

REITs for Residential Rental Markets in China

By

Sihang He

Bachelor of Economics
University of Science and Technology of China, 2012

SUBMITTED TO THE MIT SLOAN SCHOOL OF MANAGEMENT IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE IN MANAGEMENT STUDIES
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JUNE 2018

©2018 Sihang He. All rights reserved.

The author hereby grants to MIT permission to reproduce
and to distribute publicly paper and electronic
copies of this thesis document in whole or in part
in any medium now known or hereafter created.

Signature of Author: **Signature redacted**

MIT Sloan School of Management
May 11, 2018

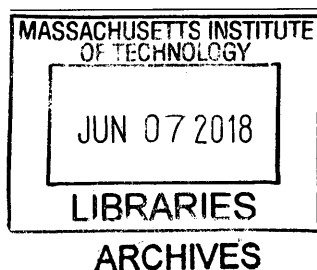
Certified by: **Signature redacted**

Robert C. Pozen
Senior Lecturer
Thesis Supervisor

Accepted by:

Signature redacted

Jacob Cohen
Senior Associate Dean for Undergraduate & Master's Program
MIT Sloan School of Management



REITs for Residential Rental Markets in China

By

Sihang He

Submitted to MIT Sloan School of Management
on May 11, 2018 in Partial Fulfillment of the
requirements for the Degree of Master of Science in
Management Studies.

ABSTRACT

After decades of rapid development, China has entered an era with new opportunities and challenges. In its real estate markets, excessive housing demands exist in big cities while a large amount of stock assets are underutilized. In its financial markets, households accumulate wealth but do not have adequate investment channels. Together with expansionary credit policies, these factors have driven the housing price to an unprecedented level and thus created potential risks for the financial and social stability. To cope with these challenges, the Chinese government initiates several reforms in real estate and financial markets. First, it promotes the residential rental market to meet residents' housing demand. Second, it conducts supply-side reforms to transform the real estate industry and to utilize stock assets. Third, it performs financial system reform to provide more investment options and to increase residents' income from properties. By taking these reforms, the Chinese government aims to guide the housing price back to a reasonable level and to improve the stability of the financial system and whole society. Real Estate Investment Trusts (REITs), as a well-known financial instrument, have a significantly potential role to play in the above reforms. They can supply long-term capital and professional management to residential rental markets, provide new business models for the real estate industry to utilize stock assets, and widen investment channels for households.

This thesis examines four typical cases in the current REITs pilot phase in China, identifies existing problems and proposes corresponding solutions, in order to improve REITs in China and help it fulfil its role in the ongoing reforms.

Thesis Supervisor: Robert C. Pozen
Title: Senior Lecturer

Acknowledgements

I am particularly grateful to my advisor Professor Robert C. Pozen, who has not only shown me the world of financial institutions in his wonderful class but also helped me through the struggling process of the thesis. Without his kind help, insightful guidance and great patience, this thesis would not have been possible.

I want to thank Professor William C. Wheaton, who has helped me build up concepts in real estate economics, stimulated my interests in real estate markets and helped me a lot in the preparation phase of the thesis.

I also would like to thank Jenifer A. Marshall for her support during my journey in the MSMS program and Elizabeth Seidman for helping with the thesis administration. I wish to acknowledge Pamela Siska for helping me check the wording and Zixiao Yin for her comments about the development of REITs in China.

Last but not least, I want to thank my parents and my boyfriend Xiang Mi, who make my life full of love and joy.

Table of Contents

List of Figures	9
List of Tables	10
Chapter 1. Challenges and Reforms in China’s Residential Real Estate Markets and Financial Systems	11
1.1. Chapter Introduction.....	11
1.2. Challenges Encountered by Residential Real Estate Markets and Financial Systems in China	11
1.2.1. Excessive Housing Demands in Big Cities.....	11
1.2.2. Real Estate Markets in the Era of Stock Assets with Large Amounts of Stock Assets Unutilized	13
1.2.3. Inadequate Investment Channels vs. Accumulation of Household Wealth.....	15
1.2.4. Potential Risk of Financial and Social Stability.....	16
1.3. Reforms to Cope with Above Challenges	17
1.3.1. Promotion of Residential Rental Markets in Big Cities.....	18
1.3.2. Supply-Side Reform of the Real Estate Industry	19
1.3.3. Reform of Financial Systems.....	20
1.4. Potential Role of REITs in Implementing Above Reforms	20
1.4.1. Long-term Capital Supply for Expansion of Residential Rental Markets	22
1.4.2. New Business Model of Real Estate Industry for Stock Assets Utilization.....	23
1.4.3. New Financial Instruments for Investors	23
1.5. Chapter Summary.....	27
Chapter 2. Typical Cases in the REITs Pilot Phase of China.....	28
2.1. Chapter Introduction.....	28
2.2. CITIC Qihang Special Asset Management Plan (“CITIC Qihang REIT”)	28
2.2.1. Basic information.....	28
2.2.2. Transaction Structure and Interested Parties	29
2.2.3. Target Assets	32
2.3. Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund (“Penghua Qianhai Vanke REIT”).....	32
2.3.1. Basic information.....	32
2.3.2. Transaction Structure and Interested Parties	35
2.3.3. Target Assets	38
2.4. CYPA Apartment Equity REITs Asset Backed Special Plan (“CYPA REIT”).....	39
2.4.1. Basic information.....	39
2.4.2. Transaction Structure and Interested Parties	41
2.4.3. Target Assets	42
2.5. GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 Asset Backed Special	

Plan (“Poly REIT”).....	43
2.5.1. Basic information.....	43
2.5.2. Transaction Structure and Interested Parties.....	45
2.5.3. Target Assets.....	46
2.6. Chapter Summary.....	47
Chapter 3. Problems Identified in Past Cases in REITs Pilot Phase in China	48
3.1. Chapter Introduction.....	48
3.2. Root Cause: Lack of C-REITs Legislation.....	48
3.3. C-REITs Definition: Ambiguous.....	49
3.4. C-REITs Type: Debt Equivalent.....	51
3.4.1. Short Term and Incapability of Continuous Expansion.....	51
3.4.2. Structured Design with Large Portion in Senior Tranche.....	54
3.4.3. Lack of Intention for Permanent Sale of Properties.....	55
3.4.4. Repurchase Obligations.....	56
3.5. C-REITs Structure: Varying and Complicated.....	57
3.6. C-REITs Investors: Limited.....	57
3.7. C-REITs Taxes: Heavy.....	60
3.8. Chapter Summary.....	62
Chapter 4. Proposals for Improving REITs for Residential Rental Markets in China	64
4.1. Chapter Introduction.....	64
4.2. Fundamental: Enact C-REITs Legislation.....	64
4.3. C-REITs Definition: Focus on Real Estates.....	65
4.4. C-REITs Type: Encourage Equity REITs.....	66
4.5. C-REITs Structure: Organize as Companies.....	69
4.6. C-REITs Investors: Allow Small Investors.....	71
4.7. C-REITs Taxes: Provide Incentives.....	71
4.8. Chapter Summary.....	72
Chapter 5. Conclusions	73
References	74

List of Figures

Figure 1 Year-end Population from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou.....	13
Figure 2 Newly Completed Residential Housing Area from Real Estate Development Companies	14
Figure 3 Average Housing Sale Price from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou.....	17
Figure 4 Market Share of REITs Sectors	21
Figure 5 REITs Dividend Yield vs. 10-Year Constant Maturity Treasury Yield from January 1990 to February 2018.....	25
Figure 6 20-Year Average Annual Total Return from February 1998 to February 2018	25
Figure 7 Monthly Total Return Index Comparison among FTSE Nareit ALL Equity REITs, S&P 500, and Russell 2000 from December 1989 to February 2018.....	26
Figure 8 Transaction Structure of CITIC Qihang REIT	31
Figure 9 Transaction Structure of Penghua Qianhai Vanke REIT	38
Figure 10 Transaction Structure of CYP A REIT.....	42
Figure 11 Transaction Structure of Poly REIT	46
Figure 12 Market Share of Equity REITs in Total Publicly Listed REITs Equity Market Capitalization.....	69

List of Tables

Table 1 Year-end Population Change from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou	12
Table 2 Newly Completed Residential Housing Area from Real Estate Development Companies	14
Table 3 Average Housing Sale Price from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou.....	16
Table 4 Basic Information of CITIC Qihang REIT	29
Table 5 Investment Portfolio of Penghua Qianhai Vanke REIT as of June 30, 2017	34
Table 6 Earnings from the Usufruct of Shenzhen Vanke Qianhai Enterprise Dream+ Park from 2015 to 2017	39
Table 7 Basic Information of CYPA REIT	40
Table 8 Rent Distribution of CYPA Apartments as of June 30, 2017	43
Table 9 Basic Information of Poly REIT	44
Table 10 Target Assets of Poly REIT	47
Table 11 Investment Portfolio of Penghua Qianhai Vanke REIT at Different Times	50
Table 12 Duration of CITIC Qihang REIT, Penghua Qianhai Vanke REIT, CYPA REIT and Poly REIT	53
Table 13 Proportions of Preferred and Junior tranche in Previous Cases	54
Table 14 Overview of C-REITs Relevant Taxes When They are in the Form of “Public Securities Investment Funds + Asset Backed Securities”	61

Chapter 1. Challenges and Reforms in China's Residential Real Estate Markets and Financial Systems

1.1. Chapter Introduction

Chapter 1 first discusses the challenges faced by residential real estate markets and financial systems in China (1.2): excessive housing demands in big cities (1.2.1), large amounts of underutilized stock assets in real estate markets (1.2.2), inadequate investment channels for households (1.2.3), and potential risks caused by the above challenges (1.2.4).

Then, Chapter 1 introduces the reforms designed to cope with the above challenges (1.3): promotion of the residential rental market to meet residents' housing demand (1.3.1), supply-side reforms to transform the real estate industry and utilize stock assets (1.3.2) and financial system reform to provide more investment options and increase residents' income from property (1.3.3).

Last, Chapter 1 points out the potential role of Real Estate Investment Trusts (REITs) in the above reforms (1.4): long-term capital supply and professional management to residential rental markets (1.4.1), new business models for real estates to utilize stock assets (1.4.2), and new investment instruments for households (1.4.3).

1.2. Challenges Encountered by Residential Real Estate Markets and Financial Systems in China

1.2.1. Excessive Housing Demands in Big Cities

Since the reform and opening-up policy of China in the 1970s, China has been experiencing a rapid urbanization process, accompanied by acceleration of industrialization. From 1978 to 2013, the

number of urban permanent residents increased from 170 million to 730 million [1]. The national urbanization rate increased from 17.9% to 53.7% [1]. The three biggest metropolitan areas (Beijing-Tianjin-Hebei Metropolitan Area, Yangtze River Delta, and Pearl River Delta) gather 18% of total population with 2.8% of total land [1].

As representative cities in those metropolitan areas, Beijing, Shanghai, Shenzhen and Guangzhou witness rapid inflow of population. From 2002 to 2016, the increase of year-end population¹ was 2.2 million, 1.16 million, 2.45 million and 1.5 million in Beijing, Shanghai, Shenzhen and Guangzhou respectively [2]. This population change creates huge demands for residence in those cities. **Table 1** and **Figure 1** show year-end population change from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou.

Table 1 Year-end Population Change from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou

(In millions, except for percentage)

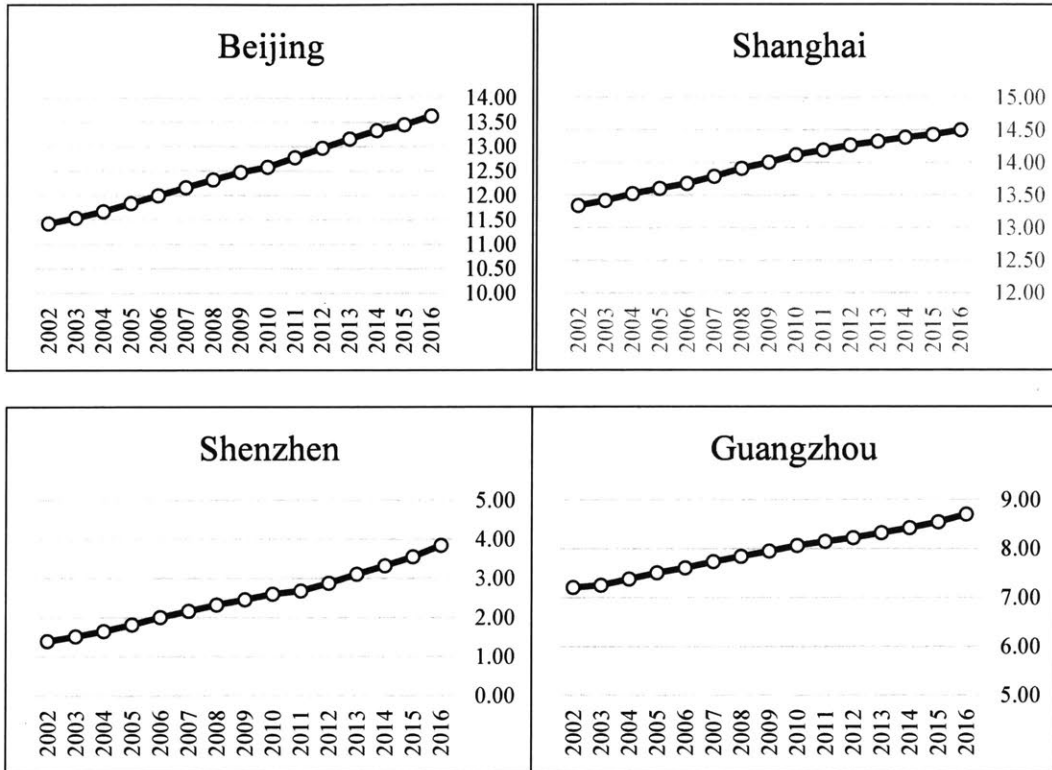
	Change from 2002 to 2016	Percentage Change from 2002 to 2016	Year-end Population in 2016	Year-end Population in 2002
Beijing	2.20	19%	13.63	11.43
Shanghai	1.16	9%	14.50	13.34
Shenzhen	2.45	176%	3.85	1.39
Guangzhou	1.50	21%	8.70	7.21

Sources: National Bureau of Statistics of the People's Republic of China

¹ Year-end population is the population of a city at midnight on December 31 every year. It is the number of people who hold Hukou in that city [2]. The actual population could be larger than that because people who live in these cities do not necessarily hold Hukou.

Figure 1 Year-end Population from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou

(In millions)



Sources: National Bureau of Statistics of the People's Republic of China

1.2.2. Real Estate Markets in the Era of Stock Assets with Large Amounts of Stock Assets Unutilized

After fast growth in past years, the real estate markets in China have entered the era of stock assets. L+ Research Institute estimates the market value of stock assets in real estate markets of China is 245 trillion yuan, of which 180 trillion are from residential markets [3]. Especially in big cities like Beijing, Shanghai, Shenzhen and Guangzhou, resales dominate the market. In 2016, the amount of resale was 3.3 times, 1.6 times and 2.3 times that of sales from new apartments in Beijing, Shanghai and Shenzhen respectively [3]. **Table 2** and **Figure 2** show that newly completed

residential housing area from real estate development companies decreased 6.59, 1.75, 4.18 and 0.53 million square meters from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou respectively [2].

Table 2 Newly Completed Residential Housing Area from Real Estate Development Companies

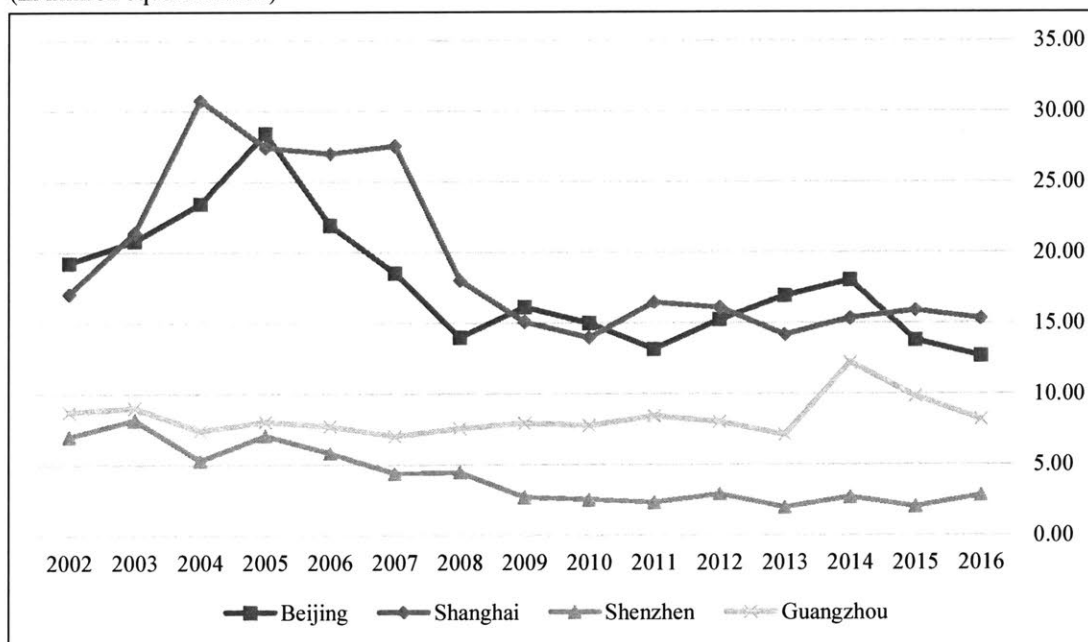
(In million square meters, except for percentage)

	Change from 2002 to 2016	Change (%) from 2002 to 2016	2016	2002
Beijing	-6.59	-34%	12.67	19.26
Shanghai	-1.75	-10%	15.33	17.08
Shenzhen	-4.18	-60%	2.81	6.98
Guangzhou	-0.53	-6%	8.18	8.71

Sources: National Bureau of Statistics of the People's Republic of China

Figure 2 Newly Completed Residential Housing Area from Real Estate Development Companies

(In million square meters)



Sources: National Bureau of Statistics of the People's Republic of China

This market change brings challenges to the real estate industry. The traditional business model for this industry is to borrow money from banks, invest in constructing houses, sell them to pay off the debts and make profits. It worked because there were plenty of land supply and in this “build and sell” model real estate development companies get the cash flow quickly, typically in a couple of years, so they don’t have much trouble in financing the projects. However, the real estate market is generally oversupplied now and land supply is limited especially for the big cities. Real estate development companies don’t have as many construction opportunities. They need to find new ways to do business.

Meanwhile, in the rapid expansion phase prior to 2010, many projects were not planned, designed or constructed well due to various reasons. Large amounts of stock assets like excessive industrial land, over-supplied commercial estates and vacant office buildings are not used properly. These underutilized stock assets is a serious waste since they do not provide much value as effective supplies, particularly when compared with the big demands in residential markets.

1.2.3. Inadequate Investment Channels vs. Accumulation of Household Wealth

As with the phenomenal growth of Chinese economy in past decades, the household wealth and number of wealthy families has increased rapidly. According to the Boston Consulting Group, total individual investable financial assets in China is 126 trillion yuan, ranking the second around the globe [4].

In contrast to the accumulation of household wealth, investment channels are inadequate in China. Due to historical reasons, the financial market in China started relatively late and not as mature as that of developed economies. Under this condition, household wealth floods into residential market for investment purposes. Individual investors demand more types of financial instruments to invest

and to realize their asset management goals.

1.2.4. Potential Risk of Financial and Social Stability

Given that a large population has flowed into big cities creating excessive housing demands (1.2.1), that stock assets are not fully utilized to provide effective supply to residential markets (1.2.2), and that households are keen on purchasing houses due to lack of investment options (1.2.3), together with expansionary credit policies, the housing price in big cities has soared in past years. **Table 3** and **Figure 3** show average housing sale price from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou.

Table 3 Average Housing Sale Price from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou

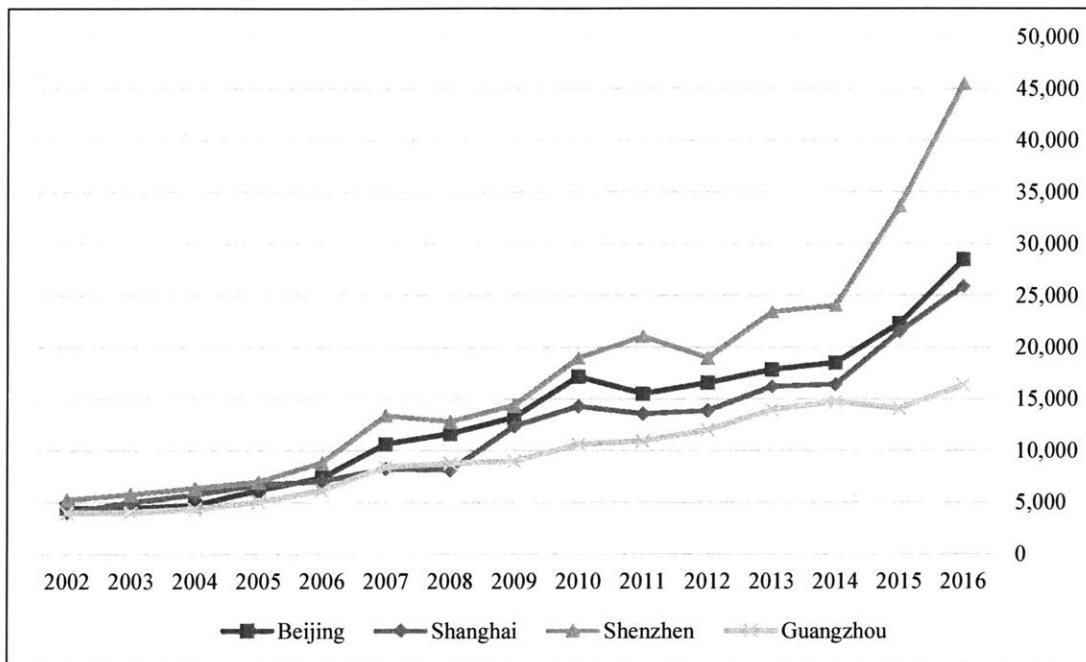
(In yuan per square meter, except for percentage)

	Change from 2002 to 2016	Percentage Change from 2002 to 2016	Average Sale Price in 2016	Average Sale Price in 2002
Beijing	24,022	538%	28,489	4,467
Shanghai	21,903	547%	25,910	4,007
Shenzhen	40,231	764%	45,498	5,267
Guangzhou	12,351	309%	16,346	3,995

Sources: National Bureau of Statistics of the People's Republic of China

Figure 3 Average Housing Sale Price from 2002 to 2016 in Beijing, Shanghai, Shenzhen and Guangzhou

(In yuan, per square meter)



Sources: National Bureau of Statistics of the People's Republic of China

The high housing price causes potential risks. On one hand, too much capital and debts concentrates in the housing markets of big cities. Once the asset bubble bursts, it could cause catastrophic damage the financial systems. On the other hand, the demand for residence in big cities can hardly be met. If the situation deteriorates and complaints among the public spread, it could endanger the stability of the whole society.

1.3. Reforms to Cope with Above Challenges

In order to cope with above challenges, i.e., meeting the housing demands in big cities (1.2.1), utilizing the underutilized stock assets and helping real estate companies complete transformation

(1.2.2), expanding investment channels for households (1.2.3) and preventing the potential financial and social risks (1.2.4), the central government of China is advancing reforms in real estate markets and financial systems, including promotion of the residential rental markets in big cities, supply-side reform of real estate industries and reform of the financial systems. These reforms will be introduced in details in 1.3, 1.3.2, and 1.3.3 respectively.

1.3.1. Promotion of Residential Rental Markets in Big Cities

Although the housing demand in big cities is huge, the residential rental markets in China are not as big as they are supposed to be, compared with those in developed economies. Currently the gross merchandise volume of residential rental markets in China is only one third of that of US [3]. Considering the total population and demographic structure, residential rental markets in China has great potential for growth. According to L+ Research Institute, the gross merchandise volume of residential rental markets in China will be approximately 1.6, 2.9 and 4.6 trillion yuan in 2020, 2025 and 2030 [5]. The number of tenants in China is estimated to reach 230 million in 2025 and 300 million in 2030 [5].

To facilitate this process and make housing accessible to everyone, General Office of the State Council issued a policy in 2016 to promote residential rental markets by fostering supply entities, encouraging consumption via leasing, supporting rental housing construction and enhancing rental market supervision etc. [6].

Later, to put that policy into effect, Ministry of Housing and Urban-Rural Development, together with eight other ministries or commissions of China, posted announcements in 2017 to accelerate residential rental market development in large and medium-sized cities where net inflow of population exists. Detailed measures include to foster institutionalized large-scale service companies for rental housing, to establish government service platforms for leasing transactions,

to increase effective supply of rental housing, and to innovate management and service systems for residential rental markets [7].

In March 2018, Premier Li, Keqiang put better solving housing problems as one of the major tasks for Chinese government. Promotion residential rental markets is an important way to achieve that goal [8].

1.3.2. Supply-Side Reform of the Real Estate Industry

Since real estate market in China is into the era of stock assets and land are not to be supplied unlimitedly for the purpose of sustainable development, the importance of effective allocation and management of stock assets has become increasingly prominent [9].

On one hand, it will help reduce waste, avoiding unnecessary cost caused by underutilized resources. On the other hand, these stock assets can be turned into supplies to the residential rental market, providing housing for many people. Moreover, it brings opportunities for the transformation of the real estate industry. By upgrading, holding and operating the properties, it creates new business for traditional real estate development companies to make long-term profits. Meanwhile, light-asset professional management companies for rental housing come into being.

In October 2017, President Xi, Jinping pointed out to establish new development concepts and deepen supply-side structural reform, which consists of capacity reduction, inventory destocking, deleverage, cost reduction and weak-link improvement [10]. It also includes optimizing allocation of stock resources and improving incremental supply [10]. Hopefully, dynamic balance between supply and demand can be achieved. Real estate industry is an integral component in the reform.

1.3.3. Reform of Financial Systems

To satisfy the increasing demands for wealth management, the State of Council issued policies in 2016 to continuously expand channels for increasing residents' income, where effectively protecting property rights and enhancing income from property are among the principles [11]. Detailed activities include accelerating the development of direct financing, innovating financial products, improving financial services, providing diversified financial products [11]. In 2017, President Xi, Jinping addressed that residents' income should grow in pace with economic growth and the channels for income from property should be widened, in his keynote of The Nineteenth National Congress of the Communist Party of China [10].

The financial system reform covers completing the financial service system, enhancing the financial systems' ability to serve real economy, increasing the proportion of direct financing and promoting healthy development of multi-level capital markets. It aims to modernize the economic system in China and improve the living standards of people [10] [8].

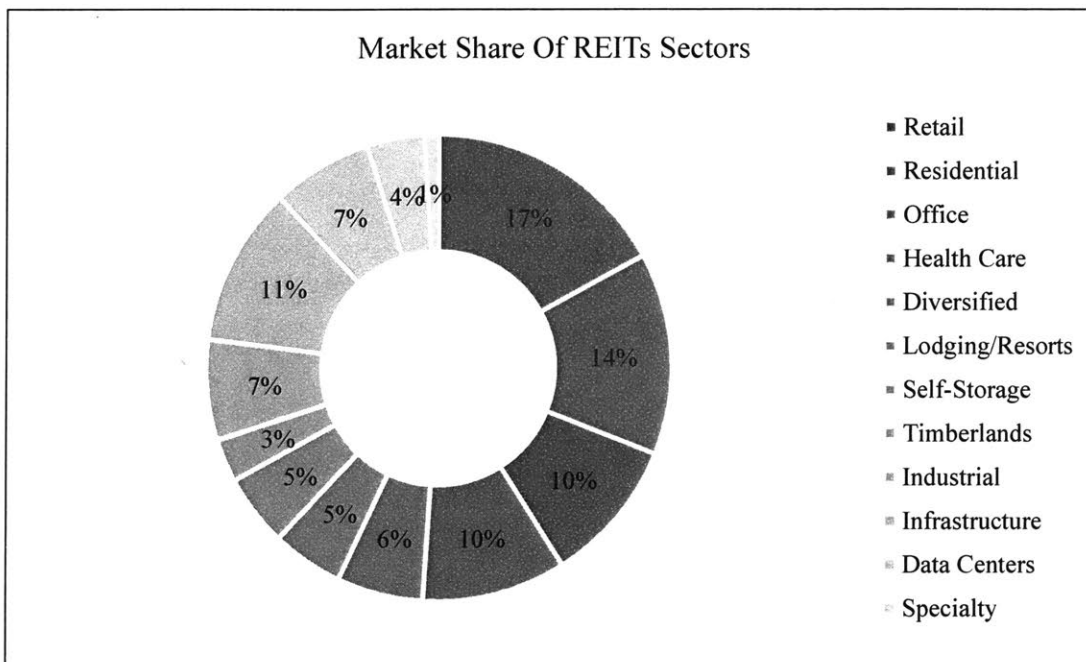
1.4. Potential Role of REITs in Implementing Above Reforms

To effectively put the reforms discussed in 1.3 into practice, thereby solving the problems analyzed in 1.2, Real Estate Investment Trusts (REITs) have a potential significant role to play.

Although still being considered in China, REITs is a mature financial instrument global wise. Invented by US in the 1960s, REITs provide a viable way to own real estate properties, to provide professional services and to benefit investors, managers and tenants. Currently thirty seven countries have enacted REITs legislation worldwide [12]. The properties REITs invest nowadays cover most of the property types, varying from office buildings to infrastructure [11]. **Figure 4** shows the market share of REITs sectors. Residential sector is the second largest sector in REITs

market.

Figure 4 Market Share of REITs Sectors



Sources: Nareit.

By creating REITs in China, it will attract household wealth, bring this capital to finance real estate development companies and leasing companies to acquire and upgrade stock assets, provide these stock assets as residential rental market supply with professional services, and return the income and capital gain to households.

In this way, REITs support promotion of residential rental markets (1.3.1), utilize stock assets and accelerate supply-side reform of the real estate industry (1.3.2) and facilitate financial system reform (1.3.3). As a result, the housing demands in big cities (1.2.1) can be met. The real estate stock dilemma (1.2.2) will be solved. The demand for more investment opportunities (1.2.3) can be satisfied. Furthermore, because the larger and higher-quality rental markets meets housing needs, the demand for home purchases will be reduced. At the same time, the demand for housing

investment will also diminish due to the provision of better investment opportunities. The potential risk of instability of financial systems and the whole society (1.2.4) will be mitigated.

The mechanism introduced above will be discussed in 1.4.1, 1.4.2 and 1.4.3 in details.

1.4.1. Long-term Capital Supply for Expansion of Residential Rental Markets

To expand residential rental markets, real estate development companies and leasing companies need to purchase and upgrade stock assets and turn it into qualified supplies. This requires large amounts of capital in the early phase and it takes long time to recover the investment, because collected rents from tenants is typically just a small portion of the whole investment. Therefore, they can hardly conduct the business with traditional financing methods, i.e., borrowing from banks.

Under these circumstances, REITs can provide a viable financing model by supplying long-term, low-cost capital. Similar to mutual funds, REITs raise funds from investors and import them to the residential rental markets. According to the experience in US, the amount of funds raised by REITs can be considerable. As of March 31, 2018, the total market value of 22 listed residential REITs is 138 billion dollars [12]. This could be true even for just one single REIT. For example, the market cap of AvalonBay Communities, Inc. (AVB), a residential REIT, is 22.61 billion dollars as of April 20, 2018 [12].

Additionally, for equity REITs which is the mainstream REITs type, the capital is invested in equities. It helps reduce the leverage level of real estate companies while providing capital gains to its investors.

Chinese government has realized the importance of capital supply to residential rental markets and the role of REITs in it. It is explicitly stated in the policies that government will strengthen its

financial support to companies which are supply entities in residential rental markets. Among the supports are progressing pilot REITs steadily [6] and encouraging local governments to issue preferential policies for REITs development [7].

1.4.2. New Business Model of Real Estate Industry for Stock Assets Utilization

Financed by long-term capital supply from REITs, real estate development companies and housing leasing companies can acquire, remodel and upgrade stock assets and supply the renovated properties to the residential rental markets. With this method, mismatched or over-supplied vacant stock assets will be exploited. Resources will be better allocated. Wastes will be reduced. Value will be added through the renovation of the old assets and professional management service in the rental housing.

At the same time, supply-side reform of the real estate industry will be materialized. First, traditional real estate development companies can complete transition to a new business model by holding and operating these stock assets and make long-term profit compared to old “build and sell” model. Second, professional operation companies come into being. Because assets ownership and operation are separated thanks to REITs, professional operation companies can concentrate on property management. Since the income will be generated from operation, companies will be motivated to continuously improve their competences. This will further drive industry upgrade, optimize market structure, and develop the market in a scalable, intensive and professional way [3]. In turn, the improvement of service levels helps increase investment return of REITs [3].

1.4.3. New Financial Instruments for Investors

Historically, REITs demonstrate popularity among investors in mature markets. The following characteristics of REITs are important reasons.

First, REITs provide a new asset class focusing on real estates for all investors, generating regular income streams and long-term capital gains. REITs must “invest at least 75 percent of its total assets in real estate assets and cash; derive at least 75 percent of its gross income from real estate related sources, including rents from real property and interest on mortgages financing real property; derive at least 95 percent of its gross income from such real estate sources and dividends or interest from any source; and have no more than 25 percent of its assets consist of non-qualifying securities or stock in taxable REIT subsidiaries” [13].

Second, REITs have high distribution levels. According to the REIT Modernization Act of 1999, at least 90% of taxable income must be distributed to shareholders annually [14]. During 2016, public listed REITs distributed approximately \$55.7 billion in dividends. FTSE Nareit All REITs Index² has a dividend yield of 4.75%, compared to that of S&P 500 is 1.90% [15]. If REITs pass certain tests³, the dividends paid to shareholders can be tax deducted. **Figure 5** demonstrates REITs dividend yields vs. ten-year constant maturity treasury yield from January 1990 to February 2018.

Third, REITs demonstrates strong historical performances. Take US as example. The performance of FTSE Nareit ALL Equity REITs Index⁴ has been stronger than that of the S&P 500 in 16 out of last 25 years [12]. **Figure 6** and **Figure 7** demonstrate performance comparison among REITs and other major indexes.

² “The FTSE Nareit All REITs Index is a market capitalization-weighted index that and includes all tax-qualified real estate investment trusts (REITs) that are listed on the New York Stock Exchange, the American Stock Exchange or the NASDAQ National Market List.” [12]

³ These tests will be introduced in 4.3.

⁴ “The FTSE Nareit All Equity REITs Index is a free-float adjusted, market capitalization-weighted index of U.S. equity REITs. Constituents of the index include all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property.” [12]

Figure 5 REITs Dividend Yield vs. 10-Year Constant Maturity Treasury Yield from January 1990 to February 2018⁵

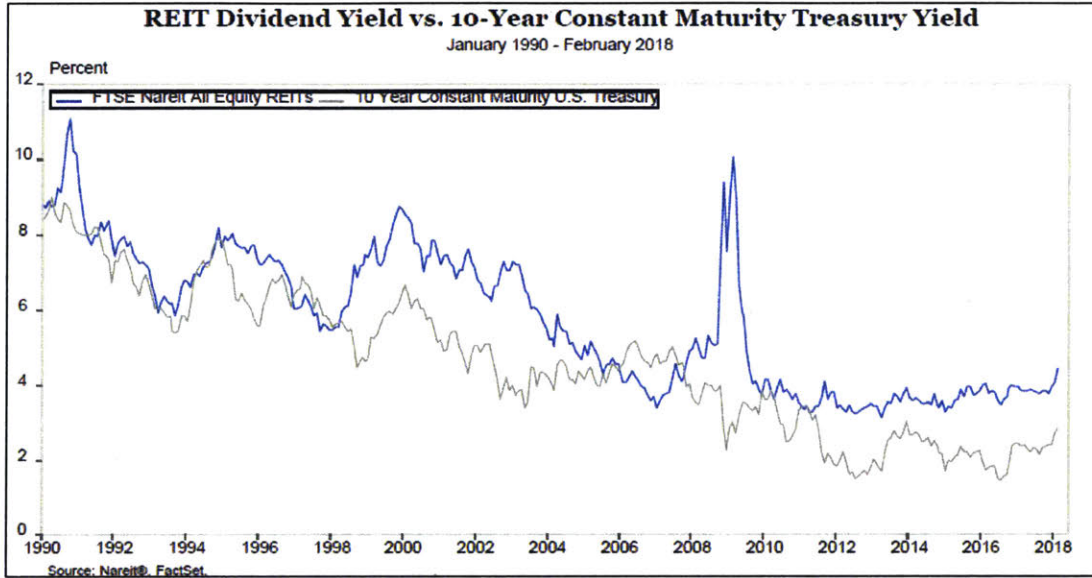
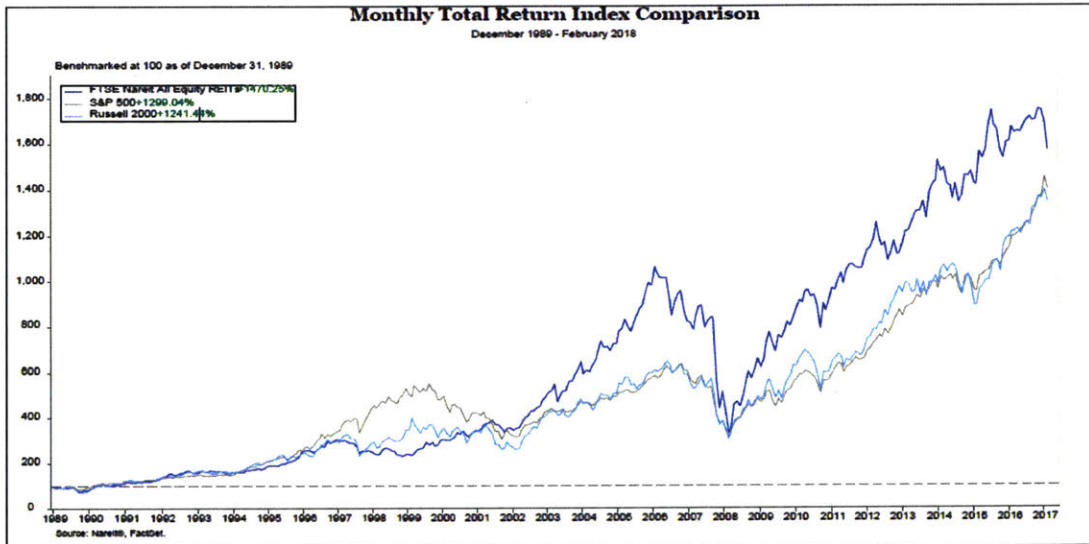


Figure 6 20-Year Average Annual Total Return from February 1998 to February 2018



⁵ Figure 5, Figure 6 and Figure 7 are from REITWatch (March 2018) [15].

Figure 7 Monthly Total Return Index Comparison among FTSE Nareit ALL Equity REITs, S&P 500, and Russell 2000 from December 1989 to February 2018



Fourth, REITs provide good liquidity like other mutual funds. Average daily dollar trading volume in publicly traded US REITs is \$8.9 billion in February 2018 [15]. REITs also provide diversification due to low correlation with other stocks or bonds. Therefore, it makes an ideal component in investors' portfolios.

Because of all these features, REITs are popular among investors. As of March 31, 2018, FTSE Nareit All REITs Index equity market capitalization is \$1.062 trillion and gross real estate assets represented by REITs are nearly \$3 trillion [12].

When REITs come to China, they will supplement current financial markets and benefit Chinese investors with these characteristics. Meanwhile, by diverting the household wealth, REITs will help drive housing price back to a reasonable level and reduce potential risks of financial and social stability.

1.5. Chapter Summary

Chapter 1 first analyzes the challenges faced by the real estate market and financial systems in China (1.2). Those challenges include excessive housing demands in big cities (1.2.1), real estate markets enter the era of stock assets with large amount of stock assets unutilized (1.2.2), inadequate investment channels for accumulated household wealth (1.2.3) and potential financial and social risks caused by above three challenges (1.2.4).

Then, Chapter 1 discusses the reforms China is advancing (1.3) to cope with above challenges. These reforms involve promotion of residential rental markets in big cities (1.3.1), supply-side reform of the real estate industry (1.3.2) and reform of financial systems (1.3.3).

Last, Chapter 1 introduces the potential role of REITs (1.4) in implementing above reforms. REITs can supply capital for residential rental markets in long term (1.4.1), provide a new business model for the real estate industry to utilize stock assets (1.4.2) and bring new financial instruments for investors (1.4.3).

Chapter 2. Typical Cases in the REITs Pilot Phase of China

2.1. Chapter Introduction

Although REITs were invented in the 1960s in US and appeared in Asia in the 2000s, they still don't exist in China technically. However, China is actively exploring this area. REITs with Chinese characteristics ("C-REITs") have been created in the pilot phase since 2014.

Chapter 2 examines four typical cases in the REITs pilot phase of China. They are CITIC Qihang Special Asset Management Plan ("CITIC Qihang REIT") (2.2), Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund ("Penghua Qianhai Vanke REIT") (2.3), CYPA Apartment Equity REITs Asset Backed Special Plan ("CYPA REIT") (2.4) and GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 Asset Backed Special Plan ("Poly REIT") (2.5). These cases lay the foundation for further analysis in Chapter 3 and Chapter 4.

2.2. CITIC Qihang Special Asset Management Plan ("CITIC Qihang REIT")⁶

2.2.1. Basic information

CITIC Qihang REIT is the first C-REIT in mainland China with similarities to equity REITs [16]. It was issued privately in 2014, in the form of special asset management plan, with two tranches of securities: senior and junior.

The total amount is 5.21 billion yuan, with 3.65 billion yuan in senior tranche (rating: AAA) and

⁶ Unless otherwise noted, all data and information in section 2.2 and its subsections are from CITIC Qihang Special Asset Management Plan Offering Prospectus.

1.56 billion yuan in junior tranche. The face value of each security is 100 yuan for both senior tranche and junior tranche. The total number of securities is 52.1 million, with 36.5 million senior tranche securities and 15.6 million junior tranche securities. Securities of both senior and junior tranche can be applied to transfer on the comprehensive agreement platform of Shenzhen Stock Exchange. The expected annual yield of senior tranche is 7%; that of the junior tranche depends on rents and appreciation of the properties. Target investors of CITIC Qihang REIT are qualified institutional investors approved by law. **Table 4** demonstrates the basic information of CITIC Qihang REIT.

The planned duration of CITIC Qihang REIT is five years from the establishment date of the plan, with flexibility to be terminated ahead of or behind time. The actual duration is three years. In the middle of 2017, CITIC Qihang REIT was cleared [17].

Table 4 Basic Information of CITIC Qihang REIT

	Total Amount (Million Yuan)	Face Value (Yuan)	Number of Shares (Million)	Percentage of Total Amount	Expected Annual Yield	Rating
Senior Tranche	3,650	100	36.5	70.06%	7%	AAA
Junior Tranche	1,560	100	15.6	29.94%	N/A ⁷	N/A

Sources: CITIC Qihang Special Asset Management Plan Offering Prospectus.

2.2.2. Transaction Structure and Interested Parties

- Main interested parties of CITIC Qihang REIT include (but not limited to):
 - Original owner of assets/Asset management plan manager/Sales agency: CITIC

⁷ Expected annual yield of the junior tranche depends on rents and appreciation of the properties.

Securities Co., Ltd. It originally owned 100% equities of the target companies which owned the target assets.

- Non-public fund manager: Goldstone Investment Limited, which is a wholly-owned subsidiary of CITIC Securities Co., Ltd.
- Custodian/Supervision bank: China CITIC Bank Tianjin Branch
- SPV1: A company founded by the non-public fund manager. It purchased 100% equities of Tianjin Jingzheng Property Services Co., Ltd. from CITIC Securities Co., Ltd.
- SPV2: A company founded by the non-public fund manager. It purchased 100% equities of Tianjin Shenzheng Property Services Co., Ltd. from CITIC Securities Co., Ltd.
- Tianjin Jingzheng Property Services Co., Ltd.: A subsidiary originally wholly owned by CITIC Securities Co., Ltd. It owns the Beijing property.
- Tianjin Shenzheng Property Services Co., Ltd.: A subsidiary originally wholly owned by CITIC Securities Co., Ltd. It owns the Shenzhen property.
- Project companies: Tianjin Jingzheng Property Services Co., Ltd. and Tianjin Shenzheng Property Services Co., Ltd.
- Target assets: An office building in Beijing (Beijing property) and an office building in Shenzhen (Shenzhen property).

- The relationship among interested parties:

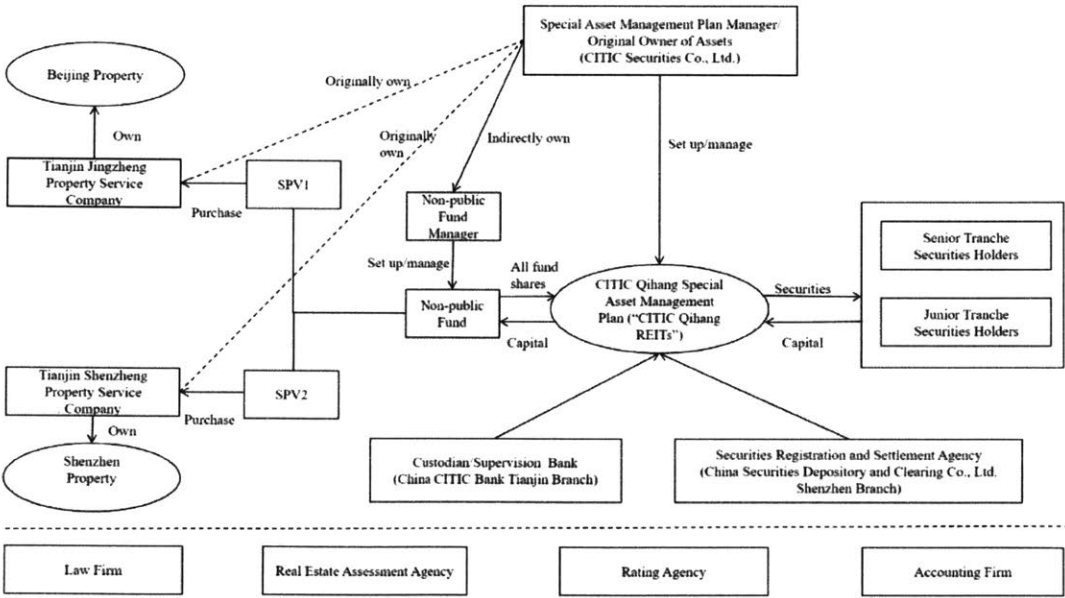
The original owner of assets and the asset management plan manager are the same entity (CITIC Securities Co., Ltd.). Non-public fund manager (Goldstone Investment Limited) is the subsidiary wholly owned by the original owner of assets and asset management plan manager (CITIC Securities Co., Ltd.). The dominant shareholder and actual controlling party of the custodian bank for the non-public fund and the asset management plan (China CITIC Bank) is also the biggest shareholder of CITIC Securities Co., Ltd.

- Transaction structure:

The investors of CITIC Qihang REIT trusted their invested capital to the asset management plan manager (CITIC Securities Co., Ltd.). The asset management plan manager (CITIC Securities Co., Ltd.) set up and managed CITIC Qihang REIT. The non-public fund manager (Goldstone Investment Limited) set up the non-public fund. CITIC Qihang REIT purchased all the shares of the non-public fund. The non-public fund acquired all the equities of the project companies (Tianjin Jingzheng Property Services Co., Ltd. and Tianjin Shenzheng Property Services Co., Ltd.) via SPV1 and SPV2 from original owner of assets (CITIC Securities Co., Ltd.) to own the target assets (Beijing property and Shenzhen property).

The transaction structure of CITIC Qihang REIT is shown in **Figure 8**.

Figure 8 Transaction Structure of CITIC Qihang REIT



Sources: CITIC Qihang Special Asset Management Plan Offering Prospectus

2.2.3. Target Assets

The target assets of CITIC Qihang REIT are two properties located in Beijing and Shenzhen respectively.

The Beijing property is an office building owned by Tianjin Jingzheng Property Services Co., Ltd. The total building area is 69,939.96 square meters. The daily rent for Grade-A office buildings in nearby area is between 9 and 13 yuan per square meter. The occupancy rate is estimated to be more than 98%. The average annual rent growth rate is estimated to be between 4% and 6%. The sale price growth rate is estimated to be between 8% and 11% per annum.

The Shenzhen property is an office building owned by Tianjin Shenzheng Property Services Co., Ltd. The total building area is 30,439.9 square meters. The monthly rent in nearby area is from 180 to 250 yuan per square meter. The occupancy rate is estimated to be 92%. The annual rent growth rate is estimated to be 4%. The sale price growth rate was estimated to be 6% per annum.

2.3. Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund (“Penghua Qianhai Vanke REIT”)⁸

2.3.1. Basic information

Penghua Qianhai Vanke REIT is the first public C-REIT. It was issued in the form of public securities investment fund. Later it was listed in Shenzhen Stock Exchange on September 30, 2015. The total amount of Penghua Qianhai Vanke REIT is 3 billion yuan, issued in 3 billion shares with initial face value 1 yuan per share.

⁸ Unless otherwise noted, all data and information in section 2.3 and its subsections are from Penghua Qianhai Vanke REITs Hybrid Closed-end Securities Investment Fund Offering Prospectus (Updated Version 2017).

The duration of Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund is indefinite, but it is divided into two different phases: the first ten years as the first phase and years after that as the second phase. The forms, investment scopes, investment strategies, risks and returns are all different in the two phases.

- First phase: Penghua Qianhai Vanke REIT

The first ten years is the closed operation period of the fund. During this period, it exists as Penghua Qianhai Vanke REIT, a closed-end fund investing in equities of the target company⁹ to obtain rental income from commercial properties.

However, the asset amount invested in that specific target company will not exceed 50% of total assets of the fund. Other assets will be invested in fixed-income securities and stocks, which will be no less than 50% of the whole portfolio. **Table 5** below lists the investment portfolio of Penghua Qianhai Vanke REIT as of June 30, 2017. The item “Among Other Assets: Other” represents the investment in real estates, which is only 20.36% of the whole assets.

Because of this special portfolio, the risks will differ from that of bond funds and stock funds. The expected risk and return will be higher than those of bond funds and money funds, lower than those of stock funds. During the first ten years, the performance benchmark is the return of ten-year Treasury note plus 1.5%

⁹ The target company will be further introduced in 2.3.2 Transaction Structure and Interested Parties .

Table 5 Investment Portfolio of Penghua Qianhai Vanke REIT as of June 30, 2017

Item	Category	Amount (Yuan)	Percentage of the Total Assets of the Fund (%)
1	Stocks	60,521,628.99	1.10
2	Bonds	3,990,851,288.90	72.21
3	Subtotal of Bank Deposits and Settlement Reserves	258,270,311.62	4.67
4	Other Assets	1,217,092,305.55	22.02
	(Among Other Assets: Refundable Deposits)	128,197.83	0.34
	(Among Other Assets: Interest Receivable)	91,402,469.67	1.65
	(Among Other Assets: Prepaid Expenses)	253,979.06	0.66
	(Among Other Assets: Other ¹⁰)	1,125,307,659.00	20.36
5	Total	5,526,735,535.06	100.00

Sources: Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund Offering Prospectus (Updated Version 2017); Author's calculation.

- Second phase: Penghua Fengrui Bond Fund (LOF)

Ten years later, the fund will become a listed open-end bond fund automatically, in accordance with the provisions of the fund contract. The name of the fund will be changed to Penghua Fengrui Bond Fund (LOF). After converted to shares of a listed open fund, the shares will still be listed and traded on Shenzhen Stock Exchange. The portfolio will change too: more than 80% of the fund assets will be invested in bonds; no more than 20% will be invested in stocks; no less than 5% will be invested in cash or government bonds due within one year.

Since the second phase is not relevant to REITs, the analysis of Penghua Qianhai Vanke REIT in this thesis refers to the first phase of the Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund and will focus on its characteristics in the first phase only, unless otherwise noted.

Compared with CITIC Qihang REIT, Penghua Qianhai Vanke REIT made progress in liquidity

¹⁰ This item represents the investment in usufruct of the target property.

because the scope of investors are expanded. Individual investors, institutional investors and qualified foreign investors can invest in the fund as long as in compliance with the law.

2.3.2. Transaction Structure and Interested Parties

- Main interested parties of Penghua Qianhai Vanke REIT include (but not limited to):
 - Fund manager: Penghua Fund Management Co., Ltd.
 - China Vanke Co., Ltd.: China Vanke Co., Ltd. owns Shenzhen Vanke Real Estate Co., Ltd. and is the actual controlling party of the target company.
 - Shenzhen Vanke Real Estate Co., Ltd.: A subsidiary wholly owned by China Vanke Co., Ltd. Before Penghua Qianhai Vanke REIT invests capital in the target company, Shenzhen Vanke Real Estate Co., Ltd. directly owns 100% equities of the target company.
 - Target company: Shenzhen Vanke Qianhai Enterprise Dream+ Park Construction and Management Company. It was established by China Vanke Co., Ltd. to fulfil the BOT¹¹ agreement signed with Shenzhen Qianhai Development Investment Holdings Co., Ltd. Before invested by Penghua Qianhai Vanke REIT, the target company is wholly owned by Shenzhen Vanke Real Estate Co., Ltd. After invested by Penghua Qianhai Vanke REIT, the target company will be changed to a corporation with 50% equities held by Penghua Qianhai Vanke REIT and 50% equities held by Shenzhen Vanke Real Estate Co., Ltd.
 - The Authority of Qianhai: A non-profit statutory board established by Shenzhen Municipal Government to perform corresponding management and public service functions, in an enterprise-style management way [18].
 - Shenzhen Qianhai Development Investment Holdings Co., Ltd.: A subsidiary wholly

¹¹ BOT: Build-Operate-Transfer. BOT is a way to carry out project financing: the government signs concession agreement with a company to delegate the investment, financing, construction and maintenance of the project to the company for a period of time; the company has the right to retain revenue from the project to recover its investment before the concession agreement expires; at the end of the concession agreement, the project will be transferred to the government without payment [37].

owned by the Authority of Qianhai. It is the only authorized entity subordinating to the Authority of Qianhai to fulfil corresponding functions in land development, infrastructure construction and major project investments according to the government policy.

- Project: Shenzhen Vanke Qianhai Enterprise Dream+ Park Construction Project. Detailed information will be discussed in 2.3.3.
- BOT agreement: BOT agreement signed by Shenzhen Qianhai Development Investment Holdings Co., Ltd. and China Vanke Co., Ltd. about Shenzhen Vanke Qianhai Enterprise Dream+ Park Project.

- Transaction structure:

According to the Shenzhen Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone Land Lease Contract and its supplement, the Authority of Qianhai leased a piece of land with area of 93,192.96 square meters to Shenzhen Qianhai Development Investment Holdings Co., Ltd for the development and construction of Qianhai Enterprise Dream+ Park Project. The term of lease is from July 25, 2013 to July 24, 2023.

Shenzhen Qianhai Development Investment Holdings Co., Ltd. signed a BOT agreement with China Vanke Co., Ltd. The BOT agreement determines the time from September 8, 2013 to September 7, 2021 as the BOT cooperation period and grants the usufruct of the Qianhai Enterprise Dream+ Park Project to China Vanke Co., Ltd. during that period.

China Vanke Co., Ltd. later established the target company (Shenzhen Vanke Qianhai Enterprise Dream+ Park Construction and Management Company) to fulfil the BOT agreement, to sign all the contracts and to do business of the project. China Vanke Co., Ltd. also transferred the usufruct of the project to the target company. Additionally, Shenzhen Qianhai Development Investment Holdings Co., Ltd. has transferred the operation right and usufruct of Qianhai Enterprise Dream+ Park Project from September 8, 2021 to July 24, 2023

to the target company. Therefore, the target company is entitled to the 100% usufruct of Qianhai Enterprise Dream+ Park Project from January 1, 2015 to July 24, 2023.

According to the agreement among the fund manager (Penghua Fund Management Co., Ltd.), Shenzhen Vanke Real Estate Co., Ltd., China Vanke Co., Ltd., the target company (Shenzhen Vanke Qianhai Enterprise Dream+ Park Construction and Management Company), and Shenzhen Qianhai Development Investment Holdings Co., Ltd., Penghua Qianhai Vanke REIT will invest 1.27 billion yuan in the target company and get 50% equities of it.

During the operation period of Penghua Qianhai Vanke REIT, the target company will be responsible for the operation management of the Qianhai Enterprise Dream+ Park Project. Later, the equities acquired by Penghua Qianhai Vanke REIT will be repurchased by Shenzhen Vanke Real Estate Co., Ltd. or its designated affiliates. In this way, Penghua Qianhai Vanke REIT obtain actual operating income and its receivables (except for the property management fees) of the target company from Qianhai Enterprise Dream+ Park Project from January 1, 2015 to July 24, 2023. The operating income will be adjusted according to the performance compensation incentive mechanism designed in the agreement.

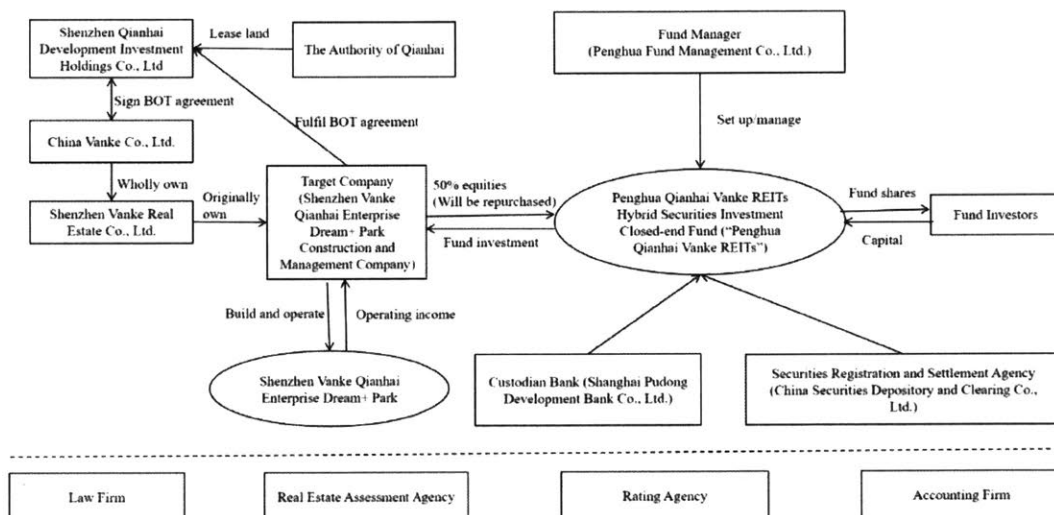
According to the equity repurchase agreement, Penghua Qianhai Vanke REIT will transfer 14%, 18%, 17.5% and 0.5% of the equities it holds of the target company to Shenzhen Vanke Real Estate Co., Ltd. or its designated affiliates at premium, before December 31, 2015, December 31, 2018, December 31, 2021 and October 31, 2023 respectively, until all equities held by Penghua Qianhai Vanke REIT are transferred.

In December 2015, the fund manager (Penghua Fund Management Co., Ltd.), Shenzhen Vanke Real Estate Co., Ltd., the target company (Shenzhen Vanke Qianhai Enterprise Dream+ Park Construction and Management Company) signed supplemental agreement to postpone the first

repurchase of equity to March 31, 2017. The target company is designated for the obligation of repurchase. Shenzhen Vanke Real Estate Co., Ltd. will supervise the target company to pay the repurchase price and complete relevant procedures.

The transaction structure of Penghua Qianhai Vanke REIT is shown in **Figure 9**.

Figure 9 Transaction Structure of Penghua Qianhai Vanke REIT



Sources: Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund Offering Prospectus (Updated Version 2017)

2.3.3. Target Assets

The target assets of Penghua Qianhai Vanke REIT is Shenzhen Vanke Qianhai Enterprise Dream+ Park¹². The total floor area is 93,192.96 square meters, including 33 office buildings, 1 large public

¹² More information about Shenzhen Vanke Qianhai Enterprise Dream+ Park can be found here: <http://www.szqh.gov.cn/ljqh/qhqqyg/>

facility, and 6 small public facilities. Planned building area is 65,200 square meters. Total investment is about 773.29 million yuan. **Table 6** demonstrates the earnings from the usufruct of Shenzhen Vanke Qianhai Enterprise Dream+ Park from 2015 to 2017.

Table 6 Earnings from the Usufruct of Shenzhen Vanke Qianhai Enterprise Dream+ Park from 2015 to 2017

(In yuan)

	From July 6, 2015 (Effective Date of the Fund Contract) to December 31, 2015	From January 1, 2016 to December 31, 2016	From January 1, 2017 to December 31, 2017
Earnings from the Usufruct of Qianhai Enterprise Dream+ Park	104,993,311.00	171,400,475.44	-184,390,963.21 ¹³

Sources: Annual Report of Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund in 2016 and 2017.

2.4. CYPA Apartment Equity REITs Asset Backed Special Plan (“CYPA REIT”)¹⁴

2.4.1. Basic information

In October 2017, CYPA REIT was listed in Shenzhen Stock Exchange. This is the first equity C-REIT for rental apartments in mainland China [16]. The total amount is 270 million yuan. It’s issued in the form of asset backed special plan with two tranches of asset backed securities. The amount

¹³ The first repurchase of the equities of the target company was completed on May 8, 2017. Part of the target company's investment costs, profit and loss from its fair value change and other income are adjusted accordingly in this accounting period [32].

¹⁴ Unless otherwise noted, all data and information in section 2.4 and its subsections are from CYPA Apartment Equity REITs Asset Backed Special Plan Offering Prospectus.

of senior tranche is 130 million yuan and that of junior securities is 140 million yuan. Namely, 48.15% are senior tranche (rating: AAA) and 51.85% are equity shares. For senior tranche securities, the interest will be paid annually and the principal will be paid at maturity. The face value of each security is 100 yuan.

The duration of CYPA REIT is 5 years, of which the first 3 years is the operation period and the last 2 years is the disposal period (“3+2”). The interest rate of the senior tranche is 5.3% [16]. No defined expected return for junior tranche. Holders of junior tranche securities are not entitled to interest distribution during operation period, but are entitled to capital gain at maturity. The target investors of CYPA REIT are qualified investors¹⁵. **Table 7** demonstrates the basic information of CYPA REIT.

Table 7 Basic Information of CYPA REIT

	Total Amount (Million Yuan)	Face Value (Yuan)	No. of Shares (Million)	Percentage of Total Amount	Expected Annual Yield	Rating	Frequency of Interest Payment
Senior Tranche	130	100	1.3	48.15%	5.3%	AAA	Annually
Junior Tranche	140	100	1.4	51.85%	N/A	N/A	No payment before maturity

Sources: CYPA Apartment Equity REITs Asset Backed Special Plan Offering Prospectus

¹⁵ Qualified investors include pension funds, charitable foundations, investment plans, organizations with net assets more than 10 million yuan, private fund managers and employees, and individuals with financial assets more than 3 million or average annual income more than 0.5 million in recent three years. Besides, the amount of investment in a single private equity fund must be no less than 1 million yuan. [27]

2.4.2. Transaction Structure and Interested Parties

- Main interested parties of CYPA REIT include (but not limited to):
 - Asset management plan manager/sales agency: Bohai Huijin Securities Asset Management Co., Ltd.
 - Private fund manager: Tianjin Saifu Shengyuan Investment Management Center (Limited Partnership)
 - Private fund: Saifu CYPA Private Equity Fund
 - Original owner of assets: Yangbuluo (Beijing) Enterprise Management Consulting Co., Ltd.
 - Interested party with option to buy the property/property operation manager: Qingnianle (Beijing) Enterprise Management Co., Ltd.
 - Project company: Beijing Tongdafu Asset Management Co., Ltd.
 - SPV: Beijing Xinleqing Enterprise Management Co., Ltd. After private fund is established, it will conduct equity investment in SPV.
 - Target assets: CYPA apartment building

- Relationships among interested parties:

Original owner of assets (Yangbuluo (Beijing) Enterprise Management Consulting Co., Ltd.), interested party with option to buy the property/property operation manager (Qingnianle (Beijing) Enterprise Management Co., Ltd.) and project company (Beijing Tongdafu Asset Management Co., Ltd.) have the same legal representative person.

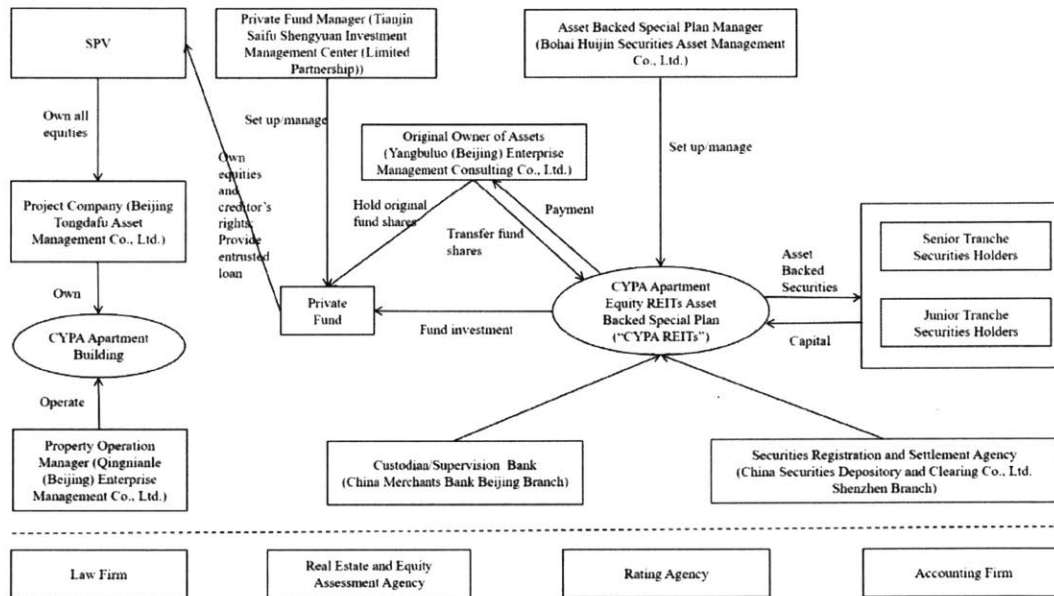
- Transaction structure:

CYPA REIT acquires the private fund from the original owners of assets (Yangbuluo (Beijing) Enterprise Management Consulting Co., Ltd.) and the SPV established by the private fund. Then it contributes capital to SPV via private fund and acquire 100% equities and debts of the project company (Beijing Tongdafu Asset Management Co., Ltd.) via SPV. Since the project

company (Beijing Tongdafu Asset Management Co., Ltd.) owns the CYPA apartment property, CYPA REIT owns the property indirectly. [3]

The transaction structure of CYPA REIT is shown in **Figure 10**.

Figure 10 Transaction Structure of CYPA REIT



Sources: CYPA Apartment Equity REITs Asset Backed Special Plan Offering Prospectus

2.4.3. Target Assets

The target asset is a property located in Beijing owned by the project company (Beijing Tongdafu Asset Management Co., Ltd). The property is a 12-floor apartment building with floor area 5,711.57 square meters. The evaluation value of the property is 315 million yuan as of June 30, 2017. It was remodeled in 2014 and later opened up in June 2014. There are 101 apartments in total, most of which are apartments with one bedroom and one living room. The building is equipped with gym, cafeteria, supermarket and meeting rooms.

The terms of 90% leases are from six to twelve months, among which 70% are annual leases. As of June 30, 2017, 8 leases are with term of 3 months; 18 are with term from 6 to 11 months; 71 are with term of 12 months; 2 are with term longer than 12 months. **Table 8** demonstrates the rent distribution of CYP A apartments as of June 30, 2017.

Table 8 Rent Distribution of CYP A Apartments as of June 30, 2017

Monthly Rent (Yuan)	Number of Leases
<6000	3
6000-7000	11
7000-8000	45
8000-9000	34
9000-10000	4
More than 10000	2

Sources: CYP A Apartment Equity REITs Asset Backed Special Plan Offering Prospectus

Since opening up, the cumulative average occupancy rate of CYP A apartment is 96%. Most rents are prepaid in advance by quarter. The total collected rent is 11.39 million yuan in 2016, 10.84 million yuan in 2015 and 8 million yuan in 2014.

2.5. GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 Asset Backed Special Plan (“Poly REIT”)¹⁶

2.5.1. Basic information

In October 2017, Poly REIT was approved by Shanghai Stock Exchange. It is the first C-REIT in residential rental markets issued by a state-owned enterprise that is supervised and managed by the central government [16]. It is also the first REIT in China issued under the shelf registration system

¹⁶ Unless otherwise noted, all data and information in section 2.5 and its subsections are from GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 First Phase Asset Backed Special Plan Offering Prospectus.

[16]. The total amount of Poly REIT is 5 billion yuan, exceeding that of previous cases largely. Within shelf registration system, the asset management plan managers can decide whether, when and how many securities to issue as long as it is within 24 months from the approval date.

In March 2018, the first phase of Poly REIT was issued. The total issuing size is 1,717 million yuan with two tranches: senior tranche (90%) and junior tranche (10%), i.e., 1,545.3 million yuan in the senior tranche and 171.7 million yuan in the junior tranche. The face value of each security is 100 yuan. The interest is fixed at 5.5% per annum for the senior tranche (rating: AAA), which will be listed on the fixed income platform of Shanghai Stock Exchange. Until the composition of this thesis, it is still in preparation for listing.

The duration of Poly REIT is 19 years at maximum, with flexibility to be adjusted by the asset management plan manager¹⁷. For the senior tranche, withdrawal option can be exercised every 3 years. **Table 9** demonstrates the basic information of Poly REIT.

Table 9 Basic Information of Poly REIT

	Total Amount (Million Yuan)	Face Value (Yuan)	Percentage of Total Amount	Expected Annual Yield	Rating	Interest and Principal Payment
Senior Tranche	1,545.3	100	90.00%	5.5%	AAA	Interest paid annually; principal paid at maturity
Junior Tranche	171.7	100	10.00%	N/A	N/A	Residual income paid annually; residual capital and assets distributed at maturity

Sources: GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 Asset Backed Special Plan Offering Prospectus

¹⁷ According to the Announcement on the Establishment of GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 First Phase Asset Backed Special Plan, the asset management plan manager has the right to propose adjustments for the benefit of securities holders, which include the duration of the plan, to the conference of asset backed securities holders [36].

2.5.2. Transaction Structure and Interested Parties

- Main interested parties of Poly REIT include (but not limited to):
 - Asset management plan manager/sales agency: Qianhai Kaiyuan Asset Management Co., Ltd.
 - Original owner of assets/Interested party with option to buy the property/Asset service agency: Poly Real Estate (Group) Co., Ltd.
 - Private Investment Fund manager: GUSM Capital Management Co., Ltd.
 - Project companies: Affiliates of Poly Real Estate (Group) Co., Ltd. Project companies own the target properties.

- Transaction structure:

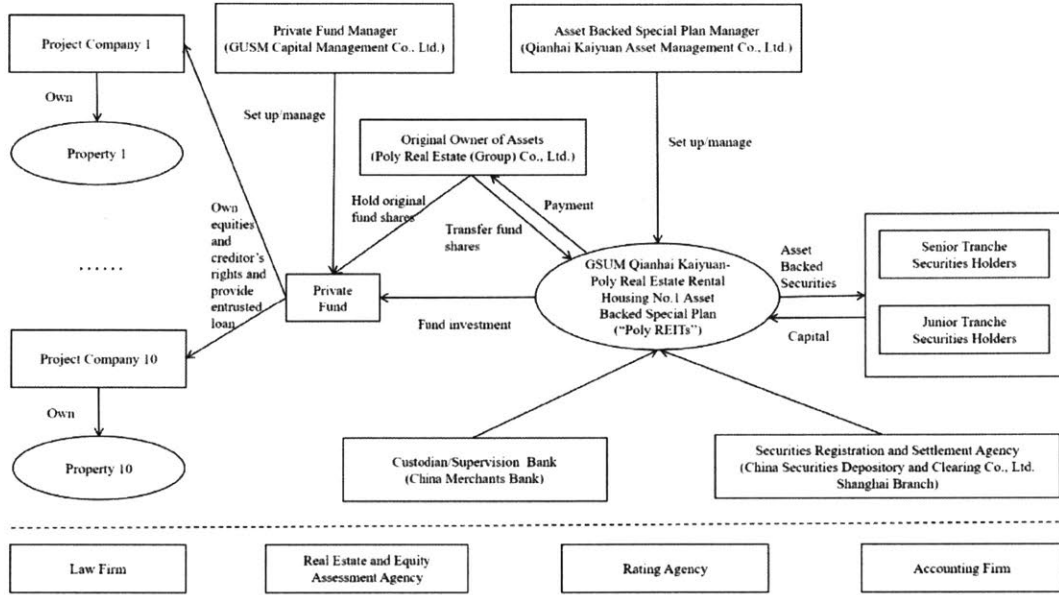
Securities holders of Poly REIT trust the invested capital to the asset management plan manager (Qianhai Kaiyuan Asset Management Co., Ltd). The asset management plan manager (Qianhai Kaiyuan Asset Management Co., Ltd) set up and manage Poly REIT. The private fund manager (GUSM Capital Management Co., Ltd.) sets up GSUM Qianyuan-Poly Real Estate Rental Housing No.1 First Phase Private Investment Fund. The original owner of assets (Poly Real Estate (Group) Co., Ltd.) own all shares of this private investment fund.

Once Poly REIT is established, it purchases shares of the private fund from the original owner of assets (Poly Real Estate (Group) Co., Ltd.) and contributes capital to the private fund. The private fund then invests in the project companies by purchasing the equities and providing entrusted loans, and thus indirectly owns the properties indirectly.

The income of Poly REIT will mainly come from rents of the properties and the additional fees paid by Poly Real Estate (Group) Co., Ltd. to maintain its option to buy the properties [3].

The transaction structure of Poly REIT is shown in **Figure 11**.

Figure 11 Transaction Structure of Poly REIT



Sources: GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 First Phase Asset Backed Special Plan Offering Prospectus

2.5.3. Target Assets

The target assets of Poly REIT are ten properties previously owned by Poly Real Estate (Group) Co., Ltd. or its affiliates. They are rental apartment buildings located in nine cities shown in **Table 10**.

Table 10 Target Assets of Poly REIT

City	Construction Area (Square Meters)	Number of Apartments	Market Value	Unit Price (Yuan/Square Meter)
Dalian	4,456.64	96	48,000,000	10,770
Changsha	5,328.88	96	66,610,000	12,374
Changsha	6,017.76	152	43,330,000	7,200
Chongqing	3,186.63	93	25,510,000	8,005
Beijing	22,383.91	200	496,000,000	20,953
Chengdu	4,835.14	35	34,660,000	7,168
Xi'an	5,536.02	116	40,350,000	7,289
Shenyang	7,292.78	134	35,000,000	4,799
Tianjin	883.58	15	32,000,000	36,216
Guangzhou	19,942.33	150	857,000,000	42,974

Sources: GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 (Phase One) Asset Backed Special Plan Offering Prospectus

2.6. Chapter Summary

Chapter 2 introduces basic information, transaction structure and target assets of four typical cases in the REITs pilot phase in China. The four cases are CITIC Qihang Special Asset Management Plan (“CITIC Qihang REIT”) (2.2), Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund (“Penghua Qianhai Vanke REIT”) (2.3), CYPA Apartment Equity REITs Asset Backed Special Plan (“CYPA REIT”) (2.4) and GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 Asset Backed Special Plan (“Poly REIT”) (2.5). The information of these cases lay foundation for further analysis in Chapter 3 and Chapter 4.

Chapter 3. Problems Identified in Past Cases in REITs Pilot Phase in China¹⁸

3.1. Chapter Introduction

From the typical cases introduced in Chapter 2, several problems are identified in REITs pilot phase in China. Chapter 3 analyzes the root cause of the situation, which is lack of C-REITs legislation (3.2), and problems brought to the surface by that root cause, including ambiguous C-REITs definition (3.3), debt-equivalent C-REITs types (3.4), varying and complicated C-REITs structures (3.5), limited C-REITs investors and liquidity (3.6), and heavy tax burden for C-REITs (3.7).

3.2. Root Cause: Lack of C-REITs Legislation

According to Chapter 2, cases in REITs pilot phase of China are different in forms, types, scopes, structures, target investors and many other aspects. The reason is that, although it is explicitly stated that Chinese government will support REITs development in residential rental markets, no REITs legislation is enacted so far. Therefore, there is no designated regulation and guidance for REITs.

However, the demand for REITs is strong. Under this circumstances, C-REITs are designed to meet the urgent demand using available financial instruments and corresponding regulating laws. For example, among the four cases discussed in Chapter 2, CITIC Qihang REIT is subject to the Securities Law of the People's Republic of China [19]. Penghua Qianhai Vanke REIT is subject to the Securities Investment Fund Law of the People's Republic of China [20]. CYP A REIT and Poly REIT are mainly subject to Regulations on Asset Securitization Business of Securities Companies and Affiliates of Fund Management Companies, and Interim Measures for Supervision and

¹⁸ Identified problems are not necessarily relevant to all cases.

Management of Private Equity Funds [21] [22] because they are in the form of asset backed securities.

This unclear situation could make C-REITs vulnerable to abuse in the real estate industry, cause difficulty in regulation and governance and therefore possibly lead to conservative attitude from investors and regulatory authorities, which would in turn constrain the development of REITs.

Problems brought to surface by the lack of REITs legislation include:

- Ambiguous REITs definition
- Debt-equivalent REITs type
- Varying and complicated REITs structures
- Limited investors and liquidity of REITs
- Heavy tax burden for REITs

Which will be discussed from 3.3 to 3.7.

3.3. C-REITs Definition: Ambiguous

The four C-REITs cases discussed in Chapter 2 takes different forms: CITIC Qihang REIT is a special asset management plan [19]. Penghua Qianhai Vanke REIT is a closed-end securities investment fund [20]. CYPA REIT and Poly REIT are asset backed securities [21] [22].

They also have different investment portfolios. Compared to CITIC Qihang REIT, CYPA REIT and POLY REITs, of which most funds are invested in real estates [19] [21] [22], Penghua Qianhai Vanke REIT only invests a small portion of its assets in real estates. In the Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund Offering Prospectus (Updated Version 2017), it is explicitly stated no more than 50% of its assets to be invested in real estates [20]. The actual percentage is smaller than the stated one because the equities of the target company would soon be

repurchased by Shenzhen Vanke Real Estate Co., Ltd. or its designated affiliates [20]. **Table 11** shows that real estates are not the main underlying assets of Penghua Qianhai Vanke REIT.

Table 11 Investment Portfolio of Penghua Qianhai Vanke REIT at Different Times

	As of December 31, 2015		As of December 31, 2016		As of December 31, 2017	
	Amount (Yuan)	Percentage of Total Assets (%)	Amount (Yuan)	Percentage of Total Assets (%)	Amount (Yuan)	Percentage of Total Assets (%)
Stocks	26,050,531.92	0.47	129,786,866.37	2.20	125,657,535.70	2.36
Bonds	3,626,325,600.00	65.44	4,082,180,606.20	69.18	3,851,351,488.50	72.31
Subtotal of Bank Deposits and Settlement Reserves	186,509,614.24	3.37	313,318,626.60	5.31	214,724,953.55	4.03
Other Assets¹⁹	1,702,390,356.21	30.72	1,375,874,809.04	23.32	1,134,077,804.65	21.29
Total	5,541,276,102.37	100.00	5,901,160,908.21	100.00	5,325,811,782.40	100.00

Sources: Annual Report of Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund in 2015, 2016 and 2017

Additionally, in different cases, C-REITs invest in different rights of the real estate assets. CITIC Qihang REIT, CYP A REIT and Poly REIT own the target properties indirectly and could exercise the right to dispose the properties [19] [21] [22]. However, Penghua Qianhai Vanke REIT does not own property rights to the target properties. In that case, Shenzhen Vanke Qianhai Enterprise Dream+ Park Project is a BOT project and the target company is entitled to the usufruct only for a certain period of time [20]. By holding the equities of the target company, Penghua Qianhai Vanke REIT is entitled to earnings from the BOT Project [20], but not the property right. Therefore, the investment return comes from rental income only, not from property appreciation.

¹⁹ This investment in the usufruct of the target property is part of the item “Other Assets”.

This situation exists because no legislation in China yet defines what are REITs, as mentioned in 3.2. Since the demand for REITs is strong and REITs are encouraged by Chinese government with preferential policies, some financial products are named REITs by the issuers despite of distinct forms, types, investment portfolios, etc., for the purpose of propaganda and benefits from policies.

This situation causes problems for investors. Investors who are unfamiliar with REITs could be misled by those products and form incorrect understanding from the very beginning. One opinion due to the misunderstanding is that REITs do not have fundamental difference from other fixed income products and is only another type of financing tool to increase the leverage level for real estate development companies [9]. Misunderstandings like this will hinder the healthy development of REITs in China.

3.4. C-REITs Type: Debt Equivalent

C-REITs in current pilot phase are debt-equivalent financial products like corporate bonds for the real estate companies, rather than a new business model for the residential rental markets and a new asset class benefiting investors it is intended to be, specifically in: Short Term and Incapability of Continuous Expansion (3.4.1), Structured Design with Large Portion in Senior Tranche (3.4.2), Lack of Intention for Permanent Sale of Properties (3.4.3), and Repurchase Obligations (3.4.4).

3.4.1. Short Term and Incapability of Continuous Expansion

The C-REITs are generally short-term in cases discussed in Chapter 2.

- **CITIC Qihang REIT**

The planned duration for CITIC Qihang REIT is five years [19] and the actual duration is three

years only [17].

- Penghua Qianhai Vanke REIT

The duration of Penghua Qianhai Vanke REIT is vaguer. Although the fund itself is indefinite, only in the first ten years it exists as Penghua Qianhai Vanke REIT [20]. Besides, 14%, 18%, 17.5% and 0.5% equities of the target company held by Penghua Qianhai Vanke REIT will be repurchased respectively at the end of the second year, the third year, the sixth year and the eighth year [20]. Since Penghua Qianhai Vanke REIT holds 50% equities of the target company altogether [20], that repurchase term arrangement means almost all (49.5% out of 50%) equities will be repurchased within the first six years.

- CYPA REIT

Similar to CITIC Qihang REIT, CYPA REIT has planned duration of five years, of which three years is the operation period and two years is the disposal period [21]. It is possible that CYPA REIT will be cleared soon after the operation period, like CITIC Qihang REIT.

- Poly REIT

The duration of Poly REIT is not clear yet. Although the maximum duration is 19 years, it can be adjusted by the asset management plan manager [22]. Within the range of 19 years, this adjustment could be considerable.

Table 12 provides an overview of the planned and actual duration of the four C-REITs.

Table 12 Duration of CITIC Qihang REIT, Penghua Qianhai Vanke REIT, CYPA REIT and Poly REIT

(In years)

	CITIC Qihang REIT	Penghua Qianhai Vanke REIT	CYPA REIT	Poly REIT
Planned Duration	5	6 ²⁰	5 (3+2) ²¹	Maximum 19 years
Actual Duration	3	Depending on actual repurchase time	Depending on actual disposal time	With flexibility to be adjusted

Sources: CITIC Qihang Special Asset Management Plan Offering Prospectus, Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund Offering Prospectus (Updated Version 2017), CYPA Apartment Equity REITs Asset Backed Special Plan Offering Prospectus, and GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 First Phase Asset Backed Special Plan Offering Prospectus

Besides short duration, the C-REITs in the pilot phase are lacking continuous expansion mechanism, which is a typical feature of REITs in mature markets. Among the cases, CITIC Qihang REIT has been cleared without acquiring other properties. Penghua Qianhai Vanke REIT is designed to only invest in the target property (Shenzhen Vanke Qianhai Enterprise Dream+ Park) within the first ten years, with no intention to purchase other properties. CYPA REIT is intended to only invest in the target property too. Poly REIT makes progress by first using the shelf registration system, but it's still within a relatively limited framework [3]. Without continuous existence and expansion, it would be difficult for C-REITs to provide long-term capital supply to residential rental markets, to scale and utilize more stock assets. It would also be difficult for professional operation companies to stand out.

²⁰ Calculated based on the planned repurchase time when 49.5% of 50% equities are repurchased.

²¹ Three years is the operation period and two years is the disposal period.

3.4.2. Structured Design with Large Portion in Senior Tranche

Among the four cases discussed in Chapter 2, except for the Penghua Qianhai Vanke REIT which is in the form of securities investment fund, other three cases have one thing in common: they are all structured in two tranches with large portion in the senior tranche. For CITIC Qihang REIT and Poly REIT, majority of the securities are in senior tranche (70.06% and 90% respectively) with fixed interests [19] [22]. For CYPA REIT the portion of senior tranche is smaller than that of CITIC Qihang REIT and Poly REIT, but still as large as 48.15% [21]. **Table 13** shows the proportions of the senior and junior tranches in previous cases.

Table 13 Proportions of Senior and Junior Tranche in Previous Cases

	CITIC Qihang REIT	Penghua Qianhai Vanke REIT	CYPA REIT	Poly REIT
Senior Tranche	70.06%	N/A	48.15%	90.00%
Junior Tranche	29.94%	N/A	51.85%	10.00%

Sources: CITIC Qihang Special Asset Management Plan Offering Prospectus, Penghua Qianhai Vanke REIT Hybrid Closed-end Securities Investment Fund Offering Prospectus (Updated Version 2017), CYPA Apartment Equity REITs Asset Backed Special Plan Offering Prospectus, and GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 (Phase One) Asset Backed Special Plan Offering Prospectus

Besides, the junior tranches are usually held by the original owner of assets or its affiliates. Independent external investors do not show much interests in them due to concerns of return, liquidity and conflict of interests [3]. For example, in the case of Poly REIT, all junior tranche securities are to be purchased and held by the original owner of assets (Poly Real Estate (Group) Co., Ltd) and these securities cannot be transferred unless there are effective judgements or rulings or written consents from the manager [22]. Therefore, the junior tranche is essentially credit support to lower the credit risk of the senior tranche securities.

3.4.3. Lack of Intention for Permanent Sale of Properties

Another indicator that current C-REITs are debt equivalent is that it seems the original owners of assets do not have the intention to permanently sell the properties. Pre-emptive rights and other necessary mechanisms are designed for these C-REITs. Cases will be analyzed in details below²².

- CITIC Qihang REIT

When the CITIC Qihang REIT was set up, according to CITIC Qihang Special Asset Management Plan Offering Prospectus, the non-public fund manager would try to find a best timing to dispose the properties or the equities of the project companies based on then real estate market conditions from the end of the third year to the end of the fifth year, in order to maximize the sale price and interests of the shareholders of CITIC Qihang REIT [19].

Three years later, on April 24, 2017, CITIC Qihang REIT entered the disposal phase [23]. On April 30, 2017, the project companies were evaluated worth 581.73 million yuan [23]. On May 22, 2017, the non-public fund manager, on behalf of the non-public fund, signed equity transfer agreement with CITIC Securities Co., Ltd. and its project companies to sell all equities of project companies to CITIC Securities Co., Ltd. at the evaluation price [23]. It is noted that CITIC Securities Co., Ltd. is the original owner of the project companies before CITIC Qihang REIT was established [19].

Although the law firm issued legal opinions stating the validity of the asset disposal via non-public agreement between the non-public fund manager and CITIC Securities Co., Ltd [23], this disposal price become controversial in public [24].

²² Since Penghua Qianhai Vanke REITs is only entitled to the usufruct of BOT project and does not own the target property, there is no foundation for the property disposal and therefore not relevant to analysis here 3.4.3. It will be analyzed separately in 3.4.4.

- **CYPA REIT:**

According to the asset purchase contract of CYPA REIT, when CYPA REIT enters its disposal period, equity shareholders of the plan and the property operation manager (Qingnianle (Beijing) Enterprise Management Co., Ltd.) have the pre-emptive right over the property [21]. They can choose to exercise their option by paying the agreed price documented in asset purchase contract of CYPA REIT [21].

Since the property operation manager (Qingnianle (Beijing) Enterprise Management Co., Ltd.) has the same legal representative as the original owner of the property [21], these terms could suggest the original owner is willing to keep the property.

- **Poly REIT:**

According to the agreement on the priority of asset acquisition signed between Poly Real Estate (Group) Co., Ltd. and the private fund manager, the original owner of assets (Poly Real Estate (Group) Co., Ltd.) has the option to purchase the equities and creditors' rights of the project companies and properties owned by these project companies, when the private fund manager tries to dispose them [22]. The purchase price is determined by the initial evaluation value. To maintain the option, Poly Real Estate (Group) Co., Ltd. is obligated to pay additional fees [22].

3.4.4. Repurchase Obligations

In the case of Penghua Qianhai Vanke REIT, it contributes capital to the project company and get 50% equities of the company [20]. The project company then has the obligation to repurchase these equities from Penghua Qianhai Vanke REIT at premium [25]. Shenzhen Vanke Real Estate Co., Ltd. will supervise the project company to fulfil the obligation and complete the process [25]. 14%, 18%, 17.5% and 0.5% of the equities shall be repurchases by December 31, 2015, December 31, 2018,

December 31, 2021 and October 31, 2023 respectively [25].²³

3.5. C-REITs Structure: Varying and Complicated

A common issue identified from the transaction structures of the four C-REITs cases (2.2.2, 2.3.2, 2.4.2, 2.5.2) is that the structures are varying and complicated. Again, the cause is lack of C-REITs legislation (3.2). Since there is no defined structure for C-REITs yet, they have to be issued in other forms. Therefore, the structures are adapted accordingly to comply with the regulations for that form.

For example, if C-REITs takes the form of public funds, like Penghua Qianhai Vanke REIT, they cannot directly invest in real estate properties according to the Securities Investment Fund Law of the People's Republic of China [9]. Therefore, some additional layers like SPVs are created between the fund and underlying assets to make it happen.

The varying and complicated structures impeded the promotion of C-REITs among small investors, because the multi-layer structures involving many interested parties are difficult to understand and accept. Therefore, small investors can hardly benefit from C-REITs and the goal to widen investment channels and to improve residents' income from property would be difficult to realize.

3.6. C-REITs Investors: Limited

Since born in the 1960s, REITs are meant to bring the commercial real estate investment

²³ The interested parties agreed to postpone the first repurchase time to March 31, 2017 while the dates of other three repurchase transactions remain unchanged [25]. The first equities repurchase transaction was completed on May 8, 2017 [32].

opportunities, which were only accessible to corporations and wealthy people before, to all investors. However, it is not yet true in REITs pilot phase in China generally²⁴. Details will be discussed below.

- CITIC Qihang REIT

The target investors of CITIC Qihang REIT are qualified institutional investors only and the threshold for transaction is high. During the sales period, the minimum amount of the first purchase is 5 million yuan for the senior tranche and 30 million yuan for the junior tranche [19]. When traded after the sales period, the minimum volume per transaction is 500,000 shares for the senior tranche and 300,000 shares for the junior tranche [19]. Investors who purchase the securities through the comprehensive agreement trading platform of Shenzhen Stock Exchange must also qualify as qualified investors as mentioned previously [19].

According to the Announcement on the Resolution of Security Holders' Meeting of the CITIC Qihang Special Asset Management Plan, only 12 securities holders or their representatives participated in the meeting reviewing the clearing plan, and the total amount of securities held by them were 38.14 million yuan [17]. It reflects the concentration of the investors of CITIC Qihang REIT.

- CYPA REIT and Poly REIT

Both of CYPA REIT and Poly REIT are issued as asset backed securities [21] [22]. According to Regulations on Asset Securitization Business of Securities Companies and Affiliates of Fund Management Companies, asset backed securities should be issued to qualified investors only and are restricted to be transferred within qualified investors [26]. Qualified investors shall meet the conditions defined in Interim Measures for Supervision and Management of

²⁴ Penghua Qianhai Vanke REIT is an exception. Since it is in the form of a public securities investment fund, the investor scope is larger than other three cases. Small investors who can invest in public securities investment funds can invest in Penghua Qianhai Vanke REIT.

Private Equity Funds [26]. According to Interim Measures for Supervision and Management of Private Equity Funds, qualified investors include pension funds, charitable foundations, investment plans, organizations with net assets more than 10 million yuan, private fund managers and employees, and individuals with more than 3 million yuan in financial assets²⁵ or average annual income more than half a million yuan in recent three years [27]. Besides, for asset backed securities, the number of target investors upon issuance or after transfer cannot exceed two hundred in total [26]. The minimum transaction amount during sales period is 1 million yuan [26].

Although the asset backed investment plans, which are established according to law, supervised by financial supervision and administration authorities of the State Council, and actively managed by relevant financial institutions, are no longer required to verify whether the final investors are qualified investors through and the number of investors are calculated in a combined way [26], these requirements together with reasons discussed in 3.5 make the majority investors are institutions in current REITs pilot phase [3]. Their investment strategy in most cases is to buy the senior tranches and hold them until maturity [3].

Combining analysis in 3.5 and 3.6, C-REITs in current pilot phase have following problems. First, they are not as beneficial as supposed to be for small investors. Second, due to the limited number of investors, the liquidity risk is relatively high that investors might not be able to sell the securities within a reasonable time period at a fair price. Third, the capital supply from C-REITs is also limited and the utilization of stock assets would be influenced. This would slow the real estate industry transformation and upgrading, influence supply to the residential rental markets. Since the housing demand can hardly be met by the residential rental markets and the investment demands of retail investors can hardly be met by C-REITs with high barriers, the pressure for housing price increase

²⁵ Financial assets include bank deposits, stocks, bonds, fund shares, asset management plans, financial products issued by banks, trusts, insurance, and future equities [27].

would still be there and C-REITs would not fully achieve the goals defined in Chapter 1.

3.7. C-REITs Taxes: Heavy

Under the current tax system in China, transactions related to real estates are subject to heavy tax burden [28]. Although not all relevant taxes are stated in the public documents of previous cases, some of them are explicitly mentioned.

- **CITIC Qihang REIT**

CITIC Qihang REIT states that individual investors are subject to the individual income tax [29]. Tax rate is 20% of the interests paid by CITIC Qihang REIT and it would be withheld when interests are paid [29].

- **CYPA REIT**

CYPA REIT lists taxes relevant to the operation of the apartment building, which include the following: 1) Property tax. The tax object is the property and the tax rate is 12% of rent revenue, levied on the owner annually; 2) Value added tax (VAT) and its additional taxes. VAT rate is 6.00% of rent and its related revenue. VAT additional tax rate is 12% of VAT; 3) Stamp tax. The tax rate is 0.1% of rent and its related revenue; 4) Urban land use tax. The tax rate is 24 yuan per square meter per annum [21].

- **Poly REIT**

Poly REIT mentions taxes on different levels in its structure. On the project company level, relevant taxes include those mentioned above in CYPA REIT and corporate income tax if there is net corporate income [22]. On the private fund level, VAT and its additional taxes apply [22]. If Poly REIT exits by Poly Real Estate (Group) Co., Ltd. exercising its option to purchase the equities of the project company, the property tax applies [22].

Table 14 provides an overview of C-REITs relevant taxes in current phase when C-REITs take the form of “Public Securities Investment Funds + Asset Backed Securities”. This heavy tax burden undermines the investment return of C-REITs and thus reduce the attractiveness for investors [28].

Table 14 Overview of C-REITs Relevant Taxes When They are in the Form of “Public Securities Investment Funds + Asset Backed Securities”

Phase	Transaction	Tax Object	Taxable Action	Tax Category	Tax Base	Tax Rates
Establishment	SPVs Acquire Assets	Initiator (Seller)	Asset Transfer	VAT	Transfer Income	11% or 5% ²⁶
				VAT Additional Taxes ²⁷	VAT	12%
				Land Appreciation Tax	Land Appreciation	30%-60%
				Stamp Tax	Contract Amount	0.05%
				Corporate Income Tax	Taxable Income	25%
				SPV (Buyer)	Asset Transfer	Deed Tax
	C-REITs Acquire Equities	Initiator (Seller)	Equity Transfer	Corporate Income Tax	Taxable Income	25%
				Stamp Tax	Contract Amount	0.05%
		C-REITs (Buyer)	Equity Transfer	Stamp Tax	Contract Amount	0.05%
		Operation	Operate Properties	Project Companies	Property Leasing	VAT

²⁶ VAT rate for the real estate and construction industry is 11% [28]. Simple taxation can be applied to projects obtained or started before April 30, 2016, where tax rate is 5% [28].

²⁷ VAT additional taxes include urban construction tax, extra charges of education funds, extra charges of local education funds, flood prevention charges etc. [28]. The total VAT additional taxes rate is 12% of VAT [28].

				VAT Additional Taxes	VAT	12%		
				Stamp Tax	Rent Revenue	0.1%		
				Corporate Income Tax	Taxable Income	25%		
					Property Holding	Property Tax	Rent Revenue or Property Value	12% or 1.2%
						Land Use Tax	Area	From 1.5 to 30 yuan in big cities
Pay Out Dividends		Institutional Investors	Dividends	VAT	Exempted for Closed-end Securities Investment Funds			
				Corporate Income Tax				
		Individual Investors	Dividends	VAT				
				Individual Income Tax				
Exit	Investors Sell Public Fund Shares in Secondary Markets	Investors	Capital Gains	VAT and individual income tax are exempted for individual investors. Institutional investors shall pay corporate income taxes based on the capital gains.				
	C-REITs Dispose Assets or Equities of SPVs	C-REITs or SPVs	Property Transfer	Similar to the asset transfer and equity transfer in the establishment phase.				

Sources: Q. LIU, W. LI, Z. ZHANG, Q. ZHOU and J. YU, "Study on Tax System of Real Estate Trust Investment Fund," Beijing, 2018.

3.8. Chapter Summary

Chapter 3 first analyzes the root cause of problems identified in past C-REITs cases, which is lack

of C-REITs legislation (3.2). Then it analyzes the following problems in details: ambiguous C-REITs definition (3.3), debt-equivalent C-REITs types (3.4), varying and complicated C-REITs structures (3.5), limited C-REITs investors and liquidity (3.6), and heavy tax burden for C-REITs (3.7).

Chapter 4. Proposals for Improving REITs for Residential Rental Markets in China

4.1. Chapter Introduction

Chapter 4 provides corresponding proposals for the problems analyzed in Chapter 3. These proposals include to enact C-REITs legislation (4.2), to focus on real estate (4.3), to encourage equity REITs (4.4), to organize REITs as companies (4.5), to lower barriers for investors and improve liquidity (4.6), and to provide tax incentives (4.7).

4.2. Fundamental: Enact C-REITs Legislation

To fully play its role in the reforms of real estate and financial market in China by supplying long-term capital to residential rental markets, providing new business models and expanding investment channels for households, the problems regarding current C-REITs discussed in Chapter 3 must be resolved. Since the root cause is lack of designated C-REITs legal framework, to enact REITs legislation is the fundamental step.

The importance of REITs legislation can be demonstrated clearly by the development of REITs in US. REITs are created when the REIT Act of 1960 were signed into law [30]. Later, corporations are allowed as a form of REITs besides business trusts by the Tax Reform Act of 1976 [30]. The Tax Reform Act of 1986 eliminates some real estate tax shelters and allows REITs to manage properties internally. The REIT Modernization Act of 1999 lowers the distribution requirement of REITs [14] and permitted REITs to own one or more taxable subsidiaries to provide services to tenants [30].

Currently the total amount of real estates in US is 27 trillion dollars while that of China is 44 trillion

dollars [9]. The publicly traded REITs in US are worth more than 1 trillion dollars [9]. Considering the urban population, total amounts of real estates and fixed asset investment volume in China, the public C-REITs market is estimated to be between 4 and 12 trillion yuan, with potential to keep growing [31]. To enact REITs legislation will help China to prepare for this huge market. It also embodies the idea of governing the country according to law [10] .

Among other areas, the definition, type, structure, target investors and tax regime of C-REITs should be defined, which will be discussed in following sections from 4.3 to 4.7.

4.3. C-REITs Definition: Focus on Real Estates

To address ambiguity of REITs definition (3.33.3), qualifications for REITs shall be defined to highlight its focus on real estates [9]. The definition should clarify what percentage of assets should be invested in real estates, what portion of income should come from real estates, what rights C-REITs are entitled to and how much income should be distributed. In this way, it will help solve the ambiguity demonstrated by Penghua Qianhai Vanke REIT which is essentially a bond fund but named REIT, because it invests a small portion of assets in real estates and don't own the property.

The US qualifications of REITs provide a good template for China. These qualifications are: "To qualify as a REIT, a company must have the bulk of its assets and income connected to real estate investment and must distribute at least 90 percent of its taxable income to shareholders annually in the form of dividends. In addition to paying out at least 90 percent of its taxable income annually in the form of shareholder dividends, a REIT must:

- Be an entity that would be taxable as a corporation but for its REIT status;
- Be managed by a board of directors or trustees;
- Have shares that are fully transferable;
- Have a minimum of 100 shareholders after its first year as a REIT;

- Have no more than 50 percent of its shares held by five or fewer individuals during the last half of the taxable year;
- Invest at least 75 percent of its total assets in real estate assets and cash;
- Derive at least 75 percent of its gross income from real estate related sources, including rents from real property and interest on mortgages financing real property;
- Derive at least 95 percent of its gross income from such real estate sources and dividends or interest from any source; and
- Have no more than 25 percent of its assets consist of non-qualifying securities or stock in taxable REIT subsidiaries. " [13]

4.4. C-REITs Type: Encourage Equity REITs

The roles of C-REITs in China's reforms include to supply long-term capital to residential rental markets, to provide new business models for the real estate industry to utilize stock assets and to provide diversified investment opportunities for household investors. However, current C-REITs in the pilot phase are not able to meet these goals.

First, as analyzed in Chapter 3, many of current C-REITs are short-termed, structural designed and repurchase-obligated. These characteristics make them debt equivalent, which add more debts to real estate development companies and contradict with the goal of deleverage. Even if they can supply capital to the residential rental markets for a certain period of time, the companies still face pressure to pay back the debt soon. It can hardly achieve the goal of providing long-term stable capital for the residential rental markets.

Second, they do not exist continuously and there is no continuous expansion mechanism. Real estate companies are not motivated to improve management levels and actively purchase or dispose assets [3]. Working as a pure financing tool, the real estate industry can go with the traditional

business models. Thus current C-REITs can hardly facilitate the transformation and upgrading of the real estate industry and make the best use of stock assets.

Third, they only pay fixed returns for the senior tranche which is typically the majority among all tranches. Although junior tranches are entitled to the capital gain, these tranches are generally held by the original owners of assets as credit support. External investors show little interests in them [3]. Therefore, external investors generally do not benefit much from long-term capital appreciation. Investors still have strong motivation to invest directly in the housing market by purchasing houses. Therefore, current C-REITs are not very helpful to drive housing price back to reasonable levels.

Fourth, these debt-equivalent C-REITs could have a strong correlation with stocks and corporate bonds of real estate development companies, so they might not provide good diversification in investors' portfolios. Compared to that, one well known characteristic of REITs in mature countries is low correlation with other stocks and bonds so they add diversification for investors.

To solve above problems and achieve the goals discussed in Chapter 1, equity REITs²⁸ could be a suitable solution.

First, they provide long-term stable capital for residential rental markets. Since they invest in equities, the leverage level of real estate companies would be lower and corresponding credit risks for banks would be reduced.

Second, equity REITs own and operate income-generating real estates. They could exist in long time and continuously expand their business. For example, in US, some of the first equity REITs

²⁸ There are mainly three types of REITs: equity REITs, mortgage REITs and hybrid REITs. Equity REITs usually own and manage the real estate properties. Mortgage REITs lend money to real estate owners and/or operators directly or indirectly. Hybrid REITs are combination of both equity REITs and mortgage REITs. [13]

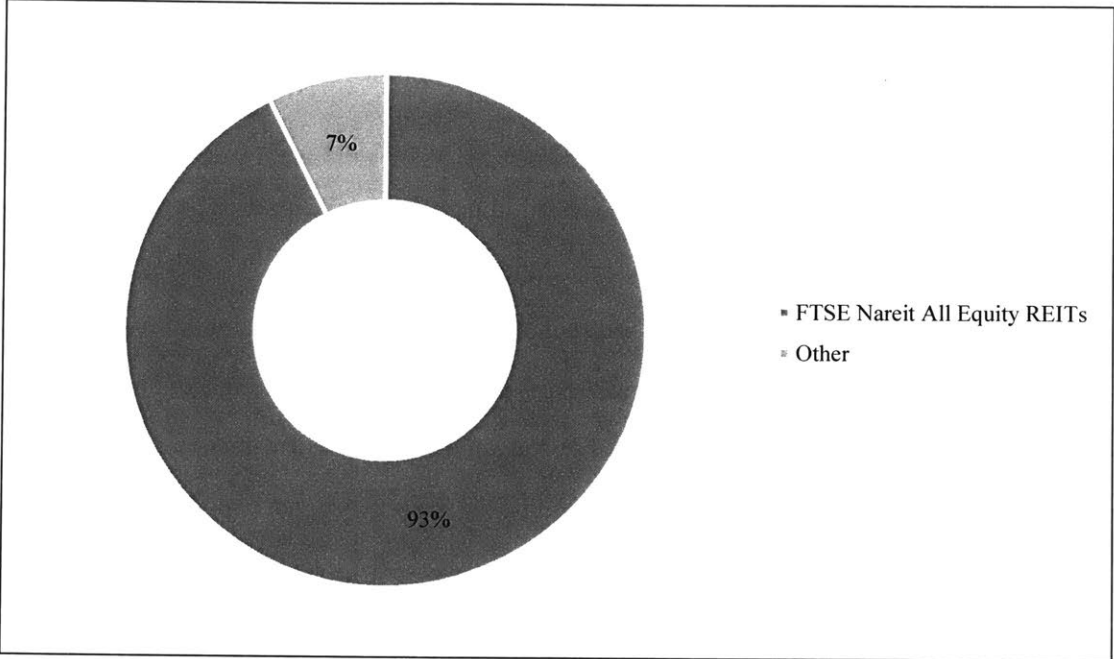
created in 1960 - 1961, like Pennsylvania REIT (NYSE: PEI) and Washington REIT (NYSE: WRE), are still in existence today [12]. The capability to acquire and dispose assets together with sizable possibilities provides motivation for REITs to purchase stock assets, improve the management levels and expand the whole industry [3]. In this way the supply-side reform of the real estate industry could be facilitated and stock assets could be better utilized. Furthermore, the residential rental markets will benefit from better operation and management.

Third, equity REITs combine best attributes of real estates and stocks [12]. The equity nature makes it possible for investors to gain capital appreciation in addition to regular incomes from rent, therefore it would reduce the investment demand for housing purchase and divert some capital from short-term speculation. It would help drive the housing price back to reasonable levels while providing long-term appreciation for investors.

Fourth, as an independent asset class with low correlation with other stocks and bonds, equity REITs provides better diversification for investors [9].

As a matter of fact, equity REITs as the primary type of REITs in mature markets have proved its popularity and success. As of February 28, 2018, FTSE Nareit All Equity REITs equity market capitalization is \$954.1 billion while FTSE Nareit All REITs equity market capitalization is \$1.031 trillion [15]. Equity REITs share 93% of the total publicly listed REITs equity market capitalization. **Figure 12** shows the market share of equity REITs in US.

Figure 12 Market Share of Equity REITs in Total Publicly Listed REITs Equity Market Capitalization



Sources: Nareit

4.5. C-REITs Structure: Organize as Companies

Based on the current legal framework in China, there are mainly two options for the C-REITs structure: one is that, based on the Company Law of the People’s Republic of China and the Securities Law of the People’s Republic of China in China, C-REITs are organized as companies like in US, which directly own properties, issue stocks and go public in stock exchanges; the other is, based on the Securities Investment Fund Law of the People’s Republic of China, C-REITs are organized as trusts, in the form of public securities investment funds [9]. Since public securities investment funds cannot invest in real estates directly, these funds will invest in asset backed securities or equities of owner companies of properties to own the properties indirectly [9].

Some argue that the “Fund + ABS/Equities of Target Company” model is better because it leverages

current framework with less difficulty in design and legislation [9]. However, this model, similar to the structure of Penghua Qianhai Vanke REIT, will easily encounter similar problems discussed in Chapter 3.

First, this “Fund + ABS/Equities of Target Company” model faces the ambiguity of REITs definition. Besides the percentage of assets invested in real estates, the asset backed securities or equities of the target company are not necessarily entitled to property rights. In Penghua Qianhai Vanke REIT, it will be only entitled to the usufruct of the BOT project for a certain period of time. Second, the asset backed securities it invests are probably structural designed under current circumstances. If it only holds the senior tranches and get fixed returns, it will not benefit from the capital appreciation. Third, this “Fund + ABS/Equities of Target Company” model automatically introduce complicated structures. There would be many layers and interested parties, with multi-level fiduciary relationships vulnerable to moral hazard and ineffective governance [9]. It would be difficult to protect the benefits of investors. Fourth, the multi-level structure could mean unnecessary duplicate taxes. Taxes are to be levied on the REITs level, fund level, project company level etc. and the tax rates related to the transaction and operation of real estates are already high [28].

Compared with this “Fund + ABS/Equities of Target Company” model, REITs organized as companies will address these problems.

First, they could be defined clearly as companies that own and operate real estates and do not face the ambiguity of definition as the “Fund + ABS/Equities of Target Company” model does. Second, these companies issue stocks by which investors could own equities and the underlying properties, so shareholders can benefit from both increasing rent revenue brought by better performance and capital gains in property disposal. Third, the structures would be simpler than the “Fund + ABS/Equities of Target Company” model. Middle layers would be unnecessary. Governance would

be easier. Investors' rights could be better protected. Fourth, the independent entities and simple structures make tax reform for REITs easier.

4.6. C-REITs Investors: Allow Small Investors

Since created, REITs are intended to provide small investors with access to income producing real estates which previously only available to large institutions and wealthy individuals [12]. Besides, REITs are supposed to bring other benefits including pooling, diversification and professional management to small investors [14].

However, in current C-REITs cases, there are high barriers for small investors to benefit from it, as discussed in 3.6. To make the initial intentions come true and to achieve the goal of improving residents' income from properties, these barriers need to be lowered. C-REITs need to be accessible as stocks and mutual funds. However, measures discussed in 4.2, 4.3, 4.4, and 4.5 are prerequisites to make this happen.

By allowing small investors in the market, the liquidity of C-REITs could be improved. In turn, better liquidity benefits all investors as what is historically demonstrated in mature markets.

4.7. C-REITs Taxes: Provide Incentives

Tax benefits are an important reason why REITs gain popularity in mature markets. As shown is US, the development of REITs has been accompanied by tax reforms [14]. However, as discussed in 3.7, current tax regime in China makes C-REITs subject to heavy tax burdens, limiting the investment returns of C-REITs [28].

To promote C-REITs and unleash its power in the reforms of real estate and financial markets, tax reform is inevitable. One concern for the tax reform is that tax revenue might be affected negatively if tax support policies are created for C-REITs, but research shows that C-REITs will broaden tax base, increase tax revenue and contribute to standardize tax systems [28]. Therefore, tax incentives for C-REITs should be provided with reference to the international practice.

4.8. Chapter Summary

Chapter 4 proposes solutions for problems identified in REITs pilot phase in China (Chapter 3). These proposals include to enact C-REITs legislation (4.2), to focus on real estates (4.3), to encourage equity REITs (4.4), to organize REITs as companies (4.5), to lower barriers for investors and improve liquidity (4.6), and to provide tax incentives (4.7).

Chapter 5. Conclusions

Although China has made progress in the REITs pilot phase, there are still gaps between current C-REITs and REITs in mature markets in important aspects including REITs legislation, definition, type, structure, investor scope, liquidity and tax system etc. This thesis discusses the importance of REITs development for the residential rental markets and financial systems in China, identifies existing problems of four C-REITs cases in the pilot phase and provides corresponding proposals to cope with these problems. In order to fulfil its potential role in the ongoing reforms in China, REITs should be studied more extensively from the experience of developed markets and be adapted properly to better serve Chinese markets.

References

- [1] National Development and Reform Commission of the People's Republic of China, "National New Urbanization Plan (2014 – 2020) ," 2014.
- [2] National Bureau of Statistics of the People's Republic of China, "National Bureau of Statistics of the People's Republic of China," 2018. [Online]. Available: <http://www.stats.gov.cn/>. [Accessed 4 April 2018].
- [3] Z. ZHANG, W. LI, Q. LIU, Q. ZHOU and J. YU, "Research on China Residential Rental REITs Market Development," 2017.
- [4] Industrial Bank Co., Ltd; The Boston Consulting Group, "Private Banking in China 2017," 2017.
- [5] L+ Research Institute, "The Rise of Leasing," 2016.
- [6] General Office of the State Council, "Several Opinions of the General Office of the State Council on Accelerating the Fostering and Development of the Residential Rental Market," 2016.
- [7] Ministry of Housing and Urban-Rural Development et al., "Notice on Accelerating the Development of the Residential Rental Market in Large and Medium-Sized Cities with A Net Inflow of Population," 2017.
- [8] K. LI, "Annual Government Work Report - At the Opening Meeting of the First Plenary Session of the 13th National People's Congress, March 5, 2018," Beijing, 2018.
- [9] Q. LIU, Z. ZHANG, X. LIU, Y. YANG, Q. ZHOU, S. XU, Y. ZHU, J. YU, X. FAN and W. e. a. LI, "White Papers of China Public Offering REITs Development," 2017.
- [10] J. XI, "To Win the Victory of Building a Well-off Society in an All-round Way and a Great Victory of Socialism with Chinese Characteristics in a New Era: A Report at the 19th National Congress of the Communist Party of China," Beijing, 2017.

- [11] State Council, "State Council's Opinions on Stimulating the Vitality of Key Groups to Promote the Increase in Income of Urban and Rural Residents," 2016.
- [12] Nareit, "Nareit," 2018. [Online]. Available: <https://www.reit.com/>. [Accessed 6 April 2018].
- [13] U.S. Securities and Exchange Commission, "Real Estate Investment Trusts (REITS)," [Online]. Available: <https://www.sec.gov/fast-answers/answersreitshtm.html>. [Accessed 23 April 2018].
- [14] L. G. GOLDBERG and A. NEBESAR, "Cypress Sharpridge: Raising Capital in a Time of Crisis," Harvard Business School Publishing, Boston, 2010.
- [15] Nareit, "REITWatch," 2018.
- [16] Shanghai HeYi Financial Services Limited, "China Securitization Analytics," 2018. [Online]. Available: <https://www.cn-abs.com/>. [Accessed 15 April 2018].
- [17] CITIC Securities Co., Ltd., "Announcement on the Resolution of Security Holders' Meeting of the CITIC Qihang Special Asset Management Plan," 2017.
- [18] The Authority of Qianhai, "About Us," [Online]. Available: http://www.szqh.com.cn/Support/About_SZQH/. [Accessed 22 April 2018].
- [19] CITIC Securities Co., Ltd., "CITIC Qihang Special Asset Management Plan Prospectus," 2014.
- [20] Penghua Fund Management Co., Ltd., "Penghua Qianhai Vanke REITs Hybrid Securities Investment Closed-end Fund Offering Prospectus (Updated Version 2017)," 2017.
- [21] Bohai Huijin Securities Asset Management Co., Ltd., "CYPA Apartment Equity REITs Asset Backed Special Plan Offering Prospectus," 2017.
- [22] Qianhai Kaiyuan Asset Management Co., Ltd. et al., "GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 (Phase One) Asset Backed Special Plan Offering Prospectus," 2017.
- [23] CITIC Securities Co., Ltd., "CITIC Qihang Special Asset Management Plan Announcement,"

2017.

- [24] "Yielding Only 17.9% on Junior Tranche, CITIC Qihang REITs Accused of Infringement of Investor Income by More than 400 Million.," 14 June 2017. [Online]. Available: <http://finance.sina.com.cn/stock/quanshang/qsyj/2017-06-14/doc-ifyfzfy3968221.shtml>.
- [25] Penghua Fund Management Co., Ltd., "Announcement on Changes in Equity Repurchase of Penghua Qianhai Vanke REITs Hybrid Securities Investment Closed-end Fund," 2015.
- [26] China Securities Regulatory Commission, "Regulations on Asset Securitization Business of Securities Companies and Affiliates of Fund Management Companies," 19 November 2014. [Online]. Available: http://www.csrc.gov.cn/pub/newsite/flb/flfg/bmgf/jj/gszl/201510/t20151012_284996.html. [Accessed 21 April 2018].
- [27] China Securities Regulatory Commission, "Interim Measures for Supervision and Management of Private Equity Funds," 25 7 2016. [Online]. Available: http://www.csrc.gov.cn/pub/heilongjiang/xxfw/hljflfg/201607/t20160729_301412.htm. [Accessed 21 April 2018].
- [28] Q. LIU, W. LI, Z. ZHANG, Q. ZHOU and J. YU, "Study on Tax System of Real Estate Trust Investment Fund," Beijing, 2018.
- [29] CITIC Securities Co., Ltd., "Announcement on the Income Distribution of the Fourth Phase (and Asset Disposal) of CITIC Qihang Special Asset Management Plan by CITIC Securities Co., Ltd.," 2017.
- [30] Nareit, "REIT Industry Timeline," Nareit, 2018. [Online]. Available: <https://www.reit.com/investing/reit-basics/reit-industry-timeline>. [Accessed 29 April 2018].
- [31] Q. LIU, Z. ZHANG, W. LI, Q. ZHOU, X. LIU, Y. YANG, S. XU, Y. ZHU, J. YU and X. e. a. FAN, "Research on the Market Size of China's Real Estate Investment Trust Funds," Beijing, 2017.
- [32] Penghua Fund Management Co., Ltd., "2017 Annual Report of Penghua Qianhai Vanke

- REITs Hybrid Securities Investment Closed-end Fund," 2018.
- [33] Penghua Fund Management Co., Ltd., "2015 Annual Report of Penghua Qianhai Vanke REITs Hybrid Securities Investment Closed-end Fund," 2016.
- [34] Penghua Fund Management Co., Ltd., "2016 Annual Report of Penghua Qianhai Vanke REITs Hybrid Securities Investment Closed-end Fund," 2017.
- [35] Penghua Fund Management Co., Ltd., "Public Announcement of Listing of Penghua Qianhai Vanke REITs Hybrid Securities Investment Closed-end Fund," 2015.
- [36] Poly Real Estate (Group) Co., Ltd., "Announcement on the Establishment of GSUM Qianhai Kaiyuan-Poly Real Estate Rental Housing No.1 First Phase Asset Backed Special Plan," 2018.
- [37] "Build–operate–transfer," [Online]. Available: <https://en.wikipedia.org/wiki/Build–operate–transfer>. [Accessed 24 Apr 2018].