China Futures Project

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Abstract — This study investigates the motivations behind China's introduction of agricultural futures contracts and traces how policy objectives evolved from the 1990s to the 2010s. Drawing on official documents, think tank reports, and exchange publications, it identifies a four-stage progression from risk control to market institutionalization and modernization. Early policies framed futures as tools to stabilize farmers' incomes through hedging, while later reforms emphasized efficiency, income growth, and agricultural modernization. Analyses of the Development Research Center's reports, keyword patterns, and inter-agency comparisons reveal a coordinated policy structure in which the State Council defined strategy, the Ministry of Agriculture implemented development goals, and the CSRC and exchanges ensured regulatory prudence and market innovation. The findings suggest that agricultural futures have become not only mechanisms for price stabilization but also key instruments for integrating financial and agricultural reforms in China's broader modernization agenda.

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I. POLICY TIMELINE

A. State Council

Stage 1. Expansion (1990 – 1992)

Background. In the aftermath of the *Reform and Opening-up*, accelerated market reforms exposed the urgency of restructuring agricultural product procurement, sales, and price formation. At the same time, rising demand for agricultural output and the improvement of farmers' incomes created strong pressure for institutional change.

Key documents.

- 1988. Premier Li Peng, in the Government Work Report,[1]

> *"Actively develop various wholesale trade markets and **explore** futures trading ..."*

- 1990-10. Zhengzhou Grain Wholesale Market (later ZCE) piloted forward contract trading. In Reply of the State Council on the Pilot Operation of the Zhengzhou Grain Wholesale Market,[2]

> *"Based on spot wholesale, the transfer of forward contracts on the exchange floor is **permitted** in accordance with the market trading rules ..."*

- 1992. Premier Li Peng, in the Government Work Report,[3]

> *"**Develop** wholesale and futures markets, ..."*

Highlight. First introduction of standardized agricultural futures contracts and centralized trading mechanisms in China.

Stage 2, Regulation (1993 – 2000)

Background. This stage was marked by significant volatility in agricultural product prices and episodes of overheating speculation. At the same time, natural disasters disrupted the physical supply side, while the futures trading system remained underdeveloped, limiting its capacity to stabilize markets and manage risks.

Key documents.

- 1993-11. The State Council issued the "Notice on Resolutely Curbing the Blind Expansion of the Futures Market,"[4]

> *"No **futures exchange** may be established without the approval of the Securities Commission ... The approval and registration of all new **futures trading and brokerage institutions** shall be suspended ... (All institutions) shall **cease** engaging in futures trading ... **Foreign-funded and Sino-foreign joint venture** futures brokerage firms shall, in principle, not be re-registered until the relevant regulations on foreign-related futures are promulgated ..."*

- 1996 ~ 1998. The State Council issued the Notice on Further Rectifying and Regulating the Futures Market, consolidating 14 futures exchanges into **three** (Shanghai, Zhengzhou, Dalian); reducing the number of traded contracts; instituting policy restrictions on speculative trading, **allowing only hedging**.[5]

> *"Continue the rectification and **consolidation** of futures exchanges, retaining **only three**—located in Shanghai, Zhengzhou, and Dalian ... **Cancel** certain commodity futures contracts ... Except where futures markets are needed for **hedging purposes**, state-owned*

enterprises are strictly prohibited from engaging in futures trading in violation of regulations ..."

- 1999. China' s first futures regulation, the "Interim Regulations on the Administration of Futures Trading", was promulgated.[6] It defined the rights and obligations of exchanges, brokerage firms, and traders; standardize market conduct, leading to the establishment of the China Futures Association in 2000.

Highlight. Wrote **hedging only** into regulatory guidance, strictly restricting speculative trading in agricultural futures.

Stage 3, De-regulation (2001 – 2006)

Background. Following China's accession to the WTO in 2001, agricultural industrialization advanced rapidly, accompanied by expanding trading volumes and a growing demand for hedging. At the same time, reforms of the grain reserve system were introduced, shaping the broader environment for futures market deregulation.

Key documents.

- 2001. China access WTO, opening agricultural imports and exports.
- 2004. The 2004 No. 1 Central Document set the policy tone for the **development** of agricultural futures markets.[7]

*"Improve the grain spot and **futures markets** ... strengthen **coordination** between producing and consuming regions ..."*

- 2004. The 2004 version of the Nine Measures for the Capital Market for the first time proposed in a top-level capital market document to "steadily **develop** the futures market."[8]

*"Steadily **develop** the futures market, and, under strict risk control, gradually introduce commodity futures contracts that provide **price discovery** and **hedging functions** for producers and consumers of bulk commodities."*

- 2005. The 2005 No. 1 Central Document revised the futures market reference to emphasize its "**guiding role**".[9]

*"Emphasize the **guiding role** of the futures market in agricultural product circulation."*

- 2004 ~ 2006: Resumption of product listings (corn, cotton, soybean No. 2, white sugar, etc.)

Highlight. Agricultural futures functions expanded from pure hedging to include price discovery. Top-level national policies acknowledged the need for futures market development.

Stage 4, Modernization (2007 – 2010)

Background. Agricultural modernization and rural income growth were designated as national strategic goals, while the rapid development of China's financial sector created favorable conditions for the further expansion and institutionalization of the futures market.

Key documents.

- 2007. The 2007 No. 1 Central Document acknowledged the role of future market in guiding agricultural production.[10]

*"**Standardize** and **improve** the agricultural futures market step by step, and fully leverage its role in guiding production, stabilizing markets, and hedging risks."*

- 2007. China's first formal futures administrative regulation, the Regulations on the Administration of Futures Trading, was issued, marking a milestone in **legalization**.[11]

- 2007. The Catalogue for the Guidance of Foreign Investment Industries (2007 revision) for the first time allowed foreign-invested enterprises to participate in futures trading.[12]
- 2007 ~ 2010. Rapid expansion of products (palm oil, white sugar, early indica rice, etc.) and increased use of trading and regulatory tools

Highlight. Began seeking financial market value beyond pure risk avoidance.

B. Ministry of Agriculture

As implementing agencies, the Ministry of Agriculture (MOA), the CSRC, and the ZCE naturally followed the policy orientations set by the State Council. Their regulatory developments thus exhibit the same stage-wise characteristics, and will therefore not be reiterated in subsequent sections.

- 2003. MOA issued "Opinions on Accelerating the Development of State Farm-Based Animal Husbandry."[13] As part of its measures to strengthen market system building for livestock products, MOA proposed to encourage diversified circulation forms such as direct links between production and sales, chain operations, **futures trade**, and e-commerce, to broaden marketing channels for livestock products.
- 2005. MOA issued "Opinions on Implementing the CPC Central Committee and State Council's Document on Further Strengthening Rural Work and Improving Comprehensive Agricultural Production Capacity."[14] In this document, MOA called for vigorous development of the agricultural industry and stressed the importance of **giving full play to the role** of the agricultural **futures market** in guiding **farmers' production decisions** and helping them hedge market risks.
- 2006. MOA issued "The Eleventh Five-Year Plan for the Development of the National Agricultural Products Market System."[15] In this plan, MOA recognized the **steady development of the agricultural futures market** during the Tenth Five-Year Plan period. For the Eleventh Five-Year Plan, it explicitly required the **development of the agricultural futures market**, along with the expansion of the varieties, scale, and quality of agricultural futures.
- 2007. MOA issued the "Opinions on Implementing the CPC Central Committee and State Council's Document on Actively Developing Modern Agriculture and Solidly Promoting the Building of a New Socialist Countryside."[16] In this document, MOA emphasized the need to promote the **standardization and improvement of the agricultural futures market**.
- 2010. The Permanent Mission of the People's Republic of China to the UN Food and Agriculture Agencies published an article titled "Future Grain Prices Will Remain High."[17] The article reflected the official recognition that agricultural futures contribute to **price volatility**. It emphasized the Chinese government's view that farmers should gain access to more effective risk management tools, including production contracts, insurance schemes, and the **use of futures markets to hedge risks**.

C. CSRC

- "Measures for the Administration of Futures Exchanges" issued by CSRC
  - 1999 version.[18] Characterized by **risk regulation**. Only **membership-based** exchanges were permitted. Futures exchanges were explicitly prohibited from engaging in any business beyond organizing trading.
  - 2002 version.[19] Characterized by **institutionalization**. Emphasized the self-

regulatory responsibilities of large exchanges.

  - 2007 version.[20] Characterized by **marketization and legalization**. Allowed the coexistence of membership-based and **corporate systems**.

- "Measures for the Administration of Futures Companies" issued by CSRC
  - 1999 version.[21] Characterized by **risk regulation**. Emphasized the exclusivity of "futures brokerage companies," prohibiting any other institutions or individuals from engaging in disguised futures business.
  - 2002 version.[22] Characterized by **institutionalization**. Expanded the scope of permitted business.
  - 2007 version.[23] Characterized by marketization and legalization. The name was changed to "Measures for the Administration of Futures Companies", reflecting a broader **orientation beyond brokerage**.
- 2004. CSRC issued "Guidelines on the Administration of Futures Hedging Business of State-Owned Cotton Enterprises", a uniquely **detailed CSRC directive** on agricultural futures trading.[24] It reflects the stringent risk-prevention mindset toward futures, especially agricultural futures, by restricting relevant enterprises **exclusively to hedging activities** and prohibiting all other trading. The guidelines rigorously regulate trading procedures in detail, serving as a **model framework for agricultural futures regulation**, while also illustrating the rapid institutionalization of regulation during this period.
- 2006. China Financial Futures Exchange (CFFEX) was established.[25] The "CFFEX Hedging Management Measures" marked the first **corporate-structured exchange**. It **emphasized the functional orientation of hedging** and institutionalized the regulation of hedging activities for the first time.

D. ZCE

- 2002 Annual Report.[26] The General Manager's address was titled "Pioneering and Innovating: Striving to **Build an Agricultural Futures Market System**." It explicitly set the goal of transforming "grain futures varieties into an agricultural futures market system" and of "initially establishing a modern agricultural futures market system."
- 2004 Annual Report.[27] The General Manager's address was titled "Reform and Innovation: Establishing a **Modern Agricultural Futures Market**." It noted that the wheat and cotton futures markets had begun to play a positive role in "promoting the adjustment of China's agricultural planting structure and increasing farmers' incomes."
- 2007. A report in China Securities Journal announced that, after long-term improvement of the product series, ZCE planned to develop an **agricultural futures index**.[28]
- 2010 Annual Report.[29] The General Manager's address once again highlighted agriculture after 6 years, elevating its position to a **broader strategy**: "Strengthening the summary of the futures market's services for agriculture, farmers, and rural areas ('**San Nong**', i.e., '三农'), and improving mechanisms and models for agricultural futures to serve 'San Nong'."

II. RELATED LITERATURE

A. Academic paper

In recent years, Chinese scholars have conducted systematic research on the mechanisms through which the agricultural futures market affects agricultural development. Specifically, the

impacts of agricultural futures on agricultural development can be summarized in four aspects. In the short run, futures as financial instruments bring both **stability** and **fluctuation**. In the long run, they contribute to **growth** and interact with China's institutional environment as part of the broader **institutional infrastructure**.

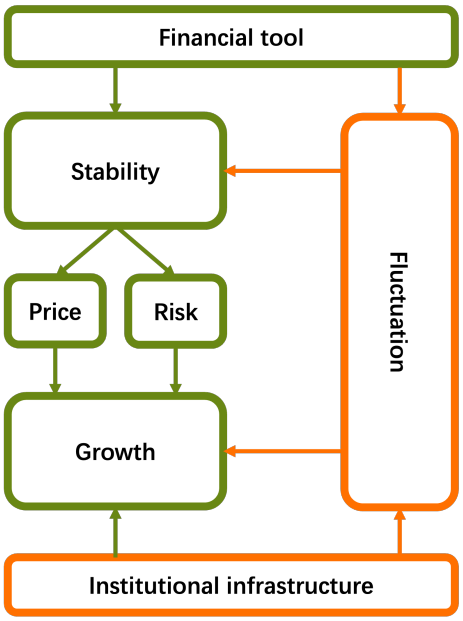

Figure 1. Illustration of literature

(1) Stability: The fundamental function of the futures market

This can be further divided into its effects on **price formation** and on farmers' **risk management**.

Price formation and expectation realization. The forward-looking nature of futures prices positions the market as an important provider of price signals in agriculture. Tian and Guo (2006), using cointegration tests and the Garbade–Silber model, found that corn futures prices have a unidirectional guiding effect on spot prices, demonstrating the futures market's price discovery capacity. Yan (2010), employing a directed acyclic graph approach, further confirmed the leading role of corn futures from a causal identification perspective. Together, these studies highlight that futures prices not only reflect market expectations but also provide reference values for farmers' production decisions. However, Wang (1999) and Jing (1999) emphasized that institutional obstacles—such as underdeveloped spot markets, lagging storage and logistics, and imperfect delivery rules—still constrain the full realization of this function.

Risk management and income protection. The second core function of the futures market lies in its risk-transfer mechanism, which is particularly critical given agriculture's dependence on natural conditions and cyclical prices. As early as He (1988) and Weng (1997), scholars argued that futures contracts can help mitigate sharp price swings and safeguard producers' expected revenues.

(2) Risk: The inherent volatility caused by financialization

With rising trading activity and speculative capital involvement, the volatility of agricultural futures prices has attracted attention to the market's financialization. Li (2017) and Li et al. (2019) constructed quantitative indicators of bubble length, frequency, and intensity to assess risks and proposed building real-time warning mechanisms to prevent systemic shocks. Qiu (2010) found

that the deep involvement of international speculative funds significantly altered the price formation of soybean futures, leading to deviations from supply-demand fundamentals and heightened market risk. Zhai et al. (2013) argued at the systemic level that financialization has amplified volatility and weakened the effectiveness of futures prices as production signals. This stream of research reminds policymakers that while encouraging the market mechanism, they should also be vigilant against adverse incentives and risk spillovers.

(3) Growth: Long-term benefits for agricultural productivity

Whereas stability reflects the ability to realize 100% of agricultural potential in the short run, growth lies in enhancing productivity beyond 100% in the long run. In classical institutional economics, North (1990) emphasized that the replacement of informal institutions by formal institutions improves efficiency. Futures pricing transforms dispersed, informal price-setting into a centralized, formal price reference system. Coase (1937) highlighted that futures contracts reduce transaction costs by decoupling pricing and delivery, thereby enhancing agricultural efficiency over time. More recent evidence, such as Fang et al. (2019), showed that the "insurance + futures" model increased farmers' willingness to plant through mediation effects, and government subsidies significantly enhanced farmers' participation.

(4) Institutional foundations: Embeddedness in broader reforms

The development of agricultural futures in China unfolded against the backdrop of market-oriented reforms. Its performance is deeply shaped by institutional embedding and supporting mechanisms.

- Early contributions by Zha (1992) and Zhang (2002) emphasized that grain circulation reforms and the unification of dual-track pricing provided the institutional foundation for futures, while standardized delivery systems, spot markets, and information disclosure were essential for sustainable operation.
- In international comparison, Dong et al. (2014) pointed out that U.S. agriculture relies on the combination of futures and insurance to stabilize farm incomes under extreme shocks. Liu and Yu (2008) noted that American farmers' effective use of futures is inseparable from mature institutions, efficient information systems, and cooperative organizations.
- For China, Meng and Fu (2007) proposed developing farmer cooperatives, contract farming, and intermediary services to ease institutional barriers for smallholders. Xu et al. (2010), based on household surveys, found that the actual benefits of futures remain limited due to low awareness, high entry thresholds, and missing complementary mechanisms, preventing risk management functions from reaching small farmers.

Overall, existing studies demonstrate that agricultural futures influence production and income distribution through multiple dimensions: price discovery, risk management, international transmission of risks, market efficiency, and institutional environment. The prevailing research framework,

$$\text{institutional background} \rightarrow (\text{stability}, \text{risk}) \rightarrow \text{growth},$$

is closely aligned with the trajectory of China's futures market reforms, i.e., stability → growth → risk governance. On the other hand, the functions of futures in China's agricultural sector remain only partially realized, constrained by weak institutional support, limited participation, and insufficient market awareness.

B. Think tank research articles

This section provides a brief review of several major research outputs from official think tanks concerning agricultural futures, including the **Development Research Center** (DRC) of the State Council, research institutes under the **CSRC**, and the **Rural Development Institute** (RDI) of the Chinese Academy of Social Sciences (CASS). Due to the rarity of access to original internal reports, this study refers to publicly available versions published under the same authors' names.

(a) DRC

DRC focuses on institutional development and transition. As the highest-level national think tank directly under the State Council, the DRC's internal reports exert direct influence on policy formulation. Among them, three reports issued at critical policy junctures are particularly important.

First, in a report reviewing the expansion stage, Yang et al. (1994) argued that the superiority of futures markets lay in their role in **price formation** and in **lowering transaction costs**. The authors emphasized that this institutional advantage was grounded in the *liberalization of futures prices* and the permission of *speculative activities* such as short selling. The disorder of this stage, however, was attributed to the absence of a **formal regulatory framework** and to market participants' **limited understanding of futures trading**. The authors advocated closing or withdrawing non-standard futures exchanges and enterprises established during the expansion period, but this did **not** imply retreating from the strategic importance of futures markets. On the contrary, the authors stressed that the next stage of reform should focus on establishing a national **regulatory body** for financial futures, developing a sound **institutional framework**, and fostering greater awareness of futures among market participants.

From a policy perspective, Yang et al. (1994) suggested that the government should firmly support the development of futures markets, but in a more **prudent** manner. "Support" meant continue pilot programs, while "prudence" required **reducing the number** of exchanges and product varieties. Futures companies, however, could be expanded. Large-scale liberalization, they argued, should only proceed once a regulatory authority was in place and institutional foundations were strengthened. This regulatory philosophy shaped China's subsequent transition to a regulation-centered stage. In addition, they also introduced the early ideas of corporate-style exchanges and the "insurance + futures" model, pioneering the institutional innovations later realized in the modernization stage.

Liao (1999) analyzed the critical transition following the large-scale rectification of the futures market in 1998, when China shifted from a stage of *expansion* to *regulation*. The study argued that the closure and merger of exchanges, along with the reduction of traded contracts, had improved market structure and promoted more rational investor behavior, while maintaining overall **stability**. Nonetheless, issues such as the limited number of contracts, reduced scale, insufficient liquidity, and weak risk management persisted. The report concluded that the futures market's functions in agricultural and corporate *risk management* had **not** yet been fully realized. It called for improving the legal and regulatory framework, refining contract design and delivery mechanisms, and cautiously expanding product variety and market scale. The objective was to strengthen **price discovery** and hedging functions and to provide farmers and agribusinesses with more effective risk management tools.

In 2002, with the establishment of a three-tier regulatory framework composed of the CSRC, the China Futures Association, and futures exchanges, along with the promulgation of formal regulations on futures trading, Liao (2002) argued that the futures market had entered a preliminary stage of standardization following the regulation stage. Although regulation constrained the scale of trading and limited the number of products, the maturity of institutions, exchanges, and brokerage firms indicated that the "prudence" objective outlined in the 1994 report

had been largely achieved, creating the conditions for **large-scale deregulation**.

Nevertheless, during the upcoming deregulation stage, several challenges persisted, including insufficient public understanding of futures, policy resistance, and regulatory lag. Considering China's WTO accession, policy at this stage required the removal of institutional constraints and a comprehensive expansion of the futures market. Parallel to this, the government needed to enhance public awareness and participation, while exchanges and regulatory bodies were expected to align quickly with international practices in institutional design, particularly in mechanisms for listing new contracts. Together, these measures laid the institutional foundation for the rapid expansion of futures products and trading volumes in the years that followed.

(b) CSRC-affiliated think tanks

CSRC-affiliated think tanks mainly study the links between agricultural futures markets and the "San-Nong."

ZCE (2007) identified two major challenges for increasing farmers' income and promoting rural economic growth: (1) significant volatility in agricultural product prices that eroded farmers' income gains, and (2) the structural tension between "small-scale production" and a "large market." As a result, beyond stabilizing prices, the futures market was expected to enhance agricultural organization, shift risk from scattered farmers to leading enterprises and investors, and thereby improve the **efficiency of risk-sharing**. The core functions of the futures market were thus defined as *price discovery* and *risk transfer*, with the policy goal of stabilizing farm income.

As a continuation of this perspective, ZCE (2008) argued that mitigating agricultural market risks and increasing farmers' income required further **development** and **expansion** of agricultural futures.

China Futures Association (2009) built upon these functions but placed greater emphasis on **institutional innovation** in rural finance. It proposed the model of "farmer + company + Agricultural Development Bank + futures company" to facilitate farmers' **entry** into the futures market. This model was expected to address regional gaps in futures market coverage and significantly increase farmer participation.

Overall, CSRC-affiliated think tanks in the *modernization stage* highlighted the futures market's dual functions of price discovery and risk management while advocating for continuous institutional innovation to accelerate comprehensive expansion.

(c) RDI of CASS

Research of RDI focused on international comparisons of grain pricing mechanisms. He (2008) analyzed the differences in grain pricing mechanisms across major economies, emphasizing the futures-market-based pricing models practiced in the United States and the European Union. He noted that futures markets, through their roles in price discovery and risk dispersion, had gradually become **central benchmarks** for agricultural prices. This experience provided a valuable reference for China, underscoring the significance of futures mechanisms in stabilizing farmers' income and mitigating sharp price fluctuations.

III. QUALITATIVE CONTENT ANALYSIS

This section performs a keyword analysis and thematic coding to examine the frequency of key policy expressions and how their usage varies over time and across different agencies. Policy statements are broadly divided into **three** categories, as outlined below:

- **Farmer income**:
  - 农民收入 (farmer income), 收入波动性 (income volatility), 稳定性 (stability)

- 稳定收入 (stabilize income), 收入增长 (income growth)

- **Risk mitigation**:
  - 风险管理 (risk management), 控制风险 (control risk), 预期管理 (expectation management)
  - 跨期保值 (hedging), 套期保值 (intertemporal hedging)
  - 价格波动 (price volatility)，稳定价格(stabilize price)
  - 参考价格 (reference price), 价格发现 (price discovery), 价格形成 (price formation)
- **Agricultural development**:
  - 农产品流通 (agricultural product circulation), 生产 (production), 农业效率 (efficiency)，粮食产量 (grain production), 安全 (grain safety)
  - 农村经济 (agricultural economy), 三农 (San-Nong)
  - 农业现代化(agricultural modernization), 规范化(agricultural standardization), 农业发展 (agricultural development)
  - 农产品期货 (agricultural futures)

Compared with English, Chinese policy statements are more concise. In addition, Chinese terminology demonstrates temporal consistency and is not subject to variations in translation. Therefore, the subsequent keyword analysis is based on the *Chinese documents*.

Since the frequency of a keyword is negatively correlated with its specificity, the following keyword analysis adopts both **specific** and **general** scopes. Essentially, the former refers to phrase-level keywords, while the latter refers to word-level keywords. The complete list of keywords is presented in the table below.

Table 1. List of keywords

Specific		**General**	
Category	**Keywords**	**Category**	**Keywords**
Risk mng.	风险管理，管理风险，控制风险，风险控制，预期管理，管理预期，跨期保值，套期保值	Risk	预期，风险，保值，套期
Risk, price	价格风险，价格波动，价格变动，价格稳定，稳定价格	Price	价格
Risk, pricing	价格发现，价格形成，参考价格	Fluctuation	波动，变动，稳定
Farmer income	农民收入，收入波动，收入稳定，稳定收入，收入增长	Agri.	农，粮
Dev., agri-prod.	农产品流通，农产品生产，农业效率，粮食产量，粮食安全，粮食生产	Futures	期货，期权，跨期，远期
Dev., agri-econ.	农村经济，农业经济，三农，农业现代化，农业规范化，农业发展，农产品期货	Agri. futures	农产品期货

Specifically, for all keywords under each category, I calculate their total frequency in each document. I then group the frequencies by four policy stages and by agency, where CRSC, CFFEX, and ZCE are merged into a single category labeled as EX. Subsequently, I construct stacked bar charts to illustrate the distribution of each category across the four stages. Figures 2 and 3 present the frequencies of specific and general keywords, respectively.

From Figure 2, first, over time, policy statements concerning risk and development increase in frequency. Across agencies, the exchanges (EX) greater emphasis on risk, while the MOA focuses more on agricultural development. As the highest authority, the State Council stresses both risk and development; however, its emphasis shifts over time, with development objectives gradually replacing risk management objectives.

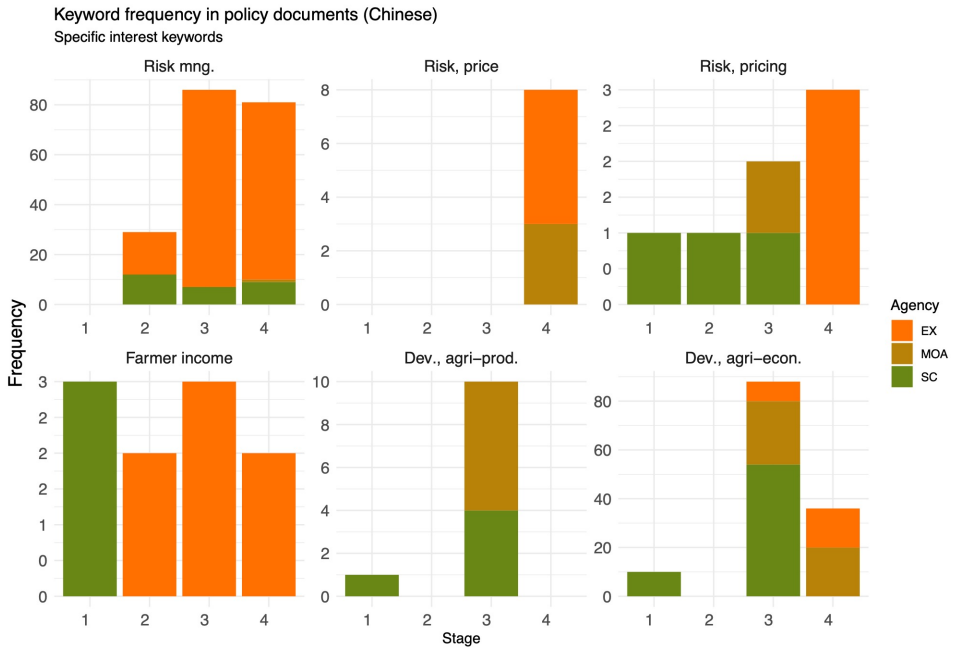

Figure 2. Keyword frequency (Chinese), specific

Figure 3 offers more interesting insights. First, during the exploration stage (i.e., Stage 1), almost no agency emphasized risk, whereas related policy arguments increased steadily across the subsequent three stages. The State Council consistently underscored the price formation mechanism; however, in Stage 4, both the exchanges (EX) and the MOA exhibited a surge in their attention to price issues. Concerns about volatility were pronounced during the deregulation stage but declined significantly in the modernization stage. Finally, the emphasis on agricultural development and agricultural futures rose sharply in the deregulation stage, driven by the policy

direction set by the No. 1 Central Document.

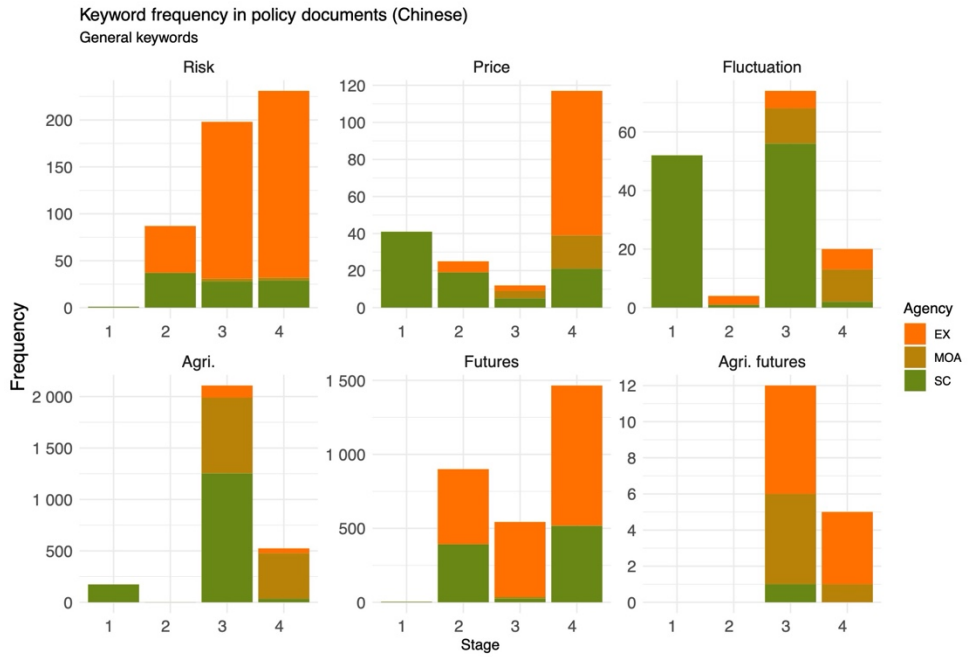

Figure 3. Keyword frequency (Chinese), general

Figure 4 combines Figures 2 and 3 into a stacked area chart to illustrate the evolution of keyword usage across all agencies over time. The categories that exhibit the largest overall

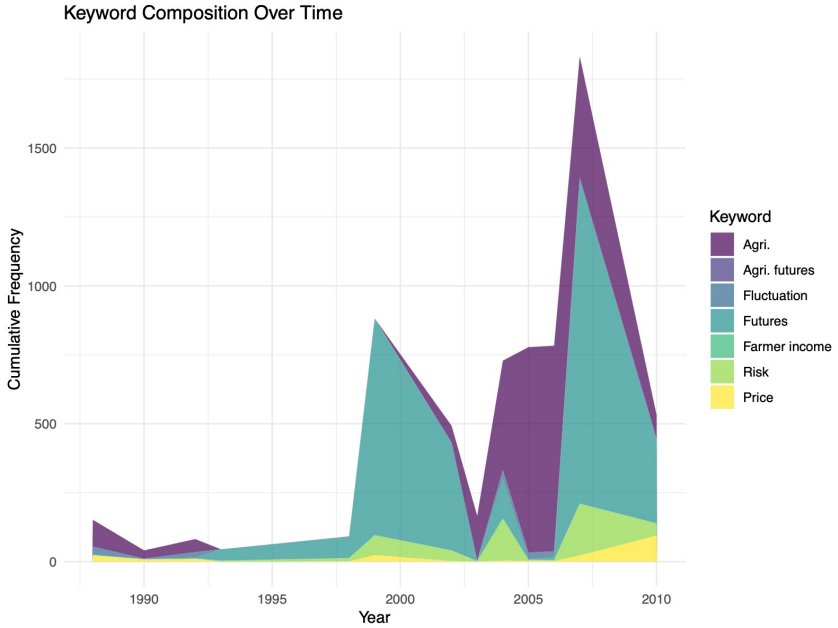

Figure 4. Keyword stacked area chart by year

increase are **futures** and **agriculture**, with two peaks emerging during the deregulation and modernization transitions. In addition, peaks in risk and price occur at the same points in time, reflecting China's *simultaneous* pursuit of stability and development in the agricultural futures market.

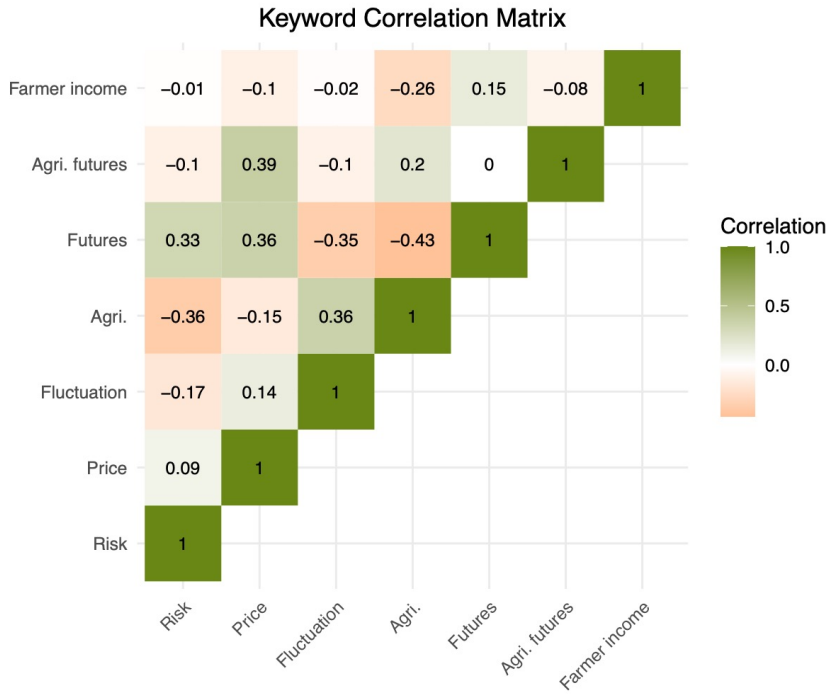

Figure 5. Correlation among keywords (pooled)

Figure 5 presents the correlations among all keywords, treating each document as a separate observation. An interesting finding is that keywords related to futures are often associated with price and risk, while agriculture is frequently linked with fluctuation. Moreover, "futures" shows a strong negative correlation with both "agriculture" and "fluctuation". This suggests that China tends to frame the futures market primarily as a **risk management instrument**, while regarding the reduction of fluctuation as central to agricultural development.

Figure 6 presents radar charts of keyword profiles across the three agencies. The results show that EX emphasizes price, risk, and income; SC focuses on agriculture, development, and risk; while MOA primarily highlights agriculture and development. This again underscores the functional division among the agencies.

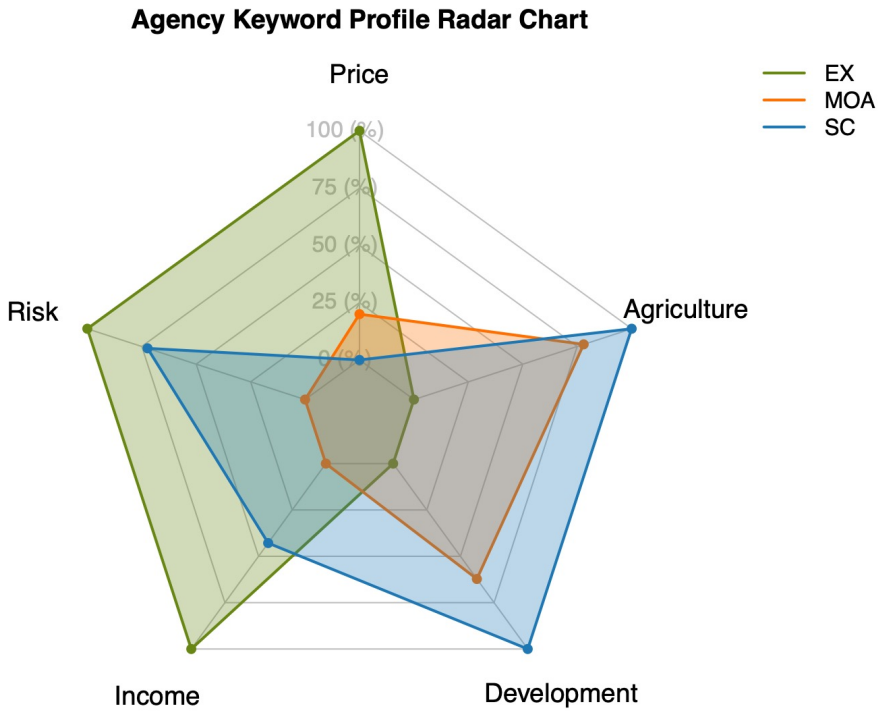

Figure 6. Agency keyword profiles

IV. POLICY COMPARATIVES

A. Comparisons over time

The impact of introducing futures into agriculture on farmers can be broadly divided into the following three aspects:

1. **Stability.**
   a) First, as a *risk management* tool, futures allow hedging through forward contracts to avoid price fluctuations during production and transportation. In the **expansion** stage, futures stabilized procurement by state-owned enterprises and other large distribution and processing firms, thereby indirectly stabilizing farmers' incomes.
   b) Another core function of futures is participation in *price formation*, which became especially important in the **deregulation** stage. On one hand, arbitrage activity allows price volatility in agricultural products to be absorbed by the financial market, thereby reducing *fluctuations*. On the other hand, when futures markets have sufficient liquidity and scale, the futures price determines the position of the "mean" of the spot price, namely, the *reference price*.

   Stability, precisely, ensuring the stability of farmers' incomes, was the primary policy objective during the **expansion** and **regulation** stages. Intuitively, if we assume that the

potential output of Chinese agriculture (i.e., TFP) is100 percent, market failures mean that actual output falls well below this level. In this context, the State Council's approval for the establishment of ZCE made clear that the purpose of allowing and developing futures trading was to *address agricultural market failures.* Following the overheating of futures pilots in the mid-1990s, the financial attributes of futures trading induced excessive price volatility, which again undermined price stability. Consequently, by the late 1990s the **regulation** stage emphasized that futures should be confined to the function of hedging risk.

2. **Growth.** As price distortions were gradually alleviated and China acceded to the WTO, the government's objective shifted toward enhancing agricultural productivity, i.e., enabling grain output to *exceed* the assumed 100 percent potential. In the broader institutional economics literature, *market efficiency* derives from two main channels: the replacement of informal institutions with formal institutions, and the reduction of transaction costs. In the context of futures markets, these correspond to the functions of **price discovery** and **market building**. Accordingly, during the **deregulation** stage, policy documents repeatedly highlighted the *guiding role* of futures markets in price formation and the circulation of agricultural products. In the **modernization** stage, the improvement in legalization further reinforced these effects.
3. **Financial returns and instruments.** In the **modernization** stage, as financial instruments and regulation improved, financial returns from futures trading gradually gained recognition from authorities. Relaxation of restrictions on financial institutions' trading and encouragement of financial innovation reflect the policy emphasis on the **financial market**. In addition, futures trading has gradually been incorporated into the **policy toolkit** for financial and macroeconomic regulation. For example, arbitrage activity can stimulate market liquidity through the futures market.

B. Comparisons across agencies

The policy timeline and keyword analysis shed light on the distinctive features of different agencies. The State Council, as the highest authority, emphasized food security and rural stability in early stages, focusing on stabilizing grain circulation and farmer incomes. Over time, its discourse shifted toward **price formation and agricultural modernization**, reflecting broader macroeconomic reform goals.

The MOA framed futures as instruments for guiding production, improving circulation efficiency, and raising farmers' incomes through futures. Especially during the **deregulation** stage, MOA linked futures development to the "San-Nong" agenda, positioning it as part of rural industrialization and modernization.

The CSRC approached futures primarily through **financial regulation**. Its regulatory measures across 1999–2007 reflected a progression from restriction to institutionalization, consistently stressing risk control and systemic stability. The 2004 cotton hedging guidelines illustrate this focus, allowing only narrowly defined hedging functions.

By contrast, the exchanges (ZCE, CFFEX, etc.) concentrated on **product innovation**, market efficiency, and service to the agricultural economy. Their objectives were pragmatic and operational, yet remained closely responsive to policy signals from the State Council. They play a major role mainly in the last three stages, especially the fourth stage, reflecting China's efforts toward the legalization of financial markets.

Together, these agencies created a layered governance structure: the State Council prioritized stability and modernization, MOA highlighted agricultural development, CSRC focused on risk management, and exchanges pursued market expansion. This divergence of goals explains the differentiated emphases across stages and agencies.

V. CONCLUDING REMARKS

This project examines the rationale behind China's introduction of agricultural futures contracts by integrating evidence from **four dimensions**: the policy timeline, official think tank research, qualitative keyword analysis, and cross-sectional comparisons across time and agencies. Together, these analyses reveal a coherent evolution of policy logic that moves from risk control to institutionalization and ultimately to modernization, guided by an interplay between financial regulation and agricultural development.

The policy evolution of China's agricultural futures market is structured into four stages: **expansion**, **regulation**, **deregulation**, and **modernization**. The official think tanks, particularly DRC of the State Council, provided the intellectual framework underpinning this trajectory: emphasizing "support with prudence," institutional consolidation before expansion, and the long-term embedding of futures within broader reform agendas. The keyword analysis confirms this shift empirically, showing a gradual *decline* in risk-centered terms and a *rise* in those related to income, efficiency, and modernization. Finally, the policy comparatives, including comparisons over time and across agencies, demonstrate a *layered division of responsibilities*, in which the State Council set macroeconomic direction, the Ministry of Agriculture operationalized agricultural objectives, the CSRC ensured prudential regulation, and the exchanges translated policy signals into market practice.

These findings together provide clear answers to the three guiding questions.

1. **Risk management versus income enhancement**.

   The introduction of agricultural futures was **initially** driven by risk stabilization. Yet over time, policy goals **expanded** toward income enhancement. The deregulation and modernization stages, coupled with DRC's later recommendations (Liao (1999), (2002)), marked a transition from "stabilizing income through hedging" to "increasing income through efficiency and coordination." Keyword evidence reinforces this evolution: the rising prominence of "income growth," "agricultural modernization," and "price discovery" terms after 2004 signals a policy consensus that futures should not only manage volatility but also promote long-term welfare.

2. **Policy justifications across agencies**.

   Agency comparisons show that the justification for agricultural futures **varied** with institutional mandates but **converged** toward complementary objectives. The State Council emphasized stability and food security; the MOA integrated futures into rural industrialization and production guidance; the CSRC justified futures in terms of systemic risk control; and the exchanges operationalized these visions through product innovation and service to the "San-Nong." Keyword correlations capture these differences: risk-related terms dominate CSRC and exchange documents, while agricultural and development terms prevail in MOA and State Council statements. Together, this configuration reflects a coordinated policy architecture balancing regulation with developmental expansion.

3. **Long-term economic vision**.

   Both the four-stage timeline and DRC's reports demonstrate that futures were **envisioned** as part of a broader modernization and globalization strategy. The DRC's early advocacy for institutionalization laid the intellectual foundation for the 2007 *Regulations on the Administration of Futures Trading* and the inclusion of foreign participation, signaling a deliberate alignment of agricultural and financial reforms. In practice, this vision materialized as a gradual embedding of futures markets within China's modernization agenda, which shifted the policy narrative from isolated financial instruments to integral

components of agricultural transformation. Looking ahead, this trajectory suggests continued emphasis on the "insurance + futures" model, deeper institutional integration, and expanding the futures framework to better serve smallholders and global market participation.

In sum, China's agricultural futures policy reflects a systematic and multi-layered evolution: from managing risks to enhancing incomes, from regulatory prudence to institutional modernization. Through the alignment of financial and agricultural governance, futures markets have become not only a mechanism of price stabilization but also a central instrument for advancing China's agricultural modernization and rural development goals.

REFERENCES

查振祥, 1992. 我国粮食期货市场模式的现实选择[J]. 中国农村经济, 1992(01): 34-35+6.

翟雪玲;徐雪高;谭智心;张照新, 2013. 农产品金融化概念、形成机理及对农产品价格的影响[J]. 中国农村经济, 2013(02): 83-95.

董婉璐;杨军;程申;李明, 2014. 美国农业保险和农产品期货对农民收入的保障作用——以2012年美国玉米遭受旱灾为例[J]. 中国农村经济, 2014(09): 82-86+96.

方蕊;安毅;刘文超, 2019. "保险+期货"试点可以提高农户种粮积极性吗?——基于农户参与意愿中介效应与政府补贴满意度调节效应的分析[J]. 中国农村经济, 2019(06): 113-126.

何予平, 2008. 世界各国粮食定价机制与变化趋势[J]. 中国粮食经济, 2008(09): 35-38.

何子阳, 1988. 解决农副产品价格波动的途径——谈开辟农产品期货市场[J]. 中国农村经济, 1988(10): 41-43.

荆林波, 1999. 现货市场发育与期货市场发展的相关性——中国农产品期货发展有关问题的探讨[J]. 中国农村经济, 1999(06): 34-36+39.

李剑;李崇光, 2017. 农产品期货市场风险评价——一个基于价格泡沫模型的新分析框架[J]. 中国农村经济, 2017(05): 73-87.

李剑;吕捷;李崇光, 2019. 农产品期货市场泡沫风险实时预警研究[J]. 中国农村经济, 2019(03): 53-64.

廖英敏, 1999. 1998年～1999年中国期货市场发展与预测[J]. 国务院发展研究中心, 调查研究报告-1999(032).

廖英敏, 2002. 中国期货市场规范发展的政策建议[J]. 国务院发展研究中心, 调查研究报告-2002(35).

孟菲;傅贤治, 2007. 美日农产品流通渠道模式比较及对中国的借鉴[J]. 中国农村经济, 2007(S1): 141-146.

邱雁, 2010. 国际投机基金对大豆期货价格影响的实证分析[J]. 中国农村经济, 2010(04): 87-96.

田彩云;郭心义, 2006. 我国玉米期货市场发现价格功能的实证分析[J]. 中国农村经济, 2006(06): 52-57+71.

王秀杰, 1999. 中国农产品期货市场发展评价[J]. 中国农村经济, 1999(06): 26-33+54.

翁鸣, 1997. 我国农产品期货及其实物交割[J]. 中国农村经济, 1997(12): 17-23.

徐欣;胡俞越;韩杨;王沈南, 2010. 农户对市场风险与农产品期货的认知及其影响因素分析——基于5省(市)328份农户问卷调查[J]. 中国农村经济, 2010(07): 47-55.

闫云仙, 2010. 中国玉米期货市场价格发现功能的实证分析——基于有向无环图的应用[J]. 中国农村经济, 2010(07): 39-46.

杨敏, 吴硕, 廖英敏, 1994. 发展我国农产品期货市场的政策要点[J]. 国务院发展研究中心,

调查研究报告-总(214).

张雷宝, 2002. 粮食流通体制改革与中国期货市场发展[J]. 中国农村经济, 2002(09): 43-52.

郑州商品交易所, 2007. 关于利用农产品期货市场服务“三农”的报告[M]//中国期货市场年鉴（2007）.

郑州商品交易所, 2008. 农产品期货市场服务“三农”问题研究[M]//中国期货市场年鉴（2008）.

中国期货业协会, 2009. 期货市场服务“三农”运作模式研究[M]//中国期货市场年鉴（2009）.

Coase R H, 1937. The Nature of the Firm[J]. Economica, 4(16): 386-405.

North D C, 1990. Institutions, Institutional Change and Economic Performance[M]. Cambridge: Cambridge University Press.

[1] Premier Li Peng, in the Report on the Work of the Government, 1988, 李鹏总理《1988年政府工作报告》, https://www.gov.cn/test/2006-02/16/content_200865.htm

[2] Reply of the State Council on the Pilot Operation of the Zhengzhou Grain Wholesale Market, 1990, 国务院关于试办郑州粮食批发市场的批复(国发〔1990〕46号）, https://zjdy.zjdafw.gov.cn/zjzb/ZJZB-1990-17-08.pdf

[3] Premier Li Peng, in the Report on the Work of the Government, pp. 315, 1992, 李鹏总理在《1992年政府工作报告》, https://www.gov.cn/gongbao/shuju/1992/gwyb199210.pdf

[4] Notice of the State Council on Resolutely Curbing the Blind Expansion of the Futures Market, 1993, 关于坚决制止期货市场盲目发展的通知（国发〔1993〕77号）, https://www.gov.cn/zhengce/content/2016-01/27/content_5036630.htm

[5] Notice of the State Council on Further Rectifying and Regulating the Futures Market, 1998, 《国务院关于进一步整顿和规范期货市场的通知》（国发〔1998〕27号）, https://zjdy.zjdafw.gov.cn/zjzb/ZJZB-1998-28-04.pdf

[6] Interim Regulations on the Administration of Futures Trading, 1999, 期货交易管理暂行条例（国务院令第267号）, https://baike.baidu.com/item/%E4%B8%AD%E5%8D%8E%E4%BA%BA%E6%B0%91%E5%85%B1%E5%92%8C%E5%9B%BD%E5%9B%BD%E5%8A%A1%E9%99%A2%E4%BB%A4%EF%BC%88%E7%AC%AC267%E5%8F%B7%EF%BC%89/23188837?fr=aladdin

[7] No. 1 central document for 2004: Opinions on Several Policies for Promoting the Increase of Farmers' Incomes, 2004,中央一号文件（2004）：中共中央国务院关于促进农民增加收入若干政策的意见, https://www.gov.cn/gongbao/content/2004/content_63144.htm

[8] State Council 'Nine Measures for the Capital Market' (2004 version): Several Opinions of the State Council on Promoting the Reform, Opening, and Stable Development of the Capital Market, 2004, 国务院资本市场‘国九条’（2004 版）, https://www.gov.cn/zhengce/content/2008-03/28/content_2071.htm

[9] No. 1 central document for 2005: Opinions on Several Policies for Further Strengthening Rural Work and Enhancing the Overall Agricultural Production Capacity, 2005, 中央一号文件（2005）：中共中央国务院关于进一步加强农村工作提高农业综合生产能力若干政策的意见, https://www.gov.cn/test/2006-02/22/content_207406.htm

[10] No. 1 central document for 2007: Opinions on Developing Modern Agriculture and Advancing the Building of a New Socialist Countryside, 2007, 中央一号文件（2007）关于积极发展现代农业扎实推进社会主义新农村建设的若干意见, https://www.gov.cn/gongbao/content/2007/content_548921.htm

[11] Regulations on the Administration of Futures Trading, 2007, 期货交易管理条例（国务院令第489号）, https://www.gov.cn/ziliao/flfg/2007-03/16/content_553090.htm

[12] Catalogue for the Guidance of Foreign Investment Industries, 2007, 外商投资产业指导目录（2007年修订）, https://www.moj.gov.cn/pub/sfbgw/flfggz/flfggzbmgz/200804/t20080402_374163.html

[13] Opinions on Accelerating the Development of State Farm-Based Animal Husbandry, 2003, 关于加快农垦养殖业发展的意见（农办垦〔2003〕61号）, https://www.moa.gov.cn/govpublic/NKJ/201006/t20100606_1535981.htm

[14] Opinions on Implementing the CPC Central Committee and State Council's Document on Further

Strengthening Rural Work and Improving Comprehensive Agricultural Production Capacity, 2005, 关于贯彻<中共中央 国务院关于进一步加强农村工作提高农业综合生产能力若干政策的意见>的意见, https://www.moa.gov.cn/nybgb/2005/derq/201806/t20180617_6152395.htm

[15] The Eleventh Five-Year Plan for the Development of the National Agricultural Products Market System, 2006,农业部"十一五"时期全国农产品市场体系建设规划, https://www.moa.gov.cn/gk/tzgg_1/tz/200612/t20061212_738312.htm?utm_source=chatgpt.com

[16] Opinions of the Ministry of Agriculture on Implementing the CPC Central Committee and State Council's Document on Actively Developing Modern Agriculture and Solidly Promoting the Building of a New Socialist Countryside, 2007, 农业部关于贯彻落实《中共中央 国务院关于积极发展现代农业扎实推进社会主义 新农村建设的若干意见》的意见, https://www.moa.gov.cn/nybgb/2007/deq/201806/t20180613_6151848.htm

[17]Future Grain Prices Will Remain High, 2010,未来十年粮食价格将居高(中华人民共和国常驻联合国粮农机构代表处), https://gjs.moa.gov.cn/gzdt/201006/t20100628_1589067.htm

[18] Measures for the Administration of Futures Exchanges, 1999 version, 期货交易所管理办法（证监期货字〔1999〕43号）, https://neris.csrc.gov.cn/falvfagui/rdqsHeader/mainbody?navbarId=3&secFutrsLawId=edcc8ff257e947409661f2758fec5af5

[19] Measures for the Administration of Futures Exchanges, 2002 version, 期货交易所管理办法（证监会令第6号）, https://neris.csrc.gov.cn/falvfagui/rdqsHeader/mainbody?navbarId=3&secFutrsLawId=c678775ba0904079b3cad3598d2109bd&body=

[20] Measures for the Administration of Futures Exchanges, 2007 version, 期货交易所管理办法（证监会令第42号）, https://neris.csrc.gov.cn/falvfagui/rdqsHeader/mainbody?navbarId=3&secFutrsLawId=c537d07ece624577bc686f7ecba13267&body=

[21] Measures for the Administration of Futures Companies, 1999 version, 期货经纪公司管理办法（证监期货字〔1999〕43号）, https://neris.csrc.gov.cn/falvfagui/rdqsHeader/mainbody?navbarId=3&secFutrsLawId=262b26a557614370974044a1d1b9d137

[22] Measures for the Administration of Futures Companies, 2002 version, 期货经纪公司管理办法（证监会令第6号）, https://neris.csrc.gov.cn/falvfagui/rdqsHeader/mainbody?navbarId=3&secFutrsLawId=21394e575f014f9a943ab86619a47c85&body=

[23] Measures for the Administration of Futures Companies, 2007 version, 期货公司管理办法（证监会令第6号）, https://neris.csrc.gov.cn/falvfagui/rdqsHeader/mainbody?navbarId=3&secFutrsLawId=f4bfab03edaa497abbf4bf66d00de0e5&body=

[24] Guidelines on the Administration of Futures Hedging Business of State-Owned Cotton Enterprises, 2004, 国有涉棉企业期货套期保值业务管理制度指引（证监期货字〔2004〕32号）, https://neris.csrc.gov.cn/falvfagui/rdqsHeader/mainbody?navbarId=3&secFutrsLawId=b9a24a65682747dba8c073debe57ef81&body=

[25] The CFFEX Hedging Management Measures, 2007, 中国金融期货交易所套期保值管理办法, https://neris.csrc.gov.cn/falvfagui/rdqsHeader/mainbody?navbarId=3&secFutrsLawId=679c0056320b48a2a16861ec788d2e84&body=

[26] ZCE 2002 Annual Report, http://www.czce.com.cn/cn/administrator/AdminArticle/editor/UploadWord/2004923162739642.pdf

[27] ZCE 2004 Annual Report, http://www.czce.com.cn/cn/administrator/AdminArticle/editor/UploadWord/2005321145134264.rar

[28] 完善品种系列 郑商所欲开发农产品指数期货, China Securities Journal, 2007, http://www.czce.com.cn/cn/mtzq/mtkzss/webinfo/2007/06/1275476206008185.htm

[29] ZCE 2010 Annual Report, http://www.czce.com.cn/cn/rootimages/2011/07/12/1309863056305725.pdf