



## Economics Weekly September 26, 2016

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## Growing healthcare expenditure to become a new normal

- Expenditure on health accounted for 6.0% of GDP in China, significantly below that in most OECD countries
- Consumers are willing to pay a huge premium on quality healthcare services
- A large amount of private capitals are flowing to the healthcare industry; seven healthcare companies are lining up for IPO in HK
- Idle capacity in low-grade private hospitals indicate a surplus in healthcare resources and depresses investment returns
- Investors should focus on the quality of hospital assets

**Services consumption – a new driving force of economy.** China's retail sales fail to track changes in private consumption. For 2015, retail sales of physical consumer goods grew by 10.7%YoY; total original insurance premium, however, increased by 24.1% YoY and health expenditure was up 14.7% YoY. Lower retail sales growth of physical consumer goods suggested consumers or households were allocating a higher proportion of their disposal incomes on services rather than goods. As people are willing to spend more on services, growth in the tertiary industry will accelerate in coming years. For 1H16, real economic growth of tertiary industry was 7.5%YoY, 0.8ppt higher than the real GDP growth or 1.4ppt higher than growth in the secondary industry. We believe a faster growth in the tertiary industry will become one of the "new normal" in the economy

**Per capita expenditure on health grew at 14.65% CAGR in 2011-15, 7.68ppt higher than the nominal GDP growth for the same period.** Private and public sectors are willing to allocate more financial resources on upgrading living standard. According to National Health and Family Planning Commission (NHFPC), national health expenditure expanded at a CAGR 15.23% from 2011 to 2015. Increase in government expenditure and society expenditure on health were the major driving forces of total expenditure growth (Exhibits 1-4).

**Expenditures on health accounted for 6.0% of GDP in China in 2015, significantly lower than most OECD countries.** According to the OECD statistics, the top five countries with the highest health expenditure-to-GDP ratio in 2015 were the U.S., Switzerland, Japan, Germany, and Sweden, with the respective ratios of 16.9%, 11.5%, 11.2%, 11.1% and 11.1%. In China, health expenditures-to-GDP ratio increased from 5.15% in 2012 to 5.56% in 2014 and 6.0% in 2015. China's 2015 figure was slightly higher than that of Mexico and neared the U.K. level in 2000 (Exhibit 5).

**Potential market size of the health sector will reach RMB 6,850-7,829bn in 2020.** The government aims to double the economic size from 2010 to 2020. Assuming the government is able to achieve this goal and the proportion of national health expenditure-to -GDP ratio increases to 7-8% by 2020 (from 6% in 2015), we project the total national health expenditure to be RMB 6,850.2-7,828.8bn. Such mammoth market size should attract private enterprises or investors to the healthcare sector.



**The government is exiting the hospital market to provide room for private hospitals.** In China, the total number of hospitals increased by 6,282 from 21,979 in 2011 to 28,261 in June 2016. During the period, the number of public hospitals reduced by 584 from 13,542 in 2011 to 12,958 in June 2016; the number of private hospitals increased by 6,866 from 8,437 in 2011 to 15,303 in June 2016. Private capital has been increasing their investments in the healthcare market for the past few years. If the trend sustains, private capital would have a strong demand for long-term funding so as to finance their investments in the healthcare market. According to HKEx on Sep 23, 2016, five healthcare companies have submitted their listing applications – a positive news to the investment banking industry in HK.

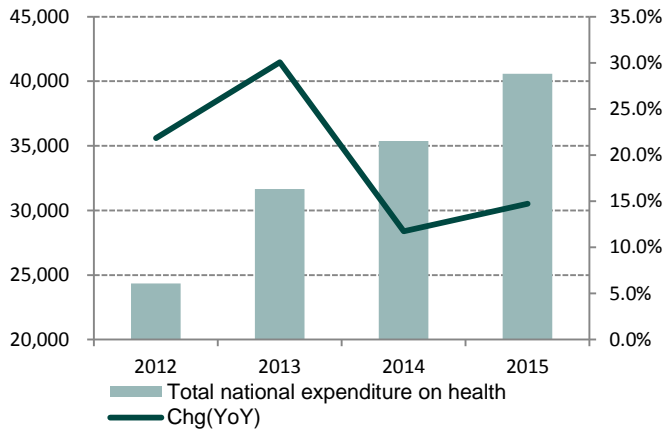
**Healthcare market is dominated by low-grade hospitals; investors in the healthcare industry should select carefully.** In China, Class 3 hospitals, which accounted for 7.6% of the total number of hospitals at end-June 2016, are considered to be the highest caliber. Lower-grade hospitals (Class 1& 2; 1 as lowest) and unrated hospitals accounted for 59% and 33.4% of the total number of hospitals at end-June (Exhibits 6-8). Between 2011 and June 2016, Class 3 hospitals increased by 756, which accounted for 12.0% of the total increase in hospitals. The low proportion of Class 3 hospitals in the market suggests most of the new private hospitals are low-grade or unrated.

**Huge premium for better healthcare services.** Average outpatient fee for Class 3 hospital was RMB 289.6/patient for 1H16, 54% higher than the average outpatient fee for Class 2 hospital. Average inpatient fee for Class 3 hospital was RMB 1,2901.2/patient for 1H16, 133% higher than average in-patient fee for Class 2 hospital (Exhibits 9-10).

**Higher ASP, strong patient flow, and high bed occupancy rate in Class 3 hospitals suggest strong cash inflow and high asset utilization rate.** Equity or debt market investors in the healthcare sector should select companies with a high proportion of assets in Class 3 hospitals. For 1H16, average number of outpatients per public hospital was 106.0K; whereas the average number of outpatients per private hospital was 12.7K. Private hospitals are struggling to find more customers. For 1H16, the average number of outpatients per Class 3, 2, and 1 and unrated hospitals were 357K, 79K, 11K, and 11K, respectively. Average bed occupancy rates per Class 3, 2 and 1 hospitals were 99.3%, 87.1%, and 62.3%. Lower-grade private hospitals are encountering keen market competition, lower ASP, customer flow, and bed occupancy rate. In general, investment returns of low-grade or unrated private hospitals are not optimistic. In contrast, capacities in the Class 3 hospitals are overstretched by high levels of bed occupancy and patient visits. (Exhibits 13-14).

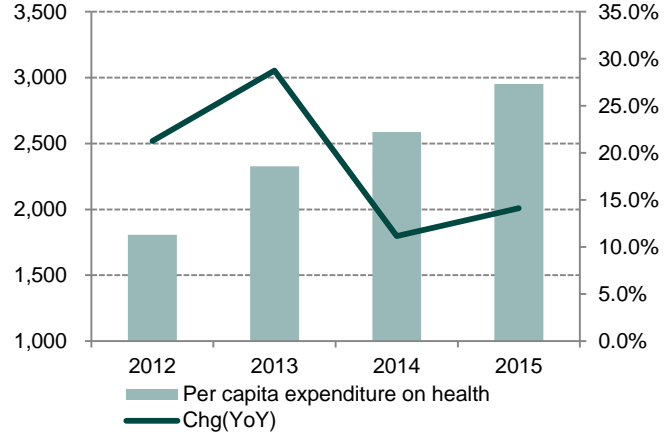


**Exhibit 1: National health expenditure (RMB100 mn)**



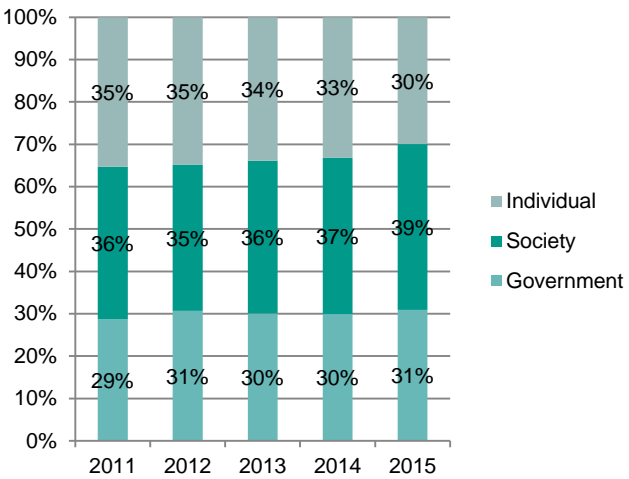
Source(s): NHFPC, ABCI Securities

**Exhibit 2: Per capita expenditure on health (RMB)**



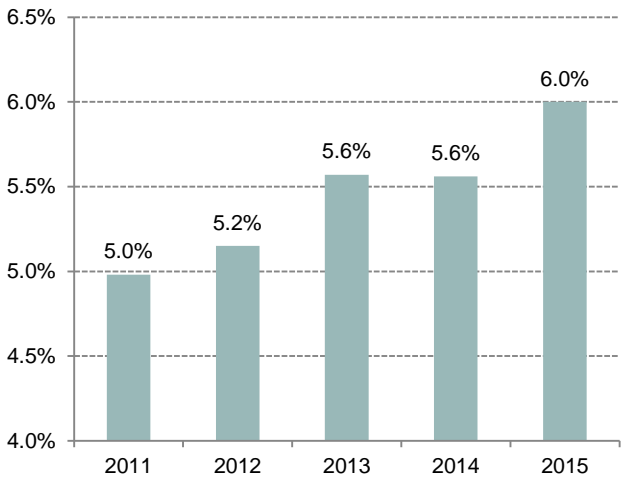
Source(s): NHFPC, ABCI Securities

**Exhibit 3: Composition of national expenditure on health**



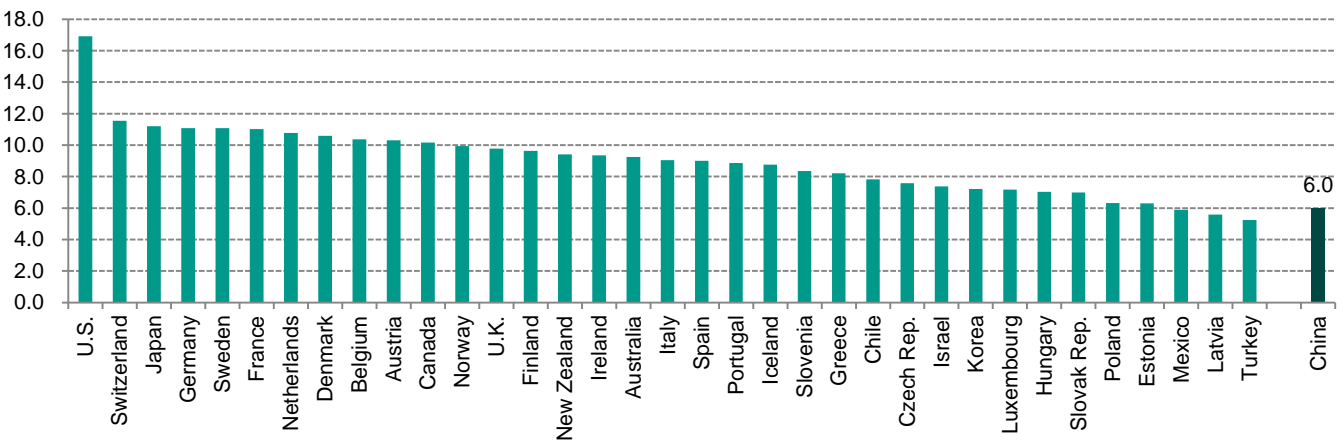
Source(s): NHFPC, ABCI Securities

**Exhibit 4: National expenditure on health/GDP**



Source(s): NHFPC, ABCI Securities

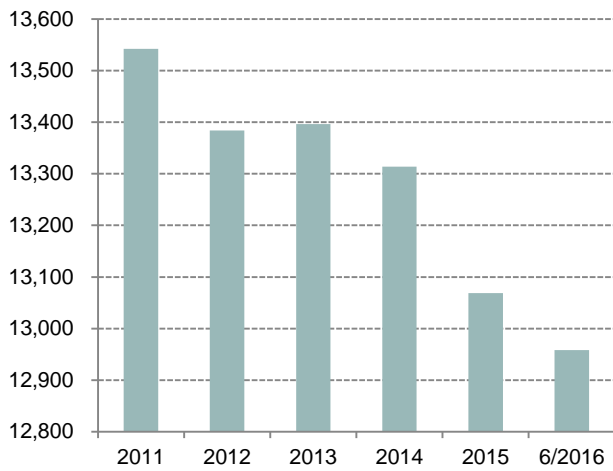
**Exhibit 5: Estimated expenditure on health/nominal GDP (%) in 2015**



Source(s): OECD, NHFPC, ABCI Securities

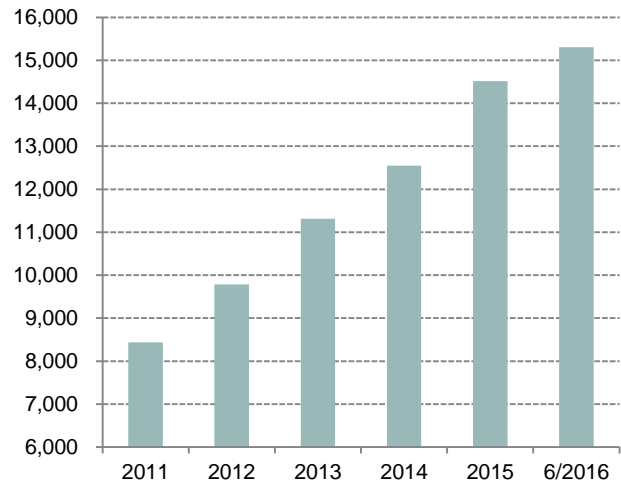


Exhibit 6: Number of public hospitals in China



Source(s): NHFPC, ABCI Securities

Exhibit 7: Number of private hospitals in China



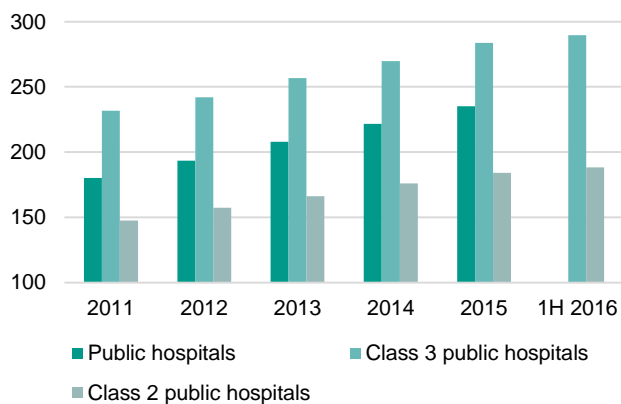
Source(s): NHFPC, ABCI Securities

Exhibit 8: Number of hospitals by quality grade (Class 3 as highest; 1 as lowest)



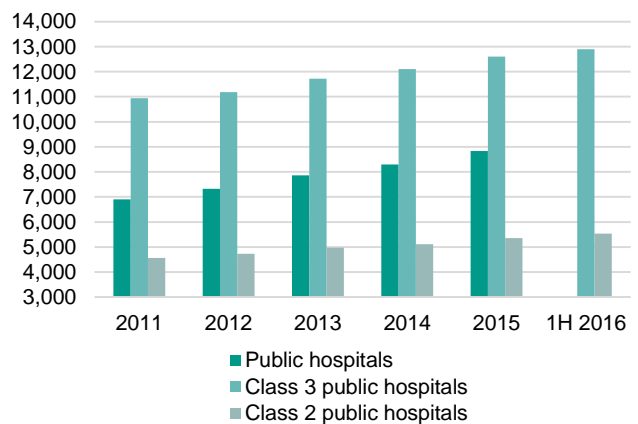
Source(s): OECD, NHFPC, ABCI Securities

Exhibit 9: Average outpatient fee (RMB/patient)



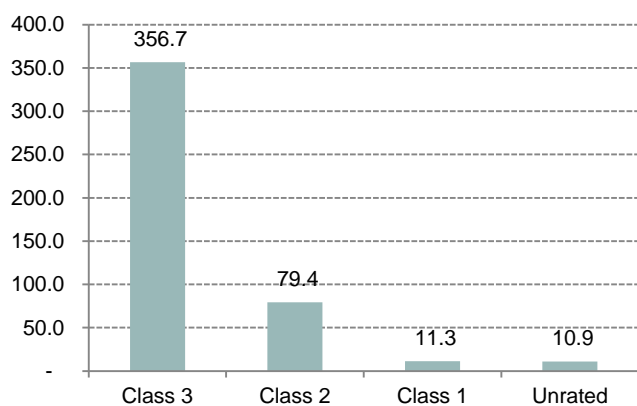
Source(s): NHFPC, ABCI Securities

Exhibit 10: Average inpatient fee (RMB/patient)



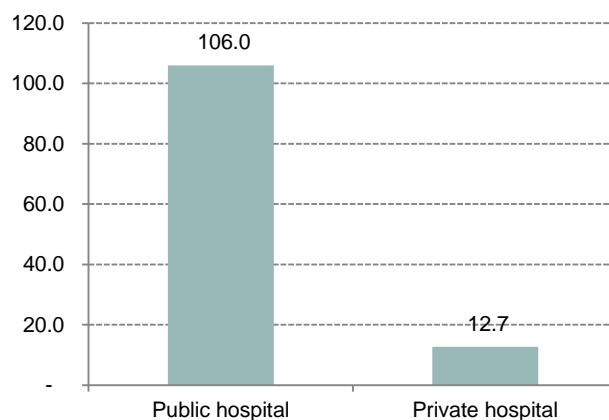
Source(s): NHFPC, ABCI Securities

**Exhibit 11: Number of outpatients per hospital in 1H16 (1,000 patients)**



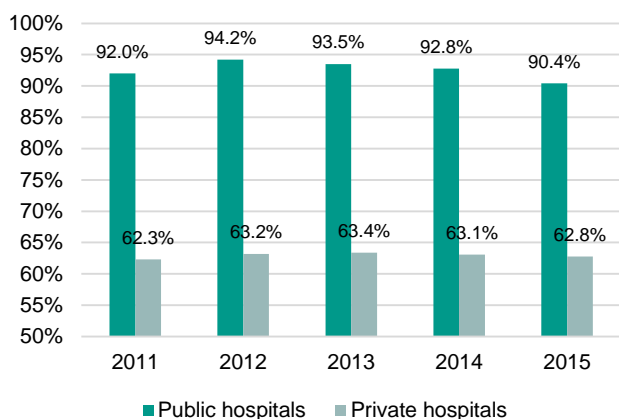
Source(s): NHFPC, ABCI Securities

**Exhibit 12: Number of outpatients per hospital in 1H16 (per 1,000 patients)**



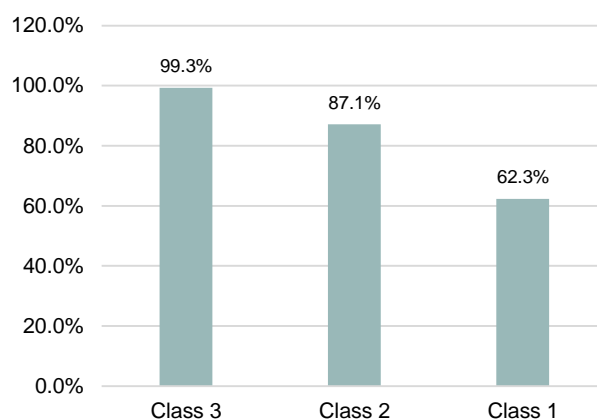
Source(s): NHFPC, ABCI Securities

**Exhibit 13: Bed occupancy rate (public hospitals vs. private hospitals)**



Source(s): NHFPC, ABCI Securities

**Exhibit 14: Bed occupancy rate in public hospitals by quality class in 1H16**



Source(s): NHFPC, ABCI Securities

**Exhibit 15: HK-listed mainland hospital stocks**

	Price (HK\$)	2015 PER (x)	2015 P/B (x)	2015 ROAE (%)	2016F PER (x)	2016F P/B (x)	2016F ROAE (%)
1515 PHOENIXHEALTH	13.14	56.50	4.98	10.86	33.83	4.80	14.45
1509 HARMONICARE MEDI	4.65	25.25	2.19	Note #	27.02	2.01	7.76
2120 WENZHOU KANGNI-H	39.95	33.36	2.61	9.13	35.79	2.48	7.12
1858 BEIJING CHUNLI-H	13.78	20.09	1.94	12.03	13.62	1.59	12.82

Note #: It recorded negative equity in 2014

Source(s): Bloomberg, ABCI Securities



**China Economic Indicators**

	2015						2016							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Real GDP (YoY %)	---	---	6.9	---	---	6.8	---	---	6.7	---	---	6.7	---	---
Export Growth (YoY %)	(8.3)	(5.5)	(3.7)	(6.9)	(6.8)	(1.4)	(11.2)	(25.4)	11.5	(1.8)	(4.1)	(4.8)	(4.4)	(2.8)
Import Growth (YoY %)	(8.1)	(13.8)	(20.4)	(18.8)	(8.7)	(7.6)	(18.8)	(13.8)	(7.6)	(10.9)	(0.4)	(8.4)	(12.5)	1.5
Trade Balance (USD/bn)	43.0	60.2	60.3	61.6	54.1	60.9	63.3	32.6	29.9	45.56	49.98	48.11	52.31	52.05
Retail Sales Growth (YoY %)	10.5	10.8	10.9	11.0	11.2	11.1	10.2		10.5	10.1	10.0	10.6	10.2	10.6
Industrial Production (YoY %)	6.0	6.1	5.7	5.6	6.2	5.9	5.4		6.8	6.0	6.0	6.2	6.0	6.3
PMI - Manufacturing (%)	50.0	49.7	49.8	49.8	49.6	49.7	49.4	49.0	50.2	50.1	50.1	50.0	49.9	50.4
PMI - Non-manufacturing (%)	53.9	53.4	53.4	53.1	53.6	54.4	53.5	52.7	53.8	53.5	53.1	53.7	53.9	53.5
FAI (YTD) (YoY %)	11.2	10.9	10.3	10.2	10.2	10.0	10.2		10.7	10.5	9.6	9.0	8.1	8.1
CPI (YoY %)	1.6	2.0	1.6	1.3	1.5	1.6	1.8	2.3	2.3	2.3	2.0	1.9	1.8	1.3
PPI (YoY %)	(5.4)	(5.9)	(5.9)	(5.9)	(5.9)	(5.9)	(5.3)	(4.9)	(4.3)	(3.4)	(2.8)	(2.6)	(1.7)	(0.8)
M2 (YoY %)	13.3	13.3	13.1	13.5	13.7	13.3	14.0	13.3	13.4	12.8	11.8	11.8	10.2	11.4
New Lending (RMB/bn)	1,480	809.6	1,050	513.6	708.9	597.8	2,510	726.6	1,370	555.6	985.5	1380	463.6	948.7
Aggregate Financing (RMB bn)	742	1,082	1,300	476.7	1,020	1,815.1	3,425.3	824.5	2,404.0	751.0	659.9	1,629.3	487.9	1470.0

**World Economic/Financial Indicators**

Equity Indices				Global Commodities					Bond Yields & Key Rates					
	Closing price	Chg. WTD (%)	P/E	Unit	Price	Chg. WTD (%)	Vol (5-Day avg.)		Yield (%)	Chg. WTD (Bps)				
<b>U.S.</b>				<b>Energy</b>					US Fed Fund Rate					
DJIA	18,261.45	0.00	17.58	NYMEX WTI	USD/bbl.	44.51	0.07	398,661	0.50	0.00				
S&P 500	2,164.69	0.00	20.38	ICE Brent Oil	USD/bbl	45.83	(0.13)	270,994	3.50	0.00				
NASDAQ	5,305.75	0.00	41.71	NYMEX Natural Gas	USD/MMBtu	2.98	0.98	126,862	US Discount Window	1.00	0.00			
MSCI US	2,064.63	0.00	21.03	China Qinhuangdao Port Thermal Coal <sup>2</sup>	CNY/Metric Tonne	552.00	1.10	N/A	US Treasury (1 Yr)	0.0760	0.00			
<b>Europe</b>				<b>Basic Metals</b>					US Treasury (5Yr)					
FTSE 100	6,832.89	(1.11)	57.41	LME Aluminum Cash	USD/MT	1,629.25	0.00	26,737	US Treasury (10 Yr)	1.6029	(1.55)			
DAX	10,480.27	(1.38)	23.70	LME Aluminum 3 -mth. Rolling Fwd.	USD/MT	1,637.00	0.00	35,459	Japan 10-Yr Gov. Bond	(0.06)	(1.90)			
CAC40	4,415.15	(1.64)	22.56	CMX Copper Active	USD/lb.	4,842.00	0.00	11,988	China 10-Yr Gov. Bond	2.7420	(3.10)			
IBEX 35	8,672.50	(1.71)	21.49	LME Copper 3- mth Rolling Fwd.	USD/MT	4,855.00	0.00	39,863	ECB Rate (Refinancing)	0.00	0.00			
FTSE MIB	16,157.40	(1.80)	37.18	<b>Precious Metals</b>					1-Month LIBOR					
Stoxx 600	340.75	(1.33)	27.34	CMX Gold	USD/T. oz	1,338.40	(0.25)	151,730	3 Month LIBOR	0.8529	(0.42)			
MSCI UK	2,011.65	0.00	60.86	CMX Silver	USD/T. oz	19.50	(1.56)	58,387	O/N SHIBOR	2.1640	(0.28)			
MSCI France	127.38	0.00	21.21	NYMEX Platinum	USD/T. oz	1,044.00	(1.59)	5,989	1-mth SHIBOR	2.7330	0.32			
MSCI Germany	135.81	0.00	24.29	<b>Agricultural Products</b>					3-mth HIBOR					
MSCI Italy	46.69	0.00	38.69	CBOT Corn	USD/bu	334.50	(0.59)	128,372	Corporate Bonds (Moody's)					
<b>Asia</b>				CBOT Wheat	USD/bu	404.00	(0.19)	42,354	Aaa	3.44	(7.00)			
NIKKEI 225	16,544.56	(1.25)	20.57	NYB-ICE Sugar	USD/lb.	22.65	(0.22)	82,089	Baa	4.32	(9.00)			
S&P/ASX 200	5,431.42	0.00	24.39	CBOT Soybeans	USD/bu.	955.25	0.03	109,367						
HSI	23,317.92	(1.56)	12.61	Note:										
HSCEI	9,629.35	(1.70)	8.25	1. Data sources: Bloomberg, National Bureau of Statistics of China, ABCIS (updated on date of report)										
CSI300	3,220.28	(1.69)	14.84	2. The price is Coal 5500 kcal/kg FOB Spot Price										
SSE Composite	2,980.43	(1.76)	17.31											
SZSE Component	10,392.70	(2.05)	31.39											
MSCI China	64.72	0.00	14.11											
MSCI Hong Kong	13,315.67	0.00	15.37											
MSCI Japan	813.16	0.00	17.19											

**Currency**

	Euro/USD	GBP/USD	AUD/USD	USD/JPY	USD/CHF	USD/CNY	USD/HKD	USD/CNY NDF 12-mth Spot pr.
Spot Rate	1.1239	1.2932	0.7609	100.60	0.9681	6.6690	7.7551	6.8575
Chg. WTD (%)	0.12	(0.26)	(0.18)	0.42	0.24	0.01	0.02	(0.01)



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### Definition of equity rating

Rating	Definition
Buy	Stock return $\geq$ Market return rate
Hold	Market return - 6% $\leq$ Stock return < Market return rate
Sell	Stock return < Market return - 6%

Stock return is defined as the expected % change of share price plus gross dividend yield over the next 12 months

Market return: 5-year average market return rate

Time horizon of share price target: 12-month

### Definition of share price risk

Rating	Definition
Very high	$2.6 \leq 180$ day volatility/180 day benchmark index volatility
High	$1.5 \leq 180$ day volatility/180 day benchmark index volatility < 2.6
Medium	$1.0 \leq 180$ day volatility/180 day benchmark index volatility < 1.5
Low	180 day volatility/180 day benchmark index volatility < 1.0

We measure share price risk by its volatility relative to volatility of benchmark index. Benchmark index: Hang Seng Index.

Volatility is calculated from the standard deviation of day to day logarithmic historic price change. The 180-day price volatility equals the annualized standard deviation of the relative price change for the 180 most recent trading days closing price.

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