

Universität Mannheim
Lehrstuhl für ABWL und Corporate Governance
68131 Mannheim

Besucheradresse:
L9, 1-2
68161 Mannheim
Telefon 0621/181-1595

Bachelor Theses FSS 2020: Topics

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TOPIC NR1: Risk-taking decisions of mutual fund managers

Advisor: Chia-Yi Yen

The role of mutual fund managers is to weigh off the portfolio's risk and return, based on the risk preferences of their investors. Several characteristics can affect the risk-taking decisions of mutual fund managers. Ma and Tang (2018) show that managerial ownership is affiliated with less agency-induced risk-taking in portfolio holdings. Shu et al. (2012) find that local religious beliefs have significant influences on mutual funds' risk-taking behaviors.

Apart from these characteristics, the literature also pays attention to the risk-taking incentives of fund managers. Chen and Pennacchi (2009) point out that mutual fund competition explains the relation between prior performance and a mutual fund's choice of risk. Kempf et al. (2009) document that employment risk and compensation posit incentives of risk-taking for mutual fund managers. Massa and Patgiri (2008) further find that high-incentive contracts induce managers to take more risk and reduce the funds' probability of survival as a result.

Goals/Requirements:

The primary goal of this bachelor thesis is to provide a comprehensive literature survey on the risk-taking decisions of mutual fund managers. The discussion should include but is not limited to (1) what are the characteristics associated with fund managers' risk-taking, (2) what are fund managers' incentives to take more or less risk, and (3) what is the investors' response to fund managers' risk-taking decisions. In addition to the literature survey, the student is supposed to calculate and analyze fund riskiness and visualize its trend over time. Data used for calculating fund riskiness are accessible on the CRSP Mutual Fund Database via the university network.

Introductory Literature:

- Chen, Hsiu-lang, and George G. Pennacchi. "Does prior performance affect a mutual fund's choice of risk? Theory and further empirical evidence." *Journal of Financial and Quantitative Analysis* 44.4 (2009): 745-775.
- Kempf, Alexander, Stefan Ruenzi, and Tanja Thiele. "Employment risk, compensation incentives, and managerial risk taking: Evidence from the mutual fund industry." *Journal of Financial Economics* 92.1 (2009): 92-108.
- Ma, Linlin, and Yuehua Tang. "Portfolio manager ownership and mutual fund risk taking." (2018). *Management Science*, forthcoming
- Massa, Massimo, and Rajdeep Patgiri. "Incentives and mutual fund performance: higher performance or just higher risk taking?." *The Review of Financial Studies* 22.5 (2009): 1777-1815.
- Shu, Tao, Johan Sulaeman, and P. Eric Yeung. "Local religious beliefs and mutual fund risk-taking behaviors." *Management Science* 58.10 (2012): 1779-1796.
- Taylor, Jonathan. "Risk-taking behavior in mutual fund tournaments." *Journal of Economic Behavior & Organization* 50.3 (2003): 373-383.

TOPIC NR2: Do financial markets predict economic recessions?

Advisor: Chia-Yi Yen

The recent plunges of the US stock market could inflict serious harm on the global economy. While it is possible that investors' gloom may prove to be overblown, the inverted yield curve and shunning corporate bonds have raised severe concerns in the economy. Estrella and Mishkin (1998) have shown that financial variables are useful in predicting economic recessions with 1-to-3 quarter horizons. Naes et al. (2011) further find a strong relation between stock market illiquidity and economic recessions, indicating that stock market illiquidity outperforms classical recession predictors such as the yield curve and term spreads. Investors' "flight-to-safety" and "flight-to-liquidity" are the main underlying mechanisms how financial markets predict economic recessions. Baele et al. (2020) explain in detail how stock markets and bond markets interact when investors rebalance their portfolios from equities to bonds due to flight-to-safety.

Goals/Requirements:

The primary goal of this bachelor thesis is to provide a comprehensive literature survey on how financial markets predict economic recession. The discussion should include but is not limited to (1) what are the classical recession predictors associated with financial markets and (2) what are the underlying reasons for these predictors to work. In addition to the literature survey, the student is supposed to collect the data of some of these financial predictors and analyze the likelihood of an economic recession in the US, which experienced a volatile financial market recently. If data availability allows, the student can look at the development of these financial predictors at the outbreak of the Corona pandemic in recent months. Data are accessible from the FRED database.

Introductory Literature:

- Naes, Randi, Johannes A. Skjeltorp, and Bernt Arne Ødegaard. "Stock market liquidity and the business cycle." *The Journal of Finance* 66.1 (2011): 139-176.
- Estrella, Arturo, and Frederic S. Mishkin. "Predicting US recessions: Financial variables as leading indicators." *Review of Economics and Statistics* 80.1 (1998): 45-61.
- Baele, Lieven, et al. "Flights to safety." *The Review of Financial Studies* 33.2 (2020): 689-746.

TOPIC NR3: Window-dressing behavior of mutual funds: incentives and consequences

Advisor: Chia-Yi Yen

One of the most noteworthy misbehavior of fund managers is window-dressing, which happens when fund managers manipulate their portfolio snapshots right before disclosure dates by assigning higher (lower) composition weightings in stocks that have recently done well (poorly). The attempt to mislead fund shareholders about their stock-picking skills by window-dressing reflects an agency problem that potentially damages fund value and performance.

To quantify the damage and uncover the underlying mechanism, researchers have to first overcome some difficulties. On the one hand, window-dressing is an unobservable action that fund managers engage in, and therefore it is a challenge for empirical studies how to measure this unobservable action. On the other hand, the strategic interactions among fund investors, managers, and regulators remain unclear, which challenges theoretical developments how a window-dressing decision is made. As a result, window-dressing has long been a controversial issue in the literature on mutual funds. While some researchers found no significant evidence of its existence, some believe in the existence of window-dressing. For example, Agarwal et al. (2014) document that funds with poor past performance and little skills have a greater propensity to window-dress, and investors respond to a window-dressed portfolio in a strategic way, i.e., they contribute higher (lower) flows if observing good (bad) fund performance.

Goals/Requirements:

The primary goal of this bachelor thesis is to provide a comprehensive literature survey on the window-dressing behavior of mutual fund managers, with special focus on the incentives and consequences. The discussion should include but is not limited to (1) what are the most common window-dressing measures in the literature, (2) What are the window-dressing incentives of mutual fund managers, and (3) What are the consequences of window-dressing. In addition to the literature survey, the student is supposed to collect fund turnover ratio as a window dressing measure and empirically analyze if there is any abnormal trend around the disclosure dates. Data of fund turnover ratio are accessible on the CRSP Mutual Fund Database via the university network.

Introductory Literature:

- Agarwal, Vikas, Gerald D. Gay, and Leng Ling. "Window dressing in mutual funds." *The Review of Financial Studies* 27.11 (2014): 3133-3170.

TOPIC NR4: The gender pay gap in the financial industry

Advisor: Mengqiao Du

Women have become increasingly integrated into U.S. occupations since the Civil Rights Movement succeeded in winning legal bans on many types of discrimination in the 1950s and 1960s. An emerging literature in accounting and finance focuses on the role of gender in financial markets. Niessen-Ruenzi and Ruenzi (2018) show that female mutual fund managers receive lower inflows in their funds. Kumar (2010) finds that female analysts are more likely to issue bolder forecasts and their forecasts are more accurate. This thesis focus is on the question whether women working in the financial industry are equally compensated than men working in this industry.

According to Kumar (2010), consistent with a self-selection hypothesis, female analysts are relatively more accurate and cover larger stocks with high institutional ownership, even when they are less experienced. If female analysts perform better and take more important positions, are they compensated by higher income? U.S. Department of Labor and the U.S. Census Bureau collect annual surveys of random samples of workers in the U.S. - the March Current Population Survey (CPS). Relatedly, Madsen (2013) uses CPS data to study the integration of women and minorities into the auditing professions.

Goals/Requirements:

The student is expected to provide a comprehensive review of the literature that covers female career choices and the gender pay gap. Furthermore, related literature focusing on the behavior of women in the finance industry is also helpful in understanding their career choices and the gender pay gap. The discussion should include but is not limited to gender discrimination and policies that help improve female representation in the finance industry. In addition, the student also is expected to compute summary statistics on the gender pay gap among different occupations using CPS data. Empirical work for this topic requires fundamental knowledge of Excel at least. CPS data are accessible online via the university network.

Introductory Literature:

- Kumar, A., 2010. Self-selection and the forecasting abilities of female equity analysts. *Journal of Accounting Research*, 48(2), pp.393-435.
- Madsen, P.E., 2013. The integration of women and minorities into the auditing profession since the civil rights period. *The Accounting Review*, 88(6), pp.2145-2177.
- Niessen-Ruenzi, A. and Ruenzi, S., 2018. Sex matters: Gender bias in the mutual fund industry. *Management Science*.

TOPIC NR5: Return to scale among mutual funds

Advisor: Mengqiao Du

There have been debates in the mutual fund literature on the nature of returns to scale among actively managed mutual funds. A number of studies, including Chen et al. (2004) and Yan (2008), show a negative relationship between fund size and performance. However, Pástor et al. (2015) improve the econometrical methodology and fail to reject the hypothesis of constant returns to scale at the individual fund level. Zhu (2018) revisits the nature of returns to scale in active management following Pástor et al. (2015) and shows diseconomy of scale among mutual funds by demonstrating that the empirical strategy in Pástor et al. (2015) suffers from an inherent misspecification.

Consistent with the model prediction by Stein (2002), Chen et al. (2004) further find that single-managed funds are significantly more likely than co-managed funds to invest in local stocks and to do better than co-managed funds at picking local stocks. This result provides evidence that scale erodes fund performance because of organizational diseconomies.

Goals/Requirements:

The student is expected to conduct a literature review on mutual fund returns to scale and the mechanisms behind diseconomies of scale among equity mutual funds. The discussion should include but is not limited to the relationship between fund performance and fund size in funds with different investment objectives and the reasons for and the impact of diseconomies of scale. In addition, the student is also expected to compute summary statistics on fund performance and fund size using the CRSP mutual fund data. Empirical work for this topic requires fundamental knowledge of Excel at least. CRSP mutual fund data are accessible via the university network.

Introductory Literature:

- Chen, J., Hong, H., Huang, M. and Kubik, J.D., 2004. Does fund size erode mutual fund performance? The role of liquidity and organization. *American Economic Review*, 94(5), pp.1276-1302.
- Pástor, L., Stambaugh, R.F. and Taylor, L.A., 2015. Scale and skill in active management. *Journal of Financial Economics*, 116(1), pp.23-45.
- Stein, J.C., 2002. Information production and capital allocation: Decentralized versus hierarchical firms. *Journal of Finance*, 57(5), pp.1891-1921.
- Yan, X.S., 2008. Liquidity, investment style, and the relation between fund size and fund performance. *Journal of Financial and Quantitative Analysis*, 43(3), pp.741-767.
- Zhu, M., 2018. Informative fund size, managerial skill, and investor rationality. *Journal of Financial Economics*, 130(1), pp.114-134.