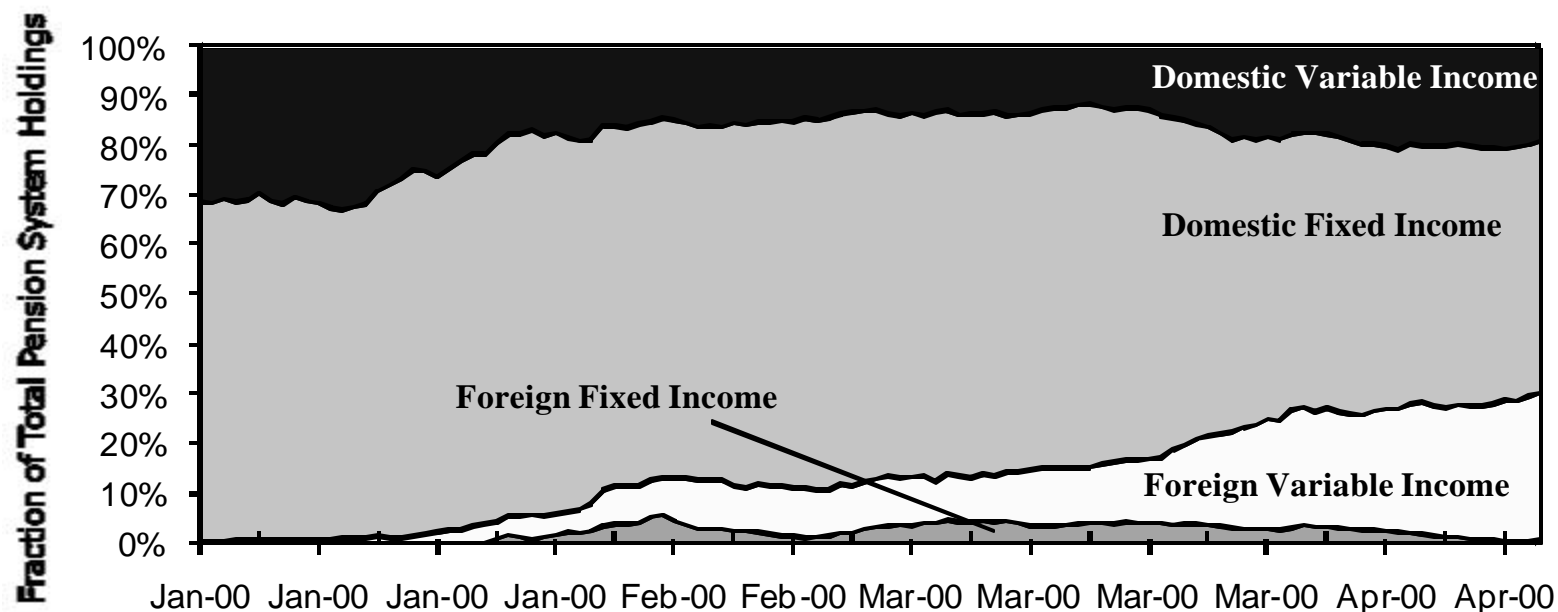
1. Motivation: Chilean Pension Funds

- ✦ Privately administered, defined-contribution (DC) pension fund system adopted in 1981
- ✦ Assets managed experienced important growth
 - Growing at average annual rate of 46% since 1981
 - Reached 59% of GDP at the end of 2005
 - Important players in domestic capital markets
 - 10% of equity market capitalization – 28% of free-float
 - 60% of domestic public sector bonds
 - 30% of corporate bonds
- ✦ Domestic specialists

1. Motivation: Chilean PFAs

PFAs as “domestic specialists”

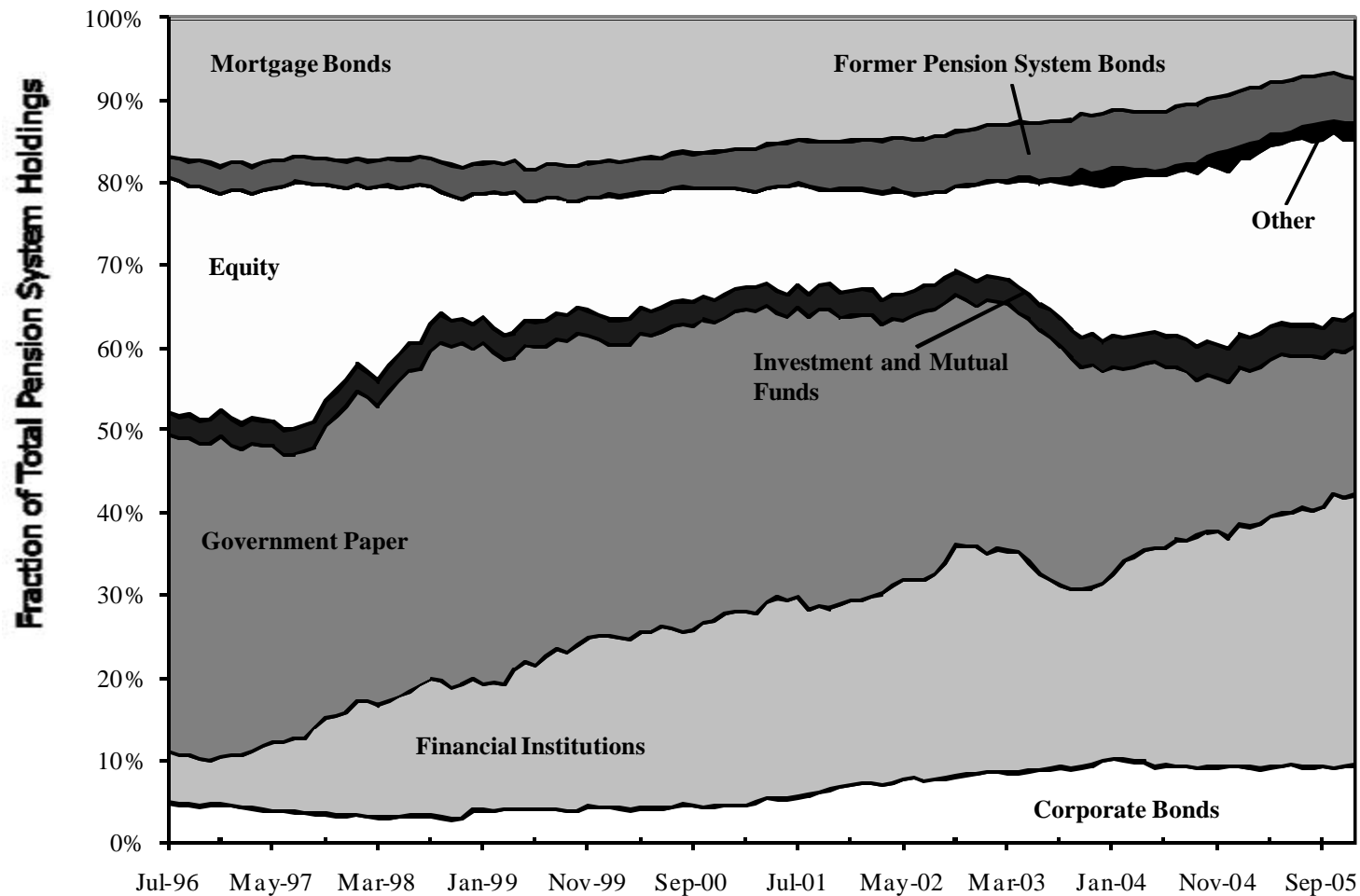
Pension System Allocation by Broad Asset Class



1. Motivation: Chilean PFAs

PFAs as “domestic specialists”

Pension System Holdings in Domestic Assets



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2. Data and Methodology

(a) Data

- ✦ Unique and detailed dataset from Chile
- ✦ Portfolios of universe of PFs from SP
 - Monthly frequency (Jul 1996-Dec 2005)
 - 7,501,210 observations
 - 104,789 different securities
 - 57 pension funds
 - Daily frequency (Jul 1996-Jul 2008), indirectly
 - 201,288,833 observations
 - 62 pension funds

2. Data and Methodology

(a) Data

- ✦ Portfolios of universe of bond MFs from SVS
 - Monthly frequency (Sep 2002-Dec 2005)
 - 447,664 observations
 - 78 funds
- ✦ Portfolios of universe of insurance cos. from SVS
 - Monthly frequency (Jun 2002-Dec 2005)
 - 2,156,576 observations
 - 36 companies

2. Data and Methodology

(b) Measuring maturity structure

- ✦ Fraction of fund k 's fixed-term assets with term to maturity D

$$W_{D,k,t} = \sum_i w_{i,t}^k I(d_{i,t} = D)$$

- ✦ Average fraction across periods and funds

$$W_{D,k} = \frac{1}{T_k} \sum_{t=1}^{T_k} W_{D,k,t}, \quad W_D = \frac{1}{N} \sum_{k=1}^N \frac{T_k}{T} W_{D,k}$$

- ✦ Cumulative average fraction

$$F(D < \mathbf{d}) = \sum_{d < \mathbf{d}} W_d$$

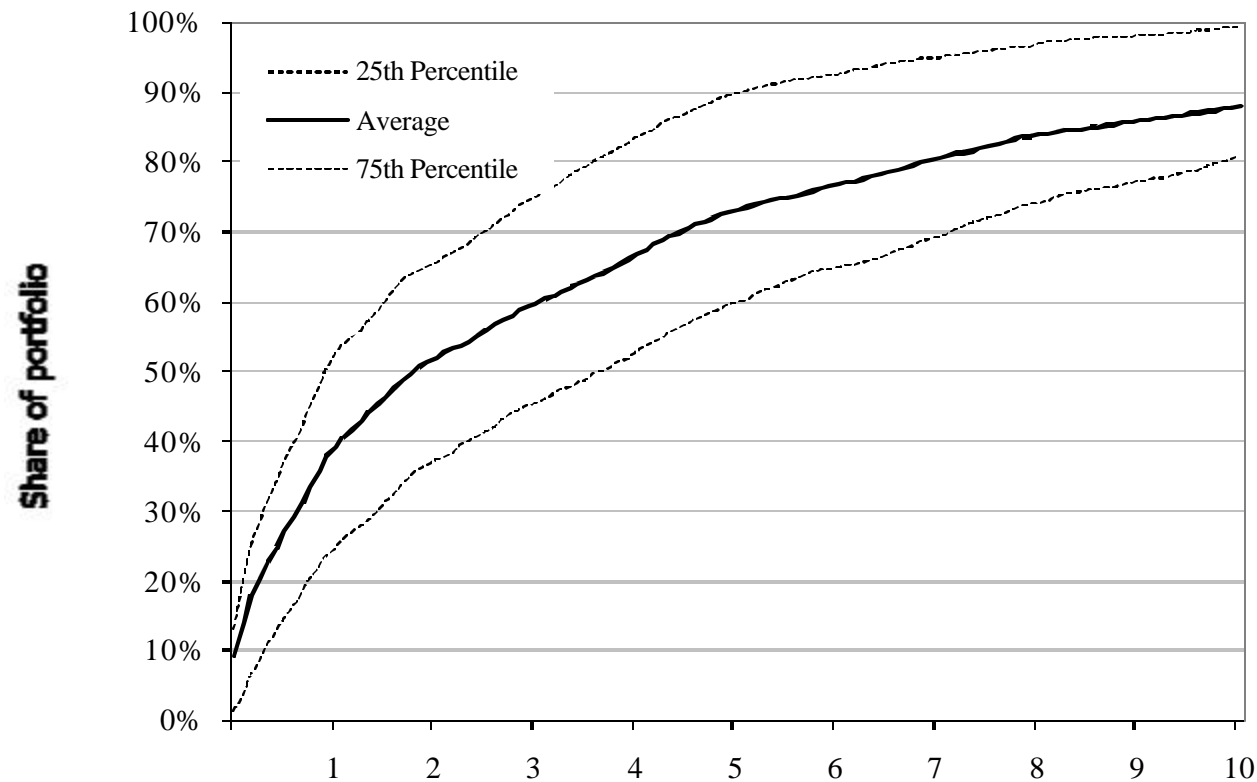
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3. Maturity Structure

Important fraction of MFs' assets in short-term

Maturity Structure of Chilean MFs

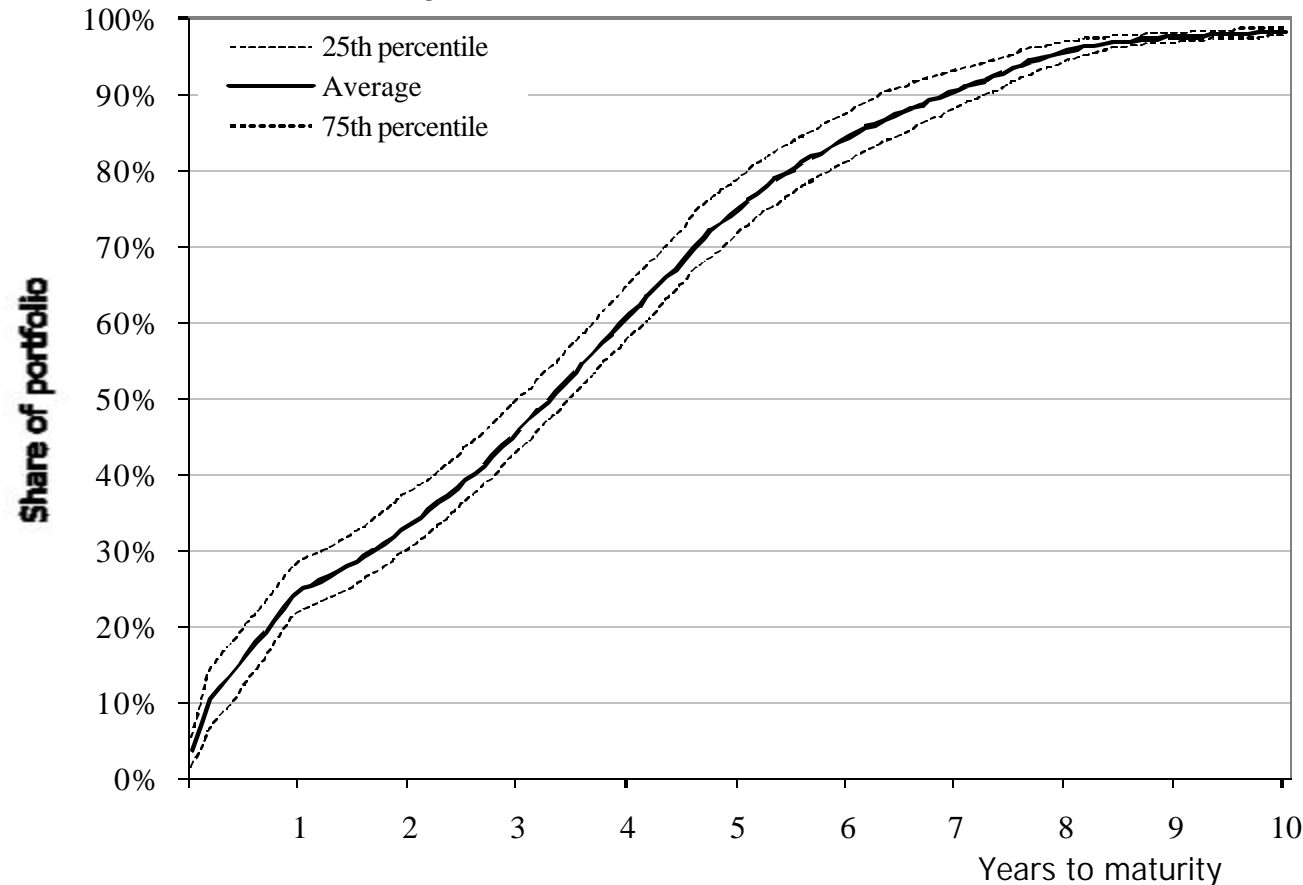


	Years to maturity							
	<1year (y)	<3y	<5y	<7y	<10y	<15y	<20y	<30y
	38%	59%	73%	80%	88%	95%	99%	100%

3. Maturity Structure

Important fraction of PFAs' assets in short-term

Maturity Structure of Chilean PFAs

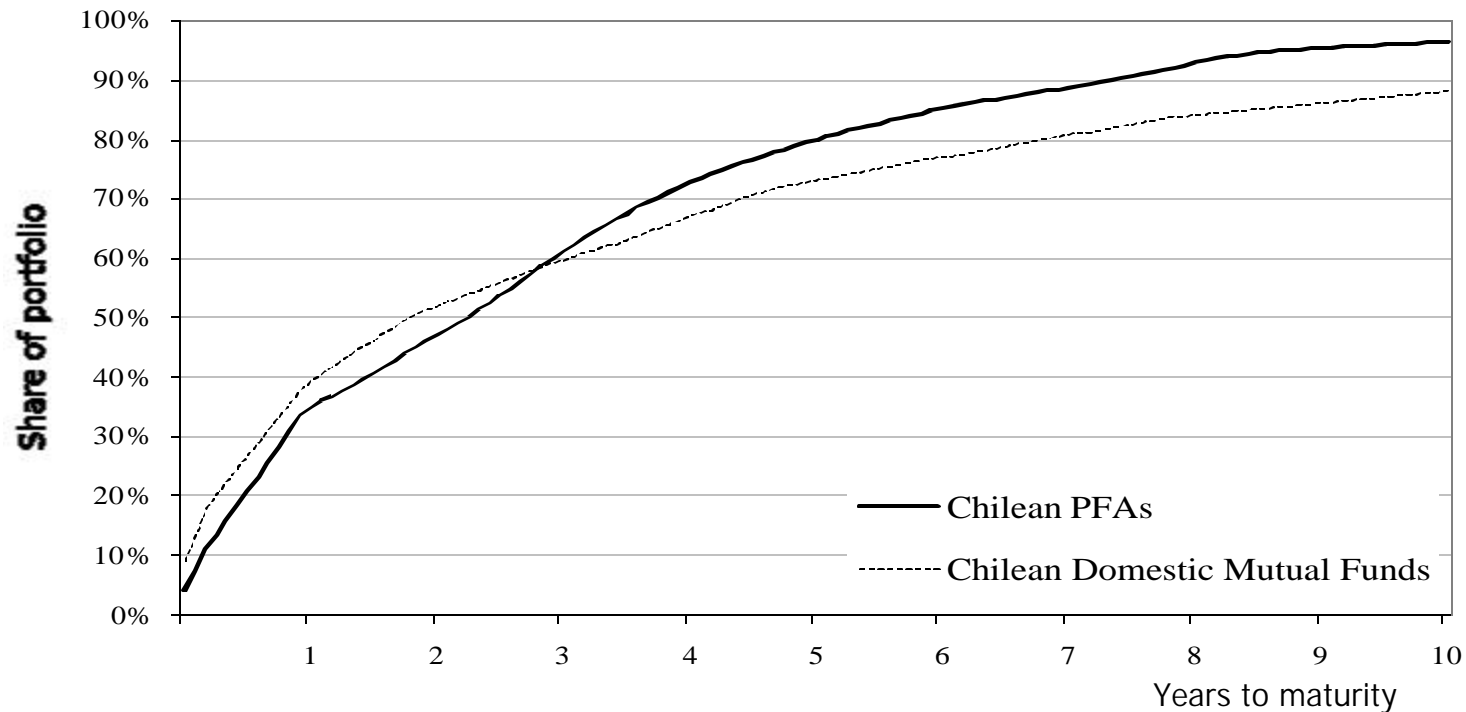


	<1year (y)	<3y	<5y	<7y	<10y	<15y	<20y	<30y
	24%	45%	74%	90%	98%	100%	100%	100%

3. Maturity Structure

PFAs no longer than Chilean domestic mutual funds

Maturity Structure of Chilean Domestic Mutual Funds vs. PFAs



	Avg. Maturity
Chilean PFAs	3.16
Chilean Domestic Mutual Funds	3.88

3. Maturity Structure

PFAs no longer than Chilean domestic mutual funds

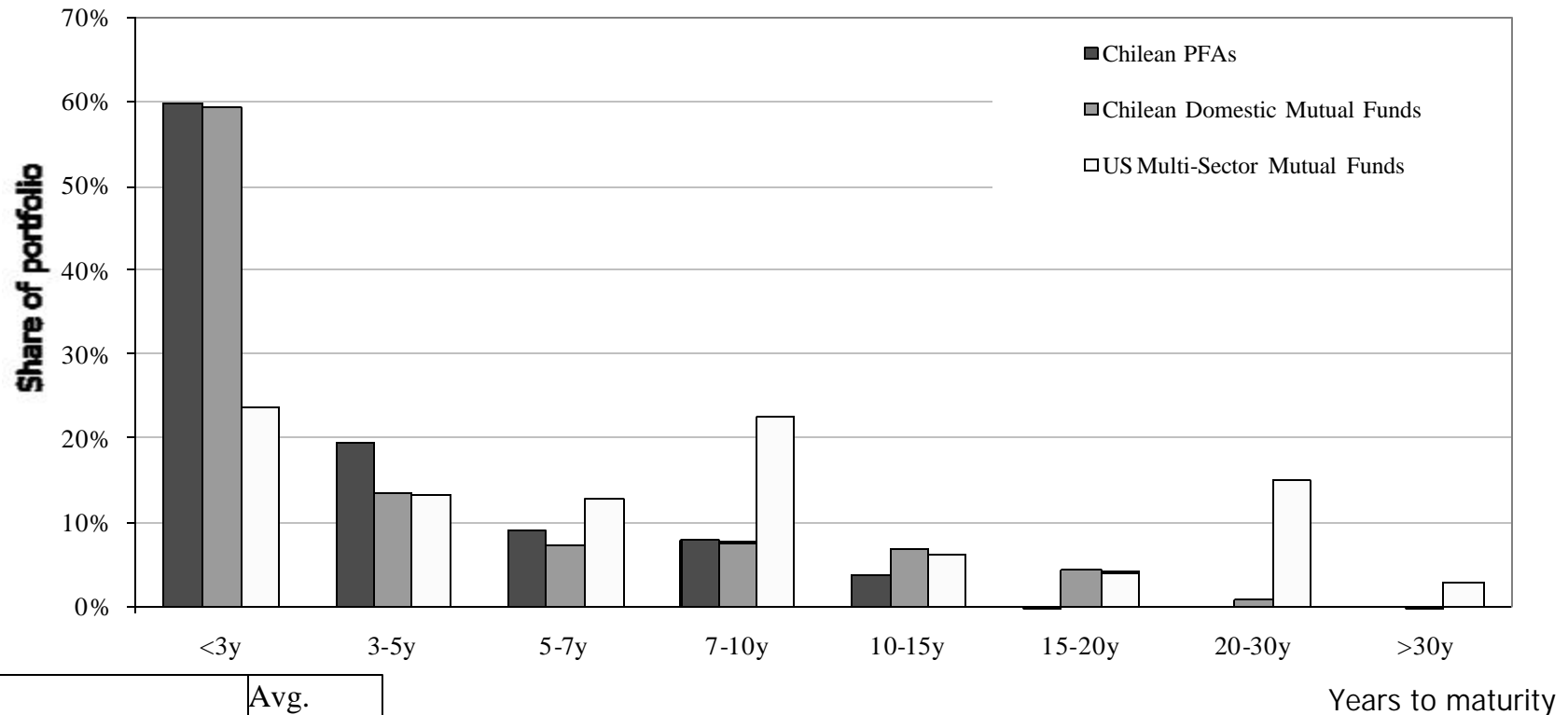
Maturity Structure of Chilean Domestic Mutual Funds vs. PFAs

C. Average Maturity and Accumulated Weights										
		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
			Accumulated Weights							
		Avg. Maturity	<1year (y)	<3y	<5y	<7y	<10y	<15y	<20y	<30y
(1) Chilean Domestic Mutual Funds		3.88	38%	59%	73%	80%	88%	95%	99%	100%
(2) Chilean PFAs		3.16	34%	60%	79%	88%	96%	100%	100%	100%
D. Hypothesis Testing										
		(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
			Accumulated Weights							
		Avg. Maturity	<1year (y)	<3y	<5y	<7y	<10y	<15y	>20y	KS
(1) = (2)		0.29	0.16	0.75	0.39	0.20	0.07*	0.03**	0.10*	0.02**

3. Maturity Structure

Shorter maturities than US mutual funds

Maturity Structure of Chilean Mutual Funds and PFAs
vs. US Multi-Sector Mutual Bond Funds



	Avg. Maturity
(1) Chilean MF	3.88
(2) Chilean PFAs	3.16
(3) US MS MF	9.55

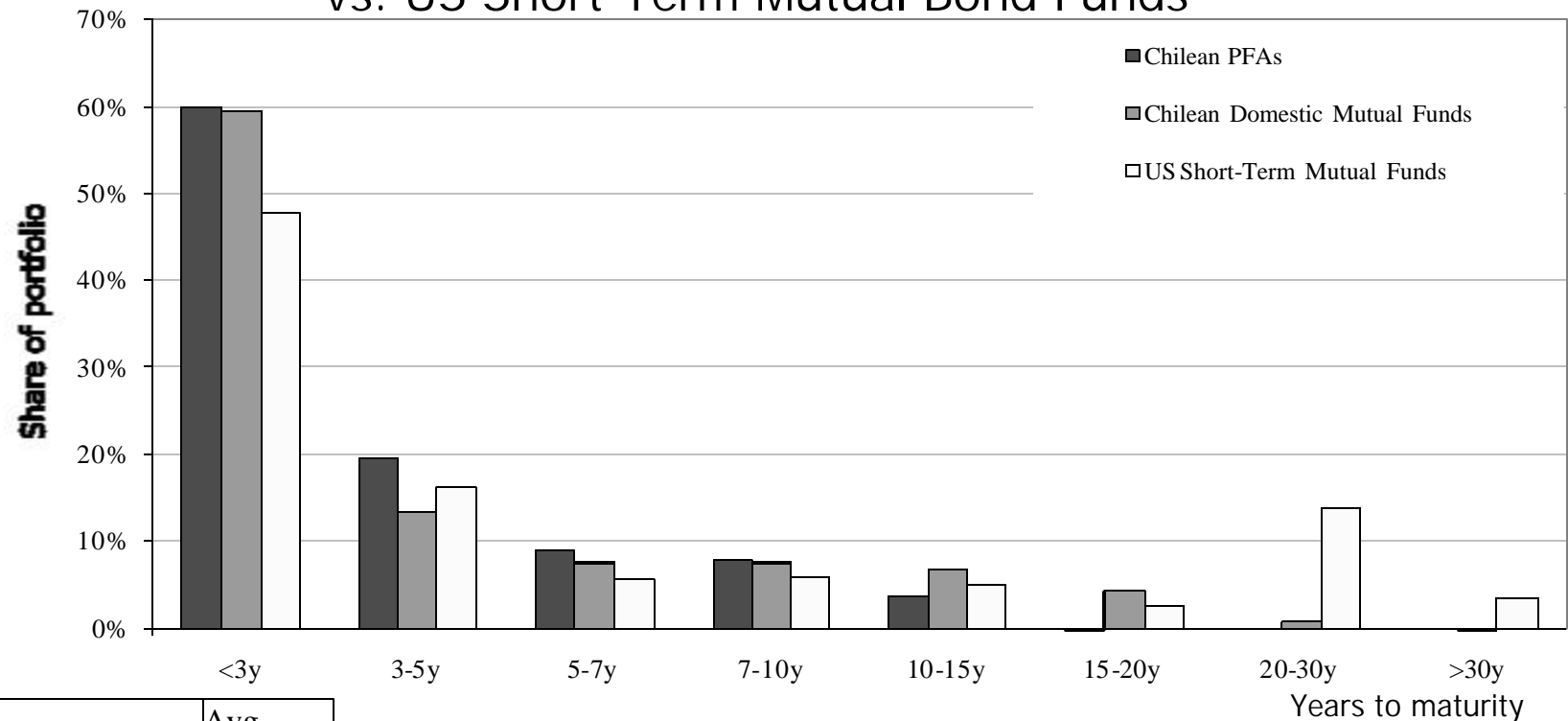
Kolmogorov-Smirnov Test of Equality of Distributions		Overall
Two sided test (1) = (3)		<.01***
Two sided test (2) = (3)		<.01***

3. Maturity Structure

Shorter maturities than *short-term* US mutual funds

Maturity Structure of Chilean Mutual Funds and PFAs

vs. US Short-Term Mutual Bond Funds



	Avg. Maturity
(1) Chilean MF	3.88
(2) Chilean PFAs	3.16
(3) US ST MF	7.76

Kolmogorov-Smirnov Test of Equality of Distributions	Overall
Two sided test (1) = (3)	<.01***
Two sided test (2) = (3)	<.01***

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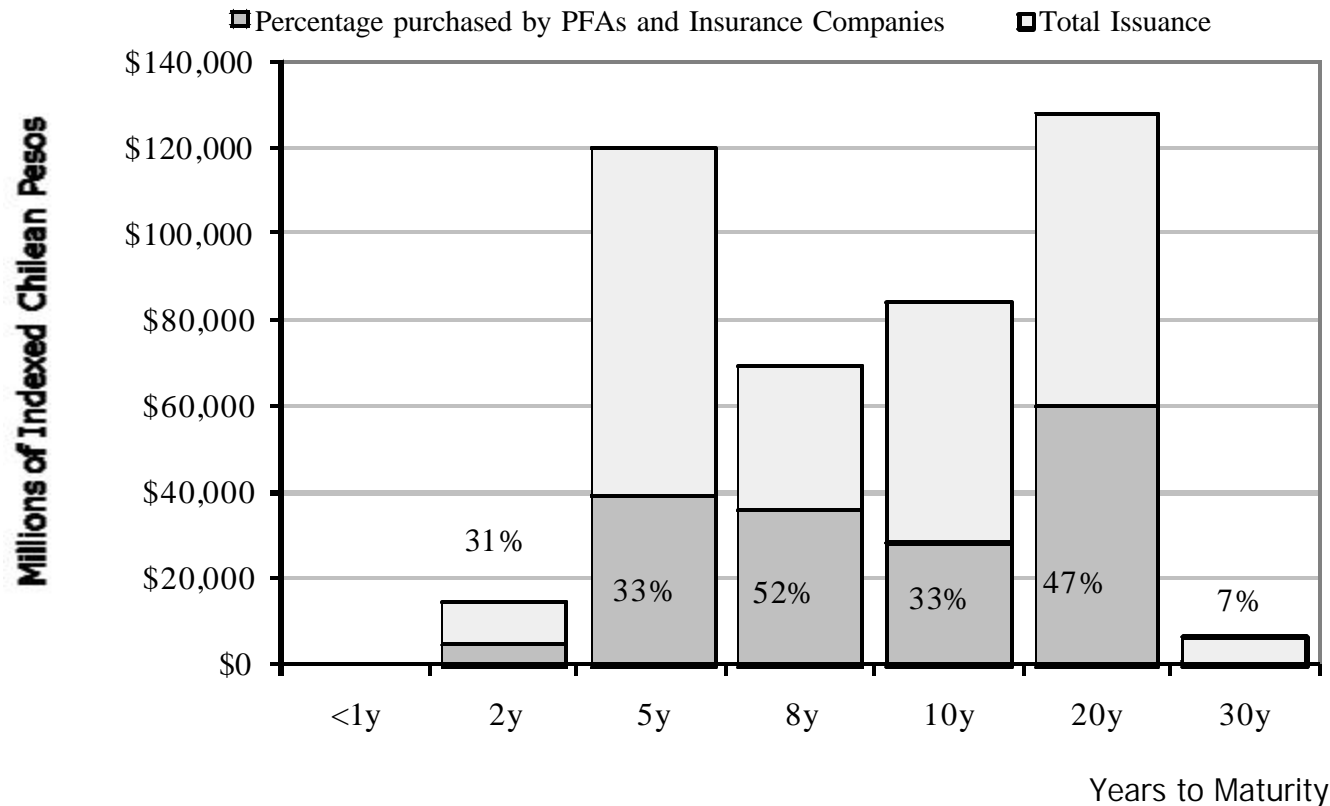
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4. What Drives Maturity Structure

(a) Instrument availability does not constraint maturities

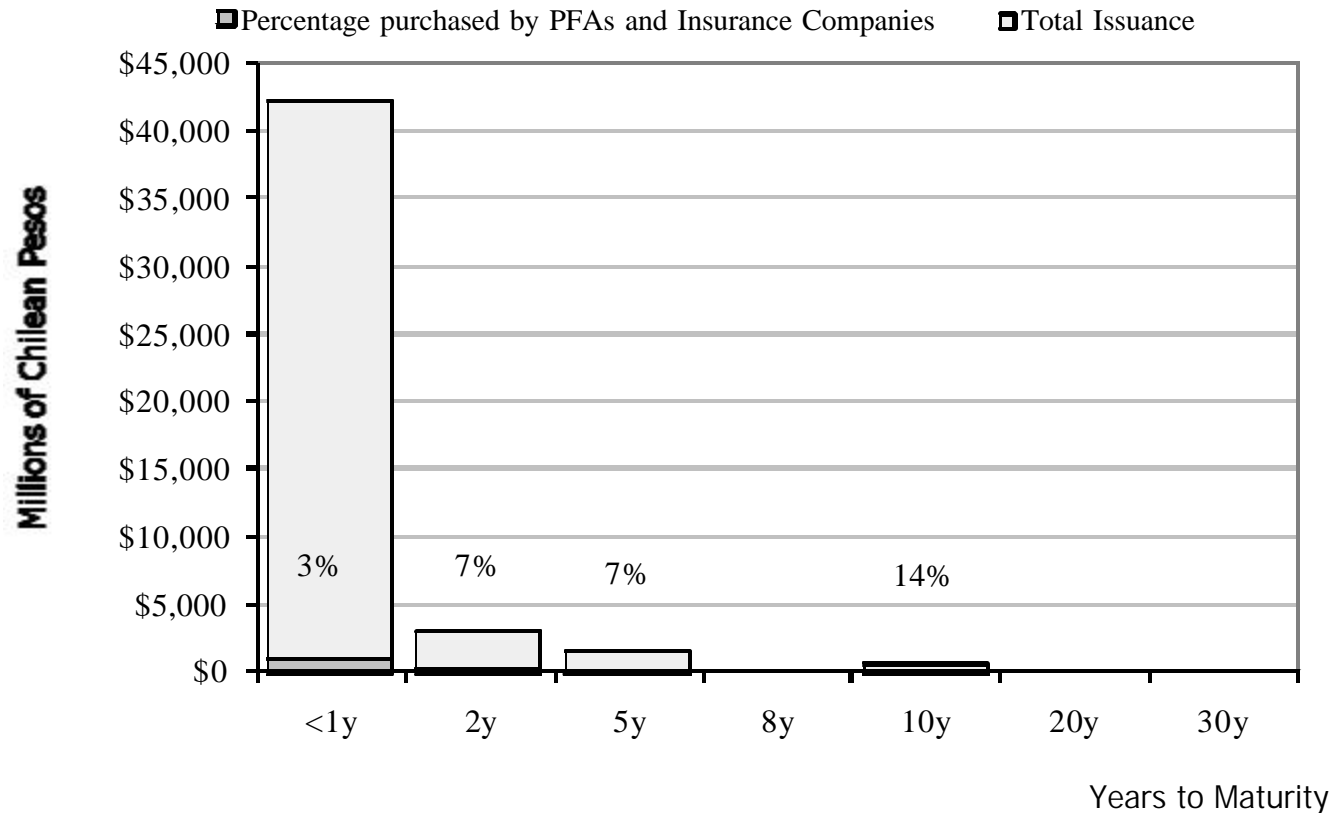
Issuance Denominated in Indexed Chilean Pesos



4. What Drives Maturity Structure

(a) Instrument availability does not constraint maturities

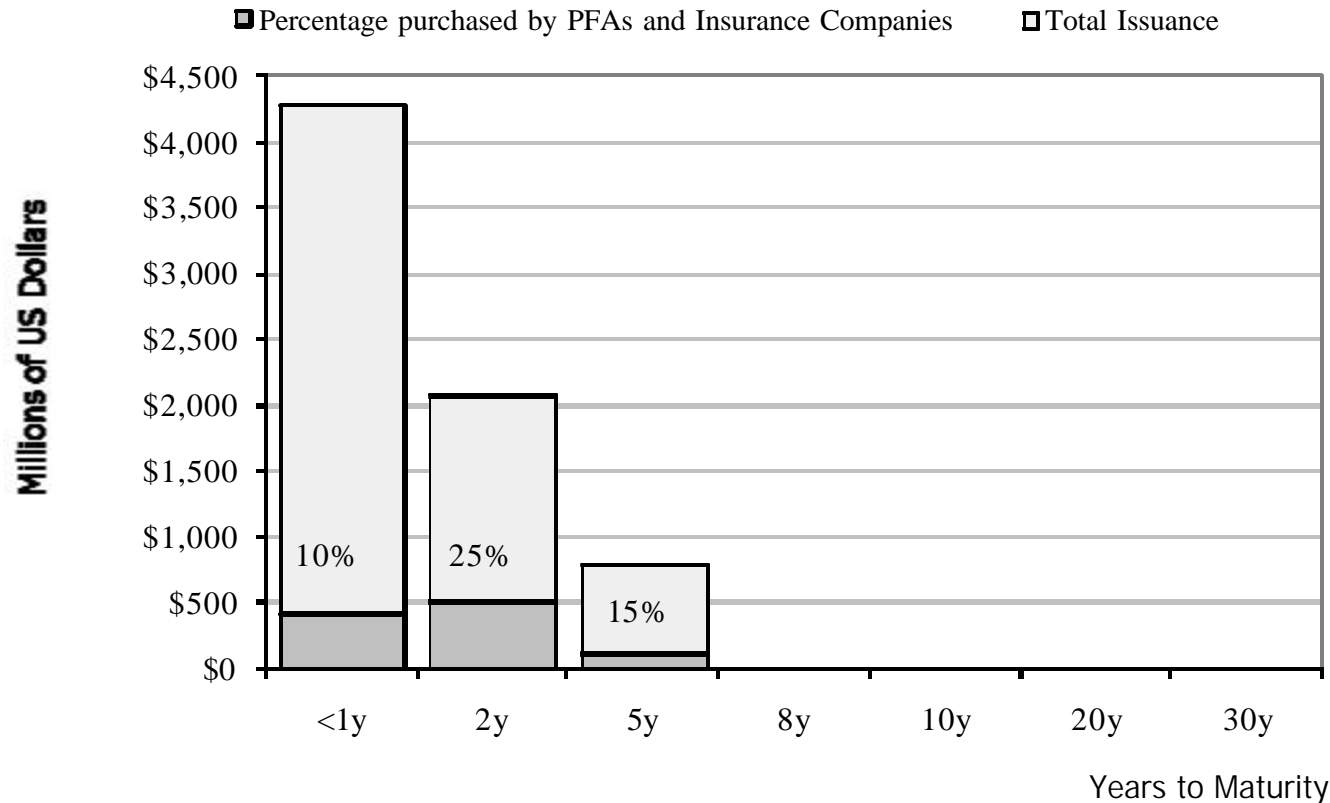
Issuance Denominated in Nominal Chilean Pesos



4. What Drives Maturity Structure

(a) Instrument availability does not constraint maturities

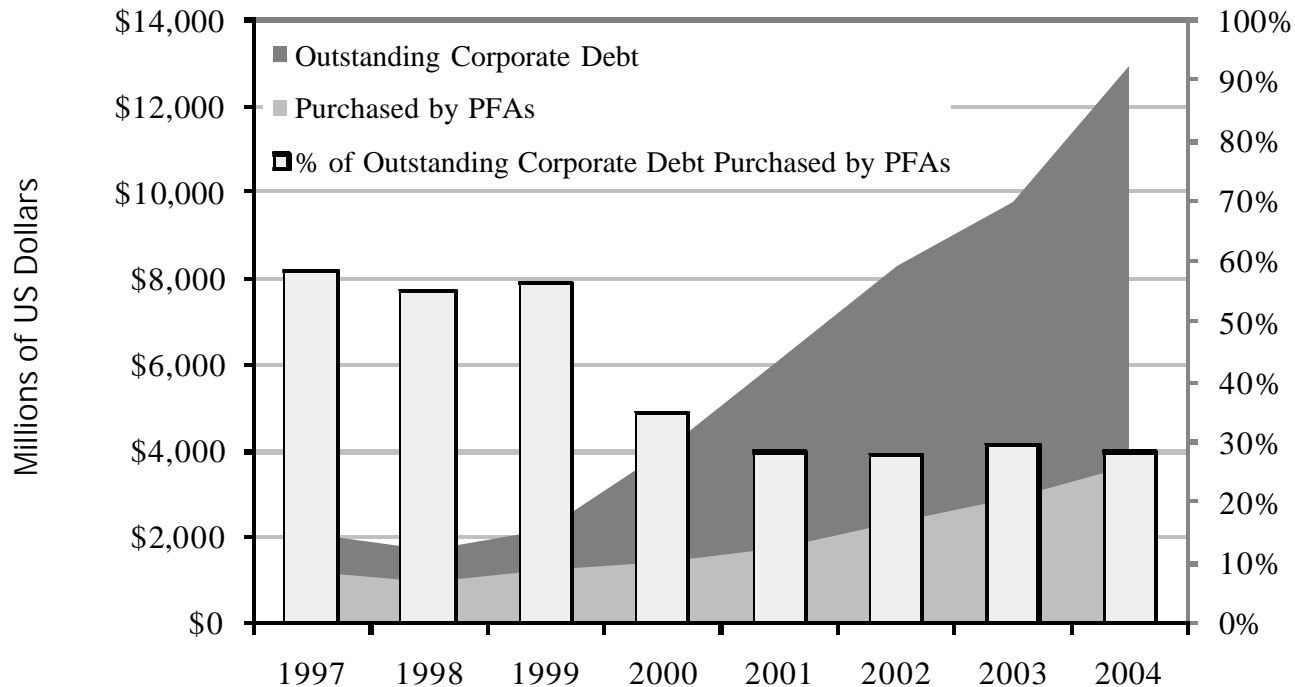
Issuance Denominated in US Dollars



4. What Drives Maturity Structure

(a) Instrument availability does not constraint maturities

PFAs' Holdings of Total Corporate Debt Issuance

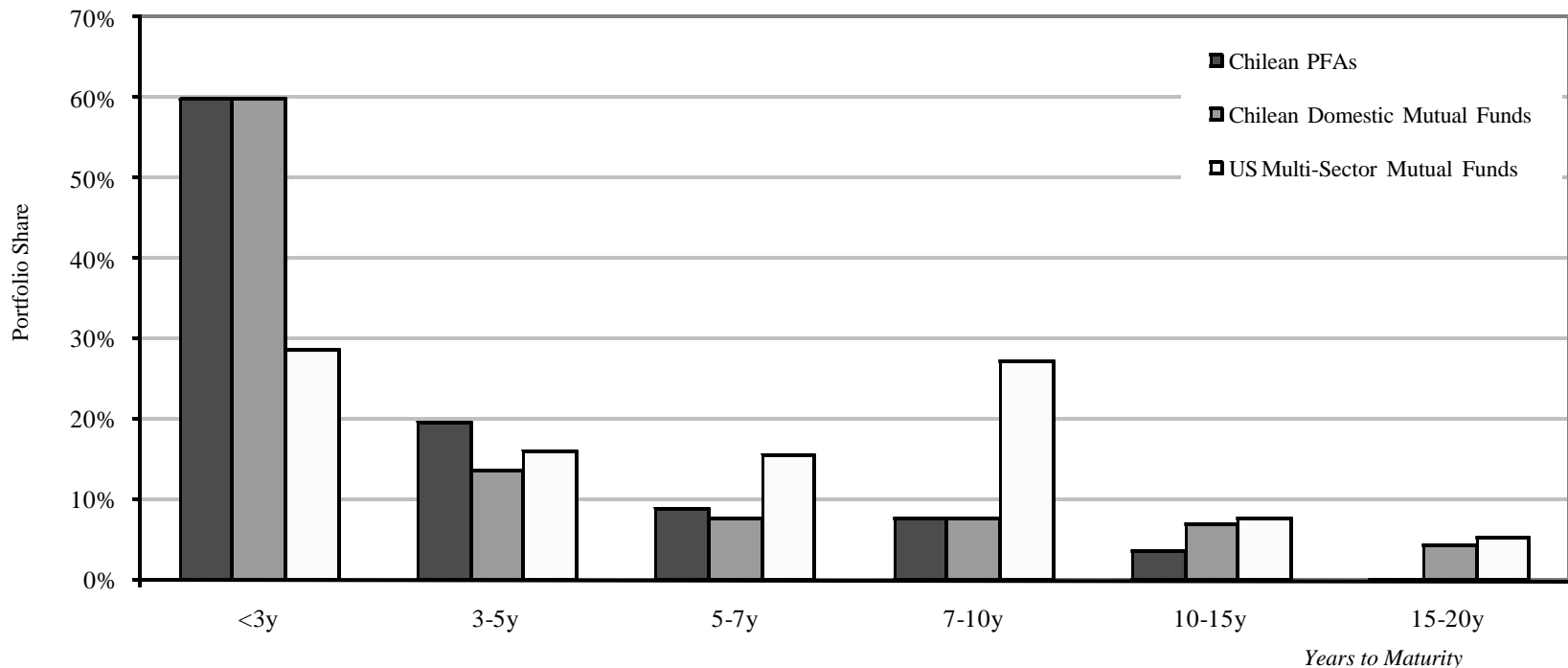


Maturity in years	Dec-02	Dec-03	Dec-04	Dec-05
PFAs	4.9	5	5.8	6.1
Total Debt	12.2	12.7	14	14.7

4. What Drives Maturity Structure

(a) Instrument availability does not constraint maturities

Maturity Structure of Chilean Mutual Funds and PFAs
vs. US Multi-Sector Mutual Bond Funds , Adjusting for Instrument Availability

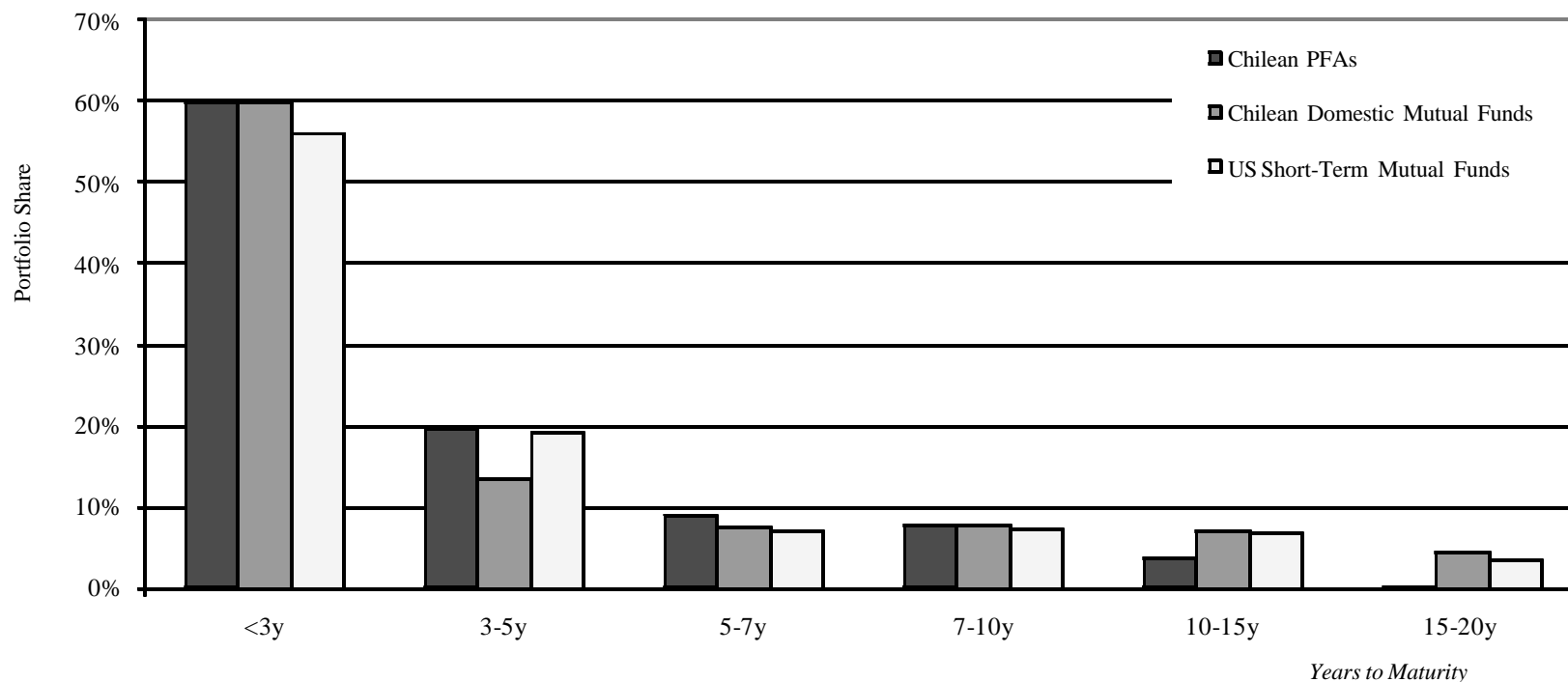


	Avg. Maturity
(1) Chilean MF	3.88
(2) Chilean PFAs	3.16
(3) US MS MF	6.12

4. What Drives Maturity Structure

(a) Instrument availability does not constraint maturities

Maturity Structure of Chilean Mutual Funds and PFAs
vs. US Multi-Sector Mutual Bond Funds, Adjusting for Instrument Availability



	Avg. Maturity
(1) Chilean MF	3.88
(2) Chilean PFAs	3.16
(3) US MS MF	4.07

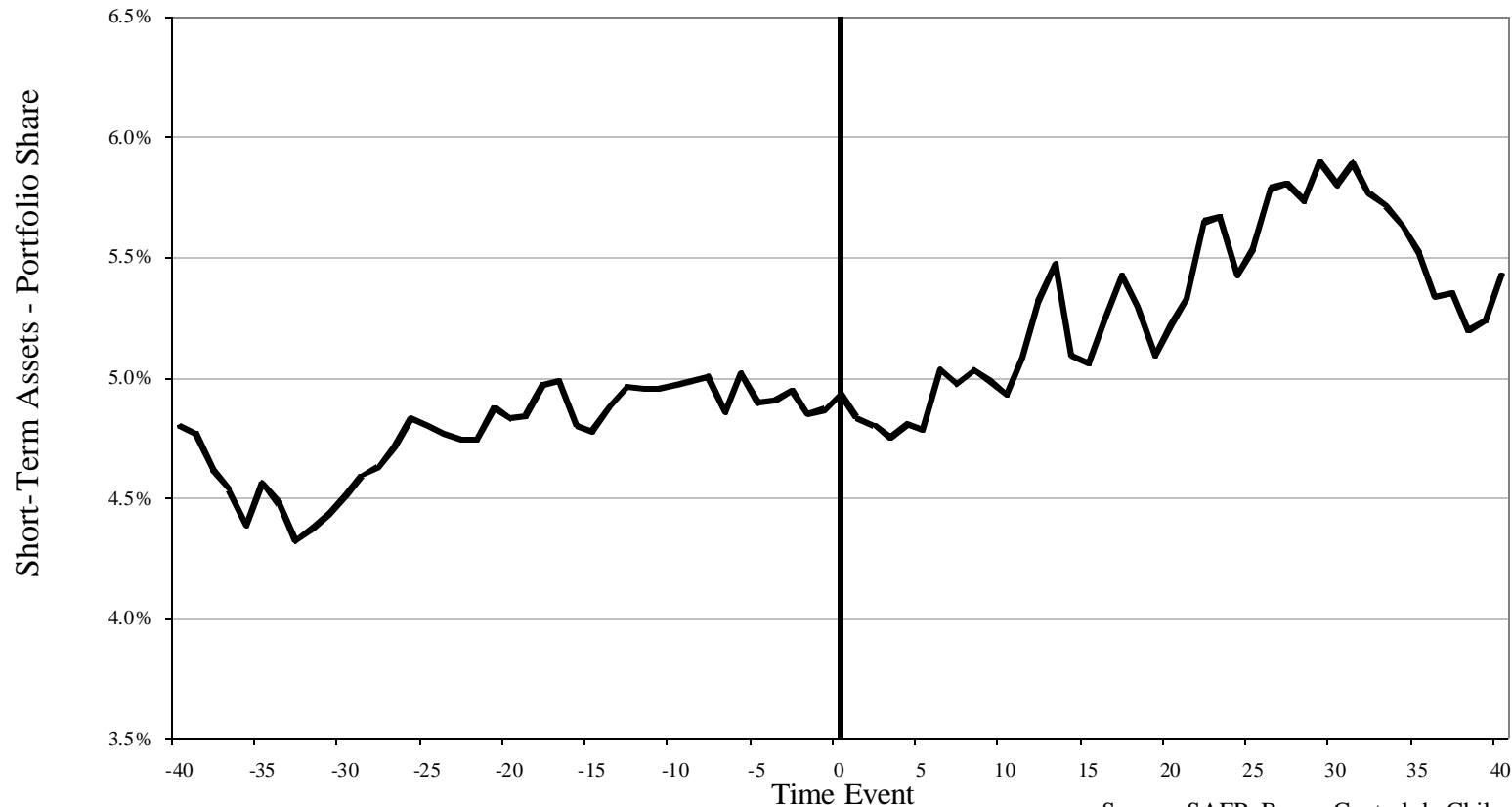
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4. What Drives Maturity Structure?

(b) Liquidity is not held to rebalance portfolios

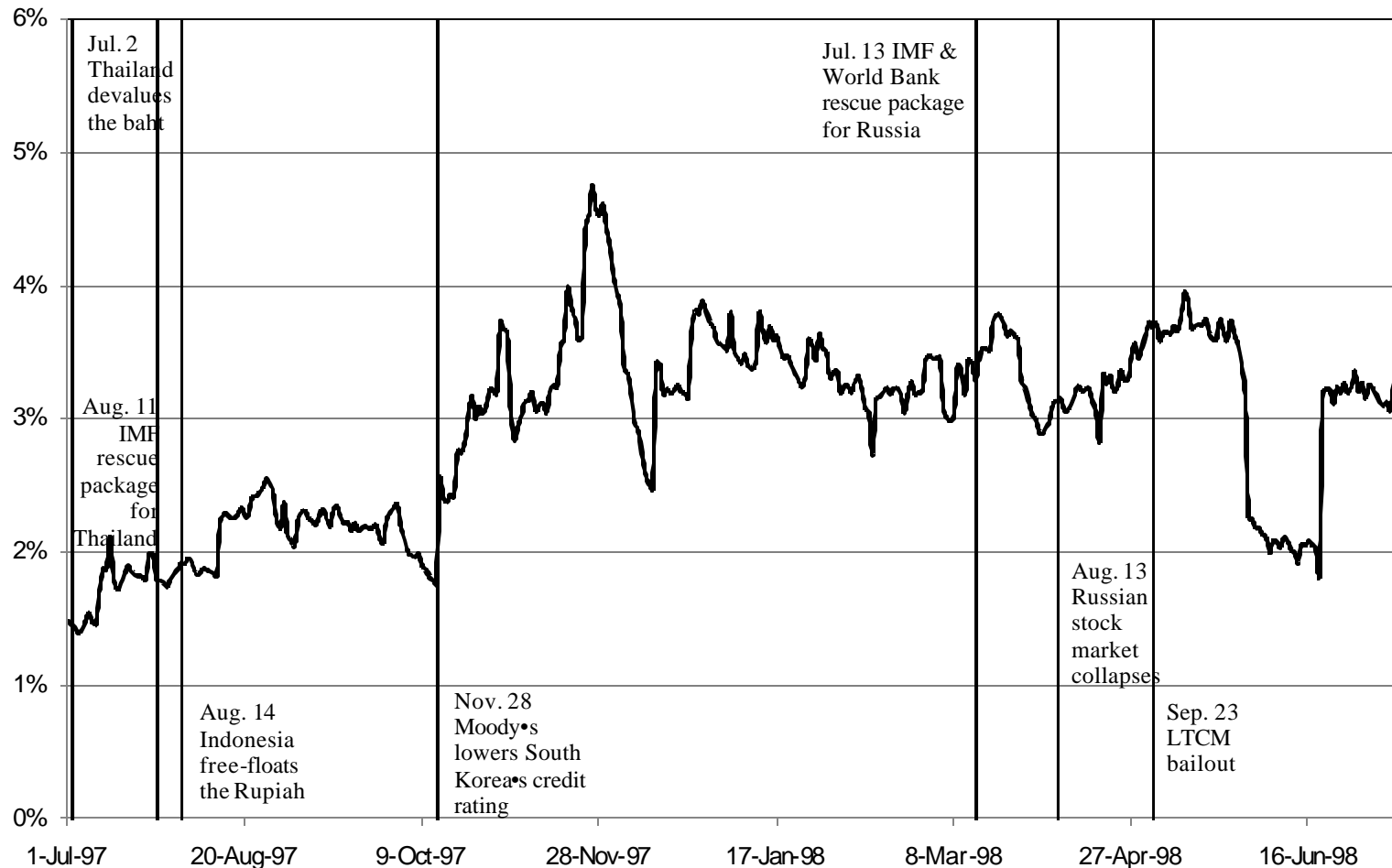
Evolution of PFA Short-Term Fixed Income Assets around Relaxation of Regulatory Constraints to Foreign Investment



4. What Drives Maturity Structure?

(b) Liquidity is not held to rebalance portfolios

Evolution of PFA Short-Term Assets around Crisis Events



Source: SAFP, Banco Central de Chile

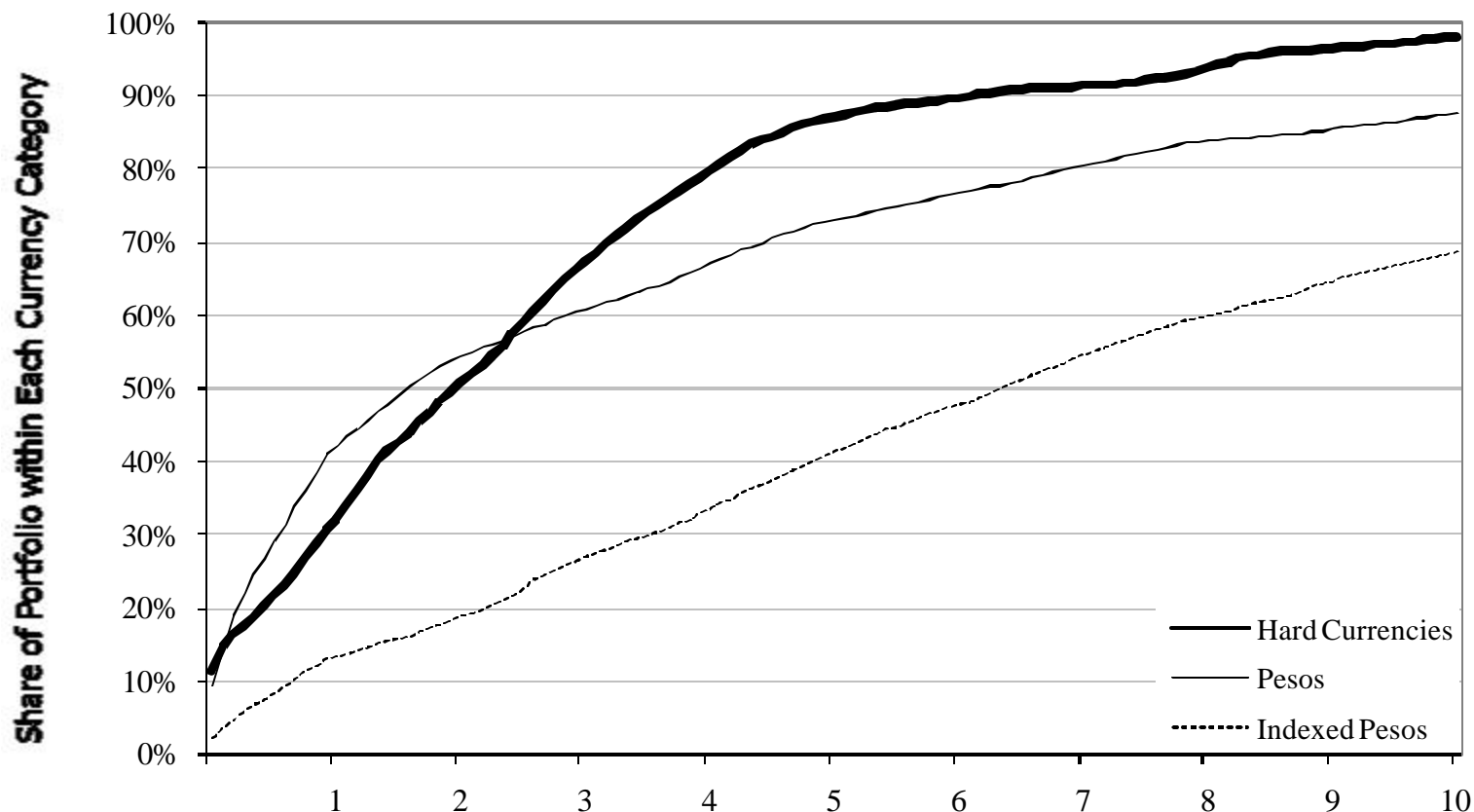
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4. What Drives Maturity Structure?

(c) Maturity related to risk-return

Maturity Structure of Chilean MFs by Currency

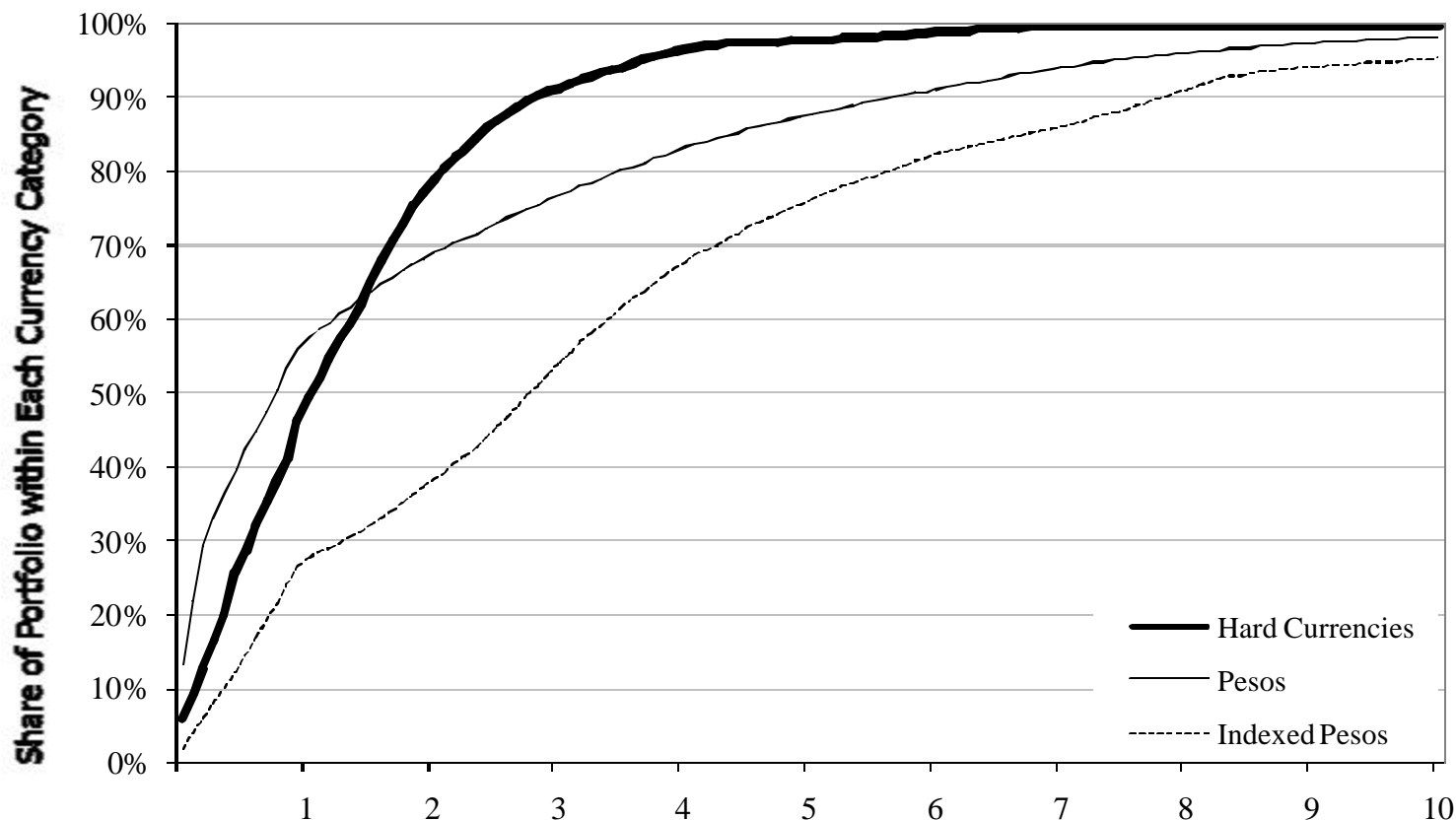


Avg. Maturity by currency	Pesos	Indexed Pesos	Hard Currencies
Chilean MFs	3.59	6.71	3.37

4. What Drives Maturity Structure?

(c) Maturity related to risk-return

Maturity Structure of Chilean PFAs by Currency

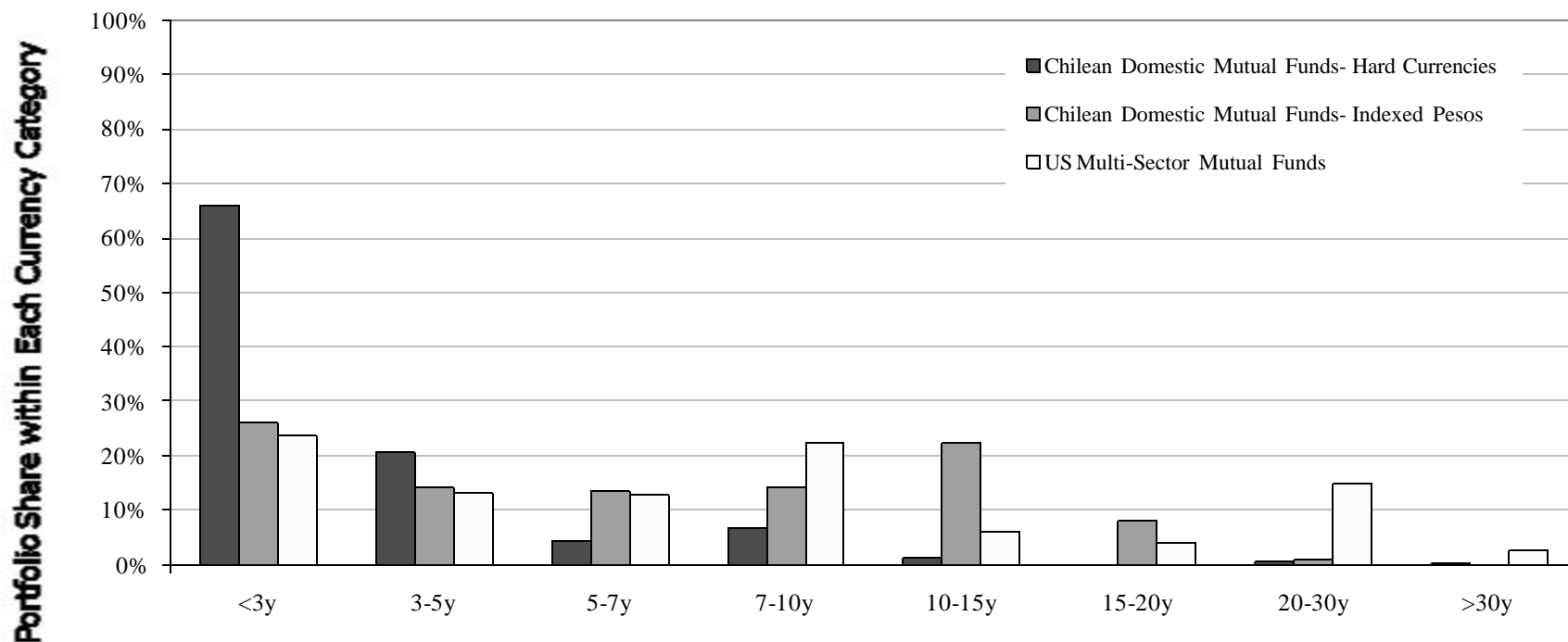


Avg. Maturity by currency	Pesos	Indexed Pesos	Hard Currencies
Chilean PFAs	2.08	3.61	1.60

4. What Drives Maturity Structure?

(c) Maturity related to risk-return

Maturity Structure of Chilean MFs by Currency
Compared to US Mutual Funds

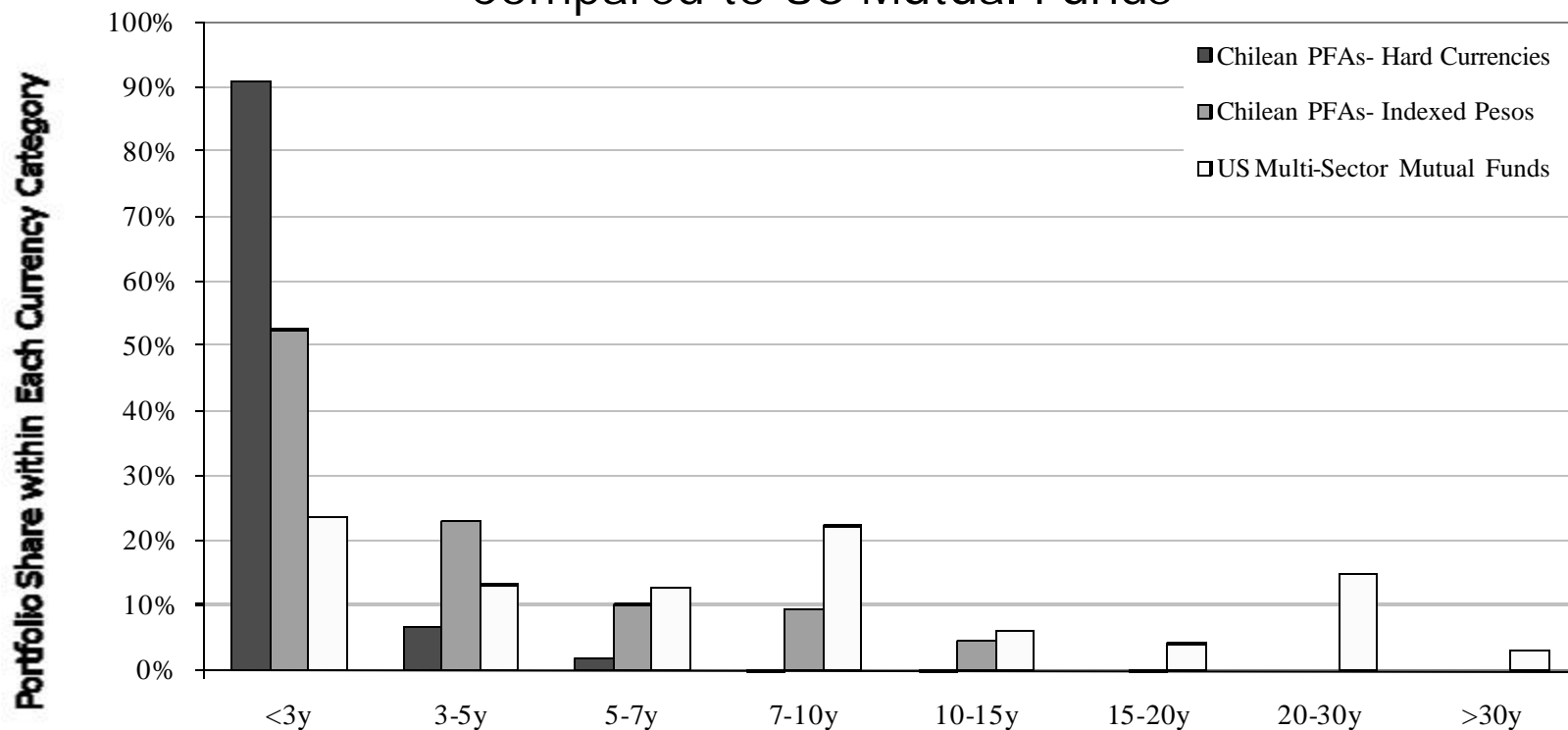


	Avg. Maturity	<3years (y)	<5y	<7y	<10y	<15y	<20y	<30y
Chilean PFAs - Hard Currencies	3.37	66%	87%	91%	98%	99%	99%	100%
Chilean PFAs - Indexed Pesos	6.71	26%	41%	54%	68%	91%	99%	100%
US Multi-Sector Mutual Funds	9.55	24%	37%	50%	72%	78%	82%	97%

4. What Drives Maturity Structure?

(c) Maturity related to risk-return

Maturity Structure of Chilean PFAs by Currency
Compared to US Mutual Funds

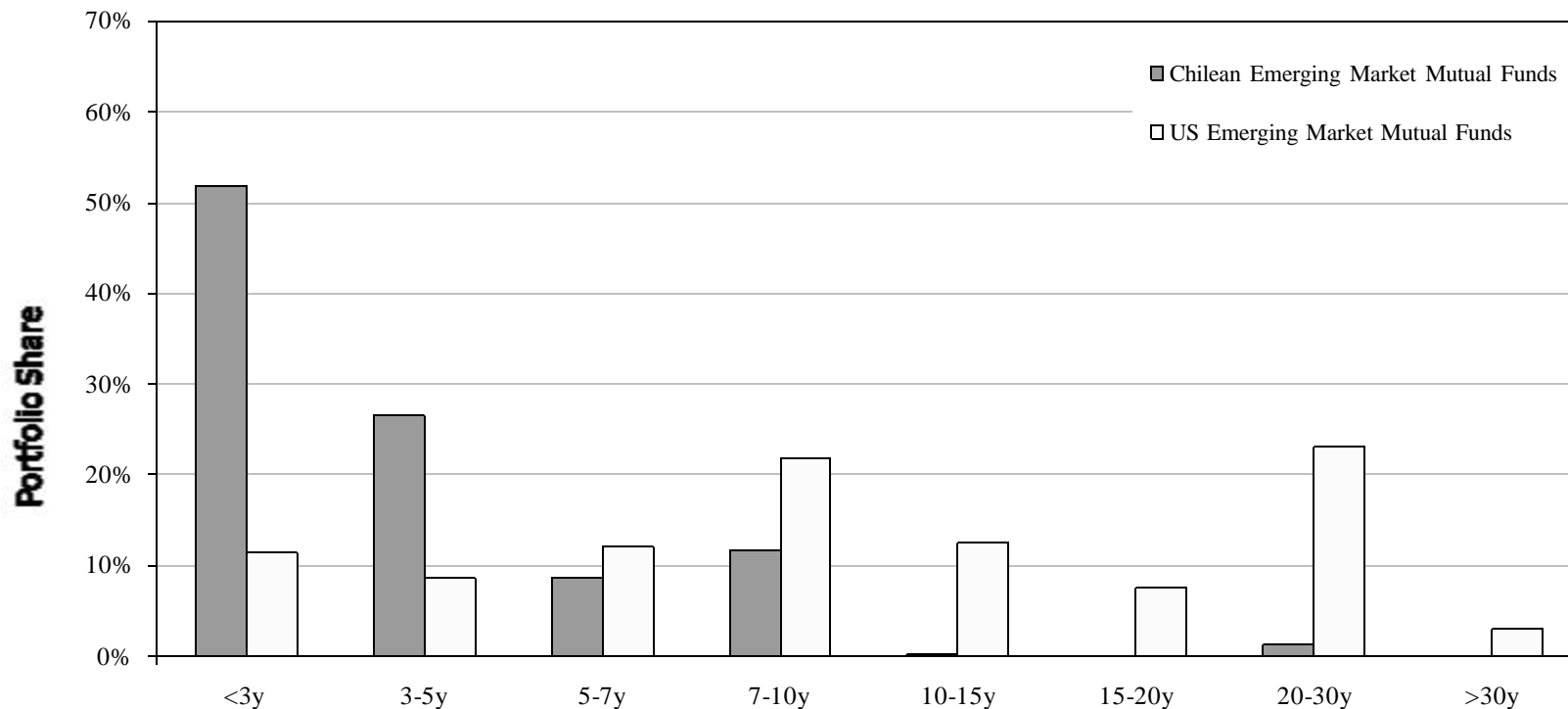


	Avg. Maturity	<3years (y)	<5y	<7y	<10y	<15y	<20y	<30y
Chilean PFAs - Hard Currencies	1.60	91%	98%	100%	100%	100%	100%	100%
Chilean PFAs - Indexed Pesos	3.61	53%	76%	86%	95%	100%	100%	100%
US Multi-Sector Mutual Funds	9.55	24%	37%	50%	72%	78%	82%	97%

4. What Drives Maturity Structure?

(c) Maturity related to risk-return

Maturity Structure of Chilean EM MFs Compared to US EM MFs

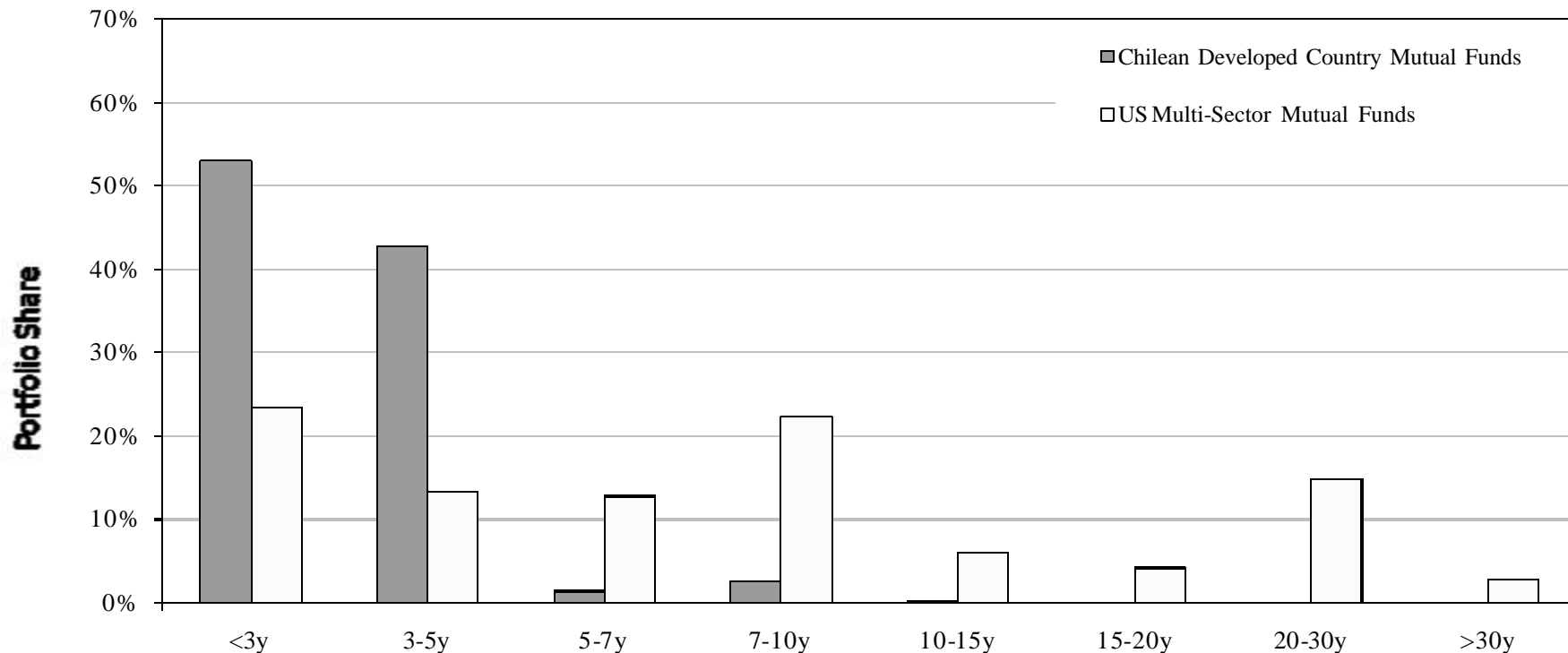


	Avg. Maturity	<3y	<5y	<7y	<10y	<15y	<20y	<30y
Chilean Emerging Market Mutual Funds	3.80	52%	78%	87%	99%	99%	99%	100%
US Emerging Market Mutual Funds	12.64	11%	20%	32%	54%	66%	74%	97%

4. What Drives Maturity Structure?

(c) Maturity related to risk-return

Maturity Structure of Chilean DM Mutual Funds Compared to US Mutual Funds



	Avg. Maturity	<3y	<5y	<7y	<10y	<15y	<20y	<30y
Chilean Developed Country Mutual Funds	3.77	53%	96%	97%	100%	100%	100%	100%
US Multi-Sector Mutual Funds	9.55	24%	37%	50%	72%	78%	82%	97%

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4. What Drives Maturity Structure?

(d) Maturity related to managerial incentives

- ✦ Standard portfolio allocation theories do not consider conflict of interests/incentives
- ✦ Recent literature explores role of managerial incentives in risk taking
 - Incentives may affect risk taking and lead to herding
- ✦ Can these incentives explain Chilean short termism?
 - Do funds have incentives for short-term performance?
 - Can they bias their portfolios toward short-term?

4. What Drives Maturity Structure?

(d) Maturity related to managerial incentives

- + Investor side - market discipline
 - Outflows (or the threat of)
 - Based on short-term returns?
 - Outflows potentially more important for MFs - systemic
- + Investor clientele
- + “Liability structure”

4. What Drives Maturity Structure?

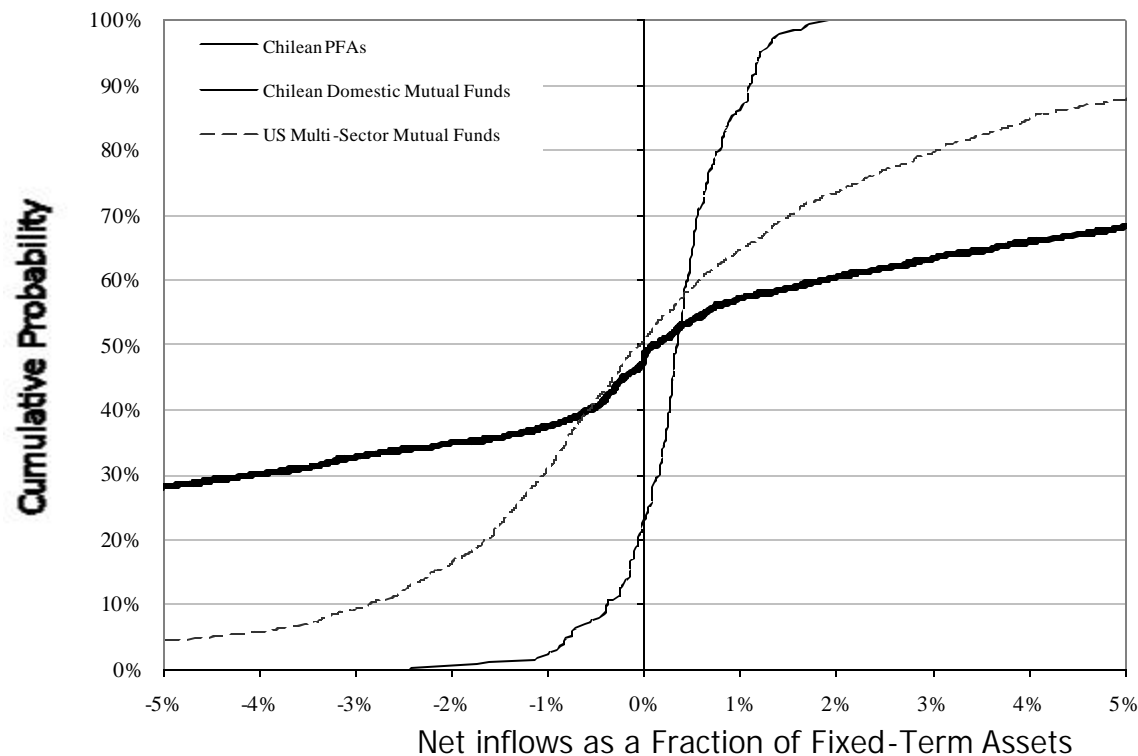
(d) Maturity related to managerial incentives

- ✦ Regulatory discipline
 - PFA penalized when deviating from average
- ✦ Relative performance evaluation
 - Tracking error investment model (tracking the mean)
- ✦ Fee structure such that PFAs paid upfront
- ✦ Incentives to produce stable returns in short run
 - Bias against long-term instruments
- ✦ Why more biased than US Funds?
 - Long-term instruments more volatile in EMs

4. What Drives Maturity Structure?

(d) Redemption risk requires extreme conservatism

Net Inflows to Chilean Mutual Funds and PFAs Compared to US Mutual Funds

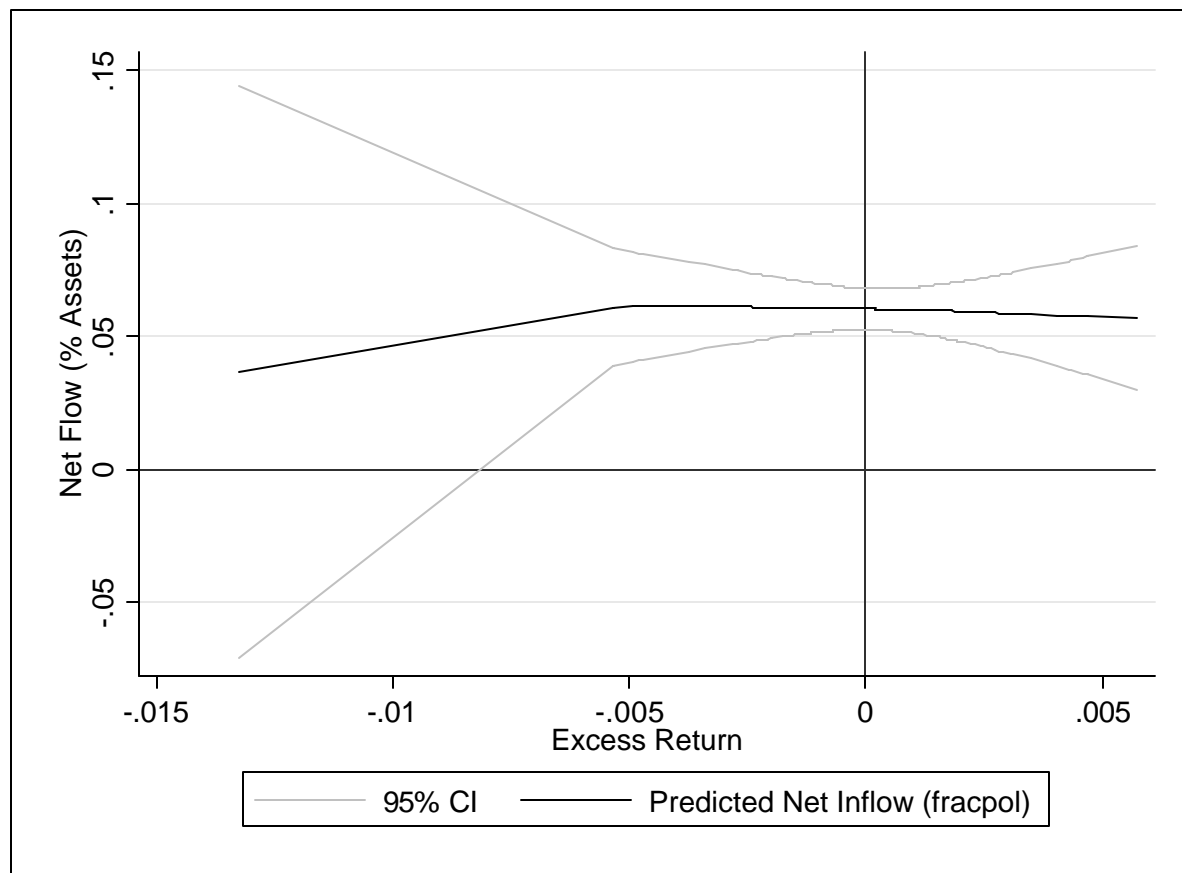


	(up to 1 month)			(up to 3 months)	
	% of Short Term Assets	Pr[Outflows>%]		% ST-Assets	Pr[Outflows>%]
Chilean PFAs	4.4%	0.0%		11.2%	0.0%
Chilean Domestic Mutual Funds	9.3%	21.6%		17.9%	13.4%
US Multi-Sector Bond Funds	3.7%	6.6%		7.1%	2.8%

4. What Drives Maturity Structure?

(d) Redemption risk requires extreme conservatism

Net Outflows versus Excess Returns (Fund A, 2003-2005)

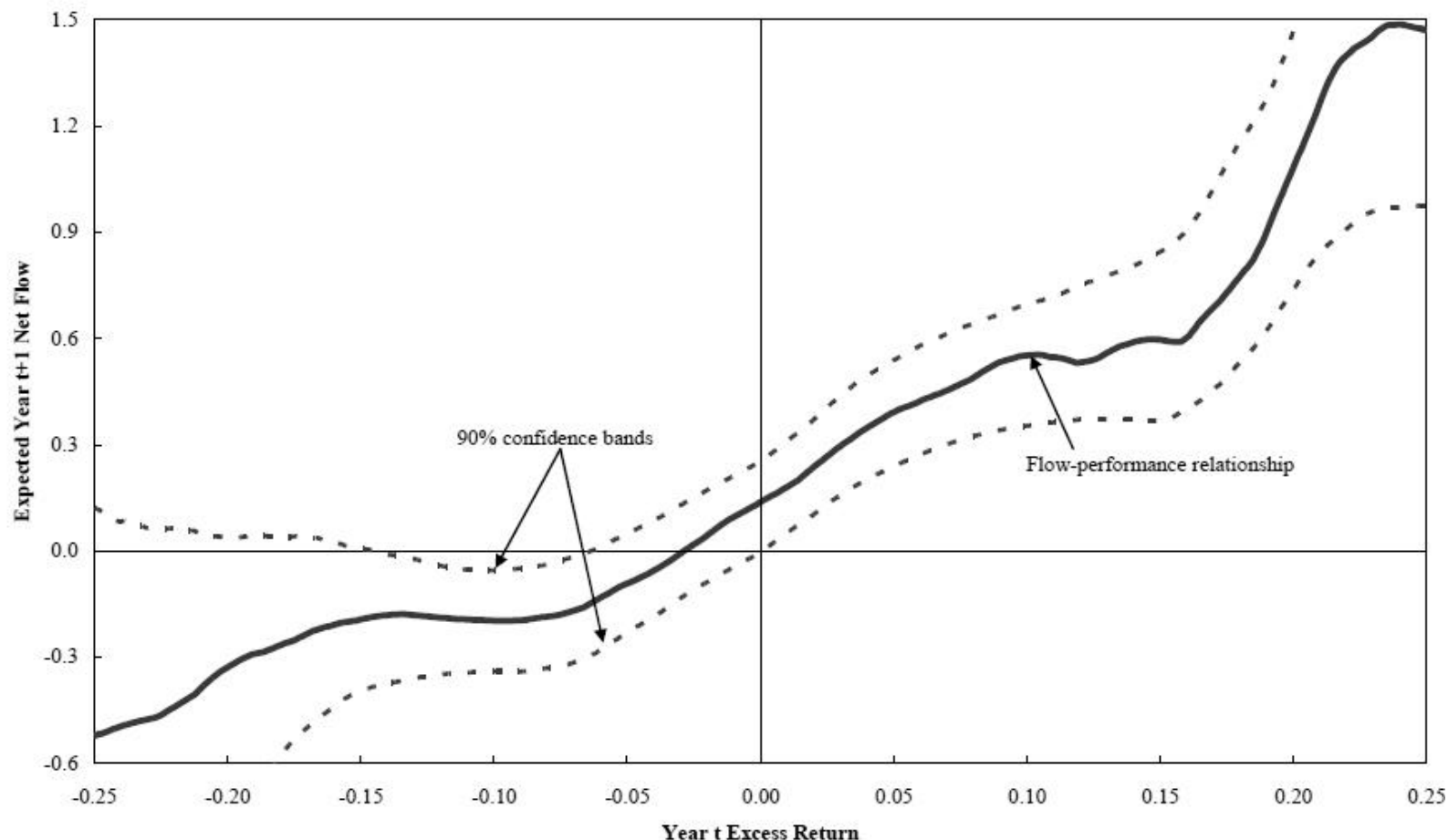


No correlation between returns and net inflows

4. What Drives Maturity Structure?

(d) Redemption risk requires extreme conservatism

US Mutual Fund Returns and Net Flows

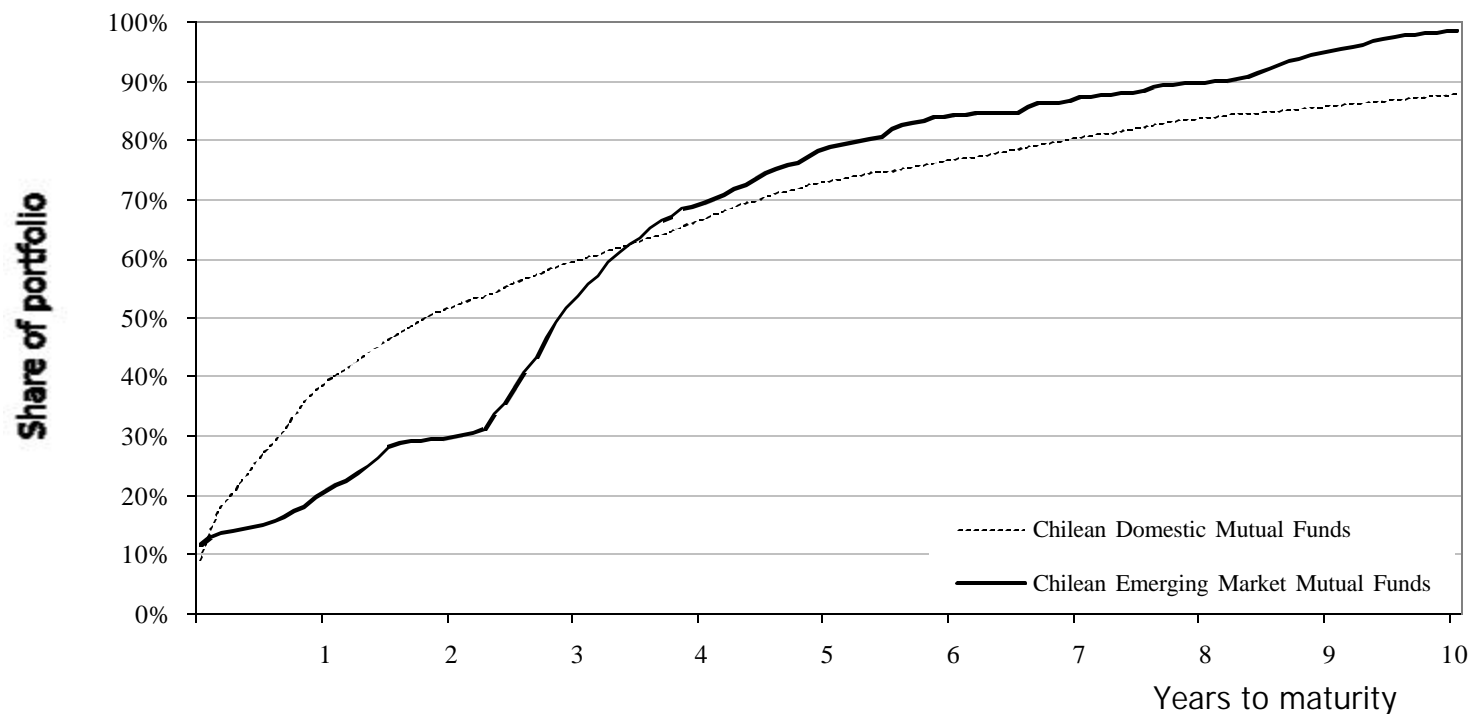


Source: Chevalier and Ellison (1997).
1/ Data for young funds (age 2 years).

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(d) Maturity related to managerial incentives

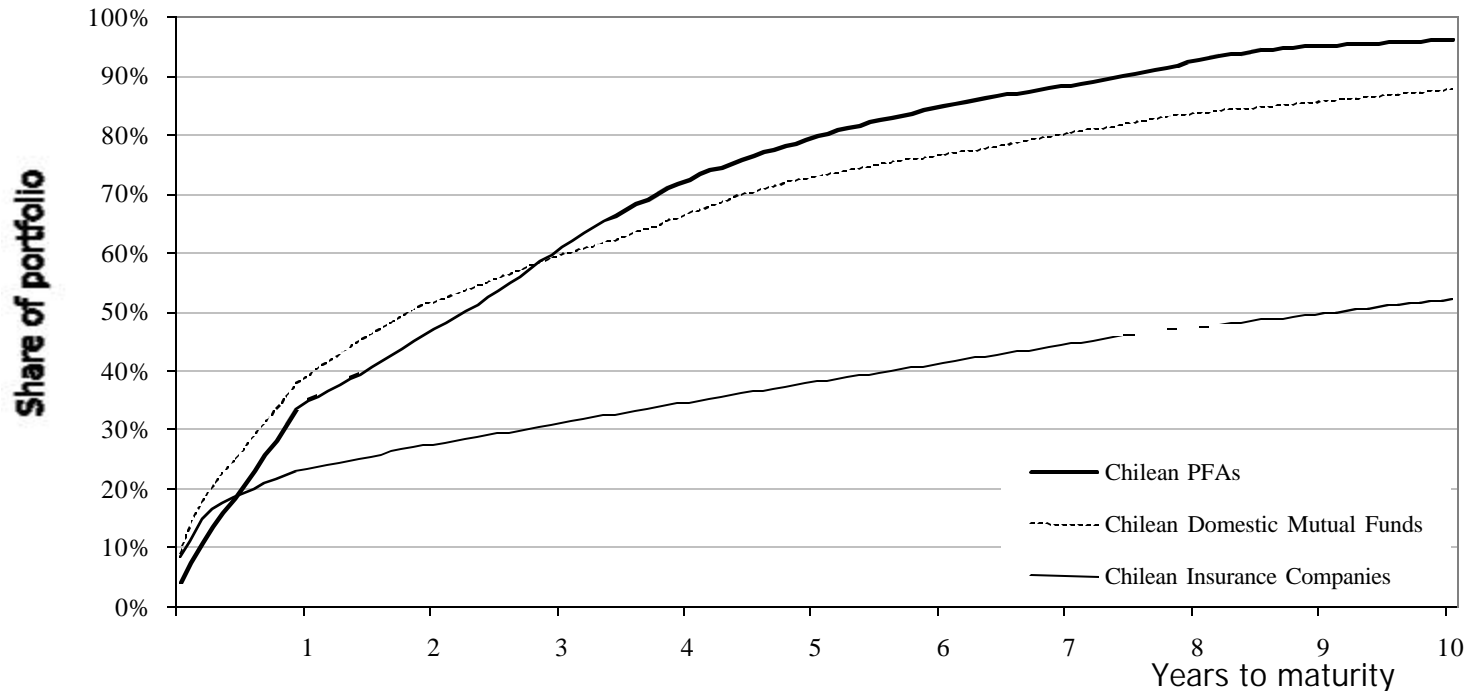
Maturity Structure of Chilean Domestic Mutual Funds
vs. Chilean EM Mutual Funds



4. What Drives Maturity Structure?

(d) Maturity related to managerial incentives

Maturity Structure of Chilean Domestic Mutual Funds and PFAs vs. Insurance Companies



Kolmogorov-Smirnov Test of Equality of Distributions	Overall
Two sided test: (1)=(2)	<.01***
Two sided test: (1)=(3)	<.01***

	Avg. Maturity
(1) Chilean Insurance Companies	10.32
(2) Chilean Domestic Mutual Funds	3.88
(3) Chilean PFAs	3.16

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5. Conclusions: Main Stylized Facts

- ✦ PFAs and MFs hold much short-term investments
 - Easy to liquidate
 - Bank deposits, government and corporate debt, & cash
- ✦ Much shorter than US mutual funds
 - Short even compared to US short-term mutual funds
- ✦ Pension funds not longer than Chilean mutual funds
- ✦ Investors expected to be long are short!

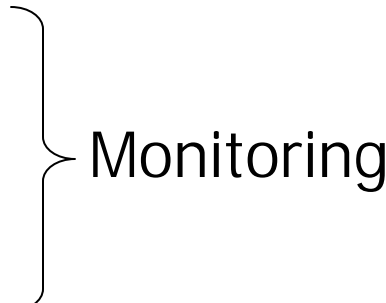
5. Conclusions: Potential Explanations

- ✦ Do not exhaust available long-term instruments
 - E.g., demand well below government bonds offered
- ✦ Not short to anticipate buying opportunities
- ✦ Partly driven by risk
 - Longer term in inflation-linked and US dollar assets
 - But still short-term compared to US
- ✦ Incentives seem to play big role
 - Investor side: redemption risk for MFs, investor clientele
 - “Liability structure”

5. Conclusions: Another Stylized Facts

- ✦ These facts add to other evidence from PFAs
 - Hold similar portfolios at the asset-class level
 - Infrequent trading (buy and hold)
 - When trade they tend to herd
 - When trade they tend to follow momentum strategies
- ✦ Not explained just by regulation
- ✦ Not driven by crises
- ✦ Not driven by instrument availability
- ✦ Failure to fulfill initial expectations on (secondary) capital market development

5. Conclusions: What Then?

- ✦ Our conjecture: Interaction of two factors
 - Managerial incentives
 - Risk-return profile of long- and short-term instruments in emerging economies
- ✦ Managerial Incentives: Be constantly with peers
 - Market discipline
 - Regulatory discipline
 - Other factors (like pay structure)

Monitoring
- ✦ To be aligned with incentives, invest short term
 - Long-term instruments much more volatile (riskier)
 - Thus, more short term in emerging markets

5. Conclusions: Final Thoughts

- ✦ Despite benefits of long-term debt ...
- ✦ Despite all efforts to extend maturities ...
- ✦ Uphill battle to get long-term investments in EMs
 - Forces so strong that push to short term
 - No difference between pension and mutual funds
- ✦ Strong tradeoff
 - Monitoring managers vs. obtaining higher returns
 - Frequent manager monitoring leads to short termism
 - Monitoring by market (investors), regulator, owner

5. Conclusions: Final Thoughts

- ✦ Socially optimal design to balance tradeoff?
- ✦ Two factors might help
 - Reduce systemic risk
 - Provide instruments that hedge those risks
 - Implies risk transfers
 - Changing incentive structure for managers
 - But is forgoing short-term monitoring acceptable?
- ✦ More research required
 - E.g., cost to underlying investors of investing short term

Thank you!

Additional Material on Pension Fund Investment Behavior

Investment Behavior: Infrequent Trading

Trading Statistics (Monthly)

	Average Percentage of Assets Traded Relative to Assets Held
All Asset Classes	11.0%
Domestic Assets	
Former Pension System Bonds	5.9%
Corporate Bonds	7.2%
Financial Institutions	34.6%
Government Paper	9.5%
Investment and Mutual Funds	6.4%
Equity	37.4%
Mortgage Bonds	13.5%
Foreign Assets	
Fixed Income	37.2%
Investment and Mutual Funds	47.6%
Equity	54.2%

Investment Behavior: Infrequent Trading

Turnover Statistics on Asset-Class Fixed Effects (1996-2005)

	<i>Using Weights</i>	
	Grinblatt et al.	Ferson and Khang
Overall Mean	1.29%	1.23%
Domestic Assets		
Former Pension System		
Bonds	-0.27**	-0.21**
Corporate Bonds	-0.52**	-0.49**
Financial Institutions	0.34**	0.38**
Government Paper	2.14**	2.06**
Investment and Mutual Funds	-0.46**	-0.41**
Equity	0.33**	0.15**
Mortgage Bonds	-0.06**	-0.06**
Foreign Assets		
Fixed	-0.41**	-0.39**
Investment and Mutual Funds	1.07**	1.01**
Equity	-0.57**	-0.52**

Investment Behavior: Infrequent Trading

Proportion of Units Purchased and Held up to Maturity

	Ratio of Units at First Purchase to Maximum Units in Portfolio		Ratio of Units at Expiration to Maximum Units in Portfolio	
	Average	Standard Deviation	Average	Standard Deviation
Domestic Assets				
Former Pension System Bonds	0.96	0.05	0.98	0.05
Corporate Bonds	0.97	0.05	0.98	0.06
Financial Institutions	0.98	0.01	0.95	0.05
Government Paper	0.91	0.08	0.93	0.07
Mortgage Bonds	0.96	0.04	0.85	0.13
Foreign Assets				
Fixed Income	0.93	0.04	0.97	0.05

Investment Behavior: When They Trade

Momentum Strategies:

Fraction of PFAs Buying/Selling an Asset on Lagged Return (Sias 2004)

	All Assets	Assets Traded by More than One PFA
All Asset Classes	0.10	-0.12
Domestic Assets		
Former Pension System Bonds	1.88**	1.34**
Corporate Bonds	0.32*	0.07
Financial Institutions	-0.28	0.82*
Government Paper	0.34**	0.49**
Investment and Mutual Funds	-0.57	1.22
Equity	0.26**	0.27**
Mortgage Bonds	-1.70**	-2.67**
Foreign Assets		
Fixed Income	-0.03	0.03
Investment and Mutual Funds	0.98**	0.88**
Equity	0.39*	0.38

Investment Behavior: When They Trade

Momentum Strategies: Average Lagged Momentum Statistics

	Grinblatt et al. (1995)	Ferson and Khang (2002)	Kaminsky et al. (2004)
All Asset Classes	3.16**	3.89**	53.39**
Domestic Assets			
Former Pension System Bonds	0.01	0.01	31.93**
Corporate Bonds	0.08	0.24**	0.83
Financial Institutions	-0.00	-0.00	1.82**
Government Paper	0.22	0.76**	9.39**
Investment and Mutual Funds	-0.05	-0.15*	-1.01*
Equity	2.71**	2.44**	23.20**
Mortgage Bonds	-0.28**	0.07*	-19.8**
Foreign Assets			
Fixed Income	0.10**	0.14**	0.85
Investment and Mutual Funds	0.69*	0.63*	10.35**
Equity	0.04**	0.04*	1.66*

Investment Behavior: When They Trade

Herding:

Average Herding Statistic by Asset Class (Lakonishok et al. 1992)

	All Assets	Assets Traded by More Than One PFA	Assets Traded by More Than Half of PFAs
All Asset Classes	2.26**	0.88**	1.77**
Domestic Assets			
Former Pension System Bonds	-2.53	-11.02	2.07**
Corporate Bonds	2.38**	5.04**	5.74**
Financial Institutions	0.81**	1.86**	1.66**
Government Paper	-0.10	-2.45	2.73**
Investment and Mutual Funds	2.41**	3.03**	1.35**
Equity	0.96**	1.28**	0.66**
Mortgage Bonds	8.84**	4.45**	0.92**
Foreign Assets			
Fixed Income	-0.01	3.09**	15.60**
Investment and Mutual Funds	1.43**	2.23**	1.51**
Equity	-0.23	-0.32	-

Investment Behavior: When They Trade

Herding:

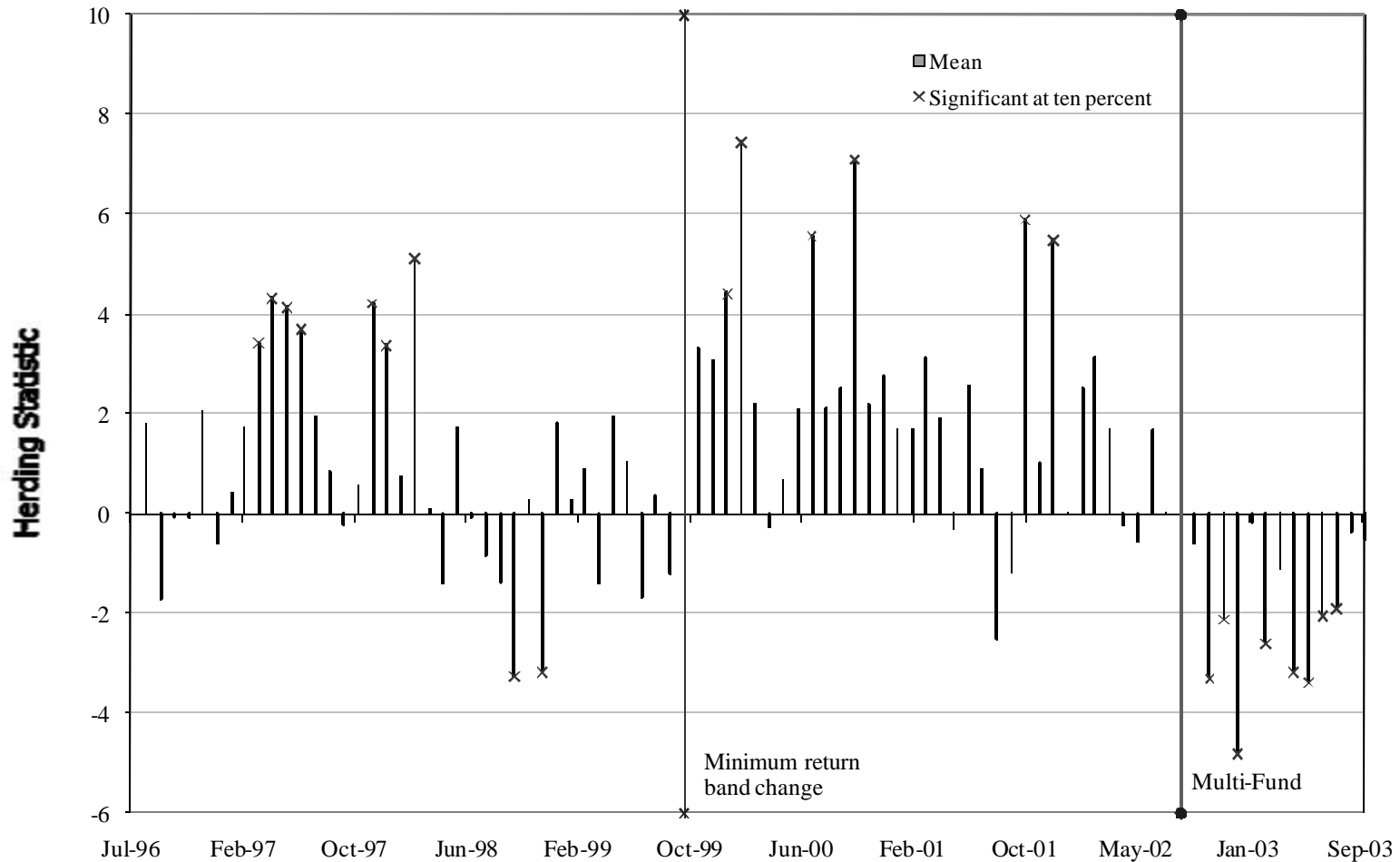
Probability of Buying/Selling an Asset on Lagged Probability (Sias 2004)

	All Assets	Assets Traded by More Than One PFA	Assets Traded by More Than Half of PFAs
All Asset Classes	-33.65	7.20**	27.93**
Domestic Assets			
Former Pension System Bonds	-58.66	-59.60	-
Corporate Bonds	-18.83	-4.32	-
Financial Institutions	-24.41	-11.81	-
Government Paper	-31.67	-6.07	9.93
Investment and Mutual Funds	-34.33	-	-
Equity	22.39**	26.16**	34.10**
Mortgage Bonds	-26.70	4.91	-
Foreign Assets			
Fixed Income	-18.25	-13.27	-
Investment and Mutual Funds	1.49	15.31**	15.89**
Equity	-26.37	6.72	-

What Drives Investment Behavior?

Herding not caused by regulation

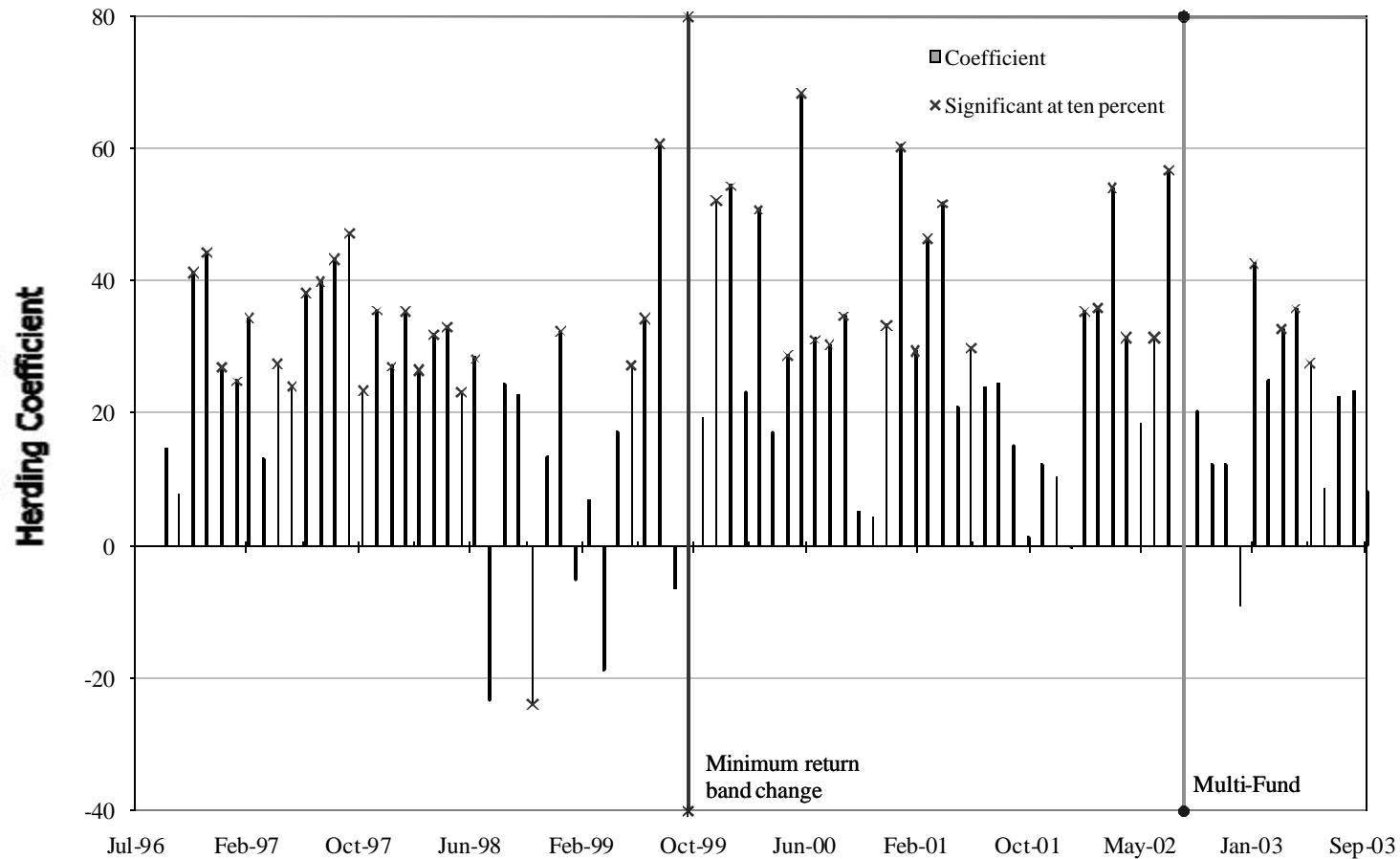
Evolution of Contemporaneous Herding Statistic (Domestic Equity)



What Drives Investment Behavior?

Herding not caused by regulation

Evolution of Dynamic Herding Coefficients (Domestic Equity)



What Drives Investment Behavior?

Herding not caused by regulation

Herding Statistics on Fund Type Fixed Effects

	Overall Mean	Fund A	Fund B	Fund C	Fund D	Fund E
All Asset Classes	0.79**	-0.57**	-0.09*	1.07**	-0.02	-0.37**
Domestic Assets						
Former Pension System Bonds	-0.24**	0.22	0.26**	-0.78**	0.14	0.15
Corporate Bonds	2.15**	-0.98*	0.14	1.41**	-0.34	-0.23
Financial Institutions	0.61**	-0.00	-0.04	0.13	-0.06	-0.02
Government Paper	0.53**	-0.10	0.20	0.36**	-0.11	-0.35**
Investment and Mutual Funds	0.51	0.07	0.33	0.27	-0.76	0.07
Equity	-0.47**	-0.59**	-0.36	0.96**	-0.47	0.47**
Foreign Assets						
Fixed Income	-0.16	-0.13	-0.12	-0.06	0.12	0.19
Investment and Mutual Funds	0.91**	0.16	-0.17	-0.11	-0.04	0.16
Equity	-0.08	0.27	0.11	-0.23	-0.44	0.27

Additional Material on Pension Fund Investment Behavior and Crises

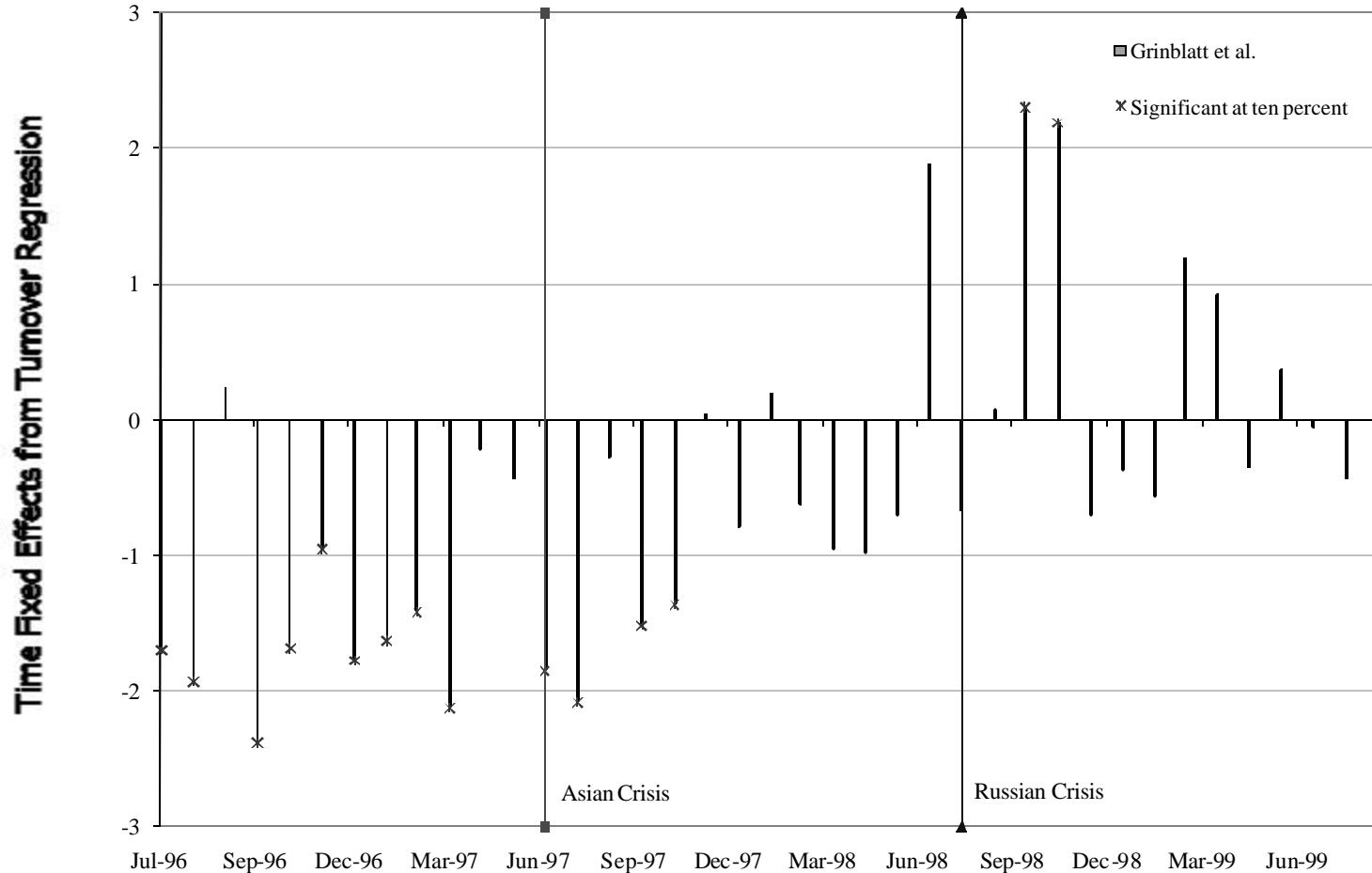
PFAs and Market Stability

- ✦ Passive strategies: form of “resilience”
 - But specialist should be active during crises
 - Especially those with liquidity
- ✦ Momentum and herding can amplify fluctuations
 - Some increase in equity trading during Russian crisis
 - Some increase in momentum
 - (Some decline in herding)
- ✦ Overall, probably passivity is predominant
 - Trading behavior has potential to be destabilizing
 - But unlikely to be quantitatively important

PFAs and Market Stability

PFAs could be active (buy/sell) during crises

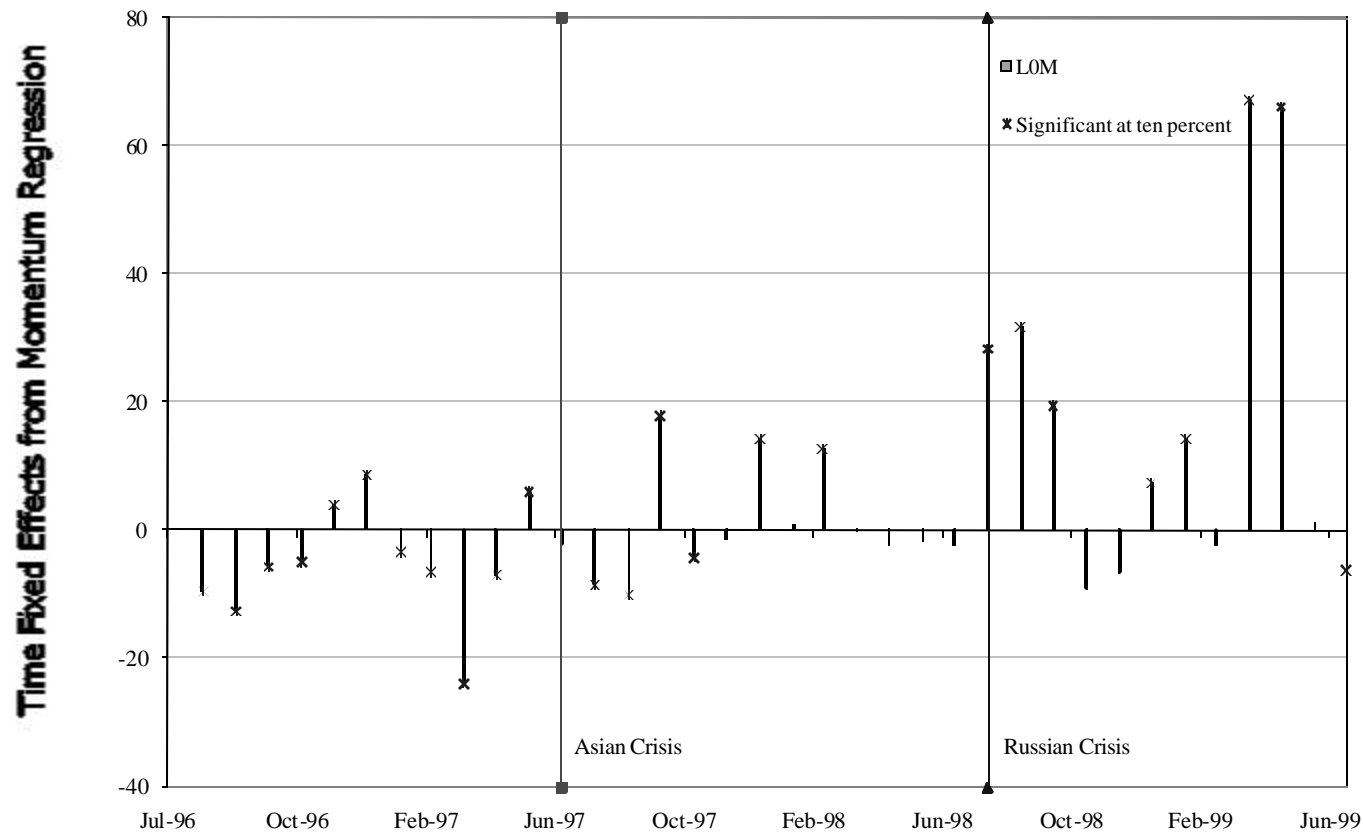
Evolution of Turnover Time Fixed Effects (Pre Multi-Fund Regime)



PFAs and Market Stability

No contrarian trading, but probably negligible effect

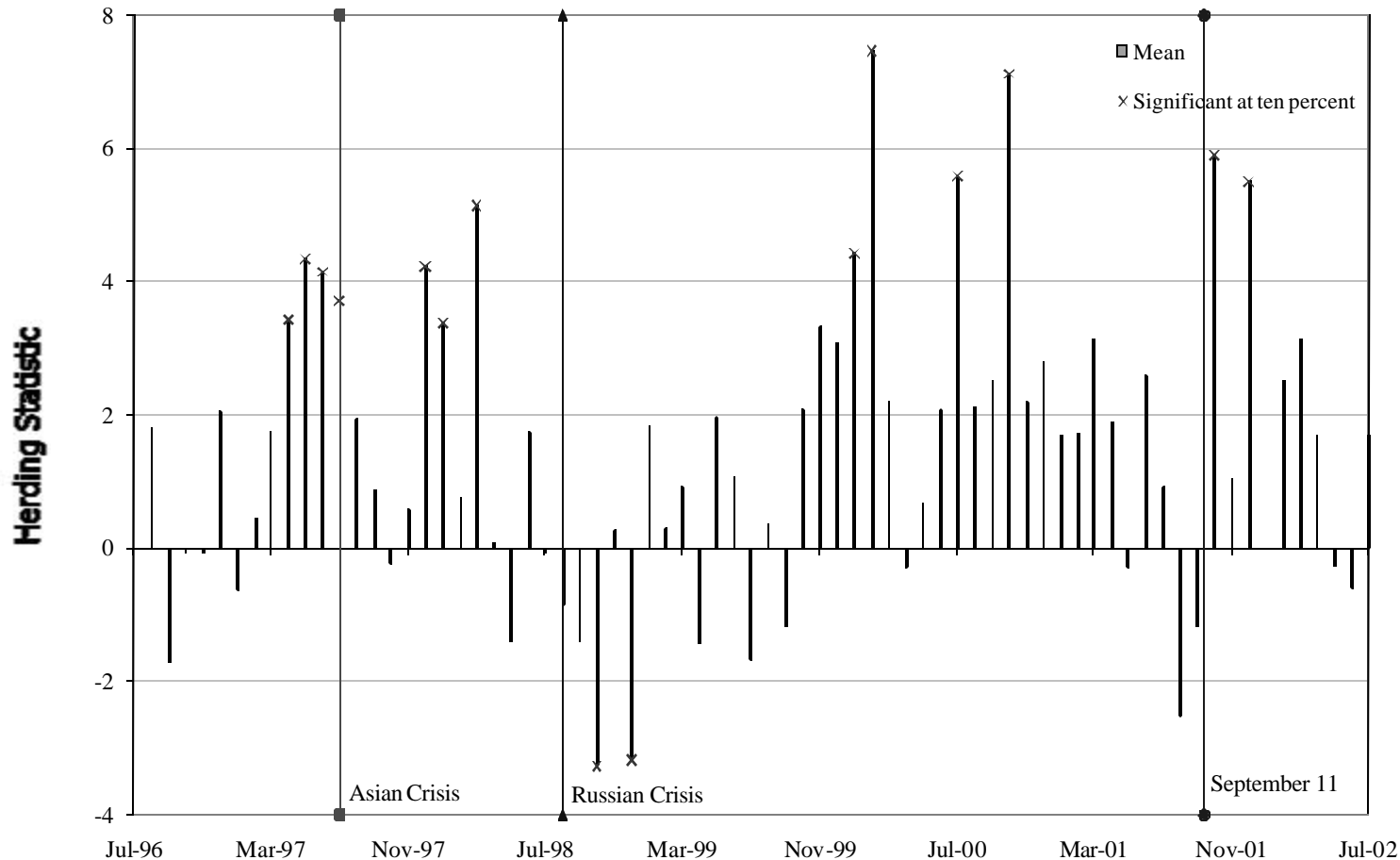
Contemporaneous Momentum Statistics



PFAs and Market Stability

Momentum and herding do not seem to amplify fluctuations

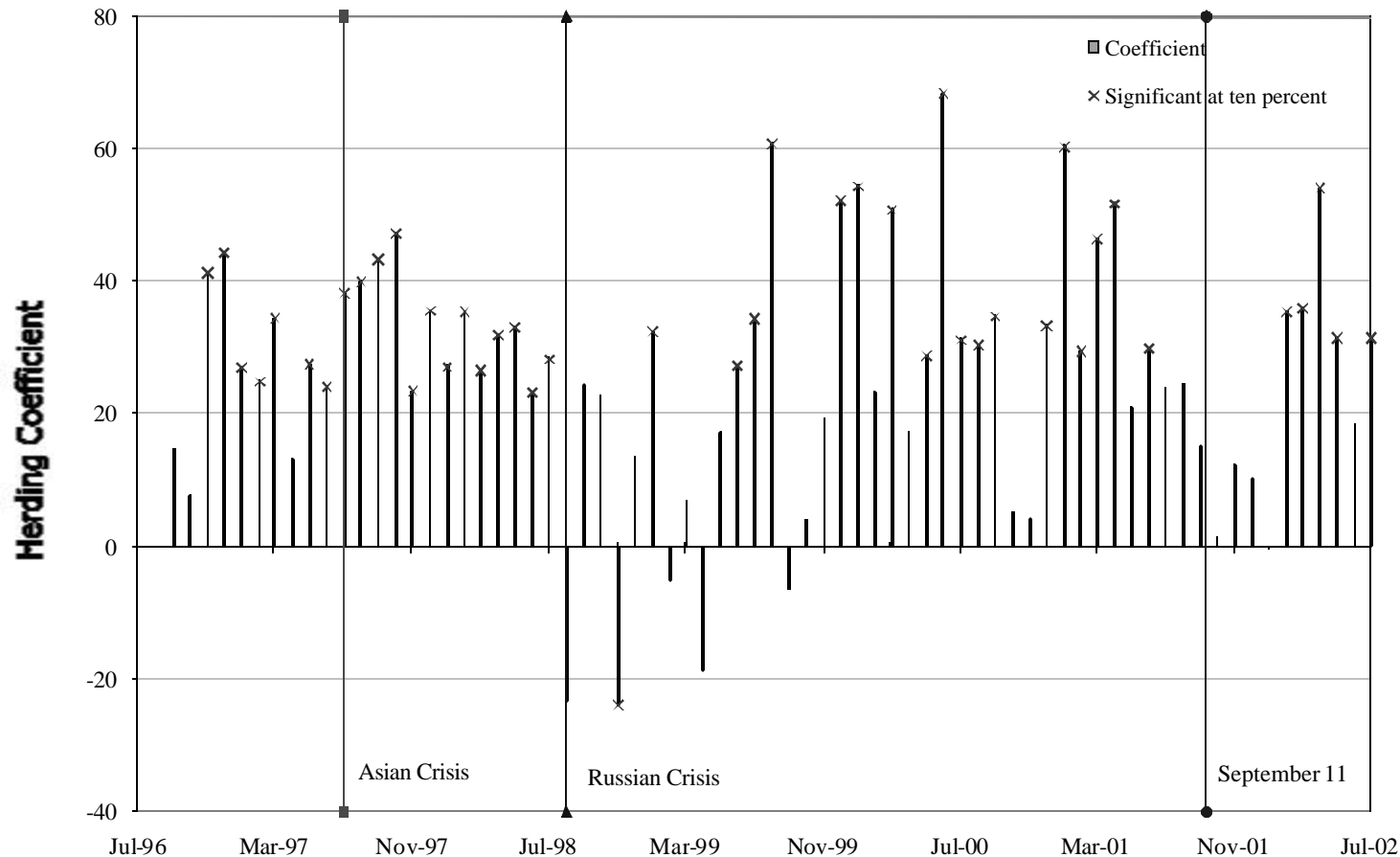
Evolution of Contemporaneous Herding Statistic (Domestic Equity)



PFAs and Market Stability

Momentum and herding do not seem to amplify fluctuations

Evolution of Dynamic Herding Coefficients (Domestic Equity)



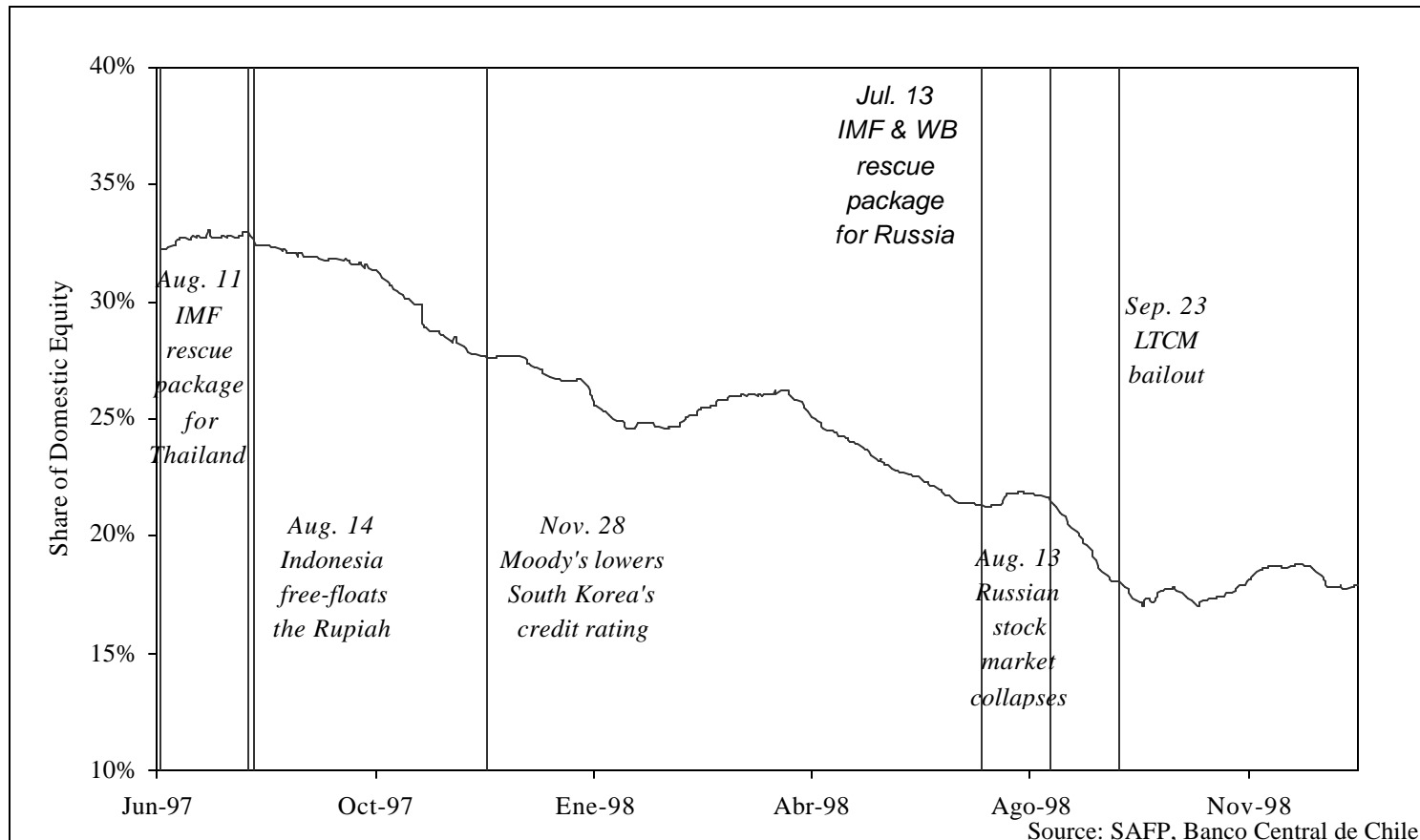
PFAs and Opportunities During Crises

- ✦ Widespread evidence of fire-sales during EM crises
- ✦ PFAs: market specialist (domestic focus), steady inflows (unrelated to returns), long-horizons
- ✦ Should take opportunities: buck in mispricing
- Specialists likely contrarian, but momentum traders
 - Contrarian profitable in the long run
- Use of liquidity also inconsistent: flight to liquidity
- Domestic equity positions inconsistent
- ✦ PFAs behave very cautiously

PFAs and Opportunities During Crises

Movement of domestic equity positions inconsistent

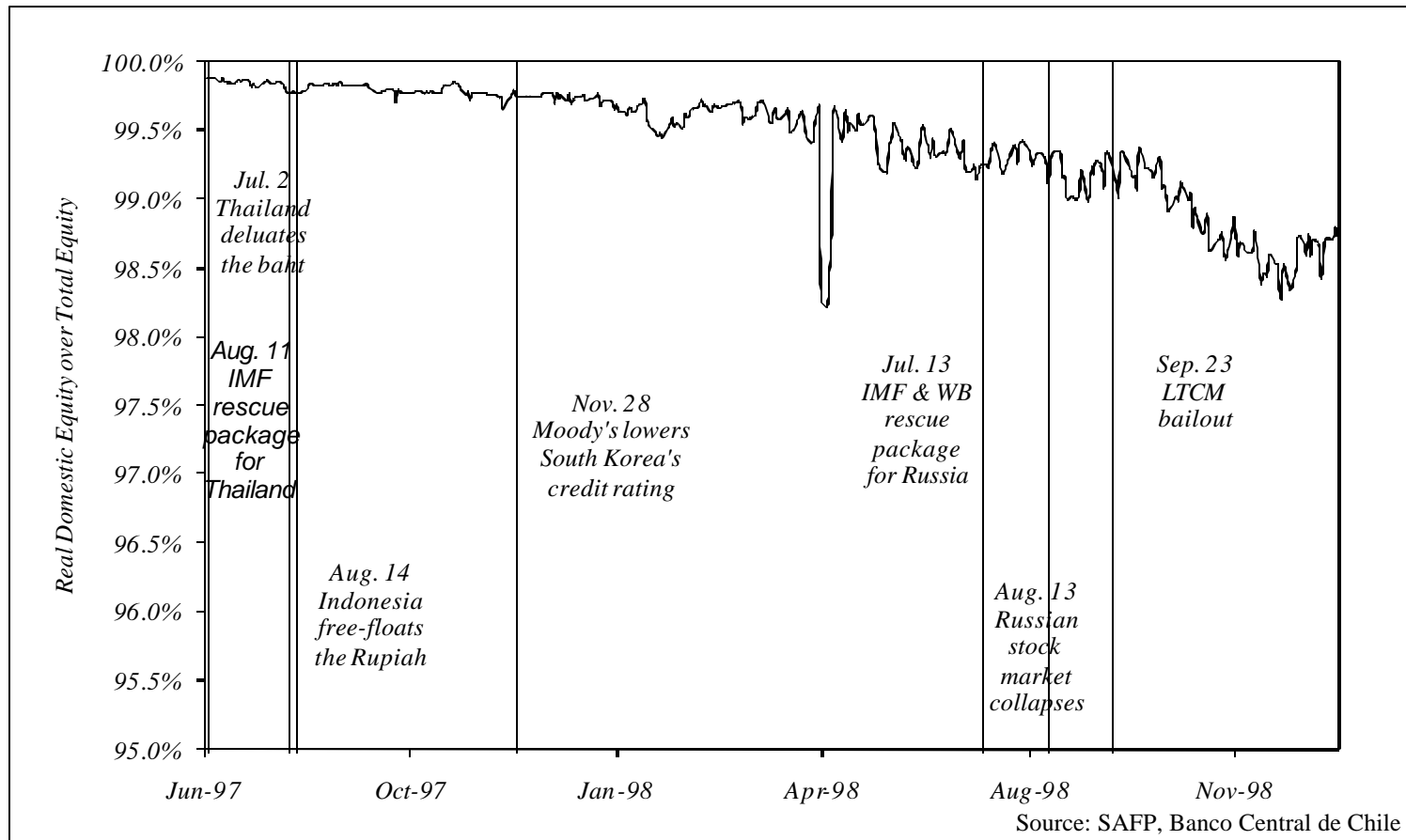
Share of Domestic Equity as Percentage of Total Portfolio
Nominal Terms



PFAs and Opportunities During Crises

Movement of domestic equity positions inconsistent

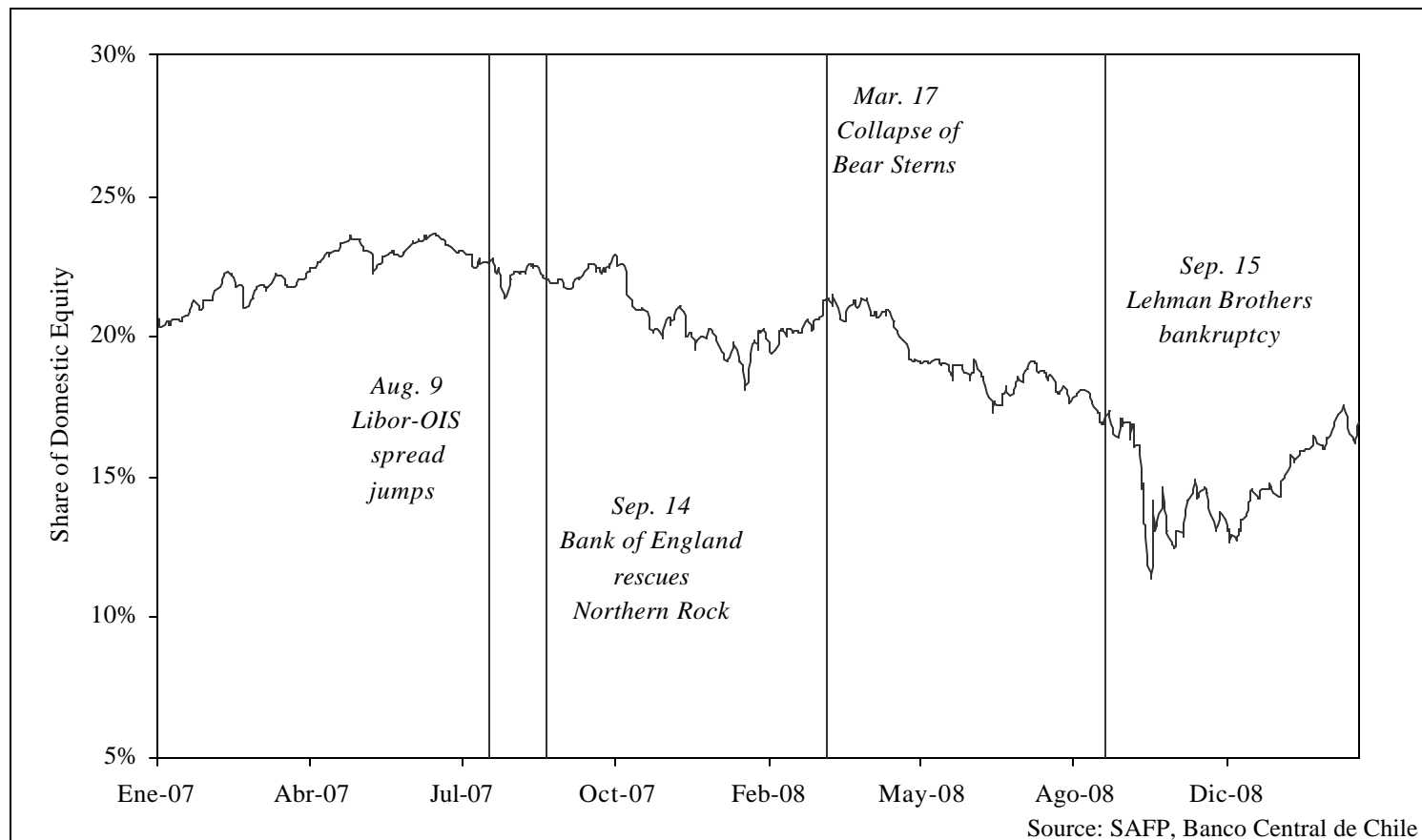
Share of Domestic Equity as Percentage of Total Portfolio
Real Terms



PFAs and Opportunities During Crises

Movement of domestic equity positions inconsistent

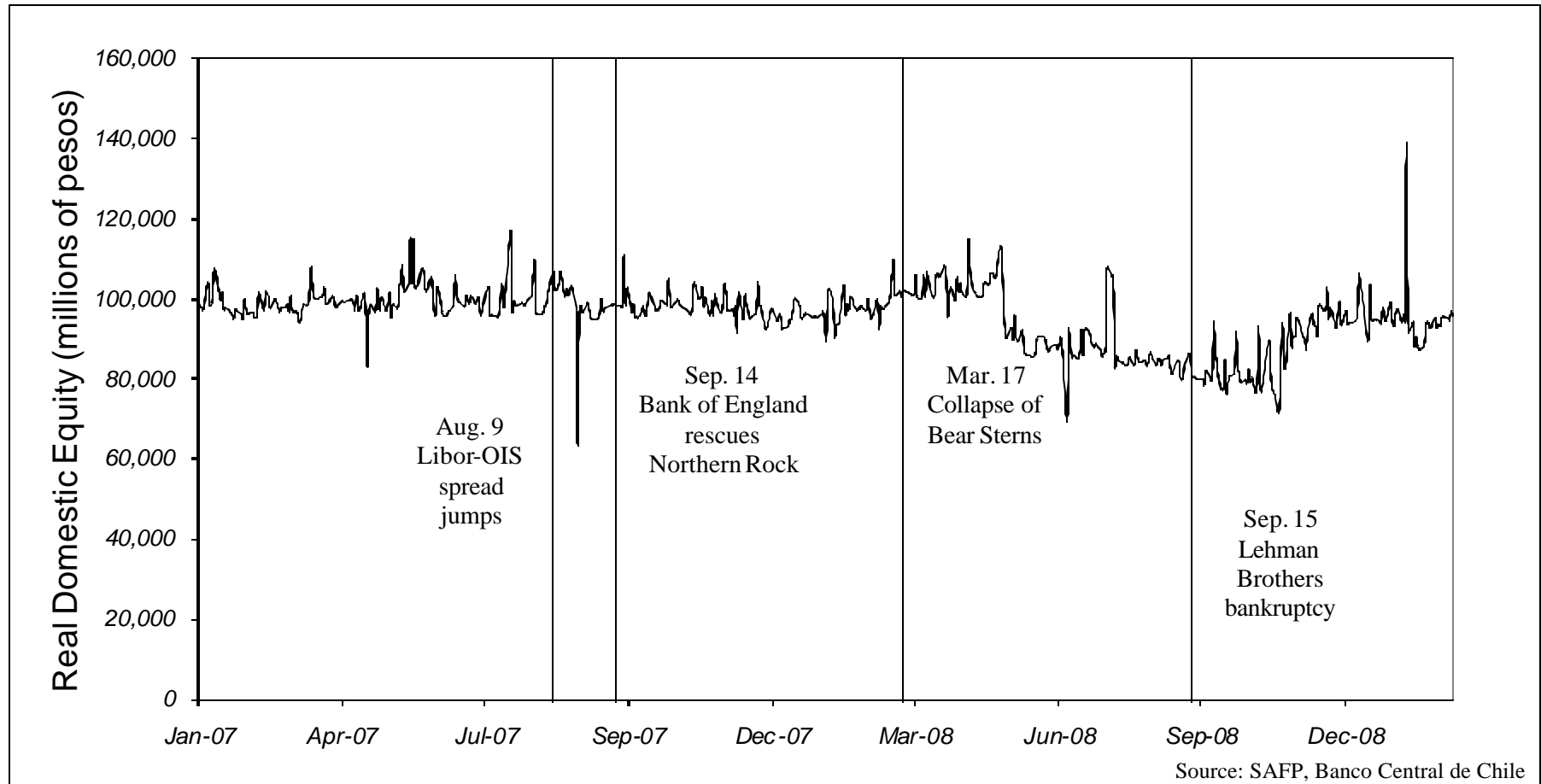
Share of Domestic Equity as Percentage of Total Portfolio
Nominal Terms



PFAs and Opportunities During Crises

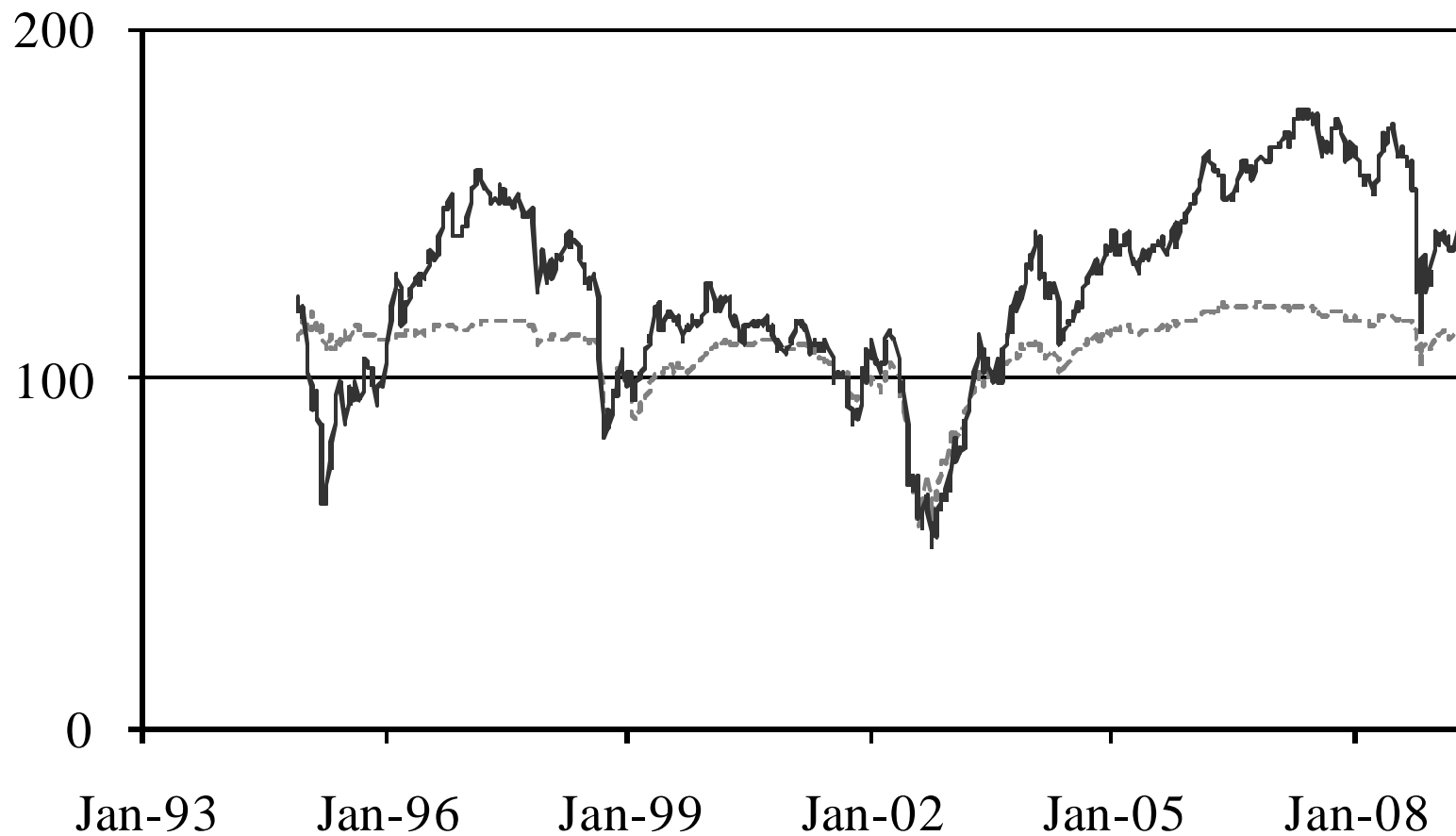
Movement of domestic equity positions inconsistent

Real Domestic Equity

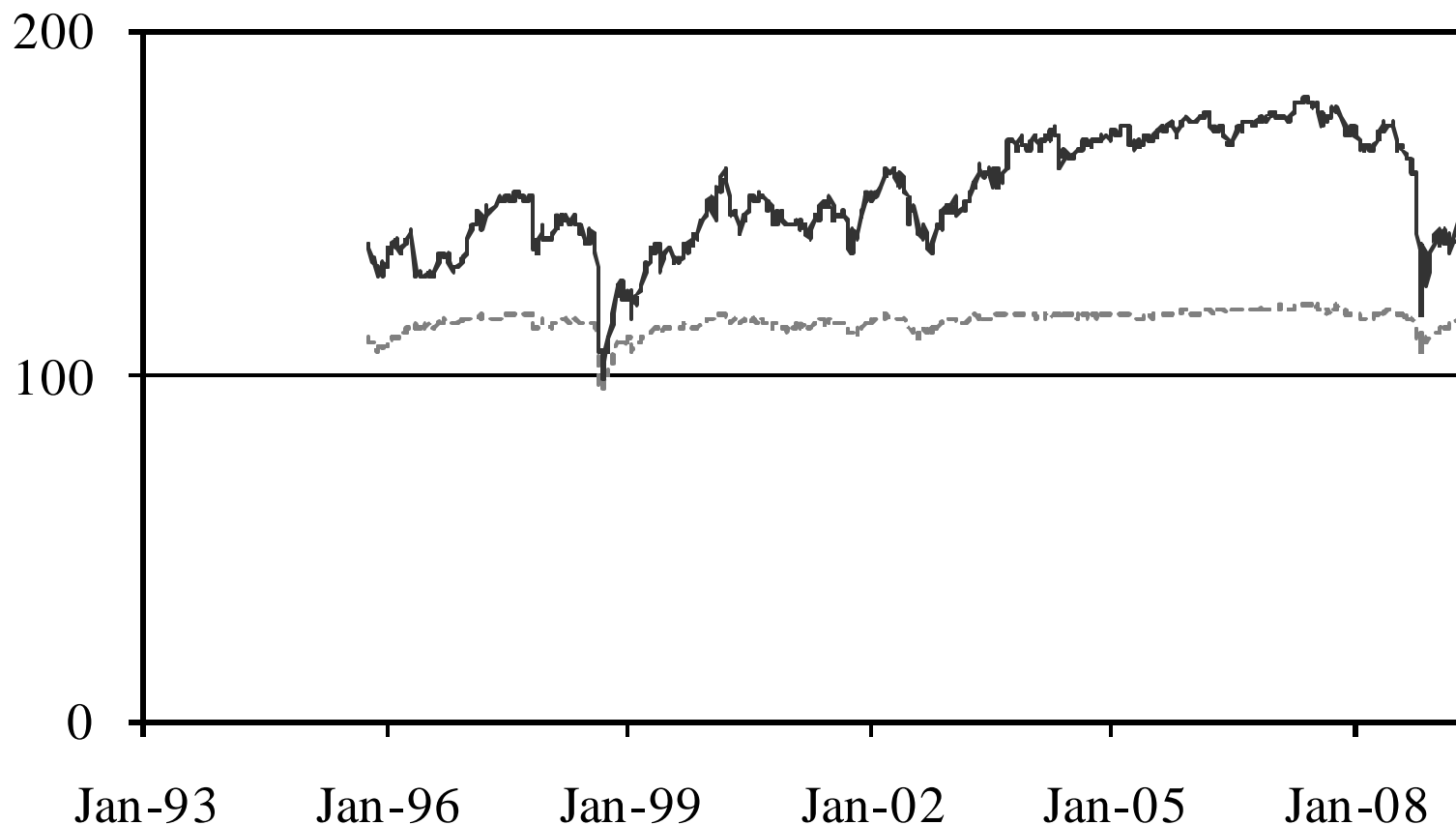


Additional Material on Bond Prices

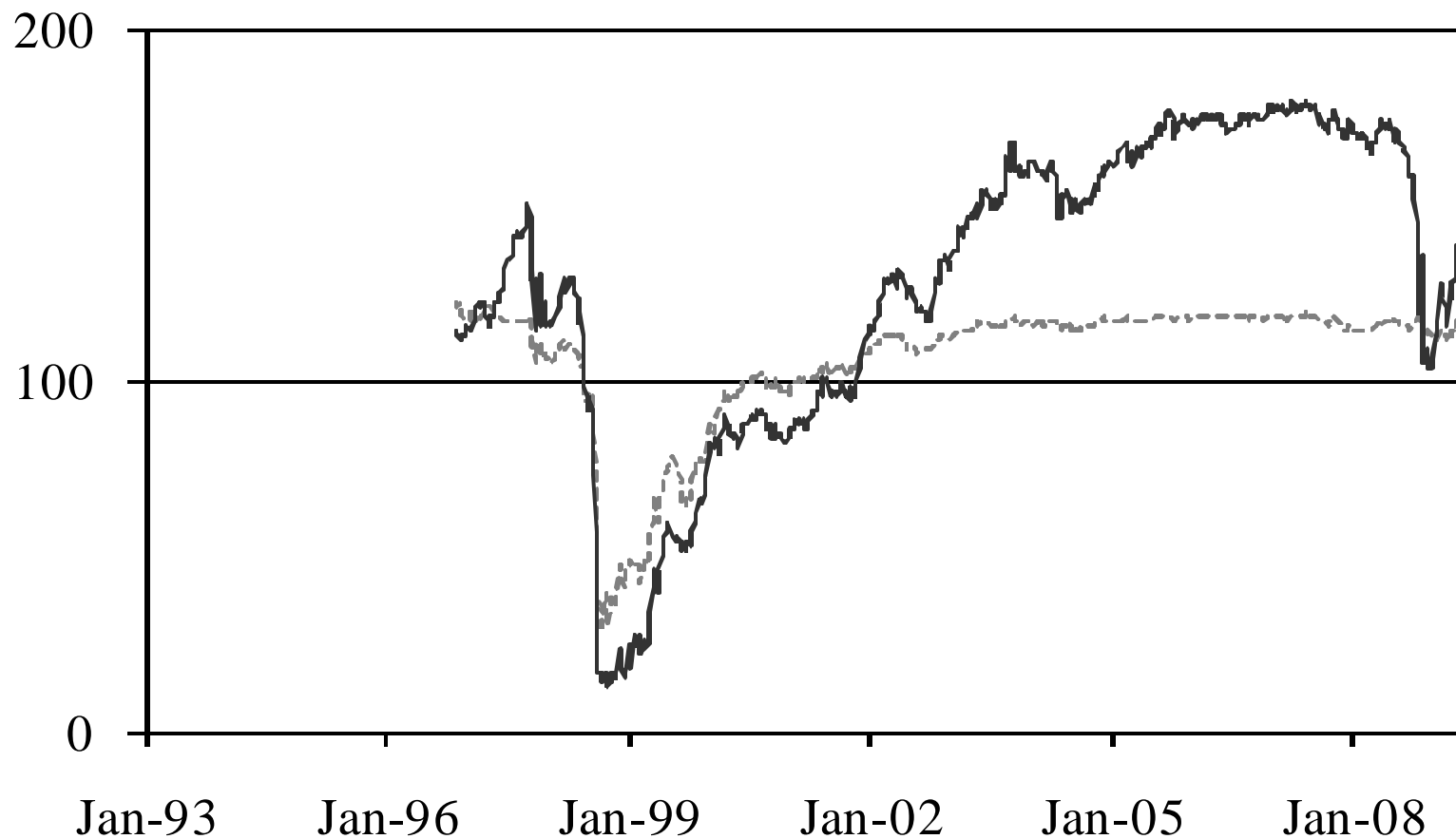
Bond Prices – Long and Short – Brazil



Bond Prices – Long and Short – Mexico



Bond Prices – Long and Short – Russia



Bond Prices – Long and Short – Turkey

