

The Implications of US Senior Housing to China

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ABSTRACT

In 2005, China had approximately 144 million people aged over 60, accounting for 11 percent of the whole population. In 2010, this population will reach 1,700 million and consist of 12.78% of the total population. It is also estimated that less than 200,000 seniors live in those not-for-profit, non-government senior housing centers. This is 0.14% of total population of 144 million people aged over 60 in 2005. If 3% of seniors may choose to live in a senior housing environment, it will create an investment market of RMB90 billion to RMB100 billion. However, in China, much foreign capital has been invested in real estate products such as office, residential, retail, logistics, and hotel. Little capital has been deployed in senior housing. The for-profit senior housing market is emerging as local developers have started to catch up the needs of the elderly in China. None of them are sophisticated enough compared to senior housing owners and operators in US. In China, the increased number of middle-class, and the rapid social and cultural changes of traditional elderly care have demonstrated that the elderly' great needs for better quality of retirement life and experiences. The existing for-profit senior housing market in US and both the for-profit and not-for-profit markets in China are discussed. Opportunities and challenges to US developers/ investors as well as the implications of US senior housing to China are analyzed. Several strategies are also proposed for potential US developers and/ or investors to seriously look into this niche market in China now.

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ABBREVIATIONS

Chinese “Acre”- mu

One mu equals approximately 667 square meters.

Chinese Hukou

A hukou is residence register in China and is part of the household registration system in China.

Minying Enterprises

Enterprises are different from state-owned enterprise or private companies. Minying enterprises consist of collectives, cooperatives, joint-stock ventures, household businesses, larger privately-owned firms and “state-owned, people-managed” enterprises, not including foreign-funded firms.

RMB

RENMINBI, Chinese currency, \$1 is approximately RMB7.6.

Three Noes

The “Three-Noes” refers to the elderly who have no families or families do not have the financial capability to take care the elderly, no work capability and no income.

CHAPTER 1

INTRODUCTION

1.1. General

China has stepped into an aging society which will continue for the next a few decades. However, senior housing industry in China has just emerged for the past a few years, while the United States and other developed countries and/or regions such as Canada and Europe have had a very mature senior housing industry for decades. The industry is still growing very fast in US, Canada and Europe as the aging continues. In US, about 77 million baby boomers were born between 1946 and 1964. The oldest will turn 65 in 2011. These people on average can expect to live to 83. Many will live until their 90s (Harvard 2004). This trend stimulated more growth and consolidations in the senior living industry in US in 2006 (Assisted Living Executive 2007).

1.2. Research Objectives

The objectives of the present research are to understand the existing senior housing industry in both China and US, and to discuss major differences of the growth of senior housing industry between these two countries. It intends to help US developers and investors understand potential opportunities and challenges to invest in senior housing in China. It can also serve Chinese developers or government officials to understand better practices in US so that are able to attract both intellectual and monetary capitals from overseas to grow and boom senior housing industry in China for a win-win outcome. In essence, the present research is to investigate what can applied to China effectively from what has been existing in US on senior housing. In summary, the objectives of this research are as follows:

- 1) Study the existing senior housing industry in both US and China.
- 2) Discuss about the differences of the two markets.
- 3) Analyze opportunities and challenges of the senior housing industry in China.
- 4) Propose strategies for investing and developing senior housing in China.

1.3. Research Methodology

The methodology adopted in the present research is to conduct a literature review from the industry practice rather than academic perspective, and analysis of the existing senior housing for-profit senior housing market in US and overall senior housing market in China. The focus will be on the following:

- To study the senior housing industry in US.
- To review aging in China.
- To review elderly care practices in China.
- To collect and analyze senior housing market data in China.
- To discuss about the implications of US senior housing to China.

1.4. Thesis Organization

Chapter 2 presents a literature review comprising: 1) for-profit senior housing industry in US, and 2) senior housing industry in China including topics on aging and elderly care. The chapter will focus on for-profit senior housing in US, but cover both for-profit and not for profit senior housing in China.

Chapter 3 describes in details of potential opportunities and challenges of investing and developing senior housing in China from a US investor and/ or developer's point of view.

Chapter 4 discusses about the implications of US senior housing that may be applied to China. A comparison analysis is presented.

Chapter 5 provides concluding remarks and recommendations for future work.

CHAPTER 2

LITERATURE REVIEW

2.1. General

The literature review on US senior housing will focus on the for-profit senior housing market only to understand the development and size of the market, types of senior housing, and types of companies which are developing and investing in senior housing. On China senior housing, the review will be in a broader scope, including current aging and elderly care practices, and both not-for-profit and for profit senior housing. The objective is to help a US developer and/ or investor understand the aging, the elderly care in a macro level, and current senior housing practices in China. Another reason why the focus in US is on the for-profit sector is that the market driven business models and practices in this sector may be easily implemented in China, while the senior housing practices in the government, not-for-profit sector in US are more difficult for China to pick up. Comparisons and analyses between US and China senior housing will be conducted Chapter 3.

2.2. US Senior Housing Market

Sexton (1998) has described that religiously-affiliated non profit facilities for seniors started in 1800s. However, for-profit senior housing industry started to grow and boom only until late 1970s when HUD Section 8 independent living seniors housing and Section 202 residential care facilities loan guarantees could be applied to for-profit entities. In the 1980s a boom in senior housing by for-profit entities came along with another boom in other commercial real estate. When other commercial real estate crashed in the late 1980s and early 1990s, the for-profit senior housing industry suffered as well. In the 1980s, while a wide range of senior housing residences were developed, the congregate senior housing was the dominant property type among these for-profit firms. The senior housing industry has realized that senior housing is mainly driven by the needs of seniors who have lost a spouse or some independent living competences. Senior housing has integrated residence housing, services, personal care, and health care. Most senior housing is marketing towards the families of seniors, or towards the hospital discharge controllers, rather than the senior themselves.

The federal government regulates senior housing through the following ways:

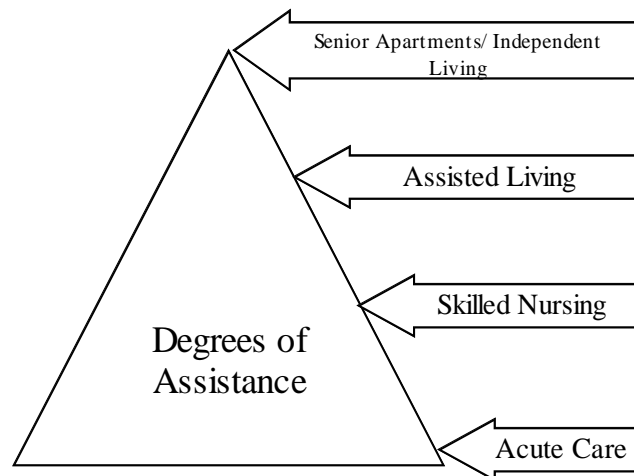
- civil rights regulations (the Fair Housing Act),
- direct rental subsidies (HUD Section 8),
- financing guarantee requirements (HUD Section 232),
- federal income tax-exempt financing provisions (IRC Section 142 (d)),
- federal low-income housing tax credit provisions (IRC Section 42),
- Medicare or Medicaid “reimbursement” requirements.

State regulations on senior housing are mainly related to Medicaid systems, building codes and land use regulations, as well as on-going health and safety requirements. States may also add different layers of regulations to different senior housing.

2.2.1. Types of Senior Housing in US

Figure 1 shows degrees of assistance related to five basic types of senior housing in US, which include senior apartments, independent living, assisted living, skilled nursing and acute care. Senior apartments and independent living facilities offer little assistance. Assisted living is a hybrid of independent living and skilled nursing, while acute care is more operated like or under a hospital. Many of these forms of housing may be combined on the same site to give seniors a wide range of options and a chance to age within the same community once they move in.

Figure 1. Degrees of Assistance Related to Different Types of Senior Housing



For example, a continuing care retirement community (CCRC) provides all the service types mentioned in the above. CCRCs offer a variety of lifestyle options, services, and programs designed to help senior residents maintain health and independence for as long as possible. All CCRCs offer three basic levels of care: independent living, assisted living, and skilled nursing care. Independent living apartments are good for individuals who need little or no assistance, while assisted living apartments are designed for those who need some help with the activities of daily living (e.g., eating, bathing, medication management). Skilled nursing care offers residents both short-term and long-term nursing care as needed.

Care can also be offered in an on-site Health Care Center for a 24-hour nursing care. All residents have access to services such as routine health screenings, as well as more specialized services such as speech, physical, or occupational therapy. Residents can stay in the Health Care Center while recovering from short-term illness or injury, then return to their apartment or cottage when they have recovered. Long-term care services are available for residents in the Health Care Center as well. The choices available to senior residents within a CCRC allow them to enjoy a truly personalized retirement.

2.2.2. Size of US Senior Housing Market

Anikeef and Mueller (1998) cited that the institutional investment-quality senior housing market was valued at \$86 billion and it was estimated that it would grow to \$490 billion in the next 35 years from then. American Senior Housing Association (ASHA 2004), and ASHA and National Investment Center (ASHA and NIC 2005) indicated that the total number of for-profit, senior housing units was 1,916,632 in US (refer to Table 1). If using average bed price of \$132,900 for assistive living to multiply with the total number of units, the whole market is worth approximately \$254.7 billion. In 2006, the skilled nursing facility market continued to strengthen and skilled nursing beds hit a record high of an average price of \$52,000 per bed, or 20% higher than the prior year. This level is more than 50% higher than the average price per bed in 2003 (Monroe 2007).

Table 1. Total Number of Senior Housing Units in 2004 by ASHA and NIC

Property Type	Number of Units/Beds
Congregate/ Independent Living	731,932
Assisted Living	549,484
CCRC	635,216
Total	1,916,632

Source: ASHA 2004, ASHA and NIC 2005

Table 2 and 3 show the descriptive statistics of the 50 largest owners and managers in US according to ASHA (2007). Appendix 1 has a full list of the 50 largest owners and managers of senior housing in US in 2006.

Table 2. Descriptive Statistics of 2006 ASHA US 50 Largest Senior Housing Owners

	Mean	SE Mean	Standard Deviation	Sum	Minimum	1st Quartile	Median	3rd Quartile	Maximum
Number of Units	7,746	918	6,494	387,297	2,240	3,080	4,949	10,098	31,278
Number of Properties	72	11	79	3,589	5	14	35	115	330

Source: ASHA 2006

Table 3. Descriptive Statistics of 2006 ASHA US 50 Largest Senior Housing Managers

	Mean	SE Mean	Standard Deviation	Sum	Minimum	1st Quartile	Median	3rd Quartile	Maximum
Number of Units	8,462	1,450	10,254	423,082	2,218	2,799	4,603	8,977	50,443
Number of Properties	66	14	102	3,273	7	13	28	61	536

Source: ASHA 200

The 50 largest owners and managers of senior housing in US include public real estate operation companies, healthcare REITs, and private companies. On the owner side, Colson & Colson/Holiday Retirement Corp. owned 31,278 beds and managed 32,311 beds; Brookdale owned 16,971 beds but managed 50,433 beds; Sunrise is in the similar situation, it managed 44,000 beds but owned only 16,000 beds. Boston Capital is a real estate investment and advisory firm which owned 19,800 beds but probably had all managed by third parties. Senior Housing Properties Trust, a healthcare REIT, owned 16,609 beds and probably had third parties managed them as well. The number of beds cited here can be referred to Appendix 1. All data are as of July 1, 2006.

The following sections will briefly introduce a few key players in the US senior housing, which have been very active in owning, managing, acquiring, and/ or developing senior housing recently. The review will focus on their portfolios as well as some of their current business strategies, and activities, if any.

1. Brookdale Senior Living, Inc. (NYSE: BKD)

As the largest provider of senior living facilities in the U.S., Brookdale has been in this industry since 1981. The Chicago based company has 27,000 employees today and cares for more than 51,000 permanent residents at its 546 centers in 37 states. It has doubled in size from growth and acquisitions from January 2006. During 2006, it acquired \$3.3 billion in senior housing assets with a capacity for 25,000 residents. To continue capitalizing on the trend for serving more baby boomers, the CEO of Brookdale has identified 60 of his facilities to add 2,000 more units over the next three years, and is allocating \$500 million to the task (Pincus 2007).

2. Sunrise Senior Living, Inc. (NYSE: SRZ)

As of March 31, 2007, Sunrise operated 444 communities with capacity for more than 52,000 residents, located in the United States, Canada, Germany and the United Kingdom. With 42 communities already under construction, Sunrise expects to increase capacity by more than 6,300 residents or 12 percent within the next 18 months. Between now and the end of 2009, Sunrise is targeting breaking ground on new communities with capacity for over 15,000 residents, bringing worldwide capacity to over 73,000 residents (SRZ 2007).

3. Colson & Colson/ Holiday Retirement Corp.

Holiday and its affiliates operate more than 260 retirement communities in 39 states in US, 6 provinces in Canada, plus facilities in UK and France. Its CEO, William E. Colson, is also the managing partner of Colson & Colson Construction Co., and President of Colson & Colson General Contractor, Inc. Beginning in 1979, Colson & Colson began focusing almost exclusively on the development of retirement residences. Today Colson & Colson's continued role is to select appropriate sites, re-zone property, obtain equity funds, assist with construction and permanent financing, construction, and to assume the development and lease-up risk by acting as general partner for the project ownership (Holiday 2007, Colson & Colson 2007).

4. Erickson Retirement Communities

Erickson is a private-held company specializes in developing, owning and operating senior housing targeting middle-income people in US. It has been based in Baltimore County, Maryland, since 1983. It currently comprises 20 communities in 11 states in US offering home to more than 19,000 people and employs more than 10,000. The company is currently developing new communities in the Denver area, Kansas City area, and Ashburn, VA. It is also pursuing land acquisition opportunities across the U.S. Its annual overall growth in 2006 was 14.6%. A total of 2,431 people across the country moved to Erickson communities in 2006 last year (Erickson 2007).

5. Ventas, Inc. (NYSE: VTR)

Ventas is one of the nation's leading healthcare real estate investment trusts (REITs). Its growing portfolio includes 512 healthcare-related facilities containing approximately 52,500 licensed beds and senior housing units, strategically located in 43 states and two Canadian provinces. It has consistently been one of the top performing Healthcare REITs in the Morgan Stanley REIT Index (RMS) over the past 7 years. For the twelve month period ending December 31, 2006, it had an annual total shareholder return of 38.2 percent. For the seven year period ended on that date, it had an annual total shareholder return in excess of 52 percent, which is more than twice the annual return of the RMS during this period. It had a total enterprise value of approximately

\$7 billion and equity market capitalization over \$4.4 billion at March 31, 2007(Ventas 2007). As of December 31, 2006, its portfolio consisted of the following facilities in 43 states:

- 172 seniors housing properties
- 218 skilled nursing facilities
- 43 hospitals and 19 other communities.

6. Health Care Property Investors, Inc. (NYSE: HCP)

HCP's portfolio includes senior housing, including independent living facilities (ILFs), assisted living facilities (ALFs) and continuing care retirement communities (CCRCs); medical office buildings (MOBs); hospitals; skilled nursing facilities (SNFs), and other healthcare facilities. As of December 31, 2006, the Company's portfolio of investments included direct investments in healthcare-related properties, mortgage loans and investments through joint ventures. HCP has the largest and most diversified portfolio of any healthcare REIT. The Company's portfolio is diversified by property type, geographic location and operator. Table 4 shows HCP's investment portfolio in 44 states as of 31st March 2007 (HCP 2007).

Table 4. HCP Investment Portfolio

	Number
Senior Housing Facilities	331
Medical Office Buildings	264
Hospitals	39
Skilled Nursing Facilities	67
Other Healthcare Facilities	29
Total Number of Facilities	730

Source: HCP 2007

7. Health Care REIT, Inc. (NYSE: HCN)

As of December 31, 2006 HCN had \$ 4,132,749,000 of net real estate investments, inclusive of credit enhancements, in 578 facilities located in 37 states. At that date, the portfolio included

- 204 assisted living facilities,
- 221 skilled nursing facilities,
- 47 independent living/continuing care retirement communities,
- 89 medical office buildings

- 17 specialty care facilities.

The above five categories represented approximately 25%, 34%, 13%, 22% and 6%, respectively, of HCN's investments on December 31, 2006 (HCR 2007) .

8. LTC Properties, Inc.(NYSE: LTC)

At December 31, 2006 LTC's direct real estate investment portfolio consisted of investments in 121 skilled nursing properties with 13,953 beds, 94 assisted living properties with 4,449 units and two schools in 32 states (Reuters 2007).

9. National Health Realty, Inc. (AMEX: NHR)

NHR owns the real property of 16 skilled nursing facilities, 6 assisted living centers, and 1 independent living center (NHR 2007).

10. Nationwide Health Properties, Inc. (NYSE: NHP)

NHP specializes in investments in healthcare-related senior housing and long-term care properties. On December 31, 2006, the Company had investments in 487 healthcare facilities in 42 states, including 245 assisted and independent living, 200 skilled living, 21 medical office buildings and 21 other facilities (NHP 2007).

11. Omega Healthcare Investors, Inc. (NYSE: OHI)

Omega invests in income producing healthcare facilities, principally long-term care facilities located in the United States. At March 31, 2007, the Company owned or held mortgages on 235 SNFs and assisted living facilities with approximately 26,996 beds located in 27 states (Omega 2007).

12. Senior Housing Properties Trust (NYSE: SNH)

SNH focuses its investment in age-restricted apartment buildings, independent living properties, assisted living properties and nursing homes. Some properties combine more than one type of service in a single building or campus. As of March 31, 2007, we owned \$1.8 billion of senior living properties with approximately 23,980 living units located in 32 states (SNH 2007).

It can be seen that the above mentioned companies are in various forms such as public REITs, private companies, and public real estate operation companies. Several have a combination of senior housing and other medical facilities such as hospitals located across US which may provide good diversifications. Holiday Retirement Communities originated from a general contracting company. As briefly discussed in the above sections, the roles in senior housing industry are multi-faceted. For example, one company such as Boston Capital may only invest and own senior housing facilities, but other may act as operators and managers. A lot of the companies are both owners and managers, which can be active in both acquiring portfolios from other companies and developing new senior living facilities. Some of the REITs have a few hundred facilities such as Sunrise but others may have only a few dozen facilities such as National Health Realty.

2.3. Senior Housing Industry in China

As the goal is to identify potential applications of US for-profit senior housing practices to China, it is important to introduce aging problems and the shifting of traditional home-care of the elderly, and the not-for-profit senior housing in China in the following sections. Above all, the not-for-profit senior housing now has been dominating the non-home based elderly care market in China. The for-profit, market rated senior housing has just taken place in a very small scale.

2.3.1. Aging in China

China State Council Information Office (CSCIO 2006) published a white paper entitled the Development of China's Undertakings for the Aged on the 12th December 2006. The white paper indicated that by the end of 2005, China had approximately 144 million people aged over 60, accounting for 11 percent of the whole population. The population of seniors will be growing at 3% every year. It is forecasted that by the end of 2010, this population will reach 1,700 million and consist of 12.78% of the total population. About 21,320,000 of the seniors will be of an age of 80 or above. 2030 will be the year that China will have the peak population of seniors.

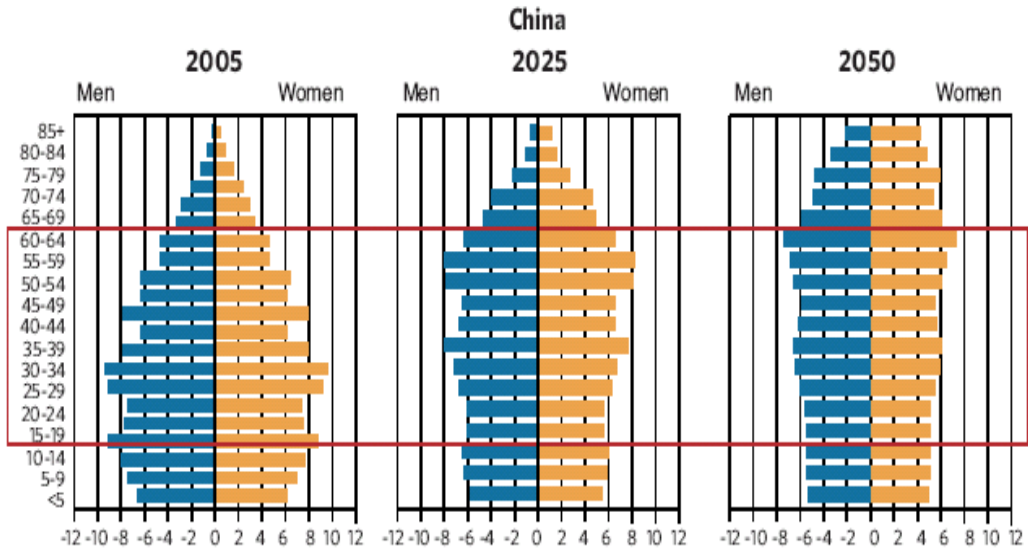
Figure 2 shows the dramatic increase of the population of age 65 and above in China from 2005 to 2050. One can easily see that the percentages of 15-59 age groups are shrinking while those of 60+ age groups are increasing dramatically.

Figure 3 and 4 show that China's population of age 65 and above will grow from 87.8 million in 2000 to 331.9 million in 2050, as compared to Europe, Russia, North America and Japan. By then, China will have more seniors than those combined from Europe, Russia, United States, Canada, and Japan.

Table 5 shows the rates of aging in Korea, Japan, France, Italy, Germany and US. China is probably aging at slower pace than Korea. Japan has been a super aged country since 2006 with about 20% of its population are seniors.

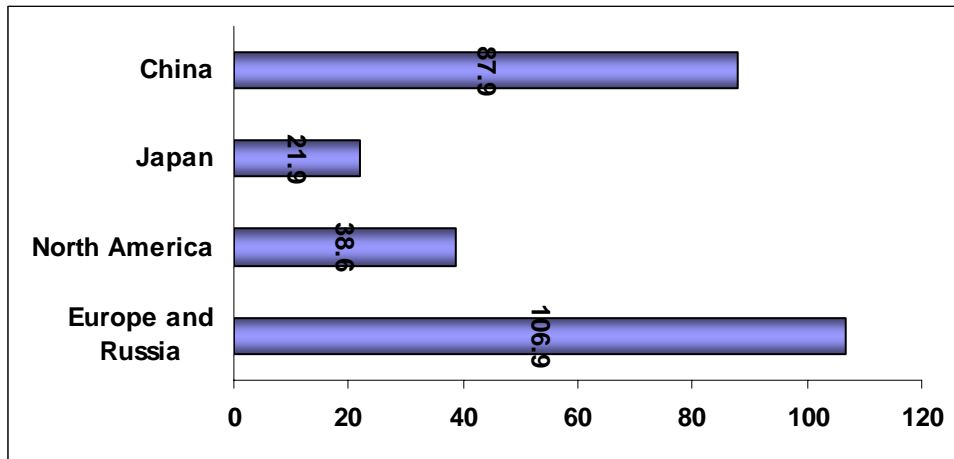
Table 6 shows the percentage of the elderly population in Shanghai from 1990 to 2050. It estimated that in 2010, the population with age 60 or over would reach 21%, which is close to what the situation now. It is reported (Ye 2007) that according to Shanghai Civil Affairs Bureau and Shanghai Statistics Bureau, there were 92,500 people who turned into their 60s in 2006. Now Shanghai 2,756,200 senior citizens aged 60 and above, which is 20.1% of the total population of Shanghai. By 2006, there are 467,8,00 people aged 80 and above, 680 people aged 100 and above. Every 100 working aged people need take care of 28.1 seniors aged 60 and above. The numbers only include people who have residency register (hukou) in Shanghai, there can be more seniors who may have their residency register (hukou) in other places but they are living in Shanghai.

Figure 2. 60+Age Group as Percentage of Total Population



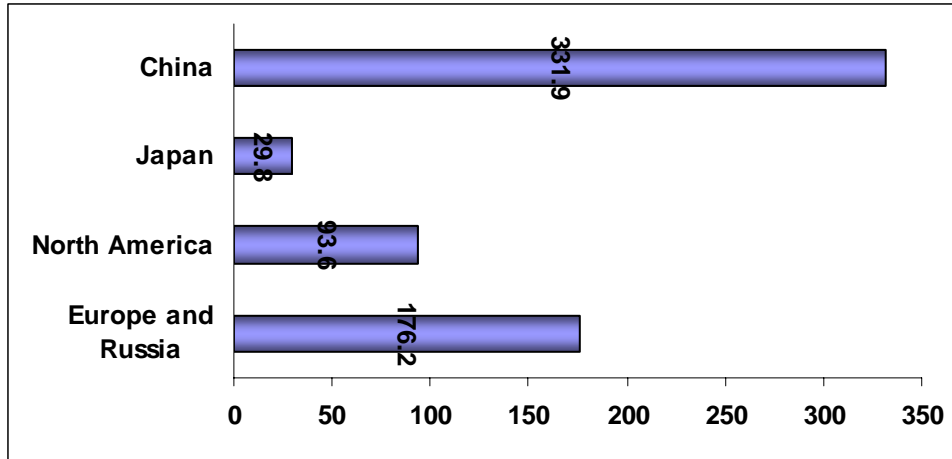
Source: United Nations 2005

Figure 3. Population Age 65 and Older, 2000 (million)



Source: United Nations 2002

Figure 4. Population Age 65 and Older, 2005 (million)



Source: United Nations 2002

Table 5. Rate of Aging Population

	Rate of aging population			Required years	
	Aging society (7%)	Aged society (14%)	Super aged society (20%)	Senior population 7 ->14%	Senior population 14 ->20%
Korea	2000	2018	2025	18	7
Japan	1970	1994	2006	24	12
France	1864	1979	2019	115	40
Germany	1932	1972	2010	40	38
Italy	1927	1988	2008	61	20
U.S.	1942	2014	2030	72	16

Source: Japan Demographic Yearbook 2003

Table 6. Percentage of the Elderly Population in Shanghai, 1990-2050

Year	60 and over	65 and over
1990	14.2	9.4
2000	17.9	13.7
2010	21.0	14.3
2020	33.2	21.7
2030	38.8	31.7
2040	35.3	29.7
2050	34.9	27.2

Source: Gui 1991

2.3.2. Elderly Care in China

Traditionally, the children will take care of their seniors and they live together in the same homes. In the rural areas, the big families with more than one child were downsizing in the end of 1970s after the Cultural Revolution. The elderly parents in these big families normally live with one of their children or live on their own. The other children may help support the elderly financially. If they live on their own, when they can not live independently any more, the adult children in turn will take care of the elderly members, mostly their parents, but sometimes their grandparents as well. In the urban areas such as the cities, the situation is similar, or the adult children may be able to afford to hire people from the rural areas to take care of their elderly parents or grandparents. In both the rural and urban environments, if the elderly have no financial support from themselves or their adult children, or they may do not have any children, when they are not able to live independently, the local governments will step out to allocate them into social welfare type senior centers. This will be discussed further in the following sections.

The traditional way for the adult children to live together with their elderly parents in the same homes still exists in some rural and urban areas of China. But since the beginning of the 1990s, as China started the housing reform which allowed market rate housing to emerge, and as the one-child policy took off in the 1970s, Chinese families are continue to downsize dramatically. A few factors have contributed to the increase of empty nesters in Chinese society.

- Urbanization and the temporary or permanent migration of farmers (the adult children) from less developed areas to more developed areas such as Beijing, Shanghai, Guangzhou, Dongguan, Shenzhen, Tianjin, Xi'an, and other cities in Zhejiang and Jiangshu Provinces for better job opportunities.
- Moving of the adult children who grow up in one-child families for jobs in different cities upon college or university graduation.
- Immigration of educated adult children overseas.
- Overseas students not returning to China.
- Faster work-life pace in more developed areas.

For the above mentioned adult children, they may move to and live in other cities other than their home town where their parents live in. The children with average or lower income may not be able to afford to invite their parents to live with them for ever in most cases.

The children who were born under the one-child policy in the late 1970s and early 1980s are now in their late 20s and 30s and are generally married. This means that one couple from this cohort may need take care of four elderly parents later in their life. If their grandparents are considered as well, one such couple may have to take care of 8 elderly people in their families.

A survey of 1,000 elderly people aged 65 and above living in Shanghai City by Shanghai Statistics Bureau in 2003 shows the following facts (Chen 2004):

- more than 40% of the elderly people live without their children;
- 15% of the elderly people need assistance in their living;
- 45% of the elderly people aged 80 and above need assistance in their living;
- 5.7% of the elderly people feel lonely, and 40% feel lonely occasionally;
- 35% of the elderly people seldom or never communicate with other people;
- 16.7% of the elderly people have difficulty living themselves or lack of care from their families and prefer to living in a senior living facility.

There are probably two reasons if the elderly are still living with their children: either one of the children is still young, or the child(ren) may not be able to afford another unit of housing. Otherwise, even though some of the families may have very strong family ties, it tend to be that the elderly parents and their adult children tend to live in their own homes respectively. They may have dinners every day or stay together in the weekend.

Adult children may hire individuals to provide home elderly care to their parents, which is quite common nowadays in the cities. However, unless the parents are living in good communities where there are elderly services centers, and other people of similar age to communicate with, the elderly will have to tolerate loneliness. Due to the different living habits, some elderly people prefer living in senior living facilities to living with their children. Well designed and managed senior communities provide an alternative lifestyle where seniors can enjoy the beauty

of aging together. Affordability is one of the major concerns for the elderly in China to even consider the options of living in a senior housing facility, which will be discussed in Chapter 3.

2.3.3. Senior Housing in China

In general, senior housing in China is typically categorized into three major types based on whether a facility is built by government, and whether a facility is operated for profit.

- Government welfare type senior housing
- Non-profit, non-government senior housing
- For-profit senior housing

Any of these senior housing facilities may have one or more senior living types such as independent living, assisted living facilities and nursing care. Acute care is typically provided by hospitals in China.

2.3.3.1 Government Welfare Type Senior Housing

The 2001 Standard of Social Welfare Institution for the Elderly lists down two types of the senior housing that are developed and operated by various levels of governments

Social Welfare Institution for the Aged: these institutions accept the elderly of “three-noes”, the seniors who can live independently, or need assistance, or nursing care. These institutions may include living, recreational, rehabilitation and nursing care and other facilities.

Homes for the Elderly in the Rural Areas: these homes are similar to the above social welfare institutions and are mainly located in towns and villages.

2.3.3.2 Not-for-Profit, Non-Government Senior Housing

The same standard defines 5 types of senior living which are normally developed and owned by enterprises or individuals in a not-for-profit operation platform. These senior living facilities have similar type of functions to the social welfare institutions for the aged. They are as follows:

- Senior homes
- Senior apartments
- Assisted living homes

- Senior nursing homes
- Adult day care

Because of the non-profit nature of these facilities, the income generated from the operations has to be used according to the stated rules that have been approved by related Civil Affairs Bureau. The income by no means can be employed for other uses than specified in such rules. The non-profit entities which develop, own and operate senior housing are granted by local governments for the tax exemption as well as other waivers and/ or discounts, such as:

- Land utilization
- Utility connections (electricity, water, sewer, and telecom)

In some cases, the entities can also receive certain one-time establishment subsidies and/or monthly operation subsidies according to local governmental policies. The pricing of such entities are normally regulated by local Price Control Bureaus. Should such non-profit entities change to be for-profit entities, they need to pay for the normal land premiums and others discounted amounts.

The following are some of the statistics of the above mentioned two major types of not-for-profit senior living in China (CSCIO 2006, Shanghai Civil Affairs Bureau 2007):

- For 3 years starting from 2001, Chinese government established 32,000 “Starlight Senior Homes” in China.
- By the end of 2005, there were 39,546 different types of not-for-profit senior living facilities, with total number of beds of 1,497,000, among which 28,681 are located in village and towns offering 895,000 beds in China.
- By the end of 2005, Shanghai had 474 different types of not-for-profit senior living facilities. Of which, 29 facilities are developed and operated by the City and different districts, 214 facilities by the street (jiedao) communities, and 231 facilities by individuals or other enterprises. The total number of beds is 49,529 with 6288, 17,674 and 255,67 owned and operated by the city and different districts, the street communities, and individuals and other enterprises respectively.

The following section will give some details of the costs for living in such not-for-profit senior housing, which will help a US developer and/ or investor understand what the low-end senior housing market is about in China.

2.3.3.2.1. Costs of Living in Not-for-Profit Senior Housing

It should be noted that the prices of the above mentioned not-for-profit, government or non-government senior living facilities are regulated by City Civil Affairs Bureaus and City Pricing Bureaus. The following are typical examples of living in the not-for-profit senior housing in 2004 in Shanghai for seniors who have retirement income or financial supports from their children. The government provides free services to those “three noes”. Tables 7 to 9 show the typical costs of living in the government types of senior living facilities in Shanghai.

Table 7. Costs of Singles Sharing with Two Other in a 3-bed Apartment Room

Items	Costs
Rents, Food and other assisted living services	RMB850 /month
Clothes washing	RMB20 /month
Total	RMB10,440 /year (excluding deposit, approximately RMB1,500)

Source: Chen 2004

Table 8. Costs of a Single Room

Items	Costs
Rents and basic assisted living Services	RMB1,200 /month
Food services	RMB200/month
Total	RMB16,800/year for a single senior RMB33,600/year for a senior couple (Deposit is excluded)

Source: Chen 2004

Table 9. A 90-year-old Senior Living in a Nursing Care Facility

Item	Costs
Rents and nursing care	RMB2,200 /month
Food services	RMB400/month
Total	RMB31,200/year (excluding deposit)

Source: Chen 2004

Table 10 lists the monthly cost for one elderly person to live in one of not-for-profit senior living facilities in Shenzhen City, the city where the average personal annual income is highest in China.

Table 10. Monthly Cost of One Senior Person Stay in Shenzhen Social Welfare Institution

	Futian District Social Welfare Institution	Luohu District Social Welfare Institution
General assisted living	RMB980~1,130/ month	RMB980~1,130/ month
50% nursing	NA	RMB1,240~1,390/ month
100% nursing	NA	RMB1,560~1,710/ month

Source: Li 2006

In general, the costs of living in these types of senior facilities are ranging from \$100 to \$250 a month. It should be noted that while most of these facilities are owned by governments, individuals, or mining enterprises that are classified as not-for-profit entities, they typically charge the market rate to those elderly people who can afford to living in these facilities. The pricing may seem not high enough compared to that of for-profit senior housing which will be discussed later. But with the quality of facilities and services available in this sector, even though these entities are for-profit, market rated, their market rates may be in similar range. There are extreme cases where governments spent huge amount of money to build modern, high quality of so called senior living facilities. But the governments only charge a small amount of premium above the typical market rates. The ordinary elderly people may not afford to live there. In other words, only privileged elderly people such as retired government officials are taking advantages of such facilities.

2.3.3.3. For-Profit Senior Housing

This type of senior housing is normally referred to as private, market rate senior housing and/ or community. The senior living facilities of this type are normally with a name of “International Senior Condominiums/ Apartments” in China, which intends to attract overseas seniors besides domestic seniors. A for-profit senior living facility also needs approval from a local Civil Affairs Bureau as a not-for-profit facility does. More importantly, it needs to register at the local Administration for Industry and Commerce and the Tax Bureau because such an entity need pay business taxes to the Tax Bureau. For a wholly owned foreign enterprise (WOFE) to develop, own and operate senior housing, it needs additional approvals at the state or local Administration for Industry and Commerce and Foreign Exchange and Control Bureau depending on the size of investment.

The costs of living in the not-for profit type of senior housing vary, mainly depending on the location, the environment, and the types and quality of services available. It may vary among different cities as well. In Tianjin City, the for-profit senior living facilities used to be subject to price regulation by the City Affairs Bureau and the City Price Bureau. Tianjin City has allowed such facilities to charge market rate only since 1 March 2007. The Tianjin Administration Rules of Senior Living Facilities requires that one senior service staff can only take care of not more than 8 seniors with independent living capabilities; and one senior service staff can only take care of not more than 4 seniors with nursing care requirements. For example, Tianjin Price Bureau issued the following Pricing Regulations for one international senior housing facility in 2003 as shown in Table 11, which is no longer effective any more.

Table 11. Tianjin International Senior Village Rents and Nursing Care Prices, 2003

Items	Descriptions	
Room Rates	Type	Daily Costs
	Standard room (2 beds)	RMB26/ bed
	Big standard room (2 beds)	Not Regulated
	Standard Apartment (2 beds)	RMB 40/ Room
	Big Apartment (2beds)	Not Regulated
Nursing Care Fees	Nursing Care	Daily Costs
	Special nursing care	RMB16
	First category nursing care	RMB12
	Second category nursing care	RMB8
	Third category nursing care	RMB5

Source: Tianjin Price Bureau (2003)

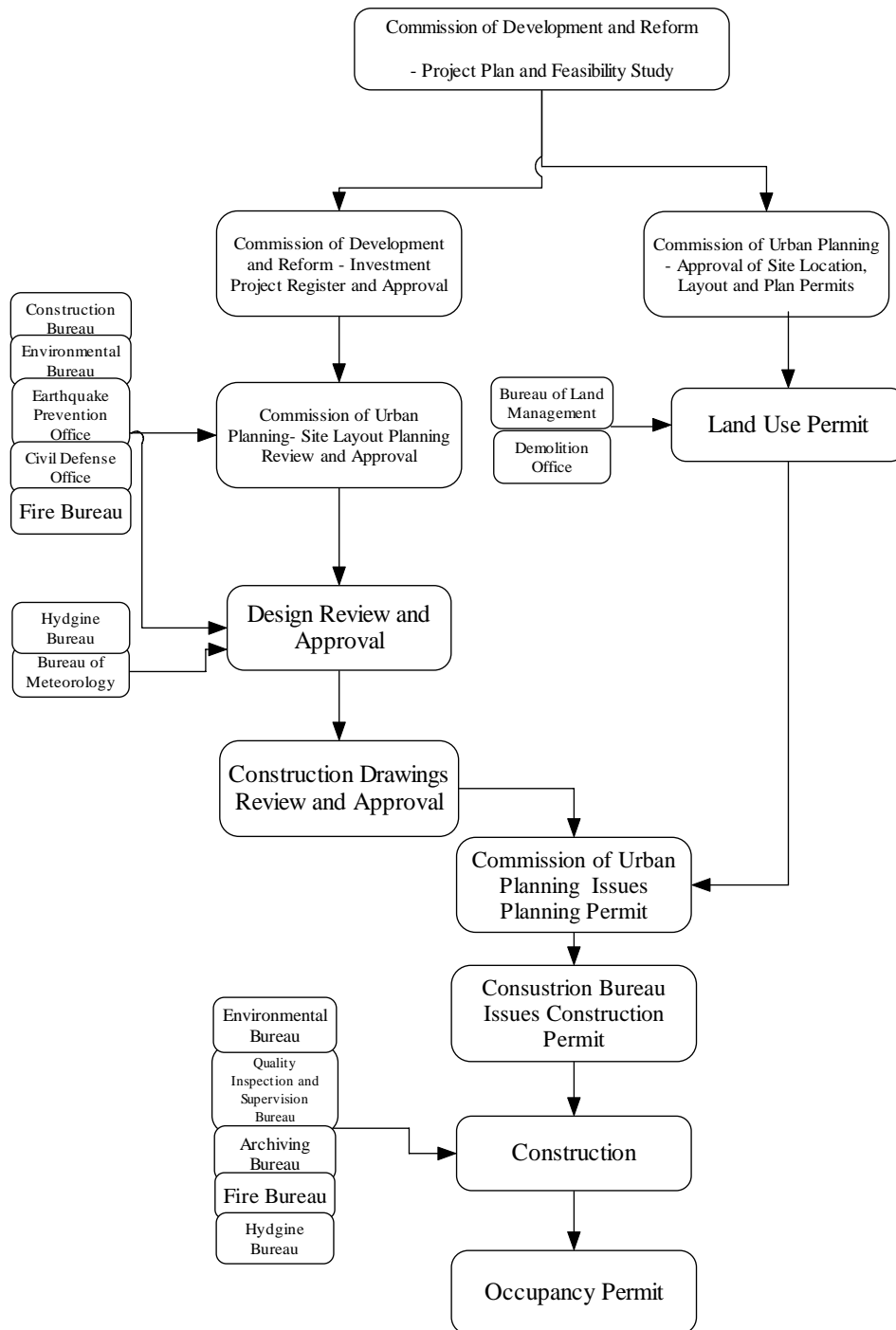
2.3.3.3.1. Development Process of Senior Housing In China

One of potential opportunities for a US developer or investor is to develop new senior living facilities in China. The development process is not much different from what a US developer need go through in US except that there is almost none or few communities involving in a development process if the project is developed on a vacant land parcel. However, if there is any demolition required, the individuals or parities that are involved may pose some impact on the development process.

In general, the development process of senior housing is no different from other types of commercial real estate developments in China. Additional permit or license is needed from City Civil Affairs Bureau for operating such a facility. Figure 5 shows a brief process of developing senior housing project in China. It may vary among different cities. The most critical parts are to get approvals for designs and project completion inspections from various local authorities because these local authorities operate independently and sometimes they may have conflicting decisions towards the same issue. It is important to find a good local partner, or a good local design institute, or a construction management company to smooth the development process from regulatory approvals' perspective.

The not-for profit senior housing in China is just emerging. Not so much data is available because the market is very fragmented. The following sections will introduce several recent market rate senior housing projects in China. It is obvious that US also has a large government (or not-for-profit entities) owned, operated, and/ or subsidized senior housing portfolio. It will not be discussed in this study because it is easier for a for-profit business model than for a US government type, not-for-profit model to be implemented in China.

Figure 5. Development Process of Senior Housing in China



Source: Liuzhou Small Enterprise Net (2006)

2.3.3.3.2. Current China For-Profit Senior Housing

Most of the government welfare type and the not-for-profit, non-government senior housing facilities provide assisted living and certain degrees of nursing care. To the author's knowledge, most of the for-profit senior housing communities offer a choice of independent living and assisted living only. Hospitals usually take the lead where acute care is needed or a senior is diagnosed to be treated in a hospital. A US style continuing care retirement community (CCRC) does not exist in China yet.

The senior housing in the for-profit and non-government sector started in China only a few years ago. The market data is hard to obtain. The following sections will focus on a few recent for-profit, non-government "senior housing" projects in China, which represent where the senior housing industry is going. It should be noticed that while these "senior housing" projects in China have been well regarded as models of senior living facilities nowadays, it is still a long way for these companies to develop US type senior living facilities. The introduction of these projects will help a US senior housing developer or investor to understand how local developers are planning for different amenities and services for the elderly people in China.

Beijing Sun City

The Beijing Sun City was conceptualized in 1997, when Beijing Baoshihuashang Company was to figure out the company's next move. After careful market analysis and feasibility study, the company established Beijing Sun City Development Company as a subsidiary to develop the first, true senior housing community based on US Sun City model.

The project is located 17 kilometers away from Beijing Capital International Airport and 7 kilometers away from the Olympic Business Circle. It includes the following:

- Beijing Sun City Hospital with 200 beds
- Beijing Sun City Chinese Medicine Center
- The Cultural Palace
- The Home Services Center
- Holiday Hotel
- Hot Spring Conference Center

- Other amenities such as retail, restaurants, schools, daycare

All the facilities are also open to residents from adjacent communities. Beijing Sun City has been promoting its pioneering senior community and variety of services associated with it. It also opens to tourists, and some are coming from overseas. It is difficult to judge whether this is good or bad approach, but compared to the more focused approach of US senior housing developers, this may not make sense in the long term.

Figure 6. A Render of Beijing Sun City International Senior Housing Community



Source: Focus Real Estate 2007

Figure 7. A Picture of Beijing Sun City Condo Buildings



Source: Focus Real Estate 2007

The project is designed according to Chinese Architectural Standard for the Aged People by Harerbin Architectural University (HAU 1999). Some of the project basics are as follows:

- Site area 420,000 square meter
- Gross building area (construction area) 180,000 square meter
- 1300 residential units. (1st and 2nd phases 500; 3rd phase 830)
- Senior apartment complex with about 1000 beds.
- For sale condominiums/ townhouses/ single-family houses
- Parking ratio 1.1
- Medical use elevators
- 76-168 square meter per residential unit

Table 12. Beijing Sun City Phase 3 For-Sale Condo Price

	Low	Average	High
Time Period	RMB/square meter		
2007.06.22 - present		6,300	
2007.02.07 - 2007.06.22	5,800	6,000	6,380
2006.07.18 - 2007.02.07	5,350	5,800	6,380
2006.04.17 - 2006.07.18	4,880	5,800	6,380
2006.03.22 - 2006.04.17	4,820	5,900	6,380
2006.03.20 - 2006.03.22	4,820	5,800	6,380
2005.05.17 - 2006.03.20	5,800	5,800	6,300
2005.04.14 - 2005.05.17	4,800	5,300	5,700
2004.10.14 - 2005.04.14	4,600	5,100	5,700
2003.12.29 - 2004.10.14		5,100	

Source: Focus Real Estate 2007

It should be noted that the US Sun Cities developed by Del Webb Corp., now part of Pulte Homes, are more of active adult communities, which are age-restricted communities that typically require at least one resident to be age 55 or better and restricts anyone under 19 from being a permanent resident. Age restrictions may vary by community (Del Webb 2007). Even though Beijing Sun City has added health care and other services into its project, the overall community is not a CCRC. The senior apartment complex within the project is a hybrid between independent living and assisted living. Interviews with Li (2007) of Beijing Sun City have showed that there are 176 senior apartments in Beijing Sun City, the occupancy is approximately 80%. Most of the seniors there are able to live independently. Some seniors bring their own home-care aids to take care of them. In other words, the assisted living services in Beijing Sun

City are still to be developed. It is easy to build a well functioned senior living facility, but it is not easy to provide necessary services of a high standard. Table 13 gives the rates of the senior apartments in Beijing Sun City. This can be a good reference for a US developer and/ or investor to understand the market rate of for-profit senior housing in China. It should be noticed that the rates are for the rooms only. Other services such as cafeteria services might be available on site but with addition charges.

Table 13. Costs of Living in Beijing Sun City Senior Apartment

Double Room		Single Room	
Deposit	Monthly Charges	Deposit	Monthly Charges
in RMB		in RMB	
60,000	2,200-2,700	30,000	2,300-2,500
120,000	1,400-1,900	60,000	1,500-1,700
150,000	1,000-1,500	150,000	700-900
200,000	700-1,100	260,000	200-300
300,000	200-600		

Note: deposits will be returned when the seniors move out

Source: Li 2007, Beijing Sun City 2007

The Beijing Sun City Development Company has started to build Vancouver Sun City and is also planning to develop similar Sun Cities in other parts of China, such as Sanya City, Hainan Province, south of China. Once the Sun City network is established, the seniors eventually may have the opportunity to change and live in the Sun City located throughout China and even overseas in a time share manner (Beijing Sun City 2007, Focus Real Estate 2007). Li (2007) has also mentioned as a mining enterprise, the Beijing Sun City Development Company has financial constraints to expand its business to build more Sun Cities.

In about the same time frame, another Sun City project called Beijing Oriental Sun City was put into market which is also targeting senior residents.

Beijing Oriental Sun City

Figure 8. Beijing Oriental Sun City Master Plan



Source: Focus Real Estate 2007

The project is located in Shunyi District, east to Beijing International Airport. The following are some of the project basics:

- Total site area 2,340,000 square meters
- Planned construction area 800,000 square meters
- Amenities 50,000 square meters
- Landscape 750,000 square meters
- Man-made lake 160,000 square meters

Figure 9 shows four-story condominiums of Beijing Oriental Sun City. The project also has single family homes, lakefront town houses and 4-story condominiums with lifts. Some of single family homes are designed to be the Beijing traditional courtyard type “siheyuan” as shown in Figures 10 and 11.

Figure 9. A Picture of Beijing Oriental Sun City



Source: Beijing Oriental Sun City 2007

It has implemented barrier-free design, rainwater reclamation, and underground heat pumps. The three phases includes the following:

- Townhouses and condominiums from 70 to 230 square meters in unit size
- Medical Service Center by Sino-Japan Friendship Hospital
- Post office
- Community shopping center
- Cafeteria
- Sports clubs (pingpong, taiji, chess and cards, and fishing)
- Condominiums and townhouses
- Single family homes including “siheyuan”
- Commercial and cultural center
- Short-term, vocational apartments
- Hotel
- Fitness center
- Hot spring spas
- Bowling
- Inside swimming pool
- Senior University

Figure 10. Front Door of a Siheyuan at Beijing Oriental Sun City



Source: Focus Real Estate 2007

Figure 11. Inside a Siheyuan at Beijing Oriental Sun City



Source: Focus Real Estate 2007

Table 14 lists down the average for sale price of the condo units in the project. The starting price was much lower than that of Beijing Sun City in 2003 due to its location, which is not as good as the location of Beijing Sun City. However, the recent average price is RMB6,700 per square meter, which is higher than RMB6,300 per square meter of Beijing Sun City. The single family houses such as the siheyuan are of a higher sale price, which is approximately at RMB20,000 per square meter. One can see the condominium sale price has almost doubled in Beijing Oriental Sun City. While it is hard to have an apple to apple comparison of the condominium price in US. Pulte Homes in US offers duplexes, townhouses, and condominiums at prices from \$62,000

to almost \$2.4 million. Most of the houses are in the \$100,000 to \$400,000 range with an average of \$315,000 (Answers 2007).

Table 14. Average Condo Price of Beijing Oriental Sun City

Time Period	Average Price (RMB/square meter)
2007.07.03 - Present	6,700
2007.03.08 - 2007.07.03	6,000
2006.08.02 - 2007.03.08	4,500
2004.10.12 - 2006.08.02	3,880
2004.01.17 - 2004.10.12	3,800
2003.12.29 - 2004.01.17	3,300

Source: Focus Real Estate 2007

Figure 12 shows some sports and recreational activities in the project. It is worth noticing that Chinese elderly people enjoy more group activities such as dancing, sports, and taiji and others. In the early morning, senior groups are everywhere in large communities and parks engaging in various activities in China. Similar situation exists in Japan.

Figure 12. Activities in Beijing Oriental Sun City



Source: Beijing Oriental Sun City 2007

Beijing Oriental Sun City has a lot of amenities and services that are senior oriented. Like Beijing Sun City, it not a real senior living community by US definition. The US senior living facilities are focusing on one or more of the independent living, assisted living, nursing and acute care.

Greenland 21 City

Greenland Real Estate Development Company is one of the largest real estate companies in Shanghai, China. The company's recent Greenland 21 City project is located between Shanghai and Kunshan City of Zhejiang Province. It is 35 kilometers away from the city center of Shanghai and 35 kilometers away from Kunshan. It is adjacent to International Automobile City and Shanghai International F1 Circuit. The project has a site area of 2,664,000 square meters. Since 2004, as Greenland has promoted the project to be a great second home choice, it has sold more than 1,200 residential units. The project includes daycare, shuttle buses to cities, neighborhood centers, and a four-star hotel. Figure 13 shows the master planning of the large project. Table 14 shows the price of this project. It has designed five communities in this master plan:

- Seniors' community
- International community
- Vacation community
- Business community

What is worth mentioning is its senior community, which takes four scenarios into consideration:

- Two seniors living with their grandchild and the couple join in the weekend
- Two seniors living with their grandchild and the couple live overseas
- Two seniors living on their own
- Two seniors living in one residence unit with the couple and the other two seniors living in another unit in the same building.

From the above four scenarios, senior housing developers in US may see some differences of seniors' life in China compared to their counterparts in US. In China, grandparents typically help their adult children to take care of their little grandchildren on a full time basis before their grandchildren go to a day care. There is possibility that the seniors may play this role babysitting their grandchildren even though they are living in independent living facilities in China. If the market has such a demand, it might be feasible to have children day care facilities built within an independent living facility. Other developers such as China Vanke Co. are also considering building smaller units of condo within a condo building targeting two generations who may choose to live nearby. Table 15 lists down the sale price of the residential units in its senior community.

Figure 13. Greenland 21 City Project Master Plan



Source : Greenland Company 2007

Table 15. Greenland for Sale Price for Units in the Seniors' Community

Dates	Average Price	Minimum Price	Maximum Price	Description
5/16/2007	RMB780,000 /unit			Lily Garden single family house
12/31/2006	RMB3,600/square meter			
7/26/2006		RMB687,000/unit		Rose Garden townhouse; Senior condo with elevator RMB200,000-300,000/unit
5/18/2006	RMB3,600/square meter			Condo average price
4/4/2006	RMB3,700/square meter			Condo RMB3,700;Townhouse RMB4,700;Single Family House RMB9,000
2/23/2006	RMB3,700/square meter			Condo RMB3,700;Townhouse RMB4,700
12/31/2005	RMB6,200/square meter	RMB1,08million/unit	RMB3.5million/unit	Townhouse RMB6,000(180-200square meter); Single Family RMB9,000(350-400 square meter); Condo RMB4,500

Source: Shanghai Sofun 2007

Augustinum Shanghai Retirement Center

On 6 June 2006, a German Senior housing developer and owner signed an agreement with Shanghai International Medical Zone located in Nanhui District, Shanghai. Augustinum has a history of more than 50 years in providing top quality services to seniors. The retirement center will be developed into two phases (Shang International Medical Zone 2007):

- Phase 1 plan has a construction area of 85,000 square meters, which will provide 500 condominiums and other amenities.
- Phase 2 plan will provide another 750 condominiums as well as establish a business headquarter and a training center

The whole investment will be RMB 940 million (US\$123.7 million at exchange rate 7.6), and will be deployed by 2010. It has the following goals:

- Targeting wealthy local families and returned overseas Chinese

- 1st phase of the project including 500 apartments to be completed in 2 years
- 2nd phase including 750 apartments ranging from 30 to 100 square meters in size
- Creating a natural leisure space for seniors
- Motivating its residents to take part in group events
- Offering medical care and laundry services

The information on the Augustinum is limited. Its rooms in Germany having rent for 53 euros (US\$68) a square meter, plus extra security charges. Rents include services such as meals, weekly apartment cleaning, access to a swimming pool, and various cultural events. Due to its adjacent location to many medical services providers, the community may function as a rehabilitation center for the elderly people. When this community is in service, it will probably be the first 100% foreign owned retirement facility in China both developed and managed by a western company.

As discussed in the above, the two Sun Cities in Beijing are called “senior housing” projects in China, but there are still many areas need to be improved before the developers can learn to developer and operate true senior housing communities. Both projects are very successful due to their additional, significant design considerations for senior people. Buyers of younger age groups are also buying units in these two Sun Cities because there is no age restriction requirement. For these residents, when they get older, their homes will be more suitable for them to live in because of all the design features in place. The Greenland 21 City is still to be proved because part of the themes there is the second home in a suburban location concept. The Greenland 21 City model is getting more attention as major residential developers are trying to add the senior living features into their projects as selling points to attract customers of different ages. Augustinum may have a competitive advantage if it have featured services that can be related to the services of the medical zone may be offering.

CHAPTER 3

OPPORTUNITIES AND CHALLENGES

IN DEVELOPING SENIOR HOUSING IN CHINA

3.1. General

In Chinese, “crisis” is called “wei ji”. “wei” means challenges or dangers, and “ji” means opportunities. Opportunities and challenges normally come together. The following sections will focus on analyzing aspects related to income, social and culture, regulatory and finance, and relation to healthcare industry, which may indicate opportunities for a US developer/ investor in senior housing. The challenges will be discussed along with the opportunities.

3.2. Income

It is commonly regarded that people in China get old before getting wealthy. It is true in a lot of aspects. However, the economic reform and open policy started in the late 1970s have tremendously improved people’s quality of living in the past 25 years. One can see the change of Shenzhen from a small fishing village to a modern city with about 7 million of people, and Pudong, Shanghai from farming land to one of China’s financial, manufacturing, and high-tech centers. The GDP of China is growing at double digits. It is not surprising that people in China are getting richer now and are looking for better quality of life than before. The seniors are of no exception.

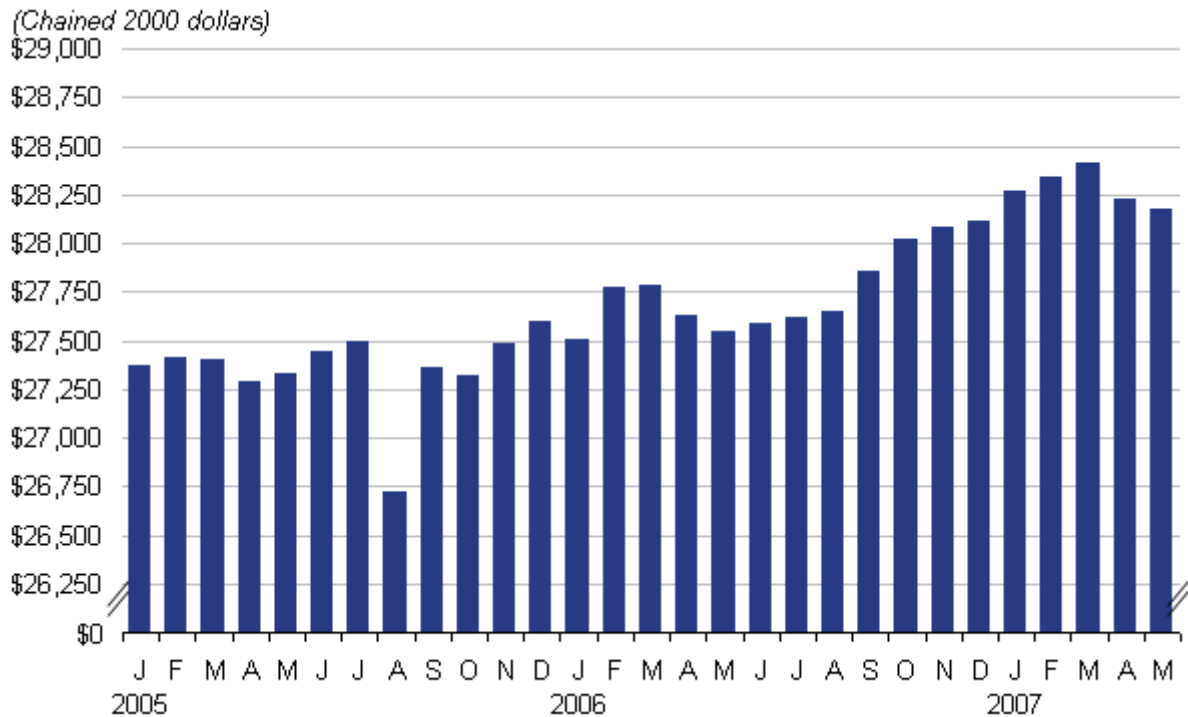
3.2.1. A Growing Income Theme in China

As a developing country with a population over 1.3 billion, China had a per capita GDP around \$1,000 compared to those from \$5000 to \$ 10,000 per capita GDP in the developed countries. People get old before they get wealthy. In 2005, China Population Information Network (CPIN 2006) had statistics showing that the average annual disposable income of urban residents reached RMB10,493 (\$1,380 at exchange rate of 7.6), which increased 9.6% in real term from the past year. However, the average annual disposable income of rural residents was only \$430 in 2005. The living costs in the rural areas are much lower compared to those in the urban environments, but the rural residents do live in lower quality of life because of their lower

disposable income. The income inequality is continuing to grow. For example, in 2005, the 10% highest income group has an average annual disposable income of \$3,785, which is 9.2 times higher than the 10% lowest income group in cities. The former increased 13.4% and the latter 9.5% from 2004. The provinces in the east part of China had a much higher average annual disposable income than the provinces in the middle and west parts of China.

There is no doubt that the disposable income in US is much higher than that in China. Figure 14 shows the average annual real disposable personal income per capita is approximately \$27,625 in US compared to \$1,380 as the average annual disposable income of urban residents in China in 2005. It is important to consider the affordability of seniors in China even though the costs of labor, medical services, average housing and living are much less expensive than those in US. The chained 2000 dollars have removed changes in the purchasing power of the dollar.

Figure 14. Real Disposable Personal Income Per Capita in US



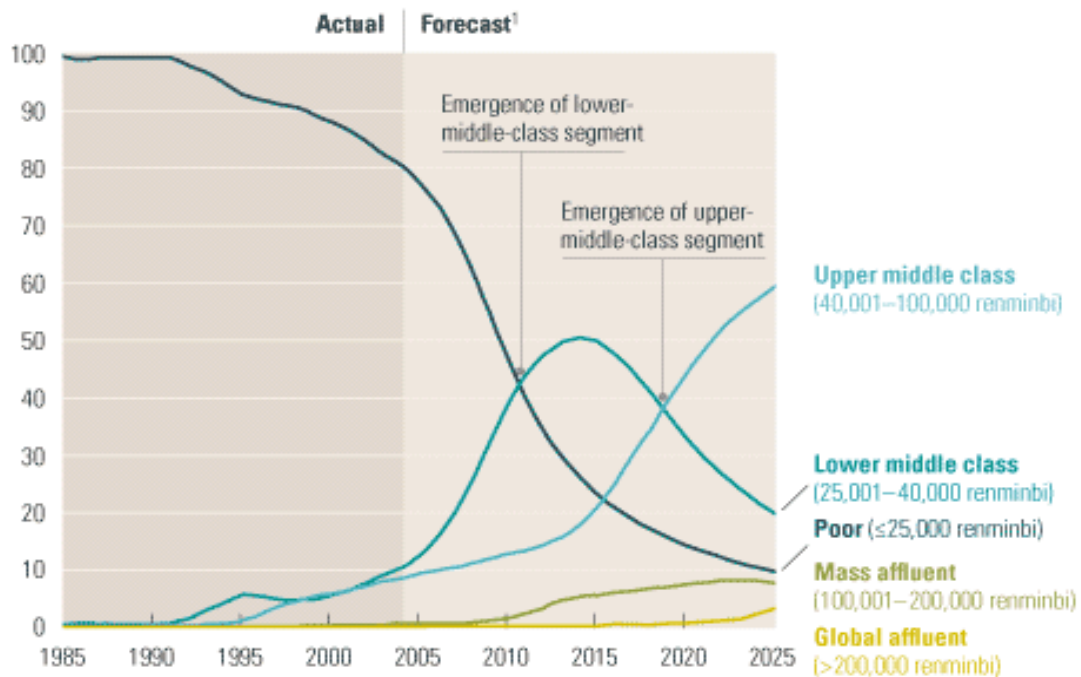
Source: U.S. Bureau of Economic Analysis (2007)

3.2.2. The Rising of Middle Class and the Grey Income

According to McKinsey (2006), the rising economy in China has boomed the emerging of a middle-class. 77 percent of urban Chinese households live on less than RMB25,000 a year nowadays and those households live a minimum quality of life; As far as senior housing is considered, these households in general can not afford to send their elderly family members to senior living facilities. It also estimates that by 2025 that figure will drop to 10 percent. By then, urban households in China will make up one of the largest consumer markets in the world, spending about RMB20 trillion annually, almost as much as what all Japanese households spend today.

Figure 15 shows the percentage share of urban households by income class. For example, in 2005, it was estimated that 10% of the households in China are belonging to upper middle class with annual income between RMB40,001 and RMB100,000. In 2025, this percent will rise to 60%. By 2025, the number of households that can be categorized as mass affluent and global affluent will also increase significantly.

Figure 15. Percentage Share of Urban Households by Income Class (Forecast 1Q06)



Source: McKinsey 2006

In the mean time, a recent study by Wang (2007) has surveyed more than 2,000 households for the 2005-2006 income in different cities in China. The results say that in 2005, the 10% highest income group has an average annual disposable income about 31 times rather than 9.2 times higher than the 10% lowest income group. The actual income is much higher than what is shown in official statistics. The main reason is that the political system has allowed corruption and grey income. About 10 million households or 50 million people are among the 10% highest income group in cities. They have annual average disposal income of RMB97,000 (about \$12,763). It is estimated that about RMB440 billion of income may fall into the grey income category which is not part of the statistical data. It is about 24% of the GDP in 2005.

Like the rich baby boomers in US, in China, a special group of people who entered colleges or universities in the years from 1977 to 1979, the years right after the Cultural Revolution, are heading numerous senior management positions in the private, minying, state-owned enterprises, and governments now. They definitely fall into the top 10% highest income group. In the next 5 to 10 years, the majority of these people will retire, and they can be the demand drivers for for-profit, market rate senior housing in China. Unfortunately, the number of this group of people is not available.

For US developers and/ or investors, it does mean that in China, there is a cohort of people with higher education and income who are able to afford high-end senior housing. Traditionally, when these people get older and become less healthy, their adult children will take care of them or most of the time, they can afford service aids who can provide home-based care. Approximately 6% of the senior people in cities such as Shanghai and Beijing are part of this cohort. The seniors may have already been part of the middle-class, or their adult children are and they can support their parents if needed. The two Sun Cities in Beijing discussed in Chapter 2 have targeted both this cohort of seniors to be their customers. The challenge is to understand the demographics of this relative rich group of seniors and to optimize sizes and locations of senior living facilities that target these people. It is possible to develop very high-end senior living facilities to attract senior people from overseas as well as very rich local seniors.

3.3. Social and Culture

Traditionally, Chinese seniors are being taken care of in a home-based environment, and most seniors still are. Chinese Xiao in its genuine sense of filial piety is still one of the most important merits in the society. The sons or daughters are more than obligated to do so. As the one-child policy started in the late 1970s, the son or daughter of a family may not be able to offer his or her parents the opportunity to live together. Most important of all, even though the son or daughter is able to live together with his or her parents, he or she may be too busy to spend time with his or her parents. When they live together, due to the difference in living habits, inconvenience may occur. For example, the seniors tend to wake up very early but sleep very early. Their children can be just on the opposite. If the elderly are to live with their children together for the long-term, this might be a potential problem.

News Daily (2006) reported that the Shanghai Social Welfare Association evaluated 400 government welfare type and not-for-profit/ non-government senior centers. The results have showed that many centers have different degrees of non-compliances to fire codes and access requirement for the disabled. Some of the detailed issues are as follows:

- 53 centers didn't have fire inspection permits
- Non-compliance of fire extinguishers
- Lack of emergency exits/ stairs
- Inappropriate handrails
- 80% of the centers didn't meet the slippery proof requirements

Other problems in managing and operating of these centers have also been identified, such as:

- Incomplete healthcare and operation records
- Staff sleeping while on duty
- Accepting seniors without proper medical examinations

Window to Shenzhen Net (2006) has summarized a few reasons that seniors in Shenzhen do not want to live in the government welfare type and not-for-profit/ non-government senior centers in a survey:

- The son or daughter will be criticized if his or her parents are sent to such centers.
- The seniors take aging in home as a tradition.

- Poor reputation of such centers.

As a matter of fact, Shenzhen has more than 86,000 people aged 60 and above who have Shenzhen hukou (residence register). Considering non-Shenzhen hukou seniors, the number can reach 200,000. However, there are 25 such centers in Shenzhen with 2,671 beds, the occupancy rate is only 32.16% because of the above mentioned reasons and poor quality facilities and services in these centers.

Chinese seniors have recently started to be attracted by the emerging communities designed specifically for the elderly. In US, when the Del Webb (now part of Pulte Homes) developed the Sun City 40 years ago, it was a huge success. Nowadays, assisted and other types of senior living have been a very natural part of retirement planning for a lot of Americans. One major difference needs to be emphasized is that in China, grandparents are playing a very important role in babysitting their grandchildren almost full time, which is not the same case for most grandparents in US. That is why Greenland as a developer, when considering a senior community within its large scale development of the Greenland 21 City, has taken the grandparents' taking care of their grandchildren into consideration.

Feng (2006) reported in that in Qingdao, seniors from other provinces were looking for beds in Qingdao because of its perfect weather and living environments. The city is one of the best tourist cities in China. Ding and Ye (2001)'s survey of 1,006 elderly people living in Xiamen has showed that more than 66.8% of the seniors support senior apartments, and educated seniors with retirement pension tend to accept such senior apartment concept more easily.

In summary, the shift of the attitudes and facts of taking care of the elderly in China opens opportunities to wealthy seniors to consider options to live in a modern senior living facility or community, but not those government type or non-government type, not-for-profit senior living facilities, which are in general not well managed compared to what US has in the market rate senior housing sector. This strengthens the point that the market does exist. The challenge for a western developer is to understand what Chinese seniors care about and find capable local people to execute.

3.4. Regulatory and Finance

While regulatory factors regarding senior housing can be very different between US and China, in general, the regulations in China need to be further developed to stimulate foreign direct investment into senior housing industry.

Since China lacks regulations and/ or financial incentives in regulating for-profit/ non-government senior housing, the senior housing communities in China are not real senior communities when compared to those in US. The senior housing communities in US have strict requirements on the ages of the residents and visiting time of family members. But there are no such requirements now in China. For example, the for sale residential units the two Sun Cities in Beijing are not limited younger age groups from purchasing. The units are open for sale to people of all ages. For the developers, the earlier they can sell the units, the better the return will be. So will be Greenland and others. These developers are aiming to establish true senior communities, but they are not doing it. In the long run, the developers may suffer from such decisions. On the other hand, Chinese governments should learn the age restricted practices in US and promote such practices because in general, the two Sun Cities in Beijing may have got favorable conditions during their developments. For example, they may have got smooth and quick approvals when local authorities consider their projects to help satisfy seniors' needs.

As discussed in the previous sections, public companies including several Healthcare REITs have been playing an important role in developing, owning, and managing various types of senior housing in US. REITs do not exist in China yet. Several REITs with assets in mainland China are listed in either Hongkong or Singapore. The adoption of REITs can help senior housing industry grow especially when Chinese senior housing developers have financial constraints. The financial constraints also result lack of permanent financing in China, not to mention CMBS and CDOs. This can be an opportunity for US developers and/ or investors because there is so much capital out there waiting for good projects, and there are many mechanisms to get the capital in US.

In China, the common healthcare insurance may cover certain medication and in-hospital costs and expenses. There is no long-term care insurance available for assisted living and nursing care. In US, Living Your Life Insurance Solutions (LYI-IS 2007) has mentioned that since Medicare,

HMO's and Medigap insurance do not pay for nursing home care for long term stays or for assisted living, long term care insurance is important for a lot of Americans to consider. Without it, a one year stay in a nursing home, estimated at \$25,000-\$42,000 per year, can cause serious money spent away. It can leave the well spouse without many financial resources to live on.

Some typical costs of long term care in the US are cited as follows by Long Term Care Net (LTC 2007):

- The 2006 average daily rate for a private room in a nursing home is \$206 (\$75,190 annually) - a 6.8% increase from the 2004 rate of \$192.
- The 2006 average daily rate for a semi-private room in a nursing home is \$183 (\$66,795 annually) - a 7.7% increase from the 2004 rate of \$169.
- By 2007, a private room will cost over \$250 per day (\$94,000 annually).
- In 2000, the annual cost estimates for adult day care were \$13,000 and \$25,300 for assisted living.
- By 2030, many retirees will not have enough income and assets to cover basic expenditures or any expenses related to a nursing home stay or service from a home health provider.

In general, US has a more liquid, mature capital market for the senior housing industry than China. The regulations in US regarding senior housing, and health care related to senior housing are also more complicated than those in China. Serious US developers which are targeting the China market can bring along more mature practices to China.

Chinese Central Government has put more barriers towards short-term, foreign real estate investment in China with the goal to cool down its residential markets. However, investing senior housing may be able to get the green light because the nature of the business. The senior housing investment can help the government build the harmony society as more seniors are looking for better services in their retirement life. Many local governments have established policies to favor senior housing investment including Shanghai.

3.5. Relation to Health Care Industry

Definitely Chinese are paying more attention to health care nowadays. As can be seen from Table 10 in Chapter 2, the nursing care as well as the other care services in China are really inexpensive, which is part of the “cheap labor” story. It is a huge advantage with the only challenge to train local service staff with a high service standard.

To summarize, it is estimated that in China, about 610,000 million of seniors live in more than 40,000 government welfare type senior housing centers, and less than 200,000 seniors live in those not-for-profit, non-government senior housing centers. This is 0.56% of total population of 144 million people aged over 60 in 2005. It will be a huge market if the percent increases as the society promotes well positioned senior housing communities. The retirement pensions, and re-employment income and amounts from their children are estimated to add up to RMB400 billion. It is estimated that even though only 3% of seniors decide to live in a senior housing environment, which means 4.3 million of Chinese seniors will be looking for suitable senior housing. The rest of seniors may still age in traditional home-based care environment. With only 800 for-profit/ non-government senior housing facilities nationwide, the demand is huge. Approximately 80,000 to 100,000 senior housing communities are needed. It will create an investment market of RMB90 billion to RMB100 billion (Wang 2006).

Chinese seniors have better affordability than ever and they are willing to learn and accept new ways of senior living once the right products are there. Opportunities are significant US developers can bring a brand and higher quality services that can be set as model for Chinese senior housing industry. The US developers with long-term commitments have better capital resources than local developers. It will be much easier to roll out nationally once the different level of governments recognize these developers’ efforts.

Opportunities exist in not only developing new senior housing communities in China, but also helping upgrade most condominium units to better adapt the seniors’ needs. The Home Care Technology Association of America (HCTAA 2007) has mentioned examples of modern home care technology that include Tele-health/ Remote Monitoring, Telephony, Point-of-Care, Scheduling, and other Operations Management Software. Besides the physical upgrade the

housing units, if such systems can be applied effectively, the aging in place can be very practical for people who hope to do so. In addition, these tools to permit aging in place can be on a widespread, cost-effective scale. US National Association of Home Builders (NAHB 2007) offers Certified Aging-In-Place Specialist (CAPS) program. The program teaches the technical, business management, and customer service skills essential to competing in the fastest growing segment of the residential remodeling industry: home modifications for the aging-in-place. This can be part of developing senior housing business in China.

There are quite a few potential senior housing projects in China that are readily available or can be investigated further. The following may give a US developer and/ or investor a broad sense on how various local governmental entities may approach investment projects related to senior housing in China.

Li (2006) mentioned that Shenzhen Civil Affairs Bureau was planning a high-end senior housing project with a site area of 10,000 square meters and was expecting the capital and operational partner could come from non-government sectors.

Gaizhou City (2007) is expecting a foreign investment of \$70 million in the Huaxia Taoyuan Senior Housing and Recreational Village. The Chinese partner will invest \$30 million. The project has got all the entitlements and permits. It has already built a senior apartment building with a construction area of 4,000 square meter as well as infrastructure such as roads and landscaping.

Beidaihe District (2007) is proposing a 2-year, RMB50 million senior apartment project with a payback period of 5 years. The project has a planned site area of 50,000 square meters. Beidaihe is one of the most famous destinations for vacations in China because of its weather and coastal location. The Central Government as well as many provincial governments, state owned enterprises have vacation and recreational facilities over there.

Table 16 shows a senior housing project proposal from a National Park Administration Office. It is estimated that based on their analysis an IRR of 20.79% can be achieved.

Table 16. Sun Moon Canyon National Park Senior Apartment Investment Proposal

Project Name	Senior apartment (including senior education, medical care etc.)
Project Description	Site area: 20,000 square meter
	Construction area: 15,000 square meter
	1000 beds
	Landscaping 10,000 square meter
Investment type	Sole investor
Project Owner	Sun and Moon Canyon “riyuexia” National Park Administration
Project Details	Total Investment: RMB20 million
Market Analysis	The development of the national park is make it as a place to attract people to visit for leisure and/ or to live here for enjoying the perfect environment
Return on Investment	IRR 20.79% , Years of return 5.6 years

Source: Sun Moon Canyon National Park 2007

Also a sample investment analysis can be referred to Appendix 2. A RMB40 million equity investment for a senior condominium project may be able to generate average cash on cash return of 113.62% (Wang 2006).

The challenges are most related to localization, and understanding the culture and the markets. How to ensure the same high quality of services as that in US when there are no regulations to require one developer to do so can be a big challenge. Training for qualified people and building a brand take time. A developer has to have some patient capital to back up.

CHAPTER 4

DISCUSSIONS OF IMPLICATIONS OF US SENIOR HOUSING TO CHINA

4.1. General

China can learn from US in many aspects on its senior living practices, the present study is attempting to summarize a few major ones:

- Why investing in senior housing industry is attractive?
- What is behind senior housing from a real estate developer's point of view?
- What China can pick up from local government and regulatory perspectives?

4.2. The Reasons to Invest in Senior Housing in US

According to KMF (2007), there are five major reasons to invest in senior housing:

- *High Cash-on-Cash Returns with High Internal Rates of Return*
The senior housing market currently provides cash-on-cash returns ranging from 8% to 11% free and clear. Internal rates of return have ranged from 10% to 20%.
- *Demand Drivers are Positive and More Certain than Other Property Types*
The demand for senior housing is driven by demographics related to the baby boomers. Senior housing with assisted living or nursing services is very much need-driven, and is not discretionary compared to other types of real estate such as office, retail and industrial properties. Demand for senior housing is also much less impacted by "technology risk" than that for retail, commercial, and industrial property types.
- *The Business Cycle is Independent*
Senior housing has its own business cycle. However, the cycle is different from that of other types of real estate which is more sensitive to overall economy and business environment. Today's seniors have all kinds of financial support to live out their senior years. The overall economy and business environment can definitely affect the ability of the seniors to sell their traditional housing, but social security payments, various insurance programs and the nature of needs demand can protect the senior housing industry. The cycle for senior housing is resulted from demand and supply between

capital and senior housing properties. There is a strong argument that adding independent living properties to a multi-family portfolio will help the risk-return profile of the investment because the two types of assets are not highly correlated.

- *Industry Cost Structure Creates Excess Returns for Additions and Expansions*

The senior housing industry's high fixed-cost structure can create significant problem when there is a large drop in occupancy. It can also provide significant, value-added opportunities. Small additions to a property can create significant increases to net operating income thus increase the IRR with minimum risk.

- *Inefficient Market Provides Opportunities To Make Above-Market Returns*

The research on senior housing is much limited compared to other commercial real estate. A sophisticated and good research may provide better returns.

Monroe (2007) has pointed out that investors' seeing a top in the health care REITs rather than the rising interest rate have caused the price declines of health care REITs in 2007 so far. Monroe has also summarized the following:

- A relatively high dividend yield together with price gains in the health care REITs sector have provided investors with solid returns for nearly 20 years.
- For the 11 health care REITs in US, the total returns (inclusive of dividends) in 2006 ranged from a low of 26.8% to a high of 52.5%.
- In 2003, the total returns ranged from 22.1% to 153.5%, with six of the 13 health care REITs then providing returns in excess of 50%.

In the mean time, as discussed in Chapter 2, companies such as Brookdale, Sunrise and many others, are continuing to expand their businesses through new developments and consolidation. Private equity firms may have seen arbitrage opportunities in the health care industry which resulted in the Carlyle Group's acquisition of Manor Care, a short-term post-acute medical care, rehabilitation and long-term skilled nursing care company. Analysts are predicting that the Carlyle may sell some of the Manor Care's facilities to REITs. Even though the market shows some adjustments in the health care REITs prices, there is no reason not to believe the fundamentals for the senior housing industry is still very strong.

The same reasons may be applicable to the emerging market such as China. Local developers and early foreign real estate companies in China have been enjoying high profits in real estate investment and development in China for quite a few years as long as they can acquire the land and develop the projects. As the market becomes more mature and competitive, niche markets such as senior housing can become a good segment to invest.

4.3. The Geriatric Services

In US, except independent living and senior apartments, senior housing industry is very heavily tied to the elderly health care services. There are geriatric certifications for physicians, nurses, and professional geriatric care managers, geriatric counselors, and pharmacists etc. Wikipedia (2007) defines geriatricians to be primary care physicians who are board-certified in either family practice or internal medicine and have also acquired the additional training necessary to obtain the Certificate of Added Qualifications in geriatric medicine.

The Commission for Certification in Geriatric Pharmacy (CCGP 2007) has mentioned why such certification is important due to the reason that the public has been aware of medication-related problems, which cost more than 100,000 lives each year and consume more than \$100 billion in scarce health care resources.

The Morning Calls Inc.(2007) has stated that there are fewer than 7,000 practicing geriatricians in US, which means there is about one geriatrician for every 5,000 patients. As the baby boomers continue aging, more geriatricians are needed to deal with the complex health needs of older adults.

A discussion with An (2007) has revealed that in China, the geriatric health services is quite different from the practices in US and Europe. Such services in China are focusing on more the annual physical examinations and sicknesses of the elderly people. For example, An (2007) has commented that one retired government official may have a direct phone line at home to access hospital for services needed, but this is nothing compared to what American seniors can receive in a good senior service centers within a senior living community. In China, not only the elderly, but people of all age groups are subject to over dose of medicine. It is a common mind-set that whenever one goes to see a doctor, the doctor must prescribe some medicines otherwise the

patient may feel worried. An (2007) has further pointed out for a senior living community in China to introduce a general hospital to be located adjacent or within the community to not a good idea because of it may pose cross infection problems. An has proposed that the senior housing projects in China have qualified medical centers with well trained geriatricians, nurses, and nursing aids. Such medical or nursing centers should focus on how to help the elderly people live a healthier life style and educate them to understand the natural aging process. An and his partner have started pilot training in top hospitals in China to promote the most advanced geriatric practices.

There are different levels of certifications in China for geriatric services. However, none has been that sophisticated and well administrated compared to those in US and Europe. Hu and Li (2004) have reported that one famous geriatrician in China has pointed out the elderly in China tend to make three mistakes: 1) the elderly in China tend to see doctors who only handles one type of healthy problems but ignores that the patient may have other healthy issues; 2) the elderly tend to be act as doctors themselves, and take over-the-counter drugs medicine without consulting a doctor; and 3) the elderly in China believe in over-stated advertisement rather than science.

The implications on this discrepancy may mean that it is possible for US senior housing developers/ investors to work together with geriatric services companies from US to shape up the China senior living industry. The elderly people then will come to understand better the best practices which are not available now in China.

4.4. Brands and Reputation

At Brookdale, its focus is on one goal – serving our residents 24 hours a day, and seven days a week (Brookdale 2007); Sunrise believes in helping seniors live the life they want to live (SRZ 2007); Holiday Retirements Corp. strives for gracious retirement living, and encourages the residents, “don’t just live with us, participate with us!” (Holiday 2007). The brands of these companies have been built with more than 20 years of continuous improvements of their services.

Whether it is a foreign or local developer/ investor in senior housing in China, the most important mission should be focusing on offering the best customer services to build a sustainable and reputable brand.

4.5. The Government and Regulatory Practices

As briefly discussed in Chapter 2, US senior housing industry did not grow very fast until only until late 1970s when HUD Section 8 independent living seniors housing and Section 202 residential care facilities loan guarantees could be applied to for-profit entities. The ability for REITs and other public real estate operation companies to raise capital from the public has enabled the senior housing industry to grow. More institutional investors have also been investing in senior housing for years. Wellesley Hills (2007) has indicated that though the revenues of senior living industry are projected to grow from \$18 billion to \$30 billion at end of 2008, it is still very fragmented industry, the top 45 for-profit companies control only 400,000 or 22% skilled nursing beds of 1.8 million US total beds, and the top 5 not-for-profit nursing home companies control about 1.3%, 24,000 beds. It also indicates that the number of nursing home beds per thousand elderly Americans has declined every year over the past 20 years. In US, many senior housing projects are welcomed by local municipalities and communities because senior housing communities have almost zero demand for schools, and can generate local tax revenues. Compared to other residential developments, the senior housing projects can get approvals easily and faster, which poses huge advantages to developers.

In China, such advantage is not clear yet, because the governments have not got anything specific to encourage for for-profit senior housing developments. Because of the rapid growth residential markets in China for the past a few years, the residential development has been one of the most profitable real estate businesses. It is obvious that development costs of senior housing are significant higher than those of traditional residential development of the same quality. If the governments will have the senior housing developers compete with residential developers to bid a parcel of land, the senior housing developers definitely can not get the bid if it requires the same rate of returns as the residential developer.

The Chinese government should do the following :

- Promote for-profit senior housing projects with lower price land and other benefits such as tax incentives that may allow the developer to achieve reasonable returns.
- Prepare master planning for senior housing projects and then introduce public and private partnership.
- The government should focus on low and zero income senior housing but let the market to develop for-profit, middle to higher end senior housing.

4.6. Future Growing Strategies

Roulac and Eachempati (1999) have suggested seven growth strategies for the US senior housing businesses. The for-profit senior housing market in US then is far ahead what China has now. However, most of the strategies are still applicable today in both US and China. The strategies are as follows:

- Increase of revenues from currently owned communities through the establishment of a brand identity.
- Extension of service lines.
- Expansion to new market by managing contracts.
- Development of adjacent land.
- Development of new communities.
- Overseas expansion.
- Strategic acquisitions of second tier firms.

To summarize, the senior housing industry in US is more of a health care service business than of a real estate business. It is important for Chinese developers to realize that the service part of senior housing business is the key to their success. A good integration of hospitality, health care and real estate development can make a good senior housing project. In China, residential developers used to care less about the details and services because of the high demand of housing. Nowadays, the developers are getting more sophisticated and they become to realize that service and good quality really help build a good brand. Some of the principals that have helped US develop a mature but still growing senior housing markets are valid in China. As the Chinese economy and number of wealthy senior population continue to grow rapidly, the senior housing market will be very promising.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

The senior housing market in China will take a leap in future as the aging continues and the financial capability of the elderly improves. The social and cultural changes have allowed the elderly in China to live in a senior housing environment. Once more elderly realize that they can enjoy much better their elderly life in a well planned senior community with good services, choices of living in senior community can be very well welcomed. The governments in China have already encouraged individuals, private businesses and mining enterprises to engage into senior housing business. It is not surprisingly that in the near future, the governments may encourage foreign investments into this area with better investment environments.

A US developer and/ or investor should consider high-end or very high-end senior communities targeting middle to high income seniors or seniors with middle to high income children. The immediately available opportunities in China lie in the following:

- To partner with successful local senior community developers or residential developers with master planned residential project including buildings for seniors.
- To partner with various level of governments for for-profit senior housing development probably in public-private format.
- To look for tourist places/ cities to develop mixed-use project including major senior housing portions.
- To provide improvement services to help the existing multi-family units better fit seniors' needs.
- To partner US geriatric services providers to promote high quality and high standard geriatric services.

5.2. Recommendations

The study has attempted to identify several key areas in senior housing industry in both US and China, it is recommended that US developers and/ or investors perform in-depth market study and analysis as well as to understand related legal, regulatory requirements. It is also suggested

that future research on this topic focus on interviews with senior housing developers and investors in both US and China.

Overall, as the local developers have just started to pick up the senior housing and building senior communities in China and none of US standard or quality senior living facilities exist yet, it is the right time for a US developer and/or investor to seriously look into the investment opportunity in China and make a bold move.

APPENDIX 1

2006 US 50 LARGEST SENIOR HOUSING OWNERS/ MANAGERS

Table 17. 2006 US 50 Largest Senior Housing Owners as of 1 July 2006

Rank	Company	Headquarters	Number of Units	Number of Properties
1	Colson & Colson/Holiday Retirement Corp.	Salem, OR	31,278	264
2	CNL Retirement Properties, Inc.	Orlando, FL	22,149	188
3	Nationwide Health Properties, Inc.	Newport Beach, CA	20,157	251
4	Boston Capital	Boston, MA	19,800	330
5	Brookdale Senior Living, Inc.	Chicago, IL	16,971	139
6	Senior Housing Properties Trust	Newton, MA	16,609	125
7	Sunrise Senior Living	McLean, VA	16,000	185
8	Health Care REIT, Inc.	Toledo, OH	15,737	219
9	Sunwest Management, Inc.	Salem, OR	15,160	193
10	Health Care Property Investors, Inc.	Long Beach, CA	15,023	143
11	Ventas Healthcare Properties, Inc.	Louisville, KY	13,709	126
12	Atria Senior Living Group	Louisville, KY	12,632	109
13	Merrill Gardens	Seattle, WA	9,253	68
14	Healthcare Realty Trust	Nashville, TN	9,168	33
15	Erickson Retirement Communities, LLC	Baltimore, MD	8,848	9
16	Simpson Housing Solutions, LLC	Long Beach, CA	7,845	82
17	ACTS RetirementLife Communities, Inc.	West Point, PA	7,005	18
18	First Centrum, LLC	Sterling, VA	6,742	98
19	Evangelical Lutheran Good Samaritan	Sioux Falls, SD	6,625	112
20	Assisted Living Concepts, Inc.	Milwaukee, WI	6,434	153
21	Senior Lifestyle Corporation	Chicago, IL	5,811	48
22	Classic Residence by Hyatt	Chicago, IL	5,722	18
23	USA Properties Fund, Inc.	Roseville, CA	5,080	34
24	Presbyterian Homes & Services	St. Paul, MN	5,042	36
25	Century Park Associates ¹	Chattanooga, TN	4,963	40
26	Leisure Care, LLC	Seattle, WA	4,935	23
27	Prime Care Properties, LLC	Indianapolis, IN	4,810	49
28	Brightview Senior Living, LLC	Baltimore, MD	4,621	43
29	Covenant Retirement Communities	Chicago, IL	4,564	14
30	Capital Senior Living Corporation	Dallas, TX	4,505	35
31	Benchmark Assisted Living	Wellesley, MA	4,006	43
32	Retirement Housing Foundation, Inc.	Long Beach, CA	3,907	21
33	Chartwell Seniors Housing REIT	Toronto, Ontario	3,762	20
34	LTC Properties, Inc.	Westlake Village, C	3,744	84
35	Life Care Retirement Communities, Inc.	Des Moines, IA	3,619	11
36	Lytle Enterprises, LLC	Bellevue, WA	3,274	25
37	Kisco Senior Living	Carlsbad, CA	3,120	20
38	American House Senior Living Residences	Bloomfield Hills, MI	3,083	29
39	Front Porch	Burbank, CA	3,069	13
40	Westminster Communities of Florida	Orlando, FL	3,057	10
41	Carefree Senior Living	Las Vegas, NV	3,016	11
42	Cornerstone Affiliates ²	Pleasanton, CA	2,923	11
43	Asbury Communities, Inc. ³	Gaithersburg, MD	2,742	5
44	The Kendal Corporation	Kennett Square, PA	2,580	13
45	Lutheran Senior Services	St. Louis, MO	2,482	9
46	Justus Rental Properties, Inc.	Indianapolis, IN	2,472	7
47	Senior Resource Group	Solana Beach, CA	2,396	12
48	Aegis Living	Redmond, WA	2,349	31
49	Life Care Services LLC	Des Moines, IA	2,258	12
50	Presbyterian Manors of MidAmerica, Inc.	Wichita, KS	2,240	17

Source: ASHA 2007

Table 18. 2006 US 50 Largest Senior Housing Managers as of 1 July 2006

Rank	Company	Headquarters	Number of Units	Number of Properties
1	Brookdale Senior Living, Inc.	Chicago, IL	50,443	536
2	Sunrise Senior Living	McLean, VA	44,000	400
3	Colson & Colson/Holiday Retirement Corp.	Salem, OR	32,311	272
4	Professional Community Management (PCM)	Lake Forest, CA	27,333	14
5	Life Care Services, LLC	Des Moines, IA	21,205	69
6	Erickson Retirement Communities	Baltimore, MD	15,459	13
7	Sunwest Management, Inc.	Salem, OR	15,160	193
8	Emeritus Assisted Living	Seattle, WA	15,007	183
9	Atria Senior Living Group	Louisville, KY	14,377	127
10	Five Star Quality Care, Inc.	Newton, MA	12,403	102
11	Horizon Bay Senior Communities	Tampa, FL	9,865	48
12	Merrill Gardens	Seattle, WA	9,452	71
13	Assisted Living Concepts, Inc.	Milwaukee, WI	8,818	214
14	Capital Senior Living Corporation	Dallas, TX	7,713	59
15	Evangelical Lutheran Good Samaritan Society	Sioux Falls, SD	7,297	127
16	Senior Lifestyle Corporation	Chicago, IL	7,185	57
17	ACTS RetirementLife Communities, Inc.	West Point, PA	7,005	18
18	Summerville Senior Living, Inc.	San Ramon, CA	6,797	67
19	Leisure Care, LLC	Seattle, WA	6,497	38
20	Classic Residence by Hyatt	Chicago, IL	5,722	18
21	Brightview Senior Living	Baltimore, MD	5,707	51
22	Presbyterian Homes & Services	St. Paul, MN	5,240	39
23	USA Properties Fund, Inc.	Roseville, CA	5,080	34
24	Century Park Associates	Chattanooga, TN	4,963	40
25	Covenant Retirement Communities	Chicago, IL	4,668	15
26	First Centrum, LLC	Sterling, VA	4,538	40
27	Benchmark Assisted Living	Wellesley, MA	4,006	43
28	Retirement Housing Foundation, Inc.	Long Beach, CA	3,907	21
29	Hearthstone Senior Services	The Woodlands, TX	3,792	32
30	Asbury Communities, Inc.	Gaithersburg, MD	3,400	8
31	American House Senior Living Residences	Bloomfield Hills, MI	3,378	31
32	Kisco Senior Living	Carlsbad, CA	3,284	21
33	Front Porch	Burbank, CA	3,069	13
34	Westminster Communities of Florida	Orlando, FL	3,057	10
35	Cornerstone Affiliates	Pleasanton, CA	3,047	14
36	Life Care Retirement Communities, Inc.	Des Moines, IA	3,022	8
37	Carefree Senior Living	Las Vegas, NV	3,016	11
38	Aegis Living, LLC	Redmond, WA	2,802	38
39	Continuing Care Management, LLC	Westborough, MA	2,789	24
40	The Kendal Corporation	Kennett Square, PA	2,580	13
41	Oakdale Heights Management Corporation	Redding, CA	2,510	24
42	Lutheran Senior Services	St. Louis, MO	2,482	9
43	Justus Rental Properties, Inc.	Indianapolis, IN	2,472	7
44	Simpson Housing Solutions, LLC	Long Beach, CA	2,462	24
45	Senior Resource Group	Solana Beach, CA	2,396	12
46	George M. Leader Family Corp.	Hershey, PA	2,371	11
47	Pacific Retirement Services, Inc.	Medford, OR	2,287	7
48	BelmontCorp Belmont Village	Houston, TX	2,250	17
49	Presbyterian Manors of MidAmerica, Inc.	Wichita, KS	2,240	17
50	Christian Homes Inc.	Lincoln, IL	2,218	13

Source: ASHA 2007

APPENDIX 2

FOR SALE SENIOR CONDO PROJECT LEVEL INVESTMENT ANALYSIS-SAMPLE

1. Project Plan

- Site area: 50 Chinese mu (33,350 square meters).
- Construction area: $50 \text{ mu} \times 667 \text{ square meter/ mu} \times 3 \text{ (FAR)} = 100,050 \text{ square meters}$
- Take planned construction area as 100,000 square meters
 - Retail 5,000 square meters
 - Residential 800,000 square meters
 - Parking and other amenities 15,000 square meters

2. Development Costs

Table 19. Development Costs Estimate

Items	Costs	Note
	(in RMB10,000)	
Land	2,500	RMB500,000/ mu ×50 mu
Planning and Design	100	RMB10/ square meter ×100000 square meters
Utilities	140	RMB140/ square meter×100000 square meters
Construction	8,000	RMB800/square meter×100000 square meters
Landscape	300	$50 \text{ mu} \times 667 \text{ square meters/ mu} \times 45\%$ (green area ratio×200RMB/ square meter
Management	300	
Intelligent control systems	100	
Interests and other financial costs	300	RMB20,000,000×6%/ year×2 years
Others	300	
Total	12,040	

Source: Wang 2006

3. Profit Analysis

- Revenues Residential for Sale: $80,000 \text{ square meters} \times 80\% (\text{efficiency}) \times 2500 \text{ RMB/square meter} = \text{RMB}160,000,000$
- After Tax: $\text{RMB}160,000,000 \times 0.98 = \text{RMB}156,800,000$
- Retail: $5000 \text{ square meters} \times \text{RMB}5000/\text{square meter} = \text{RMB}25,000,000$
- After Tax: $\text{RMB}25,000,000 \times 0.98 = \text{RMB}24,500,000$
- Parking and Other Amenities After Tax Estimate: $\text{RMB}30,000,000$
- Total Revenue: $\text{RMB}211,300,000$
- Total Costs: $\text{RMB}120,400,000$
- Total Profits: $\text{RMB}90,900,000$
- Profit/ Costs = 75.5% , annual ratio = $75.5\% / 2 = 37.75\%$
- Equity: $\text{RMB}40,000,000$
- Construction Loan: $\text{RMB}20,000,000$
- Cash on Cash Return: $\text{RMB}90,900,000 / \text{RMB}40,000,000 = 227.25\%$
- Average Cash on Cash Return = $227.25\% / 2 = 113.62\%$ (Wang 2006).

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