Research Essentials

International Cross-Listing of Chinese Firms

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Preface

SETTING THE SCENE

The concept of studying Chinese cross-listing began right at the start of the Global Financial Crisis (GFC) in Fall of 2008. Over the last five years, repeated financial crises have occurred. While the world was recovering very slowly from the global economic downturn associated with the GFC, the on-going European debt crisis began in late 2009. This crisis immediately spread from Ireland to Greece, Portugal, Spain, and Cyprus by early 2013. All of these countries use the Euro and are under the Euro Zone. The Euro had become a reserve currency to rival the Dollar, but now it seems to be in dire straits. Even if the Euro survives the current crisis, its future is bleak. Meanwhile, investors are considering alternative places to invest their money. Increasingly, China seems to be a viable option.

Regardless of big challenges faced by China internally, the opportunities it offers to the rest of the world are still attractive. The GFC did not hit China's financial sector, but did cause a sharp decrease in exports – a sector that traditionally enjoyed strong economic growth. However, China is continuing to introduce reforms, such as pushing for its currency, the Yuan, to be internationalized. The Chinese government is also opening up the securities industry, launching a pilot project to allow Renminbi Qualified Foreign Institutional Investors (RQFIIs) to invest in domestic capital markets. In addition, domestic companies are being encouraged to tap into overseas capital markets.

Since the re-establishment of the stock market in China in 1990, cross-listing[1] by Chinese companies has been constantly growing, and has become a complementary source of foreign capital inflows into the Chinese economy via international stock markets, in addition to the inward foreign direct investment started in 1980. The China Securities Regulatory Commission (CSRC) encourages domestic enterprises to issue shares and get listed in domestic and foreign markets, so that they can make better use of resources from both markets, participate in international economic cooperation, and improve their own international competitiveness. In terms of share issuance, the domestic companies went from issuing B-shares[2] to H-shares[3], to issuing both A-shares and H-shares, then further issuing shares in international markets. The experience of Chinese companies cross-listing in the international stock exchanges has, to some extent, provided an example of company-initiated bonding practices among the various bonding mechanisms, such as diversifying shareholder base, opting into higher financial disclosure, improving corporate governance, and integrating Chinese capital market to international markets.

With the increasing presence of Chinese companies listed and traded in the international stock markets, research on Chinese cross-listing is emerging as a new focus for academic research in the field. A number of studies have investigated the price disparity and price discovery between dual-listed Chinese securities (focusing on Hong Kong and New York dual-listings), yet little is known about how bonding affects Chinese firms cross-listed in international stock markets, as well as the price and market linkage among those dual- and triple-listed shares, and whether investment strategies could be developed from the price disparity phenomenon between the dual-listed shares.

OBJECTIVES OF THE BOOK

Building upon existing literature on cross-listing, and by using the data of listed Chinese companies during the period 1993 to 2012, this study examines the relevance of the theories of bonding hypothesis, cointegration, and the law of one price in the context of Chinese firms' cross-listing in the six major international capital markets. The intention is to assist the reader to accomplish the following objectives:

- Develop a clear understanding of the Chinese cross-listing phenomenon.
- Understand why bonding theory does not work on Chinese cross-listed firms.
- Gain understanding of the market linkage from a cross-listing perspective.
- Understand and explore the arbitrage opportunities for dual-listed securities, even though there is no overlapping trading time.

Through the lenses of bonding theory and liability of foreignness-based multinational enterprise theories, this study examines the relationship between cross-listing and firm valuation in the context of Chinese cross-listing on the major international stock markets. These include NASDAQ, New York Stock Exchange (NYSE), Hong Kong Main Board, Hong Kong Growth Enterprise Market (GEM), Singapore Stock Exchange, and London Alternative Investment Market (AIM). Hypotheses are tested using panel data over a ten-year period from 2001-2010. Contrary to bonding theory, the results reveal that the firms listed in Mainland China stocks recorded better valuation than the firms cross-listed in the international stock markets. The more sophisticated corporate governance mechanisms applied in international stock markets do not always entail better valuation, while variations in the level of stringent corporate governance mechanisms across different international stock markets are reflected in the firm valuations respectively. These results suggest that Chinese cross-listing may require a special application of general bonding theory.

Instead of using market indices, this study also examines the short- and long-term price linkages among dual- and triple-listed Chinese securities in different stock markets over the period 1993 to 2012. The empirical results reveal that most of the dual-listings traded in China A- and B-share markets, and the Hong Kong and New York stock markets, exhibit a stationary long-run relationship. Some of the dual-listed China A- and H-share also exhibit co-integrated relationships. The results also suggest that Hong Kong and New York markets have a very strong interactive relationship in terms of dual-listed Chinese shares. Although the shares' total return index series for dual-listed China A- and B-shares, A- and H-shares are co-integrated on a long-run basis, pricing errors are rarely corrected immediately.

Traditionally, arbitrage refers to simultaneously buying and selling the same financial assets by taking advantage of a price difference in two or more markets. However, a strict sense of arbitrage is barely achieved after taking into consideration the issues concerning transaction costs and time value of money. By using identical assets such as Chinese American Depository Receipts (ADRs) and their underlying securities traded in markets such as Hong Kong (HK) in HK dollars and New York in US dollars, and by constructing a very simple arbitrage trading strategy, this study demonstrates that arbitrage profits are still available, with a monthly return ranging from 0.5 percent to 3.8 percent after taking into consideration transaction costs and non-overlap trading time issues. This new study demonstrates the behavior of an emerging market's ADRs traded in two financial market locations, so providing evidence of inefficiency in the trading of China-listed shares in foreign locations.

COMPOSITION OF THE BOOK

This research book is divided into eight chapters. A brief description of each of the chapters follows:

- Chapter 1 describes the research background, the objective of the research, the study structure, and the contributions of the research.
- Chapter 2 introduces the Chinese share market and the cross-listing phenomenon for Chinese firms.
- Chapter 3 reviews the existing literature on cross-listing.

- Chapter 4 examines the relationship among the corporate governance, bonding hypothesis, and firm performance of cross-listed Chinese firms in six major international stock markets.
- Chapter 5 examines the return behavior of Chinese dual- and triple-listings, their long-term and short-term price behavior, and market co-movement phenomenon.
- Chapter 6 explores the arbitrage opportunities for Chinese dual-listed shares.
- Chapter 7 presents a small case study of one Chinese cross-listed firm from a multi-dimensional perspective.
- Chapter 8 concludes the study, listing the limitations of this research and suggesting some future potential research.

Overall, this study contributes to the literature on bonding theory and firm valuation on cross-listings by constructing an integrated conceptual framework. The intention is to explain why the bonding effect might not have explanatory power for all cross-listed Chinese firms. It also proves that arbitrage opportunities exist for some dual-listed shares, but risks are also associated with it. As an exploratory study of corporate governance of Chinese cross-listings and investment strategy, this study also provides researchers with theoretical and methodological implications for future studies in this line of research.

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ENDNOTES

1. In this study, the terms cross-listing, overseas-listing, international-listing, dual-listing, and triple-listing are used interchangeably to eliminate any possible conflict of semantics. All these terms have the same meaning when a security is registered for trading on more than one exchange. Dual-listing or triple-listing in this study means a Chinese security is listed and traded on two or three exchanges.
2. A class of shares listed on the China Shanghai and Shenzhen Stock Exchanges with denomination of US dollars or HK dollars.
3. Another class of shares referring to the shares of companies incorporated in Mainland China that are listed and traded on the Hong Kong Stock Exchange.

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Chapter 1
Introduction:
The Imperative of Research into the Chinese Firms' Cross-Listing

ABSTRACT

With the increasing presence of Chinese firms listed and traded in the international stock markets, Chapter 1 begins by explaining the objectives for the research study and addresses the methodologies employed to conduct the research. It reveals that the focus of the study has been a new line of research that includes bonding effects on Chinese internationally listed firms, the price and market linkage among multiple listings, and possible investment strategies from the price disparity phenomenon between dual-listed shares. Acknowledgement is given to the body of knowledge in the area of cross-listing that contributed to this study.

1.1 RESEARCH BACKGROUND

China, the most populous country in the world, and one of the four oldest known civilizations, with a written history of more than 4,000 years, finally opened its doors to the outside world in 1979. The nation has since undergone tremendous changes. In addition to profound political and social transformations, the economic regime in China has been gradually converting from a centrally planned to a market-based economic system. One of the most important and significant aspects of these economic transformations and reforms is the re-establishment of the stock markets in Shenzhen and Shanghai in the early 1990s. This has been followed by an established and gradually improved legal framework for governing the activities of the

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stock markets and financial markets. Lucrative opportunities unleashed by these developments together with continuous rapid growth of the Chinese economy have attracted considerable attention from academic researchers, industry practitioners, and policymakers to China's stock markets[1].

Among all the transition economies around the world, China has followed a rather unique method to transform its Soviet-style centrally planned economy to a more market-oriented economy, within the constraints of an almost unchanged political system. This system has been termed 'Socialism with Chinese Characteristics' and can be viewed as one type of mixed economic system. Therefore, economic transformation has been taking place without political democratization and without large-scale privatization. Liberalization has proceeded incrementally and privatization was delayed until two decades after the initiation of the reforms. Yet to date, the country has achieved a high and stable economic growth rate. Over the past three decade, China's economy has enjoyed average annual growth rates in excess of 8 percent. The economy recorded an annual growth rate of 7.5 percent during the period of the 11th Five-Year Plan (2006–2010). The 'once-in-a-century' global financial meltdown that occurred in the latter half of 2008 seemly hit China's economy hard, especially in the export sector, which was badly affected with a significant slide in economic growth and a fall in earnings of listed companies. It is fair to say that given the small size of overseas investments by China's enterprises and securities institutions, the global financial meltdown had a rather limited direct impact on China's securities markets (China Securities Regulatory Commission (CSRC) Annual Report, 2008). However, the on-going European debt crisis is slowing down global economic recovery, and Chinese companies face increased difficulties and uncertainties. Under these circumstances, the Chinese government is still determining to push ahead the reforms and keep opening up China's capital market, in order to allocate resources and serve the real economy and social development in a sound manner.

Since its formation in 1990, the Chinese stock market has enjoyed rapid growth with the incremental development of China's market economy. By the end of 2011, there were 2,342 companies listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange, with combined capitalization reaching RMB 21.48 trillion. Combined free-float capitalization reached RMB 16.49 trillion, although down 19.09 percent and 14.06 percent from the end of 2010 respectively (CSRC Annual Report, 2011). The overall market capitalization represents 45.55 percent of China's Gross Domestic Production (GDP), ranking China the world's third largest stock market after the United States (US) and Japan[2] in terms of combined market capitalization. The Shanghai Stock Exchange was ranked the sixth biggest stock exchange in the world by market capitalization in 2011 (World Federal of Exchanges, 2011), and all of this remarkable performance has been achieved under relatively poor legal and financial systems.

Besides the constant economic growth in China and continuous reforms of the Chinese stock market, the more integrated international financial markets make it more possible and easier for Chinese companies to list internationally as the result of the gradual process of opening up China' capital markets and securities industry. Overseas listing is an essential approach and long-term policy in China for utilization of foreign investment. The China Securities Regulatory Commission (CSRC) encourages domestic enterprises to issue stocks and get listed in both domestic and foreign markets, so that they can make better use of resources from both markets, participate in international economic cooperation, and improve their own international competitiveness (CSRC Annual Report, 2011). Under this policy, both state-owned enterprises (SOEs) and private Chinese companies actively seek to list internationally. Meanwhile, foreign securities institutions started to set up China based offices and then moved on to joint ventures, while domestic securities firms increasingly branched out overseas. The Hong Kong Stock Exchange (HKEx) and the New York Stock Exchange (NYSE) are no longer the only contenders for Chinese listings, as they were at the early stage of development of the Chinese stock market. Singapore, National Association of Securities Dealers Automated Quotations (NASDAQ), and the London Alternative Investment Market (AIM) have become the most popular destinations for Mainland Chinese companies as well. Further, the cross-listing wave has now reached Frankfurt, Toronto, Australia, and Korea. The government continues to encourage Chinese companies to tap into overseas capital markets. As of the end of December 2011, 171 domestic Chinese companies were listed overseas, raising US$174.72 billion in total. Among these, 138 were listed on the HKEx's Main Board (including 10 cross-listings in New York, four in London, and one in New York and London), 20 on the HKEx's GEM and 3 in Singapore. Of the 171 overseas listed companies, 73 had already issued local shares and been listed (CSRC Annual Report, 2011). History also witnessed the greatest offshore initial public offerings (IPOs). In 2006, the Hong Kong market saw giant IPOs launched by the Industrial and Commercial Bank of China (ICBC), which was the world's largest IPO at that time, valued at US$21.9 billion[3]. Over the period between 2000-2011, 1,452 Chinese companies were listed and traded on the different exchanges in either IPO or American Depository Receipt (ADR) forms[4].

1.2 RESEARCH OBJECTIVES

Given the fast development of Chinese cross-listing in the international stock markets as summarized in the previous section, Chinese cross-listing has been of particular interest to researchers. Despite rich literature available on cross-listing, conventional theories presented in previous studies may not adequately explain the phenomenon and behavior of Chinese companies cross-listing in the international stock markets to the extent that it is being examined in this study.

First, most previous research on international cross-listing has focused on well-developed financial markets such as that of Canada, Japan, the United Kingdom (UK), and the US. Most notably, the focus of the studies was on either US stocks cross-listed on an overseas exchange or foreign firms trading on US exchanges as ADRs (Karolyi, 2006). As an emerging market, the study of Chinese cross-listing could enrich the literature of the global cross-listing phenomenon with a more completed dataset.

Secondly, the policies adopted in the well-developed stock markets and Chinese stock markets differ significantly. For example, the policies adopted in the stock markets of Hong Kong, the US, and Singapore are free market-oriented. Hong Kong residents can hold Chinese B-shares and other foreign equities, but Chinese residents in Mainland China were not allowed to trade Hong Kong shares and other foreign shares, although hundreds of Chinese companies are listed in Hong Kong markets and other overseas markets (Su, 1999). On April 13th, 2006, the Chinese government announced the Qualified Domestic Institutional Investor (QDII) scheme, which provides limited opportunities for Chinese residents to access foreign markets via certain financial institutions that have been approved by CSRC, while the country's currency is not traded or floated completely freely and the capital is not able to move in and out of the country freely. This also suggests that overseas listing is likely to have little impact on the domestic Chinese market because of such strict policy on capital flow (Forbes, 2005). Meanwhile, short selling[5] is not allowed in the Mainland China markets, while in the Hong Kong, Singapore, London, and US markets, investors who are trading Chinese cross-listed securities should have the potential of being integrated in terms of the open and free trading environment with virtually complete access for foreign investors, and no regulatory constraints prevent cross-border arbitrage in cross-listed securities; the markets are in fact actively arbitraged by institutional investors.

Regarding corporate governance issues, despite the challenges of an under-developed legal system, corporate governance standards for Chinese firms are often seen as either lacking or deficient in their operation (Liebman & Milhaupt, 2008). Moreover, the overseas-listed Chinese firms are operating under Mainland China laws but with shares listed on the other stock exchanges. For example, on the London Stock Exchange, they must operate within and according to the rules of two significantly different systems. All these issues suggest that these cross-listed Chinese firms in international stock markets inevitably reflect the political, economic, and social preoccupations of Mainland China yet must simultaneously recognize and comply with the demands made by the host countries' legal systems and securities markets. However since 2010, many Chinese companies that went public internationally, especially in the US, have been plagued by accounting problems that result in plunging stocks and scaring the market for new listings. International investors start to wonder whether these Chinese companies have presented them a true picture, even with big name auditors and bankers behind them. This study is not aiming to counter the accusations but provide some empirical knowledge to the reader to understand why the stricter US and other international markets don't guarantee it is free of scandal.

Lastly, this research is the first study that explicitly examines Chinese cross-listings traded in several major stock exchanges. Examination of the relationship between corporate governance and firm performance of Chinese listed firms through the angle of cross-listing has not been reported in the literature in any significant detail, and neither has the arbitrage strategy between dual-listed Chinese firms in overseas markets. These represent important theoretical gaps that this study aims to fill.

Therefore, the research in this study has three objectives, as stated below:

1. **To investigate the relationship of bonding hypothesis, corporate governance and firm performance of Chinese cross-listings**. One of the issues of bonding hypothesis is that foreign firms incorporated in a jurisdiction with weak investor protection rights who cross-list on US stock exchanges could legally bond themselves to higher disclosure standards and stricter enforcement, hence enhance the equity valuation (Coffee, 1999, 2002). However, Liu and Kang (2007) surveyed 84 cross-listed Chinese firms, and they suggested that raising capital is the first important factor for Chinese firms selecting the exchange. Good governance was ranked the fourth most important factor to select an exchange. Protecting minority shareholder's interest as a bonding effect shows less importance. Therefore, in this study, the relationship between Chinese cross-listings and corporate governance under the bonding hypothesis is examined.
2. **To examine the interdependence relationship among different classes of shares of China that traded in different markets, mainly in Hong Kong, the US, and the local China A- and B-share markets**. Prior studies examined the interactions between China-related stocks, mostly conducted on share market indices of each class of shares in Shanghai, Shenzhen, and Hong Kong. However, the study of the relationship between China-related shares by investigating the behavior of individual share prices and returns of classes of shares issued by the same company is both meaningful and interesting.
3. **To explore the cross-border arbitrage opportunities**. Although short-selling is restricted in Chinese markets, considering the market conditions of Hong Kong and the US, arbitrage opportunities could be found for the Chinese firms that are dual-listed and traded on these two markets.

1.3 METHODOLOGY

This study adopts different methodologies to examine the Chinese cross-listing issues, which includes three major quantitative empirical studies. Therefore, a mixed method is suitable for this study because the study is of an exploratory nature in terms of the investigation of Chinese cross-listing phenomenon from different aspects. By adopting panel data analysis, the study provides an empirical test to the framework and hypotheses derived from bonding theory. The time series quantitative data collection and data analysis process for Chinese dual- and triple-listings provides a detailed study of return and market linkage for Chinese dual-listings. This includes unit root test, cointegration analysis, Granger causality test, and error correction model tests. Multivariate regression is also adopted to examine the market co-movement for Chinese dual-listed securities. Lastly, a simple daily arbitrage strategy is used to examine the statistic arbitrage opportunities for the dual-listed Chinese shares that traded both in the Hong Kong and New York markets. The results of these analyses are reported in the following chapters.

1.4 CONTRIBUTIONS OF THE RESEARCH IN THIS STUDY

This research builds on the existing literature on global cross-listing and makes the following original contributions to the body of knowledge in the area of cross-listing.

First, a great majority of the Chinese-listed securities in two domestic stock markets and Hong Kong stock markets are converted from large SOEs. The government had a majority control of these listed firms, and the majority shares of these listed firms were not open for trade until 2006. Prior studies on the corporate governance and other related issues of Chinese listed firms were largely limited to this category of SOEs. The present study examines international cross-listed Chinese firms and extends the research from SOEs to the private Chinese firms and other small to-medium-sized Chinese firms. This allows an understanding of whether encouraging Chinese firms to list overseas would help the Chinese government develop a robust, well-regulated securities market in China. The empirical study of the corporate governance and Chinese cross-listing provides an implacable example for policy makers, market participants, and corporate executives.

Secondly, previous theories, including agency theory (Jensen & Meckling, 1976), property rights theory (Alchian & Demsetz, 1972), the theory of incomplete contracts (Williamson, 1975, 1985), and transaction costs (Williamson, 1975, 1985) make different contributions on the corporate governance and the firm value within the country level. In the case of China, previous empirical work regarding the corporate governance issue has been focused on the effects of ownership structure on firm