



清华大学法学院

TSINGHUA UNIVERSITY SCHOOL OF LAW

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Digitization and AI in the Board Room - the Case of China

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1. the Key Words



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Digitization / Corporate Technologies (“CorpTech”):

Use of distributed ledgers, smart contracts, Big Data analytics, artificial intelligence and machine learning in the corporate context to improve discrete corporate practices, such as shareholder identification, shareholder proposals, proxy fights, electronic voting, virtual shareholder meetings, digitalized compliance and risk management (Luca Enriques & Dirk A. Zetsche (2020)).

Artificial intelligence (“AI”):

“(T)he science and engineering of making intelligent machines, especially intelligent computer programs” (John McCarthy, *What is AI?/Basic Questions*)

“In very broad terms, artificial intelligence is the ability of computers and other machines to behave in a way that appears “smart” or “intelligent” to an external observer. The technologies that enable this are different and many. Famous examples are decision-making programs that employ (proprietary) algorithms and machine learning” (Chiara Picciau (2021)).



1. the Key Words (con't)

Board of directors (“BOD”):

Functions of the BODs in China (§ § 46, 108.4, PRC Company Law (2018)):

- Calling general meetings and executing the resolutions of such meetings;
 - Making key business plans, such as determining any capital restructuring, business plans, investment or M&A programme, new financing;
 - Proposing the budget and profit distribution plans to the general meeting;
 - Appointment and oversight of senior management (including their evaluation and remuneration);
 - Setting policies for risk management, internal controls and compliance;
 - Overseeing information disclosure systems (for the listed companies).
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1. the Key Words (con't)

BOD in the Chinese companies:

Compare to:

Key functions of the BOD (The G20/OECD Principles of Corporate Governance, 2015):

[1] Reviewing and guiding corporate strategy, major plans of action, risk management policies and procedures, annual budgets and business plans; setting performance objectives; monitoring implementation and corporate performance; and overseeing major capital expenditures, acquisitions, and divestitures ... [2] Monitoring the effectiveness of the company's governance practices and making changes as needed ... [3] Selecting, compensating, monitoring and, when necessary, replacing key executives and overseeing succession planning ... [4] Aligning key executive and board remuneration with the longer term interests of the company and its shareholders ... [5] Ensuring a formal and transparent board nomination and election process ... [6] Monitoring and managing potential conflicts of interest of management, board members and shareholders, including misuse of corporate assets and abuse in related party transactions ... [7] Ensuring the integrity of the corporation's accounting and financial reporting systems, including the independent audit, and that appropriate systems of control are in place, in particular, systems for risk management, financial and operational control, and compliance with the law and relevant standards ... [8] Overseeing the process of disclosure and communications.



1. the Key Words (con't)

Also compare to:

“(B)usiness and affairs of every corporation ... shall be managed by or under the direction of a board of directors” (Del. Cod. Ann. tit. 8., § 141(a) (2020)).

The nature of the BOD in the Chinese share companies (especially the listed companies) is the Managing/Executing board (instead of the *Monitoring / Mediating* board) under the shadow of the General Meeting (as the “organ of the suprem power”).

Imcoming overhaul of the PRC Company Law (2023):

- Swing between *Shareholders Centrism & BOD Centrism*;
 - Fade-out of the Board of Supervisors;
 - More independent directors in the Share Companies?
 - Function of the managers left to autonomy of the enterprises.
 - ...
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2. Digital supports for the BODs

2.1 Virtual BOD meetings

Use of the virtual conference platforms (instead of blockchains and smart contracts) to run virtual meetings (“Electronic communications” , draft revisions to the PRC Company Law (§ 76, 2021 / § 24, 2022)) .

Still old technologies, when provides a secure and effective forum for virtual discussion, information sharing, and voting in the the limited space of board room.

Unlike virtual shareholder meetings, no material difficulties for virtual board meetings in:

- Digital divide
 - Technical problems
 - Identification
 - Eligibility to vote
 - Delegation issues
 - Vote counting
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- Permitted and even encouraged by the China Securities Regulatory Commission (“CSRC”) and the stock exchanges.
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2. Digital supports for BODs (con't)

2.2 Exemple of the Robo-advisor (“RA”)

Mainstream opinions (E.g., Zheng(2018), Gao(2018), Zhao(2020)):

A RA is only the tool used by its operator to provide services of investment consultancy, it does not enjoy the legal personality, which means that the civil liability caused by a RA should be taken by its operator. The legal relationship between the consumer/investors and the investment consultants has not been changed by the generation of RAs.

As an investment consultant, the RA operator should perform its duty of loyalty and duty of diligence. However, there is some renewal in the contents of these duties. To be specific, the operator should disclose the conflict of interest (if any), ensure the rationality of questionnaire and the validity of algorithms and ensure its RA function well.

The RA operator should take responsibility for its violation of duty of loyalty and duty of diligence, which is a kind of legal responsibilities and compose of three essentials: existence of legal relationship of RA, violation of the fiduciary duties, damages of consumer/investors caused by violation of the fiduciary duties.



2. Digital supports for BODs (con't)

2.3 Risks and liabilities: The“Everbright Fat Finger” (erroneous trading) incident

On 16 August 2013, the automated trading system used by the Strategic Investment Department of a broker-dealer company (“*Everbright Securities*” , also a listed company) caused massive orders due to program error, which caused drastic fluctuations of the whole market of that day.

Using the automated trading system, a trader of the company found that an individual share's declaration and order placement was unsuccessful, so he used the“Re-order”function of the system but, because the function was not verified by the actual quotation, the system mistakenly wrote the “buy 24 constituent stocks” as “buy 24 groups of ETF constituent stocks.”As a result, 26,082 sums of unexpected market orders were instantly and repeatedly generated. While the order-execution system had no effective verification control over the funding amount targeting high-frequency trading of market orders, the massive unexpected market orders above were directly sent to the stock exchange, which caused the benchmark Shanghai Securities Composite Index to rise by 5.96% within one minute. The mistaken orders caused nearly ¥7.2 billion of fund position shortage for the company, before making any public announcement, some of the core managers determined to short sell stock index futures hedging to hedge the risk over the companys liquidity risk.

The company and related personnels were sanctioned by the CSRC for insider trading, they were fined and the personnels were banned from the market for lifelong time. The company were also ordered by the court to compensate the losses of the retail investors for insider trading.



2. Digital supports for BODs (con't)

2.3 Risks and liabilities: The “Everbright Fat Finger” incident

No reports about the liabilities (either for the company or for the market investors) of the company directors have been found. No reports about any law suits initiated by the company against the developer of the automated trading system, one of the possible reasons may be the system used by the Strategic Investment Department of the company was mainly developed by the department staffs themselves. The company has not been found to sued the related staffs.

But, if the automated trading system was used and the market orders were executed by the board of directors instantly (or approved by any “tech commission”), according to the PRC Company Law, the directors participating in the related board meeting would be subject to the liabilities to compensate the company (§ 149) for breach of their duty of care (§ 147.1). If the proposed draft § 190 of the Company Law (Liabilities of Directors to Third Parties) is passed, they would also have to compensate the market investors.



3.1 Personality?

Support:

- Agent Theory (Liang, 2017)
- E-personhood (Eur. Parl. Doc. P8_TA(2017)0051)
- Limited Personaility (Yuan, 2017)
- Artificial Personality (UgoPagallo, 2015)
- Commercial Subject/ Business Person(Cui, 2020)

Object:

- Tool Theory (Hao, 2018)
 - Software Agent (Susanne Beck, 2016)
 - No sense of Morality (Zhao, 2018)
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3. AI as Assistants (con't)

3.1 Personality?

Ricci(2020):

The Romans, who invented legal capacity for nonhuman entities, never predicated legal personhood upon corporations. Nor did they develop a theory of legal personhood based on the transfer of human, legal, political, or spiritual capacities to nonhuman entities. Moreover, the Romans consistently refrained from using the concept of personality to refer to the legal attributes granted to corporations. At the same time, Rome still created the legal technology that first actualized legal capacity for nonhuman legal entities in order to manage its system of municipal government.

... As an anticipation, neither *natural personhood* nor *legal personhood* would likely suit AI machines, but a new form of **artificial personhood** could be a possible solution to reckon with.

If that is the case, does it make sense to discuss conscience, consciousness, sympathy, empathy and even accountability of AI machine ?



3. AI as Assistants (con't)

3.2 Delegation

§ 141(e) of the Delaware General Corporation Law (DGCL):

A board director is fully protected in relying in good faith upon such information, opinions, reports or statements presented to the corporation by any of the corporation's officers or employees, or committees of the board of directors, or by any other person as to matters the member reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the corporation.

No such general delegation or protection for corporate directors under the PRC Company Law (except for, arguably, delegation to the manager (§ § 49, 113.2)).

As to the listed companies, rules by the CSRC and other financial regulators instruct some of the particular powers of the board can only be delegated to: (1) the sub-commissions under the board in specific professional areas (e.g., law compliance, risk control or affiliated transaction); (2) the chairperson of the board when no board meeting is holding (if permitted by the Article of Association); (3) other institutions and individuals on the basis of “one project one resolution (of the board meeting)”. As to the CSRC especially, claimed reliance on the professional reports given by the financial intermediaries (e.g., public accountants) cannot be relied as the only reasons for exemption from administrative penalties.



3. AI as Assistants (con't)

3.2 Delegation

If AI assistants are to be permitted by the laws and regulations (“employed algorithm” , Diamantis(2023)) -

Duties of the directors:

- qualification
- providing information
- diligence (accurate data, oversight, regular maintenance)

Protection: articles under the PRC Labor Contract Law.

Company Liabilities: § 170 (official agency), the Civil Code; § 1245 (liabilities for animals), the Civil Code; § 30.2 (delegation to the other parties), the Law of Trust.

Will director have the duty to hire / use the AIs?



4. Hybrid Boardrooms

A mix of artificial directors and traditional human directors.

Open to argument, the AI directors would be equipped with:

- Competence, loyalty, diligence, care, and respect of the law.
- Unbiased position and without an agenda.
- Capability to Process the almost never-ending stream of information.
- Plurality of views in boardrooms.
- Control of investment risks.

“Tech nirvana fallacy,” or the tendency of comparing supposedly perfect machines with failure-prone humans! (Luca Enriques & Dirk A. Zetsche (2020))

There is no doubt that CorpTech will have a significant impact on how corporate boards perform their functions: new technologies are in fact bound to enhance boards' effectiveness by improving the information collection and processing tools available to them. But, ... CorpTech will not replace boards. ... That is because technology will not itself solve the **agency problems** characterizing corporations. ... those in control of the CorpTech will (continue to) control the corporation and therefore preserve their ability to engage in self-serving behavior.



4. Hybrid Boardrooms (con't)

More Problems (Ricci(2020)):

- Authority and capacity of AIs to hold office.
- Pressure for the human directors to conform to decisions made by AIs.
- Emergence of a form of asymmetric accountability.

In China:

- No provisions under the PRC Company Law literally prohibit non-human directors.
- 5 kinds of persons not suitable to be appointed to the board (§ 146.1, the Company Law)
- “Company directors should be human beings” (§ 95.1, CSRC Guidelines for the Articles of Association of Listed Companies)
- Company registration practice.

Legal person as directors?



4. Hybrid Boardrooms (con't)

If permitted by the laws and regulations, it would be possible that AIs act as the independent directors (“ IDs ”) in the listed companies in the future. Especially, when IDs are more and more instructed by the CSRC and courts to help to decrease the risks of financial reports manipulation by the listed companies.

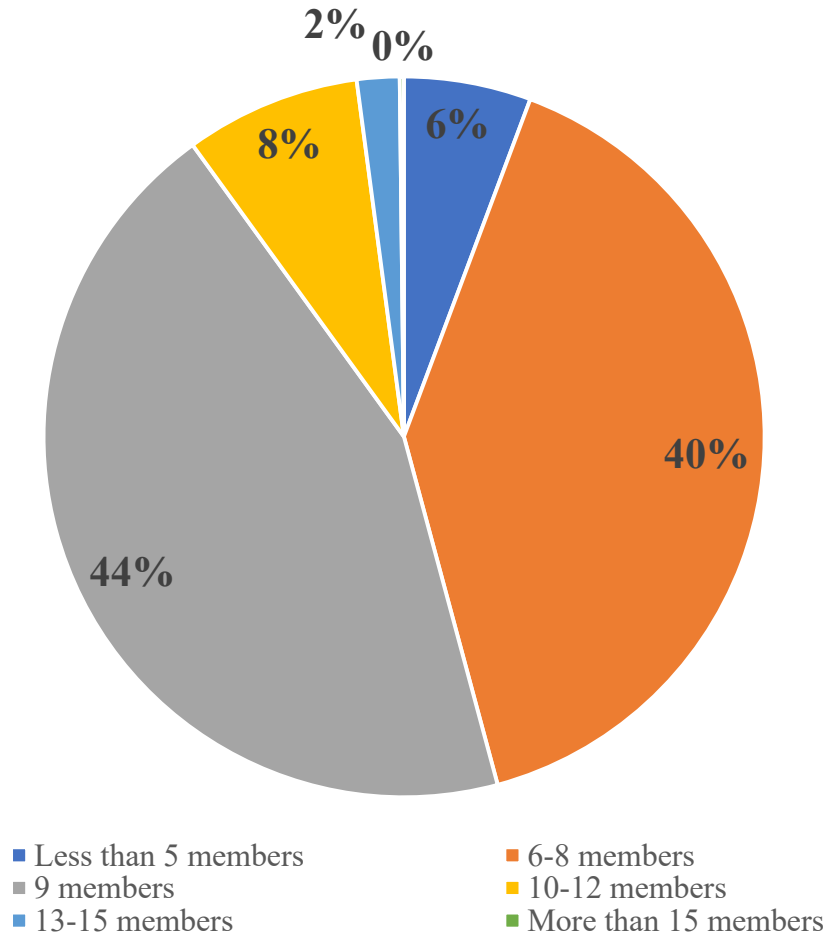
As of December 31, 2022, a total of 15,820 IDs were employed by 5,119 listed companies in Mainland China, with an average of 3.09 IDs per company. Among them, 2,186 listed companies on the Shanghai Stock Exchange employ a total of 6,954 IDs, with an average of 3.18 IDs per company. A total of 8,393 IDs were employed by 2,753 listed companies on the Shenzhen Stock Exchange, with an average of 3.05 IDs per company. The 182 listed companies on the newly established Beijing Stock Exchange employ a total of 479 IDs, with an average of 2.60 IDs per company.

The average annual fee paid to a ID in 2021 was Rmb 82,805 (USD 13,172), and the median was Rmb 72,000 (USD 11,454).

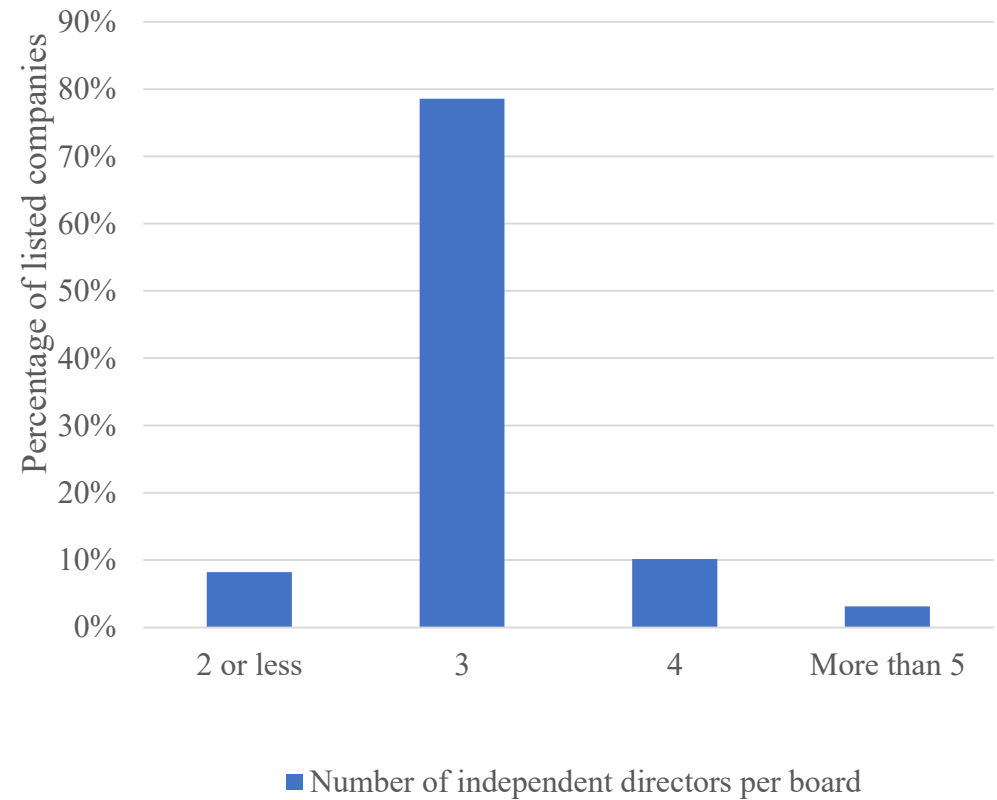


4. Hybrid Boardrooms (con't)

● China A Share Listed Company Board Size (Dec 2022)



● The popularity of three Spread of independent directors in China, 2022





4. Hybrid Boardrooms (con't)

- Independent directors in China usually act as “inner watchdogs” (CSRC rules 2001 / 2022)
 - Participate in decision-making and contribute to the compliance of the process;
 - Monitor controlling shareholders, *De facto* controller, management and thus protect shareholder interests;
 - **Avoid corporate misrepresentation** (especially in the financial reports);
 - Balance the interests of different stakeholders (controlling shareholder and minority shareholder, employee, the public, etc), provide independent understanding and reduce conflict between stakeholders with different interests;
 - Promote better risk management.
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4. Hybrid Boardrooms (con't)

According to the statistics of “Decision of Administrative Punishment”(Enforcement Reports) published by the CSRC, from January 1, 2010 until January 23, 2022, the agency and its local offices sanctioned 540 IDs in 180 cases regards market misconducts of information disclosure. Nearly all of the sanctioned were imposed dual sanctions of fine (RMB 30,000/USD 4600 penalty in most circumstances) and administrative admonition.

Since implementation of the new Securities Law in March 1, 2020, the average CSRC penalty on IDs per standalone case increased remarkably. It could be witnessed that in nearly every case where IDs are imposed administrative sanctions, there exists a corporate misrepresentation incident.

If the IDs should not be entrusted with responsibility of managing the company, their institutional goal is limited to supervise, law copliance and limit the private benefits of control (as Zeng(2021)), then it would be suitable for AIs to do the work. In this area, ID (and also company auditors) could be well supported by the CorpTechs (like smart contracts in a blockchain)(Picciau, 2021).
