



Rating
Buy

Asia
China

Property
Property

Company
Aoyuan

Reuters
3883.HK

Bloomberg
3883 HK

Exchange
HSI

Ticker
3883

Date
27 October 2017

Initiation of Coverage

Price at 26 Oct 2017 (HKD)	4.30
Price target - 12mth (HKD)	6.74
52-week range (HKD)	5.23 - 1.57
HANG SENG INDEX	28,303

Jeffrey Gao, CFA

Research Analyst
(+852) 2203 6256
jeffrey.gao@db.com

Jason Ching, CFA

Research Analyst
(+852) 2203 6205
jason.ching@db.com

Stephen Cheung, CFA

Research Analyst
(+852) 2203 6182
stephen-a.cheung@db.com

Foo Leung

Research Associate
(+852) 2203 6239
foo.leung@db.com

High earnings visibility, attractive valuation and yield; initiating with Buy

Earnings CAGR of ~50% by 2019F with 3.5x 2018F P/E; initiating with Buy

We initiate coverage on Aoyuan with a Buy rating and target price of HKD6.74. Supported by its proactive landbanking with large exposure to the Greater Bay Area (~40% GAV), we expect the company to sustain strong sales growth of 45%/41% in 2017/18F. Coupled with margin expansion to 28-30%, we expect it will deliver a ~50% earnings CAGR in FY17-19F. Also, Aoyuan now trades at only 3.5x FY18F P/E, a 68% discount to NAV, and offers 6-14% dividend yields, thus it is much cheaper than the sector average and other small caps.

Proactive landbanking in Greater Bay Area to support 40% sales growth

Aoyuan has become more aggressive in landbanking to support its fast scale expansion. It currently owns c.20mn sqm of land bank with major exposure to the Greater Bay Area (~40% GAV). We estimate current land bank can provide a total of RMB200bn saleable sources to support RMB37.2bn sales this year (+45% y-y, 12% higher than its target) and RMB52.6bn in 2018F (+41% y-y), considering that it has introduced a partnership scheme.

50% earnings CAGR amid margin expansion; high lock-in profit/dividend yields

We forecast Aoyuan to deliver ~50% earnings CAGR in FY17-19F (21-75% above consensus), driven by strong sales growth (>40%) and margin expansion (28-30% vs. 27.7% in FY16). Until September, Aoyuan had accumulated RMB45bn sold but unbooked revenue. In addition, we estimate 6-14% dividend yields over the next three years (the sector average is 4-5%).

Strong M&A capability and redevelopment projects to secure cheap land bank

Aoyuan has proactively replenished its land bank via M&A (accounting for >80% of its landbanking since its IPO) to secure low-cost projects (estimated gross margins at 25-30%). We estimate its average land cost of RMB2.5k/sqm accounts for only 25% of its 9M17 ASP. It is also engaged in 10 urban redevelopment projects with 4.2mn sqm GFA, which we estimate can potentially provide RMB120bn of saleable resources.

Diversified financing channels to lower borrowing cost to <7% in 2018F

Aoyuan has proactively reduced its high-yield offshore debt ratio to 19% (vs. 30% in 2015) by introducing low-cost domestic bonds and club loans. We expect average financing cost will lower to <7% next year (vs. 9.5%/8.1%/7.5% in 2015/16/17F) after refinancing its maturing USD bonds in May (10.875% coupon, vs. its latest bond issuance at 5.375%).

Attractive valuation at 3.5x 2018F P/E, 68% discount to NAV and risks

Our target price is based on 50% of end-FY18F NAV of HKD13.48. The stock trades at 3.5x FY18F P/E and a 68% NAV discount, much cheaper than other small-cap peers at 5-6x P/E and 40-50% NAV discounts. Key risks: 1) slower sales growth; and 2) a failure to acquire quality land bank. See pages 3 & 11.

Forecasts And Ratios

Year End Dec 31	2015A	2016A	2017E	2018E	2019E
Sales (CNYm)	9,572.4	11,827.3	18,888.9	27,179.3	38,340.9
DB EPS growth (%)	29.2	32.8	49.1	57.8	41.7
PER (x)	3.2	2.8	5.4	3.4	2.4
DPS (net) (CNY)	0.11	0.15	0.24	0.37	0.53
Yield (net) (%)	9.8	11.7	6.5	10.2	14.5

Source: Deutsche Bank estimates, company data

Price/price relative



Performance (%)	1m	3m	12m
Aoyuan	0.9	26.1	159.1
HANG SENG INDEX	2.9	5.1	21.3

Source: Deutsche Bank

Deutsche Bank AG/Hong Kong

Deutsche Bank does and seeks to do business with companies covered in its research reports. Thus, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. DISCLOSURES AND ANALYST CERTIFICATIONS ARE LOCATED IN APPENDIX 1. MCI (P) 083/04/2017.

THE CONTENT MAY NOT BE DISTRIBUTED IN THE PEOPLE'S REPUBLIC OF CHINA ("THE PRC") (EXCEPT IN COMPLIANCE WITH THE APPLICABLE LAWS AND REGULATIONS OF PRC), EXCLUDING SPECIAL ADMINISTRATIVE REGIONS OF HONG KONG AND MACAU

Distributed on: 26/10/2017 22:00:00 GMT



Model updated: 25 October 2017

Running the numbers

Asia

China

Property

Aoyuan

Reuters: 3883.HK

Bloomberg: 3883.HK

Buy

Price (26 Oct 17) HKD 4.30

Target Price HKD 6.74

52 Week range HKD 1.57 - 5.23

Market Cap (m) HKDm 11,509

USDm 1,475

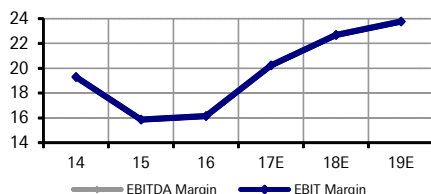
Company Profile

Aoyuan was founded in 1996 and has been listed since October 2007. Aoyuan is regionally focused on the Pearl River Delta, Bohai Rim, Yangtze River Delta, the core region of Central and Western China, and Beibuwan, and has gradually developed overseas property markets, including Australia and Canada. As of 1H17, the company has a total land bank of 17msqm.

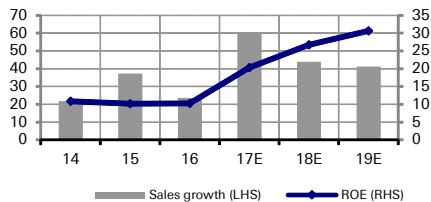
Price Performance



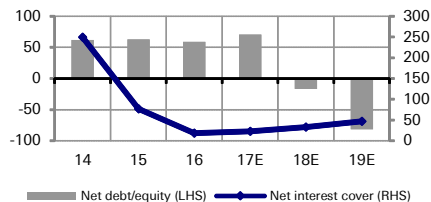
Margin Trends



Growth & Profitability



Solvency



Fiscal year end 31-Dec

Financial Summary

	2014	2015	2016	2017E	2018E	2019E
DB EPS (CNY)	0.26	0.34	0.45	0.68	1.07	1.51
Reported EPS (CNY)	0.29	0.29	0.32	0.73	1.12	1.56
DPS (CNY)	0.09	0.11	0.15	0.24	0.37	0.53
BVPS (CNY)	2.8	3.0	3.3	3.8	4.6	5.6
Weighted average shares (m)	2,784	2,784	2,728	2,673	2,677	2,677
Average market cap (CNYm)	2,354	3,005	3,496	9,797	9,797	9,797
Enterprise value (CNYm)	9,161	13,308	17,647	34,681	17,374	-480

Valuation Metrics

P/E (DB) (x)	3.2	3.2	2.8	5.4	3.4	2.4
P/E (Reported) (x)	2.9	3.7	4.0	5.0	3.3	2.4
P/BV (x)	0.29	0.39	0.43	0.96	0.80	0.65
FCF Yield (%)	nm	nm	151.8	nm	195.1	206.1
Dividend Yield (%)	10.3	9.8	11.7	6.5	10.2	14.5
EV/Sales (x)	1.3	1.4	1.5	1.8	0.6	0.0
EV/EBITDA (x)	6.8	8.8	9.2	9.1	2.8	-0.1
EV/EBIT (x)	6.8	8.8	9.2	9.1	2.8	-0.1

Income Statement (CNYm)

Sales revenue	6,976	9,572	11,827	18,889	27,179	38,341
Gross profit	2,067	2,646	3,277	5,295	7,956	11,487
EBITDA	1,347	1,520	1,911	3,822	6,162	9,110
Depreciation	0	0	0	0	0	0
Amortisation	0	0	0	0	0	0
EBIT	1,347	1,520	1,911	3,822	6,162	9,110
Net interest income/(expense)	-5	-20	-103	-168	-187	-194
Associates/affiliates	9	28	-32	39	-4	16
Exceptionals/extraordinary	98	356	310	181	182	155
Other pre-tax income/(expense)	0	0	0	0	0	0
Profit before tax	1,449	1,884	2,085	3,874	6,153	9,088
Income tax expense	666	977	1,078	1,767	2,681	4,007
Minorities	-26	95	126	164	479	916
Other post-tax income/(expense)	0	0	0	0	0	0
Net profit	809	812	881	1,943	2,993	4,164
DB adjustments (including dilution)	-73	139	357	-135	-136	-116
DB Net profit	736	951	1,238	1,808	2,857	4,048

Cash Flow (CNYm)

Cash flow from operations	-1,581	-2,944	5,999	-8,903	19,318	20,639
Net Capex	-324	-867	-692	-780	-201	-453
Free cash flow	-1,905	-3,811	5,307	-9,682	19,117	20,187
Equity raised/(bought back)	1	0	-156	0	0	0
Dividends paid	-223	-292	-245	-633	-1,000	-1,417
Net inc/(dec) in borrowings	2,793	4,849	1,442	9,784	0	0
Other investing/financing cash flows	-306	2,111	-3,665	4,328	469	-1,345
Net cash flow	360	2,856	2,683	3,797	18,587	17,425
Change in working capital	-1,430	-3,170	6,092	-11,052	15,804	15,517

Balance Sheet (CNYm)

Cash and other liquid assets	5,917	9,036	10,956	14,753	33,340	50,765
Tangible fixed assets	3,229	4,998	5,930	6,668	6,827	7,238
Goodwill/intangible assets	0	0	5	5	5	5
Associates/investments	88	292	173	198	195	211
Other assets	27,551	34,501	49,353	75,911	83,193	77,867
Total assets	36,786	48,827	66,418	97,535	123,559	136,085
Interest bearing debt	11,497	16,298	19,568	29,352	29,352	29,352
Other liabilities	16,254	20,953	32,219	47,470	70,225	80,416
Total liabilities	27,752	37,251	51,787	76,822	99,577	109,768
Shareholders' equity	7,719	8,243	8,918	10,229	12,222	14,970
Minorities	1,315	3,333	5,713	10,484	11,760	11,348
Total shareholders' equity	9,034	11,576	14,631	20,713	23,982	26,317
Net debt	5,580	7,262	8,611	14,599	-3,988	-21,413

Key Company Metrics

Sales growth (%)	21.8	37.2	23.6	59.7	43.9	41.1
DB EPS growth (%)	5.7	29.2	32.8	49.1	57.8	41.7
EBITDA Margin (%)	19.3	15.9	16.2	20.2	22.7	23.8
EBIT Margin (%)	19.3	15.9	16.2	20.2	22.7	23.8
Payout ratio (%)	29.9	36.3	46.4	32.5	33.4	34.0
ROE (%)	10.8	10.2	10.3	20.3	26.7	30.6
Capex/sales (%)	4.6	9.1	5.9	4.1	0.7	1.2
Capex/depreciation (x)	nm	nm	nm	nm	nm	nm
Net debt/equity (%)	61.8	62.7	58.9	70.5	-16.6	-81.4
Net interest cover (x)	249.6	77.1	18.6	22.8	32.9	47.0

Source: Company data, Deutsche Bank estimates



Investment thesis

Outlook

We initiate coverage on Aoyuan with a Buy rating and TP of HKD6.74. Supported by its proactive landbanking with large exposure in the Greater Bay Area (~40% GAV), we expect the company to sustain its strong sales growth of 45%/41% in 2017-18F. Coupled with margin expansion to 28-30%, we believe it will deliver ~50% earnings CAGR in FY17-19F. Also, Aoyuan now only trades at 3.5x FY18F P/E, 68% discount to NAV, and offers 6-14% dividend yield, which is much cheaper than the sector average and other small-caps.

Valuation

Our end-FY18 NAV estimate of HKD13.48/share comprises HKD11.37/share from development properties, HKD0.37/share from investment properties, and HKD1.74/share from net cash. Our NAV estimate values existing land bank and properties using a sum-of-the-parts methodology: 1) we use DCF to value the company's development properties, with a WACC of 11.7% (we apply a risk-free rate of 3.0%, beta of 2.0, risk premium of 6.0% and cost of debt at 7.6%); and 2) we use a cap-rate approach (5-9%) to value investment properties. We assume full prepayment of the land appreciation tax. In terms of property price assumptions, we assume prices in T1, T2 and T3 cities will increase 5% in FY17 and remain flat thereafter.

We initiate coverage of Aoyuan with a Buy rating and a 12-month target price of HKD6.74, implying 50% potential upside from the current level. We base our target price on a 50% discount to our NAV estimate of HKD13.48. Our rationale for this discount is based on eight key measures of the companies we cover (see Figure 22). Our target price implies 5.4x FY18F P/E (EPS: RMB1.07) and 1.5x FY17F P/B. The benchmark index for the stock is MSCI China.

NAV breakdown (share price currency)	2018E
Development properties	30,437
Residential	29,990
Retail	-
Office	447
Hotel	-
Investment properties	989
Residential	-
Retail	611
Office	377
Hotel	-
GAV	31,425
Net debt	4,644
Adjustment for perpetuals	-
NAV	36,070
Number of shares - basic (mn)	2,677
NAV per share	13.48
Discount to NAV	50%
Target price	6.74

Risks

Macro risks: The government's property tightening measures may be stricter than expected, which could result in volatile housing transaction volumes, housing prices, land prices, and the financing available to developers and homebuyers. Unexpected economic fluctuations in the Chinese economy would also add risk to the sector.

Company-specific: The major downside risks are: 1) weaker sales; 2) faster margin squeeze; and 3) higher gearing due to aggressive land acquisitions.



Key players in Greater Bay Area to support 40% sales and ~50% earnings CAGR

Greater Bay Area accounts for ~40% of GAV

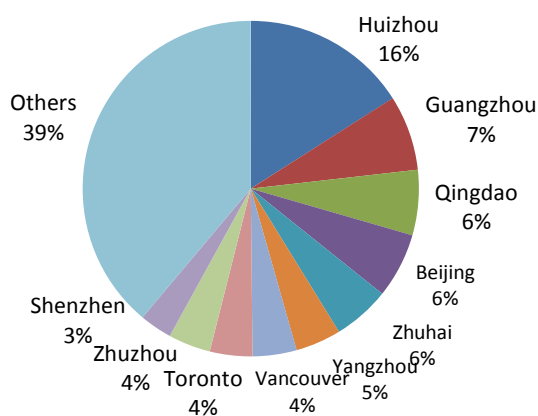
Originating from the Guangdong Province, Aoyuan is one of the major regional players in the Greater Bay Area (mainly Guangzhou, Shenzhen, Huizhou and Zhuhai), which accounts for about 40% of its GAV, based on our estimates.

To pave the way for its fast scale expansion to be a national developer, Aoyuan has turned more aggressive on landbanking this year, spending RMB25.3bn to acquire 7.3mn sqm in 9M17 (vs. 3.1mn sqm and 3.0mn sqm of GFA sold in 2016), mainly via M&As.

In addition to its China exposure, Aoyuan has also expanded its footprint into Australia (Sydney) in 2015 and Canada (Vancouver and Toronto) in 2017. Currently, the company has nine overseas projects with a total GFA of about 310k sqm, equivalent to ~2% of its total land bank, but will contribute ~RMB3bn sales in upcoming 2018F.

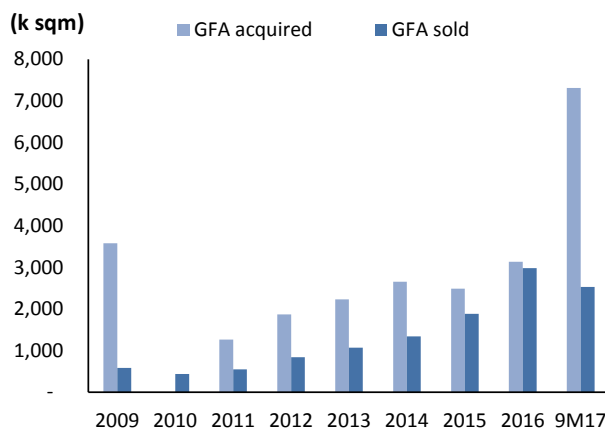
By 9M17, the company had a gross land bank of ~20m sqm (86% attributable), with estimated total saleable resources of RMB200bn. We estimate the company's latest average land cost is about RMB2.5k/sqm, accounting for only 25% of its 9M17 sales ASP. Based on our estimates, T1 (including foreign cities), T2 and T3 cities account for 24%, 23% and 53% of its GAV, respectively.

Figure 1: Land bank breakdown by GAV – 2018F



Source: Company data, Deutsche Bank

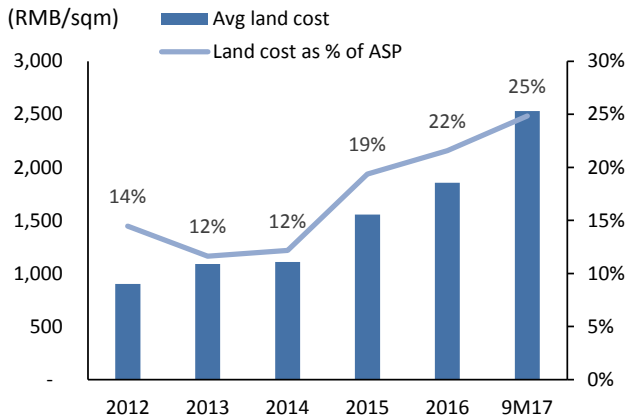
Figure 2: Land acquisition vs. property sales volume



Source: Company data, Deutsche Bank

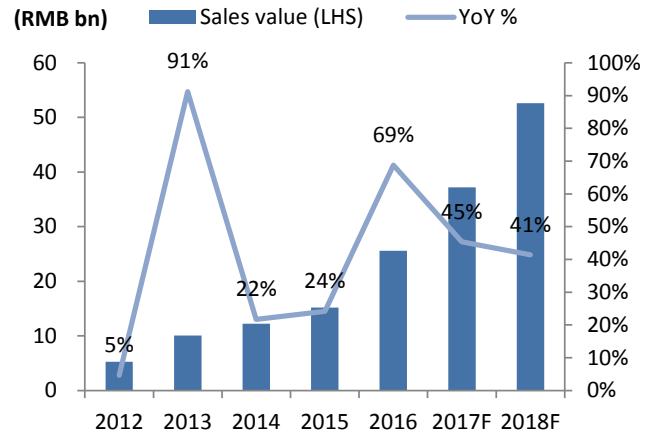


Figure 3: Average land cost



Source: Company data, Deutsche Bank

Figure 4: Contracted sales value



Source: Company data, Deutsche Bank estimates

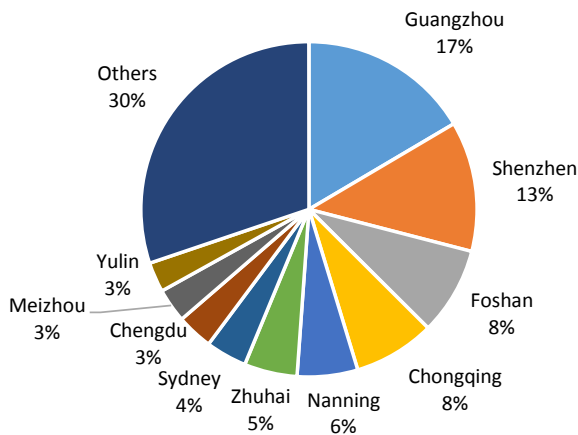
40% contracted sales growth achievable in 2018F

Supported by a total of about RMB200bn saleable resources, we expect Aoyuan to achieve RMB37.2bn contracted sales this year (+45% y-y, reached RMB25.8bn by September), beating its RMB33.3bn sales target by 12%. We expect its current land bank can support a further 41% y-y sales growth to RMB52.6bn in 2018F (even without new land acquisitions), considering Aoyuan introduced the co-investment scheme in 1H17 to provide better incentives for senior management.

Under the co-investment scheme, senior management are required to invest in every project to the amount of RMB300-500k/project (capped at a project stake of 10%).

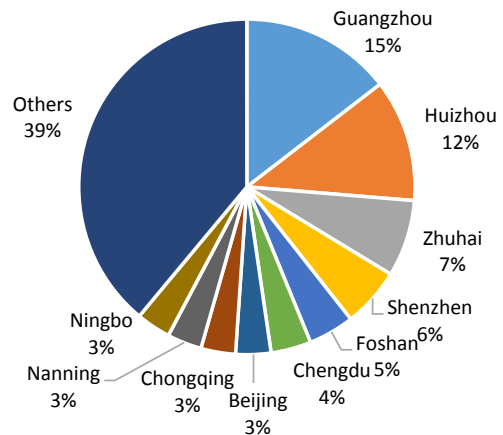
In terms of city breakdown, we expect Greater Bay Area will contribute RMB17.8bn/25.8bn sales (~50% of total) for 2017-18, while its overseas projects (including Sydney, Vancouver and Toronto) will contribute about RMB1.5bn/3bn (4-6% of total). Guangzhou/ Huizhou/Shenzhen/Zhuhai/Foshan will continue to be the major sales contributors, contributing 44-45% of its sales in 2017F and 2018F.

Figure 5: 2017F contracted sales breakdown



Source: Company data, Deutsche Bank

Figure 6: 2018F contracted sales breakdown



Source: Company data, Deutsche Bank



Strong M&A capability; redevelopment projects to be source of low-cost land bank

Aoyuan has proactively replenished its land bank via M&A (accounting for >80% of its land acquisitions since IPO) to secure low-cost projects. For example, 16 of the 20 projects acquired in 1H17 were obtained via M&A. We estimate the average land cost of its current land bank is about RMB2.5k/sqm, which only accounts for 25% of its latest sales ASP, and should offer ~30% gross margin (vs. its booking gross margin of 27.7% in FY16).

Figure 7: Summary of historical land acquisitions

	Number of projects	Total GFA (k sqm)	Total cost (RMB mn)	Avg land cost (RMB/sqm)	Sales ASP (RMB/sqm)	Land cost as % of sales ASP
2008	2	341	126	369	4,893	8%
2009	4	3,584	3,138	876	4,932	18%
2011	7	1,268	3,721	2,933	9,119	32%
2012	8	1,875	4,084	2,178	6,220	35%
2013	8	2,233	5,013	2,245	9,364	24%
2014	8	2,657	4,557	1,715	9,103	19%
2015	13	2,492	5,761	2,312	8,037	29%
2016	17	3,139	9,950	3,170	8,591	37%
9M17	48	7,308	25,293	3,461	10,182	34%
Total	115	24,898	61,643	2,476		29%
Current landbank				2,530		25%

Source: Company data, Deutsche Bank

In addition to public land auctions and M&A, Aoyuan has also engaged in urban redevelopment projects to secure low-cost land bank to sustain its high growth. Currently, it is involved in 10 major redevelopment projects that have a total planned GFA of 4.2mn sqm located in Guangzhou, Zhuhai and Dongguan. We estimate these projects can provide a total of about RMB120bn saleable resources.

Figure 8: Pipeline of redevelopment projects

No.	Project name	City	District	Status	Planned			Saleable
					Site area (k sqm)	GFA (k sqm)	Estimated ASP (RMB/sqm)	resources (RMB mn)
1	Nitrogen Fertilizer Plant	Guangzhou	Panyu	Confirm redevelopment plan	100	310	29,000	8,990
2	Caohe Village Industrial Park	Guangzhou	Panyu	Cooperation agreement	220	360	25,000	9,000
3	Yafang Building	Zhuhai	Xiangzhou	Redevelopment planning application	10	90	40,000	3,600
4	Yuexiang and Dahua Factory	Zhuhai	Pingsha	Redevelopment planning application	150	460	15,000	6,900
5	Cuiwei Village	Zhuhai	Xiangzhou	Redevelopment planning application	310	1,000	35,000	35,000
6	Xiaxu Village	Zhuhai	High Tech Zone	Redevelopment planning application	70	230	16,000	3,680
7	Gongbei Guanzha Village	Zhuhai	Xiangzhou	Redevelopment planning application	200	780	40,000	31,200
8	Shuiwengkeng Village	Zhuhai	Xiangzhou	Redevelopment planning application	80	240	35,000	8,400
9	Pailouji Village	Dongguan	Wanjiang	Decision on early-stage partner	100	250	17,000	4,250
10	Jiangshimei Village	Dongguan	Wanjiang	Decision on early-stage partner	220	500	16,000	8,000
Total					1,460	4,220		119,020

Source: Company data, Deutsche Bank

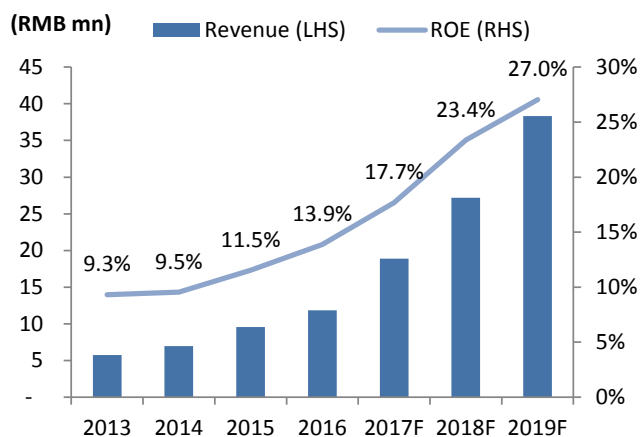


Financial analysis

Profitability

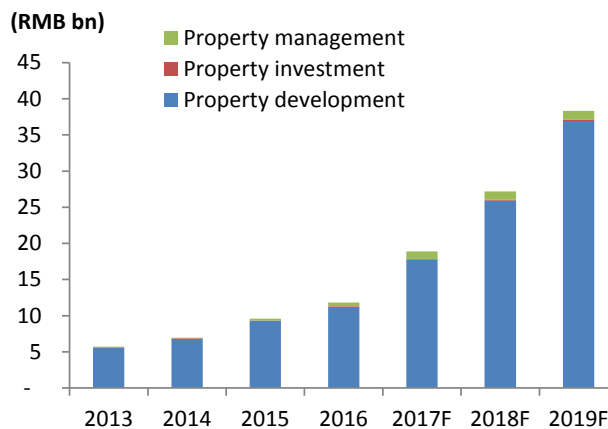
Supported by its strong sales growth over the past few years and in 2017F (69% y-y growth in 2016 and 42% in 2017F), we expect Aoyuan to deliver a strong revenue CAGR of 48% in FY17-19F to reach RMB18.9bn in FY17F and RMB27.2bn in FY18F, respectively, given there are RMB35bn un-booked pre-sales by 1H17 (including ~RMB17.5bn to be recognized in FY17F). We expect ~95% of its revenue to come from property development and ~5% from recurrent income in the next three years.

Figure 9: Revenue and ROE



Source: Company data, Deutsche Bank estimates

Figure 10: Breakdown of revenue

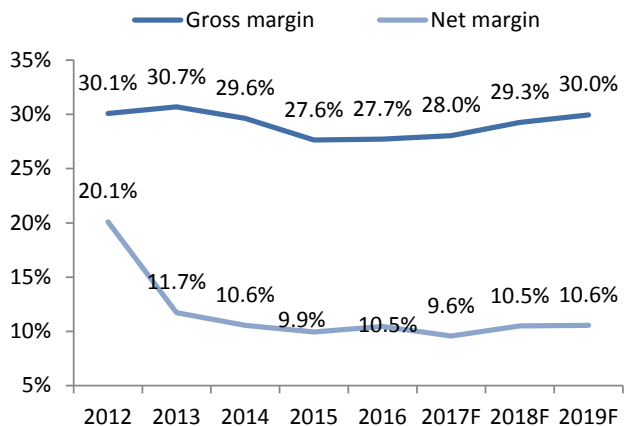


Source: Company data, Deutsche Bank estimates

Thanks to its low land cost (RMB1,897/sqm on an average by 1H17) and good cost control (average construction cost <RMB3k/sqm), Aoyuan reported decent gross margins of 28-31% in FY12-16 (lower margins in FY15 and FY16 due to booking of weak sales in 2014). We expect its gross margin to gradually recover to 28-30% in the next three years, given its higher ASP and lower financing cost. It recorded 30% core profits growth in FY16, and we expect it to accelerate to 46%, 58% and 42% to RMB1.8bn, RMB2.8bn and RMB4.0bn in FY17-19F, respectively.

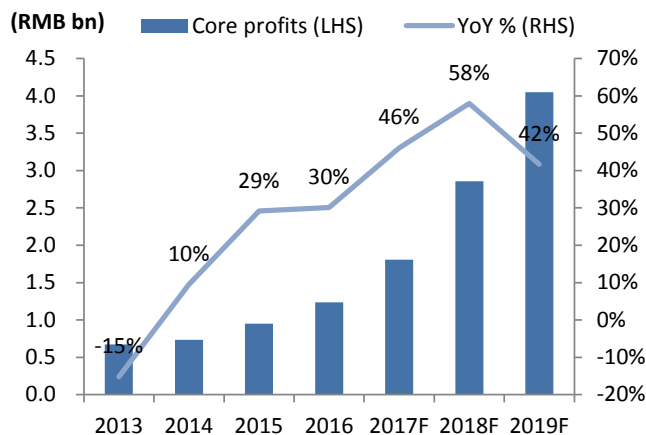


Figure 11: Gross margin and net profit margin



Source: Company data, Deutsche Bank estimates

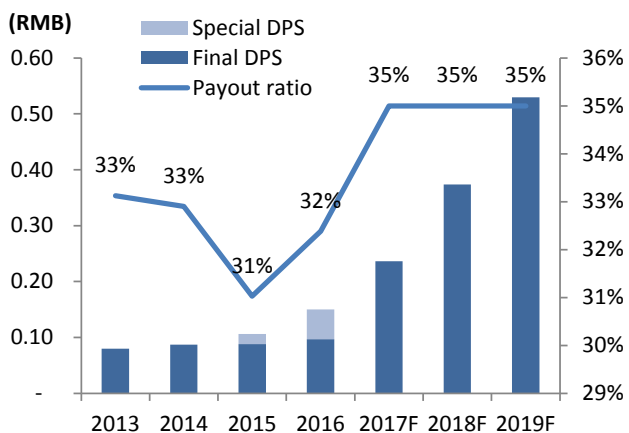
Figure 12: Core net profits growth



Source: Company data, Deutsche Bank estimates

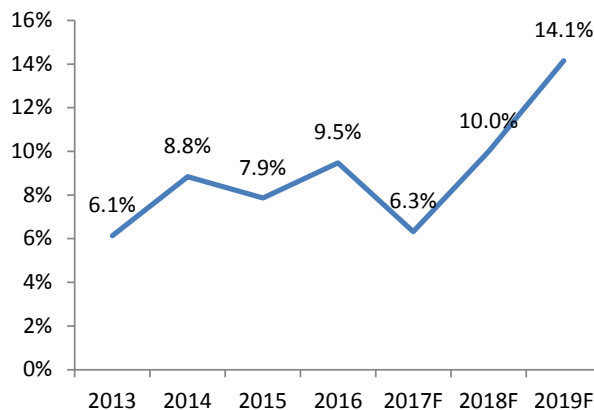
In addition, by paying >30% of its core profits as dividend (including special dividend in FY15 and FY16) since 2013, Aoyuan is one of the few developers that offers high dividend yields. Assuming 35% payout ratio (management guides 30-35% regular payout), we expect the company to offer a 6-14% dividend yield over the next three years, which is much higher than the sector average of 4-5%.

Figure 13: DPS and payout ratio on core profits



Source: Company data, Deutsche Bank estimates

Figure 14: Dividend yield



Source: Company data, Deutsche Bank estimates



Liquidity and cash flow

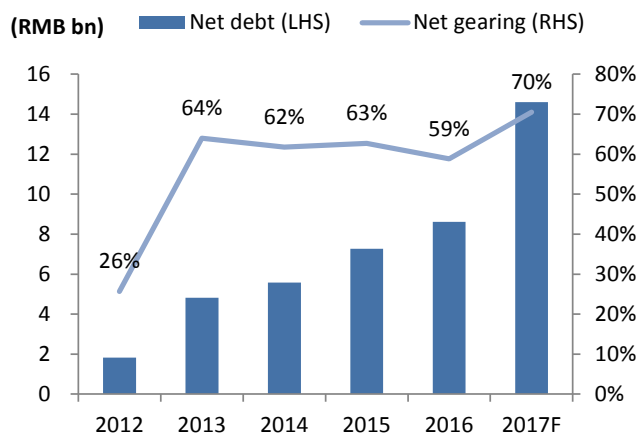
Given its aggressive land acquisitions (spent RMB25.3bn in 9M17), we expect the company's net gearing ratio to increase from 63% in 1H17 to 70% in FY17F (vs. 59% in FY16) despite its strong sales with high cash collection rate (86% in 1H17).

In terms of liquidity, although Aoyuan's short-term debt as a percentage of total debt has increased to 35% in 1H17 (vs. 16% and 23% in FY15 and FY16), we believe Aoyuan should not face much liquidity issues, considering its cash balance is 1.5x short-term debts in 1H17.

In addition, the company has refinanced its USD300mn senior note (with an 11.25% coupon, due in 2019) with an USD250mn senior note (with a 5.375% coupon, due in 2022) in September. Also, it has obtained HKD1.5bn three-year club loan at LIBOR/HIBOR+4.5% in February. We expect its average financing cost will further reduce to ~7.5% by year-end and <7% in FY18F (vs. 8.1% in FY16) after refinancing its USD250mn high-yield USD bonds (10.875% coupon) that are maturing in May 2018.

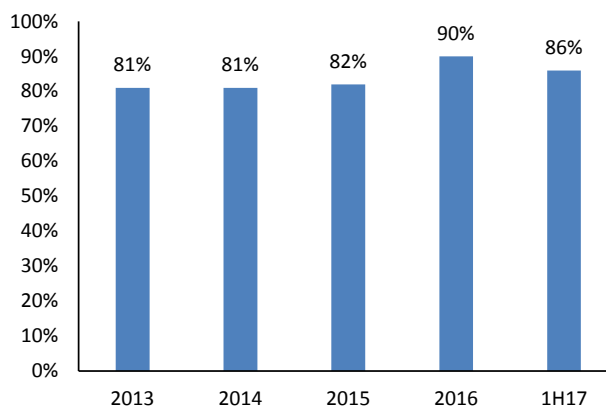
In terms of debt breakdown, 68% of Aoyuan's debt is sourced onshore, while the remaining 32% is sourced offshore (mainly offshore USD senior notes). Hence, we believe the foreign exchange risk of the company is manageable.

Figure 15: Net gearing ratio



Source: Company data, Deutsche Bank estimates

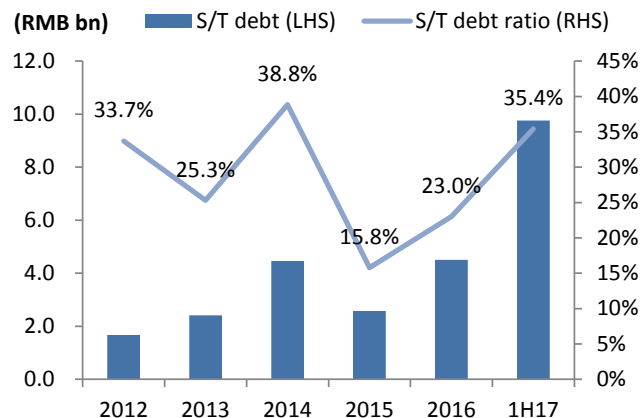
Figure 16: Cash collection rate



Source: Company data, Deutsche Bank

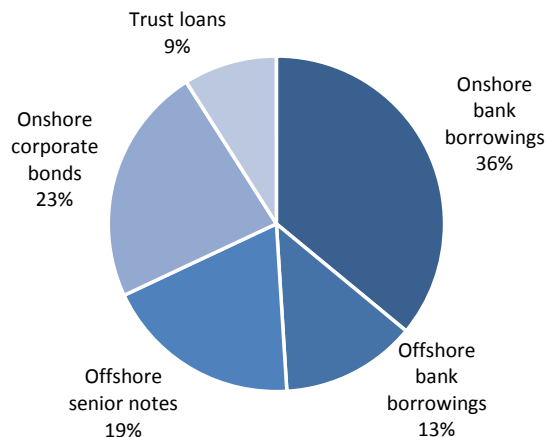


Figure 17: Short-term debt and percentage of short-term debt to total



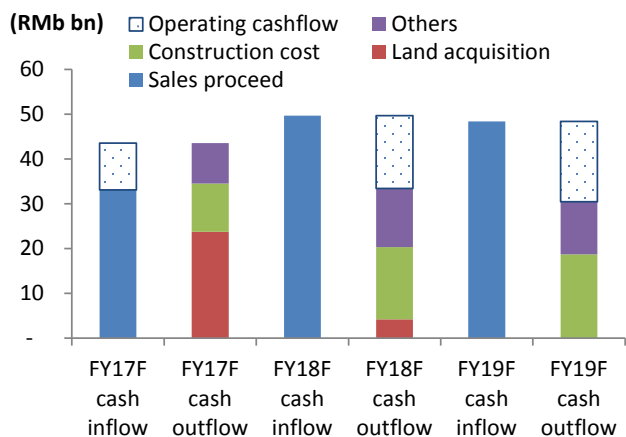
Source: Company data, Deutsche Bank

Figure 18: Debt breakdown as of 1H17



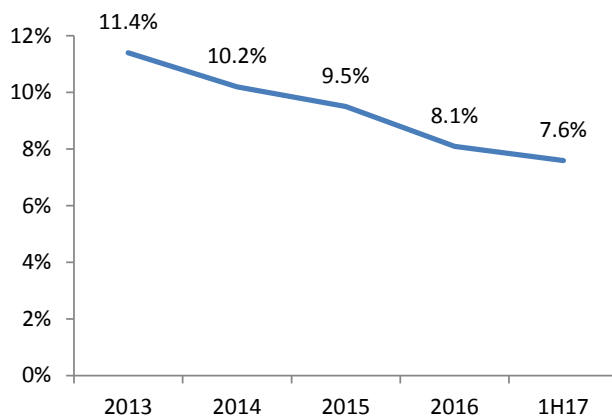
Source: Company data, Deutsche Bank

Figure 19: Operating cash flow



Note: We assume no future land acquisitions.
 Source: Company data, Deutsche Bank estimates

Figure 20: Average financing cost



Source: Company data, Deutsche Bank



Valuation and risks

Valuation methodology

Our end-FY18 NAV estimate of HKD13.48/share comprises HKD11.37/share from development properties, HKD0.37/share from investment properties, and HKD1.74/share from net cash. Our NAV estimate values existing land bank and properties using a sum-of-the-parts methodology: 1) we use DCF to value the company's development properties, with a WACC of 11.7% (we apply a risk-free rate of 3.0%, beta of 2.0, risk premium of 6.0% and cost of debt at 7.6%); and 2) we use a cap-rate approach (5-9%) to value investment properties. We assume full prepayment of the land appreciation tax. In terms of property price assumptions, we assume prices in T1, T2 and T3 cities will increase 5% in FY17 and remain flat thereafter.

We initiate coverage of Aoyuan with a Buy rating and a 12-month target price of HKD6.74, implying 50% potential upside from the current level. We base our target price on a 50% discount to our NAV estimate of HKD13.48. Our rationale for this discount is based on eight key measures of the companies we cover. Our target price implies 5.4x FY18E P/E (EPS: RMB1.07) and 1.5x FY17E P/B. The benchmark index for the stock is MSCI China.

Figure 21: GAV breakdown

NAV breakdown (share price currency)	2018E
Development properties	30,437
Residential	29,990
Retail	-
Office	447
Hotel	-
Investment properties	989
Residential	-
Retail	611
Office	377
Hotel	-
GAV	31,425
Net debt	4,644
Adjustment for perpetuals	-
NAV	36,070
Number of shares - basic (mn)	2,677
NAV per share	13.48
Discount to NAV	50%
Target price	6.74

Source: Deutsche Bank estimates

Investment risks

Macro risks: The government's property tightening measures may be stricter than expected, which could result in volatile housing transaction volumes, housing prices, land prices, and the financing available to developers and homebuyers. Unexpected economic fluctuations in the Chinese economy would also add risk to the sector.

Company-specific: The major downside risks are: 1) weaker sales; 2) faster margin squeeze; and 3) higher gearing due to aggressive land acquisitions.



Figure 22: Deutsche Bank score card for covered stocks' NAV discounts

Developer	Ticker	Profit margin	Financing advantage	Product quality	Landbank quality	Scale	Leverage	Growth prospect	Execution	Total	NAV discount
COLI	688 HK	9	10	8	8	10	10	8	10	73	-10%
China Vanke - A	000002 CH	7	9	8	7	10	10	9	10	70	-10%
China Vanke - H	2202 HK	7	9	8	7	10	10	9	10	70	-10%
CR Land	1109 HK	7	10	8	7	10	9	8	9	68	-20%
Longfor	960 HK	7	9	8	8	9	8	8	8	65	-25%
CIFI	884 HK	7	8	7	8	8	8	9	9	64	-30%
Gemdale - A	600383 CH	7	8	8	8	8	8	8	8	63	-30%
Logan	3380 HK	9	8	7	8	6	7	9	8	62	-30%
Country Garden	2007 HK	6	7	6	6	10	7	10	9	61	-35%
R&F	2777 HK	9	7	7	8	7	6	8	7	59	-35%
Sino-Ocean	3377 HK	7	8	8	8	7	8	7	6	59	-35%
China Jinmao	817 HK	8	8	8	8	7	5	7	7	58	-40%
Sunac	1918 HK	5	5	8	8	10	4	9	9	58	-40%
KWG	1813 HK	9	7	7	8	6	7	7	6	57	-40%
Shimao	813 HK	8	7	7	7	7	7	7	7	57	-40%
Evergrande	3333 HK	5	5	6	7	10	4	10	9	56	-40%
Joy City	0207 HK	9	9	7	7	3	8	6	6	55	-40%
Future Land	1030 HK	5	7	7	6	7	6	8	8	54	-45%
Greentown	3900 HK	6	8	9	6	7	6	7	5	54	-45%
China SCE	1966 HK	7	6	8	7	5	6	8	7	54	-45%
Agile	3383 HK	6	7	8	6	6	7	7	5	52	-50%
Aoyuan	3883 HK	7	6	6	6	5	7	7	8	52	-50%

Source: Deutsche Bank

Figure 23: Summary of valuations and ratings

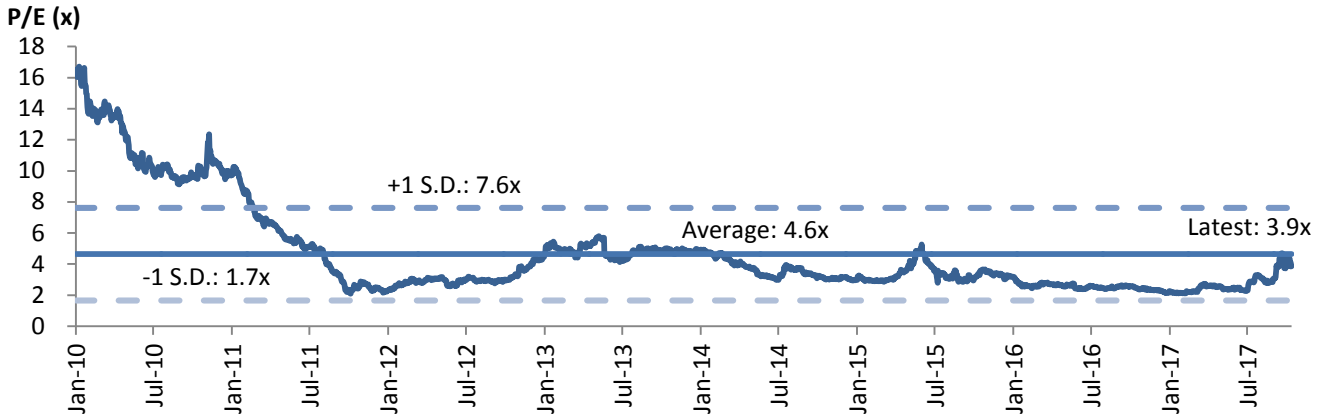
Company	Ticker	Mkt Cap (USD mn)	25 Oct			Rating	P/E			PB		NAV	NAV discount	Net gearing		Dividend yield	
			Latest Price	Target Price	Up/down-side		FY17F	FY18F	FY19F	FY16	FY17F			FY16	FY17F	FY18F	
Agile	3383 HK	6,106	12.08	9.40	-22%	Hold	9.1	8.0	7.1	1.1	1.1	18.80	-36%	71%	4.4%	5.0%	
Aoyuan	3883 HK	1,482	4.29	6.74	57%	Buy	5.4	3.4	2.4	1.1	1.0	13.48	-68%	59%	6.4%	10.1%	
China Jinmao	817 HK	5,234	3.80	3.81	0%	Buy	9.4	7.8	6.5	1.2	1.1	6.35	-40%	74%	6.5%	5.1%	
China SCE	1966 HK	1,806	3.66	4.41	20%	Buy	6.1	4.2	3.6	1.3	1.1	8.02	-54%	95%	4.9%	7.1%	
CIFI	884 HK	4,278	4.39	4.82	10%	Buy	7.1	5.8	4.5	1.7	1.4	6.89	-36%	50%	4.7%	6.0%	
COLI	688 HK	36,968	26.15	30.63	17%	Buy	7.9	7.0	6.3	1.3	1.1	34.03	-23%	7%	3.4%	3.9%	
Country Garden	2007 HK	36,267	13.20	15.10	14%	Buy	13.3	8.5	5.6	3.5	2.9	23.23	-43%	49%	2.6%	3.5%	
CR Land	1109 HK	21,687	24.25	27.11	12%	Buy	9.0	7.7	6.6	1.4	1.3	33.89	-28%	24%	3.3%	3.9%	
Evergrande	3333 HK	53,218	31.40	26.55	-15%	Hold	11.1	9.6	8.3	8.3	4.9	40.23	-22%	432%	0.0%	3.6%	
Future Land	1030 HK	2,745	3.76	5.17	38%	Buy	7.2	5.3	4.3	2.0	1.6	9.41	-60%	89%	3.5%	4.7%	
Gemdale	600383 CH	8,152	12.01	10.06	-16%	Sell	9.4	8.6	8.0	1.4	1.4	14.37	-16%	28%	6.4%	7.0%	
Greentown	3900 HK	2,828	10.12	9.13	-10%	Hold	8.7	7.9	7.1	0.8	0.7	16.61	-39%	84%	1.5%	1.6%	
GZ R&F	2777 HK	7,576	18.22	19.69	8%	Buy	6.3	5.1	4.1	1.2	1.0	30.29	-40%	174%	7.1%	8.8%	
Joy City	207 HK	2,608	1.42	1.41	-1%	Hold	18.0	14.3	10.8	0.7	0.7	2.35	-40%	36%	2.8%	3.5%	
KWG	1813 HK	3,371	8.28	10.56	28%	Buy	6.3	4.8	3.5	0.9	0.8	17.60	-53%	67%	5.4%	7.3%	
Logan	3380 HK	5,718	8.06	9.66	20%	Buy	8.4	6.6	5.0	2.0	1.6	13.80	-42%	71%	4.7%	5.3%	
Longfor	960 HK	14,913	19.60	23.17	18%	Buy	10.3	8.4	6.7	1.6	1.4	30.90	-37%	54%	3.4%	4.2%	
SH Shimao	600823 CH	3,029	5.37	4.55	-15%	Sell	12.0	10.0	9.2	0.7	0.9	7.00	-23%	23%	1.2%	1.4%	
Shimao	813 HK	7,779	17.80	16.63	-7%	Buy	7.2	6.0	5.0	1.0	0.9	27.71	-36%	59%	4.6%	5.5%	
Sino-Ocean	3377 HK	5,305	5.44	5.27	-3%	Buy	9.2	7.3	5.9	0.8	0.7	8.11	-33%	44%	6.0%	7.2%	
Sunac	1918 HK	22,286	41.70	46.00	10%	Buy	20.1	10.4	5.7	5.9	4.7	70.78	-41%	208%	1.9%	3.8%	
Vanke - A	000002 CH	45,252	27.43	25.51	-7%	Hold	11.1	8.6	7.0	2.7	2.3	28.35	-3%	26%	3.6%	4.7%	
Vanke - H	2202 HK	45,252	28.30	33.74	19%	Buy	9.8	7.5	5.8	2.4	2.1	37.49	-25%	26%	4.1%	5.3%	
Median							9.1	7.7	5.9	1.3	1.1		-37%	59%	4.1%	5.0%	

Source: Bloomberg Finance LP, Deutsche Bank estimates



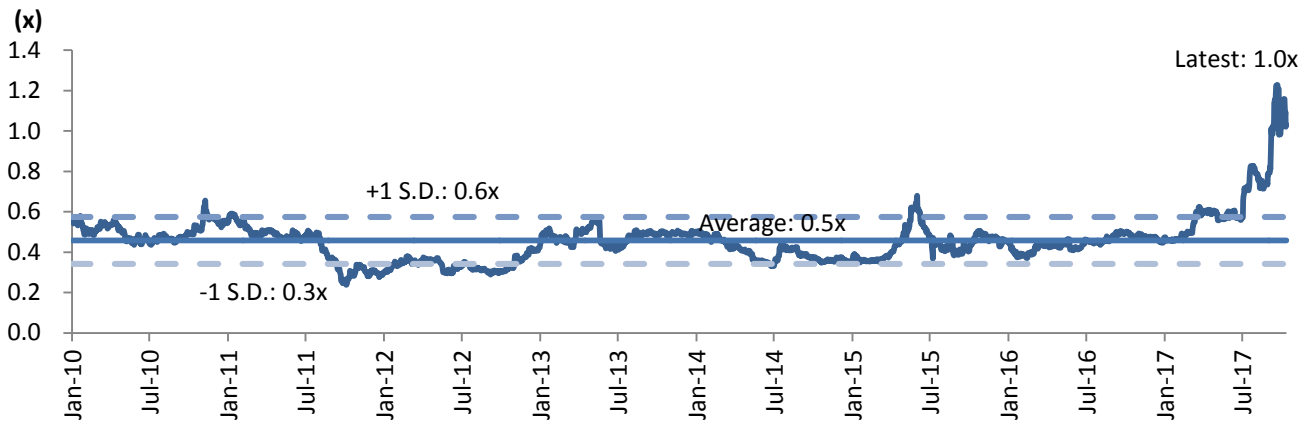
Historical valuation charts

Figure 24: 12-month forward P/E chart



Source: Bloomberg Finance LP, Deutsche Bank

Figure 25: Price-to-book value chart



Source: Bloomberg Finance LP, Deutsche Bank



Financial statements and forecasts

Figure 26: Aoyuan – Income statement (RMB mn)

Income Statement	2015A	2016A	2017E	2018E	2019E
Revenue	9,572	11,827	18,889	27,179	38,341
Cost of sales	(6,926)	(8,550)	(13,594)	(19,223)	(26,853)
Gross profit	2,646	3,277	5,295	7,956	11,487
SG&A	(890)	(1,082)	(1,473)	(1,794)	(2,377)
Other operating income/expenses	(236)	(285)	-	-	-
Operating profit (EBIT)	1,520	1,911	3,822	6,162	9,110
Interest expenses	(91)	(157)	(256)	(291)	(317)
Interest income	72	54	88	103	123
Share of results of associates and JCE	28	(32)	39	(4)	16
Pre-tax exceptional items	356	310	181	182	155
Profit before tax	1,884	2,085	3,874	6,153	9,088
Income tax	(977)	(1,078)	(1,767)	(2,681)	(4,007)
Profit before minority interests	907	1,007	2,107	3,472	5,080
Minority interests	95	126	164	479	916
Reported net profit	812	881	1,943	2,993	4,164
Core net profit	951	1,238	1,808	2,857	4,048

Source: Company data, Deutsche Bank estimates



Figure 27: Aoyuan – Balance sheet (RMB mn)

Balance Sheet	2015A	2016A	2017E	2018E	2019E
Investment properties	4,505	5,425	6,162	6,321	6,732
Properties under development + Land (L/T)	15	15	15	15	15
Interests in associates and JCEs	217	164	189	185	201
Property, plant and equipment	494	506	506	506	506
Other non-current assets	398	480	1,326	1,326	1,326
Non-current assets	5,629	6,589	8,197	8,353	8,780
Completed properties held for sale	6,951	8,193	8,067	8,096	7,961
Properties under development + Land (S/T)	24,842	35,294	59,075	63,293	58,101
Trade and other receivables (S/T)	1,753	3,604	5,407	8,110	8,110
Other current assets	617	1,782	2,037	2,368	2,368
Pledged bank deposits + Restricted cash + Time deposits	1,267	486	486	486	486
Cash and cash equivalents	7,769	10,471	14,268	32,854	50,279
Current assets	43,198	59,830	89,338	115,206	127,305
Total assets	48,827	66,418	97,535	123,559	136,085
Pre-sale deposits	9,823	20,524	35,775	58,529	68,720
Accruals, trade and other payables	5,348	6,795	6,795	6,795	6,795
Other current liabilities	5,028	4,318	4,318	4,318	4,318
Bank and other borrowings (S/T)	2,570	4,506	6,759	6,759	6,759
Current liabilities	22,770	36,143	53,647	76,401	86,592
Bank and other borrowings (L/T)	13,727	15,062	22,593	22,593	22,593
Deferred tax liabilities	454	583	583	583	583
Other non-current liabilities	300	-	-	-	-
Non-current liabilities	14,481	15,645	23,176	23,176	23,176
Total liabilities	37,251	51,787	76,822	99,577	109,768
Issued capital + share premium and reserves	4,370	4,210	4,210	4,210	4,210
Retained earnings	3,873	4,708	6,019	8,012	10,760
Attributable equities	8,243	8,918	10,229	12,222	14,970
Minority interests	3,333	5,713	10,484	11,760	11,348
Total equities	11,576	14,631	20,713	23,982	26,317
Total liabilities and equities	48,827	66,418	97,535	123,559	136,085

Source: Company data, Deutsche Bank estimates



Figure 28: Aoyuan – Cash flow statement

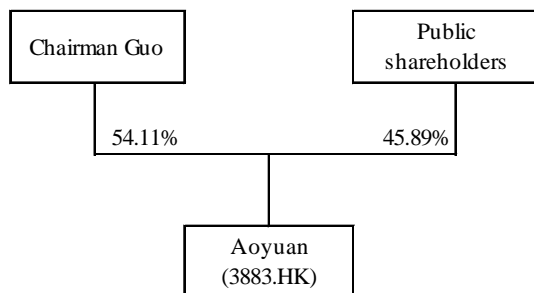
Cash Flow Statement	2015A	2016A	2017E	2018E	2019E
Operating cash flows before working capital	1,827	2,268	4,084	6,382	9,323
Pre-sale deposits	1,478	10,012	15,251	22,754	10,191
Properties under development + Land (ST/LT)	(4,908)	(1,823)	(23,781)	(4,218)	5,191
Completed properties held for sale	-	-	127	(29)	135
Inventories	-	(26)	-	-	-
Receivables and prepayments	54	(1,705)	(2,648)	(2,703)	-
Payables and accruals	207	(365)	-	-	-
Others	-	-	-	-	-
Cash generated from operations	(1,342)	8,360	(6,968)	22,186	24,840
Interest received	80	54	88	103	123
Interest paid	(1,201)	(1,535)	(256)	(291)	(317)
Investment income	-	-	-	-	-
Tax paid	(480)	(880)	(1,767)	(2,681)	(4,007)
Net operating cash flow	(2,944)	5,999	(8,903)	19,318	20,639
Disposal (purchase) of subsidiaries	1,253	(1,451)	-	-	-
Disposal (purchase) of associates and JCEs	-	-	(25)	4	(16)
Disposal (purchase) of property, plant and equipment	(19)	(43)	(42)	(42)	(42)
Disposal (purchase) of investment properties	(849)	(650)	(738)	(159)	(411)
Other investing cash flows	(199)	(102)	(255)	(331)	-
Net investing cash flow	187	(2,246)	(1,059)	(528)	(469)
Debt financing	4,849	1,442	9,784	-	-
Perpetual financing	-	-	-	-	-
Equity financing	-	(156)	-	-	-
Cash advances (repayments) of loans due to related parties	939	(1,784)	-	-	-
Minority shareholders of subsidiaries	117	(327)	4,607	797	(1,329)
Dividends paid and distribution of paid-in capital	(292)	(245)	(633)	(1,000)	(1,417)
Other financing cash flows	-	-	-	-	-
Net financing cash flow	5,613	(1,070)	13,759	(203)	(2,745)
Other cash flows	61	18	-	-	-
Increase in cash and cash equivalents	2,917	2,702	3,797	18,587	17,425
Cash brought forward	4,852	7,769	10,471	14,268	32,854
Cash carried forward	7,769	10,471	14,268	32,854	50,279

Source: Company data, Deutsche Bank estimates



Shareholding structure and management profile

Figure 29: Shareholding structure of Aoyuan



Source: Company data, Deutsche Bank

Guo Zi Wen (aged 53) is the founder, chairman and an executive director of Aoyuan. He holds a Master degree in Business Administration. Mr. Guo is mainly responsible for the formulation of development strategies, as well as giving guidance for the Group's project planning, financing and investment.

Guo Zi Ning (aged 56) is an executive director, a vice chairman and CEO. He holds a Doctor degree in Business Administration. He participated in the preparation of the Group in 1996, now primarily responsible for commercial property investment, development and operation, and leads the overall administration management. He is the brother of Mr. Guo Zi Wen.

Zhong Ping (aged 49) is an executive director and CFO. Ms. Zhong obtained a Master degree of Accountancy from Jinan University and is a certified tax advisor and certified accountant. She joined the Group in August 2003 and is mainly responsible for the financial management, management of listing performance, internal audit and risk control of the Group.

Ma Jun (aged 41) is an executive director and COO. Mr. Ma holds a bachelor degree in Environmental Engineering awarded by Tianjin University in the PRC. He is mainly responsible for the management of real estate development of the Group. Mr. Ma possesses more than 15 years of experience in the real estate industry.

Chan Ka Yeung Jacky (aged 38) is a vice president of the Group, the president of Australia Company and the head of corporate finance and investor relations. He graduated from the University of Illinois at Urbana-Champaign with Bachelor's degree in Economics. He joined the Group in October 2013 and is now mainly responsible for the operation and management of Hong Kong and Australia office, development of overseas projects, corporate finance, investor relations, as well as other capital markets related affairs of the Group.

Zhang Jun (aged 41) is a vice president of the Group. He graduated from Zhongnan University of Economics and Law, majoring in Marketing and studied in Wuhan University with a minor in Industrial and Civil Architecture. He joined the Group in February 2015 and is currently responsible for the management of the commercial development of the Group.



Appendix 1

Important Disclosures

*Other information available upon request

Disclosure checklist

Company	Ticker	Recent price*	Disclosure
Aoyuan	3883.HK	4.30 (HKD) 26 Oct 17	1,7,14

Prices are current as of the end of the previous trading session unless otherwise indicated and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Other information is sourced from Deutsche Bank, subject companies, and other sources. For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at <http://gm.db.com/ger/disclosure/DisclosureDirectory.eqsr>. Aside from within this report, important conflict disclosures can also be found at <https://gm.db.com/equities> under the "Disclosures Lookup" and "Legal" tabs. Investors are strongly encouraged to review this information before investing.

Important Disclosures Required by U.S. Regulators

Disclosures marked with an asterisk may also be required by at least one jurisdiction in addition to the United States. See Important Disclosures Required by Non-US Regulators and Explanatory Notes.

1. Within the past year, Deutsche Bank and/or its affiliate(s) has managed or co-managed a public or private offering for this company, for which it received fees.
7. Deutsche Bank and/or its affiliate(s) has received compensation from this company for the provision of investment banking or financial advisory services within the past year.
14. Deutsche Bank and/or its affiliate(s) has received non-investment banking related compensation from this company within the past year.

Important Disclosures Required by Non-U.S. Regulators

Please also refer to disclosures in the Important Disclosures Required by US Regulators and the Explanatory Notes.

1. Within the past year, Deutsche Bank and/or its affiliate(s) has managed or co-managed a public or private offering for this company, for which it received fees.
7. Deutsche Bank and/or its affiliate(s) has received compensation from this company for the provision of investment banking or financial advisory services within the past year.

For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at <http://gm.db.com/ger/disclosure/Disclosure.eqsr?ricCode=3883.HK>

Analyst Certification

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst(s) about the subject issuer and the securities of the issuer. In addition, the undersigned lead analyst(s) has not and will not receive any compensation for providing a specific recommendation or view in this report. Jeffrey Gao/Jason Ching/Stephen Cheung/Foo Leung



Historical recommendations and target price: Aoyuan (3883.HK)
 (as of 10/26/2017)



Previous Recommendations

- Strong Buy
- Buy
- Market Perform
- Underperform
- Not Rated
- Suspended Rating

Current Recommendations

- Buy
- Hold
- Sell
- Not Rated
- Suspended Rating

*New Recommendation Structure as of September 9,2002

**Analyst is no longer at Deutsche Bank

Equity rating key

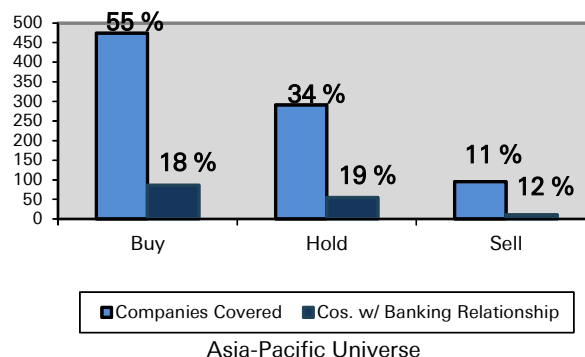
Buy: Based on a current 12- month view of total share-holder return (TSR = percentage change in share price from current price to projected target price plus pro-jected dividend yield) , we recommend that investors buy the stock.

Sell: Based on a current 12-month view of total share-holder return, we recommend that investors sell the stock

Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.

Newly issued research recommendations and target prices supersede previously published research.

Equity rating dispersion and banking relationships





Additional Information

The information and opinions in this report were prepared by Deutsche Bank AG or one of its affiliates (collectively "Deutsche Bank"). Though the information herein is believed to be reliable and has been obtained from public sources believed to be reliable, Deutsche Bank makes no representation as to its accuracy or completeness. Hyperlinks to third-party websites in this report are provided for reader convenience only. Deutsche Bank neither endorses the content nor is responsible for the accuracy or security controls of these websites.

If you use the services of Deutsche Bank in connection with a purchase or sale of a security that is discussed in this report, or is included or discussed in another communication (oral or written) from a Deutsche Bank analyst, Deutsche Bank may act as principal for its own account or as agent for another person.

Deutsche Bank may consider this report in deciding to trade as principal. It may also engage in transactions, for its own account or with customers, in a manner inconsistent with the views taken in this research report. Others within Deutsche Bank, including strategists, sales staff and other analysts, may take views that are inconsistent with those taken in this research report. Deutsche Bank issues a variety of research products, including fundamental analysis, equity-linked analysis, quantitative analysis and trade ideas. Recommendations contained in one type of communication may differ from recommendations contained in others, whether as a result of differing time horizons, methodologies or otherwise. Deutsche Bank and/or its affiliates may also be holding debt or equity securities of the issuers it writes on. Analysts are paid in part based on the profitability of Deutsche Bank AG and its affiliates, which includes investment banking, trading and principal trading revenues.

Opinions, estimates and projections constitute the current judgment of the author as of the date of this report. They do not necessarily reflect the opinions of Deutsche Bank and are subject to change without notice. Deutsche Bank provides liquidity for buyers and sellers of securities issued by the companies it covers. Deutsche Bank research analysts sometimes have shorter-term trade ideas that are consistent or inconsistent with Deutsche Bank's existing longer term ratings. Trade ideas for equities can be found at the SOLAR link at <http://gm.db.com>. A SOLAR idea represents a high conviction belief by an analyst that a stock will outperform or underperform the market and/or sector delineated over a time frame of no less than two weeks. In addition to SOLAR ideas, the analysts named in this report may from time to time discuss with our clients, Deutsche Bank salespersons and Deutsche Bank traders, trading strategies or ideas that reference catalysts or events that may have a near-term or medium-term impact on the market price of the securities discussed in this report, which impact may be directionally counter to the analysts' current 12-month view of total return or investment return as described herein. Deutsche Bank has no obligation to update, modify or amend this report or to otherwise notify a recipient thereof if any opinion, forecast or estimate contained herein changes or subsequently becomes inaccurate. Coverage and the frequency of changes in market conditions and in both general and company specific economic prospects make it difficult to update research at defined intervals. Updates are at the sole discretion of the coverage analyst concerned or of the Research Department Management and as such the majority of reports are published at irregular intervals. This report is provided for informational purposes only and does not take into account the particular investment objectives, financial situations, or needs of individual clients. It is not an offer or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy. Target prices are inherently imprecise and a product of the analyst's judgment. The financial instruments discussed in this report may not be suitable for all investors and investors must make their own informed investment decisions. Prices and availability of financial instruments are subject to change without notice and investment transactions can lead to losses as a result of price fluctuations and other factors. If a financial instrument is denominated in a currency other than an investor's currency, a change in exchange rates may adversely affect the investment. Past performance is not necessarily indicative of future results. Unless otherwise indicated, prices are current as of the end of the previous trading session, and are sourced from local exchanges via Reuters, Bloomberg and other vendors. Data is sourced from Deutsche Bank, subject companies, and in some cases, other parties.

The Deutsche Bank Research Department is independent of other business areas divisions of the Bank. Details regarding our organizational arrangements and information barriers we have to prevent and avoid conflicts of interest with respect to our research is available on our website under Disclaimer found on the Legal tab.



Macroeconomic fluctuations often account for most of the risks associated with exposures to instruments that promise to pay fixed or variable interest rates. For an investor who is long fixed rate instruments (thus receiving these cash flows), increases in interest rates naturally lift the discount factors applied to the expected cash flows and thus cause a loss. The longer the maturity of a certain cash flow and the higher the move in the discount factor, the higher will be the loss. Upside surprises in inflation, fiscal funding needs, and FX depreciation rates are among the most common adverse macroeconomic shocks to receivers. But counterparty exposure, issuer creditworthiness, client segmentation, regulation (including changes in assets holding limits for different types of investors), changes in tax policies, currency convertibility (which may constrain currency conversion, repatriation of profits and/or the liquidation of positions), and settlement issues related to local clearing houses are also important risk factors to be considered. The sensitivity of fixed income instruments to macroeconomic shocks may be mitigated by indexing the contracted cash flows to inflation, to FX depreciation, or to specified interest rates – these are common in emerging markets. It is important to note that the index fixings may -- by construction -- lag or mis-measure the actual move in the underlying variables they are intended to track. The choice of the proper fixing (or metric) is particularly important in swaps markets, where floating coupon rates (i.e., coupons indexed to a typically short-dated interest rate reference index) are exchanged for fixed coupons. It is also important to acknowledge that funding in a currency that differs from the currency in which coupons are denominated carries FX risk. Naturally, options on swaps (swaptions) also bear the risks typical to options in addition to the risks related to rates movements.

Derivative transactions involve numerous risks including, among others, market, counterparty default and illiquidity risk. The appropriateness or otherwise of these products for use by investors is dependent on the investors' own circumstances including their tax position, their regulatory environment and the nature of their other assets and liabilities, and as such, investors should take expert legal and financial advice before entering into any transaction similar to or inspired by the contents of this publication. The risk of loss in futures trading and options, foreign or domestic, can be substantial. As a result of the high degree of leverage obtainable in futures and options trading, losses may be incurred that are greater than the amount of funds initially deposited. Trading in options involves risk and is not suitable for all investors. Prior to buying or selling an option investors must review the "Characteristics and Risks of Standardized Options", at <http://www.optionsclearing.com/about/publications/character-risks.jsp>. If you are unable to access the website please contact your Deutsche Bank representative for a copy of this important document.

Participants in foreign exchange transactions may incur risks arising from several factors, including the following: (i) exchange rates can be volatile and are subject to large fluctuations; (ii) the value of currencies may be affected by numerous market factors, including world and national economic, political and regulatory events, events in equity and debt markets and changes in interest rates; and (iii) currencies may be subject to devaluation or government imposed exchange controls which could affect the value of the currency. Investors in securities such as ADRs, whose values are affected by the currency of an underlying security, effectively assume currency risk.

Unless governing law provides otherwise, all transactions should be executed through the Deutsche Bank entity in the investor's home jurisdiction. Aside from within this report, important conflict disclosures can also be found at <https://gm.db.com/equities> under the "Disclosures Lookup" and "Legal" tabs. Investors are strongly encouraged to review this information before investing.

Deutsche Bank (which includes Deutsche Bank AG, its branches and all affiliated companies) is not acting as a financial adviser, consultant or fiduciary to you, any of your agents (collectively, "You" or "Your") with respect to any information provided in the materials attached hereto. Deutsche Bank does not provide investment, legal, tax or accounting advice, Deutsche Bank is not acting as Your impartial adviser, and does not express any opinion or recommendation whatsoever as to any strategies, products or any other information presented in the materials. Information contained herein is being provided solely on the basis that the recipient will make an independent assessment of the merits of any investment decision, and it does not constitute a recommendation of, or express an opinion on, any product or service or any trading strategy.

The information presented is general in nature and is not directed to retirement accounts or any specific person or account type, and is therefore provided to You on the express basis that it is not advice, and You may not rely upon it in making Your decision. The information we provide is being directed only to persons we believe to be financially sophisticated, who are capable of evaluating investment risks independently, both in general and with regard to particular transactions and investment strategies, and who understand that Deutsche Bank has financial interests in the



offering of its products and services. If this is not the case, or if You are an IRA or other retail investor receiving this directly from us, we ask that you inform us immediately.

United States: Approved and/or distributed by Deutsche Bank Securities Incorporated, a member of FINRA, NFA and SIPC. Analysts located outside of the United States are employed by non-US affiliates that are not subject to FINRA regulations.

Germany: Approved and/or distributed by Deutsche Bank AG, a joint stock corporation with limited liability incorporated in the Federal Republic of Germany with its principal office in Frankfurt am Main. Deutsche Bank AG is authorized under German Banking Law and is subject to supervision by the European Central Bank and by BaFin, Germany's Federal Financial Supervisory Authority.

United Kingdom: Approved and/or distributed by Deutsche Bank AG acting through its London Branch at Winchester House, 1 Great Winchester Street, London EC2N 2DB. Deutsche Bank AG in the United Kingdom is authorised by the Prudential Regulation Authority and is subject to limited regulation by the Prudential Regulation Authority and Financial Conduct Authority. Details about the extent of our authorisation and regulation are available on request.

Hong Kong: Distributed by Deutsche Bank AG, Hong Kong Branch or Deutsche Securities Asia Limited.

India: Prepared by Deutsche Equities India Pvt Ltd, which is registered by the Securities and Exchange Board of India (SEBI) as a stock broker. Research Analyst SEBI Registration Number is INH000001741. DEIPL may have received administrative warnings from the SEBI for breaches of Indian regulations.

Japan: Approved and/or distributed by Deutsche Securities Inc.(DSI). Registration number - Registered as a financial instruments dealer by the Head of the Kanto Local Finance Bureau (Kinsho) No. 117. Member of associations: JSDA, Type II Financial Instruments Firms Association and The Financial Futures Association of Japan. Commissions and risks involved in stock transactions - for stock transactions, we charge stock commissions and consumption tax by multiplying the transaction amount by the commission rate agreed with each customer. Stock transactions can lead to losses as a result of share price fluctuations and other factors. Transactions in foreign stocks can lead to additional losses stemming from foreign exchange fluctuations. We may also charge commissions and fees for certain categories of investment advice, products and services. Recommended investment strategies, products and services carry the risk of losses to principal and other losses as a result of changes in market and/or economic trends, and/or fluctuations in market value. Before deciding on the purchase of financial products and/or services, customers should carefully read the relevant disclosures, prospectuses and other documentation. "Moody's", "Standard & Poor's", and "Fitch" mentioned in this report are not registered credit rating agencies in Japan unless Japan or "Nippon" is specifically designated in the name of the entity. Reports on Japanese listed companies not written by analysts of DSI are written by Deutsche Bank Group's analysts with the coverage companies specified by DSI. Some of the foreign securities stated on this report are not disclosed according to the Financial Instruments and Exchange Law of Japan. Target prices set by Deutsche Bank's equity analysts are based on a 12-month forecast period.

Korea: Distributed by Deutsche Securities Korea Co.

South Africa: Deutsche Bank AG Johannesburg is incorporated in the Federal Republic of Germany (Branch Register Number in South Africa: 1998/003298/10).

Singapore: by Deutsche Bank AG, Singapore Branch or Deutsche Securities Asia Limited, Singapore Branch (One Raffles Quay #18-00 South Tower Singapore 048583, +65 6423 8001), which may be contacted in respect of any matters arising from, or in connection with, this report. Where this report is issued or promulgated in Singapore to a person who is not an accredited investor, expert investor or institutional investor (as defined in the applicable Singapore laws and regulations), they accept legal responsibility to such person for its contents.

Taiwan: Information on securities/investments that trade in Taiwan is for your reference only. Readers should independently evaluate investment risks and are solely responsible for their investment decisions. Deutsche Bank research may not be distributed to the Taiwan public media or quoted or used by the Taiwan public media without written consent. Information on securities/instruments that do not trade in Taiwan is for informational purposes only and



is not to be construed as a recommendation to trade in such securities/instruments. Deutsche Securities Asia Limited, Taipei Branch may not execute transactions for clients in these securities/instruments.

Qatar: Deutsche Bank AG in the Qatar Financial Centre (registered no. 00032) is regulated by the Qatar Financial Centre Regulatory Authority. Deutsche Bank AG - QFC Branch may only undertake the financial services activities that fall within the scope of its existing QFCRA license. Principal place of business in the QFC: Qatar Financial Centre, Tower, West Bay, Level 5, PO Box 14928, Doha, Qatar. This information has been distributed by Deutsche Bank AG. Related financial products or services are only available to Business Customers, as defined by the Qatar Financial Centre Regulatory Authority.

Russia: This information, interpretation and opinions submitted herein are not in the context of, and do not constitute, any appraisal or evaluation activity requiring a license in the Russian Federation.

Kingdom of Saudi Arabia: Deutsche Securities Saudi Arabia LLC Company, (registered no. 07073-37) is regulated by the Capital Market Authority. Deutsche Securities Saudi Arabia may only undertake the financial services activities that fall within the scope of its existing CMA license. Principal place of business in Saudi Arabia: King Fahad Road, Al Olaya District, P.O. Box 301809, Faisaliah Tower - 17th Floor, 11372 Riyadh, Saudi Arabia.

United Arab Emirates: Deutsche Bank AG in the Dubai International Financial Centre (registered no. 00045) is regulated by the Dubai Financial Services Authority. Deutsche Bank AG - DIFC Branch may only undertake the financial services activities that fall within the scope of its existing DFSA license. Principal place of business in the DIFC: Dubai International Financial Centre, The Gate Village, Building 5, PO Box 504902, Dubai, U.A.E. This information has been distributed by Deutsche Bank AG. Related financial products or services are only available to Professional Clients, as defined by the Dubai Financial Services Authority.

Australia: Retail clients should obtain a copy of a Product Disclosure Statement (PDS) relating to any financial product referred to in this report and consider the PDS before making any decision about whether to acquire the product. Please refer to Australian specific research disclosures and related information at <https://australia.db.com/australia/content/research-information.html>

Australia and New Zealand: This research is intended only for "wholesale clients" within the meaning of the Australian Corporations Act and New Zealand Financial Advisors Act respectively.

Additional information relative to securities, other financial products or issuers discussed in this report is available upon request. This report may not be reproduced, distributed or published without Deutsche Bank's prior written consent. Copyright © 2017 Deutsche Bank AG



David Folkerts-Landau

Group Chief Economist and Global Head of Research

Raj Hindocha
Global Chief Operating Officer
Research

Michael Spencer
Head of APAC Research
Global Head of Economics

Steve Pollard
Head of Americas Research
Global Head of Equity Research

Anthony Klarman
Global Head of
Debt Research

Paul Reynolds
Head of EMEA
Equity Research

Dave Clark
Head of APAC
Equity Research

Pam Finelli
Global Head of
Equity Derivatives Research

Andreas Neubauer
Head of Research - Germany

Spyros Mesomeris
Global Head of Quantitative
and QIS Research

International locations

Deutsche Bank AG

Deutsche Bank Place
Level 16
Corner of Hunter & Phillip Streets
Sydney, NSW 2000
Australia
Tel: (61) 2 8258 1234

Deutsche Bank AG

Mainzer Landstrasse 11-17
60329 Frankfurt am Main
Germany
Tel: (49) 69 910 00

Deutsche Bank AG

Filiale Hongkong
International Commerce Centre,
1 Austin Road West, Kowloon,
Hong Kong
Tel: (852) 2203 8888

Deutsche Securities Inc.

2-11-1 Nagatacho
Sanno Park Tower
Chiyoda-ku, Tokyo 100-6171
Japan
Tel: (81) 3 5156 6770

Deutsche Bank AG London

1 Great Winchester Street
London EC2N 2EQ
United Kingdom
Tel: (44) 20 7545 8000

Deutsche Bank Securities Inc.

60 Wall Street
New York, NY 10005
United States of America
Tel: (1) 212 250 2500
