THE ABFER ASIAN BUREAU OF FINANCE AND ECONOMIC RESEARCH DIGEST

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INSIDE THIS ISSUE:

Information Environment and the Geography of Firms and Investors

Gennaro Bernile (SMU), Shimon Kogan (UT), IDC Herzliya (UT), John Sulaeman (NUS)

A growing literature documents the tendency of investors to invest "close to home" – both internationally and within the U.S. Thus portfolio holdings may differ across investors based on their location. The paper contributes to the literature on attention, asymmetric information, and asset prices by formulating a hypothesis linking potential determinants of investor attention and asset prices. It focuses on the potentially long-term determinants of investors' access to private information that are unlikely to be driven by investor attention.

In **Information Environment and the Geography of Firms and Investors,** authors **Gennaro Bernile, Shimon Kogan** and **Johan Sulaeman** developed a model linking investor attention, asset ownership, and asset returns in a rational setting, and test their model's prediction that investors' attention to a particular firm depends jointly on their proximity to the firm's locations and on the firm's information environment. They say that the empirical evidence shows that the quality and quantity of publicly available information are strongly related to investors' propensity to hold and trade stocks.

However, the direction of these relations depends crucially on the investors' geographic proximity to the firm. The holdings and trading propensity of investors located near the firm decrease with the quality and quantity of public information, but the pattern is reversed for investors located further away from the firm.

Tests exploiting exogenous shocks to the firm's information environment indicate that these relations are causal. At the firm level, the authors' find that the cross-sectional variations in firms' information environment and proximity to potential investors jointly explain the variation in the geographic concentration of firm ownership and in stock returns.

Using a number of new measures for investors' proximity and the quality of public information, the authors derive and test several empirical predictions that link a firm's geographic distribution of ownership and stock returns to investors' proximity to firm locations and the firm's public information environment. The empirical evidence provides strong and consistent support for the predictions of the theory.

The authors find that the geographic dispersion of a firm's institutional shareholders increases with both the geographic dispersion of the firm's potential investors and improvements in its public information environment. They say that the intensity of investors' trading in a firm's stock is strongly related to the same factors that determine the firm's ownership dispersion and, again, there is evidence of substitution between firm's geographic dispersion and public information environment.

Lastly, as suggested by theory, the authors find that the determinants of the geographic dispersion of ownership and trading have similarly consistent effects on stock returns in that firms whose locations are furthest from potential investors have higher stock returns than those located closest to potential investors, and this effect is largely tempered by the quantity and quality of public information.

Overall, the evidence presented in the paper shows that potential investor distance is a strong predictor of stock returns, and this relation is strongest for firms that have more geographically concentrated economic interests or poor public information environment. All the evidence cited by the authors lends support to the idea that the geographic distribution of private information and the public information environment jointly determine firms' ownership structure and the cost of capital.

A Market Based Funding Liquidity Measure

Andrea Lu (Melbourne), Chen Zhuo (Tsinghua)

Since the 2007-2009 financial crisis, financial frictions are understood to be an important factor in determining asset prices. Researchers have done a lot of work on the relationship between market frictions and risk premia, including restricted borrowing, limits of arbitrage, and an intermediary's capital constraint.

Funding liquidity is an important form of financial frictions. It captures how easy (or difficult) it is for investors to finance their portfolio positions with collateralized borrowing. Adverse funding liquidity shocks result in difficulty for investors to exploit investment opportunities. As a result, investors cannot move capital quickly across assets and asset prices can be affected by funding liquidity shocks.

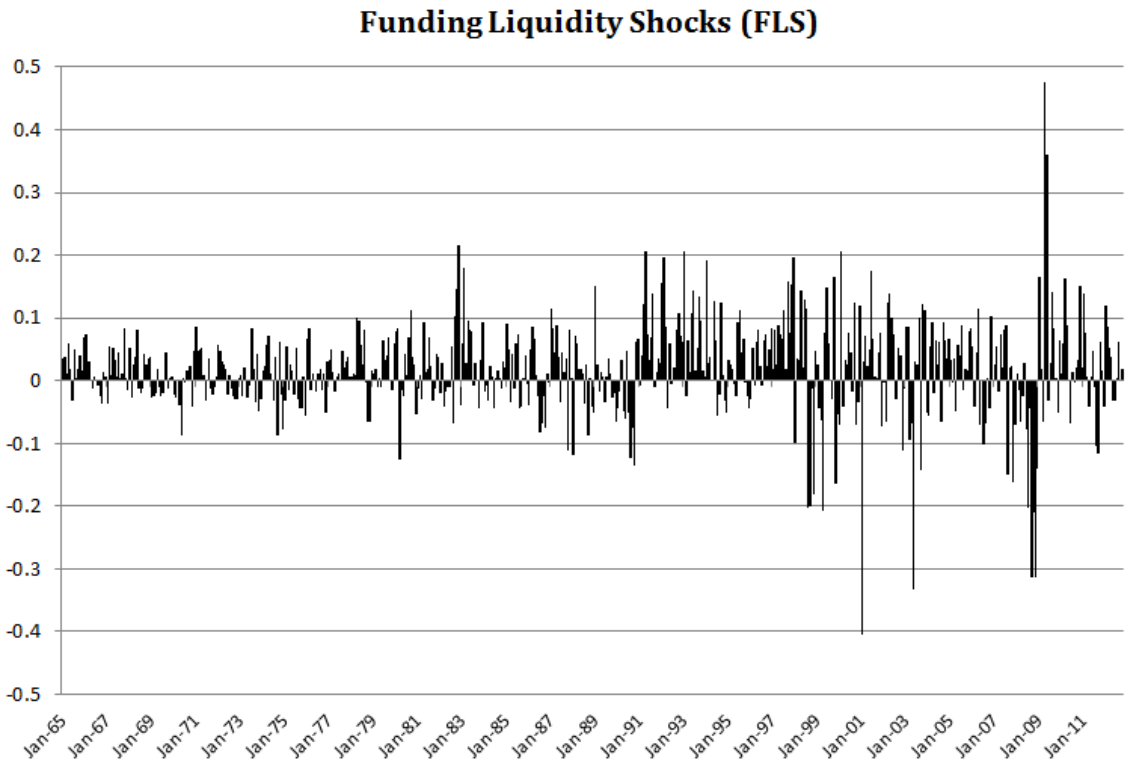
In this paper, the authors construct a theoretically motivated measure of funding liquidity using both the time series and cross-section of stock returns. Using a stylized model, they show that the expected return of a beta-neutral portfolio, which exploits investors' borrowing constraints, depends on both the market-wide funding liquidity and stocks' margin requirements. They extract the funding liquidity shock as the return spread between two beta-neutral portfolios constructed using stocks with high and low margins.

The return-based measure is correlated with other funding liquidity proxies from various markets. It delivers a positive risk premium, which cannot be explained by existing risk factors, such as the Fama-French three factors, the momentum factor, the short-term reversal factor, or the market liquidity factor. Meanwhile, the measure is positively correlated with market liquidity and such correlation is stronger during market downturns supporting the theoretical prediction of a spiral relation between market liquidity and funding liquidity.

In **A Market-Based Funding Liquidity Measure**, authors **Andrea Lu** and **Chen Zhuo** applied their tradable funding liquidity measure to study its implications on hedge fund returns. They find that, in the time series, hedge funds in general are inversely affected by funding liquidity shocks: a one standard deviation of adverse shock to the market funding liquidity results in a 2% per year decline in hedge fund returns. In the cross-section, hedge funds that are less sensitive to the funding liquidity shock actually earn higher returns. This performance difference could possibly be due to the actively managed nature of hedge funds: some funds exhibit funding liquidity management skill and thus earn higher returns.

Finally, the authors also examine the relation between funding liquidity risk and the real economy and find that adverse funding liquidity shocks lead to less private fixed investment up to eight quarters in the future.

The authors' work contributes to the literature by proposing a tradable factor that tracks the time-varying market-wide funding liquidity risk. Due to the tradable nature of their factor, it helps us not only better understand funding liquidity risk, more importantly, it provides a way for practitioners to hedge against funding liquidity risk or have exposures to funding liquidity risk. In addition, researchers and practitioners can apply this tradable funding liquidity to evaluate whether equity market anomalies actually deliver alpha or instead are only exposed to funding liquidity risk.



Spare Tire? Stock Markets, Banking Crises, and Economic Recoveries

Ross Levine (UCB), Chen Lin (HKU), Wensi Xie (HKU)

When banking systems fail, it disrupts the flow of bank credit to firms with dire consequences on investment, employment and economic growth. However, if firms can issue equity at low cost given the credit crunch, this will ameliorate the impact of the banking crisis on firm performance.

Put differently, if a banking crisis shuts off bank lending and firms do not have an alternative source of financing, firms will suffer more than they would. Do stock markets act as a "spare tire" during banking crises by providing an alternative corporate financing channel and mitigating the economic severity of banking crises? Do shareholder protection laws influence how firms respond to banking crises?

In **Spare Tire? Stock Markets, Banking Crises, and Economic Recoveries**, authors **Ross Levine, Chen Lin** and **Wensi Xie** assess the implications of the spare tire effect. Specifically, they argue that it is the pre-crisis legal infrastructure of the stock market, rather than its size or liquidity that provides financing during a banking crisis.

Using firm-level data in 36 countries from 1990 through 2011, they find that the adverse consequences of banking crises on equity issuances, firm profitability, employment and investment efficiency are smaller in countries with stronger than weaker shareholder protection laws.

These findings cannot be explained by the development of stock markets or financial institutions prior to the crises nor by the severity of the banking crisis, or overall economic, legal, and institutional development. The evidence is consistent with the view that stronger shareholder protection laws provide the legal infrastructure for stock markets to act as alternative sources of finance when banking systems go flat, easing the impact of the crisis on the economy.

Do firms that rely heavily on external finance benefit more from the spare tire financing mechanisms fostered by stronger shareholder protection laws than other firms? If some firms do not use bank financing, then having a replacement source of external finance will not matter much to their performance.

The findings indicate that following a systemic banking crisis, stronger shareholder protection laws facilitate equity financing in firms in financial development industries.

That is, among firms in financial development industries, equity financing falls less following the onset of a systemic banking crisis in economies with stronger shareholder protection laws, than in economies with weaker shareholder protection laws.

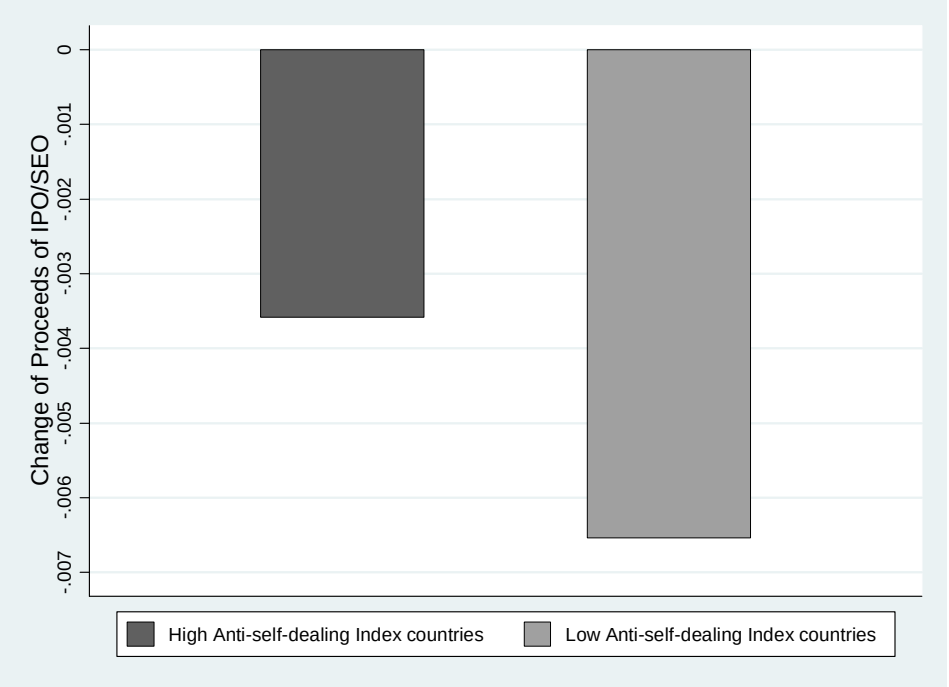


Figure 1. Firm equity issuances during a banking crisis, differentiating between countries with high and low Anti-self-dealing index values

Each bar in the figure represents the average change in the ratio of the total amount of funds raised through IPOs and SEOs to total assets (*Proceeds of IPO/SEO*) for firms in countries with above (High) and below (Low) the median value of the Anti-self-dealing index respectively.

Specifically, we first calculate for each firm the difference between *Proceeds of IPO/SEO* during a crisis, [t, t+3] and before the crisis, [t-3, t-1]. We then average this difference across all of the firms in High and Low Anti-self-dealing countries respectively.

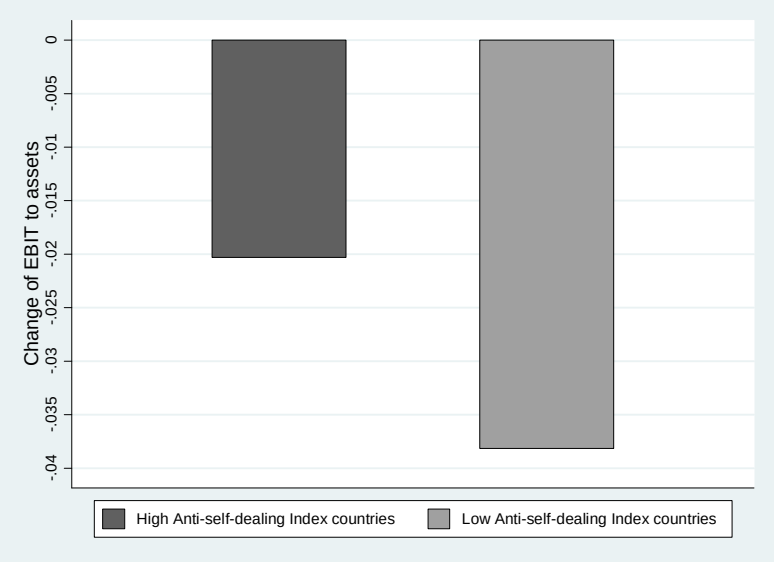


Figure 2. Firm profits during a banking crisis, differentiating between countries with high and low Anti-self-dealing index values

Each bar in the figure represents the average change of the ratio of earnings before income and taxes (EBIT) to total assets for firms in countries with above (High) and below (Low) the median value of the Anti-self-dealing index respectively. Specifically, we first calculate for each firm the difference between the ratio of EBIT to total assets during a crisis, [t, t+3] and before the crisis, [t-3, t-1]. We then average this difference across all of the firms in High and Low Anti-self-dealing countries respectively.

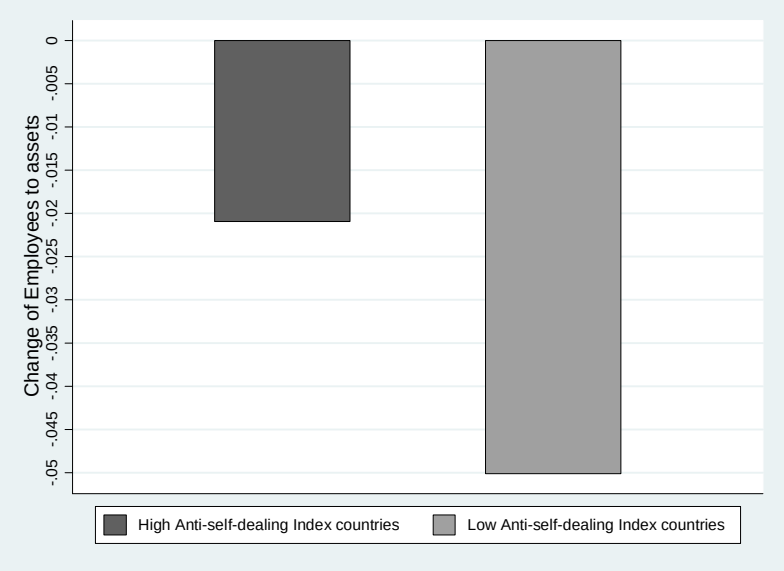


Figure 3. Firm employment during a banking crisis, differentiating between countries with high and low Anti-self-dealing index values

Each bar in the figure represents the average change in the ratio of the number of employees to total assets for firms in countries with above (High) and below (Low) the median value of the Anti-self-dealing index respectively. We multiply the ratio by 100 for expositional purposes. Specifically, we first calculate for each firm the difference between the natural logarithm of the ratio of the number of employees to total assets during a crisis, [t, t+3] and before the crisis, [t-3, t-1]. We then average this difference across all of the firms in High and Low Anti-self-dealing countries respectively.

Do Corporate Taxes Hinder Innovation?

Abhiroop Mukherjee (HKUST), Manpreet Singh (HKUST), Alminas Žaldokas (HKUST)

Discussions on innovative competitiveness and corporate taxation have recently emerged at the forefront of policy discourse. Some policy makers argue in favor of higher taxes on corporations to reduce inequality, while at the same time there is a strong demand for policies that make firms in their countries more innovative. Are these two objectives at loggerheads? Does changing corporate tax policy also affect future firm innovation?

In **Do Corporate Taxes Hinder Innovation?** the authors **Abhiroop Mukherjee, Manpreet Singh** and **Alminas Žaldokas** provide evidence on the consequences of corporate income tax changes for future innovative activities of affected firms.

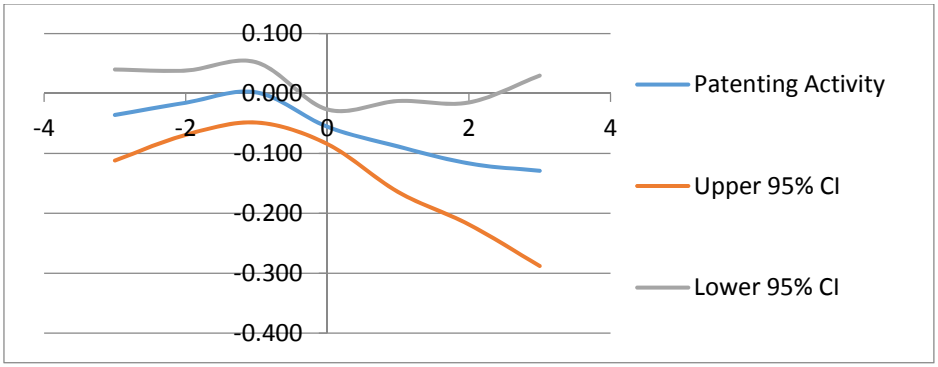
The authors find that firms become less innovative following an increase in their home state tax on corporate income. In terms of magnitude, a 1.5 percentage point increase in state corporate income tax rate leads to some 37% of affected firms to file one fewer patent within the following two years.

Importantly, the decline in innovation is not limited to patenting activity—the drop in patenting is accompanied by a decline in R&D investment, as well as a decline in new product introductions which the authors measure using a novel textual analysis-based approach. These findings imply that the effect of corporate taxes seems to pervade all stages of innovation.

Moreover, the authors show that the effect of corporate tax changes cannot be explained just by changes in local economic conditions. Firms located just across a state border -- and thus subject to similar local economic conditions --

experienced diverging paths in innovation when one of the states changed its corporate taxes.

Why these findings? The authors examine several channels, but find evidence most importantly, the decline in innovation is not limited to patenting activity—the drop in patenting is accompanied by a decline in consistent with recent theory models where corporate taxes affect innovation through their effect on the incentives to innovate.



Tax-Efficient Asset Management: Evidence From Equity Mutual Funds

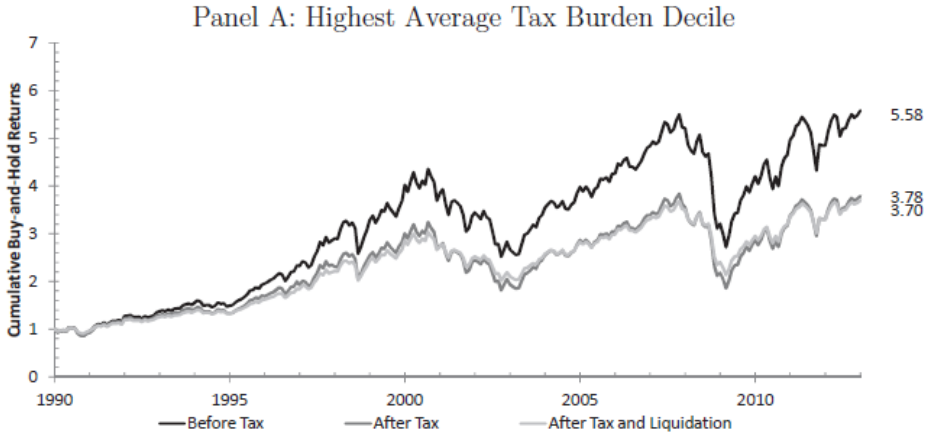
Clemens Sialm (UT), Hanjiang Zhang (NTU)

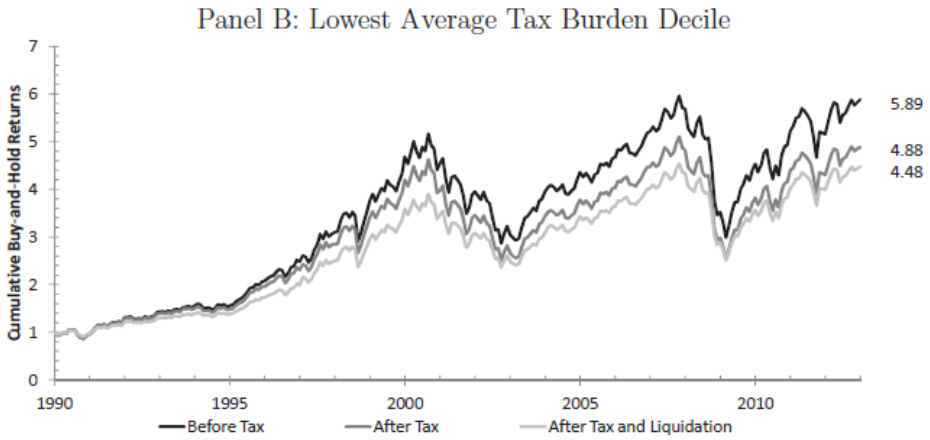
The study focuses on investment taxes having a substantial impact on the performance of taxable mutual fund investors. Mutual funds can reduce the tax burdens of their shareholders by avoiding securities that are heavily taxed and by avoiding realizing capital gains that trigger higher tax burdens to the funds' investors. Such tax avoidance strategies constrain the investment opportunities of the mutual funds and might reduce their before-tax performance.

In **Tax-Efficient Asset Management: Evidence from Equity Mutual Funds**, authors **Clemens Sialm** and **Hanjiang Zhang**, empirically investigates the costs and benefits of tax-efficient asset management based on U.S. equity mutual funds. It finds that mutual funds that follow tax-efficient asset management strategies generate superior after-tax returns. Surprisingly, more tax-efficient mutual funds do not underperform other funds before taxes, indicating that the constraints imposed by tax-efficient asset management do not have significant performance consequences.

The authors say that due to the persistence of the tax burden, fund investors can increase their future after-tax performance by avoiding funds with high prior tax burdens.

Surprisingly, the study does not find that the before-tax performance of funds deteriorates as they become more tax efficient. The results indicate that tax-efficient asset management strategies, as practiced by U.S. equity mutual funds between 1990 and 2012, did not have negative performance consequences. This result can be explained primarily by the





superior investment ability of tax-efficient mutual funds.

Overall, the study finds that the prior tax burden is an important consideration when selecting mutual funds even after conditioning on different investment styles. Funds that exhibited higher tax burdens over the prior three years will continue to exhibit high tax burdens. Furthermore, the after-tax returns are higher for funds that managed their tax burden over the previous years by reducing their dividend and capital gains distributions.

Many mutual funds attempt to create value for their investors through stock selection or market timing strategies. However, such active strategies often cause substantial trading costs that make it difficult for actively managed mutual funds to persistently generate superior performance for their investors. The authors say that an additional cost of active fund management, which has often been ignored both in academia and in practice, is the tax imposed on fund investors. Whereas it is difficult for fund managers to create superior investment performance by picking stocks

or by timing markets, it is relatively easy to avoid destroying value for taxable fund investors by managing investment taxes.

The paper shows that investment taxes are of similar importance as fund expenses. It finds that mutual funds that impose higher tax burdens on their investors do not offset these tax costs with superior before-tax performance. Rather, tax-efficient funds seem to outperform tax-inefficient funds before and after taxes through superior investment ability, lower trading costs, and careful tax management. Thus, both taxable and tax-exempt fund investors should take taxes on fund distributions into account when they make mutual fund investment decisions.

Does it Pay to Entertain Your Stakeholders?

Hui Ou-Yang(CKGSB), Haibing Shu (HKUST), Sonia Manlai Wong (LU)

Entertaining business stakeholders is a longstanding and prevalent corporate activity, especially in Asian countries, where people are more likely to rely on personal relationships for smooth and secure transactions. Business entertainment expenditure (BEE) is generally considered as a necessary operating costs and is granted tax-deductible status. Although the use of BEE by firms is considerable and widespread, little is known whether and how firms benefit from entertainment activities.

In **Does It Pay to Entertain Your Stakeholders?,** authors **Hui Ou-Yang, Haibing Shu** and **Sonia Man-lai Wong** examine the factors influencing BEE and explore how BEE can improve firm performance, with manually collected data on BEE from annual reports of all non-financial firms listed on the A-share market in either the Shanghai or Shenzhen Stock Exchanges from 2004 to 2012.

The authors expect that building and maintaining good relationship with stakeholders through entertainment activities can lead to better firm performance. Entertainment activities can mitigate transaction costs that a firm has to overcome in conducting market-based transactions with their business partners. Entertaining stakeholders can also help firms to achieve favourable outcomes in public sectors such as governments and state-owned entities as entertaining stakeholders in public sectors allows firms to exercise greater influence over the decision making of public organizations by facilitating information sharing.

The authors find that BEE improves firm performance. A one RMB increase in BEE improves sales and net profit in the following year by 14.7 and 2.0 RMB respectively. Firms spending one RMB more in BEE are associated with 19.4 RMB higher in their market valuation. These results suggest that firms benefit from BEE. They also find that higher BEE firms earn higher returns in the subsequent 12 months and tend to have high future unexpected earnings.

In addition, their findings suggest that BEE can help firms to obtain favourable treatments from various stakeholders, with the benefits being greater for firms with high transaction costs in dealing with business partners or are politically favoured by governments. The researchers also find that BEE can reduce litigation incidences although this effect is weaker for firms with more related party transactions. Finally, they find that the effects of BEE are stronger for firms with a strong versus weak governance structure.

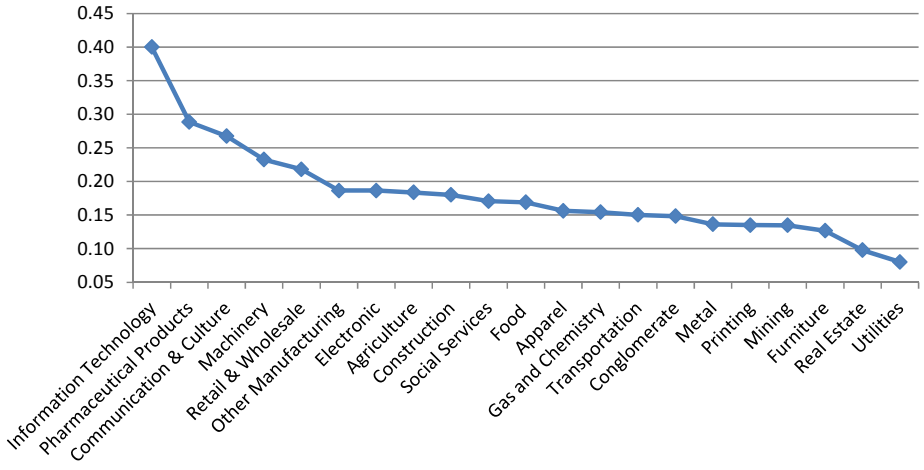


Figure 1. The median ratio of BEE divided by total assets in percentage by industry

About ABFER

The Asian Bureau of Finance and Economic Research is an institute founded by academics from Asia, North America, and Europe. The Bureau intends to create a virtual and independent network of high-quality academics akin to the NBER/CEPR, as well as conferences and workshops. The purposes of the Bureau include:

- *to promote Asia-Pacific oriented financial and economic research at local, regional and international levels;*
- *to connect globally prominent academic researchers, practitioners and public policy decision-makers on Asia-Pacific related financial and economic issues;*
- *to enhance the research capabilities and development of strong clusters of finance and economic research groups in academic institutions and other institutions in Singapore and Asia-Pacific.*

This Digest summarizes selected papers presented in the ABFER's 3rd Annual Conference which was held in May 2015 at the Shangri La Hotel, Singapore. More information on the conference can be found here

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