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To: Scott Abrams

Re: Alibaba vs. JD.com

ROE

Alibaba and JD illustrate differing approaches to maximizing consumer reach, impacting their ROE. Alibaba focuses on rural e-commerce and enhancing customer experience through data, while JD emphasizes “boundaryless retail” and having “closely associated with supply chains and logistics” (Chen and Huang, 9). Evidence of their differing operating ideologies is proven as Alibaba has consolidated companies with a wide variety of AI implications such as Taobao (E-commerce), Alibaba Cloud (Cloud Service), and Amap (location data). JD’s business model can be evident as they had over 110 overseas warehouses in 2018 and “JD-x” partnerships.

Analyzing the discrepancy between operating and net income reveals that Alibaba is more favorable for shareholders. Alibaba’s ROE shifted from **28.6% to 13.6%** (FY2016-17), this can be attributed to the shift in net income, from **71460M CNY to 43675M CNY** (FY2016- 17). JD’s ROE worsened from **-0.29% to -3.24%** (FY2017-18), driven by a decline in operating income from **-836M CNY to -2597M CNY**. Notably, JD experiences a smaller change between operating income and net income. The DuPont Decomposition (*see Exhibit 1 & 2*) further illustrates the changes in ROE, showcasing Alibaba’s consistent positive growth over the past 5 years. Contrastingly, JD’s volatility in net income renders them less favorable for shareholders.

ROIC

ROIC is one of the profitability ratios used to analyze the efficiency of a company’s usage of capital collected from its shareholders. The higher the ROIC, the more the company creates value for its investors. Alibaba experienced a higher return on investment capital of 15.5% (*see Exhibit 3*) over the five years from 2015 to 2019 compared to the industry average of 7%, with the ROIC showing a negative trend of growth from 2015 to 2019. Such fluctuations in Alibaba’s ROIC could be attributed to its changes in growth rate, investment activities, and increased competition in the e-commerce industry. Meanwhile, JD averaged an ROIC of -11.36% (*see Exhibit 4*), indicating a negative return on investment capital. A negative ROIC could suggest that JD wasn’t capable of using its capital effectively due to JD’s large investments in logistics and international expansion which is costly.

Growth Rate

In terms of revenue, both Alibaba and JD have shown strong growth, averaging 49% and 42% annual growth in revenues in the past five years respectively (*see Exhibit 5 & 6*). However, the difference between the companies becomes apparent when considering trends in operating income and net income. While Alibaba had consistent positive operating income, JD has never had a fiscal year with a positive operating income in the last five years. To be specific, Alibaba has averaged a 31% annual growth in operating income, while JD has maintained its negative operating income without much of a pattern. Net income for both firms carry a similar story as operating income, with Alibaba averaging a 60% annual growth in net income, while JD maintaining negative net income values.

EBITDA growth for Alibaba looks healthy, averaging a 39% annual growth. JD was able to breakeven for the first time in FY2016, however, not much growth is apparent since. There are also

differences in Sustainable Growth Rate (SGR) for both companies. Alibaba seems to be the healthier company, averaging a 7.2% SGR in the last five years, while JD has averaged -0.4%.

Overall, Alibaba seems to have a higher growth potential, since it maintained more consistent positive growth for its revenue, operating income, net income and sustainable growth rate.

Leverage and Liquidity

Alibaba has a very conservative leverage structure, using a balanced mix of debt and equity, which results in manageable financial risk. Its TD/EBITDA staying constant at around 1.4x (*see Exhibit 7*) also indicates that its debt level is quite reasonable relative to its earnings. JD, on the other hand, relies much more on debt financing. The high and erratic TD/EBITDA ratio at an avg. 7x (*see Exhibit 9*) is a red flag, suggesting JD struggled to generate enough earnings to cover its debt, indicating higher risk.

Also, Alibaba has seen a declining liquidity trend, but even by 2019, its liquidity ratios remain above 1 (*see Exhibit 8*), suggesting the company can comfortably meet its short-term obligations. JD has a much more concerning liquidity situation, with both the current and quick ratios below 1 in the most recent years (*see Exhibit 10*), indicating that it may face difficulties in meeting short-term liabilities, a potential red flag for creditors and investors. Overall, Alibaba appears to be in a stronger financial position, with moderate leverage and declining but still healthy liquidity ratios. Its reliance on equity and its ability to manage debt seem sustainable. On the other hand, JD faces higher financial risks with significantly higher leverage, erratic earnings relative to debt, and deteriorating liquidity. This could make JD more vulnerable to financial shocks and increase the cost of borrowing.

Correlation between Stock Performance and Financial Results

From Jan 2015 to Mar 2019, Alibaba and JD's stock prices have increased by 76.7% and 20.9% respectively. This is expected due to Alibaba's stronger growth and profitability in the last five years. However, surprisingly, JD outperformed Alibaba from Jan 2015 until Oct 2017, potentially from JD's EBITDA turning profitable in FY2016, leading to expectations from shareholders that JD will begin to become profitable and grow at a faster rate than Alibaba. Yet, JD failed to live up to the expectations of the shareholders and the stock dropped 62% from its peak by Nov 2019. JD was not able to improve its profitability and its consistently high leverage seems to have disappointed many investors. Although both stocks were volatile, Alibaba's stock prices were more stable due to having consistent profits and lower leverage ratios.

Investment Value and Risk

Both Alibaba and JD hold high investment value through their continuous investments in China's e-commerce industry. Alibaba's value stems from its market leadership, diversified businesses (Ali Cloud, Alipay), and international expansion, supported by significant growth: 255% in EBITDA, 266% in Cash Flow from Operations, and 183% in Cash Flow from Investing over the 5-year period. JD's value comes from its direct sales model, offering better quality control, and its strong logistics network, enabling same-day deliveries and high customer satisfaction.

In terms of investment risk, both companies are subject to regulatory risks and the U.S.-China geopolitical tensions. Alibaba's cloud business could suffer from semiconductor tariffs, while JD has lower profit margins and relies on external financing to sustain investments due to weaker cash flow generation. Its Cash Flow from Operations was never sufficient for its Cash Flow from Investing, and it relied on raising debt (significant long-term debt repayments) to sustain its investing activities.

Appendix

Exhibit 1. Alibaba's ROE Calculations using DuPont Analysis

	Mar-31-2015	Restated Mar-31-2016	Reclassified Mar-31-2017	Mar-31-2018	Mar-31-2019
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
Net Income	24261.0	71460.0	43675.0	64093.0	87886.0
Revenue	76204.0	101143.0	158273.0	250266.0	376844.0
Total Assets	255434.0	364245.0	506812.0	717124.0	965076.0
Shareholder's Equity	157413.0	249539.0	321129.0	436438.0	608583.0
ROE	15.4%	28.6%	13.6%	14.7%	14.4%

**ROE = (Net Income / Revenue) * (Revenue / Total Assets) * (Total Assets / Shareholder's Equity)*

Exhibit 2. JD's ROE Calculations using DuPont Analysis

	Dec-31-2014	Restated Dec-31-2015	Reclassified Dec-31-2016	Dec-31-2017	Dec-31-2018
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
Net Income	(4996.4)	(9107.9)	(3806.8)	(152.3)	(2491.6)
Revenue	115002.3	181042.3	258289.9	362331.8	462019.8
Total Assets	66493.2	85015.1	160373.5	184055.0	209164.9
Shareholder's Equity	37498.1	30720.9	41219.8	52388.7	76828.1
ROE	-13.3%	-29.6%	-9.2%	-0.3%	-3.2%

**ROE = (Net Income / Revenue) * (Revenue / Total Assets) * (Total Assets / Shareholder's Equity)*

Exhibit 3. Alibaba's ROIC Calculations

	Mar-31-2015	Restated Mar-31-2016	Reclassified Mar-31-2017	Mar-31-2018	Mar-31-2019
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
EBIT	23,310	29,557	48,912	70,609	61,606
Tax Rate	20.9%	10.6%	25.0%	22.9%	17.1%
NOPAT	18,444.2	26,425.2	36,661.4	54,467.9	51,069.8
Debt	52,593.0	57,566.0	91,732.0	125,553.0	134,300.0
Equity	157,413.0	249,539.0	321,129.0	436,438.0	608,583.0
NOA	128,296.0	116,758.0	150,801.0	210,210.0	203,165.0
IC	81,710.0	190,347.0	262,060.0	351,781.0	539,718.0
ROIC	22.6%	13.9%	14.0%	15.5%	9.5%

Average ROIC = 15.1%

* $ROIC = NOPAT / IC = EBIT * (1 - Tax\ rate) / (Debt + Equity - NOA)$

Exhibit 4. JD's ROIC Calculations

	Dec-31-2014	Restated Dec-31-2015	Reclassified Dec-31-2016	Dec-31-2017	Dec-31-2018
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
EBIT	(5802.4)	(2607.8)	(1251.7)	(835.5)	(2596.8)
Tax Rate	-0.4%	0.2%	-8.8%	115.4%	-18.0%
NOPAT	(5825.6)	(2602.6)	(1361.8)	128.67	(3064.22)
Debt	1890.8	6373.8	20258.8	23807.5	14419.5
Equity	37,541.88	30584.26	34800.26	52764.81	60496.29
NOA	19952.94	19978.78	17860.68	29798.54	37502.06
IC	19479.74	16979.28	37198.38	46773.77	37413.73
ROIC	-29.9%	-15.33%	-3.66%	0.28%	-8.19%

Average ROIC = -11.36%

* $ROIC = NOPAT / IC = EBIT * (1 - Tax\ rate) / (Debt + Equity - NOA)$

Exhibit 5. Alibaba Financials (in millions)

	Mar-31-2015	Restated Mar-31-2016	Reclassified Mar-31-2017	Mar-31-2018	Mar-31-2019
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
Revenue	76,204.0	101,143.0	158,273.0	250,266.0	376,844.0
YoY Change		33%	56%	58%	51%
Operating Income	23,310.0	29,557.0	48,912.0	70,609.0	61,606.0
YoY Change		27%	65%	44%	-13%
Net Income	24,261.0	71,460.0	43,675.0	64,093.0	87,886.0
YoY Change		195%	-39%	47%	37%
EBITDA	27,765.0	36,534.0	63,097.0	92,494.0	98,542.0
YoY Change		32%	73%	47%	7%
SGR	4.9%	20.2%	3.8%	3.8%	3.4%

Exhibit 6. JD Financials (in millions)

	Dec-31-2014	Restated Dec-31-2015	Reclassified Dec-31-2016	Dec-31-2017	Dec-31-2018
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
Revenue	115,002.3	181,042.3	258,289.9	362,331.8	462,019.8
YoY Change		57%	43%	40%	28%
Operating Income	(5,802.4)	(2,607.8)	(1,251.7)	(835.5)	(2,596.8)
YoY Change		55%	52%	33%	-211%
Net Income	(4,996.4)	(9,107.9)	(3,806.8)	(152.3)	(2,491.6)
YoY Change		-82%	58%	96%	-1536%
EBITDA	(4,151.9)	(100.4)	2,168.6	3,357.2	2,963.2
YoY Change		98%	n/a	55%	-12%
SGR	-0.6%	-1.5%	-0.1%	0.0%	0.0%

Exhibit 7. Alibaba Leverage Ratios

	Mar-31-2015	Restated Mar-31-2016	Reclassified Mar-31-2017	Mar-31-2018	Mar-31-2019
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
Total Liability	98,021.0	114,706.0	185,683.0	280,686.0	356,493.0
Total Debt	52,593.0	57,566.0	91,732.0	125,553.0	134,300.0
Total Equity	157,413.0	249,539.0	321,129.0	436,438.0	608,583.0
Total Asset	255,434.0	364,245.0	506,812.0	717,124.0	965,076.0
EBITDA	27,765.0	36,534.0	63,097.0	92,494.0	98,542.0
TL / TE	0.62	0.46	0.59	0.64	0.59
TA / TE	1.62	1.46	1.58	1.64	1.59
Debt / Equity	0.33	0.23	0.29	0.29	0.22
Debt / EBITDA	1.89	1.58	1.45	1.36	1.36

Exhibit 8. Alibaba Liquidity Ratios

	Mar-31-2015	Restated Mar-31-2016	Reclassified Mar-31-2017	Mar-31-2018	Mar-31-2019
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
Current Asset	142,109.0	134,035.0	181,864.0	256,855.0	270,273.0
Current Liability	39,672.0	52,039.0	93,564.0	135,810.0	207,669.0
Inventory	0	0	957.0	4,535.0	8,534.0
Current Ratio	3.58	2.58	1.94	1.89	1.30
Quick Ratio	3.58	2.58	1.93	1.86	1.26

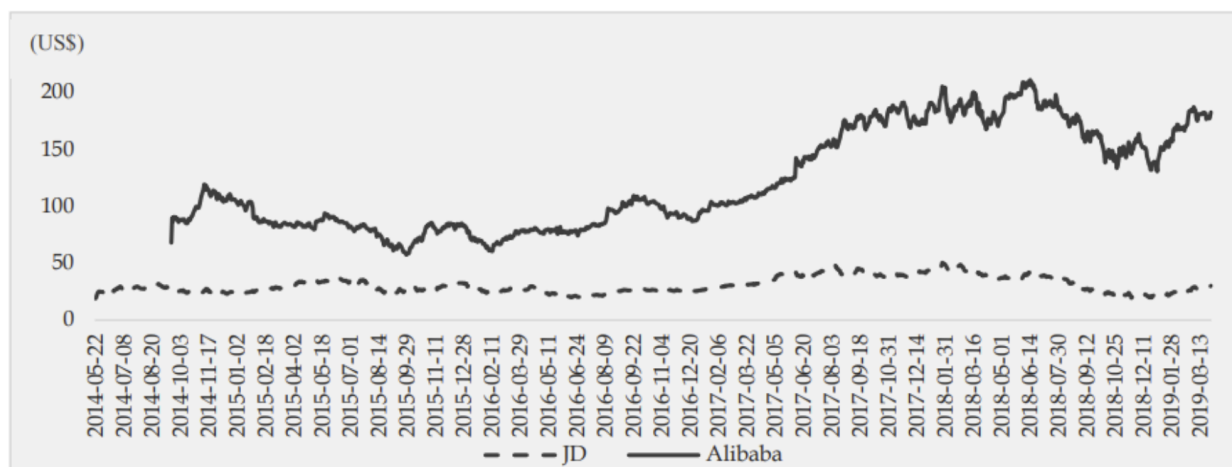
Exhibit 9. JD Leverage Ratios

	Dec-31-2014	Restated Dec-31-2015	Reclassified Dec-31-2016	Dec-31-2017	Dec-31-2018
	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>	<i>CNY</i>
Total Liability	28,995.1	54,294.3	119,153.7	131,666.3	132,336.7
Total Debt	1,890.8	6,373.8	20,258.8	23,807.5	14,419.5
Total Equity	37,498.1	30,720.9	41,219.8	52,388.7	76,828.1
Total Asset	66,493.2	85,015.1	160,373.5	184,055.0	209,164.9
EBITDA	(4,151.9)	(100.4)	2,168.6	3,357.2	2,963.2
TL / TE	0.77	1.77	2.89	2.51	1.72
TA / TE	1.77	2.77	3.89	3.51	2.72
Debt / Equity	0.05	0.21	0.49	0.45	0.19
Debt / EBITDA	(0.46)	(63.48)	9.34	7.09	4.87

Exhibit 10. JD Liquidity Ratios

	Mar-31-2015	Restated Mar-31-2016	Reclassified Mar-31-2017	Mar-31-2018	Mar-31-2019
	CNY	CNY	CNY	CNY	CNY
Current Asset	49,941.7	58,468.1	106,932.1	115,028.7	104,855.8
Current Liability	28,995.1	48,983.0	104,740.2	118,250.6	120,862.0
Inventory	12,190.8	20,539.5	28,909.4	41,700.4	44,030.1
Current Ratio	1.72	1.19	1.02	0.97	0.87
Quick Ratio	1.30	0.77	0.74	0.62	0.50

Exhibit 11. Alibaba and JD Stock Performances and Stock Returns



Alibaba	FY2015-FY2016 (2014/9/19-2016/3/31)	FY2017-FY2018 (2016/4/01-2018/3/31)	FY2019 (2018/4/01-2019/3/31)
Opening/closing price (US\$)	68.00-79.03	79.03-183.54	183.54-182.45
Stock return rate (%)	16.22	132.24	-0.59
JD	FY2014-FY2015 (2014/5/22-2015/12/31)	FY2016-FY2017 (2016/1/01-2017/12/31)	FY2018 (2018/1/01-2018/12/31)
Opening/closing price (US\$)	19.000-32.265	32.265-41.42	41.42-20.93
Stock return rate (%)	69.82	28.37	-49.47