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The real value of China's stock market ☆

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Abstract

What capital allocation role can China's stock market play? Counter to perception, stock prices in China have become as informative about future profits as they are in the US. This rise in stock price informativeness has coincided with an increase in investment efficiency among privately owned firms, suggesting the market is aggregating information and providing useful signals to managers. However, price informativeness and investment efficiency for state-owned enterprises fell below that of privately owned firms after the postcrisis stimulus, perhaps reflecting unpredictable subsidies and state-directed investment policy. Finally, evidence from realized returns suggests Chinese firms face a higher cost of equity capital than US firms.

Introduction

Over the last ten years, China's GDP tripled for the third decade in a row. China has become the world's largest investor, with $5.9trillion of investment in 2018 compared to $4.3 trillion in the US and $1.2 trillion in Japan. It has also become the world's greatest contributor to global growth, making the efficiency of its investment a matter of global importance. This explosive, investment-driven economic growth has been fueled by a financial system dominated by its state-owned banking sector, as these banks represent the key instrument of centrally planned investment policy. Thus, while China has been successful in rapidly building up infrastructure, its banking sector has swollen to $35 trillion in assets. Concerns about the inefficiency of investment have mounted along with the proliferation of the resulting nonperforming loans.

China's domestic stock market, the market for A shares, has grown exponentially since 1990 but remains dwarfed by its banking sector.[1] In particular, as a capital allocation channel, China's stock market has been a side experiment, derided as a casino, dominated by retail investors, and subject to frequent regulatory interventions and significant restrictions on the tradability of shares.[2] Researchers and journalists emphasize the low correlation between China's stock market and its GDP.[3] Repeated market interventions, trading halts, and IPO suspensions reflect low confidence in the market by regulators as well.[4] Despite programs to accommodate foreign investment in A shares, foreign investors still hold only 3% of the market.

However, with over 3700 firms now listed and over $8 trillion in market capitalization as of December 2019, China's stock market is becoming a focus of attention by international investors and regulators.

A long literature in financial economics links good legal and market institutions to stock price informativeness about future profits and further to the efficiency of capital allocation and corporate investment. This paper sheds new light on the potential of China's stock market as a capital allocation channel by analyzing the functioning of this market in terms of the informativeness of prices, the efficiency of investment, and the cost of equity capital.

Using data over the period 1995–2016, we begin with a comprehensive study of price informativeness in China using the methodology of Bai et al. (2016). Based on the predicted variation from cross-sectional regressions of future firm profits on past prices, we find that although stock prices were indeed uninformative in the early years when the market earned its reputation as a casino, stock prices have become as informative about future profits in China as they are in the US since 2004. China's stock market no longer deserves its reputation as a casino. This improvement in price informativeness coincided with a wave of stock market reforms in China, most notably the Split-Share Structure Reform of 2005, which plausibly broadened the investor base.

It is well known that in China, privately owned and state-owned enterprises (SOEs) differ in both funding sources and investment policy in ways that might make SOE profits less predictable. Therefore, we estimate informativeness as a function of the fraction of state ownership and also perform subsample analyses for privately owned enterprises and SOEs. We find that after the financial crisis, price informativeness about future profits among SOEs fell significantly below that of private firms. We attribute this to the government's massive and unpredictable economic stimulus program that channeled financing to SOEs.

Then we examine the link between stock prices and future firm investment, which under the model of Bai et al. (2016) should parallel the link between prices and profit, if managers are learning from prices. The model assumes managers are value maximizers, which is a more appropriate assumption for privately-owned firms in China than for SOEs. Accordingly, we find a highly significant time-series correlation between the price-profit link and the price-investment link for private firms. The correlation is significant but weaker for SOEs. These results constitute evidence that stock prices not only contain information about future profits but also that this information is incremental to managers' private information. In other words, in the language of Bond et al. (2012), stock prices in China exhibit not only forecasting price efficiency but also revelatory price efficiency.

Next, we study the efficiency of capital allocation in China using the predicted variation from cross-sectional regressions of future firm profits on past investment. Again, under the model of Bai et al. (2016), this should parallel price informativeness about future profits if managers are value maximizers and are learning from prices. We find a significant time-series correlation between price informativeness and investment efficiency for private firms but not for SOEs. Taken together, these results suggest that China's stock market has real value for the economy, which is not fully realized by SOEs.

For value-maximizing managers, investment decision-making depends not only on information about future profits but also on cost of capital. Therefore, to shed further light on the role of the stock market in capital allocation, we analyze the cost of equity capital faced by Chinese firms and compare it to that of firms in the US. We hypothesize that from the perspectives of both domestic Chinese CNY investors, who hold almost all of China's stock market, and foreign USD investors, China's cost of capital is greater than that in the US because of the high volatility and lack of diversification opportunities that must be borne by domestic investors and the repatriation risk and other frictions that must be borne by foreign investors.

Using realized average excess market returns as estimates of required returns, we find that the annualized equity premium in China is almost 5% higher than that in the US. However, we acknowledge that the estimate of this differential may reflect unexpectedly good realized stock market performance in China over this period. Such unexpected outperformance would be a plausible result of the same liberalizations that may have led to the increase in price informativeness that we show. We also find that in terms of its USD monthly returns, China's stock market portfolio delivered an alpha with respect to US and global factors of almost 1% per month. Again, this estimate is based on realized returns, which may not equal expected returns. To the extent that these estimates reflect differences in expected returns, they suggest an elevated cost of capital for Chinese firms. Thus, efforts to increase diversification opportunities for domestic investors and to increase the flow of foreign investment into the stock market could lower China's cost of equity capital and fuel corporate investment and economic growth.

The paper proceeds as follows. Section 2 analyzes stock price informativeness and corporate investment efficiency. Section 3 briefly examines the cost of capital in China. Section 4 concludes.

Section snippets

Stock price informativeness and allocational efficiency

A long literature in economics, finance, and accounting going back to Hayek (1945) and Fama (1970) links good legal and market institutions to stock price informativeness about future profits and further to the efficiency of capital allocation and corporate investment. Elements of this nexus include the benefits of effective listing, disclosure, and auditing policy (Amihud, Mendelson, 1988, Diamond, Verrecchia, 1991, Healy, Palepu, 2001, Hail, Leuz, 2009); aggregation of diffuse information…

Cost of capital

Another way in which the stock market potentially affects the real investment decisions of managers is through the cost of capital it determines, that is, through the returns investors require to compensate them for risk. For firms that maximize net present value, this required return becomes the hurdle rate that projects under consideration must clear. A reasonable summary measure of the cost of equity capital in a given market is the value-weighted average expected return across stocks in…

Conclusions

China's stock market is the world's second largest, yet it is not a significant channel for capital allocation in an investment-driven economy dominated by the state-owned banking sector. However, there is increasing skepticism as to whether this bank-centered model, which has been responsible for unprecedented levels of growth in the past, is capable of sustaining such growth going forward. Is the stock market ready to take on a greater role? This paper presents evidence that it is.

We show…

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