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Does law matter? Changes in corporate governance in China and its impact on financial market growth: An empirical analysis (1995-2014).

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Does Regulation Matter? Changes in corporate governance in China and its impact on financial market growth: An empirical analysis (1995-2014).

Abstract: Over the past two decades, China's stock market has experienced rapid growth. This period has seen the transplantation of many 'OECD principles of corporate governance' into the Chinese corporate regulatory framework. These regulations are dominated by shareholder values. This article attempts to explore whether there is a causal relationship between the changes in China's corporate governance and financial market growth, using data from 1995-2014 to create a robust corporate index by looking at 52 variables and a financial index out of five financial market parameters. Subsequently, data is subject to a panel regression analysis, with the financial market index as the outcome variable, corporate governance index explanatory variable and a variety of economics, social and technological control variables, concluding that changes in corporate regulation have in fact had no statistically significant impact on China's financial market growth, which must therefore be attributed to other factors.

Keywords: *Law and financial development, financial market growth, corporate governance, leximetrics*

I. Introduction

Corporate governance as a 'band aid' to financial malaise has been in vogue for several decades. Repeated accounting frauds and related corporate and financial crises in early 1990's Europe gave rise to the modern-day avatar of corporate governance, gradually morphing into a shorthand tool to justify exporting 'good corporate values' to developing countries, in order to stimulate financial market growth. Transitioning to established international models relating to unified corporate governance practices is, according to the World Bank and OECD, 'one important element in strengthening the foundation for individual countries' long-term economic performance' as well as 'a strengthened international financial system.'[1] Corporate governance within these institutions ascribe principles based on microeconomics focusing on internal relationships of companies which subsequently attribute to a strengthened national and, therefore, international financial system[2]. This economic rationale was similarly reflected by the United Nations Conference on Trade and Development's view that improvements to corporate governance would 'facilitate investment flows and mobilize financial resources for economic development.'[3] Expediency and an awareness of 'transparency, accountability and responsibility' is, according to OECD, paramount when executing corporate governance to achieve the desired aforementioned result.[4]

China is quite unique amongst the developing and mid-income countries in that it adopted current corporate governance practices after significant foreign investment had already taken place, either directly, or by proxy through Hong Kong[5]. China started to adopt the laws and regulation relating to internationally approved corporate governance at the turn of the 21st century. The dominant corporate governance code at this time was the OECD Principles of Corporate Governance, based primarily on the shareholder value corporate governance model, although it also provided limited space for stakeholder models.[6] As a result, a shareholder value

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[1] The World Bank , 'Corporate Governance: A Framework for Implementation' (2000) United States: Washington D.C. p.25, Clause 1.1.The 1999 Memorandum of Understanding between the World Bank and OECD, establishing the framework for the Latin American Roundtable among a series of Regional Corporate Governance Roundtables.
[2] ibid, p.11.
[3] UNCTAD, 'Guidance on good practices in corporate governance disclosure' UNCTAD/ITE/TEB/2006/3.
[4] The World Bank, n.1. pp. 12, 25.
[5] The World Bank, n.1. p.2.
[6] The World Bank, n.1. p.11; G20/OECD. 'G20/OECD Principles of Corporate Governance'. (2015) OECD: Secretary General of the OECD.

oriented corporate governance code was adopted by the Chinese regulator with the influence of that approach extending to company[7] and securities legislation.

Over the past three decades, thanks to the burgeoning law and finance literature[8], an assumption has been widely accepted by corporate scholars and international development agencies alike that, once a country adopts a shareholder primacy corporate governance model, benefits will be derived therefrom through encouraging domestic and overseas investment leading to a booming capital market.[9] China's stock market has experienced remarkable growth since it was established in 1990.[10] By October 2017, China's stock market had over 3500 listed firms with market capitalization reaching $8.5 trillion, with a global ranking second only to the USA. China therefore presents an interesting case study to test the postulated link between shareholder-oriented corporate governance and financial market growth and this constitutes the main focus of this paper.

This paper is structured as follows: part II details the methodology adopted in this research; part III focuses upon the historical background of Chinese stock market – its sui generis nature helping to contextualise the quantitative analysis of the financial market growth in part IV. Part V addresses the evolution of the corporate governance regime in China followed by a quantitative analysis in part VI. In part VII we quantitatively contrast and analyse the impact of

[7] Although under Chinese company law public companies are required to establish a supervisory board but in realtiy, the role of supervisory board is negligible and therefore, despite its two-tier board corporate form, it is much closer to the Anglo-American one-tier board structure. For the role of supervisory board, see J Dahya,Y Karbhari &J Xia, 'The Supervisory Board in Chinese Listed Companies: Problems, Causes, Consequences and Remedies'Asia Pacific Business Review 9 (2002) 2. 118-137; P Wang,'The The Effectiveness and Independence of Supervisory Board: Evidence from China 2000-2009', available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2223990; Dahya, J., Karbhari, Y., Xiao, J.Z. and Yang,M. 2003. The usefulness of the supervisory board report in China. Corporate Governance, Vol.11, 308-321.

[8] Law and Finance literature is led by La Porta, et.al. in 1997 and inspired tens of thousands following-up studies ever since. See La Porta et al., 'Legal Determinants of External Finance' (1997) 52 (3) Journal of Finance 1131-1150; La Porta et al., 'Law and Finance' (1998) Journal of Political Economy 1113-1155; La Porta et al., 'Investor Protection and Corporate Governance' (2000) Journal of Financial Economics 58 (1-2):3-27 J. Fin. Econ. 3; La Porta et al., 'Do institutions cause growth?' (2005) Journal of Economic Growth 271; La Porta et al., 'What Works in Securities Laws' (2006) Journal of Finance 1-32; La Porta et al., 'The Economic Consequences of Legal Origins' (2008) 46 (2) Journal of Economic Literature 285-332.

[9] La Porta et al (1999) 'Corporate ownership around the world', 54(2) (1999) Journal of Finance: 471–517.
G S Liu and P Sun, 'Identifying ultimate controlling shareholders in Chinese public corporations: An empirical survey' In D Brown and A MacBean, 'Challenges for China's Development: An Enterprise Perspective' 2005 UK: Routeledge p.48.

[10] N Rajagopalan, Y Zhang, 'Corporate governance reforms in China and India: Challenges and Opportunities' 51 (2008) Business Horizons 55-64.

changes in corporate governance to financial market growth in China. Thereafter qualitative analysis of the residual causes is provided in part VIII. Part IX concludes this paper.

II. Methodology

The research is conducted in several stages. First, a database is created on the evolution of corporate governance in China from 1995-2014. The aim of this phase is to: collect data on fifty-two separate companies; variables based on the OECD Principles of Corporate Governance and previous indices for twenty years (1995-2014). These variables are scaled polynomially – for example the value could be zero, or one, or two meaning the survey went beyond a simple yes/no response in order to take into account systems which use optional rules or 'soft law'.

Secondly, a graded response model is used with a Kalman filter to create a dynamic corporate governance index for China. Applying a linear quadratic estimation creates a dynamic index which measures distribution of changes identified over a period of time rather than confining measurements to a restrictive time restraint of just one year. It is widely acknowledged that change in laws and regulations take some time to show their impact, hence considering development of corporate governance over a number of years would yield more realistic results. Accordingly, any incremental changes can be readily discerned by gathering data over blocks of time (five years) in comparison to a twelve month period. In our corporate governance survey several questions were asked: Is the regulation the same in 1994 in comparison to 1999?'; 'Is the regulation the same in 1999 in comparison to 2004?'; same between 2004 and 2009; and same between 2009 to 2014[11]. These questions provide a platform for effective use of Kalman filter whilst also assisting the identification of seismic events that influenced change.

Bayesian factor analysis is also used. This is the quantification of evidence for a thesis in comparison to an alternative/opposing thesis. Bayesian analysis is thus used to build up a separate multiyear index of financial market growth consisting of five variables - foreign direct investment (FDI); market capitalisation of listed companies; S&P global equity index; volume of stocks traded and the number of listed domestic companies to represent the financial growth of countries; and three control indices of similar timescales comprising a total of ten variables.

[11] With thanks to Xun Zhang for assistance with the survey.

Those being: annual percentage growth rate of GDP; purchasing power parity conversion factor; current account balance; real interest rate; external debt stocks; commercial bank branches per head of population; mobile cellular telephone subscriptions per head of population; electric power consumption per capita; high-technology (products with high R&D intensity) exports in current USD; and the number of patent and trademark applications filed at USPTO.[12] Subsequently, Bayesian change point analysis is used to identify the breakpoints, for example: the time period or particular year when there was a regime shift (a substantial movement away from the previous distribution or, qualitatively speaking, a 'complete' change from the previous system). In the corporate governance development index a breakpoint signifies a complete change from the previous system usually in the form of a completely new corporate governance code that replaces the previous system. In the financial market development index, a breakpoint signifies either a market high or low compared with recent statistics and so, usually, coincides with the peak of a boom or the trough of a bust. In addition, qualitative analysis is provided in advance of the quantitative analysis in order to contextualise quantitative descriptors.

Finally, a country level regression model is constructed using the five indices. The financial market index is used as a dependent variable, the dynamic corporate governance index as predictor variable, and the three control indices as control variables. Both Bayesian and classical regression methods have been used in the analysis[13].

III. Historical background of the Chinese stock market

The Chinese stock market emerged from a unique background. From the outset, it was closely related to state-owned enterprises (SOEs) reform. Like its former socialist counterparts, before the 1978 economic reform, SOEs dominated China's economy, particularly its industrial sector. Further, as was the case with their socialist counterparts, the eve of the economic reform was a period characterised by sloth, inefficiency and waste across numerous SOEs. The Chinese

[12] For a discussion of all control variables please contact the authors of this paper.

[13] The use of regression analysis has resulted in previous remarkable success in other studies. See: X Xu, &Y Wang, 'Ownership Structure and Corporate Governance in Chinese Stock Companies', 10 China Economic Review (1999) 75–98; X Wang, L Xu, et al. 'State-owned Enterprises Going Public: The case of China', Economics of Transition 12 (2004) 467–487; B B Jiang et al., 'Share Reform and the Performance of China's Listed Companies' 19 (2008) China Economic Review 489-501.
For more information regarding the computer codes used in the methodology please contact the authors.

government adopted a number of measures to improve SOEs' performance. However, none were successful.[14] By the end of 1994, more than 50% of the approximately 110,000 SOEs ran at a loss,[15] with the state industry's losses reaching a record high of almost RMB 80 billion in 1996.[16]

Historically, the SOEs raised capital primarily through interest-free budgetary grants. With the fall in central government's revenues in the early 1980s and restructuring of the banking sector,[17] the government moved towards funding SOEs through bank loans. Nevertheless, since the main banks were also state-owned, many of the loans were more akin to grants, with debt forgiveness and payment deferrals common place. The persistent loss-making SOEs therefore resulted in massive non-performing loans (NPLs) in the banking system.

Consequently between 2000-2002, China had the largest number of NPLs among major Asian countries, measured either as a fraction of total new loans made by all banks or as a fraction of GDP in a given year. [18] Lardy was of the opinion, when applying the standard accounting criteria, that the whole Chinese banking sector was technically insolvent in the mid-1990s.[19] As a result, the Chinese government needed to find an alternative fundraising vehicle for SOEs and the newly-established stock market was enlisted for this mission.[20]

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[14] For instance, see M Shirley and C Xu, 'Empirical Evidence of Performance Contracts: Evidence from China', 17 (1)(2001) Journal of Law, Economics and Organization168-200; N Lardy, China's Unfinished Economic Revolution, (1998), Washington, D.C.: Brookings Institution; D Clarke 'Corporate Govenance in China: An Overview' 14(2003)China Economic Review 494-507; X Li and KE BrØdsggrd, 'SOE Reform in China, Past, Present and Future'31(2) (2013) The Copenhagan Journal of Asian Studies (2); S Tenev and C Zhang , 'Corporate Governance and Enterprise Reform in China' (2002) Washington, DC: World Bank and the International Finance Corporation; Q Liu 'Corporate Governance in China: Current Practices, Economic Effects and Institutional Determinants' 52(2) (2006) CESIFO Economic Studies 415-453; D Chen, 'Corporate Governance, Enforcement and Financial Development, the China Experience (2013) Edward Elgar, chapter 2 ; O Sabbaghi, 'Corporate Governance in China: A Review' 16 (1) (2016)Corporate Governance: The International Journal of Business in Society 866-882

[15] K Lincoln, 'Fire When Ready', Far Eastern Economic Review, (1995) Feb 23, 50.

[16] Lardy, n.14

[17] Between 1950 and 1978, China's financial system consisted of a single bank - the People's Bank of China (PBOC), a central government-owned bank under the Ministry of Finance which served as both the central bank and a commercial bank. Since 1978 the PBOC departed from the MOF and became a separate entity while four state-owned banks were established to take over some of its commercial banking businesses.

[18] The Asian banker (2003).

[19] N Lardy (1998) n.14.

[20] J Wu, 'Understanding and Interpreting Chinese Economic Reform' (2005) Thomson and South-Western. Wu, then served as an advisor to the State Council, claimed that 'the administrative authorities ..adopted the policy that 'the stock market should serve the SOEs'.

Given the primary task of the Chinese stock market is to finance SOEs (which remained true until at least very recently), it is no surprise that the stock market is dominated by state-owned companies (directly or indirectly owned).[21] A 2003 study showed that approximately 84% of listed companies were under state control;[22] at the end of January 2013, listed SOEs constituted nearly 51.4% of the total market capitalization.[23] Moreover, in order to maintain the state's control over the listed companies, two classes of shares were created, one was tradable and the other was non-tradable. Tradable shares were offered to public investors and non-tradable shares were owned by either state or legal persons.[24] As a consequence, throughout the limited history of the Chinese capital market, only around one third of shares were tradable.[25]

IV. Quantitative assessment of financial market growth in China

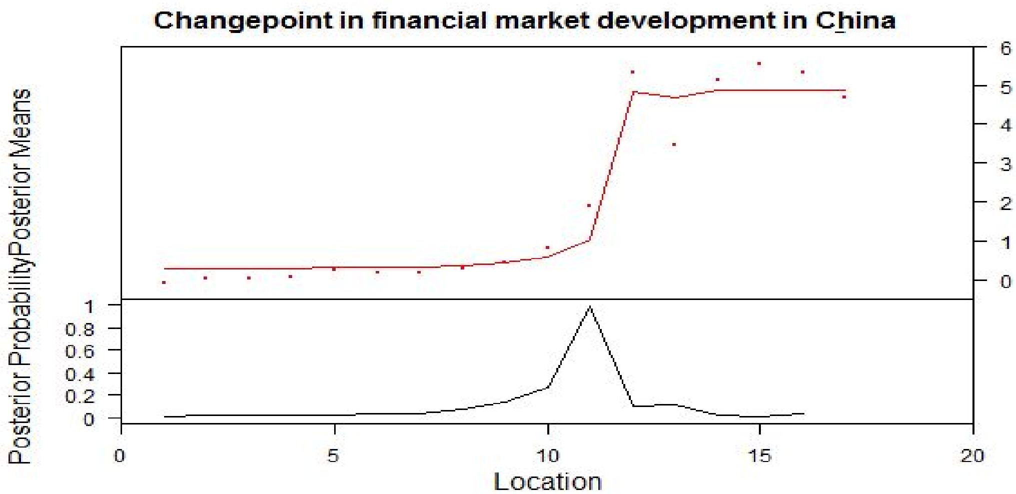
[21] Jiang et al., n.13; P Wonacott, 'China's Stock Markets Open Doors' 10 (2002)Wall Street Journal, September; C Walter and F Howie, (2003) 'Privatizing China: The Stock Markets and Their Role in Corporate Reform',John Wiley and Sons; S Tenev, C Zhang and L Brefort 'Corporate Governance and Enterprises Reform in China, Building the Institutions of Modern Markets' (2002) World Bank Publications; L Tian, 'State Shareholding and The Value of Chinese Firms' (2001)Working Paper, London Business School; Q Sun and W Tong 'China Share Issue Privatization: the Extent of Its Success', 70 (2) (2003) Journal of Financial Economics 183-222

[22] G Liu and P Sun, 'Identifying Ultimate controlling shareholders in Chinese public corporations: an empirical survey'. Asia Program Working Paper No 2 (2003), available at http://www.chathamhouse.org.uk/files/3096_stateshareholding.pdf .

[23] A report made by the State-owned Asset Supervision and Administration Commission (SASAC), see 'State-owned Listed Companies Account for 51.4 Percent of the A-share Market Capitalization', available at Yicai Network: http:www.yicai.com/news/2013/01/2404678.html, accessed 27 February 2017.

[24] State shares are held by the central and local governments, which are represented by the SOSAC. Legal person is defined as a non-individual legal entity or institution, they include stock companies, non-bank financial institutions and SOEs that have at least one non-state owner. Non-tradable shares can only be transferred between state and legal persons by off-market negotiation.

[25] For instance, by the end of 2004, 64 percent of the total 7149 billion shares were non-tradable, among which 74 percent was state owned. See The CSRC,'2008 China Capital Market Development Report'(The 2018 Report hereinafter)



[26]

From 1995 to 2005, momentum towards shareholder primacy gained traction culminating in the probability of change in the development of the financial market within China being a gradual process producing a high probability of change (year 11 probability of 0.99).[27] This corresponds to the year 2006/07. It is submitted the reduced probability of change thereafter was due to the ensuing Global Financial Crisis ('GFC'). The height of the crisis corresponds with the reduced probabilities (years 12-14). One compelling reason for such a reduced probability was the GFC unveiled that emphasis on adopting shareholder primacy regulations does not necessarily equate to higher financial market growth (as inferred by OECD and World Bank).[28] The GFC questioned the causal relationship between the ability of shareholder primacy to positively impact financial market growth. A report analysing this very point confirmed there are more influential ways of nurturing financial market growth.[29]

V. Evolution of corporate governance in China

[26] N Samanta, (2015) The impact of adopting shareholder primacy corporate governance on the growth of the financial market in developing countries. PhD thesis, University of Sheffield.
[27] The 2018 Report, n.25 at p.161.
[28] The World Bank (2000), n.1
[29] The World Bank(2000), n.1; ; H Hansmann and R Kraakman, 'The End of History for Corporate Law' 89 (2000) Geo. L. J. 439; H Hansen and J Rand, 'On the causal links between FDI and growth in developing countries' 29(1) (2006) The World Economy 21-41.

Development of corporate governance in China is a process that complemented and supported SOE reform. Until 1978 there were no enterprises in the modern or commercial sense in existence throughout China. Traditional SOEs (TSOEs) were essentially a grassroots production unit for cost accounting, but had insufficient characteristics that are expected of enterprises. In other words, a TSOE therefore had the basic task of carrying out all instructions and directives from the state..

From 1978 to 1993 the Chinese government adopted a series of measures to boost TSOEs' performance. These measures mainly focused on increasing TSOEs' operational autonomy and creating economic incentives for managers. As a result the state incrementally reduced its direct control over production and managers were allowed to retain the profits over and above the fixed targets.[30] Although these strategies did increase employees' incentive to maximize valueat first, the positive impact was only short-lived since managers and workers only took the upside of profit increasing,had no responsibility in relation to the downside which was still borne by the state.[31] In addition, the government's persistent intervention often gave rise to a clash between the government officials and managers, resulting in enormous inefficiencies.[32]

In order to separate state ownership from daily control over the SOES, during 1993-2003, the policy of corporatisation was introduced. The underlying idea of 'corporatisation' is through restructuring SOEs and adopting western-style corporate governance, effectively eliminating harmful administrative intervention to daily management while leaving state-ownership intact[33]. The 1993 Company Law legislation was passed in the service of those firms. TSOEs were requested to convert into one of the three forms of companies: joint stock company, limited liability company or wholly state-owned limited liability company.[34] The old organs of governance (Party Committee, General Meeting of Employees' Representatives and Union) were replaced by the shareholders' general meeting, board of directors and supervisory board. The corporatized SOEs now look very much like their western counterparts, at least in form. In 1998,

[30] It's called the SOE Management Responsibility System.
[31] Shirley and Xu, n.14 .
[32] Clarke, n.14 Tenev and Zhang, n.14
[33] C Lin, 'Corporatization and Corporate Governance in China's Economic Transition' 34 (2001) Economics of Planning 5-35; S Wong, S Opper and R HU, 'Shareholding Structure, Depoliticization and Firm Performance'12 (1)(2004)Economics of Transition 29-66;
[34] C Wei-qi, and P Lawton, 'Chapter 3: SOEs reform from a governance perspective and its relationship with the privately owned publicly listed corporation in China' In D Brown and A MacBean, 'Challenges for China's Development: An Enterprise Perspective' 2005 UK:Routeledge at 25.

the first Chinese Securities Law was promulgated – it was the product of a decade's work on securities and how it could supplement China's political context.[35]

From 1993-2002, the Chinese capital market experienced a period of short term prosperity but this was accompanied by corporate scandals and financial crimes. 327 treasury bond scandals resulted in the collapse of Wan Guo Securities company (the then largest securities company) and the imprisonment of its general manager. The Yin Guangxia scandal was known as 'China's Enron', in which the listed company was revealed to have faked almost everything, from booking accounts to supply contracts; Lan Tian, Daqing Lianyi were all held to be liable of misconduct on a similar scale. It was discerned that listed companies were being treated akin to ATMs by their controlling shareholders together with rife presence of so-called 'tunnelling'[36]. As a consequence, issues of corporate governance were brought to the public's attention and became a major item on the agenda of the regulator.

On 31 May 2001 the China Securities Regulatory Commission (CSRC), released the 'Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies' and made a mandatory requirement of having at least one-third of independent directors on the board. In early 2002 the CSRC and National Economic and Trade Commission jointly issued the 'Code of Corporate Governance of Listed Companies.' This Code was based on OECD Corporate Governance Principles but also gave particular consideration to the circumstances and outstanding issues of listed companies in China.[37] It expounded basic principles of corporate governance; the means to achieve investor protection; and the basic code of conduct and professional ethics that need to be observed by directors, supervisors, managers and other executives of listed companies. Consequentially, the number of companies listed on the stock exchange from 1993 increased annually.[38]

In 2005, both Company Law and Securities Law were revised and passed by the National People's Congress (NPC). The 2005 Company Law confirmed most of the corporate governance

[35] The 2018 Report, n.25at161.
[36] G Jiang, C Lee and H Yue, 'Tunneling through Inter-corporate Loans: The China Experience', 98(1) (2009) Journal of Financial Economics 1-20; Q Liu, Z Lu, 'Earnings Management To Tunnel: Evidence from China's Listed Companies'(2004) available at https://pdfs.semanticscholar.org/b3f2/d296e1acad2806d8c9f6c6b7d3bf36bb01a3.pdf
[37] International Monetary Fund, 'People's Republic of China: Detailed Assessment Report: IOSCO Objectives and Principles of Securities Regulation'.(2012) US: Washington DC pp.2-5.
[38] ibid, pp.166, 180.

measures already adopted by the CSRC, such as the mandatory requirement of independent directors that is now included in Article 123. It also made further efforts in strengthening minority shareholder protection, as represented by the introduction of cumulative voting in the election of directors and supervisors;[39] it imposed constraints on large shareholders' voting in related transactions;[40] prohibited directors from voting on matters of conflicting interests;[41] and established a system of private securities litigation (PSL).[42]

The 2006 Securities Law improved the system of governing issuance, trading, registration and settlement of securities and provided for the establishment of multi-tiered capital-market architecture. It enhanced the supervision of listed companies, made issuance approval procedure more transparent and established a system of listing sponsorship.[43] It advanced minority shareholders protection by imposing further constraints on corporate controllers,[44] setting up investor protection funds[45] and extending legal grounds for PSL to insider trading and market manipulation.[46]

Further seismic reforms took place in 2005 in the Split-Share ReformReform (*guquan feizhi gaige*). The reform aimed to resolve the long-standing issue of 'non-tradable' shares. Under the new policy the constraint on state and legal person shares was removed and all shares of listed companies became fully circulated. Nonetheless, the impact of this change has been prolonged and incremental with listed companies requiring compensation packages approved by the holders of tradable shares before circulating the 'non-tradable' shares[47]. By the end of 2009 tradable shares still accounted for only 28.4% of the total shares outstanding. [48]

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[39] Art 106.
[40] Art 16, Art 125.
[41] Art 125.
[42] Art 152.
[43] Art 11. Also mentioned in the 2018 Report, n.25.
[44] For instance, Art 47, Art 68.
[45] Art 134.
[46] Art 76, 77.
[47] Z Yang, W Hou, X Qian, 'The Split-Share-Structure Reform in China: Past, Procedure, and Impact' In: Cumming D., Firth M., Hou W., Lee E. (eds) (2015)Sustainable Entrepreneurship in China. Palgrave Macmillan, New York 159-177**;** A Beltratti and B Bortolotti, ' The Nontradable Share Reform in the Chinese Stock Market: The Role of Fundamentals'(20017), available at https://www.ifc.org/wps/wcm/connect/ba00118048a7e555a11fe76060ad5911/Beltratti%252C%2BBortolotti%2B-%2BThe%2BNontradable.pdf?MOD=AJPERES&ContentCache=NONE;
[48] The 2018 Report, n.25.

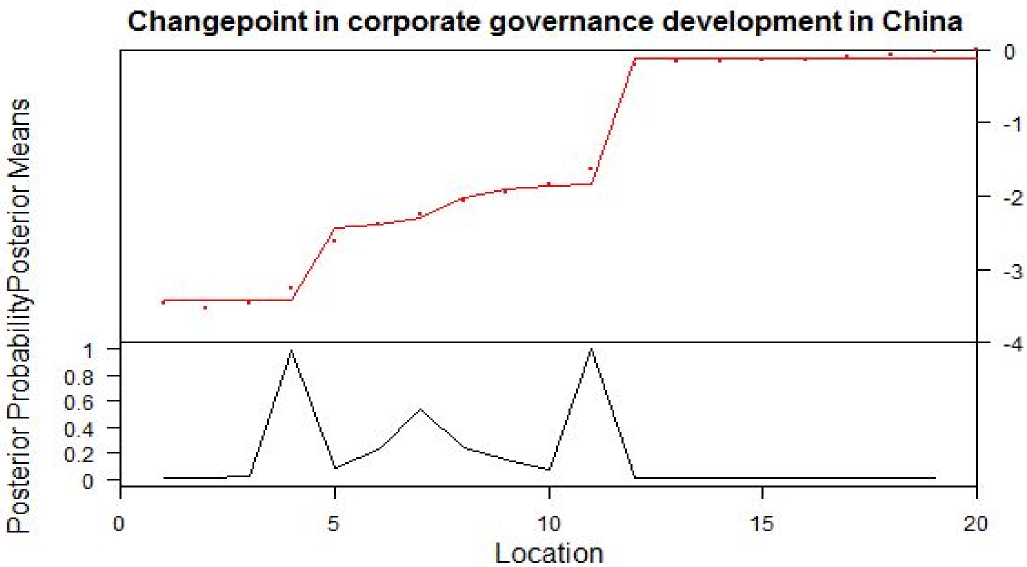
Within the framework of the revised Company Law and Securities Law, the CSRC adopted a series of measures in relation to corporate governance.[49] Those significant regulations include: Regulations on Information Disclosure of Listed Companies (2007); Guidelines on Articles of Association of Listed Companies (2006); Regulations on the Takeover of Listed Companies (2006); Regulations on Major Asset Reorganization of Listed Companies (2008); and Regulations on Stock Option Incentives of Listed Companies (Trial) (2005).[50].

In addition to legislation and regulations, the stock exchanges[51] also moved ahead in protecting minority shareholders. They built up a market surveillance system that closely monitored the share price fluctuation in order to prevent illegal stock manipulation. They suspended companies that failed to improve information transparency and took measures to forcibly disclose information pertinent to investor's interest that public companies chose not to announce.

Despite technical differences, it is safe to say that the overwhelming majority of the rules adopted by the Chinese authorities are consistent with international best practice of corporate governance and have a clear shareholder value orientation. Next, we will test whether this shareholder value orientation is linked with the growth of China's financial market.

VI. Quantitative assessment of Chinese corporate governance evolution

[49] ibid, p.165.
[50] The 2018 Report, n.25, at. 165, 210.
[51] Although stock exchanges claim to be self-regulatory bodies, they are, in fact, tightly controlled by the CSRC and therefore more like an executive branch of the CSRC.



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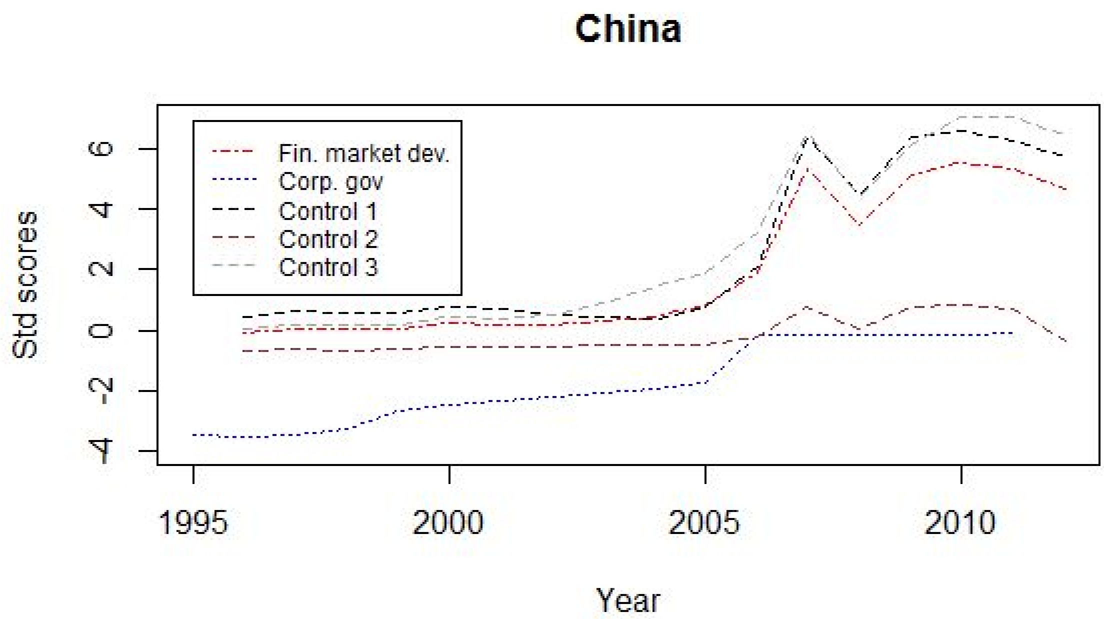
The probability of change occurring in year 4 (probability of 0.99) and year 11 (probability of 1.0) is quite high. This corresponds to the year 1998 when Securities Law was adopted[53] and the years 2005/06 which sits squarely between the amendments to company law in 2005 wherein a new Administrative Measures on Securities Depository and Split Share Reform was introduced, together with Clearing in 2006 and Provisional Administrative Measures on Transferring Shares Owned by State-Owned Shareholders (promulgated by the CSRC and SASAC in 2007).[54] The data is suggestive of a high probability that China has made improvements to its corporate governance which, subsequent to the implementation of the above reforms, are likely to be shareholder orientated.

Thus our quantitative analysis matches up with the qualitative discussion in the previous section.

VII. Impact of changes in corporate governance on Chinese financial market growth

[52] N Samanta, (2015) 'The impact of adopting shareholder primacy corporate governance on the growth of the financial market in developing countries'. PhD thesis, University of Sheffield.
[53] Securities Law of the People's Republic of China < http://www.npc.gov.cn/englishnpc/Law/2007-12/11/content_1383569.htm>.
[54] The 2018 Report, n.25.



The timeline of the above diagram[55] corresponds to the time period being analysed, that being from 1995 to 2014. It complements the protracted securities reforms within China for that same time period. Accordingly, the graphs above show Chinese corporate governance was non-existent for a period of time (the Chinese corporate governance index starts at -3, one of the lowest among the countries studied, followed by aggressive development over a short period of time with some rapid bursts followed by a slow tapering off (between 1995 and 2014 China had one of the highest degrees of shareholder value shift in the corporate governance model). The diagram is supportive of the CSRC's findings that between 1995 to 2006 the emergence of capital markets had been borne of reform to Chinese securities which gave primacy to shareholders whilst strengthening corporate governance.[56] Accordingly, it follows from this that incremental reform presence increases the probability of corporate governance prevalence. It is no surprise therefore that when the frequency of Chinese securities reform reduced, the corporate governance trend plateaued.

In contrast to other developing countries with planned economies, there are diverse results of the progression of corporate governance. For instance in Brazil between 1995 to 2001, there was a

[55] N Samanta, (2015) The impact of adopting shareholder primacy corporate governance on the growth of the financial market in developing countries. PhD thesis, University of Sheffield.
[56] ibid, pp.13-14.

non-existent shift to shareholder primacy in corporate governance unlike China.[57] Thereafter Brazil had slow growth from 2001 to 2010. Similarly, El Salvador replicated these results in the same time period. These contrast to other central economies such as Vietnam which had results akin to China's corporate governance progression.[58] It is surprising to witness divergent progressions amongst centrally planned developing economies.

There are several possible explanations for this. Two of those could be time lag and demographics. In relation to the former, China's and Vietnam's plateau circa 2005 may reflect the seismic changes posed to complex political ideology and institutions which confined the parameters corporate governance operated within. The derogation of power in favour of primary shareholders contrasts with political ideology of governance being state owned therefore transplantation of OECD and the World Bank's suggestions cannot be expected to be instantaneous, rather a prolonged process. Coupled with the GFC, which many scholars have argued was caused by manipulation of capital asset prices by economic actors having too much power[59], reinforces resistance for all shares being tradable with Government ownership being drastically reduced.[60] The political undertones may explain the plateaued period after 2005.

In relation to demographics, these are a dependent variable which can be influenced by extrinsic events such as the collapse of the Soviet Union which could provide an explanation why the trend of corporate governance in Asia increased throughout the 1990s analogous to El Salvador and South American countries which may not be as politically or economically reactive.

Accordingly, increased shareholder value corporate governance tends to coincide with higher financial market development,[61] but the control variables evidence much greater influence on financial markets. However, the importance of non-governmental actors in the promotion of corporate governance must not be understated. Academic literature is supportive of the above diagrams insofar as state promotion of corporate governance is limited due to the government's

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[57] See Navajyoti Samanta, 'A leximetric analysis of evolution of corporate governance regulations in 21 countries.' XXXX

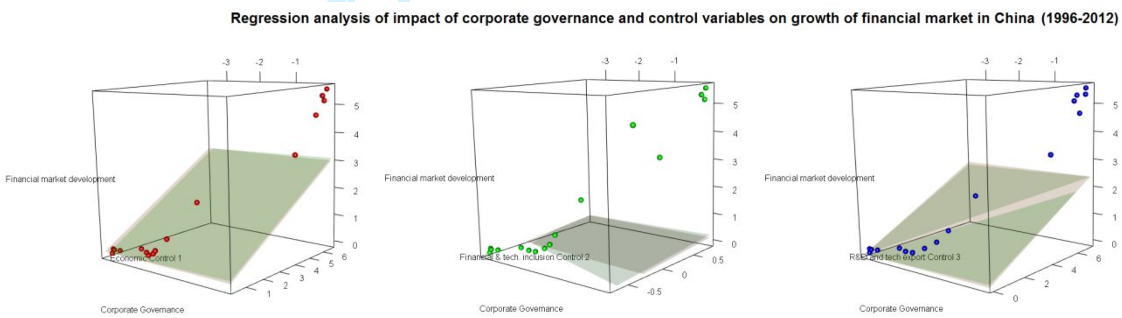
[58] ibid

[59] A Berle and G Means, The modern corporation and private property. (1968). ew York: Harcourt, Brace & World (Rev. ed.); B Wang, 'A Study of the current legal situation of the organizational structure of companies limited by shares and the legislature program for them' (1999) China Reform and Development Institute 135; ; E F Fama, Two Pillars of Asset Pricing. 104(6) (2014) American Economic Review 1467; Clarke, n.14

[60] Jiang et al., n.13

[61] The World Bank (2000), n.1

finite resources; more active engagement is required by non-government institutions/actors to promote corporate governance[62]..The plateau in the above diagram affirms these sentiments, notwithstanding the growing acceptance amongst scholars of non-governmental ownership structures positively correlating to improved corporate governance with non-controlling shareholders have an important role.[63]. From a commercial perspective shareholders want maximised profits whilst being as risk aversive as possible. It is in their interest to promote corporate governance to preclude erosion of certainty and repetition of scandals of the 1990s[64] which could ultimately affect their investments and personal wealth.[65]



[66]

This is proved by the fact that the regression planes have a remarkably high tilt towards the Z axis which denotes the control variables. Change in corporate governance has an impact on financial market growth comparable with that of financial and technological inclusion (control 2) where the regression plane is almost flat, signifying similar importance between the variables in the X axis and the Z axis. The other control factors like the economic factors (control 1), increase investment in R&D and technology-led exports have far more impact than shifts in the corporate governance model.

[62] Jiang et al, n.13
[63] Y Kang, B Kim, ‘Ownership structure and firm performance: Evidence from the Chinese corporate reform’ 23 (2012) China Economic Review 471.
[64] N Rajagopalan, Y Zhang, ‘Corporate governance reforms in China and India: Challenges and Opportunities’ 51 (2008) 58-60.
[65] La Porta et al., (2005)n.8.
[66] N Samanta, (2015) The impact of adopting shareholder primacy corporate governance on the growth of the financial market in developing countries. PhD thesis, University of Sheffield.

While the regression coefficients for control variables are comparable, the corporate governance regression coefficients diverge extremely between Bayesian and frequentist analysis. Bayesian analysis puts the impact of change in corporate governance at approximately five times that given by frequentist analysis.

	CG	Control 1	Control 2	Control 3	Intercept
Mean Bayesian	0.032681	0.46066	0.24393	0.327721	-0.00826
Frequentist	0.005788	0.460602	0.23133	0.342759	-0.10093

Bayesian analysis puts the high density interval tightly between 0.018637 and 0.046816, the frequentist coefficient falls well out of this range. However, both coefficients are much smaller in comparison to the control coefficients.

A ratio analysis shows the impact as following and bears out the summary above.

Mean Bayesian		Frequentist	
CG:Ctrl1	CG:Ctrl3	CG:Ctrl1	CG:Ctrl3
1 : 14.096	1 : 10.028	1 : 79.581	1 : 59.22

Thus it is quite clear that, in comparison to other control factors, the change in corporate governance has little correlation to the growth in the financial market in China.

VIII. Explanation to the growth of the Chinese Stock Market: other drivers?

Our quantitative analysis found a weak correlation between China's shareholder orientation corporate governance reform and the growth of its financial market. This may appear to challenge La Porta's 'Law and Finance' literature which claims shareholder protection leads to capital market development.[67] It is beyond the scope of this paper to offer a comprehensive, detailed explanation to this deviation although this issue has been discussed by one of the authors in a previous paper. The main arguments can be summarized as follows:

[67] La Porta et al., (1997)(1998), n.8

The growth of China's capital market is mainly driven by institutional rent-seeking and financial repression.[68] For any stock market to grow there must be a demand and supply of equity capital. However, previous studies have shown that neither can be taken for granted. On the demand side, since information asymmetry is most severe in relation to equity financing, equity capital is usually the least rather than most favoured financing vehicle.[69] On the supply side, the law and finance literature has well established that in the absence of strong shareholder protection, investors would be reluctant to part with their capital and trust it with corporate controllers. In China, institutional rent-seeking created the demand and financial repression accounted for the supply.

On the demand side, the price of equity capital in Chinese financial markets has been distorted and artificially maintained to reflect cheap prices. As mentioned earlier in this article, the primary goal of the Chinese stock market is to finance its SOEs. In order to ensure the lion's share of equity finance flowing into SOEs, the entry of market has been tightly controlled and the state regulates almost every aspect of stock issuance from the issuer to the price of IPO. By limiting the supply of stocks togetherwith the fact that two thirds of the stocks are non-tradable, it significantly lowered the cost of equity capital and turned it into nearly a free lunch for issuers.[70] In other words, it created enormous rents for issuers to catch. Thus, in China, contrary to the corporate finance theory and the practice in mature markets,[71] equity financing becomes companies' most favoured vehicle[72] and there has always been a fierce competition for listing.[73] The scale of regulatory rents is estimated to be at 20 percent of total market capitalization.[74]

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[68] For a more detailed study, see D Chen, 'Developing a Stock Market Without Institutions-the China Puzzle', 13 (2013) Journal of Corporate Law Studies,151-184

[69] S Mayers, 'The Capital Structure Puzzle' (1994) 39(3) Journal of Finance, 575; S Mayers and N Majluf, ' Corporate Financing and Investment Decision When Firms Have Information that Investors Do not Have' (1984), 13(2) Journal of Financial Economic 187.

[70] This is known in China's stock market, as 'quan qian'(a free lunch style fundraising).

[71]For instance, during 1970s and 1980s, in seven countries (the US, Canada, France, Germany, Italy, UK and Japan), the average internal financing constituted 55.71 percent and external financing 44.29 percent , of which equity financing was only 10.86%, see R Hubbard, 'Money, the Financial System and the Economy' Addison-Wesley, 2nd ed, 1997.

[72] S Huang and G Zhang, 'Analysis of Chinese Listed Companies' Equity Financing Preference' 2002 (11), Economic Research Journal, 12; C Wan, C Chu, X Li, Y Yuan and J Zhou, 'A Study on Sources of External Financing in Listed Companies', SHSE research paper, available at http://static.sse.com/cn/cs/zhs/xxfw/research/plan/plan20020412e.pdf .

[73] It often gives rise to scandals and even crimes. Some senior staff in the CSRC, such as the former vice president of the CSRC, Wang Yi was sentenced to death penalty for bribery.

On the supply side, the Chinese investors are willing to risk their money in the equity market mainly because of the lack of investment alternatives, thanks to the policy of financial repression. Financial repression has invariably stood at the centre of China's economic policy which imposed rigid control over interest rates, the bond market and the convertibility of currency. The stock market was the main (if not the only) investment alternative to bank deposits before the rise of the property market and the recent development of Fintech. Financial repression drives tremendous amount of savings into the stock market regardless of weak investors' protection.

In short, China's capital market growth is a result of unique institutional arrangement and has little to do with changes in corporate governance.

IX. Conclusion

To conclude, the data portrays the effect of corporate governance regulations on the growth of the Chinese financial markets is confined. Controlling for the macroeconomic growth and technological growth at least in frequentist or classical method laws have a limited role to play. In Bayesian analysis the role of law is more pronounced than in frequentist methods. We would thus tend to disagree with the 'law matters' group of legal scholars, at least in the view of this empirical research done in the context of Chinese financial market growth.

We aim to add them to a multilevel model later. More focus has to be given on the qualitative aspects of Chinese stock exchanges where other considerations apart from the law in books may come into play. There are certain market forces like SOEs which need to be studied separately from the other listed companies as government stakes may distort the data being analysed. It is interesting to note that the G20/OECD Principles of Corporate Governance 2015 has also emphasised the regulatory and implementation aspects of corporate governance[75]. Further studies are needed to discern whether China has eagerly adopted the shareholder primacy model

[74] Q Liu, 'The Shell of Chinese Listed Companies Worth RMB 800 Billion Yuan', 2 June 2002, 21st Century Economic Report, available at http://finance.anhunews.com/system/2002/06/02/000027743.shtml; Also, C Bai, Q Liu and F Song, 'Bad News is Good News: Propping and Tunnelling Evidence from China', working paper (University of Hongkong 2004), available at http://www.hiebs.hku.hk/working_paper_updates/pdf/wp1094.pdf.

[75] The World Bank (2000), n.1

espoused in the 2004 OECD Principles showing a similar propensity towards strengthening the regulatory systems as encouraged in the 2015 OECD Principles.[76]

[76] International Monetary Fund, People's Republic of China: Detailed Assessment Report: IOSCO Objectives and Principles of Securities Regulation. (2012) US: Washington DC; G20/OECD. 'G20/OECD Principles of Corporate Governance'. (2015) OECD: Secretary General of the OECD.