FEN-JUNE-2017

["Decreasing Returns to Scale, Fund Flows, and Performance"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2990737&partid=22912&did=346566&eid=537891) Free Download

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Email: [y-liu@mays.tamu.edu](mailto:y-liu@mays.tamu.edu)

Theoretical models imply fund size and performance should be negatively linked. However, empiricists have failed to uncover consistent support for this negative relation. Using a new econometric framework which includes fund-specific sensitivities to decreasing returns to scale, we find a both economically and statistically significant negative relation between fund size and performance. Exploiting fund heterogeneity to decreasing returns to scale, we show that investors direct flows to those funds with low sensitivity to decreasing returns to scale. Interestingly, investors appear to over-allocate capital to these low sensitivity funds leading to significantly negative excess performance.

["An Approach to Enhanced Indexing"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2989955&partid=22912&did=346628&eid=524917) Free Download

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Investment managers often manage a portfolio of stocks with respect to a benchmark. Their primary concern is selecting the best stocks to outperform their benchmark, while constraining their tracking error. The most common way of doing this is to use an optimization framework to maximize the information ratio of their portfolio. In this paper, we develop an unconventional approach to determining how a portfolio should be managed with respect to the benchmark. In particular, given some assumptions, we determine what percentage of the benchmark stocks would be optimal for the portfolio manager to select. The optimal portfolio depends on Fisher’s noncentral hypergeometric distribution and the Wallenius noncentral hypergeometric distribution. We find that the optimal selectivity of a benchmark universe varies from 50% to 80%, when managers have selection ability. The information ratio and the selectivity percentage can vary as the selection ability of the portfolio manager changes and as the underlying size of the universe changes. These results are provocative, given that many enhanced index portfolio managers select a low a percentage of the benchmark universe.

["What Do Crowdfunding Platforms Do? A Comparison between Investment-Based Platforms in Europe"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2988965&partid=22912&did=346612&eid=509408) Free Download

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Email: [Silvio.Vismara@unibg.it](mailto:Silvio.Vismara@unibg.it)

Despite the growing popularity of investment-based crowdfunding, we know little about what platforms do before the campaign. This is one of the first studies to provide cross-platform evidence on investment-based crowdfunding. First, we describe the regulation and development over time of investment-based crowdfunding markets in France, Italy, Germany and the UK. Second, using a sample of 127 platforms in these countries, we document which services are offered to proponents, before, during and after the campaigns. Finally, our econometric analysis shows that a higher number of post-campaign services offered by the platforms increases the annual number of successful campaigns. Services offered before and during the campaign do not attract more campaigns to the platforms

[Credit Alpha and CO2 Reduction: A Portfolio Manager Perspective"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2987772&partid=22912&did=346606&eid=502937) Free Download

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This paper discusses the challenges of carbon-dioxide emission measurement on corporate credit portfolios. We illustrate how it can be difficult to translate traditional CO2 reductive strategies into incentives for portfolio managers. As an alternative approach to the footprinting techniques commonplace in equities, we introduce the ECOBAR model which looks at CO2 missions from an ordinal standpoint and takes a risk-based approach to measuring this in credit portfolios. We build out the model to encompass important credit alpha factors such as short positions, leverage and derivatives as well as explicit green investments such as green bonds. We apply the model on two sets of data, where the first is a historical real traded investment-grade credit portfolio and the second is a systematic CDS trading strategy. In the traded portfolio, we find that it has been possible to own a clearly CO2 efficient portfolio whilst still generating average alpha of 4.5 percentage points per annum. In the CDS-based strategy, alpha loss turns out to be insignificant with reasonable investment constraints on high-CO2 emitting issuers. We conclude that there is a good potential for low-CO2 strategies in a variety of operational, mainstream credit trading settings.

[Optimal Holdings of Active, Passive and Smart Beta Strategies"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2987924&partid=22912&did=346357&eid=330551) Free Download

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Institutional equity portfolios are increasingly dominated by a large passive core and a smaller constellation of high tracking error satellite portfolios – the core and explore approach. We examine the role of lower tracking error strategies such as enhanced index and smart beta in this core and explore world. In the conventional approach where risk is volatility and for a fixed target excess return implied by the core and explore model, the lower tracking error strategies can only lower tracking error. We study this problem from the perspective that investment risk is not having what you need when you need it. We find that for moderate excess return targets and long horizons, enhanced index and smart beta strategies play an important role in reducing investment risk.

[Why Do Individuals Not Participate in the Stock Market?"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2822094&partid=22912&did=346151&eid=167986) Free Download   
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Email: [yulia.veld-merkoulova@monash.edu](mailto:yulia.veld-merkoulova@monash.edu)

Using a representative survey panel, we show that individual-level expectations of the equity risk premium are related to stock market participation decisions. We define the Perceived Equity Risk Premium (PERP) as the difference between the individual’s expected stock market return and her personal opportunity cost of capital, and find that the PERP is positively related to stock market participation. Although 66% of the non-investors assert that they will never invest in stocks, this attitude is less likely for individuals who expect higher benefits from investing, as measured by the PERP, and/or who have a lower level of inertia.

[Valuation of Carbon Emission Allowances and Related Derivatives Under a Closed Trading Phase"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2988701&partid=22912&did=346331&eid=309351) Free Download

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Email: [twirjant@uwaterloo.ca](mailto:twirjant@uwaterloo.ca)

This paper provides a complete-market valuation framework for emission allowances and related derivatives. In particular we present a structural model by assuming an emission rate with time-homogeneous parameters, where closed-form expressions are derived for allowances, allowance futures, and option prices. In addition, we also discuss the completeness of the allowance market and the source of incompleteness as supported by empirical evidence. While identifying limitations of the models, we present in detail their applications under information incompleteness, with a focus on deriving implied emission values from actual market data. Finally, the model is implemented using real world allowance data, based on which a comparative analysis is undertaken.

[Multimarket High-Frequency Trading and Commonality in Liquidity"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2984887&partid=22912&did=345890&eid=1522645) Free Download

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This paper examines the effects of multimarket high-frequency trading activity on systematic liquidity co-movements across different markets. Multimarket trading by HFTs connects individual markets in a single network, inducing stronger network-wide liquidity co-movements. We use a staggered introduction of an alternative trading platform, Chi-X, in European equity markets as our instrument for an exogenous increase in multimarket HFT activity. Consistent with our predictions, we find that liquidity co-movements with an aggregate European market significantly increase after Chi-X introduction and even dominate liquidity co-movements with the home market. They are especially strong in down markets and for stocks with a higher intensity of HFT trading.

["The Passive vs. Active Conundrum: A New Perspective on the Arithmetic of Index Investing"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2986458&partid=22912&did=345890&eid=1522645) Free Download

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Email: [chris.anderson@avondalecap.com](mailto:chris.anderson@avondalecap.com)

The rise in passive investment through indexes has been significant in recent decades and is causing a drastic reduction in actively managed assets. In addition to the empirical evidence that index funds outperform actively managed funds, net of fees, the logical basis for index investing, as famously articulated by Professor William Sharpe in The Arithmetic of Active Investing and in other publications, has provided proponents with an unchallenged rationale for indexing — that the average active manager cannot beat the index and actually tends to underperform it after deducting fees. This logical argument has persuaded many investors to increase allocations to index funds given their admitted inability to accurately choose the active outperformers from the active underperformers in advance. It has also reduced active manager’s credibility given their inability to add value (in terms of returns vs. an index) as a group. This paper reexamines the “arithmetic of active investing” as explained by Professor Sharpe and attempts to show that its assumptions do not necessarily hold in practice. If active buyers and active sellers have a roughly equal probability of buying or selling each security in the index, liquidity is available on both sides of each trade and index investors are able to execute orders for all securities at proper market-capitalization weightings. However, once active investors concentrate their orders on one side of a trade, it becomes difficult for index investors to execute the proper orders to keep their weightings in-line with the index. This idea of failed order execution (or costly order execution) has been shown by previous authors in the context of how “informed” traders trade with “uninformed” traders. The same concept can be applied to active vs. passive investors as long as active investors are “informed” on average (i.e., possess skill). By illustrating how index investors are required to trade in the underlying shares of the index (or equivalently that ETF Trusts are forced to issue and redeem shares on a continuous basis) it can be shown that order concentration by active investors can cause index investors to experience tracking difference (commonly referred to as tracking error). By including tracking difference in the arithmetic of index investing, active management is no longer a zero-sum game. As long as active managers as a group possess skill, they can beat the index at the expense of index investors who underperform by an amount equal to tracking difference. This framework also indicates that tracking difference is not necessarily a fixed cost for index investors and could potentially increase to undesirable levels in the future.

["The Relevance of Broker Networks for Information Diffusion in the Stock Market"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2988743&partid=22912&did=345887&eid=1519494) Fee Download   
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This paper shows that the network of relationships between brokers and institutional investors shapes the information diffusion in the stock market. We exploit trade-level data to show that central brokers gather information by executing informed trades, which is then leaked to their best clients. We show that after large informed trades, a significantly higher volume of other institutional investors execute similar trades through the same broker, allowing them to capture higher returns in the first few days after the initial trade. In contrast, we find that when the informed asset manager is affiliated with the broker, such imitation does not occur. Similarly, we show that the clients of the broker employed by activist investors to execute their trades tend to buy the same stocks just before the filing of the 13D. This evidence also suggests that an important source of alpha for fund managers is the access to better connections rather than superior skill.

[Regulatory Issues and Challenges Presented by Virtual Currencies"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2988367&partid=22912&did=345862&eid=1504575) Free Download   
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There is little doubt that virtual currencies are here to stay in one form or another, and as means of payment, they invite if not require regulation and standardization to avoid abuse. Stakeholders of virtual currency regulation are companies involved in the blockchain economy, both new entrants and those already controlling part of the market; governments regulating both economic activity and consumer protection; and consumers. The interests of those parties naturally conflict, and given governmental regulatory powers, it is understandable that, faced with the significant risks and difficulties in coming up with a comprehensive regulatory concept, governments take a precautionary stance of wait and see, while in some cases leaning towards a prohibition of virtual currencies. But if regulators could start, more modestly, by finding ways to monitor virtual currency transactions and reliably identify their counterparties, the problem of money laundering and terrorist finance would be considerably easier to resolve than if conspirators were openly using bank wires and accounts in their own names. The problem, then, is not that it is impossible to control decentralized virtual currencies, but that state actors lack tools to decipher digital currency networks and gain access to the full measure of information contained therein. That, however, is more a question of cryptography and general computer science than of alien decentralized structures where traditional surveillance methods, such as wiretapping, simply will no longer work.

["Evidence and Implications of Short-Termism in US Public Capital Markets: 1980-2013"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2982589&partid=22912&did=345724&eid=1419470) Free Download

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In this paper, we provide evidence of increasing short-termism in US equity capital markets over the period of 1980-2013. Using a ‘market discount factor’ estimated for publicly traded firms based on a capital asset pricing model, we show that US capital markets have become increasingly short-term oriented over the past thirty years. We corroborate this finding by estimating the impact of various investment behaviors and relevant ownership variables on our measure of short-termism, market discounting. We find that markets more heavily discount firms that have less financial slack, spend less on capital or R&D, or have greater analyst coverage. Consistent with prior research, we also find that public firms held by more transient institutional investors (i.e., investors that have significant turnovers of stocks) are more heavily discounted than their counterparts held by dedicated investors (i.e., investors that hold stocks for the long term). Further, firms that pay their executives proportionately more via long-term compensation packages are discounted less than firms with more short-term compensation, while shorter CEO tenure is correlated with greater discounting. To examine the impact of short-term valuation on firm behavior, we also estimate the impact of short-termism on capital spending using changes in a firm’s institutional ownership type (e.g., a switch from transient to dedicated or vice versa) as an identification mechanism. We find that short-term market valuations are significantly negatively correlated with future capital investment. Overall, these results suggest that market discounting may proxy for firm short-termism. To our knowledge, this is the first paper to demonstrate economy-wide, firm-level evidence of increasing short-termism and the implications for investment behaviors by firms.

[Passive Investing and Market Efficiency"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2989692&partid=22912&did=345721&eid=1417727) Free Download

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In a stock market dominated by passive investors, an interesting question arises as to how the equilibrium level of market efficiency will be maintained. This short article argues that the critical agents in this regard must be the companies that issue the shares, not active investment managers.

[Crowdfunding Cleantech"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2985703&partid=22912&did=345550&eid=1314138) Free Download   
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This paper provides insights on the crowdfunding of new alternative energy technologies by enabling inferences from large pools of small investors. We provide large sample evidence from 81 countries around the world that cleantech crowdfunding is more common in countries with low levels of individualism and more common when oil prices are rising. Cleantech crowdfunding campaigns are more likely to have higher capital goals, more photos, a video pitch, and longer text descriptions of the campaign. Relative to non-cleantech campaigns, the success of cleantech campaigns, in terms of achieving funding goals, is more economically sensitive to the campaign’s goal size, being not-for-profit, and having a video pitch. The evidence is consistent with the view that while alternative energies are viewed as being more risky, and investors face greater information asymmetries relative to other types of investment projects, there are mechanisms for entrepreneurs to mitigate these information problems and be at least as successful in cleantech crowdfunding markets.

["Inventory Management for Mobile Money Agents in the Developing World"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2987591&partid=22912&did=345356&eid=1132617) Free Download   
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Mobile money systems, platforms built and managed by mobile network operators to allow money to be stored as digital currency, have burgeoned in the developing world as a mechanism to transfer money electronically. Mobile money agents exchange cash for electronic value and vice versa, forming the backbone of an emerging electronic currency ecosystem that has potential to connect millions of poor and “unbanked” people to the formal financial system. Unfortunately, low service levels due to agent inventory management are a major impediment to the further development of these ecosystems. This paper describes models for the agent’s inventory problem, unique in that sales of electronic value (cash) correspond to an equivalent increase in inventory of cash (electronic value). This paper presents a base inventory model and an analytical heuristic that are used to determine optimal stocking levels for cash and electronic value given an agent’s historical demand. When tested with a large sample of transaction-level data provided by an East African mobile operator, both the base model and the heuristic improved agent profitability by reducing inventory costs (defined here as the sum of stockout losses and cost of capital associated with holding inventory). The heuristic increased estimated agent profits by 15% relative to profits realized through agents actual decisions, while also offering substantial computational advantages relative to the base model.

["The Agency Problems of Institutional Investors"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2982617&partid=22912&did=345127&eid=969916) Free Download

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Email: [shirst@law.harvard.edu](mailto:shirst@law.harvard.edu)

We analyze how the rise of institutional investors has transformed the governance landscape. While corporate ownership is now concentrated in the hands of institutional investors that can exercise stewardship of those corporations that would be impossible for dispersed shareholders, the investment managers of these institutional investors have agency problems vis-à-vis their own investors. We develop an analytical framework for examining these agency problems and apply it to study several key types of investment managers.   
  
We analyze how the investment managers of mutual funds - both index funds and actively managed funds - have incentives to under-spend on stewardship and to side excessively with managers of corporations. We show that these incentives are especially acute for managers of index funds, and that the rise of such funds has system-wide adverse consequences for corporate governance. Activist hedge funds have substantially better incentives than managers of index funds or active mutual funds, but their activities do not provide a complete solution for the agency problems of institutional investors.   
  
Our analysis provides a framework for future work on institutional investors and their agency problems, and generates insights on a wide range of policy questions. We discuss implications for disclosure by institutional investors; regulation of their fees; stewardship codes; the rise of index investing; proxy advisors; hedge funds; wolf pack activism; and the allocation of power between corporate managers and shareholders.

[Why Do Firms Sit on Cash?: An Asymmetric Information Approach"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2984276&partid=22912&did=345126&eid=964824) Free Download

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Email: [a-raviv@nwu.edu](mailto:a-raviv@nwu.edu)

Cash holdings of U.S. firms have increased dramatically since 1980. The purpose of this paper is to build a simple formal model of cash holdings that can explain this and other empirical regularities. Our model is based on the well-known “lemons” problem associated with equity issuance. We show that firms with poor growth opportunities and those with excellent opportunities will not hold excess cash, while firms with opportunities in the middle range will hold excess cash.

["Should Governments Invest More in Nudging?"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2982109&partid=22912&did=345098&eid=946272) Free Download

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Governments are increasingly adopting behavioral science techniques for changing individual behavior in pursuit of policy objectives. The types of “nudge” interventions that governments are now adopting alter people’s decisions without resorting to coercion or significant changes to economic incentives. We calculate ratios of impact to cost for nudge interventions and for traditional policy tools, such as tax incentives and other financial inducements, and we find that nudge interventions often compare favorably to traditional interventions. We conclude that nudging is a valuable approach that should be used more in conjunction with traditional policies, but more relative effectiveness calculations are needed.

[Hybrid IS-VWAP Dynamic Algorithmic Trading via LQR"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2984297&partid=22912&did=344911&eid=825795) Free Download

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Email: [jhshen@alum.mit.edu](mailto:jhshen@alum.mit.edu)

For optimal trade execution, static models are useful for pre-trade estimation or benchmarking, but real trading must be based on dynamic decision making or dynamic programming (DP). DP algorithms can adjust execution automatically to real-time market price waves as well as inventory positions, and thus are more responsive and realistic. Development of DP models however faces a few notorious obstacles including the curse of dimensionality, absence of closed-form solutions for general formulations, and difficulty in incorporating hard constraints. The DP approach based on linear-quadratic regulators (LQR) was first introduced to algorithmic trading by Hora (2006). In Dynamic Control Theory, LQR models allow closed-form solutions thanks to the Bellman equations and quadratic value functions. The resulted optimal policies are affine functions of the state variables. The current work improves the LQR model of Hora (2006) in several important areas, including (a) the unconditional stability (or convexity), (b) retiring of the second-order small term of stagewise risk aversion, (c) quasi risk aversion achieved by time-varying delay costs, (d) incorporation of the bid-offer spreads, and (e) hybridizing the implementation shortfall (IS) algorithm with the VWAP approach to softly enforce the constraint of completion. The impact models and price dynamics still follow the earlier framework of Huberman and Stanzl (2001). The motivations behind every component of the improved model are elaborated, and the closed-form LQR solutions are derived (Theorem 1 and 2). Numerical simulation of the LQR trading paths is presented, which confirms several desirable properties of the hybrid IS-VWAP model.

[Market Efficiency and Limits to Arbitrage: Evidence from the Biggest Short Squeeze in History"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2977019&partid=22912&did=344908&eid=822278) Free Download

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On October 26, 2008, Porsche announced its domination plan for Volkswagen. This announcement came as a surprise to investors shorting Volkswagen stock, and caused the biggest short squeeze ever. We use the Porsche-VW short squeeze and the German financial market system as a unique experimental setting to argue that regulation is important for market quality and informational risk in modern, fast-paced, yet opaque financial markets. We provide the first forensic academic study of this squeeze and show that it significantly impaired price discovery, increased informational risk, and impeded market efficiency. These limits to shorting arbitrage imply significant costs to the arbitrageurs involved.

["Financial Globalization and Market Volatility: An Empirical Appraisal"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2985517&partid=22912&did=344767&eid=727419) Free Download   
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This paper computes a new financial globalization index for a large sample of countries for 1992-2016. Unlike other measures, the financial globalization index corrects for the heteroscedasticity of global volatility. This leads to a downward adjustment of financial globalization trends for developed, emerging, and frontier markets. The paper also shows that financial globalization reduces market volatility (measured by the volatility of stock returns) in tranquil times, and increases it in turbulent ones. On avera

["Information Advantage and Institutional Investors’ Performance in Foreign Markets"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2980462&partid=22912&did=344527&eid=518884) Free Download

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Traditional portfolio theory predicts that investors’ portfolios should be diversified across international markets. In contrast, empirical studies document that investors are more likely to invest in their home country and in familiar foreign markets. These findings imply that investors do not take advantage of international diversification opportunities. This study focuses specifically on foreign market asset allocations and examines empirically whether the familiarity driven foreign portfolio investment is a rational choice attributed to information advantage. Using a sample of over 46,000 institutional investors from 46 countries, we show that investors overweight foreign markets that are familiar but also earn higher risk-adjusted returns in those markets. Furthermore, we document that more skilled investors benefit the most from familiarity based allocations.

[Algorithmic Trading and Mutual Fund Performance"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2980774&partid=22912&did=344526&eid=517043) Free Download

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Email: [joeywenling.yang@uwa.edu.au](mailto:joeywenling.yang@uwa.edu.au)

This paper examines the effect of algorithmic trading on the US mutual fund performance. Using the AT proxy of Hendershott et al. (2011), the US domestic equity mutual fund returns and their stock holdings, we find evidence that funds holding stocks with higher AT exposure have lower holdings return. This underperformance is compensated by higher interim trading profits of fund managers measured by the return gap. The strong positive causal effect of AT on return gap exists even after controlling for liquidity and execution shortfall, suggesting fund managers’ ability to benefit from improved trading conditions are brought about by AT. In addition, we find that the largest AT effect is in funds holding small-cap stocks, and the smallest effect in index funds.

["High Frequency Trading and Fundamental Trading"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2980875&partid=22912&did=344383&eid=370539) Free Download

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I develop a multi-period trading model to analyze how a fundamental trader adjusts his trading strategies and information production decisions to the existence of high frequency trading (HFT). I show that these decisions differ strongly depending on the type of information that the HFT can observe. Information correlated with past trading activity reduces fundamental trading and information production, and leads to lower price informativeness, compared to a benchmark without HFT. HFT information correlated with fundamental information does not induce these effects, and prices may become more informative on average. Moreover, I study the ability of prices to reflect the asset value and produced information over time. My results are consistent with empirical findings highlighting that HFT enhances price discovery in the short run, and others suggesting that HFT reduces the ability of prices to reflect long-term fundamental information.

[Corporate Governance on Ethereum's Blockchain"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2977522&partid=22912&did=343989&eid=1566123) Free Download

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New blockchain-based technology allows users to form what's called Decentralized Autonomous Organizations ("DAO"), which can operate similarly to a publicly-traded corporation. Specifically, cryptocurrency holders can replace traditional shareholders, who can then appoint members of a governing body similar to a board of directors. This governing body can then vote to issue currency to an account holder who can then act similarly to a Chief Financial Officer, who can then pay the salaries of executives, employees, and directors. Because this is all done on using the blockchain protocol, these virtual corporations can operate pseudonymously without government intervention using what's called "Smart Contracts" (contracts that execute without human intervention).

["Why Have Interest Rates Fallen Far Below the Return on Capital"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2983681&partid=22912&did=343821&eid=1398588) Free Download   
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Risk-free rates have been falling since the 1980s. The return on capital, defined here as the profits over the stock of capital, has not. We analyze these trends in a calibrated OLG model designed to encompass many of the "usual suspects" cited in the debate on secular stagnation. Declining labor force and productivity growth imply a limited decline in real interest rates and deleveraging cannot account for the joint decline in the risk free rate and increase in the risk premium. If we allow for a change in the (perceived) risk to productivity growth to fit the data, we find that the decline in the risk-free rate requires an increase in the borrowing capacity of the indebted agents in the model, consistent with the increase in the sum of public and private debt since the crisis but at odds with a deleveraging-based explanation put forth in Eggertsson and Krugman (2012).

[Finance for Normal People: How Investors and Markets Behave (Introduction)"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2963183&partid=22912&did=343817&eid=1392465) Free Download   
Finance For Normal People: How Investors and Markets Behave, Oxford University Press (Forthcoming)

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Behavioral finance presented in Finance for Normal People is a second generation behavioral finance. The first generation, starting in the early 1980s, largely accepted standard finance’s notion of people’s wants as “rational” wants – restricted to the utilitarian benefits of high returns and low risk. That first generation commonly described people as “irrational” - succumbing to cognitive and emotional errors and misled on their way to their rational wants.  
  
The second generation describes people as normal. It begins by acknowledging the full range of people’s normal wants - hope for riches and freedom from the fear of poverty, nurturing our children and families, being true to our values, gaining high social status, playing games and winning, and more. It distinguishes normal wants from errors, and offers guidance on using shortcuts and avoiding errors on the way to satisfying normal wants. People’s normal wants, even more than their cognitive and emotional shortcuts and errors, underlie answers to important questions of finance, including saving and spending, portfolio construction, asset pricing, and market efficiency. These are presented in this book.  
  
We often hear that behavioral finance is nothing more than a collection of stories about irrational people misled by cognitive and emotional errors, that it lacks the unified structure of standard finance. Yet today's standard finance is no longer unified because wide cracks have opened between its theory and the evidence. This book offers behavioral finance as a unified structure that incorporates parts of standard finance, replaces others, and includes bridges between theory, evidence, and practice.

["Fast and Precautious: Order Controls for Trade Execution"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2977667&partid=22912&did=343484&eid=1075874) Free Download

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Controlling the speed and direction of trades becomes increasingly important to algorithmic trading desks. Brian Bulthuis, Julio Concha, Tim Leung and Brian Ward propose a new optimal execution algorithm with both li mit and market orders. An optimal strategy is derived analytically and illustrated numerically.

[Finance in the Courtroom: Appraising Its Growing Pains"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2976556&partid=22912&did=343305&eid=967875" \t "_blank)    
Forthcoming in Delaware Lawyer, Summer 2017

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This short essay provides an overview of the current state of finance in corporate law, emphasizing its role in a series of pending appraisal cases at the Delaware Supreme Court.

["The Leverage Effect and the Basket-Index Put Spread"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2972795&partid=22912&did=343070&eid=747063) Free Download

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Benchmark models which exogenously specify equity dynamics cannot explain the large spread in prices between put options written on individual banks and options written on the financial sector index during the financial crisis. However, theoretical considerations require that asset dynamics be specified exogenously, and that endogenously determined equity dynamics exhibit a “leverage effect” in which equity volatility remains finite as firms approach insolvency. This leverage effect significantly reduces forward-looking “down-side” implied correlations between highly leveraged firms, in turn providing an explanation for observed option prices in the time-series and cross-section without reference to a government subsidy.

["Algorithmic Regulation: A Critical Interrogation"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2972505&partid=22912&did=342825&eid=585349) Free Download   
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Innovations in networked digital communications technologies, including the rise of ‘Big Data’, ubiquitous computing and cloud storage systems, may be giving rise to a new system of social ordering known as algorithmic regulation. Algorithmic regulation refers to decision-making systems that regulate a domain of activity in order to manage risk or alter behaviour through continual computational generation of knowledge by systematically collecting data (in real time on a continuous basis) emitted directly from numerous dynamic components pertaining to the regulated environment in order to identify and, if necessary, automatically refine (or prompt refinement of) the system’s operations to attain a pre-specified goal.   
  
It provides a descriptive analysis of algorithmic regulation, classifying these decision-making systems as either reactive or pre-emptive, and offers a taxonomy that identifies 8 different forms of algorithmic regulation based on their configuration at each of the three stages of the cybernetic process: notably, at the level of standard setting (adaptive vs. fixed behavioural standards); information-gathering and monitoring (historic data vs. predictions based on inferred data) and at the level of sanction and behavioural change (automatic execution vs. recommender systems). It maps the contours of several emerging debates surrounding algorithmic regulation, drawing upon insights from regulatory governance studies, legal critiques, surveillance studies and critical data studies to highlight various concerns about the legitimacy of algorithmic regulation.

["Kenneth S. Rogoff's The Curse of Cash"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2972588&partid=22912&did=342825&eid=585349" \t "_blank) Free Download

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In his recent book, The Curse of Cash, Ken Rogoff makes the case for getting rid of hand-to-hand currency. The argument is relatively straightforward. Cash, according to Rogoff, is largely used to buy and sell illegal goods and services and evade taxes. It also places a lower bound on interest rates, thereby limiting the extent to which the monetary authority can prevent recessions. As such, he argues, we’d be better off without it. Rogoff’s work is subtle and sophisticated. He anticipates many counterarguments and heads them off to the extent possible. Nonetheless, I find three major shortcomings in the work: the evidence on the extent to which cash is employed by criminals and tax cheats is flimsy, the net benefits of eliminating crime and tax evasion are overstated, and it is not clear that cash prevents the central bank from conducting effective monetary policy.

[High-Frequency Trading Strategies"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2973019&partid=22912&did=342628&eid=401294) Free Download

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Examining the order book imbalance immediately before each order submission, cancelation and trade, we show high frequency traders (HFT) supply liquidity on the thick side of the order book and demand liquidity from the thin side. This strategic behavior is more pronounced during volatile periods and when trading speeds increase. However, by competing with non-HFT limit orders, HFT impose a welfare externality by crowding out slower non-HFT limit orders. Overall, we document an important information channel driving HFT behavior.

["The Impact of Time Horizon on the Effect of Diversification"](https://hq.ssrn.com/Journals/RedirectClick.cfm?url=https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2971765&partid=22912&did=342625&eid=399427) Free Download

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Although investors are often advised to diversify their investment portfolios as well as to consider rebalancing them periodically, research has shown that they often ignore this advice. We try to determine if this behavior is rational by analyzing a risk-averse investor who chooses between buy-and-hold portfolios comprised of assets with dynamic uncertain returns. The assets in the portfolio evolve according to multiplicative random walks, distinguishing them from the traditional one-shot or additive models.  
  
Solving for the optimal choice, we find an interaction between diversification and the time horizon an investor is facing. This interaction results in conditions for which an optimal portfolio in one time horizon becomes suboptimal in a longer (or shorter) horizon. Moreover, we find that rebalancing may be suboptimal if the portfolio is diversified enough. Such effects are a consequence of the non-ergodicity of the value of assets that follow multiplicative dynamics.  
  
Thus we are able to provide a rational explanation for observed behavior of investors and subjects in lab experiments who choose to not diversify their portfolios or do not rebalance as often as the standard theory would prescribe.