"WHO IS INTERNATIONALLY DIVERSIFIED? EVIDENCE FROM 296 401(K) PLANS"

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QUESTION AND MOTIVATION

We study the **home bias**, the fact that the proportion of domestic stocks in most investors' equity portfolios is well above their country's relative market capitalization in the world, **at the individual level**.

We study the international equity allocations of 3.8M individuals in 296 401(k) plans.

Most of the international literature has focused on *cross-country studies*, masking individual heterogeneity, and mostly focusing on destination country characteristics, such as governance quality, stock market development and investment restrictions.

By exploring this phenomenon at the individual level, we aim to complement this literature and explore the role of personal characteristics, preferences, and investment opportunities, keeping destination country features constant.

INTERNATIONAL DIVERSIFICATION LITERATURE

Country-level studies:

- Information barriers (Ahearne, Griever and Warnock, 2004)
- Corporate governance issues (Dahlquist, Pinkowitz, Stulz and Williamson, 2003; Kho, Stulz and Warnock, 2009)
- Stock market development (Chan, Covrig and Ng, 2005)
- Transaction costs (Glassman and Riddick, 2001)
- Real exchange rate risks (Fidora, Fratzscher and Thimann, 2006)
- The need to hedge local consumption streams (Aviat & Coeurdacier, 2007)
- Investment restrictions (Bekaert, Spiegel, Wang, 2013)
- Lack of familiarity (Portes and Rey, 2005)

Individual-level studies:

- Calvet, Campbell, Sodini (2007), Karlsson and Norden (2007) on Swedish households
- Graham, Harvey and Huang (2009) UBS survey on 1,000 US investors

MAIN FINDINGS

- Large degree of heterogeneity in international equity allocations across individuals, ranging from 0% to over 75%
- Strong cohort effects: younger cohort invest more over time than older ones and each cohort invest more over time.
- Access to financial advice, lower fees and a higher number of international funds are associated with higher international diversification.
- Education, financial literacy and the proportion of foreign-born in the zip code are associated with higher international diversification.

Table 1International Under-Diversification in the US

	Diversified	Underdiv.		Diversified	Underdiv.
	Firms	Firms		State	State
Cohort 1960			Cohort 1960		
Low Salary	33.1	3.70	Low Salary	22.2	13.3
Medium S.	30.7	4.86	Medium S.	19.7	11.2
High Salary	33.7	6.76	High Salary	19.1	13.6
Cohort 1980			Cohort 1980		
Low Salary	39.0	10.2	Low Salary	31.2	21.0
Medium S.	36.3	11.8	Medium S.	27.7	19.1
High Salary	37.4	13.7	High Salary	25.8	19.3

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Cohort 1960			Cohort 1960		
Low	33.1	3.70	Low	22.2	13.2
Intermediate	30.7	4.86	Intermediate	19.7	11.2
High	33.7	6.76	High	19.1	13.6
Cohort 1980			Cohort 1980		
Low	39.0	10.2	Low	31.2	21.0
Medium	36.3	11.8	Medium	27.7	19.1
High	37.4	13.7	High	25.8	19.3

If we transform these numbers into indeces: 1- [%interntl / non-US wrld mkt cap]

Index= 43.6%

Index=92.45%

For comparison, the same index is 34.7% for the Netherlands, and 87.5% for Spain

INTERNATIONAL DIVERSIFICATION ACROSS INDIVIDUALS

International Diversification 40 35 30 25 **of population** 20 % 15 10 5 0 (0,10] >75 0 (10,25] (25,50] (50,75] Intenational Equity/Total Equity

International Equity/Total Equity in Individual's Portfolio

INTERNATIONAL DIVERSIFICATION ACROSS FIRMS

International Equity/Total Equity in Individual's Portfolio averaged within firm



DATA AT A GLANCE

We analyze the degree of international diversification and its determinants for 3.8 million U.S. workers investing in their 401(k) across 296 different firms, spanning different industries, geographic locations, private/public,...

<u>Personal Characteristics</u>: age, salary, tenure at their firm, indicators for wealth, cohort, return experience.

<u>Area where they live</u>, i.e. more demographics at the zip code level: education, financial literacy, % of foreign-born, trade openness, economic indicators.

<u>Firm they work at</u>: size, investment, profitability, private/public, industry,...

<u>Quality and type of investment opportunities:</u> fraction of international funds, relative expense ratios, turnover, fund age, plan size.

Variable	Mean	Median	Std Dev	p25	p75	# Obs
International Div	17.736	17.073	15.959	3.846	26.263	17,082,302
% in Target Date Fund	16.077	0.000	33.774	0.000	0.000	17,082,302
International Div Benchmk	64.368	64.856	1.462	63.304	65.428	17,082,302
Cohort	(19)63	(19)63	11.683	(19)55	(19)72	17,082,302
Age	45.480	46.000	11.667	37.000	54.000	17,082,302
Annual Salary	58,017	47,625	47,772	20,136	65,463	13,105,091
Total Account Value	63,972	23,434	113,906	5,714	75,250	17,054,517
House Value	244,143	188,133	188,858	126,300	299,555	13,984,030
MN Experienced Returns	0.96	0.819	0.837	0.396	1.287	17,082,302
MN Return Chasing	8.692	8.748	1.267	7.986	9.954	17,082,302
Relative Returns	0.001	0.000	0.061	-0.039	0.031	17,082,302
Flight to Safety Dummy	0.062	0.000	0.119	0.000	0.091	17,082,302
Tenure	12.82	10.21	10.35	4.37	19.08	9,170,900
Advice Dummy	0.088	0	0.284	0	0	17,082,302
Not Stale Advice Dummy	0.032	0	0.176	0	0	17,082,302

COMPARISON WITH COMPUSTAT FIRMS AND CPS WORKERS

- Our **firms** are substantially larger than Compustat firms by asset, sales and employees
- They have higher ROA
- Similar leverage
- Both the private and public firms are established companies (median age is 65 yrs

Average 401(k) **plan** is large (average is ~ 1Billion), but there is a lot of variation (median is ~ 300Millions)

Our **workers** have longer tenure at their firms (+5 years) and are about 4 years older and have higher salary (controlling for age and tenure) than the workers in the Current Population Survey

Key Variable: idiv = international equity holdings/total equity holdings

- No bond data
- Conditional on stock market participation
- Minimizes asset location biases (Huang, 2008)
- We control for a benchmark, international market cap/world market cap, in the regressions ~ 64.4% over this period

In the analysis we drop individuals that have *managed accounts* (FE determines allocations for them in exchange of a fee) and control for the % invested in *target date funds* and whether they have access to *online financial advice*.

INTERNATIONAL DIVERSIFICATION OVER TIME

Trends in International Diversification and the MSCI Benchmark



INTERNATIONAL DIVERSIFICATION ACROSS COHORTS



AGE, COHORT AND TIME EFFECTS

 Approach: time dummies, cohort dummies and age dummies are approximated by simple parametric functions.
See Table the full se

	(2)	(5)	(8)
Variables	Idiv	Idiv	Idiv
% in Target Date Fund	0.0697***	0.0590***	0.0588***
	[13.59]	[11.79]	[11.80]
Intl Div. Benchmark	0.214***	0.214***	0.211***
	[2.719]	[2.759]	[2.680]
Trend	0.0276	0.0395	0.0808
	[0.235]	[0.348]	[0.708]
Cohort		0.158***	2 3
		[15.41]	
Age			-0.159***
C			[-15.25]
Constant	1.302	-8.450*	8.402
	[0.258]	[-1.736]	[1.624]
			2 3
Observations	17,082,302	17,082,302	17,082,302
Adjusted R-squared	0.120	0.131	0.132
Firm Fixed Effects	Y	Y	Y

See Table 3 for the full set of results

EXPERIENCE VARIABLES?

- Malmendier-Nagel (2011) "experience" variable on relative returns International Return- U.S. Return
- Malmendier-Nagel (2011) "experience" variable on absolute foreign returns (return chasing) is positive
- Inertia: Relative return wrong sign (although control for international benchmark trend)
- flight to safety (Baele et al., 2014): not robust effect

	(1)	(2)	(3)	(6)	(7)	(8)
Variables	Idiv	Idiv	Idiv	Idiv	Idiv	Idiv
% TDF, Benchman	Y	Y	Y	Y	Y	Y
Trends						
Cohort	0.194***	0.167***	0.168***	0.167***	0.158***	0.161***
	[9.54]	[13.53]	[10.60]	[11.19]	[15.40]	[12.87]
MN Experienced						
Ret	-0.554**					
	[-2.37]					
Return Chasing						
		0.098				
		[1.21]				
Relative returns			-0.243			
			[-0.08]			
Flight to Safety				-0.930	0.607	-1.071
				[-0.49]	[1.13]	[-0.70]
λ	3.99***	1.00				
	[4.11]	[0.21]				
Constant	-14.046*	-10.332	-6.581	-6.342	-10.63**	-4.513
	[-1.75]	[-1.24]	[-0.53]	[-0.56]	[-1.97]	[-0.46]
Observations	17,426,447	17,426,477	13,761,372	17,082,302	17,082,302	17,063,721
Adjusted R-	0.054	0.054				
squared			0.050	0.053	0.131	0.086
Firm Fxd Effects	Ν	Ν	Ν	Ν	Y	Ν
Zip Code Fxd Eff	N	N	Ν	N	N	Y

DEMOGRAPHICS - ECONOMIC MAGNITUDE

- House value (median ~ \$200,000): + \$50,000 => + 0.17%
- Salary (median ~ \$45,000): +\$10,000 => + 0.82%
- Account Balance (Median ~ \$20,000): +\$5,000 => -0.18%

	Mean	Median	Std Dev	# Obs
Advice Dummy=0				
International Diversification	17.335	16.667	15.784	15,571,691
% in Target Date Fund	16.834	0	34.586	15,571,691
Cohort	63.668	63	11.745	15,571,691
Age	45.471	46	11.735	15,571,691
Annual Salary	56,420	46,116	47,388	11,792,124
Total Account Value	58,735	21,184	107,211	15,548,551
House Value (Zillow)	243,629	186,651	189,469	12,697,864
House Value (Census)	239,545	186,923	164,297	15,332,097
Advice Dummy=1				
International Diversification	21.011	20.000	16.363	1,293,508
% in Target Date Fund	7.739	0	21.516	1,293,508
Cohort	63.187	63	10.902	1,293,508
Age	45.855	46	10.842	1,293,508
Annual Salary	73,095	64,766	49,153	1,110,295
Total Account Value	124,977	71,811	161,535	1,288,957
House Value (Zillow)	242,834	199,792	170,824	1,095,710
House Value (Census)	247,129	207,414	153,304	1,274,765

ONLINE FINANCIAL ADVICE

11.7% of accounts have access to financial advice

	(1)	(2)	(5)	(6)
Variables	Idiv	Idiv	Idiv	Idiv
% in Target Date Fund	0.0557***	0.0557***	0.0554***	0.0667***
	[350.7]	[350.8]	[348.5]	[500.9]
Intnl benchmark, trend, cohort,				
Advice Dummy	4.273***	3.058***	7.396***	9.501***
	[262.1]	[134.9]	[46.00]	[62.30]
Non-Stale Advice Dummy		2.246***		
		[77.16]		
Advice Dummy*Cohort			-0.0450***	-0.0675***
			[-28.73]	[-45.98]
ln(Annual Salary)	0.143***	0.143***	0.150***	0.127***
2	[15.96]	[16.00]	[16.52]	[15.27]
ln(Annual Salary) ²	0.182***	0.181***	0.185***	0.147***
	[125.7]	[125.0]	[124.3]	[107.3]
Advice Dummy*ln(Annual				
Salary)			-0.0793	-0.120**
			[-1.632]	[-2.512]
Advice Dummy*In(Annual			0.0005***	0.0125*
Salary)			-0.0285***	0.0125*
In (A account Value)	0.0246***	0 0220***	[-4.322]	[1.934]
In(Account value)	0.0240 ⁺⁺⁺	0.0229	[2 220]	0.00/9***
	[0.037]	[3.018]	[3.220]	[17.92]
$\ln(Account Value)^2$	- 0 0465***	-0.0451***	-0 0468***	-0.0586***
in(Recount Value)	[-60 17]	[-58 35]	[-57 76]	[-79 33]
Advice Dummv*ln(Account		[30:00]	<u>[37,70]</u>	[17:00]
Value)			0.323***	0.115***
			[17.38]	[6.721]
Advice Dummy*ln(Account			<u>. </u>	
Value) ²			-0.0356***	-0.0557***
			[-11.74]	[-19.79]
ln(House Value Zillow)	0.700***	0.699***	0.700***	
	[80.30]	[80.24]	[80.38]	
Constant	-25.43***	-25.43***	-25.76***	-15.64***
	<u>[-93.15]</u>	<u>[-93.18]</u>	<u>[-94.24]</u>	[-69.83]
Observations	10,621,481	10,621,481	10,621,481	13,068,893
Adjusted R-squared	0.126	0.126	0.126	0.093
Firm Fixed Effects	Y	Y	Y	Ν

ONLINE FINANCIAL Advice and Its Recency

Individuals who sign up for advice and access it recently have 5.304 pct pt higher international equity allocations than those who do not sign up, and 2.246 pct py higher than those who sign up but do not access recently

Variables	Mean	Median	Std Dev	p25	p75	# Obs
Bachelor's Degree or Higher	21.8	17.4	16.0	11.2	28.0	32,746
Less than College Degree	63.4	65.6	14.2	56.9	72.2	32,746
College Degree	14.0	11.9	9.8	7.5	18.6	32,746
Advanced Degree	7.8	5.4	8.4	2.8	9.8	32,746
Financial Literacy	2.9	2.9	0.1	2.8	3.0	42,107
Foreign Born Population	5.8	2.2	9.2	0.4	6.9	32,751
Foreign Born Population - Latin America	2.936	0.421	6.622	0.0	2.5	32,751
Foreign Born Population - Europe	0.955	0.295	2.077	0.0	1.1	32,751
Foreign Born Population - Asia	1.462	0.182	3.830	0.0	1.2	32,751
Distance to International Cities	13,070	12,801	790	12,550	13,434	41,631
Distance to Tokyo	6,323	6,515	624	6,064	6,721	41,631
Distance to London	4,210	4,143	596	3,764	4,604	41,631
Distance to Mexico City	1,647	1,655	451	1,351	1,908	41,631
Distance to Toronto	890	705	647	392	1,188	41,631
Rural	2.0	1.0	1.2	1.0	3.0	41,982
Long Distance Minutes	47	46	7	45	49	42,107
State Exports/GDP	7.2	6.6	3.2	5.3	8.2	42,107
State Openness	20.4	17.8	9.2	15.0	25.0	42,107
GDP per capita	41,861	40,451	10,525	36,715	45,671	42,107
GDP Growth 2000-2005	11.4	11.3	5.4	7.2	14.7	42,107
GDP Growth 2006-2011	2.9	2.6	6.2	-0.2	5.0	42,107
House Value – Zillow	203,117	156,350	166,527	110,148	264,033	12,446
House Value – Census	172,967	125,900	145,372	84,900	204,300	31,921

Bachelor's or Higher	0.048***	0.050***
	[16.0]	[15.2]
Financial Literacy	3.50***	0.36
	[9.71]	[1.00]
Foreign Born Population	0.031***	0.028***
	[5.78]	[7.05]
Distance to International Cities	-1.19	-0.015
	[-1.24]	[-0.020]
Urban	-0.31***	-0.97***
	[-2.60]	[-4.00]
Large Rural	-0.40***	-1.26***
	[-2.73]	[-4.63]
Small Rural	-0.090	-1.16***
	[-0.57]	[-3.78]
Long Distance Minutes	-0.036***	0.029***
	[-3.07]	[2.81]
State Exports/GDP	0.091***	0.087***
	[5.71]	[6.02]
GDP per capita	-0.000017**	-0.000030***
	[-2.33]	[-4.74]
GDP Growth 2000-2005	0.0045	0.010
	[0.43]	[1.09]
GDP Growth 2006-2011	0.0075	0.033***
	[0.97]	[4.31]
In(House Value Zillow)		0.041
		[0.39]
Constant	-22.0***	-16.7***
	[-15.9]	[-12.5]
Observations	28,547	8,773
R-squared	0.018	0.077

THE GEOGRAPHY OF INTERNATIONAL DIVERSIFICATION

Dependent Variable: Zip code coefficients

- No significant and robust effect of house values, distance, GDP growth (state level),...
- Strong Effect of Education and Financial Literacy (90% range changes):

Bachelor's or higher: 1.54%

Financial Literacy (survey) +1.62%

- Strong Effect of Immigration (% foreign born): +0.79%
- Strong Effect of **Trade Openness** ((Exports+Imports)/GDP, State level data): +1%

FIRM CHARACTERISTICS

Variables	Mean	Median	Std Dev	p25	p75	# Obs
Private Dummy	0.62	1.00	0.48	0.00	1.00	290
Foreign Headquarter Dummy	0.16	0.00	0.37	0.00	0.00	290
Foreign Subsidiary Dummy	0.56	1.00	0.50	0.00	1.00	289
Foreign Subsidiaries (%)	28.6	10.5	33.5	0.0	69.1	289
Industry Openness	24.0	0.0	35.9	0.0	44.6	264
Firm Age	69	65	45	28	102	268
# Employees	18,623	4,650	48,093	1,732	14,730	265
Assets (USD mn)	38,693	3,674	200,300	1,319	25,243	156
Leverage (%)	30.6	27.9	20.6	16.9	39.3	126
Sales/Assets (%)	106	78.3	120	40.5	127.6	152
Profitability (%)	2.84	2.74	9.67	0.89	5.91	156
Investment Intensity (%)	4.18	3.53	3.28	1.86	5.85	125
Fraction of Intnl Eq Funds (%)	21.47	20.00	7.57	16.67	25.56	297
Expense Ratio of Intnl/Domestic	1.294	1.121	1.063	0.866	1.396	296
Turnover of Intnl/Domestic Eq Funds	0.896	0.734	0.611	0.493	1.209	294
Alpha of Intnl- Alpha of Domestic Eq Funds	-0.004	-0.004	0.009	-1.228	3.548	296
Fund Age of Intnl/Domestic Eq Funds	0.932	0.854	0.584	0.579	1.098	291
Peer Exp Ratio IntnlEq Funds	89.97	95.50	11.91	85.00	98.00	296
Total Plan Assets (USD mn)	456.93	332.79	720.04	161.64	487.01	296

FIRM CHARACTERISTICS – MAIN FINDINGS

• Controlling for the % invested in TDF, time trend, international diversification benchmark, birth cohort, salary, wealth, access to advice, advice*demographics

We find that individuals working in

- Firms with lower profitability
- private firms
- firms with more foreign subsidiaries

Have higher international equity allocations

CONTROLLING FOR "WAVES"

	(1)	(2)	(3)	(4)	(5)
Variables	Idiv	Idiv	Idiv	Idiv	Idiv
Baseline	Y	Y	Y	Y	Y
Cohort	0.0478***	0.0566***	0.0572***	0.0543***	0.0569***
	[5.608]	[8.137]	[7.756]	[8.065]	[7.827]
Advice Dummy	L J	L J	L J	2.415***	4.593***
5				[11.16]	[4.306]
Non-Stale Advice				L J	
Dummy				1.638***	
5				[5.292]	
Advice					
Dummy*Cohort					-0.0264**
					[-2 610]
ln(Annual Salary)		0.283**	0.284**	0.257**	0.269**
		[2,450]	[2,454]	[2 239]	[2,351]
$\ln(\text{Annual Salary})^2$		0 0726***	0 0774***	0.0697***	0 0706***
in(i initiali Sulary)		[3 506]	[3 699]	[3 409]	[3 359]
Adv		[5.500]	[3.099]	[3.109]	[3.337]
Dmv*ln(Annual					
Salary)					-0 295
Sului y j					[-1, 010]
					[-1.010]

Adv. Dmy*ln(Annua	l				
Salary) ²					0.0171
					[0.505]
ln(Account Value)		0.248***	0.213***	0.233***	0.226***
		[4.042]	[3.411]	[3.726]	[3.492]
$\ln(\text{Account Value})^2$		0.0603***	0.0642***	0.0503***	0.0428***
		[3.489]	[3.625]	[2.964]	[2.867]
Adv.		2 3			
Dmy*ln(Account					
Value)					0.271*
					[1.792]
Adv.					
Dmy*ln(Account					
Value) ²					0.0263
					[1.340]
ln(House Value					
Zillow)		0.238**		0.260**	0.257**
		[2.072]		[2.247]	[2.224]
Constant	-2.664	-12.78*	-12.02*	-13.03*	-12.96*
	[-0.436]	[-1.699]	[-1.725]	[-1.748]	[-1.749]
Observations	9,170,900	6,040,811	7,038,080	6,040,811	6,040,811
Adjusted R-squared	0.136	0.134	0.136	0.138	0.138
Quarter Joined					
*Quarter-Year					
*Firm Fixed Effects	Y	Y	Y	Y	Y

PLAN DESIGN AND QUALITY

Variables	Idiv	Idiv	Idiv	Idiv	Idiv				
% in Target Date Fund	0.0536***	0.0436***	0.0484***	0.0449***	0.0447***				
	[389.1]	[252.7]	[312.3]	[261.0]	[259.1]				
International benchmark, trend, cohort, demogr, advice,									
Fraction of Intnl Eq Funds	22.01***	20.68***	21.72***	20.29***	20.54***				
	[347.3]	[258.4]	[301.8]	[254.1]	[257.3]				
Expense Ratio of									
Intnl/Domestic	-1.255***	-1.343***	-1.154***	-1.359***	-1.351***				
	[-195.2]	[-142.4]	[-163.6]	[-144.6]	[-143.6]				
Turnover of									
Intnl/Domestic Eq Funds	-0.502***	-0.751***	-0.693***	-0.777***	-0.806***				
	[-42.45]	[-51.47]	[-54.41]	[-53.40]	[-55.36]				
Alpha of Intnl/Domestic									
Eq Funds	0.000133***	0.000336***	0.000436***	0.000378***	0.000417***				
	[3.657]	[7.962]	[11.03]	[8.989]	[9.918]				
Fund Age of									
Intnl/Domestic Eq Funds	-0.288***	0.116***	-0.0906***	0.149***	0.158***				
	[-53.87]	[17.98]	[-15.72]	[23.07]	[24.48]				
Peer Exp Ratio									
Intnl/Domestic	-0.144***	-0.147***	-0.138***	-0.152***	-0.152***				
	[-240.9]	[-185.0]	[-204.5]	<u>[-191.9]</u>	[-192.8]				
		-5.29e-	-1.30e-	-3.81e-	-4.07e-				
Total Plan Assets	3.58e-07***	07***	07***	07***	07***				
-	[92.76]	[-65.50]	[-22.94]	[-47.27]	[-50.45]				
Constant	1.860***	-2.309***	-3.403***	-0.945***	-1.392***				
	[7.044]	[-6.614]	[-10.84]	[-2.717]	[-3.995]				

PLAN DESIGN AND QUALITY

Shifting the fraction of international funds by its 90% range, from 10.5% to 33.3% of the menu, is associated to 4.85 to 5.19 pct pt higher intenational allocations

Improving expense ratios from 95th to 5th pctile is associated to 2.86 pct pts higher international allocations

The results are robust to controlling for fixed effects based on quarter the worker joined the firm*firm*year-quarter.

To the extent that plan features are determined by employers and not inly by employees' demand, this suggest a large role for plan design and policy.

ROBUSTNESS CHECKS

The Key Results are robust to:

- Age-tenure screens to eliminate older, low tenure people that might have multiple 401(k) accounts
- Salary-account balance screens to eliminate richer people, who likely have sizable taxable accounts
- Eliminate obs with bond allocations, as it might suggest an asset location strategy

Measuring international diversification as international stock/total portfolio yields similar results.

	(1)	(2)	(3)	(4)	(5)	(6)
Variables	Idiv	Idiv	Idiv	Idiv	Idiv	Intl Stock
% in TDF	0.0590***	0.0481***	0.0539***	0.0445***	0.0560***	0.0709***
	[11.79]	[7.683]	[11.14]	[7.125]	[11.15]	[20.15]
Int Div Bmk	0.214***	0.188	0.245***	0.243**	0.209***	0.278***
	[2.759]	[1.632]	[3.373]	[2.610]	[2.737]	[4.499]
Trend	0.0395	0.133	-0.00786	0.0287	0.0815	-0.318***
	[0.348]	[0.863]	[-0.0779]	[0.243]	[0.694]	[-3.859]
Trend ²	0.00331	-0.000275	0.00532	0.00419	0.00178	0.0128***
	[0.753]	[-0.0442]	[1.298]	[0.815]	[0.397]	[3.933]
Cohort	0.158***	0.158***	0.152***	0.147***	0.161***	0.211***
	[15.41]	[10.39]	[12.20]	[8.551]	[17.27]	[16.28]
Constant	-8.450*	-5.691	-9.492*	-7.922	-8.439*	-18.90***
	[-1.736]	[-0.819]	[-1.967]	[-1.290]	[-1.762]	[-4.809]
		11,508,41	14,118,73			
Observations	17,082,302	0	9	9,847,022	15,940,134	19,017,474
Adjusted R-						
squared	0.131	0.115	0.125	0.109	0.138	0.142
Firm Fixed						
Effects	Y	Y	Y	Y	Y	Y
			Salary-	Age/Tenu		
		Age-	Acct	re &	Exclude	
	Whole	Tenure	Value	Salary/Ac	High Bond	Intl Stock
Subsample	Sample	Screen	Screen	ct	Alloc.	as Dep Var

CONCLUSIONS

- Exploration of new panel data set on international equity allocations
- Enormous cross-individual dispersion of which only a small fraction can be explained by
 - a) Access to online advice
 - b) Plan Quality
 - c) Cohort effects
 - d) Education, Financial Literacy
 - e) Salary and "wealth" proxies
 - f) Location effects (% of foreign born; trade openness)
 - g) Firm effects
- Role of familiarity and information stories.
- Future work: analyze non-participation and investment bias; second look at cross-country variation through the lens of investors' heterogeneity.

Panel A Employee Characteristics across Firms

Variables	Mean	Median	Std Dev	p5	p95
Salary	46,205	39,687	48.014	0	118,183
Total Account Value	62,798	22,255	113,850	279	256,085
Contribution Rate	5.89%	5.00%	6.16%	0%	17.00%
Tenure	10.55	7.25	10.64	0.08	32.02
Age	46	46	12	27	65
Cohort	1963	1963	12	1940	1983

Panel B Current Population Survey (CPS)

Variables	Mean	Median	Std Dev	p5	p95
Salary	45,437	37,175	30,045	14,685	109,840
Tenure	7.7	5.0	8.2	0.3	25.7
Age	41	42	12	23	62

Variable	Mean	Medi an	Std Dev	р5	p95	# Obs
Cohort	1962	1961	11	1946	1981	1,611,453
Age	46	47	11	28	63	1,611,453
Annual Salary	56,16 0	47,62 5	42,1 47	19,9 19	114, 689	1,363,806
Total Account	59,63	27,73	91,5	1,22	224,	1 611 550
Value	9	5	65	0	215	1,011,552
House Value	234,2	178,3	159,	82,3	575,	1 587 840
(Census)	66	00	756	00	800	1,307,040
Tenure	8.1	3.7	9.2	0.4	27.6	1,476,011
Contribution Rate (%)	7	6	6	0	17	1,363,806

Panel C - Summary Statistics for Managed Accounts