

**Internet Appendix to
Do the Rich Get Richer in the Stock Market?
Evidence from India**

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1 Data Construction

1.1 Stock-Level Data

We collect stock-level data on monthly total returns, market capitalization, and book value from three sources: Compustat Global, Datastream, and Prowess. Prowess reports data from both of India’s major stock exchanges, the Bombay and National Stock Exchanges (BSE and NSE). In addition, monthly price returns can be inferred from the month-end holding values and quantities in the NSDL database. We link the datasets by ISIN.²

To verify reliability of returns data, we compare total returns from the available data sources, computing the absolute differences in returns series across sources. For each stock-month, we use returns from one of the datasets for which returns match another dataset most closely, where the source from amongst those datasets is selected in the following order of priority: Compustat Global, Prowess NSE, then Prowess BSE. If returns are available from only one source, or the difference(s) between the multiple sources all exceed 5% then we compare price returns from each source with price returns from NSDL. We then use total returns from the source for which price returns most closely match NSDL price returns, provided the discrepancy is less than 5%.

After computing total returns, we drop extended zero-return periods which appear for non-traded securities. We also drop first (partial) month returns on IPOs and re-listings, which are reported inconsistently. For the 25 highest and 25 lowest remaining total monthly returns, we use internet sources such as Moneycontrol and Economic Times to confirm that the returns are valid. We also use internet sources to look up and confirm returns for stock-months where returns are missing and the stock comprises at least one percent of stock holdings for the representative individual investor for either the previous or current month.

We follow a similar data verification procedure for market capitalization and book value, confirming that the values used are within 5% of that reported by another source. Where market capitalization cannot be determined for a given month, we extrapolate it from the previous month using price returns. Where book value is unknown, we extrapolate it forward using the most recent observation over the past year.

1.2 NSDL Account Data

Our NSDL data are monthly frequency, and include the trades and holdings of all NSDL accounts from February 2002 through May 2011.³ Table A1 shows the number of unique

²Around dematerialisation, securities’ ISINs change, with some data linked to pre-dematerialisation ISINs and other data linked to post-dematerialisation ISINs. We use a matching routine and manual inspection to match the ISINs that represent the same security.

³These data are collected with the approval of India’s securities markets regulator, SEBI.

securities held in NSDL accounts, which ranges from a bit over 8,000 in 2002 to almost 22,000 in 2011. While the number of unique equities is only 1/3 to 1/2 as large, equities are by far the most commonly held, and comprise the bulk of NSDL holdings.

Table A1 shows that equity holdings in NSDL account for a growing share of India's market capitalization, from about 45% in 2002 and approaching 70% in 2011. Most of the remaining Indian equities are held in accounts in Central Depository Services Limited (CDSL). The two depositories combined share of Indian equity holdings is now close to 100% of the market. While the vast majority of accounts are held by individuals, these accounts represent only about 20% of NSDL account holdings by value in 2002. The individual account share declines gradually to about 10% at the end of our data sample as institutional investors enter the market.⁴ Mutual funds' share of equity holdings remains small throughout the sample, and never represents more than 5% of aggregate NSDL stock holdings.

In this paper, we restrict our attention to the equity holdings of individual Indian resident accounts, discarding the relatively small number of such accounts that never hold equities. In addition, we aggregate together individual accounts sharing the same permanent account number (PAN), which is unique to an individual. Our sample of 200,000 accounts is drawn from this set of roughly 11.6 million individual PAN-aggregated accounts.

2 Additional Exercises, Explanations, and Extensions of Results

2.1 Indirect Individual Equity Ownership in India

To obtain estimates of individuals' indirect Indian equity holdings, we use data from the Association of Mutual Funds of India on the aggregate value of mutual funds and unit trusts, and data from the Insurance Regulatory and Development Authority on the aggregate value of unit-linked insurance plan premiums. We assume these vehicles account for all indirect ownership of Indian equities. We classify "growth" (or "equity") and "equity linked savings schemes" as fully invested in stock, and funds classified as "balanced" as well as unit-linked insurance as invested half in stocks. Of these categories, "growth"/"equity" funds is by far the largest. We assume that individuals own a similar fraction of equity mutual funds and non-equity mutual funds, and obtain this fraction (which averages around 40%) from SEBI reports.⁵

Next, we extrapolate the value of individuals' direct ownership of stock as 5/3 of that

⁴We classify accounts with individual owners that hold at least 5% of the market capitalization of a stock as "beneficial owner" accounts.

⁵We use data from 2003 for 2004 through 2009, as we are unable to locate the figure for these intermediate dates.

held by individual accounts registered in NSDL, based on NSDL having an approximately 60% share of all such accounts. Our estimate of indirect holdings varies between 6% and 19% of total household equity holdings over 2002 through 2011. In addition, a 2009 SEBI survey found that about 65% of Indian households owning individual stocks did not own any bonds or mutual funds.

2.2 Comparison of Alternative Inequality Measures

We have characterized the entire distribution of log account size using the cross-sectional variance for expositional ease. However, Figure A1 shows that both the Gini coefficient and the share of market capitalization held by the top 5% of accounts have trended upwards in a similar manner. Since these alternative inequality measures are far more sensitive to the extreme right tail of the wealth distribution, this suggests that our analysis may still be relevant even if one is particularly concerned with concentration of wealth at the very top.

In addition, the black curves in Figure A1 compare the cross-sectional variance of log account size in our sample with that of the full set of 11.6 million individual accounts. Given that our sample is drawn at random, the two series are unsurprisingly almost identical.

2.3 Contributors to Inequality Growth at Different Points in Time

Table 4 of our paper presents the time-series average of the several components of the growth in variance of log account value. Did these components' contributions vary significantly over time? Figure A2 suggests that heterogeneous returns make the most stable contribution to the variance of log account size. In contrast, flows into and out of accounts primarily increased this variance in the beginning of the sample, whereas account exits decreased inequality in the beginning of the sample and increased inequality primarily in 2007 and 2008.

3 Robustness Exercises

3.1 What are Risk and Returns Across the Largest Accounts?

Table A2 replicates Table 2 (Panel A) and Table 3 from our paper using size-sorted deciles within the largest 5% of accounts.⁶ Return and risk are similar across the largest 5% of accounts. However, there is some evidence that the very largest accounts (top 0.5% of all accounts) have four-factor alpha.

⁶In order to have a sufficient sample size, we draw a new random sample of 200,000 accounts from the set of accounts that are in the top 5% of stock holding value for at least one month. We only include in the analysis those months immediately following a size ranking in the top 5%.

3.2 Do Results Reflect Account Age or Experience Effects?

We have focused on account size rather than account age as in our earlier work. Could we be confusing account size effects with account age effects, for example a tendency for investors to diversify and add to their accounts over time? To address this concern, in Table A3 we replicate Table 2 (Panel A) and Table 3 using cohort-balanced size deciles. Accounts in these deciles are weighted such that at each point in time, the distribution of cohorts (age) within each decile equals the distribution of cohorts across all size deciles.⁷ Results across cohort-balanced size deciles are very similar to our primary analysis, suggesting our results are not driven by account age effects.

3.3 Do Results Reflect Heterogeneous Skill?

We have used accounts' market values to measure their size even though returns affect subsequent market values. Could it be that large accounts earn higher average log returns because there is persistent cross-sectional variation in investment skill, and skillful investors have accounts that become large? To address this, we construct two alternative measures of account size that remove the effect of returns on size. The first of these, which we call "book value" by analogy with the corporate accounting concept, is the cumulated sum of net inflows. A difficulty with this measure is that it need not be positive, and in particular will be negative for investors who live off their capital income in steady state. Accordingly, we construct a second measure, "alternative book value", which is the value of each account under the counterfactual assumption that it earns an Indian money market rate, while having the same rupee inflows and the same proportional outflows that actually occurred. This measure of account size is always positive.

Table A4 provides summary statistics for the log of these alternative size measures alongside log account value. The size measures have correlations exceeding 0.9 with each other, and the measures have similar correlations with account growth and returns.⁸ In Table A5 we replicate Table 2 (Panel A) and Table 3 using book value deciles instead of account size. In Table A6, we do the same for deciles based on alternative book value. Risk and return relationships are similar across all three size measures, and especially between account value and alternative book value.

⁷Accounts in cohort-balanced deciles are equally weighted within each month-decile-cohort group.

⁸These correlations exclude observations where book value is negative.

3.4 Do Results Reflect Measurement Issues Affecting Micro-Cap Stocks?

Small Indian investors often hold micro-cap stocks as documented in Panel B of Table 2. We have included micro-cap stock returns when we can verify their returns from two data sources, but one might be concerned that the average simple returns on these stocks are biased upwards if there is survivorship bias for micro-cap stocks in the underlying data sources, or if these stocks are so illiquid that their returns are strongly negatively autocorrelated (Blume and Stambaugh 1983).

In Table A7, we replicate Table 2 (Panel A) and Table 3 after removing returns for stocks with aggregate holdings in NDSL below 500 million Rs (approximately \$10 million) at the end of the prior month. This modification reduces both excess returns and excess return volatility, particularly for accounts in the smallest decile. However, risk and return trends across size deciles are qualitatively unchanged, with mean log returns increasing with account size.

3.5 Role of Account Exit Due to Return Availability versus Exit Due to Sales

In Panel A of Table 4, we lump together two types of account entry and exit. Accounts can enter either because they start to hold stocks, or because at least one of the stocks they hold starts to have a measured return. Similarly, accounts can exit either because they cease to hold stocks, or because none of the stocks they hold continue to have measured returns. To what extent do these two types of entry and exit contribute differently? Table A8 shows that entry and exit driven by stockholdings increases wealth inequality, while entry and exit driven by the availability of returns data decreases it. The first effect is substantial at 40% of the observed increase in the cross-sectional variance of log account size, but the second effect is also substantial at -41% , and the sum of the two effects is the modest -1% contribution of account entry and exit reported in Panel A of Table 4.

4 Tables and Figures

Figure A1: Evolution of Inequality Measures
Top 5% Share Increased by 15% for Display Purposes

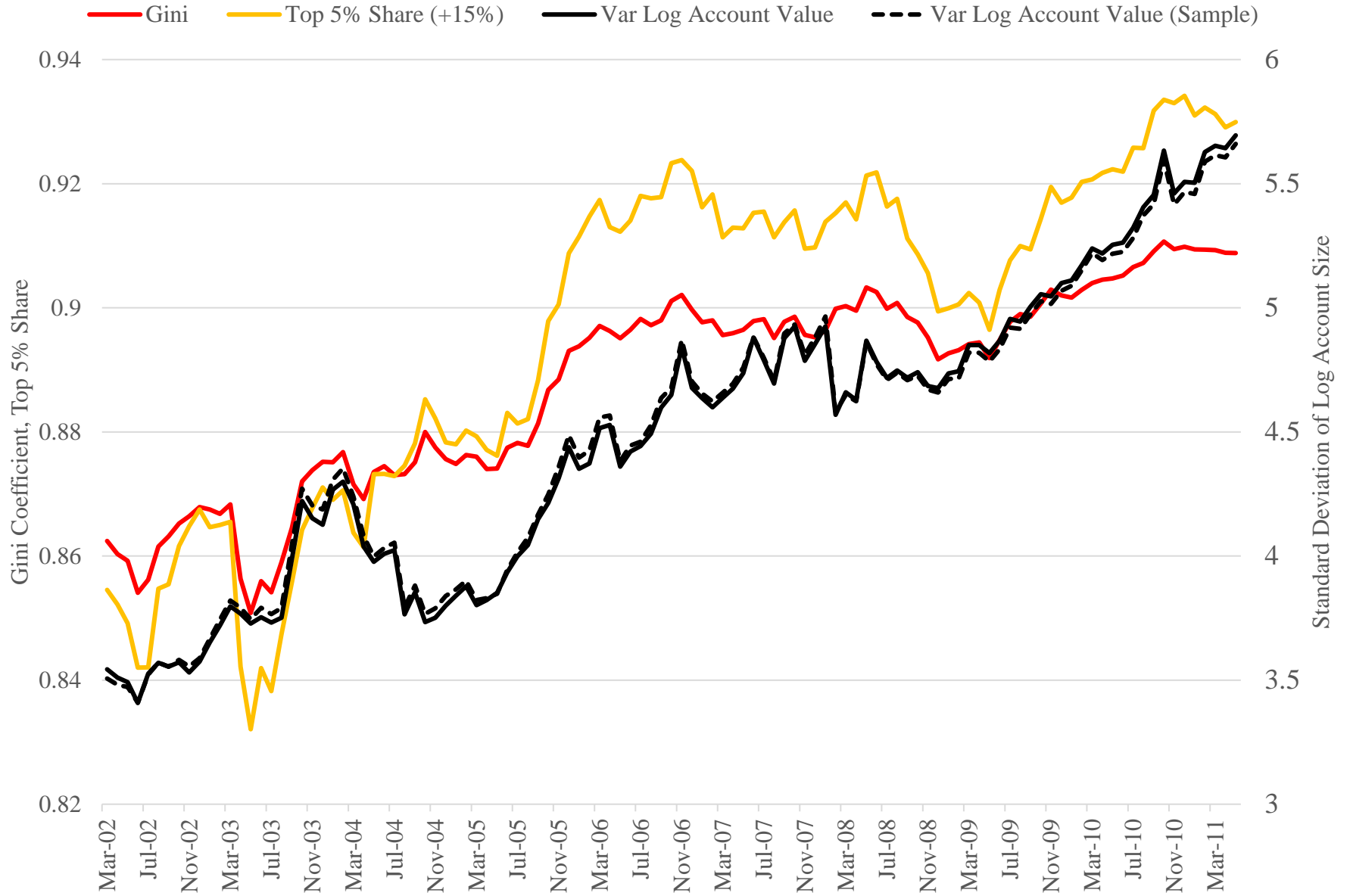


Figure A2: Decomposition of Cumulative Change in Account Size Variance

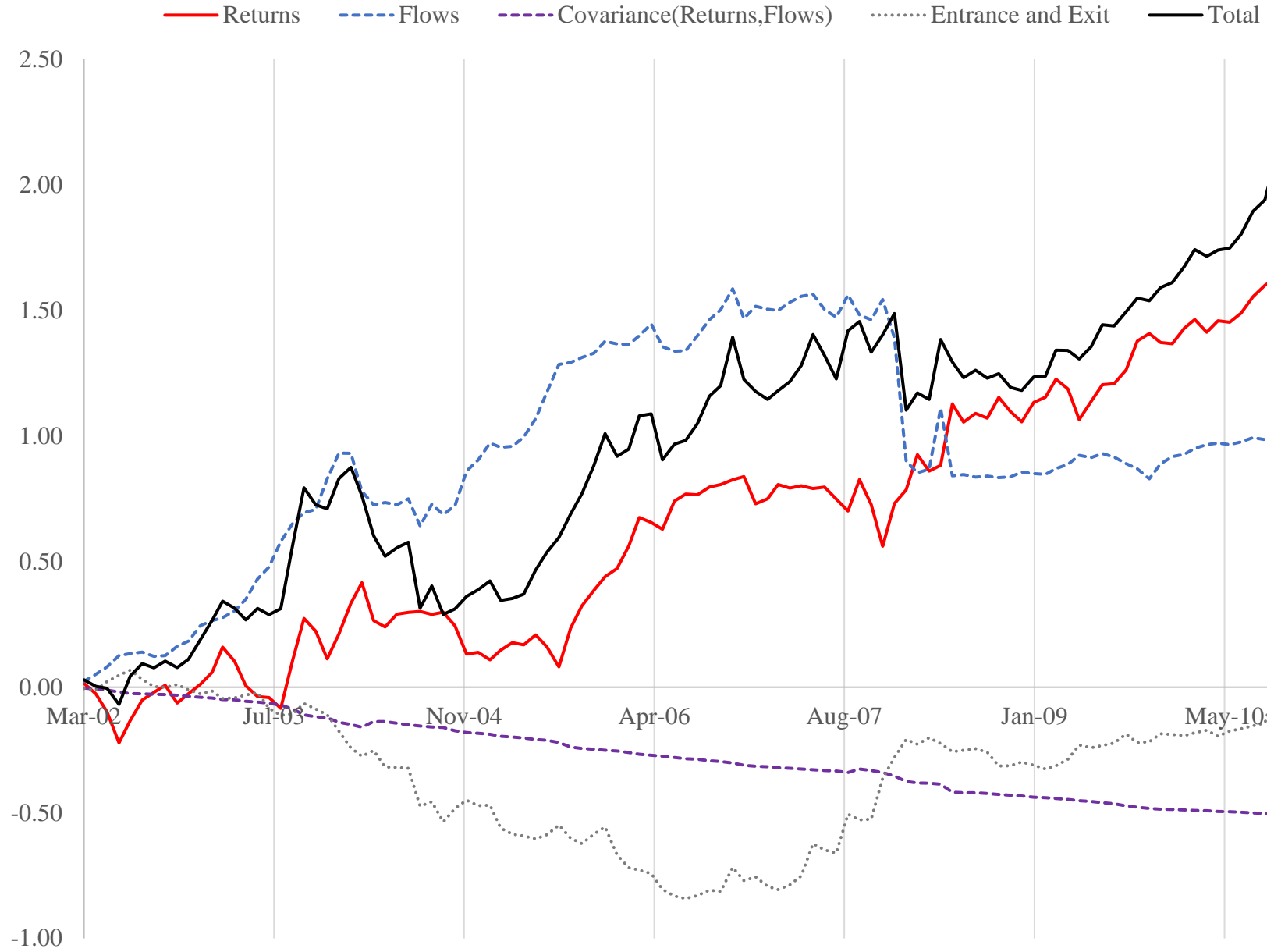


Table A1: Summary Statistics for NSDL Database

The percentages below are computed for each monthly cross-section, and the average of these monthly percentages within each year appear in the table. The number of unique securities and equities are determined by the average number of unique ISIN appearing in the NSDL database in each month in the given year (from Feb 2002 through May 2011). Individual accounts exclude "beneficial owners" (those holding more than 5% of the market capitalization of a stock at some point in time). BSE market capitalization (from the World Federation of Exchanges), is from the end of each year and represents the market capitalization of all equities listed on the BSE, representing the vast majority of Indian equities. December 2002 market capitalization is imputed from January 2003 returns and month-end capitalization.

	Number of Unique Securities	Number of Unique (Indian) Equities	Market Capitalization of BSE (Billions of US\$)	% of Indian Equity Market Capitalization in NSDL Accounts	% of NSDL Equity Value in Individual Accounts	% of NSDL Equity Value in Mutual Funds
2002	8,245	3,788	\$117.4	44.33%	19.03%	2.11%
2003	11,054	4,137	\$279.1	45.25%	18.49%	3.50%
2004	12,264	4,406	\$387.9	51.19%	16.89%	3.51%
2005	13,487	4,711	\$553.1	58.33%	15.41%	3.73%
2006	15,279	5,016	\$818.9	63.90%	14.58%	4.72%
2007	17,091	5,364	\$1,819.1	66.98%	12.66%	4.55%
2008	17,511	5,829	\$647.2	65.67%	11.71%	4.46%
2009	17,458	6,239	\$1,306.5	64.78%	10.98%	4.56%
2010	19,458	6,711	\$1,631.8	68.02%	10.60%	4.34%
2011	21,783	7,151	\$1,007.2	67.77%	10.10%	3.98%

Table A2: Risk and Return by Account Value Deciles Within Largest 5% of Accounts

Panel A replicates Table 2 for account-value sorted deciles within the largest 5% of accounts, i.e. decile one spans the 95th through 95.5th percentile.

Panel B does the same for Table 3. Standard errors are reported in parentheses.

Panel A: Return Factor Loadings

	Account Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Excess Return	1.69% (0.82%)	1.72% (0.82%)	1.70% (0.81%)	1.69% (0.81%)	1.69% (0.81%)	1.71% (0.80%)	1.70% (0.80%)	1.70% (0.79%)	1.70% (0.78%)	1.74% (0.78%)	0.05% (0.11%)
Four-Factor Alpha	0.38% (0.37%)	0.41% (0.36%)	0.42% (0.35%)	0.42% (0.36%)	0.42% (0.35%)	0.46% (0.36%)	0.47% (0.35%)	0.50% (0.35%)	0.56% (0.36%)	0.64% (0.37%)	0.25% (0.11%)
Market Beta	1.01 (0.02)	1.00 (0.02)	1.00 (0.02)	1.00 (0.02)	1.00 (0.02)	0.99 (0.02)	0.99 (0.02)	0.98 (0.02)	0.98 (0.02)	0.97 (0.02)	-0.03 (0.01)
Size (SMB)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)	0.07 (0.02)	0.01 (0.01)
Value (HML)	-0.07 (0.10)	-0.07 (0.09)	-0.08 (0.09)	-0.08 (0.09)	-0.08 (0.09)	-0.09 (0.09)	-0.10 (0.09)	-0.11 (0.09)	-0.13 (0.10)	-0.14 (0.10)	-0.07 (0.02)
Momentum (MOM)	-0.06 (0.03)	-0.07 (0.03)	-0.06 (0.03)	-0.06 (0.03)	-0.05 (0.03)	-0.05 (0.03)	-0.04 (0.03)	-0.03 (0.03)	-0.03 (0.03)	-0.03 (0.04)	0.03 (0.02)

Panel B: Risk and Returns

	Account Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Realized:											
Excess Return Volatility	11.0% (0.8%)	10.9% (0.8%)	10.9% (0.8%)	10.8% (0.8%)	10.8% (0.8%)	10.9% (0.7%)	10.8% (0.7%)	10.8% (0.7%)	10.8% (0.7%)	11.6% (0.7%)	0.6% (0.1%)
Excess Returns	1.69% (0.82%)	1.72% (0.82%)	1.70% (0.81%)	1.69% (0.81%)	1.69% (0.81%)	1.71% (0.80%)	1.70% (0.80%)	1.70% (0.79%)	1.70% (0.78%)	1.74% (0.78%)	0.05% (0.11%)
Sharpe Ratio	0.15 (0.08)	0.16 (0.08)	0.16 (0.08)	0.16 (0.08)	0.16 (0.08)	0.16 (0.07)	0.16 (0.07)	0.16 (0.07)	0.16 (0.07)	0.15 (0.07)	0.00 (0.01)
Excess Log Returns (X100)	1.10 (0.82)	1.13 (0.82)	1.11 (0.81)	1.11 (0.81)	1.10 (0.81)	1.13 (0.80)	1.12 (0.80)	1.12 (0.79)	1.12 (0.79)	1.09 (0.79)	-0.01 (0.12)
Long Run Global Factor Prices:											
Excess Returns	0.86% (0.44%)	0.88% (0.43%)	0.88% (0.43%)	0.89% (0.43%)	0.89% (0.43%)	0.92% (0.43%)	0.94% (0.43%)	0.96% (0.43%)	1.02% (0.43%)	1.09% (0.44%)	0.23% (0.11%)
Sharpe Ratio	0.08 (0.04)	0.08 (0.04)	0.08 (0.04)	0.08 (0.04)	0.08 (0.04)	0.08 (0.04)	0.09 (0.04)	0.09 (0.04)	0.09 (0.04)	0.09 (0.04)	0.02 (0.01)
Excess Log Returns (X100)	0.26 (0.45)	0.28 (0.44)	0.29 (0.44)	0.31 (0.44)	0.30 (0.43)	0.34 (0.44)	0.35 (0.44)	0.38 (0.43)	0.43 (0.44)	0.43 (0.45)	0.17 (0.12)
Long Run Global Factor Prices, No Alpha:											
Excess Returns	0.47% (0.24%)	0.47% (0.24%)	0.47% (0.24%)	0.47% (0.24%)	0.47% (0.24%)	0.47% (0.23%)	0.47% (0.23%)	0.46% (0.23%)	0.45% (0.23%)	0.45% (0.23%)	-0.02% (0.02%)
Sharpe Ratio	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.00 (0.00)
Excess Log Returns (X100)	-0.13 (0.25)	-0.13 (0.25)	-0.13 (0.25)	-0.12 (0.25)	-0.12 (0.25)	-0.12 (0.25)	-0.12 (0.25)	-0.12 (0.25)	-0.14 (0.25)	-0.21 (0.25)	-0.09 (0.02)

Table A3: Risk and Return by Cohort-Balanced Account Value Deciles

Panel A replicates Table 2 using account-value sorted deciles which are balanced by account age cohort. Specifically, the weight of each age cohort of accounts within each size decile is set equal to the age cohort's share of all accounts in the cross-section. Within each cross-section, accounts within a given cohort and size-decile are equally weighted. Panel B similarly replicates Table 3 using cohort-balanced account-value deciles. Standard errors are reported in parentheses.

Panel A: Return Factor Loadings

	Account Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Excess Return	2.95% (1.36%)	2.03% (1.13%)	2.11% (1.03%)	1.95% (0.97%)	1.87% (0.94%)	1.81% (0.93%)	1.78% (0.92%)	1.75% (0.90%)	1.74% (0.88%)	1.66% (0.84%)	-1.29% (0.79%)
Four-Factor Alpha	-0.08% (0.70%)	-0.19% (0.63%)	0.11% (0.53%)	0.17% (0.50%)	0.20% (0.46%)	0.19% (0.45%)	0.18% (0.44%)	0.19% (0.41%)	0.22% (0.38%)	0.32% (0.37%)	0.40% (0.43%)
Market Beta	1.20 (0.05)	1.16 (0.06)	1.13 (0.04)	1.10 (0.03)	1.09 (0.03)	1.08 (0.02)	1.08 (0.02)	1.07 (0.02)	1.06 (0.02)	1.02 (0.02)	-0.17 (0.05)
Size (SMB)	0.60 (0.04)	0.31 (0.04)	0.18 (0.03)	0.14 (0.03)	0.11 (0.02)	0.09 (0.02)	0.07 (0.02)	0.06 (0.02)	0.05 (0.02)	0.06 (0.02)	-0.55 (0.04)
Value (HML)	0.39 (0.20)	0.15 (0.18)	0.13 (0.14)	0.07 (0.13)	0.04 (0.12)	0.03 (0.12)	0.03 (0.11)	0.01 (0.11)	0.00 (0.10)	-0.06 (0.10)	-0.45 (0.15)
Momentum (MOM)	-0.39 (0.07)	-0.22 (0.07)	-0.21 (0.05)	-0.19 (0.04)	-0.18 (0.04)	-0.17 (0.04)	-0.15 (0.03)	-0.14 (0.03)	-0.12 (0.03)	-0.08 (0.03)	0.30 (0.07)

Panel B: Risk and Returns

	Account Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Realized:											
Excess Return Volatility	23.7% (1.2%)	17.6% (0.9%)	16.0% (0.9%)	14.5% (0.9%)	13.7% (0.9%)	13.0% (0.9%)	12.6% (0.9%)	12.2% (0.9%)	11.9% (0.9%)	11.6% (0.8%)	-12.1% (1.0%)
Excess Returns	2.95% (1.36%)	2.03% (1.13%)	2.11% (1.03%)	1.95% (0.97%)	1.87% (0.94%)	1.81% (0.93%)	1.78% (0.92%)	1.75% (0.90%)	1.74% (0.88%)	1.66% (0.84%)	-1.29% (0.79%)
Sharpe Ratio	0.12 (0.05)	0.12 (0.06)	0.13 (0.06)	0.13 (0.07)	0.14 (0.07)	0.14 (0.07)	0.14 (0.07)	0.14 (0.07)	0.15 (0.07)	0.14 (0.07)	0.02 (0.04)
Excess Log Returns (X100)	0.68 (1.27)	0.63 (1.12)	0.93 (1.01)	0.95 (0.96)	0.97 (0.94)	0.99 (0.93)	1.01 (0.91)	1.02 (0.90)	1.05 (0.88)	0.99 (0.84)	0.31 (0.69)
Long Run Global Factor Prices:											
Excess Returns	0.48% (0.73%)	0.36% (0.66%)	0.62% (0.58%)	0.66% (0.55%)	0.68% (0.52%)	0.67% (0.52%)	0.67% (0.50%)	0.68% (0.48%)	0.71% (0.46%)	0.79% (0.45%)	0.31% (0.43%)
Sharpe Ratio	0.02 (0.03)	0.02 (0.04)	0.04 (0.04)	0.05 (0.04)	0.05 (0.04)	0.05 (0.04)	0.05 (0.04)	0.06 (0.04)	0.06 (0.04)	0.07 (0.04)	0.05 (0.02)
Excess Log Returns (X100)	-1.82 (0.74)	-1.05 (0.68)	-0.56 (0.59)	-0.35 (0.56)	-0.22 (0.54)	-0.15 (0.53)	-0.11 (0.51)	-0.06 (0.49)	0.02 (0.47)	0.12 (0.46)	1.94 (0.43)
Long Run Global Factor Prices, No Alpha:											
Excess Returns	0.56% (0.32%)	0.55% (0.29%)	0.52% (0.27%)	0.49% (0.27%)	0.48% (0.26%)	0.48% (0.26%)	0.49% (0.26%)	0.49% (0.26%)	0.49% (0.25%)	0.47% (0.24%)	-0.09% (0.14%)
Sharpe Ratio	0.02 (0.01)	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.02 (0.01)
Excess Log Returns (X100)	-1.74 (0.37)	-0.86 (0.32)	-0.67 (0.30)	-0.52 (0.29)	-0.42 (0.28)	-0.35 (0.28)	-0.29 (0.28)	-0.25 (0.27)	-0.25 (0.27)	-0.21 (0.26)	1.54 (0.20)

Table A5: Risk and Return by Account Book Value Deciles

Panel A replicates Table 2 using account-book-value sorted deciles. Account book value is defined as the cumulative value of purchases minus sales of stock in the account. For accounts opened prior to the start of our data (February 2002), we assign an initial book value equal to the value of the account at the time. Panel B replicates Table 3 using account-book-value deciles. Standard errors are reported in parentheses.

Panel A: Return Factor Loadings

	Account Book Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Excess Return	2.44% (1.11%)	2.51% (1.11%)	2.21% (1.06%)	1.73% (1.04%)	1.83% (0.95%)	1.80% (0.94%)	1.75% (0.92%)	1.71% (0.91%)	1.70% (0.88%)	1.63% (0.83%)	-0.81% (0.48%)
Four-Factor Alpha	-0.06% (0.64%)	0.12% (0.56%)	-0.09% (0.56%)	-0.26% (0.58%)	0.13% (0.48%)	0.18% (0.46%)	0.18% (0.44%)	0.19% (0.41%)	0.26% (0.39%)	0.36% (0.37%)	0.42% (0.35%)
Market Beta	1.11 (0.04)	1.14 (0.04)	1.13 (0.04)	1.14 (0.06)	1.09 (0.03)	1.09 (0.03)	1.08 (0.02)	1.07 (0.02)	1.06 (0.02)	1.01 (0.02)	-0.09 (0.04)
Size (SMB)	0.36 (0.03)	0.36 (0.03)	0.23 (0.04)	0.12 (0.03)	0.10 (0.02)	0.08 (0.02)	0.07 (0.02)	0.06 (0.02)	0.05 (0.02)	0.06 (0.02)	-0.30 (0.03)
Value (HML)	0.28 (0.18)	0.22 (0.15)	0.22 (0.15)	0.12 (0.15)	0.05 (0.13)	0.03 (0.12)	0.02 (0.12)	0.00 (0.11)	-0.02 (0.10)	-0.07 (0.10)	-0.35 (0.12)
Momentum (MOM)	-0.23 (0.06)	-0.21 (0.06)	-0.18 (0.06)	-0.14 (0.07)	-0.18 (0.04)	-0.19 (0.04)	-0.18 (0.04)	-0.17 (0.03)	-0.15 (0.03)	-0.12 (0.03)	0.11 (0.06)

Panel B: Risk and Returns

	Account Book Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Realized:											
Excess Return Volatility	18.3% (1.0%)	18.7% (1.0%)	17.4% (0.9%)	15.3% (0.9%)	14.2% (0.9%)	13.4% (0.9%)	12.8% (0.9%)	12.4% (0.9%)	11.9% (0.9%)	11.4% (0.8%)	-7.0% (0.8%)
Excess Returns	2.44% (1.11%)	2.51% (1.11%)	2.21% (1.06%)	1.73% (1.04%)	1.83% (0.95%)	1.80% (0.94%)	1.75% (0.92%)	1.71% (0.91%)	1.70% (0.88%)	1.63% (0.83%)	-0.81% (0.48%)
Sharpe Ratio	0.13 (0.06)	0.13 (0.06)	0.13 (0.06)	0.11 (0.07)	0.13 (0.07)	0.13 (0.07)	0.14 (0.07)	0.14 (0.07)	0.14 (0.07)	0.14 (0.07)	0.01 (0.03)
Excess Log Returns (X100)	0.99 (1.06)	1.00 (1.06)	0.86 (1.04)	0.63 (1.05)	0.88 (0.95)	0.94 (0.93)	0.96 (0.92)	0.97 (0.90)	1.01 (0.88)	1.00 (0.83)	0.01 (0.43)
Long Run Global Factor Prices:											
Excess Returns	0.50% (0.68%)	0.68% (0.61%)	0.49% (0.60%)	0.30% (0.62%)	0.62% (0.54%)	0.66% (0.52%)	0.65% (0.51%)	0.66% (0.48%)	0.72% (0.46%)	0.80% (0.44%)	0.30% (0.34%)
Sharpe Ratio	0.03 (0.04)	0.04 (0.03)	0.03 (0.03)	0.02 (0.04)	0.04 (0.04)	0.05 (0.04)	0.05 (0.04)	0.05 (0.04)	0.06 (0.04)	0.07 (0.04)	0.04 (0.02)
Excess Log Returns (X100)	-0.97 (0.69)	-0.85 (0.62)	-0.88 (0.62)	-0.81 (0.65)	-0.34 (0.55)	-0.21 (0.53)	-0.15 (0.52)	-0.09 (0.49)	0.03 (0.48)	0.16 (0.45)	1.13 (0.35)
Long Run Global Factor Prices, No Alpha:											
Excess Returns	0.56% (0.28%)	0.56% (0.28%)	0.58% (0.27%)	0.56% (0.27%)	0.49% (0.26%)	0.47% (0.26%)	0.47% (0.26%)	0.47% (0.26%)	0.46% (0.25%)	0.44% (0.24%)	-0.12% (0.09%)
Sharpe Ratio	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)	0.04 (0.02)	0.03 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.01 (0.01)
Excess Log Returns (X100)	-0.91 (0.31)	-0.97 (0.31)	-0.80 (0.31)	-0.54 (0.31)	-0.47 (0.29)	-0.40 (0.28)	-0.33 (0.28)	-0.28 (0.28)	-0.23 (0.27)	-0.20 (0.26)	0.71 (0.11)

Table A6: Risk and Return by Alternative Account Book Value Deciles

Panel A replicates Table 2 using account-book-value sorted deciles under an alternative definition of account book value. Alternative book value equals the value of a hypothetical account which earns returns equal to the three-month Indian treasury rate and which experiences the same percentage of net sales and dollar amount of net purchases (i.e. assumes the amount of outside money available to purchase stocks is the same). For accounts opened prior to the start of our data (February 2002), we assign an initial book value equal to the value of the account at the time. Panel B replicates Table 3 using account-book-value deciles. Standard errors are reported in parentheses.

Panel A: Return Factor Loadings

	Account Book Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Excess Return	2.93% (1.28%)	2.09% (1.12%)	1.89% (1.03%)	1.90% (0.97%)	1.86% (0.95%)	1.80% (0.93%)	1.76% (0.92%)	1.74% (0.90%)	1.71% (0.88%)	1.65% (0.83%)	-1.29% (0.69%)
Four-Factor Alpha	-0.05% (0.66%)	-0.42% (0.67%)	-0.18% (0.56%)	0.14% (0.50%)	0.20% (0.47%)	0.18% (0.45%)	0.20% (0.44%)	0.22% (0.41%)	0.26% (0.39%)	0.37% (0.37%)	0.42% (0.40%)
Market Beta	1.17 (0.05)	1.15 (0.07)	1.14 (0.05)	1.10 (0.03)	1.09 (0.03)	1.08 (0.02)	1.08 (0.02)	1.07 (0.02)	1.05 (0.02)	1.01 (0.02)	-0.16 (0.04)
Size (SMB)	0.55 (0.04)	0.22 (0.04)	0.16 (0.03)	0.13 (0.03)	0.10 (0.02)	0.09 (0.02)	0.08 (0.02)	0.07 (0.02)	0.06 (0.02)	0.07 (0.02)	-0.48 (0.04)
Value (HML)	0.39 (0.18)	0.28 (0.17)	0.15 (0.15)	0.06 (0.14)	0.04 (0.13)	0.03 (0.12)	0.01 (0.12)	0.00 (0.11)	-0.02 (0.10)	-0.08 (0.10)	-0.47 (0.13)
Momentum (MOM)	-0.31 (0.07)	-0.14 (0.08)	-0.18 (0.06)	-0.19 (0.04)	-0.18 (0.04)	-0.17 (0.04)	-0.16 (0.03)	-0.15 (0.03)	-0.14 (0.03)	-0.11 (0.03)	0.20 (0.06)

Panel B: Risk and Returns

	Account Book Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	Smallest
Realized:											
Excess Return Volatility	22.9% (1.1%)	17.5% (1.0%)	15.7% (0.9%)	14.5% (0.9%)	13.7% (0.9%)	13.1% (0.9%)	12.6% (0.9%)	12.2% (0.9%)	11.7% (0.9%)	11.3% (0.8%)	-11.6% (0.9%)
Excess Returns	2.93% (1.28%)	2.09% (1.12%)	1.89% (1.03%)	1.90% (0.97%)	1.86% (0.95%)	1.80% (0.93%)	1.76% (0.92%)	1.74% (0.90%)	1.71% (0.88%)	1.65% (0.83%)	-1.29% (0.69%)
Sharpe Ratio	0.13 (0.05)	0.12 (0.06)	0.12 (0.06)	0.13 (0.07)	0.14 (0.07)	0.14 (0.07)	0.14 (0.07)	0.14 (0.07)	0.15 (0.07)	0.15 (0.07)	0.02 (0.04)
Excess Log Returns (X100)	0.79 (1.21)	0.71 (1.12)	0.73 (1.03)	0.91 (0.96)	0.96 (0.94)	0.98 (0.92)	0.99 (0.91)	1.02 (0.90)	1.04 (0.87)	1.02 (0.83)	0.23 (0.61)
Long Run Global Factor Prices:											
Excess Returns	0.54% (0.70%)	0.21% (0.69%)	0.37% (0.60%)	0.63% (0.56%)	0.68% (0.53%)	0.66% (0.51%)	0.67% (0.50%)	0.69% (0.48%)	0.73% (0.46%)	0.82% (0.44%)	0.28% (0.40%)
Sharpe Ratio	0.02 (0.03)	0.01 (0.04)	0.02 (0.04)	0.04 (0.04)	0.05 (0.04)	0.05 (0.04)	0.05 (0.04)	0.06 (0.04)	0.06 (0.04)	0.07 (0.04)	0.05 (0.02)
Excess Log Returns (X100)	-1.63 (0.72)	-1.19 (0.72)	-0.80 (0.62)	-0.37 (0.57)	-0.23 (0.54)	-0.17 (0.53)	-0.10 (0.52)	-0.03 (0.49)	0.05 (0.47)	0.19 (0.45)	1.82 (0.40)
Long Run Global Factor Prices, No Alpha:											
Excess Returns	0.59% (0.30%)	0.63% (0.28%)	0.55% (0.27%)	0.49% (0.27%)	0.48% (0.26%)	0.48% (0.26%)	0.48% (0.26%)	0.47% (0.26%)	0.47% (0.25%)	0.44% (0.24%)	-0.14% (0.12%)
Sharpe Ratio	0.03 (0.01)	0.04 (0.02)	0.03 (0.02)	0.03 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.01 (0.01)
Excess Log Returns (X100)	-1.58 (0.35)	-0.77 (0.32)	-0.62 (0.31)	-0.51 (0.29)	-0.42 (0.29)	-0.36 (0.28)	-0.30 (0.28)	-0.25 (0.28)	-0.21 (0.27)	-0.19 (0.26)	1.39 (0.16)

Table A7: Risk and Return by Account Value Deciles, Excluding Returns on Micro-Cap Stocks

Panel A replicates Table 2 under the exclusion of returns on stocks whose aggregate holdings in NSDL at the end of the prior month are less than 500 million Rs (roughly \$10 million). Panel B replicates Table 3 also excluding these micro-cap stock returns. Standard errors are reported in parentheses.

Panel A: Return Factor Loadings

	Account Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Excess Return	2.19% (1.23%)	1.70% (1.10%)	2.00% (1.01%)	1.85% (0.96%)	1.78% (0.94%)	1.78% (0.92%)	1.74% (0.90%)	1.69% (0.88%)	1.71% (0.86%)	1.66% (0.81%)	-0.53% (0.64%)
Four-Factor Alpha	-0.10% (0.71%)	-0.30% (0.69%)	0.09% (0.54%)	0.19% (0.50%)	0.24% (0.47%)	0.27% (0.45%)	0.25% (0.43%)	0.26% (0.40%)	0.33% (0.38%)	0.43% (0.36%)	0.54% (0.46%)
Market Beta	1.21 (0.06)	1.16 (0.08)	1.14 (0.04)	1.10 (0.03)	1.10 (0.03)	1.08 (0.02)	1.08 (0.02)	1.06 (0.02)	1.05 (0.02)	1.01 (0.02)	-0.21 (0.05)
Size (SMB)	0.31 (0.05)	0.16 (0.05)	0.07 (0.03)	0.06 (0.03)	0.05 (0.02)	0.04 (0.02)	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)	-0.28 (0.05)
Value (HML)	0.18 (0.21)	0.10 (0.20)	0.12 (0.14)	0.05 (0.14)	0.00 (0.13)	0.00 (0.12)	-0.01 (0.11)	-0.02 (0.11)	-0.04 (0.10)	-0.09 (0.09)	-0.28 (0.16)
Momentum (MOM)	-0.35 (0.09)	-0.17 (0.09)	-0.19 (0.06)	-0.18 (0.05)	-0.17 (0.04)	-0.16 (0.04)	-0.14 (0.03)	-0.13 (0.03)	-0.11 (0.03)	-0.07 (0.03)	0.28 (0.08)

Panel B: Risk and Returns

	Account Value Deciles										Largest minus Smallest
	Smallest	2	3	4	5	6	7	8	9	Largest	
Realized:											
Excess Return Volatility	19.8% (1.1%)	16.0% (1.0%)	15.3% (0.9%)	14.1% (0.9%)	13.3% (0.9%)	12.8% (0.9%)	12.3% (0.9%)	11.8% (0.9%)	11.3% (0.9%)	10.7% (0.8%)	-9.1% (0.8%)
Excess Returns	2.19% (1.23%)	1.70% (1.10%)	2.00% (1.01%)	1.85% (0.96%)	1.78% (0.94%)	1.78% (0.92%)	1.74% (0.90%)	1.69% (0.88%)	1.71% (0.86%)	1.66% (0.81%)	-0.53% (0.64%)
Sharpe Ratio	0.11 (0.06)	0.11 (0.07)	0.13 (0.06)	0.13 (0.07)	0.13 (0.07)	0.14 (0.07)	0.14 (0.07)	0.14 (0.07)	0.15 (0.08)	0.15 (0.08)	0.04 (0.04)
Excess Log Returns (X100)	0.47 (1.18)	0.48 (1.11)	0.90 (1.00)	0.90 (0.95)	0.92 (0.93)	0.98 (0.92)	1.00 (0.90)	1.01 (0.88)	1.07 (0.86)	1.08 (0.81)	0.62 (0.58)
Long Run Global Factor Prices:											
Excess Returns	0.40% (0.75%)	0.26% (0.70%)	0.62% (0.59%)	0.67% (0.56%)	0.72% (0.53%)	0.75% (0.51%)	0.73% (0.49%)	0.73% (0.47%)	0.80% (0.45%)	0.90% (0.43%)	0.49% (0.46%)
Sharpe Ratio	0.02 (0.04)	0.02 (0.04)	0.04 (0.04)	0.05 (0.04)	0.05 (0.04)	0.06 (0.04)	0.06 (0.04)	0.06 (0.04)	0.07 (0.04)	0.08 (0.04)	0.06 (0.02)
Excess Log Returns (X100)	-1.33 (0.75)	-0.97 (0.73)	-0.49 (0.60)	-0.28 (0.57)	-0.15 (0.54)	-0.06 (0.52)	-0.01 (0.50)	0.04 (0.49)	0.16 (0.46)	0.32 (0.44)	1.65 (0.44)
Long Run Global Factor Prices, No Alpha:											
Excess Returns	0.51% (0.32%)	0.55% (0.29%)	0.53% (0.28%)	0.49% (0.27%)	0.48% (0.27%)	0.48% (0.26%)	0.48% (0.26%)	0.47% (0.25%)	0.47% (0.25%)	0.46% (0.24%)	-0.04% (0.13%)
Sharpe Ratio	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)	0.03 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.04 (0.02)	0.02 (0.01)
Excess Log Returns (X100)	-1.23 (0.35)	-0.67 (0.32)	-0.58 (0.30)	-0.47 (0.29)	-0.40 (0.29)	-0.33 (0.28)	-0.27 (0.28)	-0.22 (0.27)	-0.17 (0.27)	-0.12 (0.26)	1.11 (0.15)

Table A8: Alternative Decomposition of Inequality Growth (Change in the Variance of Log Account Value)

The first three components of the decomposition in Table 4 (returns, net flows, and their covariance), are combined here as the contribution of changing values of pre-existing accounts where returns are available. The remainder of the change in variance of log account value is then decomposed into the contribution of (pre-existing) accounts without returns data and the contribution of accounts that enter or exit the universe of stock holding accounts.

Component		Average Share of Change in Log Wealth Variance
Changing Value of Pre-existing Accounts with Returns (Returns, Flows)	0.0199	101.30%
Entry/Exit Due to Availability of Stock Return Data	-0.0080	-40.91%
Entry/Exit of Account from Stock Holding Population	0.0078	39.61%
Realized Change in Log Wealth Variance	0.0197	100.00%