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## CEO Compensation and Real Estate Prices: Pay for Luck or Pay for Action?

*Ana Albuquerque (Boston University), Ben Bennett (Ohio State University), Claudia Custodio (Imperial College) and Dragana Cvijanovic (University of North Carolina at Chapel Hill)*

This paper seeks to explore if CEOs are paid for luck or for responding to luck in a way that adds value to shareholders. In the study, real estate price shocks are used to study the sensitivity of CEO pay to luck. Evidence that CEOs are paid for lucky events that are outside their control is commonly interpreted as inefficient contracting. However, compensating the CEOs for luck can be part of efficient contracting if boards want to provide the CEOs with incentives to act or respond to the lucky event.

The authors use real estate price shocks to test whether CEOs are paid for luck, or paid to act or respond to luck. A common response to real estate luck is sale and leaseback transactions. They distinguish between pay for luck and pay for action by exploiting US GAAP accounting rules. In the US, real estate used in the firm's operations is not market-to-market, thus a change in the value of real estate is only accounted for when the CEO reacts to the change in property value by, for instance, selling the real estate asset.

The study proposes a novel empirical strategy that relies on the different exposure of firms to real estate shocks and on the fact that market and accounting performances do not reflect the changes in the value of real estate in the same way to identify CEO actions. While stock market returns should

promptly reflect any changes in the value of real estate assets of the firm, accounting returns should not, unless some action is taken by the manager. When the authors explored this difference, they found that CEOs are rewarded for their response to luck, such as by selling real estate or issuing debt, and not purely for lucky events.

They also find that firms that are more financially constrained and well governed are the ones that reward CEOs for action rather than for luck, suggesting that the CEO's response to luck is most valuable for these firms. Whereas the evidence of pay for luck only occurs through equity pay, CEOs seem to be compensated for action mostly using cash pay.

This paper brings a new perspective on the topic of pay for luck, and contributes to the active debate on CEO compensation. Using their setting, the authors are able to identify CEO's responses to an exogenous shock and show that CEOs are rewarded for responding to the lucky event by taking actions that are presumably in the best interest of the shareholders. Thus, the results challenge the inefficient contracting view that CEOs are mostly paid for luck.

To sum up, the authors find that CEOs are mostly paid for their actions in response to lucky events rather for luck. This is the point of the paper.

## Government Credit and Trade War

Ning Cai (China Development Bank), Jinlu Feng (China Development Bank), Yong Liu (China Development Bank), Hong Ru (Nanyang Technological University) and Endong Yang (University of Macau)

**G**overnments play an important role in international trade as can be seen in the recent US-China trade war. International trade is a key part of the global economy with global trade amounting to \$32 trillion in 2016. Thus using trade policy, governments play a key role in trade in many countries through tariffs, quotas, and subsidies.

While credit provided by governments is booming across the globe in recent years, how it affects trade has received little attention. This paper looks at how Chinese government credit affects domestic firms' export activities across the industry supply chain in China and in other countries. By merging transaction-level trade data from China Customs and loan data from the China Development Bank (CDB), it analyzes the effects of government credit on trade activities. The CDB is the largest government credit policy bank in the world. It has the mandate to provide subsidized credit to SOEs in strategic industries like energy and mining and local governments for infrastructure development.

The paper documents two main findings. First, the CDB mainly lends to state-owned enterprises (SOEs) at the top of the supply chain (e.g., strategic industries such as energy and mining) which leads to the surge in export amount and the decrease in prices of export goods of private firms in downstream industries (e.g., manufacturing). Second, the increased export volume with lower prices from China leads to decreases in employment and performance of the US firms in the same industry. In contrast, the US firms in downstream industries use the cheaper intermediate goods imported from China and perform better subsequently.

Moreover, the increase in export amount with decreased prices from China benefits

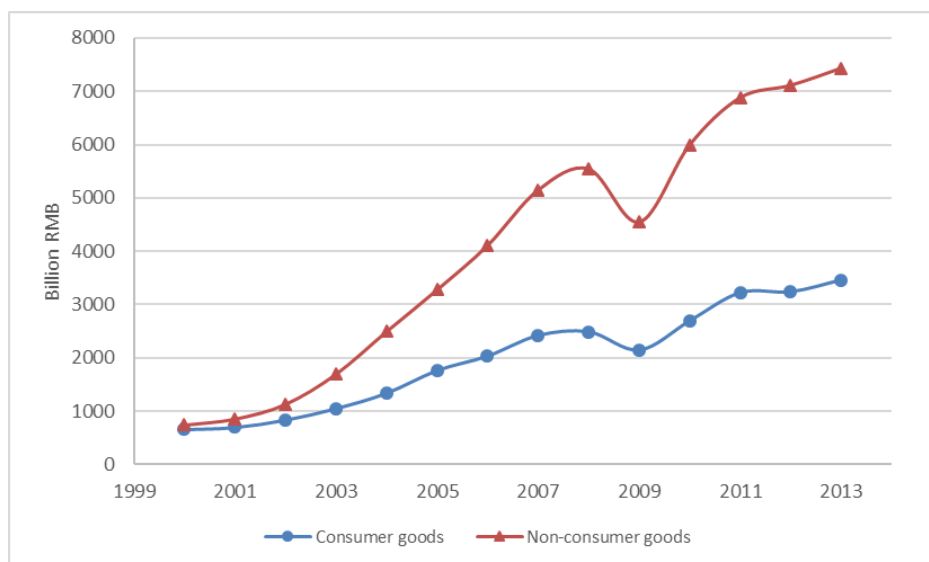


FIGURE 1. EXPORT AMOUNT BY TYPE OF GOODS

*Notes: This figure shows the time trend of export amounts for two types of exported goods: consumer goods and non-consumer goods. Based on the population data of China Customs, we aggregate the export amount from all export transactions (i.e., exports by manufacturing firms and exports by intermediary firms) from 2000 to 2013. Exported goods are classified as either raw materials, intermediate goods, capital goods, or consumer goods using the concordance table from HS standard product groups (UNCTAD-SoP), which is available at <https://wits.worldbank.org/referencedata.html>. We classify the first three types of goods into non-consumer goods group, and consumer goods are classified into consumer goods group. We plot the time trend of export amounts for the two groups. The unit is in billion RMB.*

downstream US firms regarding assets, profitability, and employment, although US firms in the same industry still suffer from direct competition from China's exports. The paper investigates how government credit affects the industry supply chain structure by documenting the positive spillover effects of upstream industrial loans on downstream private firms' export activities.

The paper also looks at whether Chinese exports hurt US firms and employment, and provide a potential price channel for the positive impact of China's exports on downstream US firms. Besides China, many countries have their own national development finance institutions, even for the

most developed economies such as the US and Germany. One major concern for such institutions is to facilitate and promote international trade. For example, the primary objective for the Export-Import Bank of the United States, which is a wholly owned federal government corporation, is to assist in financing and facilitating US export of goods and services.

Based on the empirical findings of their research, the authors suggest that policymakers should consider different types of government credit at different levels along the supply chain when making lending decisions. Hence, this paper's findings are important for policymakers across the globe.

## Going Bankrupt in China

Bo Li (Tsinghua University) and Jacopo Ponticelli (Northwestern University)

China experienced a massive increase in corporate debt in the last decade. While several factors have contributed to this debt boom, concerns have been raised about the risks associated with it and the recent increase in insolvency. Despite the increasing pressure on the Chinese insolvency resolution system, not much is known about how bankruptcy works in China and the role played by courts in the process. This paper investigates how legal reforms affect credit markets by studying the introduction of courts specialized in bankruptcy in China.

The authors construct a new case-level dataset on corporate bankruptcy filings and exploit the staggered introduction of specialized courts across Chinese cities. Differently from normal civil courts, specialized courts are run by bankruptcy professionals who are less likely to be under the influence of local governments. This allows the authors to exploit the introduction of such courts as a shock to political influence on judicial decisions in bankruptcy cases.

The first finding is that cases filed after the introduction of specialized courts are assigned to judges with more experience in bankruptcy and higher education – as measured by the probability of graduating from an elite law school. In addition, cases filed in specialized courts tend to have 20 percent shorter resolution time (100 to 120 days) compared with those filed in normal civil courts. The study also finds that the introduction of specialized courts led to an increase in the share of liquidations of state-owned firms (SOEs). Notice that this result is uniquely driven by SOEs owned by local governments, while there is no differential effect of court specialization on cases regarding SOEs controlled by the central government. According to the Supreme Court, specialized courts were introduced to facilitate an orderly liquidation of unproductive state-owned firms and the reallocation of their resources to the rest of the economy. In this sense, the study's findings are consistent with the declared objective of the reform. However, they also suggest a differential impact of court specialization on different types of SOEs.

The authors also study the effect of specialized courts on the local economy. They find that cities that introduced specialized courts experienced a decrease in the share of locally-headquartered “zombie” firms and an increase in the average product of capital of local firms. Finally, the authors find that state-owned firms operating under specialized courts experienced a decrease in the size of new bank loans, lower access to new loans, and lower investment in physical capital.

The contribution of this paper is twofold. First, it offers the first evidence on the role of judicial institutions in bankruptcy resolution in the context of China. This has important policy implications given Chinese recent credit boom and the stress under which its insolvency system might be in the near future. Second, and different from most of the previous literature, the authors offer evidence based on case-level data on bankruptcies filed in Chinese courts, which allows them to better identify the channel through which institutional changes can affect credit and real outcomes.

## Financialization and Commodity Market Serial Dependence

Zhi Da (University of Notre Dame), Ke Tang (Tsinghua University), Yubo Tao (Singapore Management University)

The object of this study is to see how institutional investors affect the commodity market. The last two decades have seen the financialization of the commodity markets as financial innovations such as commodity index swaps, ETFs and ETNs make it easy for institutional investors to invest in a commodity index, or a portfolio of commodities, just like any other financial assets. According to the estimates from the Commodity Futures Trading Commission (CFTC), investment flows to various commodity indices exceeded \$600 billion during the period from 2000 to 2017.

Coinciding with the large investment inflow to commodity indices, different commodities

started to display synchronized boom and bust cycles, especially during the 2007-2009 financial crisis. In addition, such co-movement has been found to be more severe for commodities in popular indices (indexed commodities) than for those excluded from indices (non-indexed commodities).

This finding has since attracted lots of attention from both practitioners and regulators on the potential downside of financialization. Co-movement among indexed commodities in itself, however, does not necessarily imply that financialization is the cause, since indexed commodities could have been endogenously selected into an

index, precisely because they are exposed to the same fundamental shocks.

A novel feature of the paper is that it focuses on the daily return autocorrelation instead of return correlation. On doing so, the authors observe a clear divergence between the indexed commodity portfolio and the non-indexed commodity portfolio.

The study examines the impact of recent financialization in the commodity market on excessive co-movement among indexed commodities. Using news-based sentiment measures, the authors find that index trading enabled by financialization can propagate non-fundamental shocks from some commodities to others in the same index,

giving rise to price overshoots and subsequent reversals, or “excessive co-movement” at daily frequency.

Excessive co-movement results in negative daily commodity return autocorrelations even at the index level (but not for non-indexed commodities) and such autocorrelations move with the authors’ commodity index exposure measures. Taking advantage of the fact that index weights of the same commodity can vary across different indices in a relatively ad-hoc and pre-determined

fashion, the study provides causal evidence that index trading drives excessive co-movement.

Such excessive co-movement could contribute to the boom-and-bust cycles observed during the recent financial crisis, even though it does not drive such cycles. Given the attractive risk-return tradeoff and the diversification benefits associated with commodity index investments, the commodity financialization process can be expected to continue.

The authors say that they do not dispute such benefits. They simply highlight an unexpected side effect to these benefits as negative serial dependence in commodity index return signals excessive price co-movements even at the index level. Excessive price movement could impose costs on institutional investors who trade often and individual investors who invest in commodities through those institutions. In addition, inefficient commodity prices could even distort real decisions of a firm.

## About ABFER

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- 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 7<sup>th</sup> Annual Conference which was held in May 2019 at Shangri-La’s Rasa Sentosa Resort, Singapore. Past issues of the Digests are available [here](#). More information on the conference can be found [here](#).

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