SECTOR BRIEFING

number 33

DBS Asian Insights

DBS Group Research • December 2016

Eldercare in China

A Sunrise Industry

DBS

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Investment Summary

Rapidly ageing population

After a surge in its fertility rate and population in the early 1960's, China enacted various measures to control the birth rate starting from 1963, culminating in the well-known "One Child" policy in 1978. China's fertility rate plummeted from over six births per woman in 1965 to 1.6 births currently. By 2050, there will be one elderly for every 3.6 people, a dramatic increase from approximately one in 10 currently, according to the World Bank. This issue is especially acute as China is "getting old before it gets rich"; GDP per capita still significantly lags that of other ageing developed countries'.

With challenges come opportunities

To cope with this, the government has reformed the pension systems to better support the burgeoning aging population. The prospects of an expanding elderly population, increasing consumer affluence, and longer lifespans add up to significant investment opportunities. We believe the key beneficiaries include housing, healthcare, health food, and financial products.

Accommodation is a big concern for the elderly, but contrary to common belief, there is no shortage of beds and space for the elderly in China. We believe what's lacking are good operators that can provide high-quality services to the elderly. Healthcare is another key component of elderly spending that will have an impact on their quality of life. In the consumer space, increasing health-consciousness would boost opportunities in nutrition-related products. In the financial arena, increasing wealth, stronger purchasing power, and the public pension funding gap have created new demand for life insurance and wealth management products.

"What's lacking are good operators that can provide high-quality services to the elderly"

China's Changing Demographics

China: Economic Giant Hit by Declining Growth

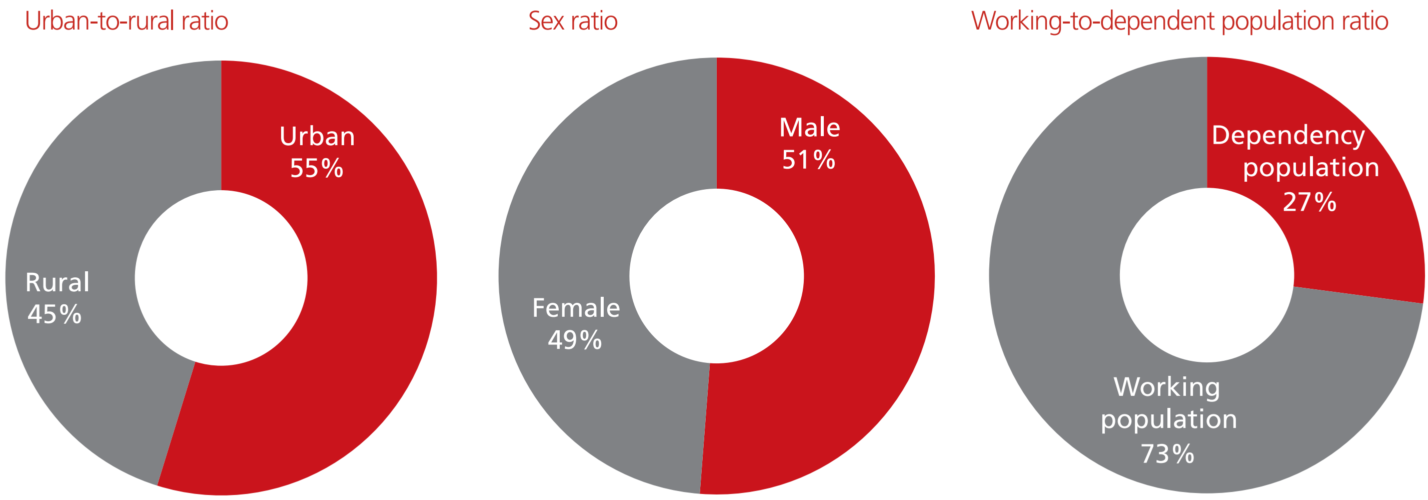
Room to catch up

Over the past 30 years, China's GDP has increased rapidly, helping the country become one of the world's most productive manufacturing centres, a vibrant commercial marketplace, and a central pivot in the global economy of the 21st century. Attaining an average annual GDP growth rate of 10.02%[1] for the last decade, China's economy is now the world's second largest, at US$10.9 trillion[2], after the United States' at US$17.8 trillion. Emerging as a superpower among the developing nations, China had a 55%[3] urbanisation rate in 2015, a rapid increase from 43% in 2005. Despite remarkable economic progress made in recent years, China's GDP per capita stood at US$14,100, compared to Japan's US$38,100, Germany's US$46,900[4], the US's US$55,800, and Hong Kong's US$56,700 in 2015, indicating room to catch up with developed nations in real terms.

Aging Population – With Challenges Come Opportunities

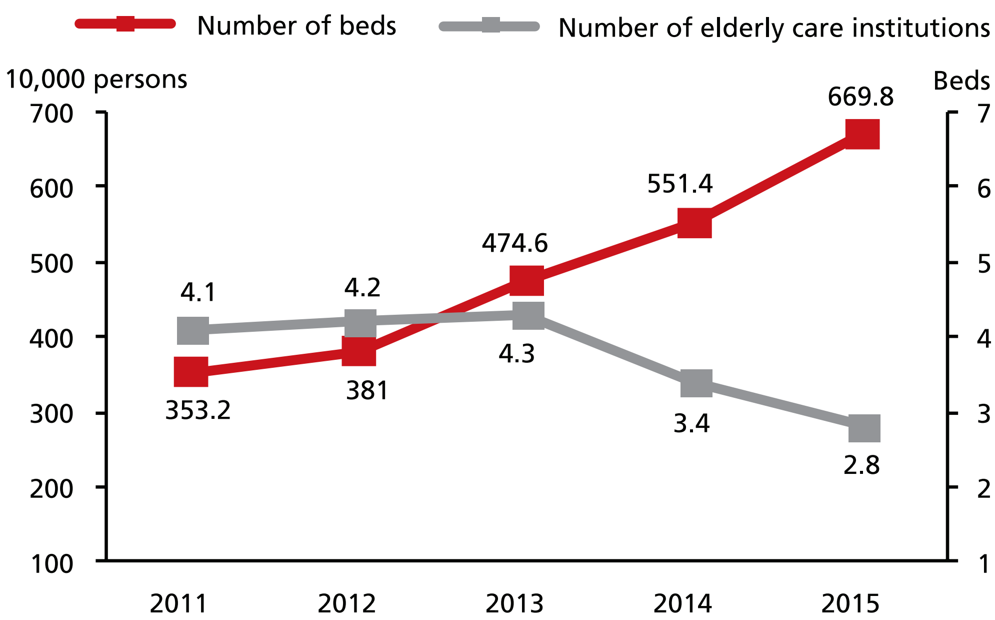
China is still the world's most populous country, although India is likely to eclipse China in this regard by 2021. With its population of 1.4 billion, China currently has more than 220 million senior citizens of over 60 years of age, and their ranks are expected to swell in the next two decades, reaching 400 million – or one-third of the country's total population – by 2050. The age-dependency ratio has climbed from 10.4% to 14.7% between 2005 and 2015, heaping greater pressure on the working population to care for their parents in their golden years.

Diagram 1. Population ratios in China (2015)



Source: China Statistical Yearbook 2015

Diagram 2. Age distribution ratio (2015)



Source: World Factbook and China Statistical Yearbook

Diagram 3. Age-dependency ratio (2015)

	Life expectancy		Median age		Death rate	Age-dependency ratio (%)
	Male	Female	Male	Female		
China	73	78	36	38	7.5	14
US	77	82	37	39	8.2	22
Japan	81	88	45	48	9.5	43
Germany	78	83	45	48	11.4	32
Hong Kong	80	86	43	44	7.1	21

Source: World Factbook and China Statistical Yearbook

Dramatically ageing

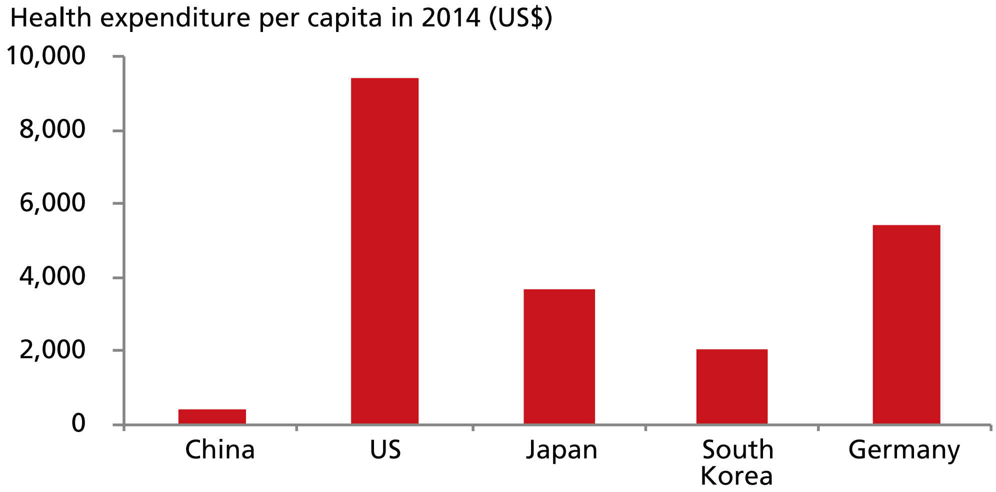
The precipitous decline in fertility and improved longevity over the past two decades are causing China's population to age at one of the fastest rates ever recorded, pushing the dependency ratio up to 14.7% in 2015, a dramatic 4.8-percentage-point jump since 2000. Thanks to continuous medical breakthroughs and higher household income, the current life expectancy at birth has reached 73.4 years and 77.7 years for male and female, respectively, in China. With its domestic institutions largely insufficient to cater to the growing demand for senior care services, opportunities for investment in eldercare abound.

Elderly Care Wanted: Higher Quantity and Quality

The 'One Child' policy

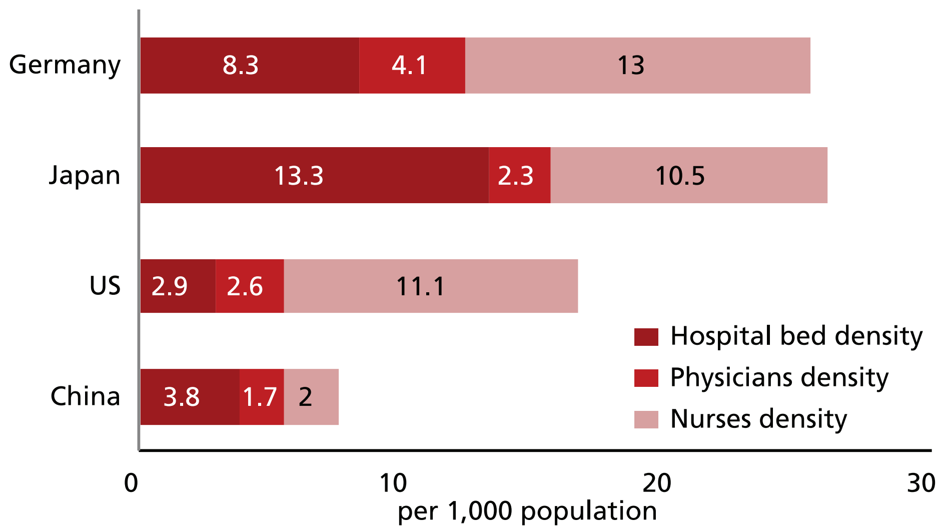
A myriad of factors has contributed to in the rising demand for eldercare services in China. The low birth rate – due to the 'One Child' policy and socioeconomic challenges in the past decades –, an overall increase in life expectancy, and a series of family-planning regulations have combined to bring about fundamental demographic changes and created unprecedented demand for more eldercare institutions and services.

Diagram 4. Healthcare resources and spending by country



Source: World Health Organization

Diagram 5. Healthcare resources by country (2014)



Source: The Organisation for Economic Cooperation and Development Health Statistics

Inadequate healthcare

Although China has achieved great economic milestones, it lags other developed economies in healthcare resources and spending. Despite a series of health reforms initiated under the 12th Five-Year Plan (2011-2015) – including an improved social safety net for China's rural population, with basic healthcare coverage for all –, China, which spends a mere US$420 on health per person is falling way behind the developed countries. At only 3.8 hospital beds per 1,000 people, China's physician density is much lower than that of developed countries', reinforcing the notion that healthcare resources are inadequate for its population.

Within the healthcare industry in China, the eldercare sector is one of the most dynamic areas awaiting investment. The deeply-rooted virtue of filial piety, combined with the explosive growth of the middle class in China, has given rise to increasing demand for elderly homes and related services. Already serving the largest elderly population on Earth, eldercare, the eldercare industry in China is set to take off in the next few decades.

At only 3.8 hospital beds per 1,000 people, China's physician density is much lower than that of developed countries'

Opportunities Abound

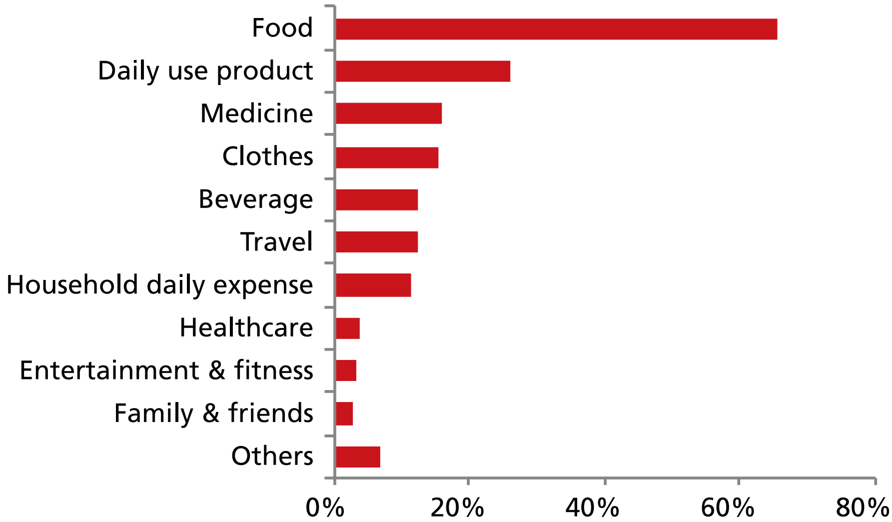
The eldercare industry serves multiple segments and involves many different sub-sectors. Accommodation remains one of the key areas of concern and it is likely to be the first area to be addressed in dealing with the well-being of the elderly.

Food and healthcare

"Accommodation remains one of the key areas of concern"

According to a study on daily expenditure of the Chinese by the Chinese Consumer Association in 2013, the key categories are food, household items, and healthcare items. They're followed by apparel, restaurants, and travel. Fitness, nutrition, and entertainment are also key other important areas.

Diagram 6. Top categories of spending by China's elderly



Source: China Consumer Association

New market for hearing aids

Healthcare typically takes up a big part of expenditure, and its share of total spending tends to increase with age. Certain ailments tend to be more prevalent amongst the elderly, namely problems of the eye, cancer, and cardiovascular diseases. Hearing aids are one of the fastest-growing segments within eldercare.

In the consumer space, we think increasing health consciousness will boost sales of nutritional supplements. The Chinese health-food market is forecast to grow at a compound annual growth rate (CAGR) of 25.7% from 2009 to 2020. An area of growth would be the nutraceutical segment. As lifespans get longer, concerns of living standards and monthly spending will also become increasingly important. This has spurred new demand for life insurance and wealth management products.

Senior Housing

How much space do we need for senior living in the mid-term and long run?

There have been various reports on the lack of accommodation for the elderly in China. However, based on our analysis, China is not short on such living space; it is lacking operators or service providers. Unfortunately, most policies and market participants are still focusing on development or construction rather than services.

China is Japan 30 years ago

Against which countries should we benchmark? We use Japan and the US for our analysis. The reasons are (i) the cultural/geographic proximity between China and Japan, (ii) the US has the entire value chain of senior-living facilities, and (iii) quite a few Japanese or American operators have ventured into China's senior-living market and most Chinese operators/owners are trying to emulate the business models in Japan and the US.

"China is not short on such living space; it is lacking operators or service providers"

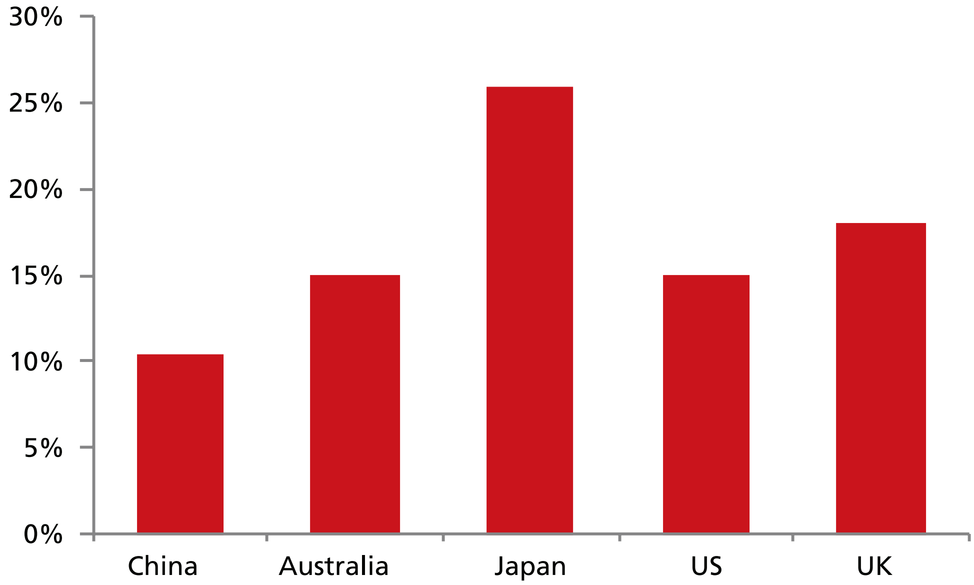
Where are we now, in terms of demographics? China is like Japan 30 years ago. According to the United Nations' (UN) estimate (see table below), the percentage of seniors (65 years old or older) in China reached 7% in 2001 and it will take 25 years for that ratio to go up to 14% and another 13 years to 21%. The aging pace in China is similar to Japan's with a 30-year difference. The percentage of seniors in the US reached 14% in 2015, but it will take 35 years for that to go up to 21%. In China, the percentage of seniors was 10% by end-2015, much lower than Japan's 26% and the US's 15%. This can be explained by China's and Japan's low fertility rate of under 1.5 whilst the US has more or less maintained a higher fertility rate of 2.0.

Diagram 7. Pace of ageing

Country	% of population aged >=65			No. of years required	
	7%	14%	21%	7%-14%	14%-21%
China	2001	2026	2039	25	13
The US	1942	2015	2050	73	35
Japan	1970	1994	2007	24	13
Time lag between China and Japan	31	32	32		

Source: United Nations, Ministry of Health Labour and Welfare of Japan, National Bureau of Statistics of China, DBS Vickers

Diagram 8. Percentage of population aged 65 and above



Source: The World Bank, DBS Vickers
As of December 31, 2015

Eldercare facilities

Where are we now, in terms of senior care facilities? The number of senior care beds in China is already close to that in the US or Japan. The reason our analysis shows a quite different picture from other reports/analysis is the definition of seniors; the widely quoted number of beds as a percentage of the population aged 60 and above was 3% by the end of 2015; this was sourced from the Ministry of Civil Affairs of China (MCA). MCA's definition of a senior i.e. someone aged 60 and above is different from other countries' definitions (65 and above). We have recalculated the ratios as shown in the table below. The number of beds as a percentage of seniors (aged 65 and above) in China was 4.7% by the end of 2015, compared to 5% in Japan and 5.9% in the US. According to the government's 13th Five-Year Plan (2016-2020), the number of beds as a percentage of the population aged 60 and above is targeted to be 3.5-4% by 2020, which will translate into 5.2%-5.9% for a senior population aged 65 and above.

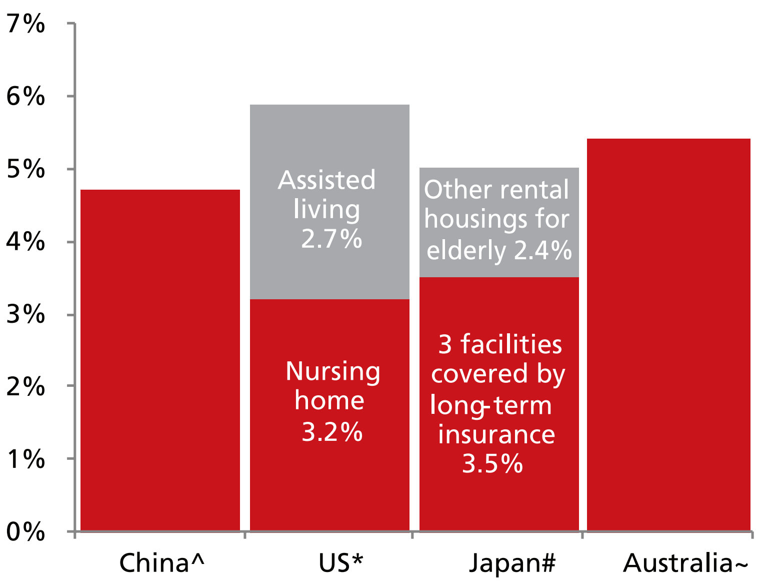
“Most of China's elderly population are not urban dwellers and may not be able to afford senior care services”

Diagram 9. No. of eldercare beds in China (2005-2020)

Year	No. of eldercare beds	Population aged >=		No. of beds as % of population aged >=	
		65	60	65	60
	m	m	m	%	%
2005	1.6	80	144	2.0%	1.1%
2006	1.8	104	149	1.7%	1.2%
2007	2.4	106	153	2.3%	1.6%
2008	2.7	109	159	2.5%	1.7%
2009	2.9	113	167	2.6%	1.8%
2010	3.2	116	177	2.8%	1.8%
2011	3.7	122	184	3.0%	2.0%
2012	4.2	127	193	3.3%	2.1%
2013	4.9	131	202	3.7%	2.4%
2014	5.5	137	212	4.0%	2.5%
2015	6.7	143	222	4.7%	3.0%
2020 gov't target					
2020	8.7	168	248	5.2%	3.5%
2020	9.9	168	248	5.9%	4.0%

Source: Ministry of Civil Affairs of China, National Bureau of Statistics of China, DBS Vickers

Diagram 10. Comparison of eldercare beds



Source: Ministry of Civil Affairs of China, Administration on Aging of the US Department of Health and Human Services, Ministry of Health Labour and Welfare of Japan, Australian Nursing & Midwifery Federation, DBS Vickers

^ no. of beds for elderly living as % of elderly population (>=65) by end-2015, recalculated by DBS Vickers
* from A Profile of Older Americans: 2015, Assisted-living facilities are designed for fairly independent people who require minor supervision, while nursing homes are designed for people who require extensive care
# from Survey on Social Welfare Institutions in 2008, three facilities covered by long-term insurance include intensive-care home for the elderly, long-term care health facility, and sanatorium medical facility for the elder requiring long-term care
~ from Australian Nursing & Midwifery Federation, September 2015
According to report from Ministry of Health Labour and Welfare of Japan, 97% are living at home

Living space

Do we lack senior living space? Not really as a whole. Given the above analysis, living space for China's seniors will be similar to that in Japan and the US by 2020. However, we don't think China really needs so much space:

1. Life expectancy in China is lower than that of Japan's and the US' (see table below), which means that China requires less senior care services than Japan and the US.

2. Most of China's elderly population are not urban dwellers and may not be able to afford senior care services (as they are not covered by China's social insurance scheme). According to the sixth census in China in 2010, the urbanisation rate was 50.1% in 2010, with only 43.9% of seniors aged 65 and above living in towns and cities.

3. Japan has a well-established social insurance system, which covers 90% of long-term care fees (for three facilities covered by long-term insurance), while China doesn't have a similar social insurance system, which makes senior living facilities unaffordable for most seniors.

These factors explain why the MCA reported a 48% vacancy rate at the end of 2015 for senior care beds for China.

Diagram 11. Comparison of life expectancy

	All	Male	Female	Rank
China	75.5	74.1	77.0	63
US	78.9	76.3	81.3	34
Japan	83.7	80.2	87.2	1
World	71.4	69.1	73.8	

Source: World Health Organization, May 2014, DBS Vickers

Diagram 12. Comparison of urbanisation rate

	Urbanisation rate*
China	55.9%
US	80.7%

Source: CEIC, US Census Bureau, National Bureau of Statistics of China, DBS Vickers
* updated to 2015 for China, 2010 for US and 2014 for Japan

Uneven distribution

Overall speaking, there is enough existing senior living space in China i, based on the demographic trends. Having said that, we also saw that the distribution of senior care beds is not even throughout the country's provinces and regions. For example, the number of beds as a percentage of the population aged 60 and above was 5.4% in the Inner Mongolia autonomous region, but only 1.8% in Gansu province. In addition, operators position senior living facilities differently, to cater to different segments of the elderly population. We think what we're lacking are professional operators, rather than space.

Opportunities and market participants

The MCA is aiming to establish a senior-care system by 2020, targeting 90%/6-7%/3-4% of the senior population living in their own homes/community-based senior facilities/institutional eldercare facilities (see table below).

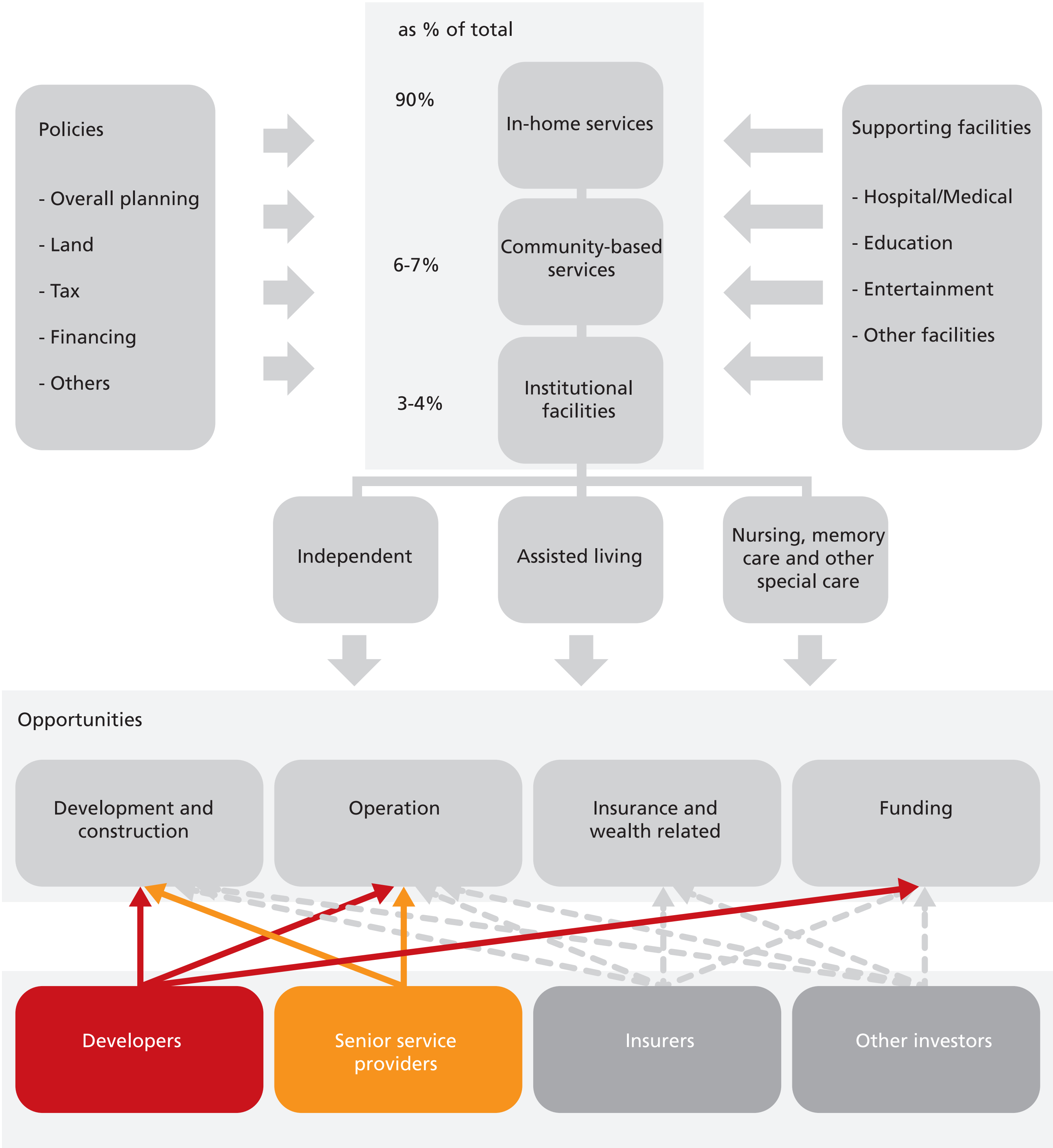
Diagram 13. Types of eldercare providers

Type	Characteristics	Care provider	Target proportion
Living in own home	Traditional elderly who prefer to stay with family Low-income elderly who cannot afford senior care services	Family members and in-home service providers	90%
Community-based services	Elderly who receive insufficient care from family members Serves as a supplement to home care Community senior care during the day and family care at night	Community hospitals and other community-based service providers	6-7%
Institutional settings	The elderly preferring to stay with other elderly The less independent elderly and those who need intensive care Provides comprehensive cares and services	Senior living facilities	3-4%

Source: Ministry of Civil Affairs of China, DBS Vickers

"Given the high prices of land and property, they are applying an asset-light model to control risks"

Diagram 14. Value chain of senior living facilities



Source: PwC, Deloitte, DBS Vickers

The rising eldercare industry offers four major opportunities including development and construction, operation, insurance and wealth management products, and funding. There are four major participants including developers, senior service operators/ providers, insurance companies, and other investors.

Diagram 15. Milestones of senior housing industry

	Features	Participants
Before 2001	Few companies engaged in senior living industry, with no mid- to high-end community	Almost none from private side
2001	The first high-end senior community emerged in Beijing	Beijing Sun City
2005	More high-end senior living communities, diversified property operation models	Shanghai Cherish-Yearn Huichen Senior Apartment
2010	More government policies and diversified investors/ participants	Developers, insurers, senior service providers, and other investment institutions

Source: PwC, DBS Vickers

Focus on development and construction

Developers ventured into the senior care industry in 2010, for: (i) business diversification, (ii) liquidising idle assets belonging to the group, and (iii) exploring potential synergies with associated companies including insurers or medical companies. So far, developers have engaged in the development, operation, and funding of senior housing. However, the focus is still very much on development and construction, as (i) developers are good at construction but lacking operational capabilities, (ii) some developers are using the senior-housing concept as a selling point to charge a premium for traditional residential properties, and (iii) local governments sometimes provide subsidies for senior housing development.

Asset-light model

International operators usually team up with local partners, using an asset-light business model. In view of rising demand for senior care in China, international operators, especially those from Japan and the US, have rushed in. Yet, given the high prices of land and property, they are applying an asset-light model to control risks.

Diagram 16. International operators' exposure to China

Company	Origin	Business model	JV with partner in China	Footprint in China	Year venturing into China
RIEI	Japan	Asset-light	Local operators	Beijing, Shanghai	2012
Medical Care Service	Japan	Asset-light, senior care related products	Shanghai Sanmao	Shanghai	2011
Wisnet	Japan	Asset-light	Local operator	Dalian	2013
Nichii Gakkan	Japan	Asset-light, in-home care	Wholly owned	Beijing	2016
Emeritus	US	Asset-light	Sino-Ocean Land	Beijing	2013
Fortress	US	Asset-light / asset-heavy	Fosun	Shanghai, Ningbo, Nantong, Suzhou, Zhenjiang, Guangzhou	2013
CAJ Right at Home	US	Asset-light, in-home care	Wholly owned	Beijing, Dalian, Erdos, Ningbo, Hangzhou, Wuhan, Chengdu, Guangzhou	2011
Watermark	US	Asset-light	Zhonghong, Taiping Senior Living Inv.	Beijing, Shanghai	2016
Cascade	US	Asset-light	Wholly owned	Shanghai	2013
CP Homes	US	Asset-light	Country Garden	Huizhou	2015
Orpea	France	Asset-light	Wholly owned	Nanjing	2014

Source: DBS Vickers

Policy support is lagging

While there have been quite a few policies to support the senior housing industry since 2010, we can hardly observe a well-established policy to facilitate the industry's growth.

Lack of land for senior housing

Prices of residential and commercial land have increased rapidly lately, and there was no land allocated specifically for senior housing prior to 2014. After the guide on land use for eldercare service facilities (養老服務設施用地) in 2014, several local governments, including that of Beijing, Shanghai, Shenzhen, Zhejiang, and Fujian launched 'senior housing land' (養老用地) for sale. Yet, land for senior housing is classified as land allocated for healthcare, medical facilities, and welfare (醫衛慈善用地), which makes funding less accessible as it cannot be used as collateral.

Diagram 17. Major documents regarding land use for eldercare services since 2010

Date	Policy	Regulator
2015.11	Guiding Opinions on Maximizing the Leading Role of New Consumption and Accelerating the Cultivation of New Supplies and New Driving Forces	The State Council
2015.11	Guiding Opinions on Advancing the Combining of Medical and Health Service and Eldercare Service	National Health and Family Planning Commission and other ministries
2015.03	Notice on Advancing the Residential Properties and Land Supply and Promoting the Stable and Sound Development of the Real Estate Market in 2015	Ministry of Land and Resources
2014.11	Guiding Opinions on Innovating the Investment and Financing Mechanisms for the Key Fields and Encouraging Social Investment	The State Council
2014.11	Guiding Opinions on Promoting the Development of Eldercare Service Industry	Ministry of Commerce
2014.09	Notice on Accelerating the Construction Projects Progress of Health and Elderly Service Facilities	Ten ministries
2014.05	Notice on Accelerating the Construction Work of Eldercare Service Facilities in Urban Area	Ministry of Civil Affairs
2014.04	Guiding Opinions on Land Used for Eldercare Service Facilities	Ministry of Land and Resources
2014.01	Notice on Enhancing the Planning and Construction work of the Eldercare Service Facilities	Ministry of Housing and Urban-Rural Development and other ministries
2013.09	Several Opinions on Accelerating the Development of Health Care Service Industry	The State Council
2013.09	Several Opinions on Accelerating the Development of the Eldercare Service Industry	The State Council
2012.07	Implementation Opinions on Encouraging and Guiding Private Capital's Entry into Eldercare Service Sector	Ministry of Civil Affairs
2011.12	Social Eldercare Service System Construction Planning (2011-2015)	The State Council

Source: CREIS

Funding is less accessible

1. Government subsidies, including a one-off construction subsidy, an interest subsidy, and a tax subsidy. However, the subsidies are far below costs.

2. It is not easy to get bank loans given the lack of profitable models in the industry. So far, banks have only provided funding to public/government-related senior care facilities and facilities with land-use rights that are under construction.

3. Funding from the equity market is also difficult. The well-known senior-housing play – Cherish-Yearn (親和源) suspended its initial public offering in the A-share market in late 2015. In early 2016, Yihua Real Estate (宜華健康) said it would acquire a 58.33% stake in Cherish-Yearn. According to the announcement, Cherish-Yearn is still making losses after 5-6 years of operation and is expected to gradually narrow losses over the next three years.

"It is not easy to get bank loans given the lack of profitable models in the industry"

4. Nearly half of senior housing owners/operators are funded via real estate investment trusts (REIT). However, REITs might not see mass adoption in China in the near future, due to limitations of existing law and tax regimes.

5. Private-equity and trust investors are less interested in senior housing as the industry is still at the start-up stage and there is no clear profitable model yet. Also, PE and trust investors usually require higher returns.

Diagram 18. Major policies regarding land use for eldercare services since 2010

Publishing Time	Name of Document	Publishing Commissions
2016.03	Guiding Opinions on Accelerating the Development of Eldercare Service Industry with Financial Support	People's Bank of China and other ministries
2015.11	Guiding Opinions on Maximizing the Leading Role of New Consumption and Accelerating the Cultivation of New Supplies and New Driving Forces	The State Council
2015.11	Guiding Opinions on Accelerating the Development of Consumer Service Industries and Advancement of Consumption Structure	General Office of the State Council
2015.04	Implementation Opinions on Supporting Social Eldercare Service System Construction with Development Finance	Ministry of Civil Affairs and other ministries
2015.04	Notice on Issuing the Guidelines for the Issuance of the Special Bond for Pension Industry	National Development and Reform Commission
2015.04	Notice on Further Improving the Eldercare Service Industry Development	National Development and Reform Commission and other ministries
2015.02	Implementation Opinions on Encouraging Private Capital to Participate in the Development of Elderly Service Industry	Ten Ministries
2014.11	Notice on Relevant Issues concerning Reduction and Exemption of Administrative Charges on Eldercare Institutions and Medical Institutions	Ministry of Finance

2014.11	Guiding Opinions on Promoting the Development of Eldercare Service Industry	Ministry of Commerce
2014.11	Guiding Opinions on Innovating the Investment and Financing Mechanism for the Key Fields and Encouraging Social Investment	The State Council
2014.11	Announcement on Encouraging Foreign Investors' Establishment of For-profit Eldercare Institutions	Ministry of Commerce
2013.09	Several Opinions on Accelerating the Development of Health Care Service Industry	The State Council
2013.04	Administrative Measures for the Central Special Lottery Public Welfare Fund on Supporting Rural Nursing Homes	Ministry of Civil Affairs and other ministries
2012.07	Implementation Opinions on Encouraging and Guiding Private Capital's Entry into Eldercare Service Sector	Ministry of Civil Affairs
2010.05	Several Opinions on Encouraging and Guiding the Healthy Development of Private Investment	The State Council

Source: CREIS

Tax regime

Lack of a favourable tax regime to support operations. Public/government-related senior housing usually enjoys local governments' subsidies on their operations or tax benefits. However, other senior housing projects hardly enjoy any tax benefits.

Business model and profitability

The business models

The four major business models:

1. **Sales model:** This model is similar to traditional residential development. Developers are using the senior care concept to attract eyeballs and charge premium pricing for their projects. Developers using this model include Poly CN (Xitangyue 西塘越), Vanke, Greentown, and Greenland.

2. **Asset-heavy model – membership:** This model is similar to the continuing care retirement community model in the US. This model enjoys "interest-free loans" in the form of upfront membership fees; some are refundable or partly refundable, while others are not refundable but can be transferred) this alleviates operators' initial financial burden, helps developers' enjoy asset appreciation over time, and lets them charge monthly fees to cover operating expenses. However, we haven't seen any successful example in China yet, given high capital costs and rising land prices. Also, high upfront membership fees might not be easily accepted by China's senior population. Developers using this model include Fosun, Sino-Ocean (which

is planning two projects), and Cherish-Yearn. As mentioned, Cherish-Yearn is still loss-making. Fosun is using the platform to sell insurance or wealth management products to enhance total profitability.

3. **Asset-light model – monthly fee:** This model allows operators to charge higher monthly fees (compared to the membership model), but they can only collect a small upfront deposit (usually 50-100,00 Chinese yuan/ per person) for emergency purposes. Yet, the initial financial burden is very high. Poly CN and Vanke use this model for their idle assets (previously designed as hotels).

4. **Asset-light model:** Operators using this model don't own assets but they pay rent to assets owners. This model is widely used by international operators. Developers using this model include Poly CN and Sino-Ocean. Some projects have started to break even or even turn a profit, but they are usually supported by cheap rent. Scalability of this model is uncertain. Poly CN's Beijing project (西山林語和熹會) with a mid-range proposition (monthly charge of 5,000-6,000 yuan per person) has achieved cashflow breakeven after being fully occupied. Sino-Ocean's first project in Yizhuang, Beijing during 2012 with a high-end proposition (monthly charge of 8,000 yuan per person + nursing charges ranging from 2,000 yuan to 8,000 yuan per person) has achieved 80% occupancy and positive cashflow after nearly three years of operations. The success of Sino-Ocean's project could be partly due to cheap rent (less than 2 yuan per square metre per month), which is supported by the local government.

Diagram 19. Major listed developers' exposure to senior housing industry

Developer	Poly CN	Sino-Ocean Land	Vanke	Fosun	Greentown	Greenland
Senior living platform	Poly-Anping Pension Care (保利安平)	Senior Living L'amore (椿萱茂)	No group level platform, various brands in different regions	StarCastle (星堡)	n.a.	n.a.
Reasons/ advantages to do the business	Liquidise idle assets inside the group; senior living operating capability could be used as a bargaining power to access land	Two major shareholders are insurers, which could create potential synergies	Liquidise idle assets inside the group; senior living operating capability could be used as a bargaining power to access land	Exposure to full value chain, including property development, insurance, hospitals/ eldercare, and pharmaceuticals	Business diversification trial	Business diversification trial

Partner		The first project was with Emeritus; memory care partnered with Meridian	n.a.	Fortress	n.a.	n.a.
Business model	Lease, sale, and membership	Asset-light care building and asset-heavy continuous life retirement centre	Lease, sale, and membership	Continuing care retirement community (CCRC), asset-light	Sale	Sale
Exposure	Beijing, Zhejiang, Guangzhou, Chengdu, Sanya	Beijing	Various regions across China	Shanghai, Ningbo, Nantong, Suzhou, Zhenjiang, Guangzhou	Jiaxing Wuzhen	Kunshan Huaqiao
Commencement	2012	2013	2010	2013	2014	2007
Other comments / special features	Aims to list its senior housing arm in the future	Memory care	Provide a wide range of senior care services in different regions	Aims to provide insurance-related products to enhance profitability	University for the elderly	

Source: Company, DBS Vickers

What seems to work

Our suggestions to developers:

1. **Developers may need to focus more on operations.** We don't think there are huge opportunities in the development and construction area. Developers may need to change their mindset (i.e., fast asset turnover in the residential segment) and focus more on operations if they really want to be the first movers in the industry.

2. **An asset-light model is preferred.** In our view, China is lacking professional operators. Developers with proven operational capabilities would be able to expand into projects owned by governments or other developers which are poorly managed.

3. **Mid- to high-end projects inTier-1 cities, especially Beijing and Shanghai, could be a starting point.** Both cities have a large proportion of seniors with more education and higher income. But developers need to position their projects accordingly to differentiate projects.

Senior Healthcare: Beneficiaries of an Ageing Population

Eye, cancer, and cardiovascular

Eye diseases, malignant tumours, and cardiovascular diseases are very common among the elderly; in 2010-14, more than 50% of hospital inpatients with those diseases were older than 60 years old. An ageing population should drive the revenue of specialty hospitals focused on such diseases. Their aggregate revenue in 2014 was 69 billion yuan. Because of the ageing population, we expect their revenue expand at a CAGR of 10-15% over 2014-20.

Three drugs to benefit

As eye diseases, malignant tumours, and cardiovascular diseases are the most common old-age ailments, a rapidly-ageing population should also boost the demand for medicines such as ophthalmic, anti-cancer, and cardiovascular drugs. We estimate the aggregate sales in 2014 to be 125 billion yuan. Coupled with increasing awareness of such diseases and the introduction of new drugs, we expect the sales of such drugs to grow at 10% CAGR in 2014-20.

The hearing aid

The total market of hearing aids was 4 billion yuan in 2014. Driven by an ageing population and further proliferation of hearing aids, we expect the market to grow at a CAGR of more than 8% in 2014-2020.

Eye diseases, malignant tumours, and cardiovascular diseases are very common among the elderly

Diagram 20. International operators' exposure to China

Regulators	National Health & Family Planning Commission	China Food & Drug Administration	
Companies in medical market for elderly	**Medical service providers** For example: Specialty hospitals that deal with diseasess which are common among the elderly Aier Eye Hospital - Ophthalmology Fuda Cancer Hospital Guangzhou - Cancer Guizhou Cancer Hospital - Cancer Shanghai Yodak Cardio-Thoracic Hospital - Cardiovascular Zhejiang Greentown Cardiovascular Hospital - Cardiovascular	**Drug suppliers** For example: Suppliers that provide drugs for treating diseases which are common among the elderly China Pioneer - Ophthalmology Essex Bio-tech - Ophthalmology Jiangsu Hengrui - Cancer Luye - Cancer CSPC - Cardiovascular Dawnrays - Cardiovascular	**Medical device makers** For example: Hearing aids Unitron Hearing (Suzhou) Starkey Hearing (Suzhou) Xiamen Xinsheng Merry Electronics
Consumers		**Elderly**	
Sponsors of the consumers	**Relatives**	**Government:** Public pension funds, public medical insurance funds (Managed by Ministry of Human Resources & Social Security)	**Deposit made by the elderly**

Source: DBS Vickers

The Stakeholders in the Medical Industry

National Health & Family Planning Commission (NHFPC): A department of the central government which regulates and supervises all hospitals and other medical services providers in China.

China Food & Drug Administration (CFDA): A department of the central government which regulates and supervises all of drugs and medical devices.

Medical-service providers: They are beneficiaries of an ageing population. According to NHFPC, there were 941,432 medical service institutes in 2014. Of that number, 16,524 were general hospitals and 5,478 were specialty hospitals.

Drug suppliers: Drug manufacturers and distributors are also beneficiaries of an ageing population. According to WIND, as of end-April 2016, there were 7,399 drug manufacturers. According to Frost & Sullivan, there were over 13,000 pharmaceutical distributors in 2014.

Medical-device makers: They are also beneficiaries. According to WIND, as of end-October 2015, there were over 1,197 medical equipment & consumable manufacturers.

Elderly: People aged or above 60.

Sponsors of consumers: Sources of finance such as the offspring of the elderly, or government bodies like Ministry of Human Resources and Social Security, which support the financial needs of the elderly.

Medical-service providers

Specialty facilities

In 2014, hospitals accounted for 77% of the total revenue of all medical service institutes in China, according to the NHFPC. These players will definitely benefit from an ageing population. Among all hospitals, we believe that specialty hospitals that focus on old-age diseases will benefit the most. Among the 18 major categories of diseases classified by the NHFPC, eye diseases, malignant tumours, and cardiovascular diseases are very common among the elderly, with over 50% of hospital inpatients with such diseases being at least 60 years old in 2010-14. Therefore, we believe specialty hospitals that focus on old-age diseases will be the prime beneficiaries of the ageing-population trend, including:

1. Eye hospitals;
2. Cancer hospitals; and
3. Cardiovascular hospitals.

Diagram 21. Proportion of inpatients (discharged from hospitals) aged 60 and above

	2010	2011	2012	2013	2014
Malignant tumours	50%	50%	51%	51%	54%
Eye diseases	59%	61%	62%	62%	64%
Cardiovascular diseases	66%	66%	67%	66%	68%

Source: National Health & Family Planning Commission (NHFPC)

Eye hospitals: The total revenue of eye hospitals grew 24% (CAGR) in 2010-14. We estimate the CAGR to be at least 15% in 2014-2020, driven by:

1. An ageing population: The UN expects the number of elderly who are at least 60 years old in China will grow at 2% (CAGR) in 2015-20.

2. Increasing number of eye hospitals: The total number of such hospitals increased 11% (CAGR) in 2010-14. We believe the momentum will continue because many players are expanding their hospital network to capture the huge unmet demand in 2nd- and 3rd-tier cities, where about 70% of eye-disease patients are located. A case in point is Aier Eye Hospital, which is planning to increase the total number of hospitals from 95 in 2015 to 200 in 2018.

3. More services to boost revenue-per-hospital: The penetration rate of many eye operations is still very low in China. For example, there were 6 million cases of cataract surgery in India in 2012 but only 1.3 million cases in China. So, there is plenty of room for new services to grow.

Diagram 22. Total revenue of eye hospitals

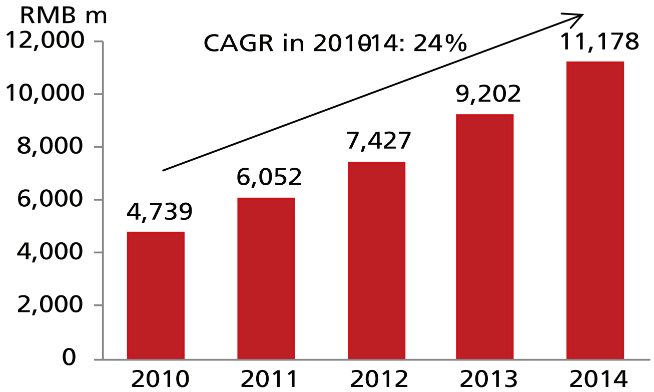


Diagram 23. Revenue per eye hospital

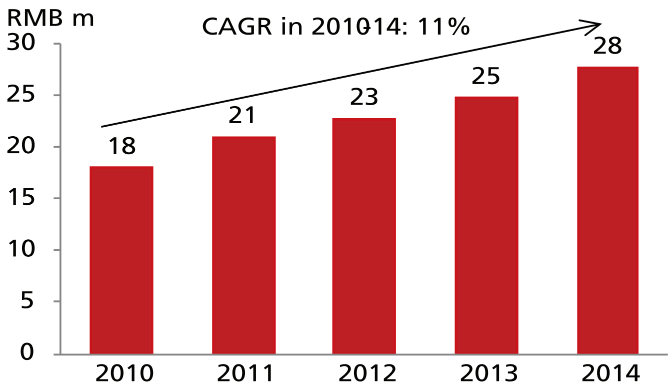
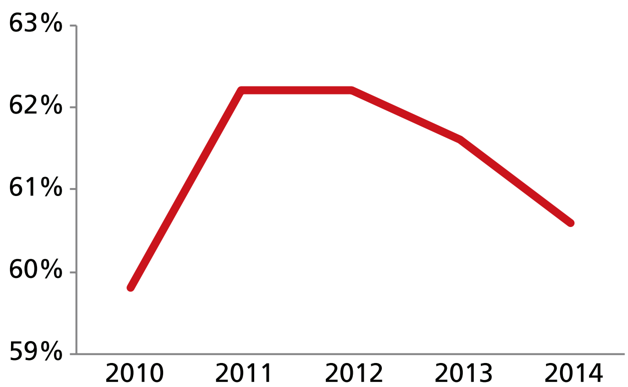


Diagram 24. Bed utilisation of eye hospitals



Sources: National Health & Family Planning Commission (NHFPC)

Cancer hospitals: The total revenue of cancer hospitals grew 21% (CAGR) in 2010-14. We estimate the CAGR to be at least 15% in 2014-2020, driven by:

1. An ageing population.

2. Increasing number of cancer hospitals: We believe there is a shortage of cancer hospitals, as highlighted by the more- than-100% bed utilisation in 2010-15. To capture the strong demand, we believe existing players will expand their hospital network.

Surgery and radiotherapy

3. More services to boost revenue per hospital: The penetration of many major methods of cancer treatment is still low in China, relative to developed countries. This provides room for domestic cancer hospitals to offer more services. For example, surgery and radiotherapy are common ways to treat cancer. In 2015, 60% and 65% of cancer patients in the US underwent surgery and radiotherapy, respectively. The figures in China were only 37% and 30%. Hence, conducting more surgery and radiotherapy is a direct way to boost revenue per hospital.

Diagram 25. Total number of cancer hospitals

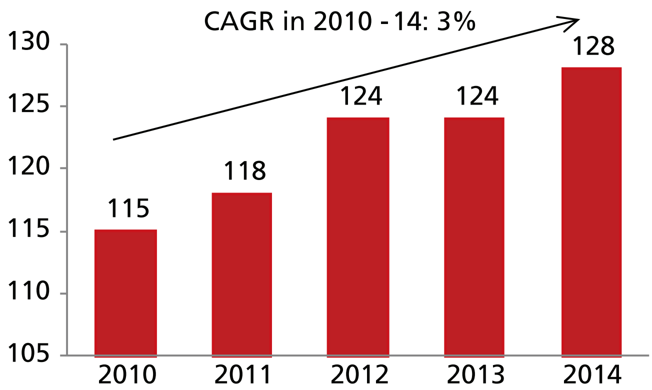


Diagram 26. Total revenue of cancer hospitals

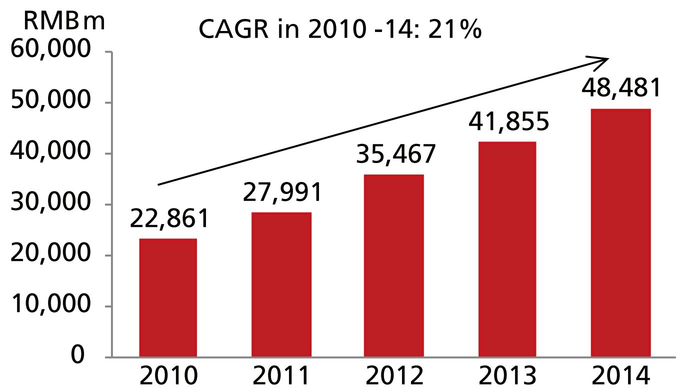


Diagram 27. Revenue per cancer hospital

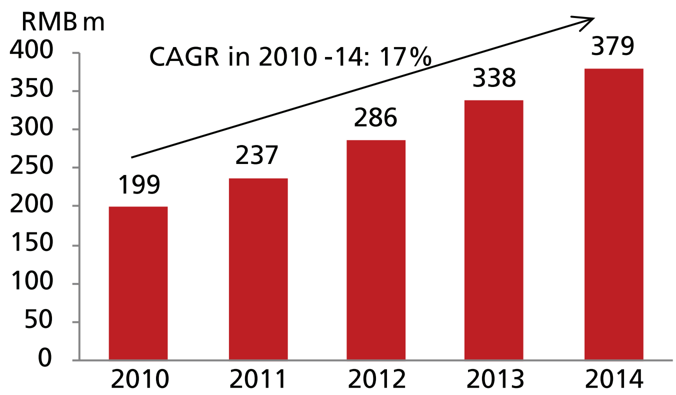
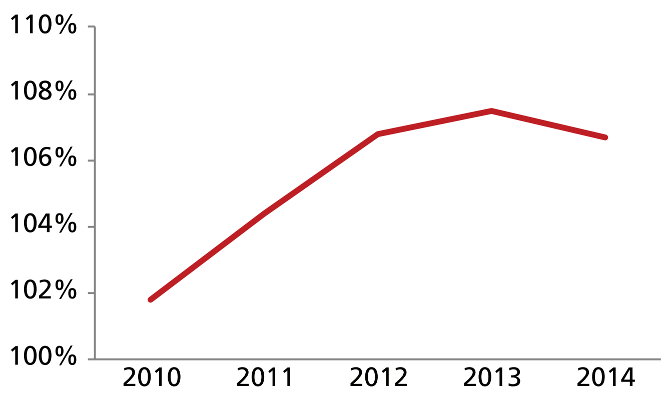


Diagram 28. Bed utilisation of cancer hospitals



Sources: National Health & Family Planning Commission (NHFPC)

Cardiovascular hospitals: The total revenue of cardiovascular hospitals grew 20% (CAGR) in 2010-14. We estimate the CAGR to be at least 10% in 2014-2020, mainly driven by an ageing population and the expansion of current players' operations to capture unmet demand.

Diagram 29. Total number of cardiovascular hospitals

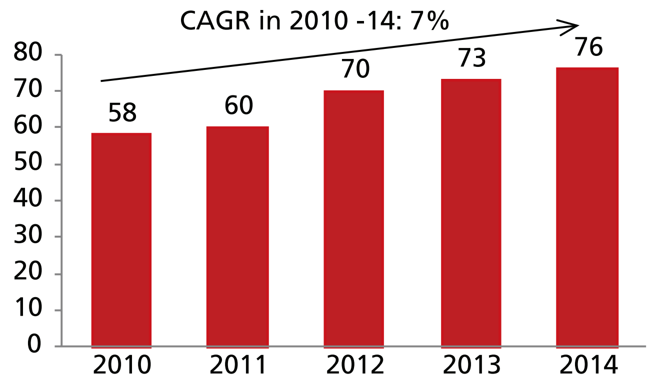


Diagram 30. Total revenue of cardiovascular hospitals

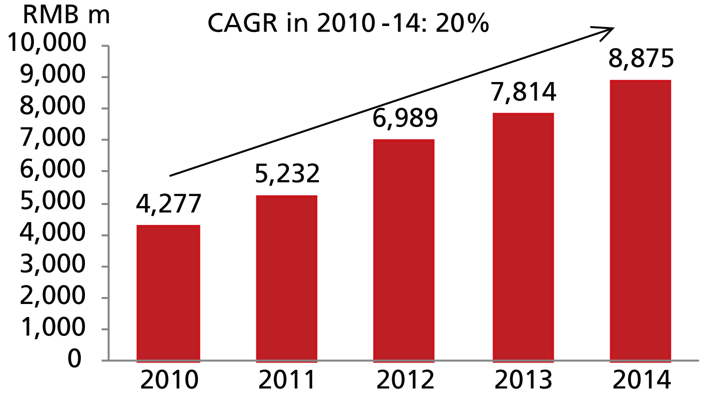


Diagram 31. Revenue per cardiovascular hospital

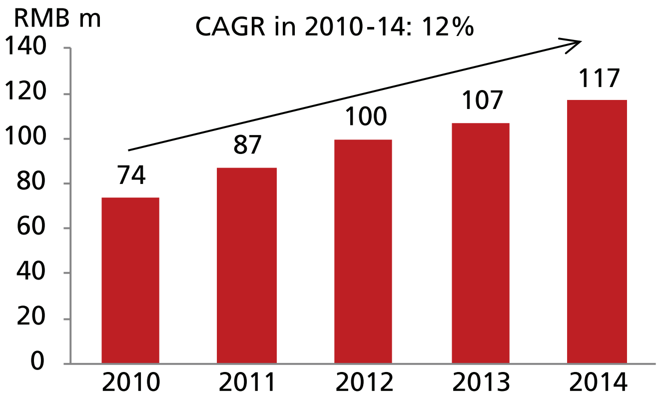
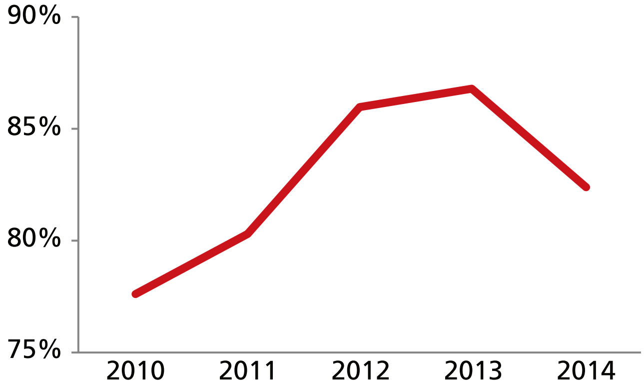


Diagram 32. Bed utilisation of cardiovascular hospitals



Sources: National Health & Family Planning Commission (NHFPC)

Drug suppliers

Spike in demand

As discussed earlier, eye diseases, malignant tumours, and cardiovascular diseases are very common among the elderly. We believe that there will be a spike in demand for drugs used to treat these diseases, namely anti-cancer as well as immunomodulatory, cardiovascular, and ophthalmic drugs. During 2009-14, we estimate that their respective sales (CAGR) rose 17.3%, 18.1%, and 21.5%, respectively. We expect their CAGR in 2014-20 to hit around 10%, driven by

1. An ageing population.

2. Rising incidence ratio. For example, the incidence of cancer increased from 184.6

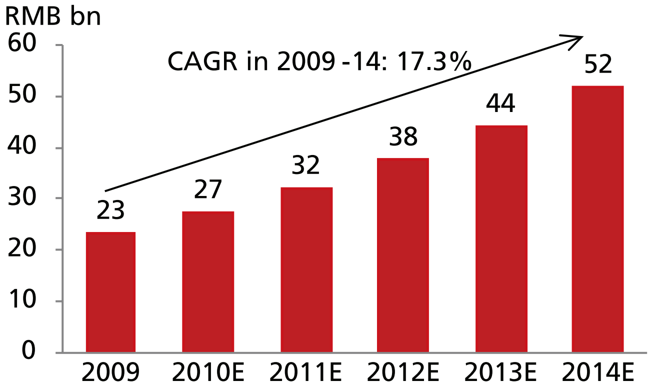
/ 100,000 population in 2000 to 235 / 100,000 population in 2013, according to the NHFPC. We estimate that the incidence ratio will continue to increase due to unhealthy diets and lifestyles.

3. Increasing awareness of old-age diseases, e.g. hypertension. According to the NHFPC, about 30% of estimated hypertension patients were aware they had hypertension in 2002, and the ratio increased to 46.3% in 2012. Thanks to the growing popularity of medical check-ups in China, we believe this ratio will continue to increase.

4. Increasing number of medical institutes like specialty hospitals.

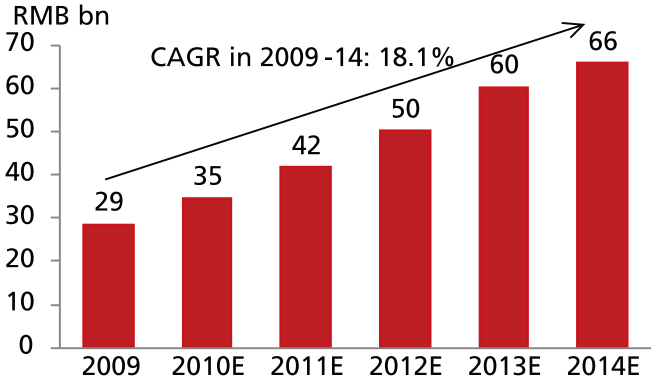
5. Launch of new drugs by drug manufacturers.

Diagram 33. Anti-cancer & immunomodulatory drug sales in China



Source: IMS, www.prnewswire.com, DBS Vickers

Diagram 34. Cardiovascular drug sales in China



Source: IMS, www.chyxx.com, DBS Vickers

There is plenty of room for China's hearing-aid market to grow

Medical-device makers

Room to grow

A hearing aid is a medical device that is widely used among the elderly. According to Sivantos Group (the leader in the global hearing aid industry with about 25% of market share), China's market is estimated to be about 4 billion yuan in 2014. We expect the market to grow at a CAGR of at least 8% in 2014-20, driven by an ageing population and the proliferation of hearing aids. In developed countries, 20-25% of people with hearing problems use hearing aids; while the rate in the US stands at 35%, China's is also only 5%. So, there is plenty of room for China's hearing-aid market to grow.

Risks and concerns

Price cuts

Price cuts for health-check services may impact hospital players. According to the "Opinion on promotion of medical service price reform" that was jointly issued by the NHFPC, National Development and Reform Commission, Ministry of Human Resources and Social Security, and the Ministry of Finance in July 2016, the central government intends to lower the price of medical check-ups conducted using full-blown medical equipment. As check-ups are a major revenue earner for many hospitals, any price cut will impact their revenue in a significant way.

Drug sales

Removal of mark-up for drug prices may impact volume of drug sales. Over 50% of drugs in China are sold to hospitals. Hospitals generate net income by selling drugs because they are allowed to mark up the selling price by 15% over the procurement cost. The government has been gradually removing the mark-up since 2014. As a result, the year-on-year sales growth of the pharmaceutical industry has been decelerating from 20% in 2013 to about 9% in the first quarter of 2016. The deceleration may continue and could impact the bottom-line of all drug makers.

Lack of qualified hearing-aid consultants

Hearing-aid consultants are very crucial in the sales process of hearing aids. The consultant will assess the hearing of a user and adjust all the technical variables of a hearing aid to suit that user. If users encounter problems when using such aids, the consultants will also be responsible for fixing these problems. Thus, without qualified consultants, we believe that potential customers will not feel comfortable purchasing hearing aids. In China, there is a lack of qualified hearing-aid consultants, according to the Sivantos Group. This could limit the sales of hearing aids in China.

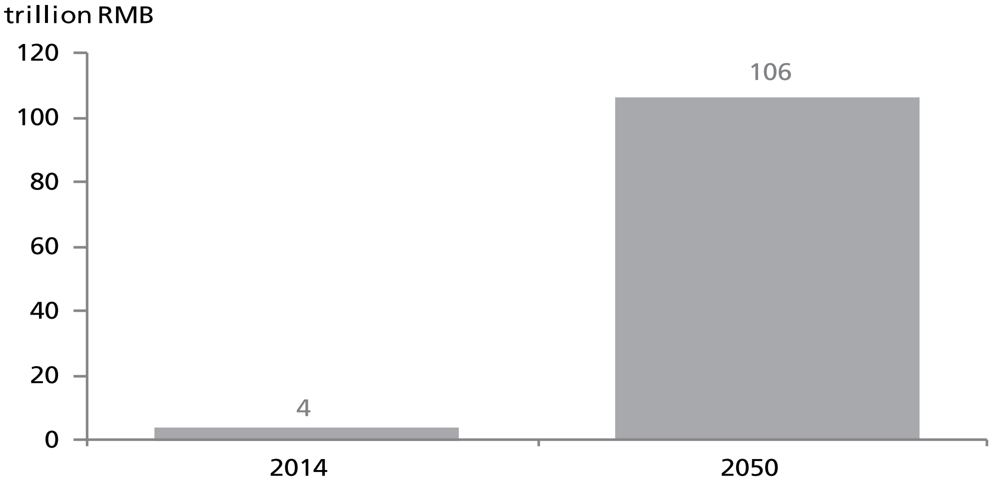
Consumer Products for Seniors

Market potential

China's elderly population (aged 65 or above) accounted for 10.1% of the country's total in 2014. The UN projects that the figure will rise to around 20% by 2035. As the life expectancy of mainland Chinese increases, we see ample potential for the elderly consumer market in China to grow.

According to China Research Center on Aging (中國老齡科學研究中心), the consumer market of China's elderly population is projected to jump from 4 trillion yuan in 2014 to 106 trillion yuan in 2050, or at 10% CAGR, with spending on health, wellness, and medical care topping the table.

Diagram 35. China's elderly consumer market



Source: China Research Center on Aging

The healthfood industry

Specifically, the nutrition and healthfood industry was included in China's 12th Five Year Development Plan for the first time, which highlighted its importance and the Chinese government's increasing focus on the food and nutrition industry. The Outline of Program for Food and Nutrition Development in China (2014-2020) also has also revealed the government's plans to raise the nutritional intake of the average Chinese by prioritising the development of health food and nutrient-fortified food.

"Chinese consumers are increasingly more concerned about their health"

Compared to their peers overseas, Chinese consumers are increasingly more concerned about their health. According to the Boston Consulting Group, 73% of Chinese consumers are willing to pay a premium for products deemed healthier, versus only 61% worldwide. Rising affluence in China is also prompting more spending on vitamins, minerals, and supplements (VMS). From the charts below, we can see that consumption of VMS accelerates sharply whenever annual household income reaches 240,000 yuan.

Overall, the Chinese healthfood market grew 36% (CAGR) from 2009 to 2015) to 243.7 billion yuan, and is projected to double by 2020 to reach 480.3 billion yuan.

Major players

Yili and the rest

Yili is among the top-3 dairy-companies in China and registered 11% y-o-y sales growth to 60 billion yuan in 2015. Among its product lines, Yili has spotted strong potential in China's healthfood market, and offers a few different lines of milk powder for the elderly, including "Xin Huo" (欣活). Other domestic brands that offer fortified milk powder include Feihe (飛鶴), Sanyuan (三元), Anda (紅星集團鞍達), and Beingmate (生命伴侶).

Founded in 1995 and listed on the Shenzhen Stock Exchange on 15 Specialty 2010, By-Health (汤臣倍健) is a Chinese company specialising in the selling of healthfood products domestically, with brands "By-Health", "Twelve Skeps" (十二篮), etc. Its operating revenue rose 36% (CAGR) from 2010-2015 to 2.3 billion yuan in 2015, suggesting strong demand.

Aside from domestic plays, some overseas companies also see great potential in the Chinese healthfood market for mid- to old-age customers. They could include Nestle, a Swiss transnational food and drink company offering products like "Nestle" fortified milk powder, "Nestle's Jian Xin" (健心), and "Nestle's An Ge" (安骼) in China. Others include Abbott, "Dutch Cow" (荷蘭乳牛) (e.g. Formula for Middle Aged & Seniors High-Active Bifidobacterium product) and Wyeth Nutrition.

Swisse Wellness Group is the leader in Australia's vitamin, herbal, and mineral supplements market. Some of its core products include vitamins such as Women's Ultivite 65+ and Men's Ultivite 65+. The company was acquired by Biostime in September 2015 to further tap the Chinese market.

Amway, an American group that primarily sells health, beauty, and home care products, also has good exposure to the Chinese market. Amway (China) recorded 27 billion yuan in revenue in 2011. No revenue data was released thereafter.

Policy

In the past, the Chinese healthfood industry was embroiled in scandals such as false advertising and food safety issues, etc. The Chinese government has increasingly paid attention to this and implemented policies to address public concerns.

Diagram 36. Rules and policies governing China's healthfood and drug industry

Year	Rules and policies
2000	The State Food and Drug Administration has consolidated work enforcement on Chinese health products and drugs, and provides a full process of product application procedures including clear labeling of product types. The aim is to help customers, especially the elderly who are not well-educated, to know exactly what the products do, as a lot of them wrongly interpreted that healthcare food products could cure certain diseases. In the United States, Food and Drug Administration has the same policy that does not allow dietary supplements to include statements suggesting medical uses.
2005	The Regulations on Direct Selling Administration have been enacted in China. The government regulates direct sales activities more strenuously to prevent fraudulent advertising. Unless being exempted, healthcare food products & drugs must only be sold at designated places.
2015	In Apr 2015, the National People's Congress has passed the Food Safety Law of China (Draft Amendments) that has been implemented on October 1 2015. Under the new law, the concurrent implementation of a record-filing system and a registration system of health food products is proposed for the first time. The government has stopped allowing the adoption of words that suggest certain product functions as brand names of healthcare food products. Products with such name have changed their brand names by December 31 2015. The highest fine for advertisements that exaggerate and/or provide false information about the products could reach 1 million yuan.

Source: sda.gov.cn, mofcom.gov.cn, China.org.cn

Opportunities and strategies

Acquisitions

Market consolidation is inevitable. Products that originate overseas, especially in developed countries, could also help minimise customers' concerns on issues such as food safety.

Another example is Biostime, which bought an 83% stake in Swisse Wellness Group, in September 2015 in a deal that valued the Melbourne-based company at US$1.67 billion. By leveraging on Swisse Wellness Group's factories in Australia, Biostime had better resources when it entered the Chinese supplements and healthfood industry. Subsequent to the acquisition, sales of Biostime's adult nutrition and healthcare products contributed to 41% of overall revenue in the first quarter of 2016, up from 29% in the same period in 2015.

Below is a list of acquisitions in the sector. Such deals would accelerate the development of the healthfood industry in China.

Diagram 37. Mergers and acquisitions

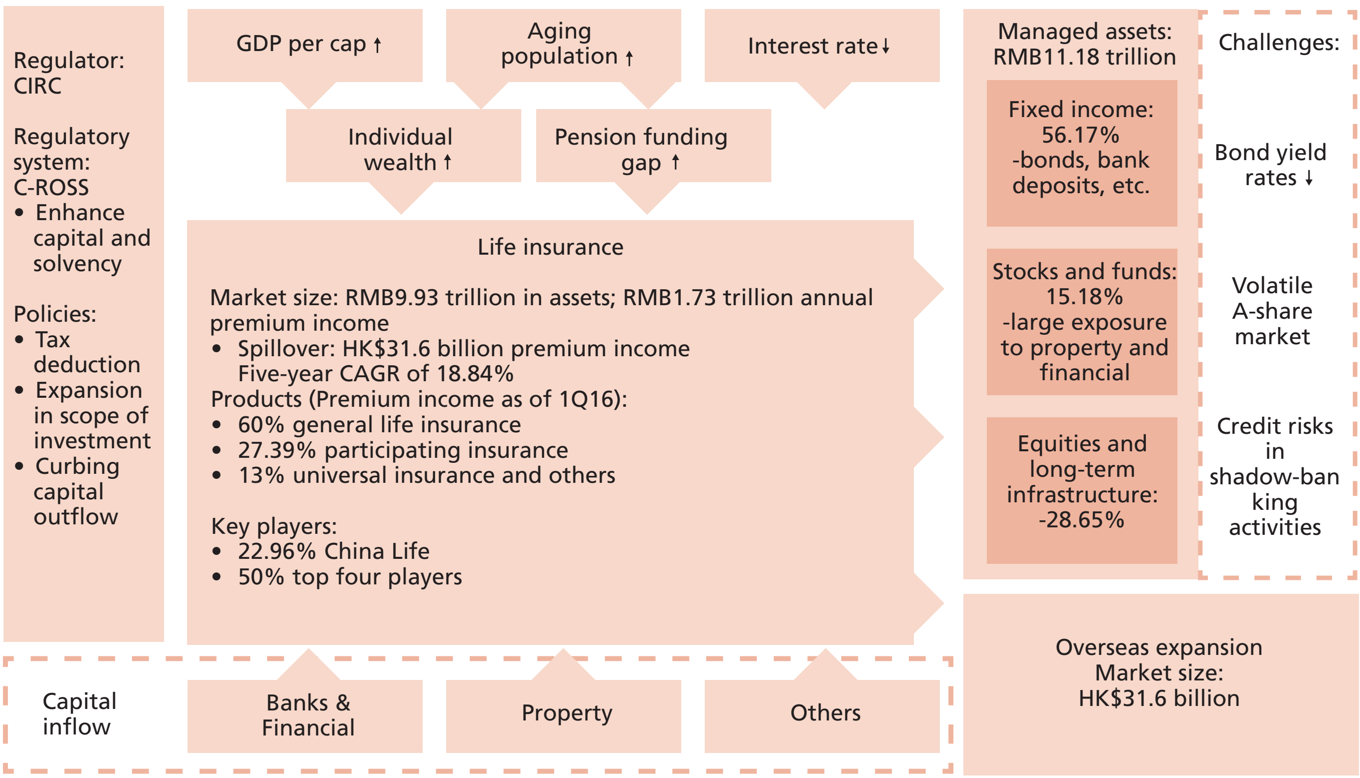
Date	M&A
Dec-14	Kingdomway (金達威) bought 51% of Doctor's Best Holdings, Inc. for US$3.5m
May-15	Kangmei (康美藥業) bought 74% stake in Mckincn (麥金利實業) for RMB82.73m (US$12m)
Jun-15	Kingdomway(金達威) bought Vitatech's major operating assests for US$9.6m
Sep-15	Biostime bought 83% stke of Swisse Wellness Group for US$1.08b
Nov-15	Sinolife United Co., Ltd (中生聯合) bought Shanghai Hejian (上海禾健) for RMB180m (US$26.13million)
Jan-16	Pfizer bought Treely Health Co., Ltd
Jan-16	Pfizer bought Treely Health Co., Ltd

Source: Company, Xinhuanet, Reuters, Infocast

Financial Services for the Elderly

Life insurance industry

Diagram 38. Overview of China's life insurance sector



Source: DBS Vickers

Market size

Purchasing power

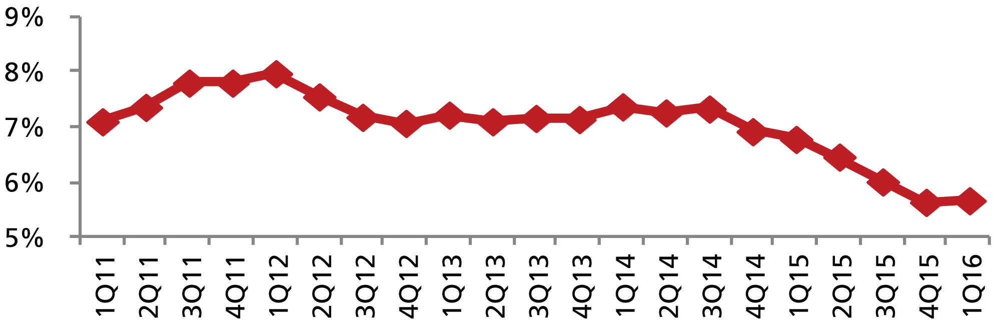
Driver 1: Increasing wealth is bringing about stronger purchasing power and boosting demand for life insurance. Research suggests that income-per-capita is the most important driver of demand for life insurance across the world. An increase of 1% in aggregate disposable income leads to a 0.6% increase in life insurance sales among countries of the Organisation for Economic Cooperation and Development.[5] China's disposable income per capita grew at a CAGR of 12% in the past 10 years[6], and is expected to grow at about 6-7% in the near future, faster than that of most major economies. Ageing is also related to individual wealth, as the age bracket of 50-60 marks the peak of household net worth in a life cycle, according to an NBC survey in 2009.

The surge in high-net-worth individuals (HNWIs) in China is especially significant to the country's insurance and eldercare industry. The number of HNWIs with investable assets of more than 10 million yuan reached 1.21 million in May 2015, up 11% y-o-y, according to the Hurun Report. 90% of HNWIs purchased commercial life insurance, with an average premium expense of 370,000 yuan, accounting for 4% of total life insurance premium in China. Risk transfer and wealth inheritance are the two major drivers of insurance purchase for HNWIs. HNWIs put quite a lot of emphasis on passing their wealth to the next generation; more than 60% of them are considering leaving at least half of their wealth to the next generation, with nearly half of them planning to use life insurance to do so, according to a report by Forbes and AIA. Apart from wealth inheritance, risk transfer is the main concern; HNWIs tend to use life insurance for wealth transfer and health/accident insurance for risk transfer.

Investments

Driver 2: Declining interest rates is forcing a shift from other investments to insurance. While a high interest rate may sway individuals to invest their money elsewhere (rather than life insurance), the declining interest rate in China could cause individuals to move their investments into life insurance. But this may not be good news for insurance companies. Analysis shows that insurance companies are less profitable as interest rates decline despite reporting rising premium income.

Diagram 39. China's interest rates

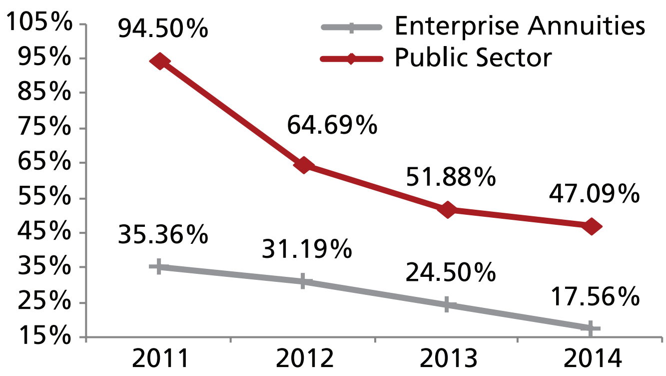


Source: Wind, DBS Vickers

Bridging the gap

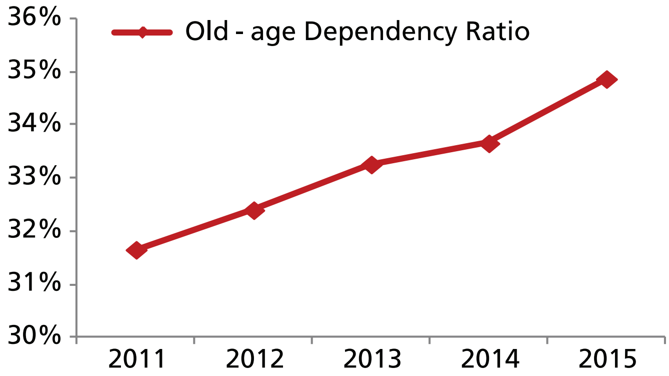
Driver 3: The public pension funding gap is shifting the burden of eldercare to the private sector. China's pension system was started in 1997 and now has three pillars: the public pillar (pay-as-you-go scheme + funded individual accounts); enterprise annuities (voluntary occupational pensions), and voluntary private savings. China's public pension fund 4 trillion yuan (according to Wind) at the end of 2015 (it has risen 10 times in the past 10 years), accounting for 90% of social security funds, and is managed by the National Social Security Fund (NSSF). There is, however, increasing pressure on the gap between the pension pool and retirement liabilities due to China's ageing population. According to the International Monetary Fund, China's working population as a proportion of its total population peaked in 2010 and has been falling steadily thereafter. The old-age dependency ratio of the urban pension scheme has been increasing, and totalled around 34% in 2015. This has resulted in a decline in the pension fund's coverage ratio (balance-to-expense). The pension system may not be able to provide the necessary living allowance for China's ageing population in the future, and this has resulted in strong demand for commercial life insurance.

Diagram 40. Public pension fund coverage ratio (balance to expense)



Source: Ministry of Human Resources and Social Security, Wind, DBS Vickers

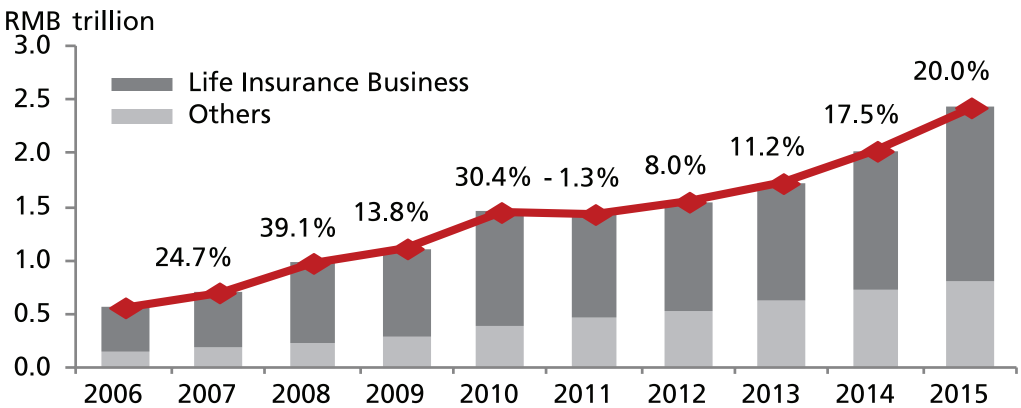
Diagram 41. Old-age dependency ratio in urban pension scheme



Source: Ministry of Human Resources and Social Security, DBS Vickers
Old-age dependency ratio is the ratio of retirement population to contributing population.

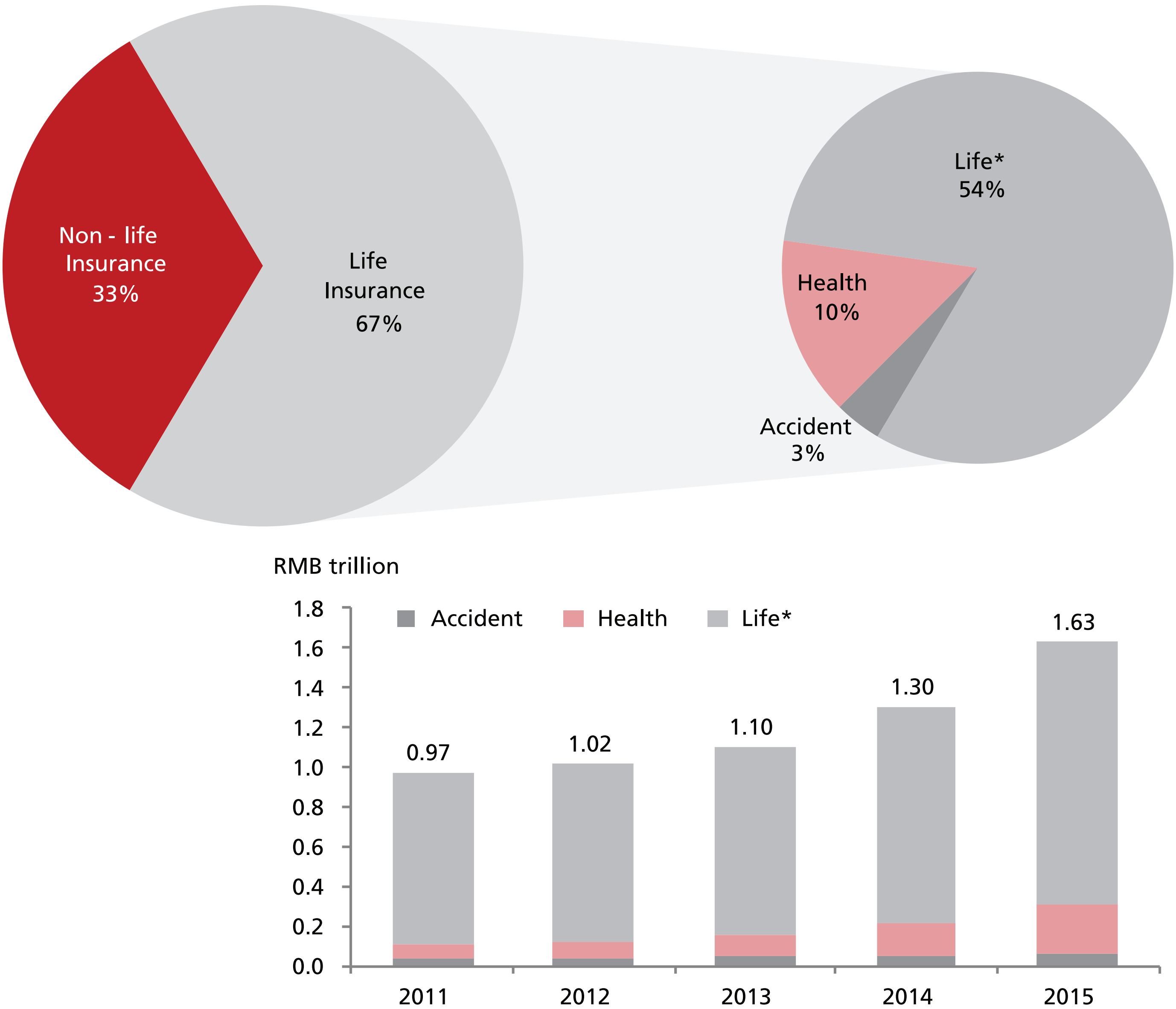
The premium income of China's insurance companies has been growing rapidly in the past few years, and the life insurance business is also experiencing similar growth. China is poised to become the world's third-largest insurance market after two decades of unprecedented growth. In 2015, China's insurance industry achieved a premium income of 2.43 trillion yuan (+20% y-o-y); the premium income of life insurance amounted to 1.63 trillion yuan (+25% y-o-y). Life insurance can be further broken down into pure life insurance, health, and accident insurance. Health insurance accounts for only a small portion, but has been growing rapidly.

Diagram 42. Insurance premium Income in China (2015)



Source: National Bureau of Statistics, DBS Vickers

Diagram 43. Premium income by product (2015)



Sources: National Property Information Centre

Hong Kong benefits

Chinese tourists have been buying more insurance in Hong Kong in the past few years; sales jumped from HK$6.3 billion in 2011 to HK$31.6 billion in 2015 (OCI), which accounted for more than 20% of Hong Kong's total insurance business. While the sales of overseas insurance products is prohibited in the mainland, Hong Kong's insurance products still remain popular among the Chinese, given their lower prices (due to Hong Kong's higher life expectancy).

Diagram 44. Comparison of life and health insurance in China and in Hong Kong

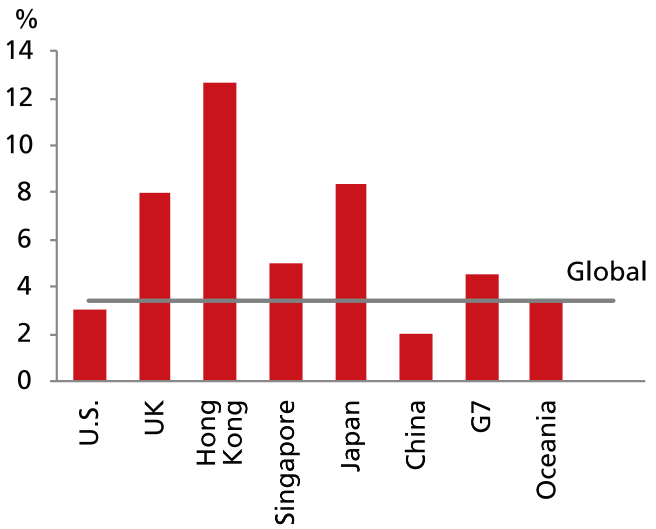
	Hong Kong	Mainland China
Age Restriction	0-70 or 0-75	0-60
Capital Restriction	No restriction (can be up to US$1m)	Underage: Max. Rmb100,000 Over 18 years old: uncommon to buy more than RMB1m
Currency Restriction	Can be USD/RMB/HKD	Mainly RMB
Premium	Around 20-30% lower than mainland China	High
Coverage	More comprehensive (e.g. up to 100 diseases for critical illness insurance)	Less comprehensive (e.g. around 50 diseases)
Claims	Worldwide coverage	Proof from Public Security Bureau or a hospital that is 'second-class' or above needed

Source: Oriental Daily, DBS Vickers

Capacity for growth

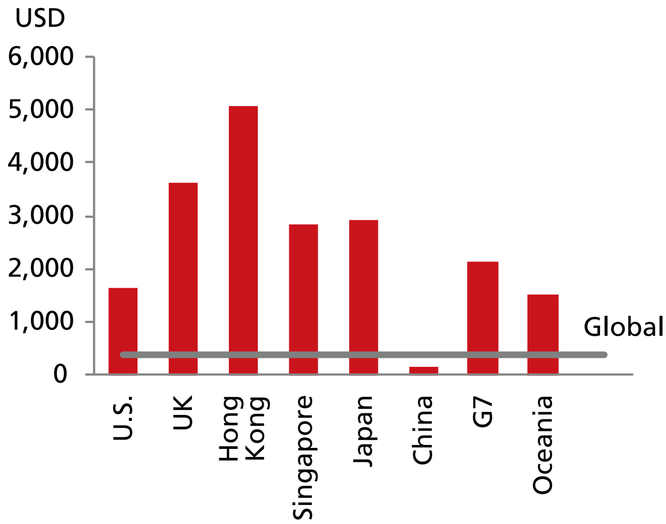
Compared to developed countries, China has much lower life-insurance penetration and density, indicating great capacity for growth.[7] China's life-insurance penetration and density are both lower than the global average. In 2015, China's life-insurance density increased to US$173.49 (Rmb1:US$0.15), according to Wind.

Diagram 45. Life insurance penetration (2014)



Source: Wind, Swiss Re, DBS Vickers

Diagram 46. Life insurance density (2014)



Source: Wind, Swiss Re, DBS Vickers

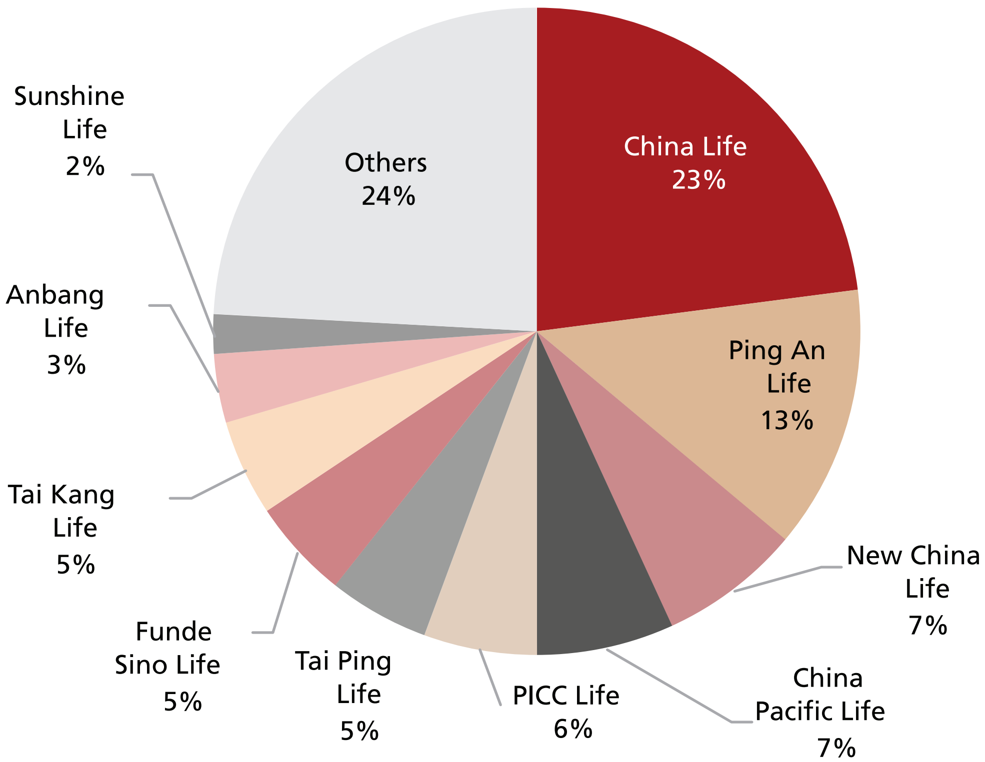
Supply chain and players in life insurance

Four players account for 50% of the life insurance market. Various banks, financial holding groups, and non-financial companies are eyeing life insurance licenses. There were 75 life insurers in 2015, compared to 61 in 2011, according to the China Insurance Regulatory Commission (CIRC). In 2015, China Life, Ping An Life, New China Life, and Pacific Life were the four largest insurance providers in the life insurance market. China Life has a market share of around 22.96%, Ping An Life 13.14%, New China Life 7.05%, and Pacific Life 6.84%, according to the CIRC). Domestic insurers dominate, with foreign insurers accounting for only 6.25% of the market.

Losing market share

The top players have lost market share to new competitors, especially in 2015, (except for Funde Sino Life, previously known as Sino Life.

Diagram 47. Top players in life insurance by premium income (2015)



Source: CIRC, DBS Vickers

Diagram 48. Top players' market share

Top 10 Players	2011	2012	2013	2014	2015
China Life	33.29%	32.41%	30.42%	26.10%	22.96%
Ping An Life	12.44%	12.93%	13.60%	13.71%	13.14%
New China Life	9.92%	9.81%	9.65%	8.66%	7.05%
China Pacific Life	9.75%	9.39%	8.85%	7.78%	6.85%
PICC Life	7.36%	6.43%	7.01%	6.20%	5.64%
Tai Ping Life	3.29%	3.66%	4.83%	5.13%	5.04%
Funde Sino Life	2.44%	2.46%	2.07%	2.89%	4.98%
Tai Kang Life	7.11%	6.18%	5.69%	5.35%	4.79%
Anbang Life	0.01%	0.13%	0.13%	4.17%	3.44%
Sunshine Life	1.67%	1.58%	1.47%	1.38%	1.96%

Source: National Health & Family Planning Commission (NHFPC)

Key segment issues and policies

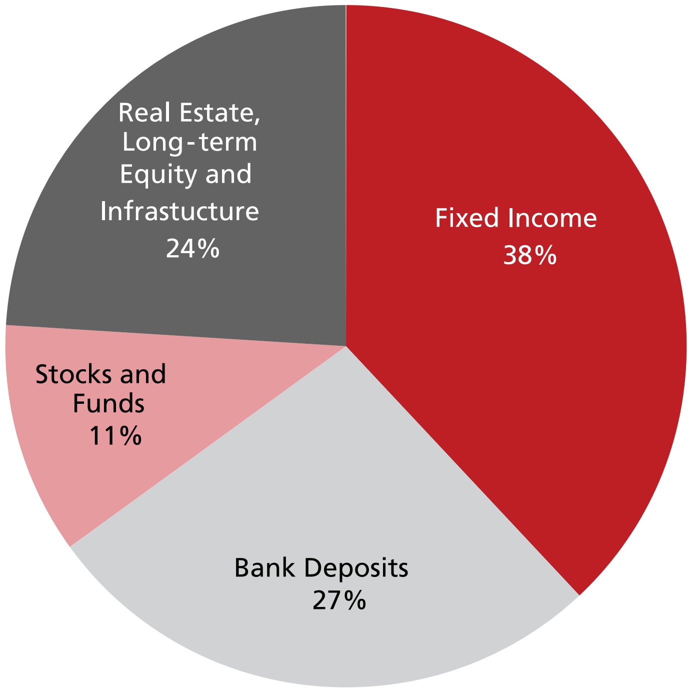
Investment returns are a key challenge

China's insurance companies manage more than 10 trillion yuan in assets. They are not only important institutional investors in stock and bond markets, they are also the funding source for various asset-backed schemes (that support China's real economy; by the end of 2015, there were 499 such schemes amounting to 1.3 trillion yuan) to. At end-2015, insurance companies had 34.39% of their assets in fixed income, 21.78% in bank deposits, 15.18% in stocks and funds, and 28.65% in real estate, long-term equity investments, and infrastructure projects. Bond yields and interbank certificate of deposit yields have been declining in the first half of 2016 due to interest-rate cuts and ample liquidity. The A-share market is dominated by individual investors and is quite volatile. Meanwhile, their investments into non-standard debt instruments and real estate projects, which have been increasing rapidly in the past three years, tend to be exposed to large credit risks during an economic downturn.

C-ROSS boosted solvency requirements

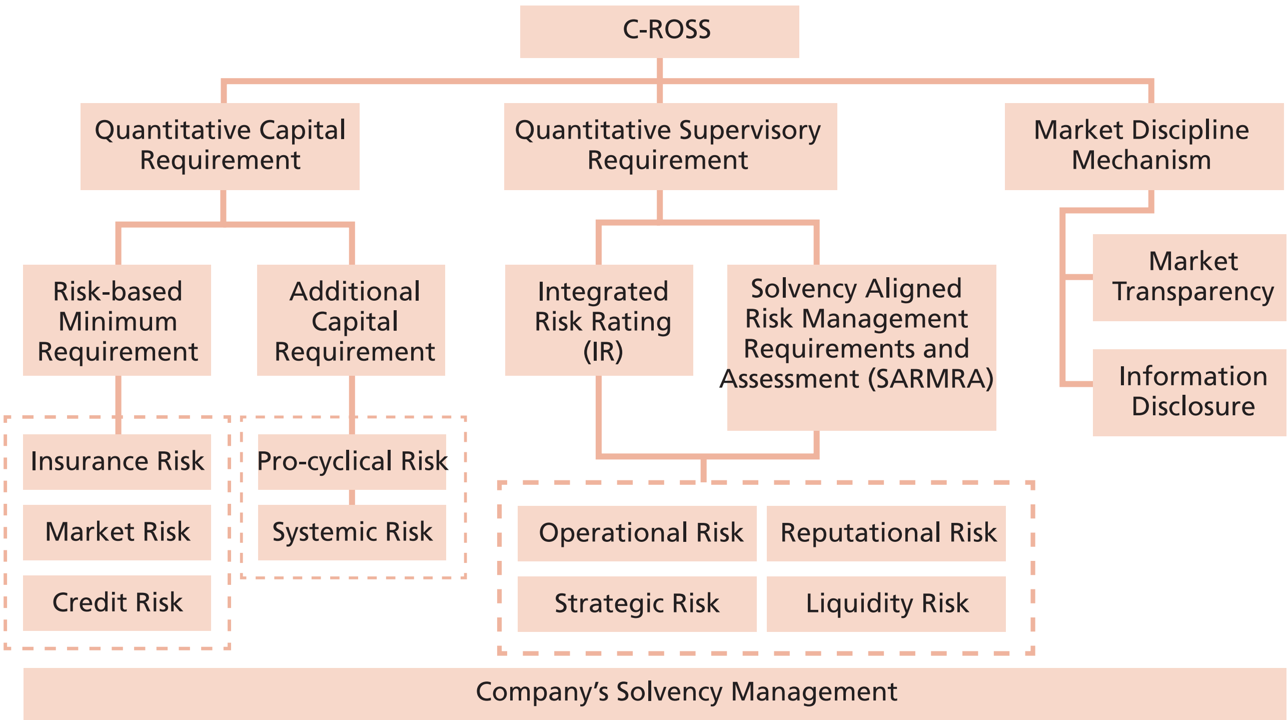
The global insurance industry does not have a unified solvency code. The European Solvency system (now Solvency II) and the US' Risk-Based Capital (RBC) framework are the two major regulatory models. CIRC published the China Risk Oriented Solvency System (C-ROSS) in March 2012, which is similar to the European system and became effective on January 1, 2016. We are likely to see more fund-raising by insurance companies, given stricter capital and solvency rules. Six insurance companies did not meet C-ROSS requirements as at end-2015, according to CIRC. Under C-ROSS, life insurance products with high guaranteed/expected rates are discouraged due to their riskier nature. Insurance companies are also encouraged to make strategic investments in the financial sector and financial investments in 'new economy' sectors such as telecommunications, media, and technology, as well as business incubation and industrial (technology) innovation centres.

Diagram 49. The insurance sector's investments (2015)



Source: CIRC

Diagram 50. C-ROSS framework



Source: DBS Vickers

Favourable policies

China started giving a tax rebate to individual buyers of commercial health insurance policies in 2015. In early 2016, CIRC issued a consultation paper on the expansion of the scope of insurance funds' investment, such as allowing investments in private equity. Both policies are expected to greatly boost the country's insurance sector. The first national insurance exchange, the Shanghai Insurance Exchange (SHIE), was officially launched on June 12 2016. It provides trading facilities and services for reinsurance, shipping insurance, insurance assets, and special risk insurance. In May, 91 companies agreed to contribute 2.24 billion yuan of registered capital for the bourse, with 75% of them from the insurance industry.

Curbing overseas insurance purchases

CIRC has been curbing illegal sales of foreign insurance products (including those sold in Hong Kong) since May 2016. This was triggered by rapid capital outflows, resulting from yuan depreciation, in our view. CIRC is urging local bureaus to investigate and penalise the parties involved in the onshore sales of offshore insurance policies. Any onshore promotion or sales by Hong Kong insurers is strictly prohibited in China. China has also clamped down on the buying of foreign insurance in Hong Kong as it has been a trend for Chinese tourists to "travel and buy". In February 2016, any insurance transaction using a UnionPay bank card is capped at US$5,000 per purchase, and in October 2016, there was a complete ban of using UnionPay to buy investment-related insurance products in Hong Kong. Meanwhile, the Office of the Commissioner of Insurance is studying anti-money-laundering policies and the need to sign an information statement for overseas purchases.

Reverse mortgages

Except for a few products that provide junior/youth care, most life insurance products in China are designed to provide a lump sum payment in the event of specified event (e.g. medical condition, death) as well as regular payments after a specified time (e.g. retirement age). For specific eldercare, China also launched a trial of reverse mortgages in March 2015, which enables senior citizens (60 and above) to use their properties as collateral in return for a monthly pension. Reverse mortgages are quite common in the US and the UK, but remain unpopular in Europe. In China, senior citizens are reluctant to join the scheme largely due to soaring property prices in top-tier cities. As of April 2016, there were 77 senior citizens from 58 households who had signed the memorandum of understanding with an insurance company. Of these, 32 households are receiving monthly pensions. Critics doubt the effectiveness of the scheme due the cultural tendency to hand down property as inheritance, and the fact that the least of private homes is capped at 70 years. The future of the scheme does not look very promising at the moment.

Opportunities and strategies

Attractive to various investors

Total assets of life insurers increased at a CAGR of 18.84% during 2011-2015, much faster than the Chinese banking sector's 15%. Meanwhile, the industry's profit more than quadrupled. This rapid growth and the low funding cost are attracting strong capital inflows. About 200 companies are awaiting an insurance license from the CIRC, including companies established by listed non-financial companies such as Fujian Septwolves, Zhejiang Aishida, By-health, Shanda, Vipshop, Evergrande group, Baidu, Greattown Holdings, Leshi Internet, Zoomlion, and Sany. Besides banks that have built up a large group of insurance companies, the "Big Four" asset management companies (AMCs) in China have all increased their involvement with insurance companies. Huarong AMC added China Life Insurance as one of its strategic investors in 2014, while China Cinda has a controlling stake (more than 50%) in Happy Life Insurance. In 2015, China Orient AMC announced its strategic transformation to a firm dealing in "Asset Management + Insurance". Meanwhile, China Great Wall AMC signed a strategic co-operation initiative with Ping An Insurance in May 2016. AMCs' recent interest in insurance is perhaps an indicator that insurers will outperform in the future.

Foreign financial and property companies

China's insurers haven't been actively merging with and acquiring competitors but they have been quite ambitious in buying foreign companies, mainly in the real estate and financial sectors. Anbang Insurance is one of the most acquisitive companies. In 2014, it acquired Waldorf Astoria New York hotel and Delta Lloyd Bank in Belgium. Anbang announced another acquisition, of Allianz Life Korea in April 2016, and took full ownership of Vancouver's Bentall Centre in mid-2016. It is also close to buying Toronto Tower in Canada. China Life and China Taiping Insurance have also expressed interest in acquiring ING Life Insurance Korea.

Diagram 51. M&A deals involving Chinese insurers (2014-20161)

Company Name	Announcement Date	Target Name	Deal Status
China Life Insurance	6/17/2016	iKang Healthcare Group Inc	Proposed
Anbang Insurance	5/25/2016	Bentall Centre	Proposed
Anbang Insurance	4/13/2016	Strategic Hotels & Resorts Inc	Pending
Anbang Insurance	4/6/2016	Allianz Life Insurance Co Ltd	Pending
China Life Insurance	11/13/2015	West Office Tower & Retail Villa/HarbourGate Project	Completed
Anbang Insurance	2/19/2015	717 Fifth Ave	Completed
Anbang Insurance	2/17/2015	Tongyang Life Insurance Co Ltd	Completed
Anbang Insurance	2/16/2015	Reaal NV	Completed
Anbang Insurance	12/16/2014	Delta Lloyd Bank SA	Completed
Anbang Insurance	10/6/2014	Waldorf-Astoria Corp	Completed

Source: Bloomberg Finance L.P

Large buyers in finance and real estate

Principally, insurance companies are allowed to invest a cumulative 3.7 trillion yuan in stocks and equities (based on end-2015 assets). Life insurers are favouring banking and real estate stocks for their equity portfolio in 2015-2016. Investing in banks paves the way for strategic moves like offering bancassurance and generates business synergy. Equity investments and strategic co-operation often go hand-in-hand. For instance, China Life signed a strategic co-operation initiative with Postal Savings Bank of China while increasing its stake last year. Such equity investments can generate relatively stable cash flow and thus better suit insurers' risk appetite and target returns. At the same time, the initiatives can create business synergies, making it easier for insurers to gain access to banks' strategic client base. An interesting example of alternative investments is Sunshine Life, which in December 2015 acquired a 7.3% stake in Fu Shou Yuan International Group, a funeral service provider in Hong Kong.

Diagram 52 . Changes in insurers' equity portfolio (banking) (2015-2016)

Company	Announcement Date	Equities	Changes in Shares	% of the issued share capital (at the end)
China Life	2/29/2016	China Guangfa Bank	3,080,479,452	43.69%
China Life	12/8/2015	Postal Savings Bank	3,341,900,000	<5%
Funde Sino	12/23/2015	Bank of Chongqing Co., Ltd	210,913,650	13.78%
Funde Sino	12/8/2015	Shanghai Pudong Development Bank	932,673,674	20%
Funde Sino	11/11/2015	Shanghai Pudong Development Bank	932,673,550	15%
PICC Life	7/9/2015	Industrial Bank	327,639,977	14.06%

Source: HKEx

Diagram 53. Changes in insurers' equity portfolio (real estate) (2015-2016)

Company Name	Announcement Date	Equities	Changes in Shares	% of the issued share capital (at the end)
Taikang Life & Taikang AMC	6/24/2016	Poly Real Estate	732,600,733	7.35%
Hexie Health	12/12/2015	Financial Street Holding	99,080,500	15.88%
Anbang Life	12/12/2015	Financial Street Holding	50,366,000	9.12%
Sunshine Life	12/2/2015	Metro Land Corp	31,970,000	4.32%
Guohua Life	8/29/2015	Shanghai Chinafortune	26,204,100	10%
Guohua Life	8/18/2015	Shanghai Chinafortune	26,204,200	5%
Foresea Life	8/27/2015	Vanke	80,203,800	6.66%
Foresea Life	7/25/2015	Vanke	102,945,700	5.93%

Source: Wind

Diversified financial industry

Besides banks and AMCs which are largely involved in the insurance sector, diversified financial companies have also been actively entering the eldercare sector, especially high-tech healthcare companies (e.g. mobile medical services). Among H-share listed financial companies, we notice that China Everbright Limited, Fosun International, and Far East Horizon (FEH) are all expanding their exposure to the eldercare sector.

Fosun's shift in focus

Fosun Int'l's parent Fosun, an asset management conglomerate, shifted to an insurance-oriented strategy in 2015 and has been aggressively purchasing foreign insurers. Its insurance segment generated 2.1 billion yuan, or 26.18%, of the group's profit of 8.04 billion yuan in 2015. Total assets in insurance amounted to 180.6 billion yuan, or 44.6% of the group's total assets of 405.34 billion yuan. Fosun oversees six insurance companies in Europe, the US, Hong Kong, and China, and is currently seeking approval for Ironshore's initial public offering, a foreign insurer it acquired in 2015. Upon these acquisitions, Fosun lowered its overall funding cost by utilising zero or negative interest rates in developed economies, and increased its overall leverage. Fosun has also been actively involved in the investment decisions of these insurance companies.

FEH and its hospitals

FEH, a mainland China financial leasing company, has ten hospitals with about 3,000 beds and is starting to see synergies from equipment purchasing, medical engineering, and operations. Its hospital-operation income more than tripled in financial year 2015 to 194 million yuan, accounting for about 3% of total income. FEH is confident on achieving return on assets of 5% in the mid-term and 10% in the longer run for overall hospital operations, and is on track to increase bed count to more than 6,000 by the end of 2016.

CEL's big acquisition

CEL, a cross-border asset management company, tapped into the eldercare market in May 2016 by acquiring a 67.27% stake in Beijing Huichen Nursing Home Management (Huichen). Bejing Huichen, one of the top eldercare service providers, currently operates six apartment complexes and one daily care centre with around 3,100 beds, serving more than 10,000 senior citizens. Huichen expand rapidly in 2016-2020 in Tier-1 cities. In 2016, it intends to add four high-end apartment complexes in south and west Beijing, and is also building apartments in near tourist attractions for seniors who would like to live a couple of months each year in less-expensive countryside resorts or eldercare centres. CEL believes that it can use its broad network, abundant property sector funds, and strong funding ability help Huichen expand across regions in the next five years. Huichen targets to go public in 2020.

Diagram 54 . Changes in insurers' equity portfolio (banking) (2015-2016)

Company Name	Date	Target Company	Status
China Everbright (CEL)	5/13/2016	Bejing Huichen Nursing Home Management	67.27% stake purchase
Fosun	7/7/2015	US P&C insurer MIG	Acquired 100% equity interest
Fosun	5/3/2015	Specialty insurer Ironshore	Acquired 100% equity interest
(indirect wholly owned subsidiary)			
Horizon Healthcare	6/21/2016	Chongqing Yudong Hospital	Shareholding cooperation Agreement
Horizon Healthcare	5/6/2015	Nayong Xinli Hospital	Shareholding cooperation Agreement
Horizon Healthcare	2015	Kunming Broad Healthcare Investment Limited	Joint venture with the group (with two hospitals)
Horizon Healthcare	2015	Huakang Hospital, Siping Cancer Hospital, Weihai Haida Hospital, Binhai Xinrenci Hospital, Anda Jiren Hospital, Zhoushan Dinghai Guanghua Hospital	Acquired equity interest of six hospitals

Source: Company website, annual report

References

1. The World Bank's national accounts data

2. International Monetary Fund

3. United Nations' World Urbanization Prospects

4. The World Factbook

5. https://smartech.gatech.edu/bitstream/handle/1853/53300/ananalysisoftheeffectofincomeonlifeinsurance.pdf

6. http://www.demant.com/~/media/Demant/main/Media%20documents/Investor%20Relations/CMD%202016%20Hearing%20Devices.pdf

7. Life insurance penetration is measured as life premium expenditure over GDP per year, whereas life insurance density is expressed as life insurance premium per capita. The higher the penetration, the bigger the proportion of GDP that is devoted to the insurance industry.

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