

The Dual-Anchoring Dilemma: Mechanisms of Valuation Bias in China's Real Estate Appraisal under Policy Interventions

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Abstract. Real estate valuation is directly related to credit security and financial stability. Appraisers are highly susceptible to the anchoring effect, leading to valuation deviations. While anchoring is well documented in general pricing, its institutional dynamics under policy intervention remain unexplored. This paper takes the second-hand housing transaction reference price mechanism implemented in China's first-tier cities as a case study and, based on the anchoring effect and the theory of monetary non-substitutability, explores the influence mechanism of the conflict between policy anchors and market anchors on valuation deviations. Research has found that although policy anchors can curb speculative regulatory standards, their deviation from market prices has triggered systemic undervaluation of credit mismatches and moral hazards such as dual contracts. In response to this, this paper proposes strategies such as constructing a dynamic multi-anchor pricing model, strengthening the cognitive debias of appraisers, and implementing penetrating supervision. The research conclusion deepens the understanding of the valuation deviation of real estate under China's special institutional background and provides a theoretical basis for optimizing regulatory policies and preventing financial risks.

Keywords: Dual-Anchoring, Real Estate Appraisal, Valuation Bias, Policy Intervention, China

1. Introduction

1.1. Research background

Appraisal is directly related to securing credit, tax fairness, and transaction efficiency. By the end of 2023, the housing loan balance in China was 38.1 trillion yuan, and every housing loan needs to be evaluated with a professional evaluation report [1]. But appraisers easily succumb to the "anchoring effect" and are given too much guidance from the first number they see, whether it's listing prices, historical transaction prices, or guidance prices, which leads to the valuation being off target from true value. Starting from 2021, China's first-tier cities have implemented "second-hand housing transaction reference price mechanisms," which are an important anchor for banks to make

mortgage evaluations. The reference price to be fixed by the government was taken as the prices listed in the market [2]. Because of this administrative anchor, there has been a systematic difference between appraised values and market prices, which has created issues of "high down payments" and "dual-contract arrangements". During 2021, the second-hand housing transactions in Shenzhen reached 40,699 units, which is 57.3% less than in 2020 and is the lowest level since 2006 [3]. An important contributing factor is the reduction in loans due to valuation deviations. From a commercial value point of view, the valuation deviations result in a higher risk of non-performing loans for banks and tax collection problems. Social value: It increases information asymmetry and can even cause systemic financial risks. Therefore, it is important to systematically study the deviation mechanism of the anchoring effect in China's real estate valuation from the theoretical and practical perspectives, which can promote the normalization of real estate valuation and reduce financial risks.

1.2. Literature review

The anchoring and adjustment heuristic was first proposed by Tversky and Kahneman [4]. They demonstrated that individuals who make judgments under conditions of uncertainty rely on an initial starting point, that they never move far enough from this point, and that this results in biased judgments. Lee et al. conducted a survey of professional appraisers and discovered that the anchoring effect is even stronger in the presence of cognitive biases and external pressures on the appraiser from a client, which helps to explain the variation of the valuation result from one appraiser to the next [5]. In the Chinese housing market, Liang et al. applied transaction data and discovered that home sellers will price just below round numbers (such as 199 instead of 200), which will be anchors for the eventual price that the buyer will pay for the home; when matched with homes just above the round numbers, the transaction price will be lowered by 0.13% [6]. Arestis et al. examined administrative reference pricing in Shenzhen and concluded that government-set reference prices have a similar effect on transaction volume and prices in the housing market [7]. The literature on anchoring is limited to the study of anchoring in general pricing and consumer expectations, while few studies have considered the institutional setting of real estate valuation in China, which is mainly policy-driven and information asymmetric. There is a lack of research that treats anchoring as a single phenomenon, ignores the interaction between "market anchors" (such as listing prices) and "policy anchors" (such as guidance prices), doesn't consider "insufficient adjustment," and doesn't consider the moderating effects of market cycles and appraiser expertise. This is a mechanistic limitation that prevents regulatory applications.

1.3. Research framework

Taking China's first-tier city second-hand house reference price policy as an example, this paper applies a "cognitive anchoring – bias formation – market consequence" perspective. It outlines the policy environment, explores the two-way effect of anchoring, and suggests that specific approaches (such as multi-anchoring pricing, cognitive de-biasing) could be used to reduce valuation risks.

2. Case profile: the reference price mechanism in tier-1 cities

China's first-tier cities have since adopted a "second-hand housing transaction reference price mechanism", which sets official reference prices based on previous contract filings and the average price of similar new homes in the area [8]. Empirical data shows a huge gap between such policy

anchors and the market value, such as in the Poly Xinyu Garden of Guangzhou, the reference price (¥96, 957/m²) was about 37% lower than the listing price (¥153, 838/m²) [8]. As a result, mortgages provided with these lower anchors significantly raised the amount of down payments, or the upfront cost, for a 100 m² unit by ¥3.98 million. This regulatory change has created a "dual-anchor conflict," such that appraisers are technically abiding by the regulations' benchmarks, but informally using market value to meet the client's needs [8]. This monetary gap is shown in Table 1.

Table 1. Comparison of costs for a 100 m² apartment under the market listing price and the government reference price

Item	Based on Market Listing Price	Based on the Government Reference Price
Unit price (yuan/ m ²)	153,838	96,957
Total value of 100 m ² apartment (yuan)	15,383,800	9,695,700
Loan amount (70%) (yuan)	10,768,660	6,786,990
Down payment (yuan)	4,615,140	8,142,510
Extra down payment (yuan)		3,527,370

3. Dual-path analysis: functional utility and structural vulnerabilities

3.1. Functional utility: cognitive anchoring as a market stabilizer

3.1.1. Suppressing speculative bubbles via policy anchoring

During the period of overheated real estate markets, housing prices rise rapidly in a short time, and the listing prices in the market often contain a large amount of speculative premiums. At this moment, government-guided prices as a "policy anchor" can provide appraisers with a relatively calm and deflated reference system, effectively curbing their blind following of overly high market prices [9]. When the initial anchor point of the appraiser shifts from the "inflated listing price" to the "rational guidance price", the final valuation result will systematically decline, thereby reducing the loan leverage ratio of home buyers and compressing the survival space for speculative demand. In Shenzhen, for example, after the reference price policy was introduced in February 2021, official reference prices for most residential projects were 15% to 25% lower than market listing prices. As a "cooling valve," the mechanism increases the capital cost for speculators, increases the down payment ratio, and basically drives out the "cooling valve" in the form of short-term arbitrage capital. From a macro perspective, policy anchoring may help to reverse the irrational expectation of "housing prices will only go up and never down", thereby nudging the market towards a real residential demand-driven pricing logic and having positive significance for preventing real estate bubble transmission to the financial system.

3.1.2. Standardization of valuation benchmarks and mitigation of moral hazard

Before the introduction of the guidance price policy, there was a serious phenomenon of "acting independently" in China's real estate appraisal industry. The comparative cases, correction factors, and discount rate assumptions adopted by different assessment institutions had tremendous

differences. In the industry, an assessment deviation rate exceeding 20% is generally regarded as a significant difference, and this business once accounted for as high as 52% of the audited business. This dispersion can induce moral hazard because appraisers may be tempted to use high anchors under the pressure of clients or intermediaries and allow loans to be overvalued. Studies have shown that the effects of customer influence can greatly enhance both anchoring effects and valuation differences [5]. Policy anchoring provides a single, open, and transparent level line for the whole industry. In terms of writing reports, appraisers are required to make "upward adjustments" based on the guidance price, versus "pricing from zero," which would allow for a lot of human manipulation. According to a line of city real estate appraisal association statistics, after the execution of this guideline, the degree of dispersion of similar real estate appraisal results between institutions in the same area has greatly reduced. The standardization effect contributes not only to the professional standardization and social credibility of the valuation industry, but also gives banks' risk control departments more reliable collateral value references for credit approval, which reduces the subjective part of credit approval.

3.2. Structural vulnerabilities: the dilemma of dual-anchoring

3.2.1. Systematic undervaluation and credit rationing

If the policy anchoring is much lower than the real value of the market, a systematic bias "under anchoring" will result. Generally, the guidance prices of the first-tier cities are 20% – 30% lower than the actual transaction prices, and even some popular properties in core areas are deviated by more than 40%. The last assessment, made under administrative pressure, saw appraisers reporting the price as per the guidance price, so that the reported price was much less than the true realizable value of the property. This systematic underestimation translates into a major drop in the amount actually available for home buyers to borrow. Suppose that a property sells for 15 million yuan and has a suggested retail price of 10 million yuan. Increased pressure on down payment, as the amount home buyers can borrow has fallen dramatically from 10.5 million yuan to 7 million yuan, meaning home buyers have to pay a 3.5 million yuan down payment. For the key demand group, this surprise increase in the down payment has delayed or scrapped their plan to buy a house, and as a result, it has severely reduced the 'effective' demand. The more profound impact is that small and medium business owners often use their personal properties as collateral for business loans. The decrease in the assessed value brings a decrease in the financing amount available, and some enterprises are thus at risk of a working capital break. Thus, policy anchoring comes with substantial spillover costs in that it also stifles the true demand for housing and lowers the financing capacity of the real economy while trying to deter speculation.

3.2.2. Appraiser path dependency and cognitive dissonance

Although the policy anchoring is enforced at the institutional level, the cognitive habits formed by assessors during their long-term practice will not change rapidly. Most appraisers have more than five years of professional experience, and their professional judgments are gradually internalized in the framework of the "market comparison method". They are used to making corrections based on the recent real transaction price and the current listed price rather than the government-guided price. This path dependence on "market anchors" is evident in empirical interviews: over 60% of the surveyed appraisers admitted that they would refer to market prices during internal discussions and estimates, but they must include guidance prices in official external reports. This "dual-track"

cognition induces cognitive dissonance, creating a systematic divergence between appraisers' internal valuations and their externally reported figures. More significantly, some appraisers in order to meet the implicit demands of clients (home buyers or real estate agents) will make "strategic adjustments" at the technical level: for instance, they deliberately choose comparison cases with newer ages and better floors in the comparison method or make adjustments to the correction coefficient to make the final assessment price as close as possible to the market price rather than the guidance price. Such strategic adjustments undermine the independence and objectivity of valuations while neutralizing the regulatory intent of policy anchors, fostering an institutional "cat-and-mouse" dynamic between regulators and practitioners.

3.2.3. Information asymmetry and the proliferation of "dual contracts"

The conflict between policy anchoring and market anchoring fundamentally exacerbates the information asymmetry between buyers and sellers. When sellers are faced with a guidance price lower than their psychological expectations in order to maintain the actual transaction price, they often reach an agreement with buyers and sign a "dual contract": the online signing and filing price is filled in according to the guidance price (lower) to reduce the expenditure of deed tax and value-added tax. The difference in price is paid through private transfers, decoration compensation, and furniture purchase fees. This behavioral pattern has become quite common in second-hand housing transactions in first-tier cities. Research has found that in the transactions of existing housing in 35 large and medium-sized cities, taking deed tax as an example, the tax evasion caused by dual contracts is approximately 39% of the tax payable [10]. More seriously, the "dual contract" exposes banks to the risk of overvalued collateral. Banks lend based on the online contract price and assessment report, but the actual transaction price is much higher than this. When the borrower defaults, the bank may discover that the "disposal price" is less than the loan balance when selling the loan's collateral. Furthermore, there is also a case of information asymmetry between institutions and regulators: the institutions write down guidance prices in their external reports, and in their internal reports, they actually cite the market prices. This information fragmentation makes it hard for regulatory authorities to have a clear understanding of the actual market temperature, which in turn impacts the exact adjustment of the following policies. Dual contracting in the longer term will undermine the concept of tax equity, reduce the effectiveness of enforcing real estate regulation policies, and lead to local financial risks.

4. Policy recommendations

4.1. A dynamic multi-anchor pricing model to reduce systemic undervaluation

To solve the problem of systemic undervaluation caused by policy anchoring, this study suggests constructing a dynamic multi-anchor pricing model. Introducing the "hybrid anchoring mechanism": Taking the government reference price as the floor anchor and the recent real transaction price (excluding extreme values) as the market anchor, and assigning different weights [11]. During the period of rapid increase in housing prices, the weight of policy anchors to curb bubbles. During periods of market downturn or differentiation, allowing for the assessment values to be revised upward over a wider range based on policy anchors to reflect the true liquidity. For prime and ordinary properties, a differentiated anchoring strategy should apply. By introducing big data for real-time monitoring of the deviation between transaction prices and guidance prices, dynamically adjusting the anchoring range. Hence, striking a balance between preventing financial risks and

meeting the financing needs of the real economy, thereby eliminating the "spillover cost" of policy anchoring.

4.2. Cognitive de-biasing training to overcome appraiser path dependence

In response to the path dependence of assessors on "market anchors" and the behavior of "double standards", cognitive de-biasing training and industry supervision should be strengthened. Firstly, adding modules on behavioral finance and cognitive bias in professional qualification examinations and continuing education. Case teaching would help appraisers recognize the 'insufficient adjustment' trap and strengthen independent judgment. Secondly, a "blind review and cross-verification" mechanism should be implemented. During the stage of writing the assessment report, assessors are required to make an estimate without considering the listed price and then compare it with the market price, forcing them to make sufficient cognitive adjustments. Meanwhile, industry associations regularly draw reports for cross-verification and issue warnings to institutions or individuals that have systematically deviated from the market average over a long period of time. Finally, a reputation mechanism should tie compliance records to professional standing, reducing pressure from clients and intermediaries. By enhancing the professional quality and moral self-discipline of appraisers, they can make objective judgments based on professional standards rather than the interests of clients, thereby maintaining the credibility of the valuation industry.

4.3. Information transparency and penetrative supervision to contain dual contracts

To contain dual contracts and moral hazard, a full-process penetrative supervision system is required. First of all, unifying the price standards in the online signing, filing price, assessment price, and the price range in the bank loan commitment letter. Tax authorities and banks need to achieve data sharing, automatically issue early warnings for online contract signing and filing that are significantly lower than the market price, and investigate private fund transactions under the guise of decoration fees, furniture fees, etc. Secondly, implementing an enhanced version of the "three-price integration" supervision: the taxable price, the bank loan assessment price, and the online contract filing price, which must be strictly consistent, to prevent the source of the behavior of using price differences to evade taxes or obtain high-value loans. In addition, strengthening compliance checks on assessment institutions and banks, and imposing severe penalties on institutions that assist in the production of false assessment reports. Finally, enhancing market transparency, regularly releasing regional housing price indices based on real transaction data, guiding the market to form rational expectations, and reducing regulatory arbitrage behaviors caused by information asymmetry.

5. Conclusion

5.1. Core findings

This study reveals the "double anchoring predicament" in real estate valuation in China. Research has found that policy anchors have functional value in curbing speculation and unifying standards, but their conflict with market anchors has led to systemic undervaluation and a credit crunch. Meanwhile, the path dependence of appraisers on market anchors has triggered moral hazards such as cognitive dissonance and "dual contracts". According to this, this paper suggests some systematic solutions, which are dynamic multi-anchor pricing, cognitive debias, and penetrating supervision.

5.2. Research significance

Both the theoretical and practical significance of this research are made. Theoretically, it has broadened the applicable scope of the anchoring effect in policy intervention, explored the interaction mechanism of "policy anchors" and "market anchors" and the transmission path to the deviation in valuation, and supplemented the real estate finance literature. At the practical level, it provides empirical evidence for regulatory authorities to transform from "rigid control" to "dynamic guidance". It provides operational guidelines for assessment institutions to identify cognitive biases and improve the quality of their practice. It also provides decision-making references for commercial banks to optimize collateral risk management and prevent credit mismatch, which has positive significance for building a long-term mechanism for the real estate market.

5.3. Limitations and future study

This study is limited by secondary data and case analysis methods, lacking first-hand empirical support for the psychological cognition of assessors. Future research can quantify the adjustment bias of assessors under dual anchoring pressure through behavioral experiments or questionnaires. It can be extended to cities of different levels to compare the heterogeneity of anchoring effects caused by market maturity. In addition, with the reform of the real estate tax and the application of AVM technology, the algorithm anchoring deviation and its market impact can be further explored in the future.

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