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Master Theses FSS 2024: Topics

- TOPIC NR1:** **ESG Commitment in Asset Management: Do ESG Funds Engage in Green Window Dressing?**
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TOPIC NR1: ESG Commitment in Asset Management: Do ESG Funds Engage in Green Window Dressing?

Advisor: Larissa Ginzinger

In recent years, the integration of environmental, social and governance (ESG) factors into investment decisions has gained significant traction in the asset management industry, as investors increasingly value sustainability (Hartzmark & Sussman (2019)). However, responsible investing can lead to an inherent tension, as fund managers must balance financial returns and ESG considerations. From a theoretical perspective, introducing an ESG constraint into standard portfolio optimization implies a trade-off between sustainability and performance (Pedersen, Fitzgibbons & Pomorski (2021)). Parise & Rubin (2023) investigate whether fund managers circumvent their ESG mandate by strategically timing the purchase and sale of sustainable assets. Portfolio holdings are disclosed infrequently (quarterly), so ESG funds may only pretend to be responsible when portfolio positions are publicly observable.

The goal of this thesis is twofold. First, the student is expected to carefully replicate the main findings of Parise & Rubin (2023). Do fund managers opportunistically decrease responsible asset holdings after portfolio disclosure dates? If so, what are the asset pricing implications of ESG manipulation? Does ESG manipulation relax ESG constraints, leading to improved performance and increased investor flows? Second, the student should extend the findings of Parise & Rubin (2023) by: (i) extending the sample period to include more recent years; and (ii) examining gender differences in commitment to ESG integration. This extension is motivated by the fact that Di Giuli, Garel and Petit-Romec (2022) document that female-led investment funds are more likely to actively engage with companies to promote ESG policies.

Requirements:

Mutual fund data can be obtained from the CRSP Survivor Bias-Free Mutual Fund Database and Morningstar. Holdings information and firm-level accounting data can be downloaded from Thomson Reuters and Compustat, respectively. These databases are freely accessible to affiliates of the University of Mannheim. ESG scores from MSCI will be made available by the supervisor. The MSCI USA ESG Leaders Index is publicly available. It is important that the candidate has at least basic knowledge of a statistical software program (e.g., Stata, R, or Python) and econometrics.

Introductory Literature:

- Di Giuli, A., Garel, A., & Petit-Romec, A. (2022). The voting behavior of women-led mutual funds. SSRN Working Paper.
- Hartzmark, S. M., & Sussman, A. B. (2019). Do investors value sustainability? A natural experiment examining ranking and fund flows. *The Journal of Finance*, 74(6), 2789-2837.
- Kaustia, M., & Yu, W. (2021). Greenwashing in mutual funds. SSRN Working Paper.
- Parise, G., & Rubin, M. (2023). Green Window Dressing. SSRN Working Paper.
- Pedersen, L. H., Fitzgibbons, S., & Pomorski, L. (2021). Responsible investing: The ESG-efficient frontier. *Journal of Financial Economics*, 142(2), 572-597.

TOPIC NR2: Does Biodiversity Risk Affect Asset Prices?

Advisor: Larissa Ginzinger

Over the past decade, there has been an increasing focus on understanding the complex relationship between the economy and the health of our planet. Much of this research has examined how climate change affects economic activity and asset values (e.g. Giglio, Kelly & Stroebele (2021)). However, climate change is only one dimension of the feedback loops between the economy and the health of the planet. An equally important concern is the loss of biodiversity, defined as the sum of genes, species and ecosystems. Moreover, the climate and biodiversity crises are deeply intertwined. Meeting the goals of the Paris Climate Agreement depends on the successful conservation, restoration, and management of biodiversity.

Despite its importance, biodiversity risk has been understudied in economics and research, in part because of its complexity and the challenges of measuring it. Giglio, Kuchler, Stroebele & Zeng (2023) fill this gap by constructing two aggregate biodiversity risk indices that measure attention to biodiversity and several measures of firm and industry exposure to biodiversity risk. They also provide evidence that biodiversity risks are incorporated into equity prices: the returns of portfolios sorted by measures of biodiversity risk exposure covary positively with innovations in aggregate biodiversity risk.

The goal of this thesis is twofold. First, the student is expected to carefully replicate the main findings of Giglio, Kuchler, Stroebele & Zeng (2023) using their publicly available biodiversity measures. Which industries are most exposed to biodiversity risk? Is biodiversity risk incorporated in equity prices? What is the relationship between biodiversity risk and climate risk? Second, the student should extend the findings of Giglio, Kuchler, Stroebele & Zeng (2023) by using information on (attention to) toxic releases. How does attention to toxic releases vary over time? Do firms' toxic releases affect stock prices? Are toxic releases related to biodiversity risk?

Requirements:

Financial data and firm-level accounting data can be downloaded from CRSP and Compustat, respectively. Biodiversity risk data and data on toxic releases is publicly available. It is important that the candidate has at least basic knowledge of a statistical software program (e.g., Stata, R, or Python) and econometrics.

Introductory Literature:

- Engle, R. F., Giglio, S., Kelly, B., Lee, H., & Stroebele, J. (2020). Hedging climate change news. *The Review of Financial Studies*, 33(3), 1184-1216.
- Flammer, C., Giroux, T., & Heal, G. (2023). Biodiversity finance. National Bureau of Economic Research Working Paper.
- Garel, A., Romec, A., Sautner, Z., & Wagner, A. F. (2023). Do Investors Care About Biodiversity?. *Swiss Finance Institute Research Paper*, (23-24).
- Giglio, S., Kelly, B., & Stroebele, J. (2021). Climate Finance. *Annual Review of Financial Economics*, 13, 15-36.
- Giglio, S., Kuchler, T., Stroebele, J., & Zeng, X. (2023). Biodiversity Risk (No. w31137). National Bureau of Economic Research.
- Kalhor, M. R., & Kyaw, K. (2024). Manage biodiversity risk exposure?. *Finance Research Letters*, 61, 104989.

TOPIC NR3: The ESG Rating Disagreement

Advisor: Larissa Ginzinger

Institutional investors are increasingly considering aspects of companies' environmental, social and governance (ESG) profiles when making investment decisions. As a result, ESG ratings can have far-reaching effects on capital allocation, asset prices, and corporate policies. However, recent studies have questioned the credibility of ESG ratings by documenting a lack of standardization of ESG scores across data providers. For instance, Berg, Koelbel, and Rigobon (2019) document substantial disagreement between the ESG ratings provided by six prominent ESG rating agencies. Gibson Brandon, Krueger, and Schmidt (2021) document that stock returns are positively related to ESG rating disagreement, suggesting a risk premium for firms with higher ESG rating divergence.

The goal of this thesis is two-fold. First, the student is expected to carefully document the ESG rating disagreement in the spirit of Berg, Koelbel & Rigobon (2019) and replicate the main findings of Gibson Brandon, Krueger, and Schmidt (2021) with respect to stock returns using ESG rating data from MSCI KLD, MSCI, Sustainalytics, and Refinitiv Asset4. Do the ratings of these asset providers diverge? Does disagreement vary along observable firm-level financial and accounting characteristics? How does ESG rating disagreement relate to stock returns? Do the results differ when each ESG dimension is considered separately? Second, the student should extend the replication results by (i) extending the sample period to include more recent years and (ii) using data on emissions, toxic releases, and ESG incidents. Does ESG rating disagreement diminish over time? How are ESG ratings from different data providers related to carbon emissions, toxic releases, and ESG incidents?

Requirements: Financial data and firm-level accounting data can be downloaded from CRSP and Compustat, respectively. ESG ratings from MSCI KLD and ESG ratings and carbon emissions from Refinitiv Asset 4 are readily accessible for affiliates of the University of Mannheim. ESG ratings and ESG incident data from MSCI and Sustainalytics will be made available by the supervisor. Data on toxic releases are publicly available. We recommend that the candidate has at least basic knowledge of a statistical software program (e.g., Stata, R, or Python) and econometrics.

Introductory Literature:

- Avramov, D., Cheng, S., Lioui, A., & Tarelli, A. (2022). Sustainable investing with ESG rating uncertainty. *Journal of Financial Economics*, 145(2), 642-664.
- Berg, F., Koelbel, J. F., & Rigobon, R. (2019). Aggregate confusion: The divergence of ESG ratings. *Forthcoming Review of Finance*.
- Christensen, D. M., Serafeim, G., & Sikochi, A. (2022). Why is corporate virtue in the eye of the beholder? The case of ESG ratings. *The Accounting Review*, 97(1), 147-175.
- Gibson Brandon, R., Krueger, P., & Schmidt, P. S. (2021). ESG rating disagreement and stock returns. *Financial Analysts Journal*, 77(4), 104-127.
- Serafeim, G., & Yoon, A. (2022). Stock price reactions to ESG news: The role of ESG ratings and disagreement. *Review of Accounting Studies*, 1-31.

TOPIC NR4: Are mutual fund managers skillful?

Advisor: Chia-Yi Yen

Whether fund managers add value to fund performance has long been a debate. Seminal research by Grinblatt and Titman (1989), Daniel et al. (1997), and Wermers (2000) has suggested that investors can use disclosed holdings to assess a manager's skill. However, investors cannot observe portfolio holdings all the time but only a portfolio snapshot at the end of each quarter. Investors do not observe the within-quarter managerial actions, such as the exact timing of the purchases and the sales of individual stocks, which could signal a manager's true skill.

In light of this, Kacperczyk et al. (2008) and Agarwal et al. (2023) suggest that the skill of a fund manager can indeed be inferred from these unobservable actions. They propose a novel skill measure, the "return gap," which is the difference between the fund's reported returns and the returns of a portfolio composed of the fund's previously disclosed holdings. This measure aims to capture the incremental return that fund managers generate through their unobserved trading, serving as a proxy for their investment skills.

The goal of this thesis is to replicate and build upon Kacperczyk et al. (2008)'s methodology, extending the analysis to include data up to the present. A key task is to dissect the "return gap" metric, exploring its persistence over time, its predictability to mutual fund performance, possible trading strategies that could utilize this metric, and the determinants associated with it. A comparative analysis is essential, contrasting the period studied by Kacperczyk et al. (2008), from 1984 to 2003, with current data, to illustrate the evolution of these metrics across the past four decades. The student should conclude with a discussion on the limitations of the study and recommendations for future research directions in this area.

Requirements: The empirical work requires using databases on mutual funds, such as the CRSP Mutual Fund database and the Thomson Reuters Ownership database. The candidate must have at least basic knowledge of a statistical software program (e.g., Stata) and econometrics.

Introductory Literature:

- Agarwal, V., Ruenzi, S., & Weigert, F. (2023). Unobserved performance of hedge funds. *Journal of Finance* (forthcoming).
- Daniel, K., Grinblatt, M., Titman, S., & Wermers, R. (1997). Measuring mutual fund performance with characteristic-based benchmarks. *The Journal of finance*, 52(3), 1035-1058.
- Grinblatt, M., & Titman, S. (1989). Mutual fund performance: An analysis of quarterly portfolio holdings. *Journal of business*, 393-416.
- Kacperczyk, M., Sialm, C., & Zheng, L. (2008). Unobserved actions of mutual funds. *The Review of Financial Studies*, 21(6), 2379-2416.
- Wermers, R. (2000). Mutual fund performance: An empirical decomposition into stock-picking talent, style, transactions costs, and expenses. *The Journal of Finance*, 55(4), 1655-1695.

TOPIC NR5: Do mutual fund managers window-dress?

Advisor: Chia-Yi Yen

Although assessing managerial skills through the scrutinization of quarter-end holdings is widely used, literature also suggests that such an approach might be compromised by the practice of “window-dressing.” This behavior involves managers tweaking their portfolios just before disclosure deadlines to project a more favorable image—masking the true nature of the portfolio. Agarwal et al. (2014) find that particularly unskilled managers, those with subpar performance records, are prone to engage in *return* window-dressing. They do this by selectively buying winners and selling losers as the quarter closes, creating an illusion of a more profitable portfolio. Furthermore, research into bond mutual funds reveals a similar trend, where managers engage in *risk* window-dressing to give the impression of a lower-risk portfolio (Musto, 1997; Musto, 1999; Morey and O’Neal, 2006). In addition, Parise and Rubin (2023) highlight that funds are also curating their holdings to appear more environmentally and socially responsible, known as *green* window-dressing. Such practices do not merely influence investor decisions; they also conceal genuine investment strategies, potentially misleading both shareholders and competitors.

The goal of this thesis is to replicate and build upon Agarwal et al. (2014), extending the analysis to include data up to the present. A key task is to construct window-dressing measures, exploring the determinants of window-dressing funds, the performance consequence of window-dressing, and the investor response to it. A comparative analysis is essential, contrasting the period studied by Agarwal et al. (2014), from 1984 to 2008, with current data, to illustrate the evolution of window-dressing behavior across the past four decades. The student should conclude with a discussion on the limitations of the study and recommendations for future research directions in this area.

Requirements: The empirical work requires using databases on mutual funds, such as the CRSP Mutual Fund database and the Thomson Reuters Ownership database. The candidate must have at least basic knowledge of a statistical software program (e.g., Stata) and econometrics.

Introductory Literature:

- Agarwal, V., Gay, G. D., & Ling, L. (2014). Window dressing in mutual funds. *The Review of Financial Studies*, 27(11), 3133-3170.
- Morey, M. R., & O’Neal, E. S. (2006). Window dressing in bond mutual funds. *Journal of Financial Research*, 29(3), 325-347.
- Musto, D. K. (1997). Portfolio disclosures and year-end price shifts. *The Journal of Finance*, 52(4), 1563-1588.
- Musto, D. K. (1999). Investment decisions depend on portfolio disclosures. *The Journal of Finance*, 54(3), 935-952.
- Parise, G., & Rubin, M. (2023). Green Window Dressing. Available at SSRN 4459352.

TOPIC NR6: Are mutual fund investors more sensitive to good performance?

Advisor: Chia-Yi Yen

Many mutual fund managerial misbehaviors have their roots in the convex flow-performance relationship identified by Sirri and Tufano (1998). This convex relationship describes a scenario where investors often reward good performance with positive inflows yet fail to penalize poor performance with corresponding outflows. Such a convexity is often considered the primary cause of managerial excessive risk-taking, imposing large costs on fund investors. The literature offers many possible explanations for this pattern. From the perspective of rational explanations, investors might withhold punitive outflows, anticipating poor managers' replacement, as suggested by Lynch and Musto (2003), or due to participation costs, as documented in Huang et al. (2007). Behavioral explanations, such as investor unsophistication highlighted by Ferreira et al. (2012) or cognitive dissonance as outlined by Goetzmann and Peles (1997), suggest that investor flows are disproportionately influenced by positive performance. Notably, the relationship between fund flows and performance appears to be shifting. A recent study by Kim (2019) has identified a trend toward less convexity in this relationship after the year 2000, suggesting a change in how investors respond to mutual fund performance over time.

The goal of this thesis is to examine the convex flow-performance relationship over time. First, the student should conduct a comprehensive literature review on the driver of convexity within equity mutual funds. Second, the student should replicate Sirri and Tufano (1998) and extend the analysis to include data up to the present. A comparative analysis is essential, contrasting the period studied by Sirri and Tufano (1998), from 1971 to 1990, with current data, to illustrate the evolution of the flow-performance relationship across the past four decades. Particularly, the student should discuss whether there has been a less convex relationship in recent years, as documented in Kim (2019). Finally, the student should conclude with a discussion on the limitations of existing studies and recommendations for future research directions in this area.

Requirements: The empirical work requires using databases on mutual funds, such as the CRSP Mutual Fund database and the Thomson Reuters Ownership database. The candidate must have at least basic knowledge of a statistical software program (e.g., Stata) and econometrics.

Introductory Literature:

- Barber, B. M., Huang, X., & Odean, T. (2016). Which factors matter to investors? Evidence from mutual fund flows. *The Review of Financial Studies*, 29(10), 2600-2642.
- Ferreira, M. A., Keswani, A., Miguel, A. F., & Ramos, S. B. (2012). The flow-performance relationship around the world. *Journal of Banking & Finance*, 36(6), 1759-1780.
- Goetzmann, W. N., & Peles, N. (1997). Cognitive dissonance and mutual fund investors. *Journal of financial Research*, 20(2), 145-158.
- Huang, J., Wei, K. D., & Yan, H. (2007). Participation costs and the sensitivity of fund flows to past performance. *The journal of finance*, 62(3), 1273-1311.
- Kim, M. S. (2019). Changes in mutual fund flows and managerial incentives. Available at SSRN 1573051.
- Lynch, A. W., & Musto, D. K. (2003). How investors interpret past fund returns. *The Journal of Finance*, 58(5), 2033-2058.
- Sirri, E. R., & Tufano, P. (1998). Costly search and mutual fund flows. *The journal of finance*, 53(5), 1589-1622.