9-314-104
REV: MAY 9, 2014

LYNN S. PAINE
JOHN MACOMBER
KEITH CHI-HO WONG

China Vanke (A-1)

For me, long term is five to ten years. For Wang Shi it's way out there – beyond imagination. Twenty years ago when Vanke was still a very small company, he already had a very grand vision that I thought was impossible to achieve. Twelve years ago when I became the general manager, we were only a two billion RMB company. He was thinking what Vanke might look like if it's a 100 billion company. I couldn't have imagined that we'd achieve that goal in less than 10 years.

— Yu Liang, President, China Vanke

China Vanke president Yu Liang surveyed the densely developed expanse of land below as his plane touched down in the southern city of Shenzhen in November 2011. Yu was eager to get back to the company's headquarters in the suburbs of Shenzhen after several days on the road meeting with subsidiary heads, construction partners, and government officials across China. Under the leadership of its founder Wang Shi, China Vanke Co. Ltd. (Vanke) had grown from a small trading firm to China's largest homebuilder, successfully navigating the tumultuous mix of volatile markets and ever-changing government policies that characterized China's real estate market. For 2011, Vanke expected to sell some 10.7 million square meters of floor area, or more than 120,000 homes valued at over 120 billion RMB (about US $20 billion).[1] Nonetheless, the year had been a slow one for the industry, as the central government introduced successive waves of austerity measures to bring down skyrocketing prices. For 2011, housing sales by gross floor area had grown by only 4.4%, down from 10.6% and 43.6% in the previous two years. Traveling around China, Yu had seen sluggish sales across the company's various segments in both first- and second-tier cities. Looking ahead, he foresaw yet "another winter" in a long industry cycle dictated by strong government intervention.

As the company driver inched through the traffic, Yu indulged his habit of checking social media sites where Chinese homebuyers, property owners, and the public eagerly voiced often blunt and sometimes rude opinions on the real estate market and even their own apartment units. On a Vanke website, Yu saw angry calls for refunds from homeowners who had bought units earlier in the year when prices were higher. Falling prices made life difficult for Vanke. Besides reducing profits and bonuses, cutting prices to meet the market also generated hostility from customers who had paid more for similar property in earlier periods. Buyers might even organize protests to demand refunds or to renegotiate the earlier deals. By November, property prices had fallen so much that Vanke's Shenzhen subsidiary announced it would begin offering customers the option of buying unfinished or "raw" units as well as the fully finished units for which Vanke was known. By offering the lower-priced raw units, the Shenzhen team hoped to protect profitability and also mollify existing customers who would otherwise be upset by a sharp decline in prices for fully finished units.

Professor Lynn S. Paine, Senior Lecturer John Macomber, and Senior Researcher Keith Chi-ho Wong (Asia Pacific Research Center) prepared this case. It was reviewed and approved before publication by a company designate. Funding for the development of this case was provided by Harvard Business School, and not by the company. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

When Yu learned of the raw units announcement by the Shenzhen office, he was concerned. Vanke had begun limiting its offerings to fully finished units at a time when most developers were selling only raw units, and Yu regarded Vanke's expertise in this area as a core competence integral to the brand. The policy of offering only finished units was also a key element of the company's green strategy. At the same time, Yu recognized the challenge Vanke was facing in the marketplace and was reluctant to reverse a decision made by a top notch sales team. Still, Yu was considering whether to let the Shenzhen team's announcement stand or whether to insist on holding to the policy on fully finished units. He had consulted with a number of company executives and planned to speak with Vanke's well-known chairman and founder Wang Shi before making a decision.

Wang Shi was widely admired for his daring, vision, and passion for people. Builder of China's largest non-state-owned company, he was also known as a philanthropist, environmentalist, and mountaineer who had reached the highest points on seven continents. But Wang could also be controversial. He upset the entire industry in 2007 by publicly stating his view that the real estate market was facing a downturn—a statement many feared would make matters worse. After the 2009 Sichuan earthquake, as donations poured in at unprecedented rates, he set off a public firestorm by writing on his weibo microblog that China has many national disasters and that donations should not be a one-time affair. When he wrote that Vanke's board had authorized a donation of RMB 2 million, China's netizens took Wang and Vanke to task for what they viewed as far too little. (Vanke also sent rescue teams to the area, and shareholders later authorized a donation of RMB 100 million.)

As the car arrived at Vanke's headquarters, Yu put down his tablet and collected his thoughts. He knew the pricing issue had to be addressed immediately, but the new, more tightly controlled environment raised a range of other issues that were on Yu's mind, including how aggressively to push Vanke's green building strategy and whether Vanke should strengthen its presence in the commercial real estate sector. Achieving sustainable growth was difficult in any industry, thought Yu, but it was particularly difficult in real estate and in China. Yu sent a final quick email and turned his attention to the pricing issue as he entered Vanke's award-winning headquarters building—a stunning "horizontal skyscraper" designed by American architect Steven Holl to embody cutting-edge green values and, at Wang Shi's insistence, one of China's first LEED (Leadership in Energy and Environmental Design)-certified platinum buildings.[2]

From trading firm to leading homebuilder

Vanke originated as a corn trading business set up by Wang Shi in 1984. The previous year Wang had been sent to Shenzhen by the Guangdong province Foreign Trade and Economic Cooperation Committee, for which he was a staff member, to lead a trading division under the state-owned Shenzhen Special Region Development Company (SSRD). In Shenzhen, Wang observed that some multinational feed companies were importing corn for their joint ventures in China from the U.S. and Thailand rather than from northeast China where ample supplies were available. On learning that transportation was the barrier, he persuaded officials at Guangzhou Marine Bureau to open a shipping route from Dalian in northeast China to Shenzhen, promising them adequate volumes. He then set up a feed trade team under the SSRD, independent from the trading division, to supply corn to his multinational clients. This "startup" soon began trading other products, such as textiles, electronics, chemicals, medical devices, or, as a Vanke executive put it, "whatever was profitable."

Throughout the 1980s, Vanke aspired to become a conglomerate with Sony as its role model. In 1988, Vanke became a "public company" (a limited liability entity with more than 200 shareholders but not listed on a stock exchange) with Wang as its chairman and general manager. The government's reduced stake (down to 60%) and the broadened shareholder mix allowed Vanke to diversify into areas such as printing, jewelry manufacturing, department stores, and even film production and electric power distribution. That same year Vanke entered the real estate sector, even though the legal framework for private land holding had yet to be formulated. Seeing newcomers flood into Shenzhen only to find a limited supply of low-quality homes, Wang paid a then record-high of RMB 20 million to win a public land auction and went on to complete Vanke's first residential project. Vanke also ventured into commercial and mixed-use real estate, although a shift in government policy decimated the commercial market and necessitated the conversion of Vanke's first office project, in Shenzhen, into a residential project. (In 2012, it was still the city's tallest residential building.) Nonetheless, as of 1993, Vanke remained heavily reliant on retail and trading, which generated about 85% of total revenues, while real estate development contributed less than 4%.

Concerned that government ownership would impair the company's decision making, Wang sought to dilute the government's stake by listing Vanke on the main board of the Shenzhen stock exchange in 1991 (SZSE: 000002) and subsequently in 1993 on the B-share board (for foreign investors), raising RMB 130 million and 510 million respectively. Vanke's listing coincided with the government's implementation of macroeconomic control measures to deflate the real estate bubble that had developed in the coastal city regions in the early 1990s—China's first real estate bubble since its re-opening in 1979. Despite several hiccups, Vanke decided to concentrate on real estate development. The company began divesting its non-real estate businesses and transforming its real estate portfolio away from mixed commercial use projects and toward residential projects. It also introduced property management services, the first in China to do so. To support the evolving business model, Vanke recruited large numbers of specialists and professional staff. From 1988 to 1998, as the number of developers in China expanded to more than 24,000,[3] Vanke's real estate business grew at an average annual rate of 70%. By 1998, when the government put in place rules for mortgage lending and prohibited public entities from providing subsidized housing for their employees, Vanke had become the largest listed real estate company in China. (Prior to the economic reforms of 1979, most Chinese lived in housing provided by their government or public employers.[4])

But it was not until 2001, after divesting its interest in Vanguard Department Store, then the largest retail chain in China, that Vanke became a pure play in residential real estate. China Resources Group, one of China's largest conglomerates and itself owner of a real estate development arm listed in Hong Kong (CR Land Ltd., HKSE: 1109), bought the interests in the department store chain and ended up becoming Vanke's single largest shareholder (owning around 14% by mid-2012). Based on a study of the U.S. housing market by Vanke's strategic planning group at that time, Wang Shi became convinced that China's residential market would be large enough to support the company's growth, and Vanke positioned itself as a mainstream developer focused on building quality homes for ordinary people (rather than targeting just the high end of the market). From his experiences in Japan, Wang Shi became interested in prefabrication as a method to improve product quality.

Over the ensuing decade, as China's urban population grew by 3.7% a year,[5] Vanke expanded beyond its home base in Shenzhen and Guangdong, establishing a market presence in some 54 cities across China and pioneering a move toward prefabricated housing and greener building beginning in 2004. In 2005, Vanke set up regional headquarters in Beijing, Shanghai, Guangzhou-Shenzhen, and Chengdu. By 2011, the company's four regional offices each managed seven to ten subsidiaries. Of the 14.48 million square meters of area commenced in 2011, about 19% was prefabricated to some degree, and of the 6.6 million square meters completed, about 40% was rated 3-star green, the government's highest environmental rating. Property development contributed more than 98% of Vanke's revenue and 99% of its profit. Over 35% of Vanke's property development revenue came from the Guangzhou-Shenzhen region, with Shanghai and Beijing at 29% and 24% respectively. The

Chengdu region, a relatively new territory, contributed 11% of the total in 2011. (See **Exhibit 1** for Vanke's growth history; see **Exhibit 2** for financial highlights 2009-2011.)

Vanke's growth during this period mirrored China's. Between 1998 and 2011, China's real estate market was one of the world's fastest growing: housing starts increased 7.5 times, completions rose 4.8 times, and sales volumes grew 9 times.[6] By 2011, China's urban population represented over 51% of the total, up from 20% in 1970. (See **Exhibit 3** for urban population growth). With 17 million people moving into cities every year, projections showed 60% of China's population living in urban areas by 2017.[7] Analysts estimated demand for housing at 9-10 million units annually through 2015, including 4 million for first-time purchasers, 4-5 million[8] to replace homes lost to urban redevelopment, and "upgrade demand" from occupants of housing allotted by state-owned enterprises and other public entities in the 1980-90s.[9] (The US had about 430,000 single family housing starts in 2011).

China's residential development industry, meanwhile, was highly fragmented. Among some 50,000-60,000 developers, only Vanke had a market share of 2% or more in 2011.[10] In aggregate, the top 15 developers had less than 15% of the market, compared to 25% for the top 15 in the United States. (See **Exhibit 4** for market shares of top developers; see **Exhibit 5** for financial comparisons.)

Wang Shi's background, vision, and beliefs

Born in 1951, Wang Shi became a solider at seventeen during the early years of China's cultural revolution, a political movement aimed at instilling communist orthodoxy across the nation. Five years of military service strengthened his endurance and provided him with a distaste for authority. Discharged from the army in 1973, Wang enrolled in Lanzhou Railway College to pursue studies in water supply. He also tuned into the Voice of America, explored forbidden western authors such as Dante, Dickens, and Stendhal, and learned about Max Weber's theories of capitalism. Wang began to question the communist depiction of capitalism. After graduating in 1978, he joined the Guangzhou Railway Bureau and moved to the Guangdong province Foreign Trade and Economic Cooperation Committee from which he launched the business that would become Vanke. Wang served as Vanke's chairman and general manager until 1999, when he relinquished the general manager role. As of 2011, he remained an active and involved chairman.

A writer in *Architectural Record* contrasted Wang with "the stereotype of the wheeling-and-dealing Chinese property developer."[11] The writer continued: "Soft spoken, deferential, and exceedingly fit…Wang comes across as a polymath who sprinkles his conversation with references to American psychologist Abraham Maslow's 'hierarchy of human needs,' Spanish architect Antonio Gaudi's Sagrada Familia church in Barcelona, and the latest green building technologies. With short, cropped hair and a square jaw that lends him a strong resemblance to film director Zhang Yimou, Wang has appeared in television commercials for companies such as Volkswagen, Ping An Insurance, and Motorola, earning millions of dollars that he has given to charity."

Celebrated in China as an entrepreneur, Wang was also recognized as a sportsman and advocate for a number of causes that he promoted via wangshi.tv and his microblog which had over eight million followers. (See **Exhibit 6** for screen shot). An ardent spokesman for the environment, Wang attended the Copenhagen summit on climate change in 2009, the first Chinese entrepreneur to participate in a U.N.-sponsored event of this kind. Wang commented:

> One of the earliest western stories I read was 'The Snows of Kilimanjaro' by Ernest Hemingway. But when I had a chance to summit Kilimanjaro in 2004, there was almost no

> snow left. I then thought 'we have to do something.' I believe that pollution and otherenvironmental issues are a real problem. In 2004, I sponsored a conference on this topic. The Chinese government's 11th Five Year plan had no mention of environment. We kept at it. The 12th Five Year Plan has a lot about environment…including architecture and construction.

In 2008 Wang had approached Greenpeace for advice on combatting the use of illegally logged timber in the China construction industry. "I decided to find them [Greenpeace] before they found me," he commented, pointing out that "70% of the illegally logged wood from the Amazon rainforest and from Africa is used in China construction." The result: Vanke adopted a new construction method using steel rather than wood molding in the construction of high-rise buildings, worked with industry to create a labeling system for timber imported into China, and launched a collaboration with the World Wildlife Fund to protect the rainforest and combat climate change. In 2011, 51% of Vanke's total area sold was built using steel molding rather than traditional timber formwork.[a]

Wang's beliefs were woven into Vanke's corporate culture which was introduced to new hires by members of Vanke's top executive team. The head of human resources, Zhou Wei, described Vanke's culture as "rare among local Chinese businesses." "It respects people, relies on evidence-based decisions, allows professionals to have their own voice, minimizes bureaucratic authority, promotes simplicity in interpersonal relations, and protects everyone's privacy," he explained.

Wang's worldview led the company to choose what many Vanke executives called the "right way" of doing business. For instance, Vanke stood firmly against bribery despite its common occurrence in China. (Wang noted that employees sometimes gave in to bribes despite the company's policy.) Some Vanke executives attributed the company's stance on bribery to Wang's studies of Max Weber's Protestant work ethic and the goal of long-term success. Indeed, as one executive put it, "we always ask whether to go with the current situation or try to 'see the future.'" But the "right way" encompassed a wide range of other practices and commitments such as concern for the customer, product quality, worker safety, employee well-being, transparent governance, and corporate citizenship. Board secretary Tan Huajie summed up the "right way" as follows:

> No matter what decisions we make, however many rules exist, there are two bottom lines. First, we have to ask our conscience if this is the right thing to do. Second, we have to ask if our way of handling the situation can be accepted by the public. If an action can pass these two tests, you know what and how to act even if there is no explicit written rule for that situation.

Governance and management

From Vanke's early days as a public company, Wang Shi had favored a governance system based on western models of transparency, respect for contracts, and adherence to rules (rather than people). He recognized that this approach could lead to difficulties in China's environment but he also felt it was the only way to build a company that could sustain itself over the long term. In this spirit, Wang sought board members with a long-term perspective. In 2012, Vanke's board consisted of eleven directors, four of whom were independent, elected through the general shareholders meeting for three-year terms. The board approved key strategic decisions and monitored company performance but delegated day-to-day operations to management. The board had committees on strategy, investment, auditing, remuneration and nomination. A distinctive feature of corporate governance in

[a] Molding, also known as formwork, is a temporary enclosure that shapes and holds newly poured wet concrete until it cures from liquid to solid form. Most of Vanke's high-rise buildings had poured concrete structural frames. Steel moldings were more expensive but lasted longer and, of course, did not use as much timber as wood moldings.

China was the supervisory board, which served as a double check on the governing board and on management, particularly over financial matters and potential violations of laws or company articles.

A winner of various awards for its governance, Vanke sought to provide accurate and timely information to the public and its shareholders, including some 2,200 institutional investors, both domestic and overseas, who held over 56% of its shares. Disseminating information through multiple channels such as traditional media, company visits, road shows, telephone conferences, press conferences, and the internet, Vanke was among the few real estate developers to proactively disclose monthly sales figures to the public. To manage the large number of inquiries and visits—more than 600 a year—the investor relations team created an internet page for visitors, mostly stock analysts, to register themselves and check the status on their appointments. The team tried to be as neutral as possible in presenting information. "Investor relations is not a sales job; we are not trying to sell our stock," said board secretary Tan Huajie. "All we do is tell investors the real situation and let them decide whether to stay or leave." (See **Exhibit 7** for investor information.)

Led by Yu, Vanke's eleven-person top team included nine executive vice presidents and the board secretary. A majority had earned undergraduate degrees in the late 1980s or early 1990s when western liberal ideas were prevalent on college campuses. Many held professional qualifications in architecture, design, or civil engineering, as well as MBA degrees from prominent schools such as China Europe International Business School, Cheung Kong Graduate School of Business, and Shanghai Jiao Tong University. Each of Vanke's four regional heads reported to the top team.

Although Vanke's compensation was not the industry's highest, it was well above average and the variable component was higher than most. In 2005, Vanke had reduced the proportion of fixed pay and introduced a bonus scheme based on sales revenue for the management team. In 2010, the company added a bonus based on economic profit (EP) for top and middle management and other significant contributors to the company—in total about 20% of the 6000 employees in the property development division. The new system increased the variable component of these employees' pay to 60%-70% of total compensation. A set percentage of the company's economic profit for each year, as calculated by an independent third party, was set aside for the bonus pool to be distributed among recipients. If EP was negative, the same percentage would be deducted from the pool. Part of the EP bonus was held for deferred payment. Over the deferral period, employees caught violating their duties or causing significant loss for the company would forfeit their entire deferred amount. For instance, a project manager for a construction site might lose part of his EP bonus if a fatal accident occurred under his supervision. In 2010, a total of RMB 105 million was allocated for the EP bonus; the actual payout was RMB 90 million.

In late 2011, Vanke had some 28,000 employees, of whom 20% worked in property development and 80% in property management. The average age in the property management division was 27.8 and tenure with Vanke was just over two years; employees in the property development averaged 31 years old and 3.7 years with the company. While 73% of the property management workforce had no more than a secondary education, over 85% of property development employees were at least university educated. Most worked in functions such as sales and marketing, accounting, construction, finance, audit, IT, legal, human resources, customer relations and data analysis.

Vanke's business model

To make up for the higher prices it had to pay for land in the early days—in part because of its unwillingness to pay bribes —Vanke had focused on shortening construction and development cycles to improve operational turnover. "This disadvantage [no bribes] put pressure on Vanke to work many times harder than our competitors," recalled Wang Shi. "We recruited the best design and sales team, gauged market demand seriously, and developed new lines of products."[12] As Vanke grew and expanded to other regions of China, the management team worked hard to manage the major categories of cost—land, construction, and financing—and to improve product quality to justify higher prices and a reasonable profit margin.

Target customers

Vanke positioned itself as a mainstream developer building quality homes for ordinary people. (See **Exhibit 8** for product focus of selected developers.) Among the five top developers with a major focus on this segment, Vanke appeared to have the most concentrated portfolio.[13] Because housing in China was often purchased by whole families, or with money from family members of different generations, Vanke relied primarily on two parameters in segmenting the market: family structure and the age distribution of the core family members. A Vanke professional elaborated:

> We track our customers' needs from age 25, when they usually start to work, through retirement – age 60 for men and 55 for women – and the final stages of life. In China, it is very common for the elderly to live with their children. Cross-generational living is considered a traditional Chinese virtue of respecting one's parents. Even if children want to live apart from their parents, they usually live nearby. Based on family structure, we break down the market into 11 categories; each varies significantly in product specifications—for example, access to public transit, schools, hospitals, shopping and leisure facilities, and most importantly, price. When we craft the development plan for a project, we always consider its location and supporting facilities. For example, housing in the suburbs with accessible public transit is likely to be suitable for young customers because it is relatively cheaper and more convenient for commuting by people with tight schedules. Such products usually have 2 to 3 bedrooms.

The eleven segments identified by Vanke (see **Exhibit 9**) included groupings such as

1. Single buyers without children (aged 22 to 27): approximately $23m^2$ of spaces needed;
2. Young couples without children: approximately 37 m^2;
3. Young couples with one child: two bedroom apartments with a space from $50m^2$ to $60m^2$;
4. Families with three generations living together: over $88m^2$, with three or more rooms.
5. Elderly couples in "empty nests" and wealthy families seeking villa residences

Land bank accumulation

Unlike many Chinese real estate developers who bid on land in public auctions, Vanke acquired most of its land through the secondary market or by acquiring small companies with existing land banks. (Developers actually acquired long-term leases on land rather than the land itself; in China, the government owned all land and leased it out for defined periods of time—70 years in the case of residential real estate.[14] The system of leaseholds allowed the government to control the land supply.) Negotiating with existing leaseholders generally allowed more confidentiality and better prices than public bidding. Moreover, land put up for public auction was often located in city centers and more suitable for commercial or mixed uses. Vanke group vice president Zhang Xu explained:

> Our main target customers are first-time buyers and Vanke intends to build "liveable homes" for them. Our land acquisition strategy thus follows our customers and the products they want. These three elements [i.e., land acquisition, customers, products] complement each other. We try to avoid pieces of land that command a high premium, as our customers are less likely to afford the high-priced apartments built on such a land.

Instead, Vanke opted for cheaper land, usually far from the city center, and compensated for distance by offering more spacious units and better overall designs. (In some instances, Vanke participated in urban renewal projects which typically had lower development costs.) Vanke also sought to foster strong community bonding among the occupants by organizing social events such as parties, concerts, and sports outings. Zhang Xu described Vanke's approach further:

> We are different from other (real estate) brands, because our product is mainly related to people and geography. We try to create that with reference to the people and the locality, to its culture and its historical legacy. This is what distinguishes our projects from the others. As such, the longer homebuyers stay in a Vanke managed property, the more loyal they are to our brand. And even if our location is a bit inferior, they'd still choose our products.

To reduce the need for capital and to maintain flexibility in the face of volatile markets and changing government policies—on land sales, bank capital, retail mortgages, interest rates, and many other matters affecting property markets—Vanke managed its land holdings carefully. In China, land bank strategy was a material component of a developer's business model. It was important to control adequate land for several years of construction, and developers wanted to purchase land at low prices. At the same time, land banks were not sources of cash flow, it was often difficult or impossible to borrow against raw land, and the market value of raw land could be volatile. According to analysts, most top developers had from 6 to 12 years' worth of development on their books as land bank.[15] Some firms had as many as 20 years. Vanke was estimated to have about seven. The land cost component of selling prices varied as well, ranging from under 10% to over 25% or even higher.[16] This number was impacted by size and location of project, number of units in the project, holding period, quality and density of vertical construction on the site, and accounting methods that allocated land across phases of projects. Vanke's land costs were said to be about 20% of its average selling price, although the percentage varied by city tier.[17] Analysts reckoned that for a typical top developer, costs as a percentage of average selling price in first-tier cities broke down into land (33%), construction (27%), interest (11%), and business tax (6%); in third-tier cities, the breakdown was land (10%), construction (50%), interest (8%), and business tax (6%).[18]

When choosing a city, Vanke looked at the potential for economic and population growth. A solid industrial base and infrastructure, such as power and high-speed rail, were also essential. (See **Exhibit 10** for land and geographic coverage of selected developers.)

Quick sales turnover

Because of various government restrictions, Vanke had not raised funds from the capital market at the corporate level for almost five years. At the project level, government regulations dictated that bank loans could be used to finance construction but not land purchases. Thus, Vanke financed project construction through bank loans and land acquisition through the rapid sale of the properties it developed and, more importantly, by partnering at the project level with co-investors—often state-owned enterprises. More than 50% of Vanke's projects were collaborations, typically involving equity or debt partnerships with other companies.

To facilitate rapid turnover, Vanke tried to keep project development cycles under three years and to begin pre-selling units by the end of the second year if permitted by local regulations. Pre-sale restrictions varied from city to city. In some, presale was allowed after a building's foundation was laid. In others, sales could begin only after construction was complete. Typically, Vanke aimed to contract for sale of 70%-80% of a new project's units within the first week of sale. In some markets, Vanke could sell out a 200-unit project in one day. Throughout a project's life, the company re-examined its sales and marketing strategies on the first, third, twelfth, and thirty-sixth month of the sales cycle. Although rapid turnover of units for sale facilitated financing, it sometimes hampered profitability. Wei Yening, Wang Shi's assistant, explained:

> The key to higher profits is to develop large-scale projects and divide them into different phases. Units sold at the later phases can instantly reap the benefits of land value appreciation. But turnover will be slower. So, in the past couple of years, Vanke decided to pursue rapid turnover at the expense of profitability. That made us different from our competitors.

Contractor relationships

After acquiring land, a Vanke team of architects, engineers, and planners designed the project and set standards for materials procurement, energy efficiency, and the like. A Vanke team then carried out procurement and contracted with builders and others to construct the project under the supervision of Vanke-designated organizations. In 2011, Vanke had some 250 projects in progress—each requiring approval from more than 250 government authorities. Overseen by managers at the subsidiary and regional headquarters levels, project managers had considerable discretion over the selection of vendors through a competitive bidding process. Typically the tender was opened to the three or four most qualified vendors in the company's centralized database of more than 4,000 firms deemed eligible based on quality, service, cost, and execution. Those selected were required to sign a contract agreeing to abide by China's labor laws on worker pay and safety, insurance for work-related injuries, breaks during hot weather, and other matters—on pain of fines or disqualification as a Vanke vendor. The contract also included Vanke's own requirements against contractors giving project-related gifts (actual or perceived) to Vanke officials or funding banquets for Vanke personnel.

On any given day, more than 270,000 workers would be on the job at Vanke project sites. Many were migrants far from home. As additional protection against labor abuses such as non-payment and underpayment of wages, Vanke took the unusual step of withholding a portion of the contract price until the project was complete and workers had been paid in full. If a contractor defaulted on its obligations to workers, a frequent occurrence in China, Vanke would pay the arrears out of the withheld funds. Vanke was also somewhat unusual in requiring contractors to provide workers with internet access as well as air-conditioned sleeping space and rooms where couples could be together (instead of in different dorms). According to Vanke's head of engineering, procurement, and construction, Wu Zhongyou, these practices flowed from Vanke's belief in respect for life, but they also reflected a view that "the quality of the product depends on the people who make the product."

At the completion of construction, Vanke conducted final inspections to ensure that all standards for the project had been met and that the end product met Vanke's requirements. Vanke had created its own quality-assessment tool that third-party consultants hired by Vanke then used to evaluate work completed at various stages of the building process. Widely copied by competitors, the tool specified allowable variances on myriad aspects of construction (but not finishing). Although the consultants rated Vanke's quality as positive relative to its peers, many Vanke executives pointed to reports of surface cracks and water seepage from the property management division as evidence that more was needed. Vanke was planning to send more than a thousand engineers, project managers, and others to Japan to study quality and quality control over a three-year period beginning in 2012. From a customer perspective, as gauged by the company's annual customer survey, Vanke had improved considerably in recent years but some managers were concerned that there remained a gap between customer expectations and the quality of the product. Among this group, some attributed the problem to Vanke's strategic focus on selling fully finished apartments which, in their view, served to heighten customer expectations and made Vanke more vulnerable to customer complaints.

The "Green" strategy and prefabrication

Vanke was the first major developer in China to position itself as a provider of "green" housing. Inspired by Wang Shi's epiphany on Mt. Kilimanjaro, the rise of public concern about pollution, and speculation about government plans to introduce incentives for green housing, the management team was receptive to ideas about greener building. Some viewed it as social responsibility while others saw it, simply, as the future of the industry, given that real estate was a major user of energy, water, timber, and other resources. When the McKinsey & Company team brought in to help Vanke formulate its third 10-year strategy in 2004 reported that leading companies around the world were viewing "green" as a crucial element of strategy, Vanke decided to adopt its own green strategy.

The green approach fit well with Vanke's focus on prefabricated housing, and prefab (also called "industrialization") become a core element of the strategy. Initially adopted from Japan as a way to improve and control quality in high-rise building, prefab allowed for greater precision as some components—exterior walls, stairs, beams, balconies, floors—were pre-cast in concrete at the factory and then transported and assembled at the construction site. (See **Exhibit 11** for images of prefab.) Compared to traditional methods, prefab allowed for faster construction cycles and also reduced energy, water, waste, and materials use. (See **Table 1)** For instance, Vanke's prefab operations saved 35,000m³ of timber formwork, equivalent to the conservation of 360 hectares of forests in 2011.

Table 1 Reduction of energy and building materials with the use of prefab method

Item	Traditional Method	Pre-fab Method	Reduction
Energy consumption per square meter (kg standard coal/ m²)	19.11	15.00	-20%
Water consumption per square meter (m³/ m²)	1.43	0.53	-63%
Timber formwork consumption per square meter (m³/ m²)	0.015	0.002	-87%
Waste producing per square meter (m³/ m²)	0.022	0.002	-91%

Source: Company documents.

Selling units with fully finished interiors, rather than "raw" units, was another element of Vanke's green strategy. In addition to reducing the cost and improving the quality of finishing compared to homeowner-managed finishing, Vanke's approach ensured the use of environment-friendly raw materials and saved on construction waste. Although Vanke was not alone in going to market with so-called "furbished" units, it had been among the first major developers to take this approach as part of its emphasis on selling livable homes that were move-in ready. The approach had been well received by busy homebuyers lacking the know-how and time to manage the finishing process, which typically cost them some RMB 2000 per square meter and often yielded disappointing results.

In implementing its green strategy, Vanke looked to standards set by China's Ministry of Housing and Urban Rural Development. Developed in 2006-2007, the Green Building Rating System (known as "the Three Star System") was aimed at reducing China's carbon dioxide intensity (CO_2 per unit of GDP) by 40-45% by 2020. The system, which was voluntary, covered key aspects of the construction process such as land, energy, water, and materials use, as well as indoor and outdoor environmental quality, and property management. Although the top rating (three stars) was sometimes compared to a gold rating in the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) program, Vanke officials saw the two systems as very different. In 2008, Vanke broke ground on China's first three-star residential project—the only one launched in China that year.

As a part of the annual strategic plan, Vanke set quarterly targets for completing projects that met the three-star standard, or used prefab methods, which further translated into annual targets for floor space in each of these categories. For 2011, about 40% of the area completed by Vanke met the three-star standard; indeed 51% of the total area of three-star green residential projects developed in China in 2011 was built by Vanke. That same year, Vanke used prefab methods, at least in part, on some 2.7 million square meters of floor space commenced for the year, or 19% of the company's total and 16 times the company's total for 2007. For 2012 and beyond, plans called for increasing the proportion of prefab and three-star green each year. Wang Shi hoped that all new Vanke projects would be prefab by 2016 and all new Vanke units would be three-star by 2020.

Success in achieving those goals would require continuing efforts to reduce costs. Because many green technologies used in the developed world were too expensive for China's mass-market, Vanke focused on low-cost applications such as natural light, exterior insulation, water conservation, and ventilation methods that leveraged natural elements. Vanke was also experimenting with new types of wind chimneys to enhance building ventilation, and with waste reduction techniques such as garbage sorting, recycling, and composting machines. The company's R&D center in Dongguan, Guangdong, was credited with 12 of the 14 China-registered patents related to prefabricated building as well as a number of innovations, including seismic-resistant construction techniques and biological water purification systems for landscaping, that Vanke incorporated into its projects. The Dongguan center was the largest R&D facility established by a developer in China. Vanke was building a second center, in Beijing, in collaboration with the Building Research Establishment (BRE), a U.K.-based consultancy, to explore low-cost environmental technologies for use in multi-story buildings. One focus, inspired by China's pollution problem, was indoor air purification.

Even with such efforts, meeting three-star standards increased construction costs on a per-square-meter basis for an average-sized apartment by some RMB 100-150. The use of prefab added RMB 300-400, and combining three-star standards with prefab added about RMB 400-550. (The average cost of prefab unit construction and assembly ranged from RMB 2,500 to 3,100/m^2 depending on the type of structure and location). The higher initial investment in factory and equipment required for prefab was reflected in Vanke's average cost per new home. (See **Exhibit 12** for costs and selling prices among top developers.) Although buyers valued the health benefits of eco-building—from safer materials and better air quality—and the energy cost savings, Vanke had been unable to generate a sales premium sufficient to offset the additional building costs. "Customers think it's a nice thing to have, but they are not willing to pay extra," noted Yu Liang. To date, Vanke had pursued green building in the belief that it created customer value by improving quality; added enterprise value by enhancing Vanke's brand, increasing construction efficiency, and speeding up capital turnover; and contributed social value by using resources more efficiently and protecting the environment.

Overall, Vanke spent over RMB 1 billion on its green strategy in 2011, including RMB 275 million on three-star eco-buildings and RMB 800 million on prefab, as well as RMB 135 million on research and development (the Dongguan center's budget), more than any other listed developer. Although investors had initially shown little interest in Vanke's green building efforts, interest and requests for information had picked up with the emergence of green investment funds.

Credit tightening and austerity measures 2010-2011

China's government tried to keep a firm grip on the country's economy and, in particular, the real estate market. Through a wide range of policy tools, the government sought to spur growth while at the same time maintaining control over prices and access to housing. In practice this often meant dramatic shifts in policy to boost or restrain the market depending on perceived needs at the time. Developers, in turn, might enjoy a windfall or be forced to retrench depending on the direction taken. To counteract the global financial crisis of 2008, for example, the government introduced a RMB 4 trillion stimulus package that increased the volume of residential properties sold nationwide by 87% and the amount of space changing hands by 53%.[19] Locales like Beijing, Shanghai, Jiangsu, Zhejiang, and Shandong, in coastal areas or near the Yangtze River Delta, saw real estate prices rise and sales volumes more than double in 2010.[20] To quell the sharp rise in prices, the government then enacted a series of austerity measures to cool the market and bring prices down. (See **Exhibit 13** for details.)

These new measures, introduced gradually over 2010-2011, included new taxes on mass-market and luxury properties, price caps on new offerings, restrictions on purchasing second or third homes, prohibitions on reselling units before completion, and new taxes on resales within 2-5 years. On the supply side, the government announced plans to confiscate land kept idle for more than two years and to break up large sites into smaller ones to increase asset turnover and completion. The new measures also called for an increase in the supply of smaller units, requiring that 70% of a project's floor area be developed into apartments of 90 square meters or less, and reaffirmed the land appreciation tax aimed at discouraging ultra-high margins. Along with these measures, the government tightened the availability of credit through new loan-to-value (LTV) limits for project loans as well as for residential mortgages for first-, second-, and third-home buyers.

In tandem with the new austerity measures, the central government also announced plans to increase support for "welfare housing" for low-to-middle income families.[21] The proportion of housing starts for affordable housing had dropped from around 20% in the early 1990s, a period of strong government support, to below 10% by the mid-2000s as private development took center stage.[22] In the face of skyrocketing property prices and a widening gap between rich and poor in 2010, the central government set a target of 36 million new affordable units between 2011 and 2015.

During 2011, as the austerity measures were implemented, the market adjusted to the new credit limits and home purchase restrictions. Property prices began to fall. (See **Exhibit 14** for house price index.) Vanke was forced to cut prices to clear inventory, thus reducing profits, shrinking bonuses, and increasing employee turnover. Faced with the government's new financing constraints, Vanke also bought less additional land. Perhaps most significant, Vanke had to modify its product offerings. In addition to further limiting its already limited offering of larger homes for higher-income groups or investors, Vanke shifted to smaller units with more economical furbishing and installed three bedrooms, rather than one or two, in more of its 100-square-meter units to accommodate buyers' family needs over a longer period. To better align itself with the government's goals, Vanke heightened the emphasis on its mission of building quality homes for ordinary people *to live in* (rather than for investment).

By November, the marketing team for Vanke's Shenzhen office was facing a particularly challenging situation involving the third phase of a suburban Shenzhen project soon to be opened for sale. Earlier in the year, in February, the first phase of the project had been sold at an average price of RMB 15,200/m^2. By August, when the second phase opened, market prices had declined so Vanke brought the price on the second phase down to around RMB 15,060/m^2. At the time, another Vanke project in the vicinity was selling at RMB 14,500/m^2. By November, prices had fallen further. Most new unfinished units in Shenzhen were selling at RMB 10,000/m^2. Gu Qingyong, marketing head for Vanke Shenzhen, believed it was impossible to keep even the RMB 14,500/m^2 price tag on the 200 units in phase three. "An obvious solution was to meet competitors' prices," noted Gu.

But Gu was also aware that price-cutting on residential real estate typically drew loud complaints from purchasers who had made deposits and were awaiting mortgage approval and even from those who had closed deals in earlier phases at higher prices. Buyers often joined together in protest, demanding a refund on the price differential or a full refund with the units returned to the developer. Complaints had already surfaced when the second phase was priced slightly lower than the first. Gu anticipated that the early buyers would be even more aggrieved if the third phase were priced significantly lower than the second. He also knew that Vanke would have to price furbished units no lower than RMB 13,000-13,500/m^2 to remain profitable.[b] Given the situation, Gu and his team decided that instead of making sharp cuts in the price of finished units, Vanke could offer customers the option of purchasing a raw unit at RMB 12,000-12,500/m^2. He explained:

> Customers have long appreciated the quality of Vanke finishing. It may cost them around RMB 2,000-2,500/m^2 to finish a raw unit on par with our standards. But we have the advantage of bulk purchases with raw materials and labor costs, so it costs us less than RMB 2,000/m^2. There is still room for making profit. But if we sell fully-finished apartments at RMB 13,000/m^2, customers will find it difficult to accept a price drop of RMB 2,000/m^2 for the same kind of product within a matter of just three months. Most of our customers are ordinary white-collar workers, a price drop of a hundred thousand [RMB] matters a lot to them.

Gu felt the raw units would also appeal to first-time homebuyers as the required downpayment would be significantly less than for the more expensive furbished unit. He also believed that local officials accountable to the central government for keeping property prices in check would prefer to see Vanke sell raw units as the lower price would help keep the city's averages down. On November 25, one of Guangdong province's leading newspapers reported that, for the first time since the price cap policy was introduced in Shenzhen, Vanke would be selling some flats in phase three without furbishing. The report described the multi-phase project and quoted a price of RMB 12,000/m^2 for the raw units and "slightly below RMB 15,000/m^2 " for the more expensive furbished units.

Reconsidering Vanke's policy on unfinished units

When news of the announcement reached Yu, he quickly registered his concerns about offering unfinished units. Yu regarded finishing as integral to Vanke's brand and saw the company's skills in furbishing as a core competence. Offering raw units, moreover, challenged a key element of Vanke's green strategy as well as the company's commitment to building homes for living in (rather than investment). Yu was also sympathetic to the ordinary homebuyer who typically lacked the know-

---

[b] The main components of a developer's cost structure were land costs and construction costs. The balance typically included provisions for selling costs, interest, taxes, corporate overhead and administration, and other allocations prior to consideration of profit margin.

how needed to manage the finishing process and ended up with higher costs and an inferior result. Before taking any action, however, Gu consulted widely with managers across the company, including Vanke's four regional heads, several front line subsidiaries, the executive team, and chairman Wang Shi. In the course of these discussions, he encountered diverse views. Those who favored the proposal argued that, in addition to dealing with the competitive situation and protecting profitability, it gave customers more choice and made it easier for Vanke to control product quality, in part because customers were less demanding when buying unfinished properties.

As Yu weighed the pros and cons of modifying Vanke's policy of selling only finished units, he reflected on the many challenges presented by the new, more tightly controlled environment. For instance, the downturn had caused some executives to question Vanke's ambitious targets to expand green housing, especially prefabrication. Even without the government's austerity measures, the future of green housing was far from certain. On the one hand, increasing wages in the construction industry were making the economics of prefabrication more attractive. Yu explained:

> Labor wages at our construction site have been growing at 40% annually over the last few years. Young people aren't interested in construction industry jobs. Many of our construction partners cannot find a carpenter even at RMB 10,000 per month, whereas a university graduate might have a hard time finding a job offering RMB 5,000 – 6,000 a month. If the upward pressures continue, most contractors will find it cheaper to use machines to replace low-end manual labor while unskilled workers will need to learn better skills to earn higher incomes.

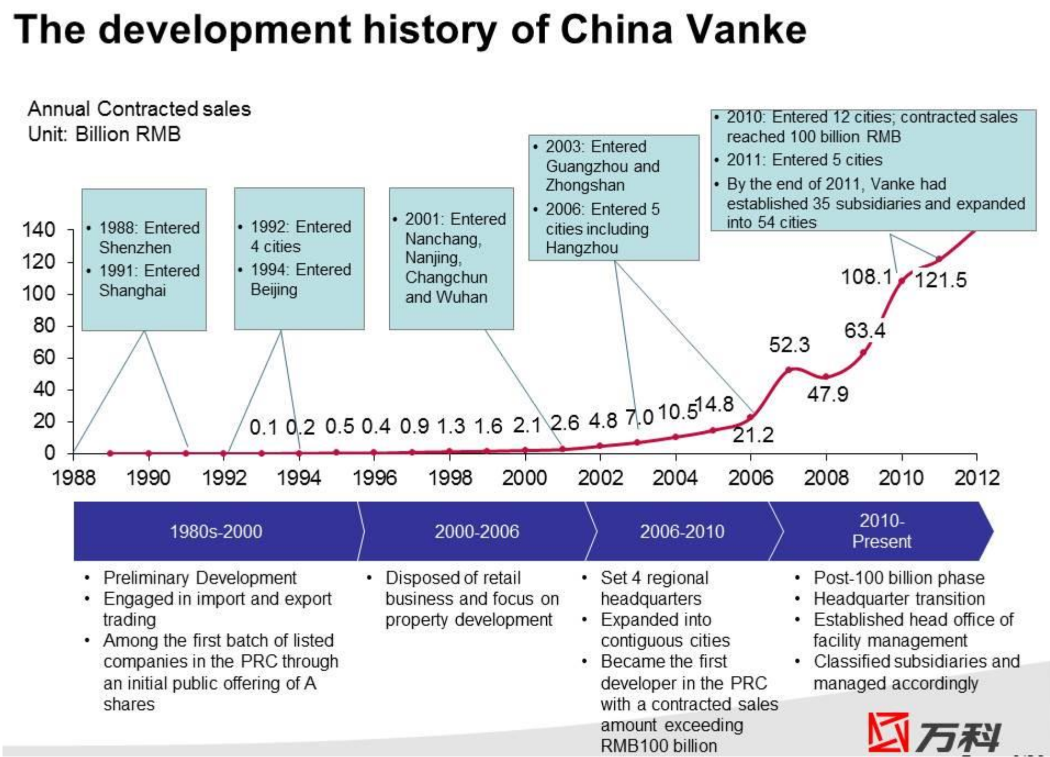
At the same time, widespread use of prefab was constrained by the cost of transportation from assembly lines to construction sites and by the lack of a nationwide supply chain. Although some executives foresaw the complete adoption of prefab in large cities within five years, the conditions for prefab building simply did not exist in many small- and medium-sized cities. Vanke's large-contractor partners, moreover, had little interest in training workers to operate the machinery used for prefab. Even within Vanke, enthusiasm for prefab was far from universal. Wei noted:

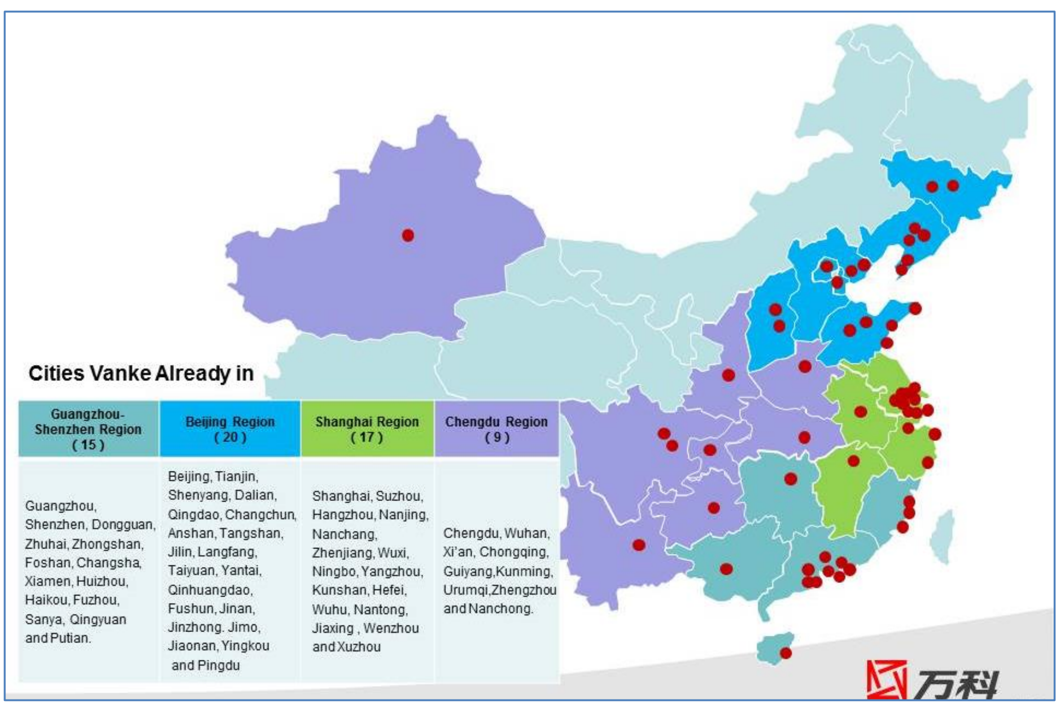
> It's easy to understand the frontline perspective. If the head of a subsidiary just follows the existing construction methods, everything is under his control. He can estimate the profits the company makes, the share of bonuses he earns, and how he gets promoted. But there are so many uncertainties once he adopts the industrialization process. He has to learn how to assemble, and how to work with other supply chain intermediaries. Everyone thinks innovation is a good thing, but once it affects your bonus, you may think differently.

Local governments in cities such as Beijing, Shanghai, Tianjin, and Guangzhou were offering cash and non-cash incentives for developers to adopt green building and energy saving techniques, including prefab in some cases, but these initiatives were uneven and limited to major cities. (See **Exhibit 15.**) And, in a move that Vanke had encouraged, the central government was expected to call for 1.1 billion square meters of eco-building by 2015 as part of China's 12th Five-Year Plan. But most authorities acknowledged that national measures for promoting green housing were lacking and that the market was not yet ready for developers to adopt industrialization on a large scale. Demand for three-star green units was expected to be down sharply in 2012.

Beyond green housing, the government's austerity measures raised questions about the scope of Vanke's business and whether it should expand into other asset classes and other regions of the world. Some felt that Vanke needed to look beyond residential housing in China to continue growing at the rates management had come to expect. (See **Exhibit 16**.) Yu knew the team would have to grapple with these questions. For the time being, though, he set them aside as he considered whether to reaffirm Vanke's policy of selling only finished units or to let the Shenzhen group's offer of raw units stand.

Exhibit 1 Vanke growth and geographic coverage (as of 2012)





Source: China Vanke Company Document.

Exhibit 2 Financial highlights 2009-2011

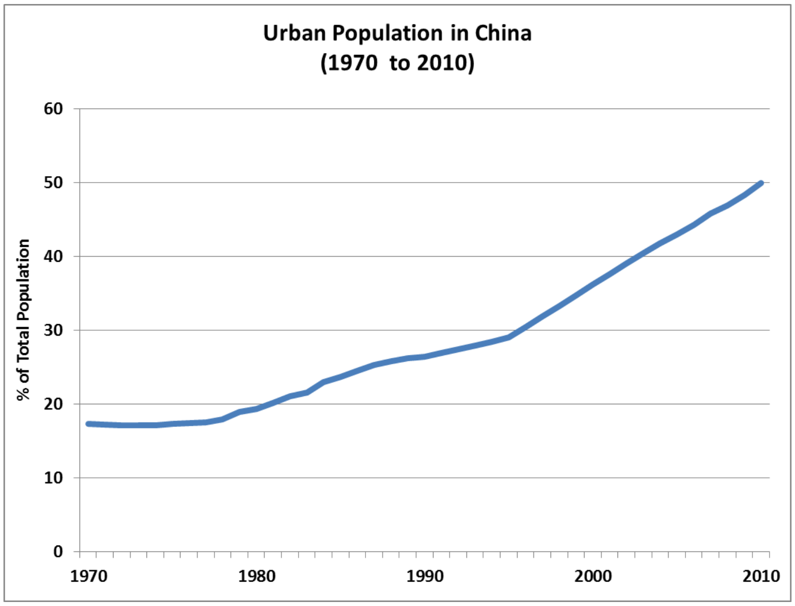
III. Accounts and Financial Highlights

1. Three-year financial information summary (Unit: RMB'000)

	2011	2010	2009
Revenue	67,709,396	47,763,550	46,047,893
Share of profits less losses of associates and jointly controlled entities	643,988	291,703	541,861
Profit before income tax	19,490,060	14,542,867	9,293,003
Income tax expense	(7,890,454)	(5,703,257)	(2,862,995)
Profit for the year	11,599,606	8,839,611	6,430,008
Profit attributed to minority	(1,974,731)	(1,556,483)	(1,100,270)
Profit attributed to Equity shareholders of the Company	9,624,875	**7,283,127**	**5,329,738**
Basic earnings per share	**0.88**	**0.66**	**0.48**
Diluted earnings per share	0.88	0.66	0.48
Dividend per share	0.13	0.10	0.07

Source: China Vanke Annual Report 2011, p.5.

Exhibit 3 China's urban population growth 1970-2010



Source: Casewriter, data from Thomson Reuters Datastream, accessed 3/12/2014. Series from National Bureau of Statistics, China, and from World Bank, World Development Indicators.

Exhibit 4 Market shares of major Chinese developers (2011)

Rank	Company name	Contracted sales volume (RMB billion)	Market share	Contracted sales area (million sq. meters)	Market share
1	China Vanke	121.0	2.0%	10.6	1.0%
2	Evergrande	80.8	1.4	12.2	1.1
3	Greenland Group	77.6	1.3	8.1	0.7
4	Poly Real Estate*	73.2	1.2	6.5	0.6
5	China Overseas*	72.0	1.2	5.7	0.5
6	Wanda Group	56.0	0.9	3.9	0.4
7	Country Garden	43.0	0.7	6.8	0.6
8	Longfor Properties	38.1	0.6	3.4	0.3
9	China Resources*	36.6	0.6	3.0	0.3
10	Shimao	31.5	0.5	2.4	0.2
11	Agile	31.0	0.5	3.0	0.3
12	Greentown	30.0	0.5	1.6	0.1
13	Gemdale	29.0	0.5	2.1	0.2
14	Guangzhou R&F	28.7	0.5	2.1	0.2
15	Sino Ocean Land*	26.5	0.4	2.0	0.2
	Sub-total	**775.0**	**13.1%**	**73.4**	**6.7%**
	National Total [a]	**5,911.9**		**1,099.0**	

Sources: Casewriter, data from China's Top 50 Real Estate Enterprises, 2011, CRIC, http://www.cric.com/research/Details/1403, accessed February 2014.

* Asterisk indicates state-owned.

[a]National real estate development and sales in 2011, National Bureau of Statistics of the People's Republic of China, January 17, 2012, http://www.stats.gov.cn/tjsj/zxfb/201201/t20120117_12778.html, accessed February 2014.

Exhibit 5 Financial comparisons of selected developers (2011)

	Trading Multiples	Valuation	Financial Ratios			Margins		Income Statement	
Company name	Price/Diluted EPS[a]	Mkt Cap (US $B)	Current ratio	Total debt to equity	Return on assets	Net income	EBITDA	Revenue (US $B)	EBITDA (US $B)
China Vanke	9.0x	$14.7	1.4x	76.1%	4.7%	14.2%	28.5%	$11.1	$3.2
China Overseas	9.2	16.7	1.9	60.8	7.1	30.1	37.5	6.6	2.5
China Resources	9.4	10.4	1.9	92.6	4.2	22.7	30.2	4.6	1.4
Evergrande	5.4	8.9	1.5	151.6	6.8	18.3	25.6	10.2	2.6
Country Garden	7.4	7.4	1.3	96.3	6.3	16.7	28.4	5.7	1.6
Guangzhou R&F	4.8	4.2	1.4	124.8	7.4	17.7	35.6	4.5	1.6
Shimao	4.4	3.9	1.4	121.7	4.7	22.0	31.8	4.3	1.4
Shui On Land	7.4	2.1	1.6	94.0	3.0	40.4	35.7	1.4	0.5

Source: Company Comparable Analysis, Capital IQ, Inc., a division of Standard & Poor's, accessed February 2014.

Notes: All figures reflect previous 12 months, as of March 13, 2012; currencies coverted to U.S. dollars using the Feb. 24, 2014 spot rate; China Vanke stock traded on the Shenzhen Stock Exchange; all others traded on the Hong Kong Stock Exchange.

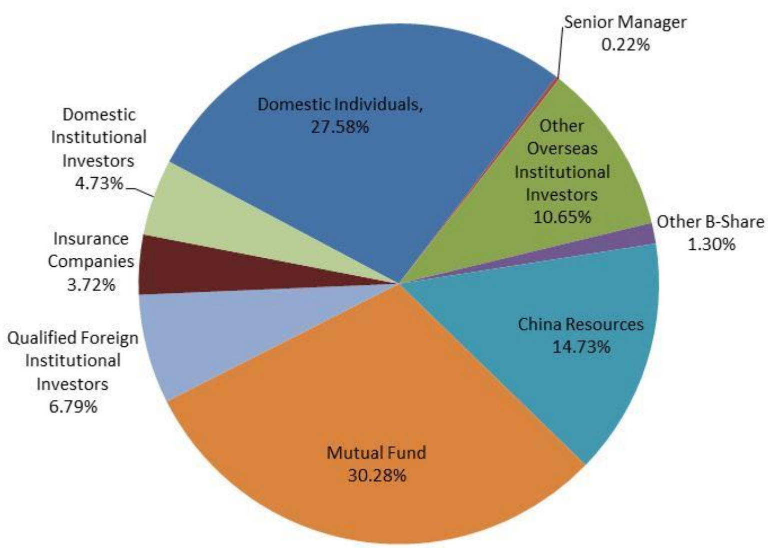
[a] Before extraordinary items.

Exhibit 6 Vanke charity initiatives, wangshi.tv, Wang Shi Microblog

Source: www.vanke.com.

Exhibit 7 Investor information

Exhibit 7a Shareholding structure (mid-2012)



Source: China Vanke Company Document.

Exhibit 7b Shareholder concentration (as at December 31, 2011)

(1) Information on shareholders

Unit: share

Total number of shareholders ended 2011	948,934 (A shares: 925,732, B shares: 23,202)	Total number of shareholders ended Feb 2012	916,525 (A shares: 894,736，B shares: 21,789)

Shareholdings of the top 10 shareholders

Name of shareholder	Classification of shareholder	Percentage of shareholdings	Total number of shares held	Number of restricted shares held	Number of pledged or lock-up shares
China Resources Co., Limited ("CRC")	State-owned legal person	14.73%	1,619,094,766	0	0
E Fund Shenzhen Stock Exchange 100 Exchange-Traded Fund	Others	1.23%	134,693,711	0	0
Liu Yuansheng	Others	1.22%	133,791,208	0	0
China Life Insurance Company Limited–Dividend Distribution–Individual Dividend-005L-FH002 Shen	Others	1.18%	129,454,917	0	0
Bosera Theme Industry Stock Securities Investment Fund	Others	1.13%	123,999,920	0	0
Rongtong Shenzhen Stock Exchange 100 Index Securities Investment Fund	Others	0.85%	93,990,303	0	0
National Social Security Fund – Portfolio 103	Others	0.74%	81,100,000	0	0
HTHK/CMG FSGUFP-CMG FIRST STATE CHINA GROWTH FD	Foreign shareholder	0.71%	78,355,190	0	0
Bosera Value Growth Securities Investment Fund	Others	0.68%	75,000,000	0	0
UBSAG	Others	0.68%	74,936,080	0	0

Source: China Vanke Annual Report 2011, p. 7.

Exhibit 7c Bondholder concentration (as at December 31, 2011)

(1) Name of the top 10 bondholders of 08 Vanke G1 bonds and their bondholdings

No.	Bondholder	No. of bonds held	Bondholding percentage
1	New China Life Insurance Company – Dividend Distribution – Individual Dividend – 018L-FH002 Shen	5,548,262	18.49%
2	China Petroleum Finance Co., Ltd.	4,157,662	13.86%
3	China Pacific Insurance (Group) Co. Ltd.	3,433,312	11.44%
4	China Ping An Property and Casualty Insurance Company Limited – Traditional – General Insurance Products	2,698,727	9.00%
5	China Life Insurance Company Ltd.	2,619,042	8.73%
6	Taiping General Insurance Co., Ltd.	1,003,216	3.34%
7	China Life Pension Company Ltd. – Internal Resources	1,000,000	3.33%
8	Haitong-BOC-Futong Bank	897,256	2.99%
9	China Life Property and Casualty Insurance Company Ltd. – Traditional – General Insurance Products	820,000	2.73%
10	China Property & Casualty Reinsurance Company Ltd.	776,162	2.59%

(2) Name of the top 10 bondholders of 08 Vanke G2 bonds and their bondholdings

No.	Bondholder	No. of bonds held	Bondholding percentage
1	ICBC Credit Suisse Credit Tianli Bond Securities Investment Fund	2,026,446	6.99%
2	Harvest Stable Earning Bond Securities Investment Fund	1,441,048	4.97%
3	China AMC Bond Investment Fund	1,040,607	3.59%
4	China Ping An Trust & Investment Co. Ltd – CMB Furui Life Individual	1,019,410	3.52%
5	ICBC Credit Suisse Asset Management Co., Ltd – ICBC – Assets of Specific Clients	889,101	3.07%
6	National Social Security Fund – Portfolio 801	849,518	2.93%
7	Fullgoal Tianfeng Surging Income Bond Securities Investment Fund	565,000	1.95%
8	China AMC Classic Allocation Hybrid Fund	550,000	1.90%
9	CNPC Pension Scheme – ICBC	522,491	1.80%
10	GF Securities Co., Ltd.	502,000	1.73%

Source: China Vanke Annual Report, p. 9-10.

Exhibit 8 Product focus of selected developers (2011)

Company name	Primary Focus	Secondary Focus	Other Segments
China Vanke	Mid high-end residential		Mass-end residential
Evergrande	Mass-end residential		Mid high-end residential
China Overseas	Mid high-end residential	Luxury residential	Mass-end residential
Guangzhou R&F	Mid high-end residential		Low density residential Mass-end residential Office/retail for sale Office/retail for lease Hotels

Source: Casewriter, based on Lucia Kwong, and Ryan Li, "Asia Real Estate Handbook – China: Primer for housing market and homebuilders – Part I," J.P. Morgan Asia Pacific Equity Research, 11 June 2012, p. 20.

Exhibit 9 Vanke customer segments

Family Life Cycle	Parameters	Description
Families with young adults	Age of the owner; Living with parents/elderly or not	Young adults or partners aged 25 to 44 (childless, parentless)
Families run by young adults		Young adults aged 25 to 34 or married couples, living with parents/elderly
Families with young children	Ages of the children; Living with parents/elderly or not	Owner and children aged 0 to 11
Families with adolescents		Owner and children aged 12 to 17
Families with three generations living together		Owner, elderly and children aged under 18
Families with middle-aged adults	Ages of the owner and children	Middle-aged couples and children aged 18 to 24
Elderly alone	Number of lineal generations in families with elderly	(Pre-)Empty nest middle-aged adults or elderly
One generation with elderly		Elderly and middle-aged couples
Two generations with elderly		Elderly, middle-aged couples and children aged above 18
Wealthy families	Family annual incomes	Incomes (including education and career resources) are far higher than other families
Practical families	Family annual incomes	Incomes (including education and career resources) are far lower than other families

Source: China Vanke company documents.

Exhibit 10 Land among selected top developers (as of 2011)

	Total Landbank[a]	Landbank Years[b]	Land Cost %[c]	Number of Projects	Number of Cities	Avg. Size per Project
Evergrande	136.84	11	7.8%	187	103	0.73
Country Garden	54.85	8	8.7%	103	44	0.53
Vanke	76.62	7	19.1%	280	43	0.27
Shimao	39.50	17	16.5%	74	40	0.53
China Resources Land	23.56	8	29.1%	78	38	0.30
China Overseas Land	37.41	6	38.5%	94	36	0.40
Guangzhou R&F	28.02	12	17.4%	54	15	0.52
Shui On Land	11.10	21	24.6%	8	5	1.39

Source: Adapted from Lucia Kwong, and Ryan Li. "Asia Real Estate Handbook – China: Primer for housing market and homebuilders – Part I," J.P. Morgan Asia Pacific Equity Research, 11 June 2012, p. 17-18.

[a] Total landbank as measured in million square miles.

[b] Land bank years = land bank as of Dec. 2011 divided by gross floor area sold in 2011.

[c] Land cost as a percentage of average selling price.

Exhibit 11 Prefabrication method illustrated

Prefab Workshops

Steel Framing (with trained worker and standardizd measures)

Concrete filling with rigorous safety and quality measures

On-Site Exterior Installation

Interior Installation

Interior installation

Source: Company documents.

Exhibit 12 Average selling prices and cost for top four residential developers in China, 2011.

(All currency in RMB/m²)

Company Name	Average Selling Price	Average Cost	Gross Margin	Gross Margin %
China Vanke	12,562	7,580	4,982	39.7%
China Overseas Land	11,426	6,513	4,913	43.0%
Poly (Hong Kong)	8,192	5,229	2,963	36.2%
Evergrande	5,459	3,658	1,801	33.0%

Source: Yamin Li, "Key Call: Vanke A (in Chinese)," UBS Investment Research, June 26, 2012, p. 18.

Exhibit 13 A summary of government tightening and austerity measures (2010-2011).

Date	Authorities in charge	Key messages
14 Dec 2009	State Council	**"4 Key Points"** to maintain policy continuity to curb property price growth: 1) Increase land & housing supply, and enhance the efficiency of land usage; 2) Continue to support end-user/upgrade demand, and suppress speculative demand by asymmetric credit policy; 3) Strengthen market monitor on land sales & presale system; 4) Solve the housing issues of 15.4 million low-income households
8 Jan 2010	State Council	**"11 Follow-up Measures"** to the 4 Key Points for local governments to take actions: 1) Speed up construction of new projects, particularly on small to medium sized units. More support on affordable housing construction, especially in cities with rampant property price growth. 2) Increase land supply & enhance efficiency on land usage, with clear targets in constructing small-to-medium sized commodity and affordable housing units 3) Strict implementation of differentiated mortgage policies between first and second home buyers. Families buying second homes need to pay 40% down payment & mortgage rate to be assessed according to the risk profile of the mortgagees. 4) Strict implementation of differentiated tax policies between first & second home buyers, as well as between buyers of ordinary & non-ordinary commodity housing. 5) Strengthen credit risk management on property sector, e.g. strict implementation of the % required for equity investment in real estate projects, & preventing domestic bank loans dedicated for other investments flowing into property sector. 6) Regulate the market in many different aspects, e.g. Ministry of Construction needs to prevent developers from holding back units from presale; The Lands Department strictly collects 50% down payment right after land sales, and confiscates idle land. 7) Strengthen the management of land supply and property presale, e.g., penalize developers who fail to pay scheduled land premium, require developers to launch all the units available for sale in one-go, establish a better transaction platform. 8) Enhance the system used in collection, analysis and monitoring of property data. 9) Solve the housing problems of 15.4 million low-income families by end-2012. 10) Strengthen support to affordable housing in China, e.g., raising subsidies to the construction of public rental housing in Central/Western China 11) Local governments shall be responsible for solving low income families' housing problems, and other issues, e.g., mortgage policies, foreign & domestic real estate investment, etc.
17 Apr 2010	State Council	**"The 10 Articles"** to suppress rapid rises in housing prices in certain cities: 1) To emphasize the importance of stabilizing home prices 2) To specify local governments' responsibilities on the stabilization of home prices. 3) To implement differential mortgage policies in a strict way, and the local governments can set cap on purchase units temporarily. *Flat units* · *Size* · *LTV ratio (%)* · *Mortgage rate* 1st flat · <=90sqm · 80 · 70% of benchmark rate 1st flat · >90sqm · 70 · 70% of benchmark rate 2nd flat · all · 50 · 110% of benchmark rate 3rd flat · all · 0 · n.a 4) To introduce tax policies on the property consumption and investments, and to carry out the land appreciation tax (LAT) inspections, under the domains of The Ministry of Finance and the State Administration of Taxation 5) To increase residential land supply, especially in overheated cities. The local governments are required to release the land supply plans in a timely manner.

Date	Authorities in charge	Key messages
		6) To adjust the housing structures and ensure that the lands for policy housing, old area redevelopment, and mass flats are not less than 70% of total land supplies. 7) The Ministry of Housing and Urban-Rural Development is to lay out detailed policy housing supply plan for 2010-12, with 3 million units of policy flats and 2.8 million units resulted from demolition in 2010. 8) To regulate developers' financing activities. State-owned enterprises are prohibited from developing commercial real estate; commercial banks reinforce risk management on loans to developers. No loans, IPOs, refinancing are allowed. 9) To supervise the property transaction order and crack down housing hoarding activities. For the properties which have obtained presale permits, the developers should publicize all the premises available for sales and prices. 10) To improve the property information disclosure system and enhance the data quality released from the statistics departments.
Oct 2010	Municipal governments	**Home Purchase Restrictions** (HPR) to restrict existing homeowners or people without residency or tax payment proof on buying additional homes.
26 Jan 2011	State Council	**"The New 8 Articles"** to reiterate the measures implemented in "The 10 Articles." 1) Down payment: Increase minimum down payment of second home (with mortgage) to 60% from 50%. Interest rate remains the same. 2) Home-Purchase-Restriction (HPR): All municipal cities, provincial capital and overheated cities should strictly implement the HPR, which allows residents already owing one home to purchase one more home; while those who do not have residency or tax payment receipt are disallowed to make another purchase. 3) Business tax: Tax home-sellers who resell the property within five years of purchases, at 5.5% of the total sales amount. (Previously business tax can be charged on either 5.5% of total sales amount of 20% on profit.) 4) Land Supply in 2011: At least 70% has to be reserved for affordable housing, settlement housing and small-sized ordinary housing. Land supply should not be less than the average of the previous two years (2009 - 2010). 5) Local governments should release the "new-home price control target" for 2011 and have it announced by 1Q2011. 6) Local governments should accumulate affordable housing stock via (a) new construction; (b) redevelopment; (c) purchases or (d) long term lease. They should develop a system for people to enter and exit affordable housing market. 7) Local governments failing to release the "new-home price control target" within a specific period, or to control the price of new-home to stay within the target, or to achieve the affordable housing target have to be accountable to the State Council. 8) Strengthen guidance on mass media and reinforce the promotion of logical consumption in the real estate market.

Source:

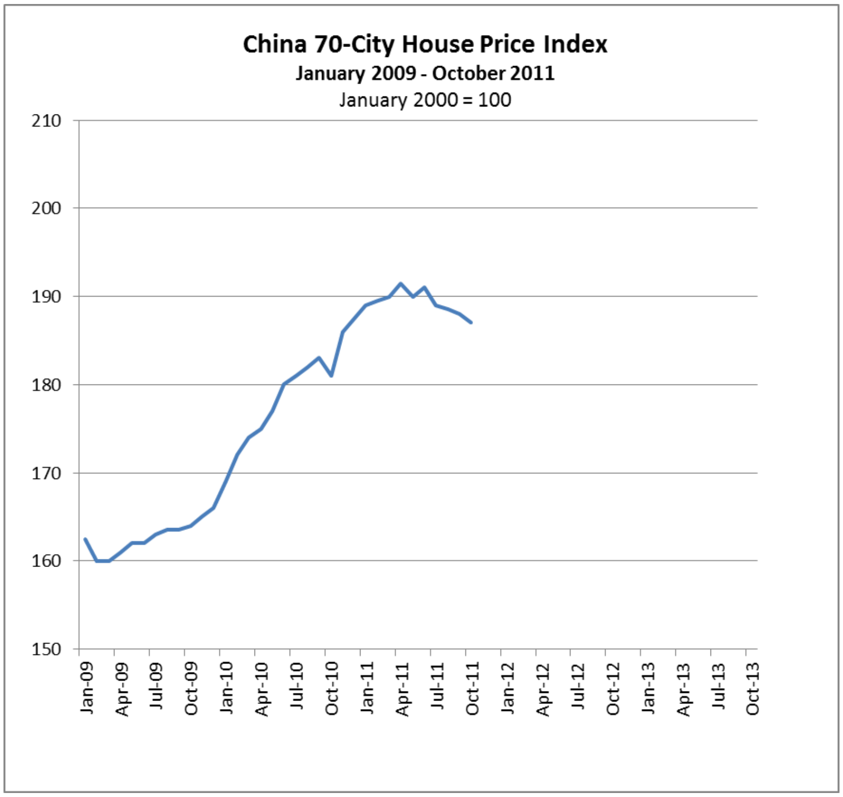
"**The 4 Key Points**": Coral Ching, Derek Kwong, Angus Chan, "China Property: A Break from Policy Shockwaves," Morgan Stanley Research Asia/Pacific, January 14, 2010, p. 7.

"**The 11 Follow-up Measures**": Coral Ching, Derek Kwong, Angus Chan, "China Property: A Break from Policy Shockwaves," Morgan Stanley Research Asia/Pacific, January 14, 2010, p. 8.

"**The 10 Articles**": Alvin Wong and Sunny Tam, "Property China: Policy … many possible moves," Nomura International (HK) Limited, October 4, 2010, p. 26.

"**The New 8 Articles**": Lucia Kwong, Ryan Li, and Suzy Tian, "China Property: Existing tightening measures re-iterated and fine-tuned; policy effectiveness in doubt," J.P. Morgan Asia Pacific Equity Research, 27 January 2011, p. 6.

Exhibit 14 China's house price index (Jan. 2009 – Oct. 2011)



Source: Based on China National Bureau of Statistics as reported in *The Economist*, November 16, 2013.

Exhibit 15 Local government incentives for encouraging green technologies, 2011.

Area	Policies
Beijing	• Subsidies of RMB 200/m² (solar collector) for solar water heating system. • Subsidies of RMB 1/Watt•Year for 3 consecutive years for optoelectronic system • 3% rewarded floor space for pre-fab housing • Subsidies of RMB 500 for every 1 ton of standard coal saved for energy saving projects; In principle, the total reward for one project does not exceed RMB 2 million.
Shanghai	• For buildings with green standard of two stars or above, a maximum of RMB 5 million awarded. • Special subsidy for energy saving: RMB50 / m²
Shenzhen	• In Bao'an District, a subsidy of RMB 2.5 million is rewarded for 5 annual pilot projects, with RMB 500,000 on each project on average.
Tianjin	• A maximum of RMB 500,000 subsidy could be awarded for building energy-saving projects; while the maximum for new energy and renewable energy projects is RMB 2 million. • Special subsidy of RMB 50,000 for projects applying green building construction standards.
Hefei	• Solar energy subsidy of RMB 40/m²; • Subsidy of RMB 80/m² for solar heating projects; • Subsidy of RMB 60/m² for geothermal heat pump projects; • Subsidy of RMB 90/m² for projects with integrated use of solar energy and geothermal heat pump
Guangzhou	• Rewards of RMB 1 million for projects identified as 3-star; RMB 200,000 for 2-star projects, and RMB 50,000 for 1-star projects;
Wuhan	• For green buildings of 2-star or above, 10% of the equipment expenditure could be subsided in the form of exemption of corporate income tax of that year.
Chongqing	• Subsidy of RMB 800/KW for heat pump unit air conditioner using renewable energy; • Subsidy of RMB 900/KW for high temperature heat pump units using renewable energy to produce domestic hot water
Yantai	• For application of geothermal heat pump technology, the heating network fees are exempted from municipal supporting facility fees • Subsidy equaling 20% of the total investment for solar water heating systems; • Subsidy equaling 25% of the total investment for solar heating and air conditioning systems; • Subsidy equaling 25% of the total investment for heating stations with application of geothermal heat pump technology.
Hainan	• For solar water heating projects, a maximum of 2.5% of the building area using solar water heating systems would be rewarded.

Source: China Vanke company document.

Exhibit 16 Key financial and performance metrics for China Vanke, 2006-2011

	2006	2007	2008	2009	2010	2011	CAGR
Financial Metrics (All in RMB billion)							
Contracted property sales (1)	21.23	52.36	47.87	63.42	108.16	121.54	41.8%
year-on-year growth		146.6%	-8.6%	32.5%	70.5%	12.4%	
Gross revenues (2)	17.92	35.53	40.99	48.88	50.71	71.78	32.0%
year-on-year growth		98.3%	15.4%	19.2%	3.7%	41.5%	
Recognized property sales (1) (2)	17.67	35.18	40.49	48.32	50.03	70.65	31.9%
year-on-year growth		99.1%	15.1%	19.3%	3.5%	41.2%	
Net earnings (2)	2.30	4.84	4.03	5.33	7.28	9.62	33.2%
year-on-year growth		110.8%	-16.7%	32.1%	36.7%	32.2%	
Operations Metrics (All in million square meters)							
Floor area sold – contracted (1)	3.23	6.14	5.57	6.64	8.98	10.75	27.2%
year-on-year growth		90.1%	-9.2%	19.1%	35.3%	19.8%	
Floor area sold - recognized (1)	2.90	3.94	4.51	6.05	4.52	5.62	14.2%
year-on-year growth		35.9%	14.7%	34.1%	-25.3%	24.4%	
Floor area commenced	5.01	7.77	5.23	5.61	12.48	14.48	23.7%
year-on-year growth		55.2%	-32.6%	7.2%	122.5%	16.0%	
Floor area completed	3.28	4.45	5.29	5.36	4.42	6.59	15.0%
year-on-year growth		36.0%	18.9%	1.3%	-17.6%	49.1%	
Overall Industry in China							
Sales revenues (RMB billion) (3)	2,083	2,989	2,507	4,436	5,272	5,859	23.0%
year-on-year growth		43.5%	-16.1%	76.9%	18.9%	11.1%	
Floor area sold (million square meters) (3)	619	774	660	948	1,048	1,094	12.1%
year-on-year growth		25.1%	-14.7%	43.6%	10.6%	4.4%	
China Vanke's Market Share							
In terms of sales revenue (based on recognized shares)	1.0%	1.8%	1.9%	1.4%	2.1%	2.1%	
In terms of area sold (based on recognized sales area)	0.5%	0.8%	0.8%	0.7%	0.9%	1.0%	

Source: China Vanke annual reports, 2006-2012, except as stated.

Notes:

(1) Amounts represent value of property for which contracts were signed. Recognition of accounting revenue occurs only after properties are ready for delivery to the customer.

(2) The revenues and net earnings figures shown here are as reported in the Chinese version of China Vanke's annual reports, in accordance with PRC accounting standards. Figures shown above in Exhibit 2 are from the English version of China Vanke's annual report, in accordance with IFRS accounting standards.

(3) Source: National Bureau of Statistics of China, http://data.stats.gov.cn/workspace/index?m=hgnd, accessed December 2013.

Endnotes

[1] This translated to about 67 bn RMB of accounting revenue. Sales bookings are new contracts; accounting revenue is recognized when units are conveyed to the buyer. See China Vanke 2011 Annual Report, p. 22.

[2] LEED is an internationally recognized certification program, that guides the design, construction, and operation, and maintenance of green buildings, homes, and neighborhoods, developed by the U. S. Green Building Council since 1998. Reference: http://www.usgbc.org/about, accessed May 2013.

[3] China: Real Estate: No. of Enterprises, 1998, via CEIC Data, accessed April 2013.

[4] Jing Wu, Joseph Gyourko, and Yongheng Deng, "Evaluation Conditions in Major Chinese Housing Markets," Working Paper 16189, National Bureau of Economic Research, July 2010, p. 5.

[5] Lucia Kwong, and Ryan Li, "Asia Real Estate Handbook – China: Primer for housing market and homebuilders Part I," J.P. Morgan Asia Pacific Equity Research, 11 June 2012, p. 58.

[6] Lucia Kwong, and Ryan Li, "Asia Real Estate Handbook – China: Primer for housing market and homebuilders Part I," J.P. Morgan Asia Pacific Equity Research, 11 June 2012, p. 7.

[7] Lucia Kwong, and Ryan Li, "Asia Real Estate Handbook – China: Primer for housing market and homebuilders Part I," J.P. Morgan Asia Pacific Equity Research, 11 June 2012, p. 58.

[8] Kwong and Li, p. 60.

[9] Kwong and Li, p. 59.

[10] Vanke China 2011 Annual Report www.vanke.com accessed March 14, 2012.

[11] 2008 Best Client Award, "BusinessWeek/Architectural Record China Awards 2008," *Architectural Record* http://archrecord.construction.com/ar_china/BWAR/default.asp , accessed 2012.03.14

[12] Wang Shi, "The Bottom Line," presentation at Harvard Business School, March 23, 2012.

[13] Kwong and Li, p. 20.

[14] The National People's Congress of China adopted the landmark Property Law on 16 March 2007. Article 149 stipulates that the term of residential land use rights upon expiry of 70 years shall be renewable automatically and the renewal of the term of non-residential land will be arranged according to the relevant laws and regulations. The ownership of the buildings and other immovable properties erected thereon shall be governed by the agreement, if any, among the parties concerned. If there is no agreement or the agreement is uncertain, the ownership issue will be dealt with based on the relevant PRC laws and regulations. The new law does not change the system of land tenure and the state still owns all land. Source: Angela Wang and Co, "Property Rights in China: New Property Law (2007)," World Law Direct www.worldlawdirect.com accessed March 14, 2012.

[15] Kwong and Li, p. 17.

[16] Kwong and Li, p. 21.

[17] Ibid.

[18] Ibid.

[19] Coral Ching, Theo Cheng, Angus Chan, and Jacky Chan, "China Property: Transaction Tracker," Morgan Stanley Research Asia/Pacific, December 29, 2010, p. 5.

[20] Ibid.

[21] Kwong and Li, pp. 72-73.

[22] Ibid.