



Asia
China

HY Corporate Credit
Real Estate

Company
**China Aoyuan
Property Group Ltd**

Date
12 August 2015

Karen Kwan
Research Analyst
(+852) 2203 5930
karen.kwan@db.com

Good yield pick-up against peers

Initiate on CAPG'18 and CAPG'19C17 with CreditBuy

We initiate on CAPG'18 and CAPG'19C17 with CreditBuy given attractive yield pick-up against peers in the B-space and on CAPG'17C with CreditHold given higher dollar price. Versus small-/mid-cap Guangdong-based developers Times and Logan, Aoyuan's credit metrics look weaker but we believe that is more than priced in. Furthermore, Aoyuan also enjoys an improvement in debt maturity profile extension and it is lowering its costs of borrowing. CAPG'19C17 offers a mid-YTM of 10.98%, offering a yield spread of ~114bp pick-up against TPHL'19C17, ~120bp pick-up against LOGPH'19C17, and ~219bp pick-up against YUZHOU'19C17. We see good relative value from CAPG despite the CAPG curve has rebounded from their lows in early July due to A-share market dip and Greece uncertainties. Downside risks to our call include: weaker-than-expected Guangdong property market, much more aggressive land acquisitions than expected, sharp decline in margins and severe RMB depreciation. Upside risks include better improvement in credit metrics, higher margins and better contract sales.

Track record is good in Guangdong but mixed outside of its homebase

Aoyuan's home base is Guangdong and its execution in its homebase is good, with a solid understanding of local buyers' preference and an established brand name. Last year, 50% of its contract sales stemmed from Guangzhou and 17% from Guangdong ex-Guangzhou. However, outside of Guangdong, its execution is quite mixed – for instance, margins and asset churn in Shenyang, Zhuzhou and Guangxi need improvement, in our view. In 7M15, Aoyuan achieved RMB7.09bn of contract sales, up 18% YoY and locking in 51-53% of its guided range of 2015 contract sales of RMB13.5-14.0bn. We estimated a 40%:60% split between 1H:2H for saleable resources. Press news showed its Sydney project which we view as well-located would officially launch soon.

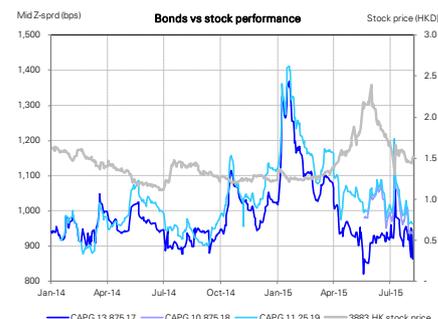
Increased access to diversified funding

Over the past 12 months, we have seen an improvement in Aoyuan's access to diversified funding, including a sale of a Panyu project stake to Huaxin Insurance, obtaining an AUD loan from Commonwealth Bank of Australia at <5% for its 130 Elizabeth Street project in Sydney with project partner Ecove, and executing RMB2.4bn on-shore 3-year corporate bond at 5.8%. The company lowered its average cost of financing from 2014's 10.2% to 9.9% in 1H15. We expect further lowering of costs with less high-cost trust loans.

What Aoyuan needs to achieve

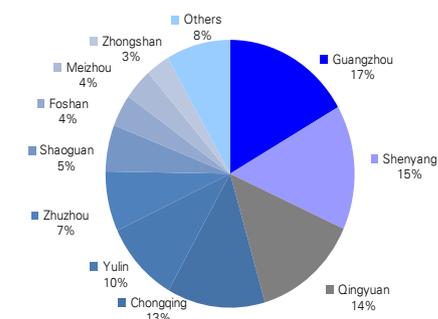
We see stable rating from rating agencies on Aoyuan. We believe Aoyuan's current bond ratings are constrained by its geographical concentration as well as its debt-funded expansion. In 1H15, Aoyuan entered into Anhui Province and added some new cities such as Jiaying. And this highlights its plan to establish core competency in more regions. Cultural and tourism property expansion might bring some operational challenges, but the investment there seems limited in size and not a cause of concern to us.

Bond vs stock performance



Source: Bloomberg Finance, Deutsche Bank

Land bank breakdown by city in GFA



Source: Company, Deutsche Bank, data as of 31 December 2014

Outstanding Issues

Issue	Issue Ratings	Maturity	Coupon (%)	O/s Amount (USDm)	Mid Price	Mid YTM (%)	Mid YTW (%)	DB Recom.
CAPG'17C15	B3/B-/B+	23-Nov-17	13.875	225	107.27	10.19	10.19	CreditHold
CAPG'18	B3/B-/B+	26-May-18	10.875	250	100.70	10.57	10.57	CreditBuy
CAPG'19C17	B3/B-/B+	17-Jan-19	11.25	300	100.74	10.98	10.98	CreditBuy

Source: Bloomberg Finance LP, Deutsche Bank



Good yield pick-up

Initiate on CAPG'18 and CAPG'19C17 with CreditBuy

We initiate on CAPG'18 and CAPG'19C17 with CreditBuy given attractive yield pick-up against peers in the B-space and on CAPG'17C with CreditHold given higher dollar price. Versus small-/mid-cap Guangdong-based developers Times and Logan, Aoyuan's credit metrics look weaker but we believe that is more than priced in.

Furthermore, Aoyuan also enjoys an improvement in debt maturity profile extension and it is lowering its costs of borrowing. CAPG'19C17 offers a mid-YTM of 10.98%, offering a yield spread of ~114bp pick-up against TPHL'19C17, ~120bp pick-up against LOGPH'19C17, and ~219bp pick-up against YUZHOU'19C17. We see good relative value from CAPG despite the CAPG curve has rebounded from their lows in early July due to A-share market dip and Greece uncertainties. Downside risks to our call include: weaker-than-expected Guangdong property market, much more aggressive land acquisitions than expected, sharp decline in margins and severe RMB depreciation. Upside risks include better improvement in credit metrics, higher margins and better contract sales.

Quick snapshot of interim 2015 results

Aoyuan announced good 1H15 results after-market on 11 Aug; having said that, the positive profit alert last week also provided some hints to this, partly thanks to increased booking of property sales. Furthermore, Aoyuan's GPM in 1H15 was satisfactory at 29.4%, which was above the 26-28% full year 2015 GPM guided by management previously. We attribute this to the majority of projects booked from Guangzhou. Around RMB25.5bn of total saleable resources is planned for 2015 and we believe its full year contract sales targeted range of RMB13.5-14.0bn looks achievable. The company previously guided for RMB4-5bn of land acquisitions for FY2015 and there was around RMB2bn of acquisitions in 1H. As of June, Aoyuan's outstanding land premium was about RMB1.3bn.

The developer's revenue for 1H15 was up 48% YoY, partly thanks to a 14% increase in GFA booked to 342k sq m and a 31% YoY rise in ASP booked of RMB11,217/sq m. The high ASP booked in 1H15 stemmed from a high contribution of 75% of property development revenue from Guangzhou. EBITDA saw a strong growth of 54% YoY to RMB895mn for 1H15. Furthermore, commercial apartments and retail shops and other commercial took up 76% of Aoyuan's booked revenue in 1H15 and that contributes to its relatively solid GPM. Looking forward, we believe its full year 2015 GPM would still fall within a range of 26-28%, with some Tier 2 cities' projects being booked in 2H.

Net profit for the company was up 74% YoY to RMB538mn in 1H15, in-line with prior positive profit alert. Stripping out the estimated revaluation gain net of deferred tax, Aoyuan's core profit was RMB462mn for 1H15, up ~57% YoY. Cash collection ratio was high at approximately 88% in 1H15, vs. 81% in 2014.

With loosening policy towards residential segment, 2015 has been a relatively weak market for commercial properties (serviced apartments, retail units, etc). This was partly due to better price growth expectation for residential as the lower down payment and mortgage rates for first homes vs. commercial property. Aoyuan's lower contract sales ASPs YTD reflect partly less contribution from commercial products (1H15 contract sales ASP was only CNY7,383/sq m, down 19% vs. 2014 contract sales ASP of 9,103/sq m).



Figure 1: Developers' operating cashflow**

RMB bn	2015E cash inflow			2015E cash outflow						2015E net operating cashflow	
	Est sales proceeds from contract sales	Our est. rental income, prop management fees, other income, etc	Est Cash inflow	Our est. land premium	Construction cost	SG&A	Interests	Taxes	Dividends and others	Est Cash outflow	Est net operating cashflow
Agile*	44.0	2.0-2.5	46.3	-5.5	-17.0	-3.0	-3.5	-8.0	-4.5	-41.5	4.8
Aoyuan	11.0	2.2	13.2	-4.5	-5.5	-0.8	-1.15	-1.3	-2.0	-15.2	-2.0
CCRE	17.2		17.2	-2.5	-5.8	-1.1	-0.8	-2.10	-5.9	-18.3	-1.1
Country Garden	126.0	2.0	128.0	-20.0	-73.0	-12.0	-5.0	-18.0	-1.9	-129.9	-1.9
Evergrande	130.0	16.0	146.0	-30.0	-60.0	-14.8	-14.0	-17.0	-2.0	-137.8	8.2
Future Land	25.5		25.5	-3.4	-14.0	-1.7	-1.6	-2.9	-0.4	-23.9	1.6
Greentown	23.7		23.7	-2.1	-13.0	-2.3	-3.5	-4.2		-25.1	-1.4
GZ R&F*	43.2	2.7	45.9	-8.0	-18.0	-4.0	-6.7	-8.0	0.0	-44.7	1.2
KWG	21.7	0.3	22.0	-4.0	-6.8	-1.5	-2.3	-2.5	-1.0	-18.1	3.9
Longfor	46.0	1.5	47.5	-15.5	-22.0	-3.3	-3.1	-8.0	-1.7	-53.6	-6.1
Powerlong	12.0	1.6	13.6	-0.4	-7.0	-1.7	-1.8	-1.7	-0.3	-12.9	0.7
Shimao	55.7	1.9	57.6	-17.5	-25.5			-14.6		-57.6	0.0
Sunac	24.7	0.3	25.0	-9.0	-9.4	-1.7	-3.0	-5.8	-1.4	-30.3	-5.3

*For Agile's guided RMB44-46bn for estimated contract sales inflow, we took the low end of the range; for GZ R&F, we apply a haircut of 10% against management's expectation of cash inflow of RMB51bn
**Note: most figures are companies' guidance from March 2015 results season except for rental income, land premium and dividends
Source: Company data, CREIS, DB estimates



Key things to know about the company

History and summary

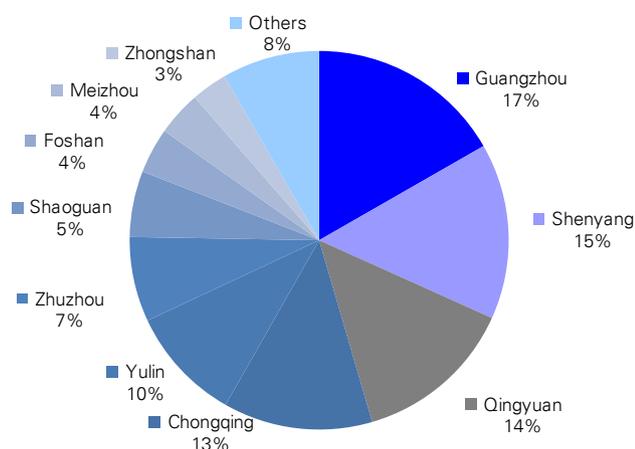
The beginning of China Aoyuan started some 18 years ago with the establishment of Zi Ye, and its first project sales of Guangzhou Aoyuan and Panyu Aoyuan started being reaped in 1999. Aoyuan has a focus on developing mass market residential as well as some commercial property (serviced apartments, retail, office, and hotels); some of its properties also revolve around a concept of healthy lifestyle. Aoyuan was listed on the HKSE in October 2007. As of 11 Aug 2015, it has a market cap of HK\$4.2bn. The company is 48.0% owned by its founder, Mr. Guo Zi Wen and his brother Mr Guo Zi Ning.

Landbank breakdown

As at YE14, Aoyuan held a landbank with total GFA 12.31mn sq m distributed in 15 cities. 65% of total GFA is residential properties, 28% is commercial properties held for sale while 4% is investment projects held for rental. It has a focus on its home base Guangdong Province, with 29 out of 45 projects or 53.3% of its total landbank located within Guangdong Province. On the other hand, the company also endeavored to diversify its landbank with increasing presence outside Guangzhou Province, such as Chongqing, and make new penetration in Zhejiang Province, Anhui and overseas in 1H15. As of 31 December 2014, the top four exposures of its landbank by GFA include Guangzhou (16.4% of total landbank), Shenyang (14.7%), Qingyuan (13.5%) and Chongqing (12.5%).

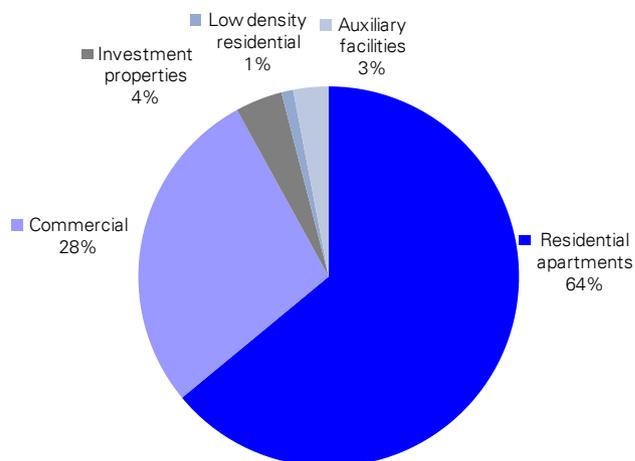
In 1H15, Aoyuan acquired 6 parcels of land (commercial and residential projects). As of June, its overall landbank's average land cost was RMB1,233/sq m (16.7% of Aoyuan's 1H15 contract sales ASP). As of June, the company has projects in 19 cities.

Figure 2: Aoyuan's total landbank breakdown by city by GFA as of 31 Dec 14



Source: Company, Deutsche Bank

Figure 3: Landbank GFA breakdown by type as of 31 Dec 14



Source: Company, Deutsche Bank



O2O business development

At the beginning of 2015, Aoyuan announced its internet strategy and Ao apartment v1.0 to provide its residential and commercial customers with value-added services (such as Smart Park and social elements) and promoting property sales. It proposed a series of smart products including Ao community, Ao shopping mall, Ao shopping street, and Ao apartment. It planned to apply Ao apartment in Guangzhou Aoyuan Beyond Era, Guangzhou Aoyuan City Plaza, and Guangzhou Luoguang Aoyuan Plaza this July. Further in May 2015, it announced co-operational agreements with subsidiaries of Tencent to further develop the O2O platform, focusing on providing family services through mobile internet.

Costs of borrowing to hedge down and debt maturity lengthened

Aoyuan's average cost of borrowing dropped from 10.2% in 2014 to 9.9% in 1H15. We expect it to further decline. We expect part of the funds raised from debt issuance in 1H15 to be deployed towards repayment of trust loans (which generally carry a 12-13% interest cost). Its long-term net debt/total equity should adhere to prior guidance of below 80% and its average funding costs should continue to decline.

Aoyuan maintained adequate liquidity with total cash of RMB5.9bn as of end-2014, covering 1.3x of its short-term debt of RMB4.5bn. Its total cash/short-term debt coverage improved to 1.6x as of June. Earlier this year, there was the private placement of USD100mn notes due 2018 at 9.25% to ABCI in April, and issuance of USD250mn notes due 2018 at 10.875% in May. It also issued a three-year domestic RMB bonds of RMB2.4bn at 5.8% in July, which will further help alleviate the funding cost.

Peer comparison

We compare Times, Logan, Yuzhou, and Cifi in our peer comparison table.

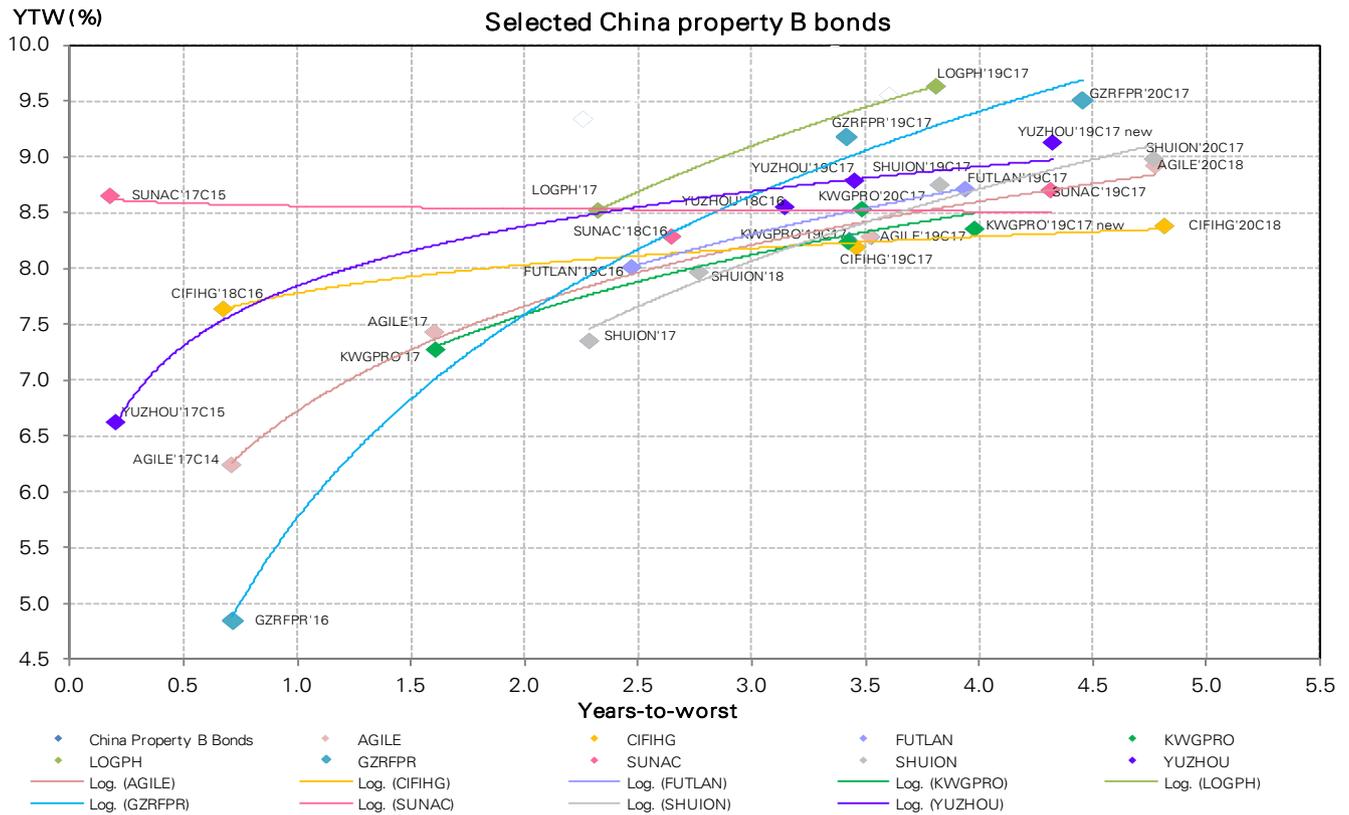
We view Times, Logan, Yuzhou and CIFI as close peers to Aoyuan given their similar operating scale. Each of Aoyuan, Times and Logan has a geographical concentration in their home base, Guangdong Province while Aoyuan and Logan has a relatively larger land bank size and greater number of cities where they operate. As of last year, Aoyuan had the lowest EBITDA interest coverage (1.0x by Aoyuan vs. 2.6x by Logan and 2.0x by Times in FY14) and highest debt-to-EBITDA ratio (8.7x by Aoyuan vs. 5.6x by Logan and 4.5x by Times in FY14) which is reflected in one notch lower issuer rating than Times and two notches lower than Logan by Moody's. On the other hand, its net debt/total equity ratio was lowest as of end-2014 within this group (Aoyuan's 62% v.s. Logan's 66% and Times' 97%).

Compared to Aoyuan, CIFI has a higher operating efficiency. CIFI's contract sales figure of RMB21.2bn in 2014 was higher than Aoyuan's RMB12.2bn. Aoyuan had a higher profit margin than CIFI in 2014, which partly highlights Aoyuan's strategy of selling some commercial products and its higher-margin projects in Guangzhou.

Aoyuan has a better diversification in landbank than Yuzhou but the credit metrics are weaker, with a lower GPM (30% by Aoyuan and 36% by Yuzhou in FY14) and higher debt / EBITDA (8.7x by Aoyuan and 6.3x by Yuzhou in FY14).

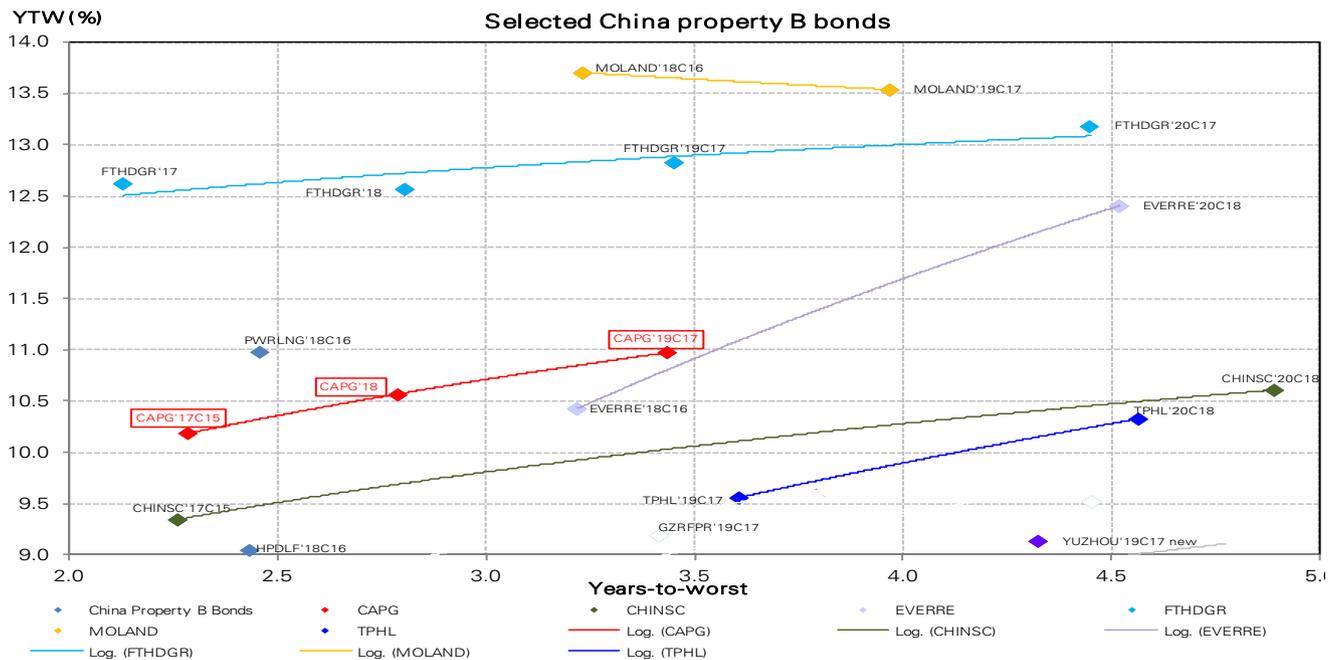


Figure 4: RV charts of China property B issuance in terms of YTW



Source: Bloomberg Finance LP, Deutsche Bank

Figure 5: RV charts of China property B issuance in terms of YTW



Source: Bloomberg Finance LP, Deutsche Bank



Figure 6: Financial summary

Company	Aoyuan (B2/B/B+; B3/B-/B+)				
Stock code	3883.HK (Market Cap: HKD4.2bn)				
Reporting period	FY12	FY13	FY14	1H14	1H15
Reporting currency	(RMBmn)	(RMBmn)	(RMBmn)	(RMBmn)	(RMBmn)
Income statement					
Revenue	3,943	5,729	6,976	2,658	3,935
Gross profit	1,187	1,759	2,067	812	1,156
EBITDA [^]	613	1,122	1,323	580	895
Gross interest	(484)	(848)	(1,276)	(583)	(604)
Net income	930	736	809	309	538
Cash Flows Statement					
FFO (Funds from operations)	5	85	(149)	(130)	n.a.
Changes in working capital	(2,917)	(1,822)	(1,430)	(942)	n.a.
Cash from operations	(3,021)	(1,773)	(1,645)	(1,099)	n.a.
Balance Sheet					
Total cash	3,143	4,712	5,917	6,285	6,731
Restricted cash embedded in total cash	762	1,899	3,928	2,541	2,577
Inventory (completed properties held for sale)	2,821	3,391	4,468	4,691	n.a.
Total assets	20,813	29,932	36,786	33,092	40,315
Short term debt	1,675	2,411	4,464	2,994	4,091
Net debt (incl. restricted cash)	1,779	4,812	5,580	5,338	7,067
Total debt	4,923	9,524	11,497	11,623	13,798
Total equity	7,104	7,524	9,034	7,580	9,740
KEY CREDIT METRICS					
Revenue growth YoY	30.5%	45.3%	21.8%	23.6%	48.0%
EBITDA growth	38.8%	83.0%	17.8%	9.7%	54.2%
Gross margin	30.1%	30.7%	29.6%	30.5%	29.4%
EBITDA margin	15.6%	19.6%	19.0%	21.8%	22.7%
EBITDA interest coverage * [^]	1.3x	1.3x	1.0x	1.1x	1.3x
Debt / EBITDA * [^]	8.0x	8.5x	8.7x	9.9x	8.4x
Net debt / EBITDA * [^]	2.9x	4.3x	4.2x	4.5x	4.3x
Total debt / Total capital	40.9%	55.9%	56.0%	60.5%	58.6%
Net debt / Equity (cash incl. restricted cash)	25.1%	64.0%	61.8%	70.4%	72.6%
Net debt / Equity ^{^^}	25.1%	64.0%	61.8%	70.4%	72.6%
Unrestricted cash / Short-term debt	142.2%	116.6%	44.6%	125.0%	101.5%
Total cash / (ST debt + 6-month COGS)	103.0%	107.2%	85.5%	129.8%	98.0%
Total cash / Short-term debt	187.7%	195.4%	132.6%	209.9%	164.5%

* Ratios are calculated based on trailing 12-month data; [^] EBITDA includes cash distribution from JVs and associates; ^{^^} 50% of hybrid is considered as debt and 50% as equity
Source: Bloomberg Finance LP, Company data, Deutsche Bank



Figure 7: Peer comparison

Company	MEDIAN	Aoyuan	CIFI	Logan	Powerlong	Times	Yuzhou
Stock Code		3883.HK	884.HK	3380.HK	1238.HK	1233.HK	1628.HK
Issue ratings		B3/B-/B+	B1/B+/BB-	B1/NR/BB-	B3/B-/NR	B2/B/B+	B1/B/NR
Reporting period	FY14	FY14	FY14	FY14	FY14	FY14	FY14
Reporting currency		(RMBmn)	(RMBmn)	(RMBmn)	(RMBmn)	(RMBmn)	(RMBmn)
Market cap as of 11-Aug-15 (USDmn)		538	1,387	2,218	788	689	891
Operating Statistics							
Total land bank in GFA ('000 sq m)		12,310	9,600	13,675	11,500	9,431	8,701
Number of cities		15	15	13	25	6	9
Number of projects		45	74	37	67	27	48
Contracted sales		12,222	21,206	13,350	10,648	15,234	12,001
Contracted GFA ('000 sq m)		1,343	1,733	1,817	1,209	1,396	1,204
Contracted ASP (RMB per sq m)		9,103	12,235	7,347	8,811	10,910	9,971
Recognized property sales		6,803	15,654	12,953	8,265	10,095	7,681
Recognized GFA ('000 sq m)		914	1,417	1,740	752	837	736
Recognized ASP (RMB per sq m)		7,441	11,048	7,446	10,986	12,061	10,437
Income Statement							
Revenue		6,803	16,179	12,953	9,663	10,095	7,837
Revenue from investment properties		71	526	56	1,132	324	156
Recurring income as a % of revenue		1%	3%	0%	12%	3%	2%
Gross profit		2,067	4,187	3,804	2,783	3,186	2,845
EBITDA ^		1,323	3,352	2,884	1,860	2,420	2,442
EBIT		1,416	3,322	2,930	1,717	2,398	2,493
Gross interest		-1,276	-1,436	-1,107	-1,624	-1,189	-1,159
Profit before tax		1,449	3,325	3,718	2,159	2,235	2,692
Attributable profit/(loss) to shareholders		809	1,861	2,348	1,371	1,279	1,254
Balance Sheet							
Unrestricted cash plus deposit pledged for borrowings		1,989	7,124	5,576	4,834	2,726	9,296
Total cash		5,917	7,124	7,514	4,949	5,418	9,785
Total assets		36,786	43,539	44,836	57,154	33,085	39,075
Advanced proceeds from customers		8,772	5,016	6,435	4,642	n.a.	3,893
Short term debt		4,464	3,035	3,824	4,291	1,786	3,805
Net debt (incl. restricted cash)		5,580	6,737	8,751	13,717	5,571	5,620
Total debt		11,497	13,861	16,265	18,666	10,988	15,404
Total equity		9,034	11,583	13,317	20,609	5,717	9,390
KEY CREDIT METRICS							
Profitability							
Contracted sales growth	21.8%	21.8%	38.4%	1.1%	13.6%	37.8%	9.5%
Revenue growth	12.4%	21.8%	35.9%	12.4%	33.2%	7.5%	4.9%
EBITDA growth	25.3%	17.8%	48.4%	-15.3%	37.2%	43.8%	25.3%
Gross margin	30.4%	29.6%	25.9%	30.4%	28.8%	30.6%	36.3%
EBITDA margin	23.1%	19.0%	20.7%	23.1%	19.2%	23.2%	31.2%
Net margin	12.3%	11.6%	11.5%	18.8%	14.2%	12.3%	16.0%
Return on equity (ROE)	19.8%	10.8%	19.8%	25.3%	7.7%	27.1%	16.1%
Selling expenses as a % of revenue	3.3%	5.4%	2.0%	3.3%	4.1%	4.6%	2.4%
Admin and other operating expenses as a % of revenue	3.3%	5.6%	3.3%	4.2%	7.0%	3.3%	3.0%
Gains from revaluation or disposals as a % of pretax profit	11.7%	6.7%	11.7%	23.7%	21.7%	3.1%	13.9%
Interest and Debt Coverage							
EBITDA interest coverage *^	2.0x	1.0x	2.3x	2.6x	1.1x	2.0x	2.1x
Recurring income / Gross interest	0.1x	0.1x	0.4x	0.1x	0.7x	0.3x	0.1x
Debt / EBITDA *^	5.6x	8.7x	4.1x	5.6x	10.0x	4.5x	6.3x
Net debt / EBITDA *^	3.0x	4.2x	2.0x	3.0x	7.4x	2.3x	2.3x
Dividend payout on net profit	28.2%	29.9%	28.2%	18.6%	18.4%	19.3%	35.3%
Total debt / Total capital	56.0%	56.0%	54.5%	55.0%	47.5%	65.8%	62.1%
Total debt / Total assets	33.2%	31.3%	31.8%	36.3%	32.7%	33.2%	39.4%
Net debt / Equity ^^	62.3%	61.8%	62.3%	65.7%	72.0%	97.4%	59.8%
Liquidity and Debt Subordination							
Unrestricted cash / Short-term debt	152.6%	44.6%	234.7%	145.8%	112.7%	152.6%	244.3%
Total cash / (ST debt + 6-month COGS)	92.0%	85.5%	78.9%	92.0%	64.0%	100.3%	155.3%
Total cash / Short-term debt	234.7%	132.6%	234.7%	196.5%	115.3%	303.3%	257.1%
Total cash / Total debt	51.4%	51.5%	51.4%	46.2%	26.5%	49.3%	63.5%
Total cash / Total assets	16.4%	16.1%	16.4%	16.8%	8.7%	16.4%	25.0%
Short-term debt / Total debt	23.5%	38.8%	21.9%	23.5%	23.0%	16.3%	24.7%

Note: * Ratios are calculated based on trailing 12-month data; ^ EBITDA includes cash distribution from JVs and associates; ^^ 50% of hybrid is treated as debt and 50% as equity
Source: Bloomberg Finance LP, Company data, Deutsche Bank

The author of this report wishes to acknowledge the contribution made by Mary Mou, an employee of CRISIL Global Research & Analytics, a division of CRISIL Limited, a third-party provider of offshore research support services to Deutsche Bank.



Appendix 1

Important Disclosures

Additional information available upon request

Disclosure checklist

Institution

Disclosure

China Aoyuan Property Group Ltd

NA

*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>.

For disclosures pertaining to recommendations or estimates made on a security mentioned in this report, 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>

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. Karen Kwan

The authors of this report wish to acknowledge the contribution made by Mary Mou, an employee of Irevna, a third-party provider to Deutsche Bank of offshore research support services.



Deutsche Bank debt rating key

CreditBuy ("C-B"): The total return of the Reference Credit Instrument (bond or CDS) is expected to outperform the credit spread of bonds / CDS of other issuers operating in similar sectors or rating categories over the next six months.

CreditHold ("C-H"): The credit spread of the Reference Credit Instrument (bond or CDS) is expected to perform in line with the credit spread of bonds / CDS of other issuers operating in similar sectors or rating categories over the next six months.

CreditSell ("C-S"): The credit spread of the Reference Credit Instrument (bond or CDS) is expected to underperform the credit spread of bonds / CDS of other issuers operating in similar sectors or rating categories over the next six months.

CreditNoRec ("C-NR"): We have not assigned a recommendation to this issuer. Any references to valuation are based on an issuer's credit rating.

Reference Credit Instrument ("RCI"): The Reference Credit Instrument for each issuer is selected by the analyst as the most appropriate valuation benchmark (whether bonds or Credit Default Swaps) and is detailed in this report. Recommendations on other credit instruments of an issuer may differ from the recommendation on the Reference Credit Instrument based on an assessment of value relative to the Reference Credit Instrument which might take into account other factors such as differing covenant language, coupon steps, liquidity and maturity. The Reference Credit Instrument is subject to change, at the discretion of the analyst.

DB Credit Opinion Definition : The DB Credit Opinion follows the same scale as S & P's credit ratings ranging from AAA for the Highest credit quality to C for the Weakest credit quality. It reflects our opinion on the creditworthiness of a company. We derive our Credit Opinion from fundamental credit analysis of the company, comparable analysis, benchmarking against rating agencies and qualitative judgement.

Regulatory Disclosures

1. Important Additional Conflict Disclosures

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.

2. Short-Term Trade Ideas

Deutsche Bank equity research analysts sometimes have shorter-term trade ideas (known as SOLAR ideas) that are consistent or inconsistent with Deutsche Bank's existing longer term ratings. These trade ideas can be found at the SOLAR link at <http://gm.db.com>.



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.

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 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 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 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. This report is provided for informational purposes only. 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.

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.

United States: Approved and/or distributed by Deutsche Bank Securities Incorporated, a member of FINRA, NFA and SIPC. Non-U.S. analysts may not be associated persons of Deutsche Bank Securities Incorporated and therefore may not be subject to FINRA regulations concerning communications with subject company, public appearances and securities held by the analysts.

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 (competent authority: European Central Bank) 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.

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.

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, The Financial Futures Association of Japan, and Japan Investment Advisers Association. 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.

Malaysia: Deutsche Bank AG and/or its affiliate(s) may maintain positions in the securities referred to herein and may from time to time offer those securities for purchase or may have an interest to purchase such securities. Deutsche Bank may engage in transactions in a manner inconsistent with the views discussed herein.

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, and any access to it, 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 by any person for any purpose without Deutsche Bank's prior written consent. Please cite source when quoting.

Copyright © 2015 Deutsche Bank AG



David Folkerts-Landau
Group Chief Economist
Member of the Group Executive Committee

Raj Hindocha
Global Chief Operating Officer
Research

Marcel Cassard
Global Head
FICC Research & Global Macro Economics

Steve Pollard
Global Head
Equity Research

Michael Spencer
Regional Head
Asia Pacific Research

Ralf Hoffmann
Regional Head
Deutsche Bank Research, Germany

Andreas Neubauer
Regional Head
Equity Research, Germany

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

Große Gallusstraße 10-14
60272 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
