Apple Inc (AAPL)

Global Credit Research GCRE006

FICC Research Dept.

China segment growing despite intensifying competition and tariffs worries

- Strong Q3 results with revenues up 17% y/y, EBITDA up 16% y/y due to iPhone's higher ASP, broad-based growth of Services
- $129.1bn of adjusted net cash; $90bn more of stock repurchase in the buyback program
- No product was directly affected by US tariffs; in process of evaluating the impact of the latest US tariff

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Credit Opinion

Apple announced Q3 FY18 results on July 31st. It was a strong quarter as revenues were close to the highest end of company's guidance ($51.5bn- $53.5bn) and set an all-time record for June quarter. Total revenues increased 17.3% y/y to $53.3bn primarily driven by iPhone's high ASP and strong demand for services and wearables.
iPhone's ASP (average selling price) increased 19.6% to $724 due to a different mix of iPhones with higher average selling prices. iPhone remains Apple's main revenue driver with a share of 56% in the total revenues. Services increased 31.4% y/y to $9.5bn with broad-based growth and Apple is on track to reach FY20 revenue target of $49bn. Wearables were up over 60% y/y due to strong sales of Apple Watch, AirPods.
We view as positive Apple's expanding ecosystem with growth in active installed base of iPhone, iPad and total paid subscriptions of over 300m across all Services offerings. Growth of Services segment brings relatively stable income, more diversity in the product mix and it has an accretive impact on overall margins.
All geographic segments reported revenues growth including Greater China which was up 19.3% y/y. China is the largest smartphone market with high growth potential and we believe it is a key market for further iPhone growth.

Apple has an excellent liquidity profile with $129.1bn of adjusted net cash and $14.5bn of operating cash flows. With $90bn more of stock repurchase in the current buyback program Apple is heading towards company's target of zero net cash on an adjusted basis.

None of Apple's products was directly affected by the first three US tariffs. Apple is analyzing the impact from the latest US tariff on $200bn worth of Chinese imports as the evaluation is a complex process.

Profitability

Highlights of Q3 Results

Revenues increased 17% y/y to $53.3bn primarily driven by iPhone, Services, wearables. All geographic reportable segments showed y/y growth.

Apple manages its business primarily on a geographic basis with 5 reportable segments:

(1) Americas, including both North & South America

Americas revenues were up 20% to $24.5bn. Americas account for 46% of total revenues and 42% of operating income, having the largest share among reportable areas.

(2) Europe, including European countries, India, the Middle East and Africa

Europe revenues were up 14% to $12.1bn. Europe accounts for 23% in total revenues and 22% of operating income.

(3) Greater China, including China, HK, Taiwan

Sales in Greater China increased 19% y/y to $9.6bn. Greater China accounts for 18% of total revenues and 19% of total operating income.

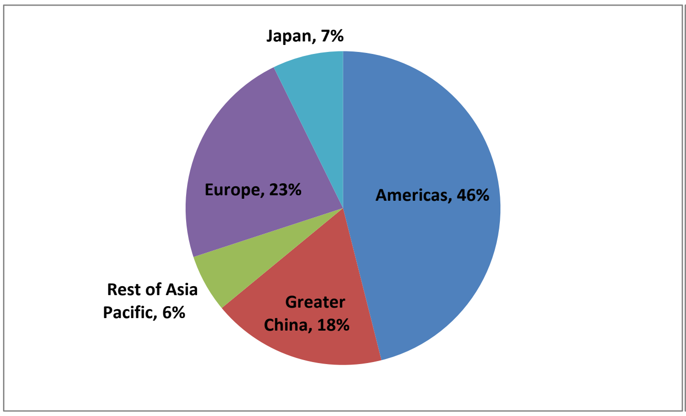
(4) Japan

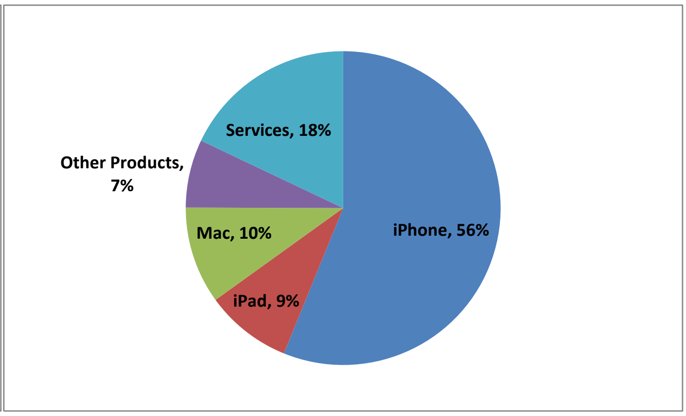
Japan revenues increased 7% y/y to $3.9bn. Japan had 7% share in revenues and 10% share in total operating income.

(5) Rest of Asia Pacific, including Australia, other Asian countries

Revenues in Rest of Asia-Pacific were up 16% y/y to $3.2bn. Rest of Asia Pacific had 6% share both in total revenues and in total operating income.

Chart 1: Revenue breakdown by products/ geographic segments





Source: Company materials, Bloomberg; compiled by Daiwa.

EBITDA increased 16% y/y to $15.3bn with EBITDA margin stable at 29%.

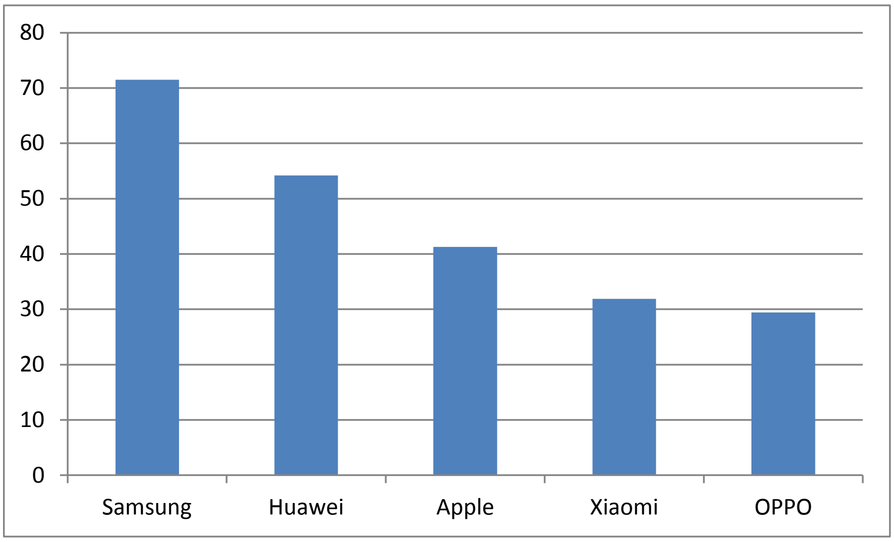
Gross margins were stable q/q at 38%. The loss in margins due to seasonality was offset by cost improvements and a favorable FX impact.

Segment Information

iPhone sales increased 20.4% y/y to $29.9bn with double digits growth in installed base. iPhone accounts for 56% of total revenues.

The main growth driver was ASP which increased 19.6% y/y to $724 due to a different mix of iPhones with higher average selling prices. iPhone unit sales increased 0.7% y/y to 41.3m with iPhone X being the top seller among iPhone models. Active installed base grew by double digits driven by switchers, first-time smartphone buyers and existing customers. Global smartphone shipments declined 1.8% y/y according to IDC while Huawei and Xiaomi expanded their market share over 40% y/y. Apple fell to the third place in the global shipment ranking behind Samsung and Huawei with 12.1%(+0.3pp y/y) market share.

Chart 2: 2018Q2 Worldwide Smartphone Shipments (m units)



Source: IDC; compiled by Daiwa

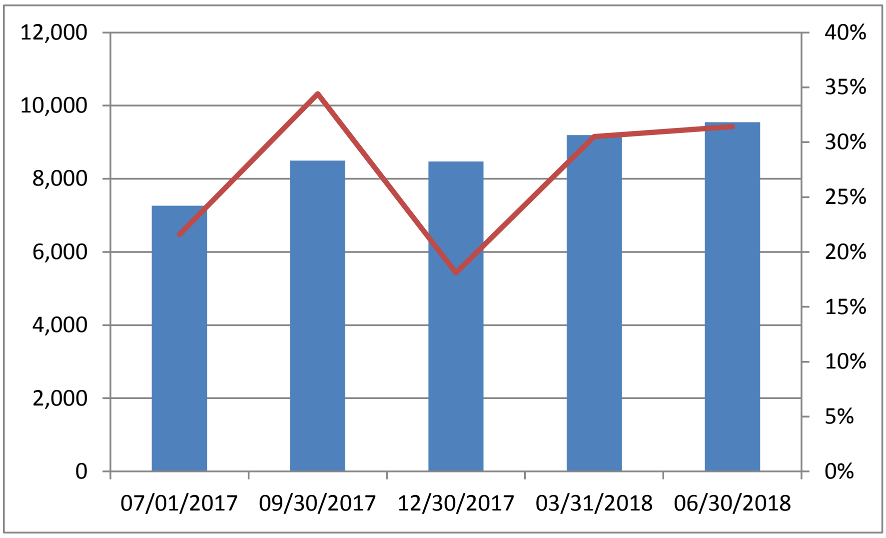
iPad sales decreased 4.6% y/y to $4.7bn due to a different mix of iPads with lower average selling prices. However active installed base reached a new all-time high.
iPad unit sales increased 1.1% to 11.6m due to double digits growth in Greater China, Rest of Asia Pacific segments and enterprise growth. Almost half of the purchases were by customers new to iPad and Apple has gained market share of the global tablet market according to IDC. ASP decreased 5.7% to $410 due to a different mix of iPads with lower average prices.

Mac sales were down 4.7% y/y to $5.3bn due to a different timing of launching new products. However active installed base showed double-digit growth y/y with nearly 60% of purchases coming from new customers.
Even though Mac total revenues declined, many emerging markets showed revenues growth with new quarter record in India, Turkey, Chile and Central and Eastern Europe. Mac unit sales declined 13.3% to 3.7m as MacBook Pro was launched later (in early Q4) this year as opposed to June last year.
ASP increased 10% to $1,433 due to a different mix of Macs with higher average sales prices.

Revenues in Other Products segment were up 36.7% y/y to $3.7bn due primarily to higher sales of wearables.
Wearables which include Apple Watch, AirPods, Beats products were up over 60% y/y. Apple TV also showed double-digit growth as Apple TV 4K offers subscription services from different providers around the world. Later this year, Charter Communications will begin offering Apple TV 4K to its customers.

Services increased 31.4% y/y to $9.5bn with broad-based growth in terms of services and geographic regions. Across all of Services offerings, the number of paid subscriptions surpassed 300 million.
Revenues include a favorable $236m one-time item in connection with the final resolution of various lawsuits. If we exclude this one-time item, Services grew 28.2% y/y to $9.3bn. Revenues showed double-digit growth rates in all geographic reportable segments. Services accounts for 18% in total revenues, being the second largest segment after iPhone. Apple is on track to reach its FY20 revenue target of $49bn.
Services include revenue from Digital Content and Services (iTunes, App Store, Apple Music), iCloud, AppleCare, Apple Pay, licensing. Apple Music, iCloud storage revenue increased by over 50% y/y while App Store, Apple Care set new revenue records for June quarter.

Chart 3: Services Revenue ($m) and y/y growth rates



Source: Company materials, Bloomberg; compiled by Daiwa.

Liquidity

$90bn left of the buyback program.

Apple repurchased $20bn worth of shares of which $10bn are related to the completion of the old $210bn buyback program and $10bn to the new $100bn program announced the previous quarter.

Adjusted net cash (cash+ cash equivalents+ marketables- total debt) decreased 11% q/q to 129.1bn primarily due to the capital return program and debt redemption. Apple targets a zero net cash position over time.

Cash (including cash equivalents, marketables) decreased 9% q/q to $243.7bn as Apple paid $3.7bn in dividends and equivalents and repurchased $20bn worth of shares.

Total debt decreased 6% to $114.6bn as Apple redeemed $6bn of debt. Total debt is made up of $102.6bn of term debt (senior unsecured obligations) and $12bn of commercial paper outstanding with maturities generally less than 9 months.

Company's guidance for Q4

Revenues are expected to be between $60bn and $62bn, growing between 14%- 18% y/y. Last year there was a one-time favorable adjustment of $640m. If we exclude this adjustment, revenue guidance implies y/y growth rates of 16%-19%.

Gross margins are expected to be stable between 38%- 38.5%. Operating expenses are expected to be between $7.95bn- $8.05bn.

Chart 4: I/S

($m) 3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018	Y/Y Change
Revenues	**45,408**	**52,579**	**88,293**	**61,137**	**53,265**	**17.3%**
Cost of Sales	▲ 27,920	▲ 32,648	▲ 54,381	▲ 37,715	▲ 32,844	17.6%
Gross Profit	**17,488**	**19,931**	**33,912**	**23,422**	**20,421**	**16.8%**
Total Operating Expenses	▲ 6,720	▲ 6,811	▲ 7,638	▲ 7,528	▲ 7,809	16.2%
Selling, General & Administrative	▲ 3,783	▲ 3,814	▲ 4,231	▲ 4,150	▲ 4,108	8.6%
R&D	▲ 2,937	▲ 2,997	▲ 3,407	▲ 3,378	▲ 3,701	26.0%
Operating Income	**10,768**	**13,120**	**26,274**	**15,894**	**12,612**	**17.1%**
Depreciation & Amortization	▲ 2,354	▲ 2,484	▲ 2,745	▲ 2,739	▲ 2,665	13.2%
EBITDA	**13,122**	**15,604**	**29,019**	**18,633**	**15,277**	**16.4%**
Pretax Income	11,308	13,917	27,030	16,168	13,284	17.5%
Net Income	**8,717**	**10,714**	**20,065**	**13,822**	**11,519**	**32.1%**

Source: Company materials, Bloomberg; compiled by Daiwa.

Chart 5: I/S- % of revenues

3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018
Revenues	**100%**	**100%**	**100%**	**100%**	**100%**
Cost of Sales	61%	62%	62%	62%	62%
Gross Profit	**39%**	**38%**	**38%**	**38%**	**38%**
Total Operating Expenses	15%	13%	9%	12%	15%
Selling, General & Administrative	8%	7%	5%	7%	8%
R&D	6%	6%	4%	6%	7%
Operating Income	**24%**	**25%**	**30%**	**26%**	**24%**
Depreciation & Amortization	5%	5%	3%	4%	5%
EBITDA	**29%**	**30%**	**33%**	**30%**	**29%**
Pretax Income	25%	26%	31%	26%	25%
Net Income	**19%**	**20%**	**23%**	**23%**	**22%**

Source: Company materials, Bloomberg; compiled by Daiwa.

Chart 6: I/S- y/y growth rates

FY End	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018
Revenues	**7%**	**12%**	**13%**	**16%**	**17%**
Cost of Sales	6%	12%	13%	17%	18%
Gross Profit	**9%**	**12%**	**12%**	**14%**	**17%**
Total Operating Expenses	12%	13%	12%	16%	16%
Selling, General & Administrative	10%	10%	7%	12%	9%
R&D	15%	17%	19%	22%	26%
Operating Income	**7%**	**12%**	**12%**	**13%**	**17%**
Depreciation & Amortization	-7%	-3%	-8%	17%	13%
EBITDA	**4%**	**9%**	**10%**	**13%**	**16%**
Pretax Income	8%	14%	12%	10%	17%
Net Income	**12%**	**19%**	**12%**	**25%**	**32%**

Source: Company materials, Bloomberg; compiled by Daiwa.

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Chart 7: B/S

($m) FY End	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018	Y/Y Change	Q/Q Change
Cash, Cash Equivalents & STI	76,759	74,181	77,153	87,940	70,970	-7.5%	**-19%**
Cash & Cash Equivalents	18,571	20,289	27,491	45,059	31,971	72.2%	-29%
ST Investments	58,188	53,892	49,662	42,881	38,999	-33.0%	-9%
Accounts & Notes Receiv	12,399	17,874	23,440	14,324	14,104	13.8%	-2%
Inventories	3,146	4,855	4,421	7,662	5,936	88.7%	-23%
Other ST Assets	20,571	31,735	38,796	20,127	24,751	20.3%	23%
Total Current Assets	**112,875**	**128,645**	**143,810**	**130,053**	**115,761**	**2.6%**	**-11%**
Property, Plant & Equip, Net	29,286	33,783	33,679	35,077	38,117	30.2%	9%
LT Marketable Securities	184,757	194,714	207,944	179,286	172,773	-6.5%	-4%
Other LT Assets	18,255	18,177	21,361	23,086	22,546	23.5%	-2%
Total Noncurrent Assets	**232,298**	**246,674**	**262,984**	**237,449**	**233,436**	**0.5%**	**-2%**
Total Assets	**345,173**	**375,319**	**406,794**	**367,502**	**349,197**	**1.2%**	**-5%**
Payables & Accruals	53,751	73,230	89,266	58,850	61,824	15.0%	5%
ST Debt	18,475	18,473	18,478	20,478	17,472	-5.4%	-15%
Current Portion of LT Debt	6,495	6,496	6,498	8,498	5,498	-15.4%	-35%
Other ST Liabilities	9,076	9,111	8,044	9,992	9,252	1.9%	-7%
Total Current Liabilities	**81,302**	**100,814**	**115,788**	**89,320**	**88,548**	**8.9%**	**-1%**
LT Debt	89,864	97,207	103,922	101,362	97,128	8.1%	-4%
Other LT Liabilities	41,582	43,251	46,885	49,942	48,572	16.8%	-3%
Total Noncurrent Liabilities	**131,446**	**140,458**	**150,807**	**151,304**	**145,700**	**10.8%**	**-4%**
Total Liabilities	**212,748**	**241,272**	**266,595**	**240,624**	**234,248**	**10.1%**	**-3%**
+ Share Capital & APIC	34,445	35,867	36,447	38,044	38,624	12.1%	2%
+ Retained Earnings	98,525	98,330	104,593	91,898	79,436	-19.4%	-14%
+ Other Equity	▲ 545	▲ 150	▲ 841	▲ 3,064	▲ 3,111	470.8%	2%
Total Equity	**132,425**	**134,047**	**140,199**	**126,878**	**114,949**	**-13.2%**	**-9%**
Cash&Marketables	261,516	268,895	285,097	267,226	243,743	-7%	-9%
Working Capital	31,573	27,831	28,022	40,733	27,213	-14%	-33%
Total Debt	108,339	115,680	122,400	121,840	114,600	6%	-6%
Net Debt	89,768	95,391	94,909	76,781	82,629	-8%	8%
Adjusted Net Debt	▲ 153,177	▲ 153,215	▲ 162,697	▲ 145,386	▲ 129,143	-16%	-11%
Ratios							
Equity/ Total Assets	38%	36%	34%	35%	33%	▲ 5.4	▲ 1.6
Total Debt/ Equity	0.82	0.86	0.87	0.96	1.00	0.2	0.0
Net Debt/ Equity	0.68	0.71	0.68	0.61	0.72	0.0	0.1
Adjusted Net Debt/ Equity	-1.16	-1.14	-1.16	-1.15	-1.12	0.0	0.0

Source: Company materials, Bloomberg; compiled by Daiwa.

Chart 8: C/S

($m) 3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018	Y/Y Change
Net Income	8,717	10,714	20,065	13,822	11,519	32%
Depreciation & Amortization	2,354	2,484	2,745	2,739	2,665	13%
Others	▲ 2,708	2,458	5,483	▲ 1,431	304	---
Cash from Operating Activities	**8,363**	**15,656**	**28,293**	**15,130**	**14,488**	73%
CapEx	▲ 2,277	▲ 3,865	▲ 2,810	▲ 4,195	▲ 3,267	43%
Cash from Investing Activities	**▲ 3,180**	**▲ 9,942**	**▲ 13,590**	**28,710**	**3,947**	---
Dividends Paid	▲ 3,365	▲ 3,270	▲ 3,339	▲ 3,190	▲ 3,653	9%
Cash from Financing Activities	**▲ 1,769**	**▲ 3,996**	**▲ 7,501**	**▲ 26,272**	**▲ 31,523**	1682%
FOCF	6,086	11,791	25,483	10,935	11,221	84%
FCF	5,183	5,714	14,703	43,840	18,435	256%

Source: Company materials, Bloomberg; compiled by Daiwa.

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Chart 9: Product Segment

($m) 3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018	Y/Y Change
Total Revenues	**45,408**	**52,579**	**88,293**	**61,137**	**53,265**	**17.3%**
iPhone						
Revenue	**24,846**	**28,846**	**61,576**	**38,032**	**29,906**	**20.4%**
Average Sales Price	606	618	796	728	724	19.6%
Number of Units Sold	41,026,000	46,677,000	77,316,000	52,217,000	41,300,000	0.7%
iPad						
Revenue	**4,969**	**4,831**	**5,862**	**4,113**	**4,741**	**-4.6%**
Average Sales Price	435	468	445	451	410	-5.7%
Number of Units Sold	11,424,000	10,326,000	13,170,000	9,113,000	11,553,000	1.1%
Mac						
Revenue	**5,592**	**7,170**	**6,895**	**5,848**	**5,330**	**-4.7%**
Average Sales Price	1,303	1,331	1,349	1,434	1,433	10.0%
Number of Units Sold	4,292,000	5,386,000	5,112,000	4,078,000	3,720,000	-13.3%
Other Products						
Revenue	**2,735**	**3,231**	**5,489**	**3,954**	**3,740**	**36.7%**
Services						
Revenue	**7,266**	**8,501**	**8,471**	**9,190**	**9,548**	**31.4%**

Source: Company materials, Bloomberg; compiled by Daiwa.

Chart 10: Product Segment- % of total revenues

($m) 3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018
Total Revenues	**45,408**	**52,579**	**88,293**	**61,137**	**53,265**
iPhone	55%	55%	70%	62%	56%
iPad	11%	9%	7%	7%	9%
Mac	12%	14%	8%	10%	10%
Other Products	6%	6%	6%	6%	7%
Services	16%	16%	10%	15%	18%

Source: Company materials, Bloomberg; compiled by Daiwa.

Chart 11: Product Segment- y/y growth

3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018
Total Revenues	**7%**	**12%**	**13%**	**16%**	**17%**
iPhone	3%	2%	13%	14%	20%
iPad	2%	14%	6%	6%	-5%
Mac	7%	25%	-5%	0%	-5%
Other Products	23%	36%	36%	38%	37%
Services	22%	34%	18%	31%	31%

Source: Company materials, Bloomberg; compiled by Daiwa.

Chart 12: Geographical Segment

($m) 3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018	Y/Y Change
Revenue	**45,408**	**52,579**	**88,293**	**61,137**	**53,265**	17.3%
Americas	20,376	23,099	35,193	24,841	24,542	20.4%
Asia-Pacific (Australia & Asia)	10,733	12,613	24,809	16,982	12,718	18.5%
Greater China	8,004	9,801	17,956	13,024	9,551	19.3%
Rest of Asia Pacific	2,729	2,812	6,853	3,958	3,167	16.0%
Europe	10,675	13,009	21,054	13,846	12,138	13.7%
Japan	3,624	3,858	7,237	5,468	3,867	6.7%
Operating Income	**10,768**	**13,120**	**26,274**	**15,894**	**12,612**	17.1%
Americas	6,420	7,102	11,316	7,768	7,496	16.8%
Asia-Pacific (Australia & Asia)	3,894	4,504	9,483	6,241	4,541	16.6%
Greater China	3,002	3,630	6,908	4,963	3,414	13.7%
Rest of Asia Pacific	892	874	2,575	1,278	1,127	26.3%
Europe	2,984	3,943	6,893	4,259	3,892	30.4%
Japan	1,624	1,763	3,082	2,346	1,765	8.7%

Source: Company materials, Bloomberg; compiled by Daiwa.

Chart 13: Geographical Segment- % of revenues/ operating income

3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018
Revenue	**45,408**	**52,579**	**88,293**	**61,137**	**53,265**
Americas	45%	44%	40%	41%	46%
Asia-Pacific (Australia & Asia)	24%	24%	28%	28%	24%
Greater China	18%	19%	20%	21%	18%
Rest of Asia Pacific	6%	5%	8%	6%	6%
Europe	24%	25%	24%	23%	23%
Japan	8%	7%	8%	9%	7%
Operating Income	**10,768**	**13,120**	**26,274**	**15,894**	**12,612**
Americas	43%	41%	37%	38%	42%
Asia-Pacific (Australia & Asia)	26%	26%	31%	30%	26%
Greater China	20%	21%	22%	24%	19%
Rest of Asia Pacific	6%	5%	8%	6%	6%
Europe	20%	23%	22%	21%	22%
Japan	11%	10%	10%	11%	10%

Source: Company materials, Bloomberg; compiled by Daiwa.

Chart 14: Geographical Segment- y/y growth

3 Months Ending	Q3 2017 07/01/2017	Q4 2017 09/30/2017	Q1 2018 12/30/2017	Q2 2018 03/31/2018	Q3 2018 06/30/2018
Revenue	**7%**	**12%**	**13%**	**16%**	**17%**
Americas	13%	14%	10%	17%	20%
Asia-Pacific (Australia & Asia)	-4%	10%	12%	17%	18%
Greater China	-10%	12%	11%	21%	19%
Rest of Asia Pacific	15%	5%	17%	4%	16%
Europe	11%	20%	14%	9%	14%
Japan	3%	-11%	26%	22%	7%
Operating Income	**7%**	**12%**	**12%**	**13%**	**17%**
Americas	18%	8%	8%	16%	17%
Asia-Pacific (Australia & Asia)	-7%	15%	13%	13%	17%
Greater China	-12%	20%	12%	17%	14%
Rest of Asia Pacific	18%	-3%	16%	-2%	26%
Europe	12%	19%	20%	11%	30%
Japan	13%	13%	15%	15%	9%

Source: Company materials, Bloomberg; compiled by Daiwa.

Explanatory Document of Unregistered Credit Ratings

In order to ensure the fairness and transparency in the markets, Credit Rating Agencies became subject to the Credit Rating Agencies' registration system based on the Financial Instruments and Exchange Act. In accordance with this Act, in soliciting customers, Financial Instruments Business Operators, etc. shall not use the credit ratings provided by unregistered Credit Rating Agencies without informing customers of the fact that those Credit Rating Agencies are not registered, and shall also inform customers of the significance and limitations of credit ratings, etc.

■ The Significance of Registration

Registered Credit Rating Agencies are subject to the following regulations:
1) Duty of good faith.
2) Establishment of control systems (fairness of the rating process, and prevention of conflicts of interest, etc.).
3) Prohibition of the ratings in cases where Credit Rating Agencies have a close relationship with the issuers of the financial instruments to be rated, etc.
4) Duty to disclose information (preparation and publication of rating policies, etc. and public disclosure of explanatory documents).

In addition to the above, Registered Credit Rating Agencies are subject to the supervision of the Financial Services Agency ("FSA"), and as such may be ordered to produce reports, be subject to on-site inspection, and be ordered to improve business operations, whereas unregistered Credit Rating Agencies are free from such regulations and supervision.

■ Credit Rating Agencies

[Standard & Poor's]

The Name of the Credit Rating Agencies group, etc

The name of the Credit Rating Agencies group: S&P Global Ratings ("Standard & Poor's")
The name and registration number of the Registered Credit Rating Agency in the group: S&P Global Ratings Japan Inc. (FSA commissioner (Rating) No.5)

How to acquire information related to an outline of the rating policies and methods adopted by the person who determines Credit Ratings

The information is posted under "Unregistered Rating Information" (http://www.standardandpoors.co.jp/unregistered) in the "Library and Regulations" section on the website of S&P Global Ratings Japan Inc. (http://www.standardandpoors.co.jp)

Assumptions, Significance and Limitations of Credit Ratings

Credit ratings assigned by Standard & Poor's are statements of opinion on the future credit quality of specific issuers or issues as of the date they are expressed and they are not indexes which show the probability of the occurrence of the failure to pay by the issuer or a specific debt and do not guarantee creditworthiness. Credit ratings are not a recommendation to purchase, sell or hold any securities, or a statement of market liquidity or prices in the secondary market of any issues.

Credit ratings may change depending on various factors, including issuers' performance, changes in external environment, performance of underlying assets, creditworthiness of counterparties and others. Standard & Poor's conducts rating analysis based on information it believes to be provided by the reliable source and assigns credit ratings only when it believes there is enough information in terms of quality and quantity to make a conclusion. However, Standard & Poor's does not perform an audit, due diligence or independent verification of any information it receives from the issuer or a third party, or guarantee its accuracy, completeness or timeliness of the results by using the information. Moreover, it needs to be noted that it may incur a potential risk due to the limitation of the historical data that are available for use depending on the rating.

This information is based on information Daiwa Securities Co. Ltd. has received from sources it believes to be reliable as of March 7th, 2017, but it does not guarantee accuracy or completeness of this information. For details, please refer to the website of S&P Global Ratings Japan Inc. (http://www.standardandpoors.co.jp)

[Moody's]

The Name of the Credit Rating Agencies Group, etc

The name of the Credit Rating Agencies group: Moody's Investors Service ("MIS")
The name and registration number of the Registered Credit Rating Agency in the group: Moody's Japan K.K. (FSA commissioner (Rating) No.2)

How to acquire information related to an outline of the rating policies and methods adopted by the person who determines Credit Ratings

The information is posted under "Unregistered Rating explanation" in the section on "The use of Ratings of Unregistered Agencies" on the website of Moody's Japan K.K. (The website can be viewed after clicking on "Credit Rating Business" on the Japanese version of Moody's website (https://www.moodys.com/pages/default_ja.aspx)

Assumptions, Significance and Limitations of Credit Ratings

Credit ratings are Moody's Investors Service's ("MIS") current opinions of the relative future credit risk of entities, credit commitments, or debt or debt-like securities. MIS defines credit risk as the risk that an entity may not meet its contractual, financial obligations as they come due and any estimated financial loss in the event of default. Credit ratings do not address any other risk, including but not limited to: liquidity risk, market value risk, or price volatility. Credit ratings do not constitute investment or financial advice, and credit ratings are not recommendations to purchase, sell, or hold particular securities. No warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability or fitness for any particular purpose of any such rating or other opinion or information, is given or made by MIS in any form or manner whatsoever.

Based on the information received from issuers or from public sources, the credit risks of the issuers or obligations are assessed. MIS adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MIS considers to be reliable. However, MIS is not an auditor and cannot in every instance independently verify or validate information received in the rating process.

This information is based on information Daiwa Securities Co. Ltd. has received from sources it believes to be reliable as of April 16th, 2018, but it does not guarantee accuracy or completeness of this information. For details, please refer to the website of Moody's Japan K.K. (https://www.moodys.com/pages/default_ja.aspx)

[Fitch]

The Name of the Credit Rating Agencies group, etc

The name of the Credit Rating Agencies group: Fitch Ratings ("Fitch")
The name and registration number of the Registered Credit Rating Agency in the group: Fitch Ratings Japan Limited (FSA commissioner (Rating) No.7)

How to acquire information related to an outline of the rating policies and methods adopted by the person who determines Credit Ratings

The information is posted under "Outline of Rating Policies" in the section of "Regulatory Affairs" on the website of Fitch Ratings Japan Limited (https://www.fitchratings.co.jp/web/)

Assumptions, Significance and Limitations of Credit Ratings

Ratings assigned by Fitch are opinions based on established criteria and methodologies. Ratings are not facts, and therefore cannot be described as being "accurate" or "inaccurate". Credit ratings do not directly address any risk other than credit risk. Credit ratings do not comment on the adequacy of market price or market liquidity for rated instruments. Ratings are relative measures of risk; as a result, the assignment of ratings in the same category to entities and obligations may not fully reflect small differences in the degrees of risk. Credit ratings, as opinions on relative ranking of vulnerability to default, do not imply or convey a specific statistical probability of default.

In issuing and maintaining its ratings, Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The assignment of a rating to any issuer or any security should not be viewed as a guarantee of the accuracy, completeness, or timeliness of the information relied on in connection with the rating or the results obtained from the use of such information. If any such information should turn out to contain misrepresentations or to be otherwise misleading, the rating associated with that information may not be appropriate. Despite any verification of current facts, ratings can be affected by future events or conditions that were not anticipated at the time a rating was issued or affirmed.

For the details of assumption, purpose and restriction of credit ratings, please refer to "Definitions of ratings and other forms of opinion" on the website of Fitch Rating Japan Limited.

This information is based on information Daiwa Securities Co. Ltd. has received from sources it believes to be reliable as of May 13th, 2016, but it does not guarantee accuracy or completeness of this information. For details, please refer to the website of Fitch Rating Japan Limited (https://www.fitchratings.co.jp/web/)

May 2018

IMPORTANT

This report is provided as a reference for making investment decisions and is not intended to be a solicitation for investment. Investment decisions should be made at your own discretion and risk. Content herein is based on information available at the time the report was prepared and may be amended or otherwise changed in the future without notice. We make no representations as to the accuracy or completeness. Daiwa Securities Co. Ltd. retains all rights related to the content of this report, which may not be redistributed or otherwise transmitted without prior consent.

Notification items pursuant to Article 37 of the Financial Instruments and Exchange Law

If you decide to enter into a business arrangement with our company based on the information described in this report, we ask you to pay close attention to the following items.

• In addition to the purchase price of a financial instrument, our company will collect a trading commission* for each transaction as agreed beforehand with you. Since commissions may be included in the purchase price or may not be charged for certain transactions, we recommend that you confirm the commission for each transaction. In some cases, our company also may charge a maximum of ¥ 2 million (including tax) per year as a standing proxy fee for our deposit of your securities, if you are a non-resident.
• For derivative and margin transactions etc., our company may require collateral or margin requirements in accordance with an agreement made beforehand with you. Ordinarily in such cases, the amount of the transaction will be in excess of the required collateral or margin requirements**.
• There is a risk that you will incur losses on your transactions due to changes in the market price of financial instruments based on fluctuations in interest rates, exchange rates, stock prices, real estate prices, commodity prices, and others. In addition, depending on the content of the transaction, the loss could exceed the amount of the collateral or margin requirements.
• There may be a difference between bid price etc. and ask price etc. of OTC derivatives handled by our company.
• Before engaging in any trading, please thoroughly confirm accounting and tax treatments regarding your trading in financial instruments with such experts as certified public accountants.

* The amount of the trading commission cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

** The ratio of margin requirements etc. to the amount of the transaction cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

When making an actual transaction, please be sure to carefully read the materials presented to you prior to the execution of agreement, and to take responsibility for your own decisions regarding the signing of the agreement with our company.

Corporate Name: Daiwa Securities Co. Ltd.
Registered: Financial Instruments Business Operator
Chief of Kanto Local Finance Bureau (Kin-sho) No.108
Memberships: Japan Securities Dealers Association
The Financial Futures Association of Japan
Japan Investment Advisers Association
Type II Financial Instruments Firms Association