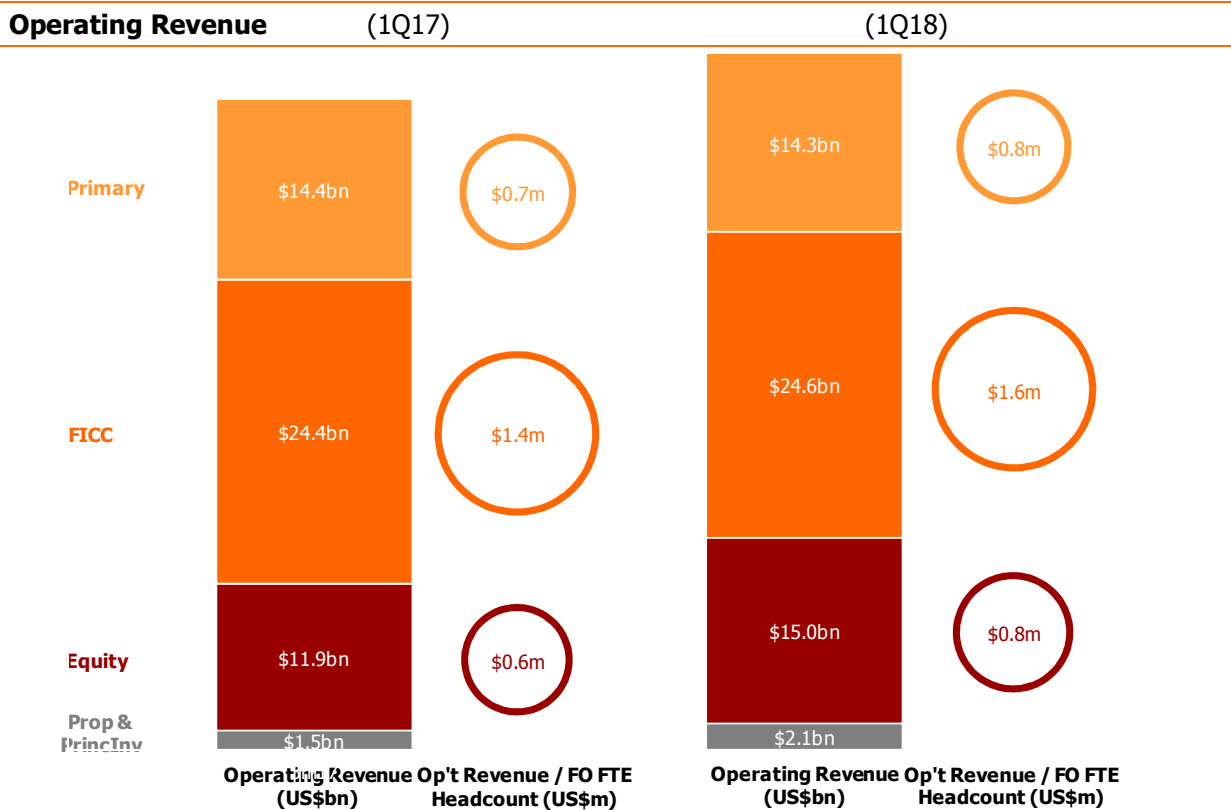


Results Review 1Q18

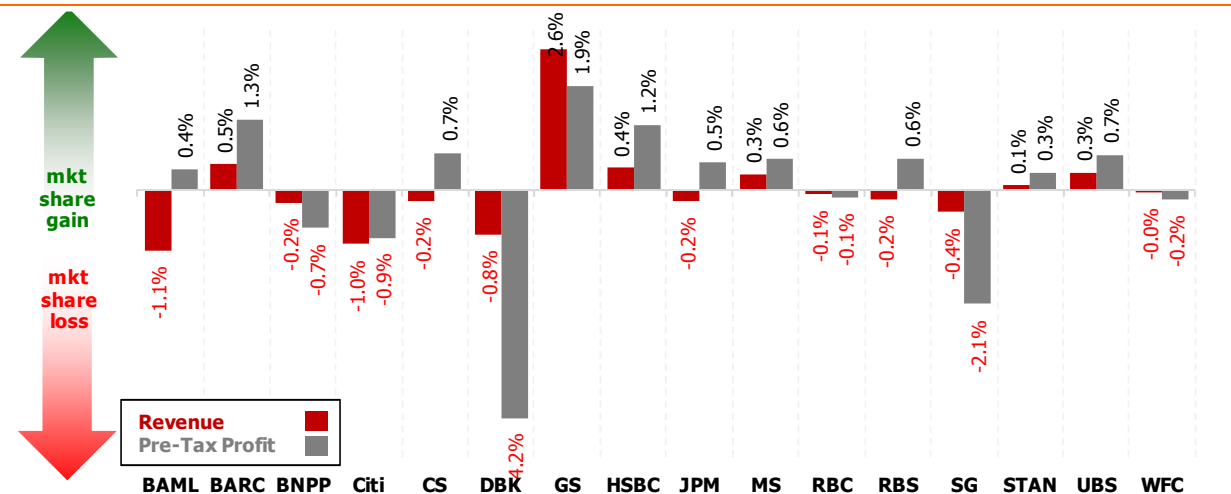
Capital Markets: Overview

New arrivals: Royal Bank of Canada, Standard Chartered, Wells Fargo

- The combined revenue of 16 banks in this report totalled \$56bn, 7% ahead of the prior-year period. Equities were the key contributor, helping US banks widen their lead over their EMEA peers in overall revenue and profit. Productivity increased in all major product areas.
- The main US regulators - The Fed, OCC, FDIC, SEC and CFTC - published a joint proposal for amendments to Volcker Rule. The main aim of the proposal is to clarify the definition and extent of prop trading, and to make compliance easier for smaller banks. Under the proposal, pure prop trading would remain forbidden, but the proposal would allow banks to establish and enforce internal trading limits for underwriting and market-making, and - more significantly - it exempts most foreign banks, even if a trade which originated outside of the US is routed via (or is financed by) a US affiliate. In our view, this is good news, as the original Volcker Rule was too prescriptive and mostly unnecessary: during 2008 Crisis, prop accounted for 4% of banks' total losses.



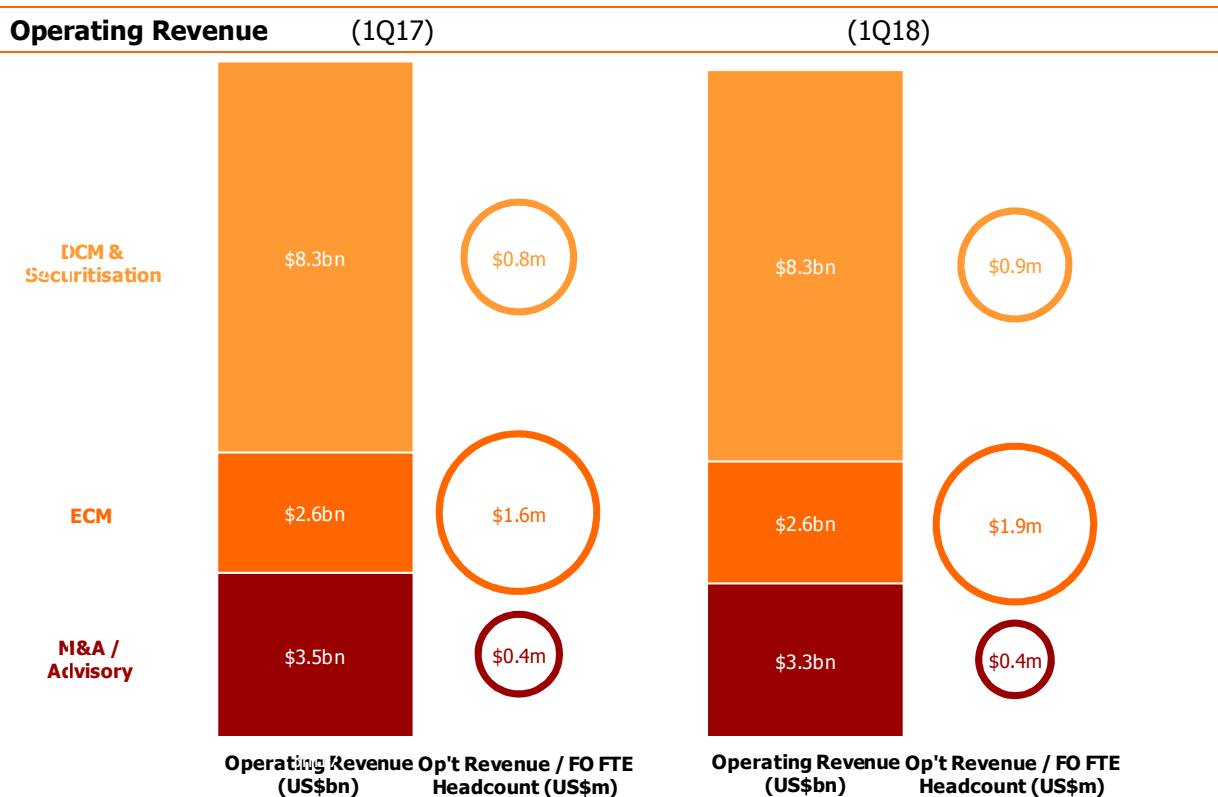
% change share of peer group operating revenue and pre-tax profit (1Q18 / Q17)



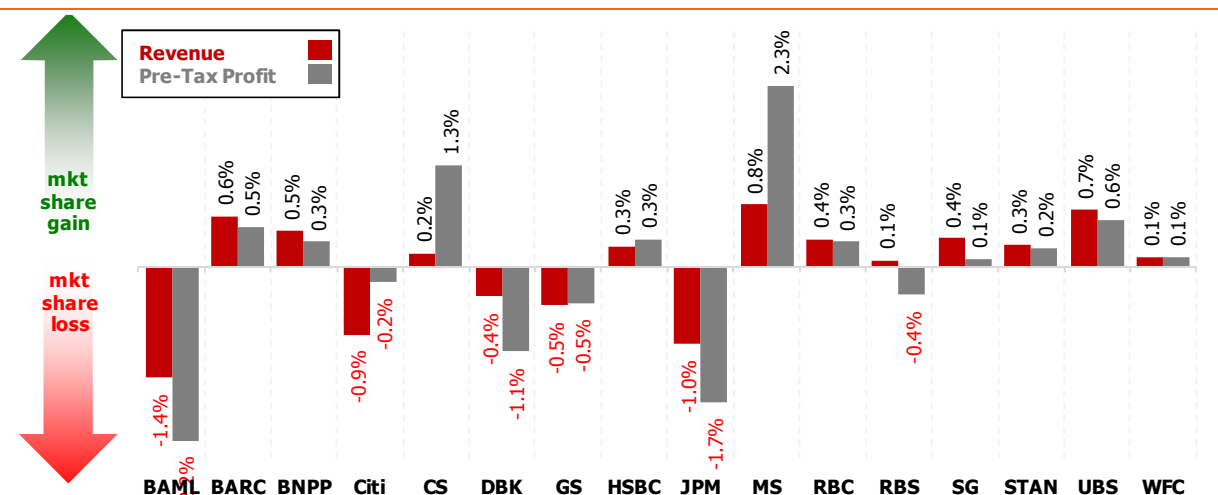
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments..

Capital Markets (cont.): Primary issuance & Advisory

- Bond underwriting fees declined 12% y/y on weakness in both main and emerging markets, and across high grade and high yield. In APAC, the accelerating pace of defaults - and the cancellation of several high-profile issues in China and elsewhere - points to a tough outlook for 2H18 and possibly beyond. Syndicated lending had a weak 1Q18; global fees declined 15% y/y, and more in EMEA (partly due to a sharp drop in UK volumes) and APAC. In securitisation, Agency CMO issuance surged 165% y/y. Agency trading and CMBS issuance both advanced modestly, but private-label trading volumes dropped 35% versus 1Q17.
- For the banks in this report, ECM fees were unchanged from the prior-year period. Industrywide global fees declined c.7-10%, despite multi-year record volumes in total deals and IPOs. China issuers' volumes surged 30%+ y/y.
- M&A/Advisory had an unexciting 1Q18: 'our' banks' fees fell 6% y/y versus the industry average of c.14%. However, 2Q18 had a strong start, spurred on by US tax reform and faster economic growth in Europe. Banks are generally optimistic regarding the outlook for the rest of the year and are hiring - especially in tech and activism-defence teams.



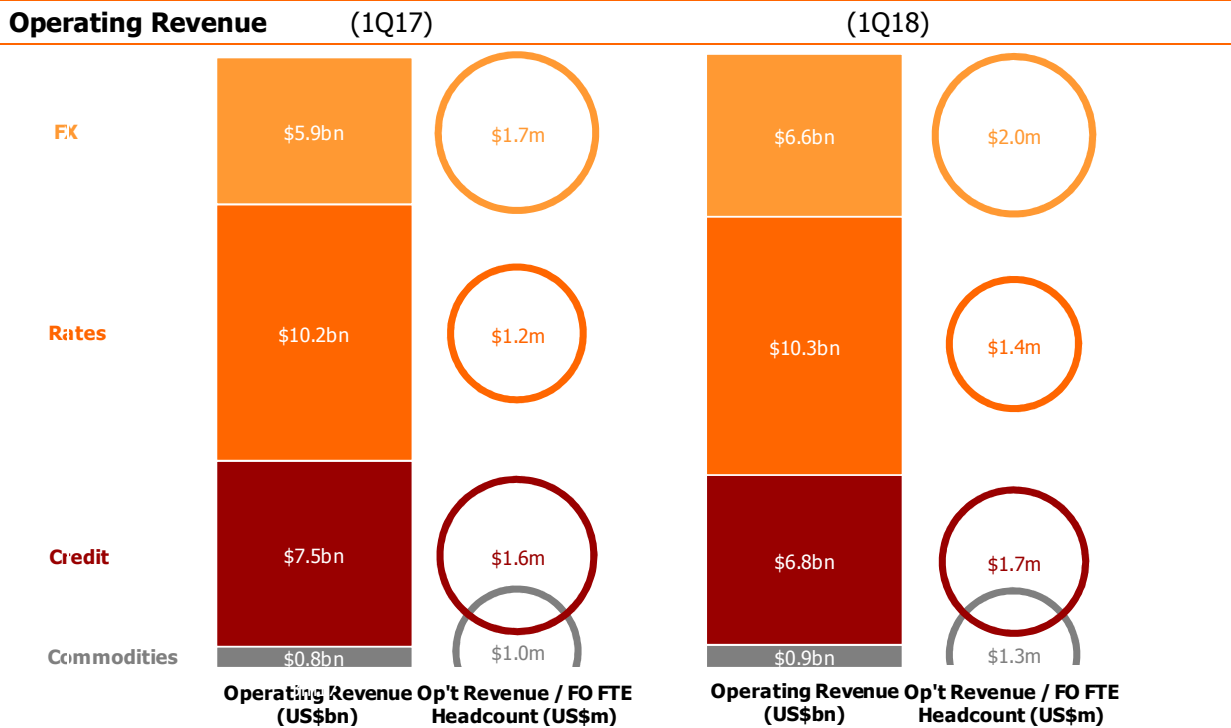
% change share of peer group operating revenue and pre-tax profit (1Q18 / 1Q17)



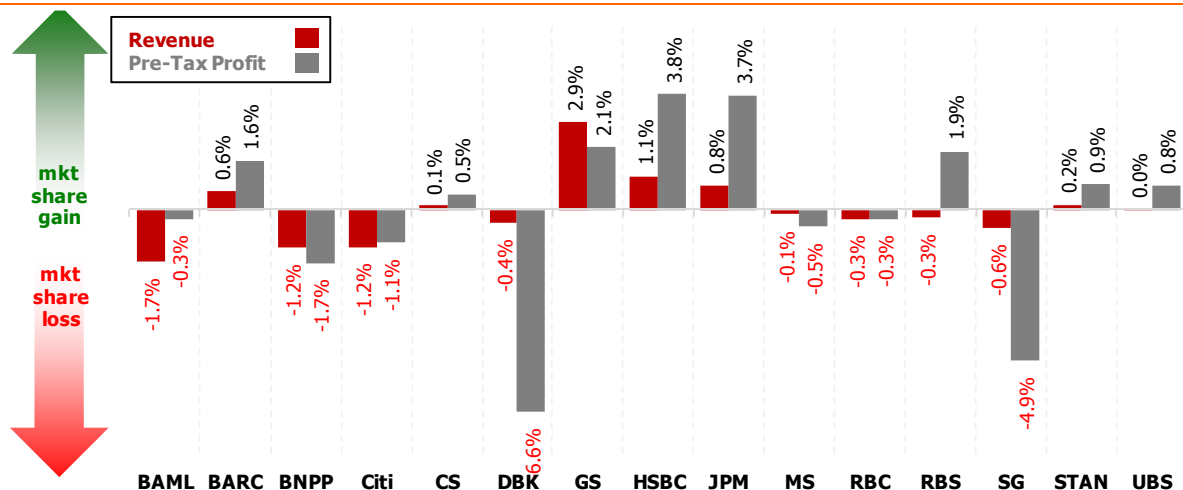
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority.

Capital Markets (cont.): FICC

- Growth in swap volumes and favourable margins supported FX trading. Spot markets were dominated by trading in APAC currencies.
In crypto markets, Goldman Sachs and J.P.Morgan have arguably taken the lead. Goldman Sachs, one of the first banks to start clearing crypto futures hired, Justin Schmidt to run Digital Asset Markets. The bank was also, in 2015, a lead investor - and remains a minority shareholder - in Circle, which claims to directly trade \$2tn worth of crypto-currencies per month. J.P.Morgan hired Oliver Harris as Head of crypto-asset strategy and internal blockchain platform Quorum.
- In Rates, weakness in repo trading was offset by solid growth in swap volumes and strong option trading. Emerging markets also made a significant contribution.
- In the US, credit markets weakened due to the 10-15% y/y decline in high grade and high yield volumes. Europe fared better, but the greatest activity was seen in emerging markets as investors sought to rebalance their portfolios.
- The increase in commodities revenue was, in large part, due to strong client demand in the US energy markets.



% change share of peer group operating revenue and pre-tax profit: (1Q18 / 1Q17)



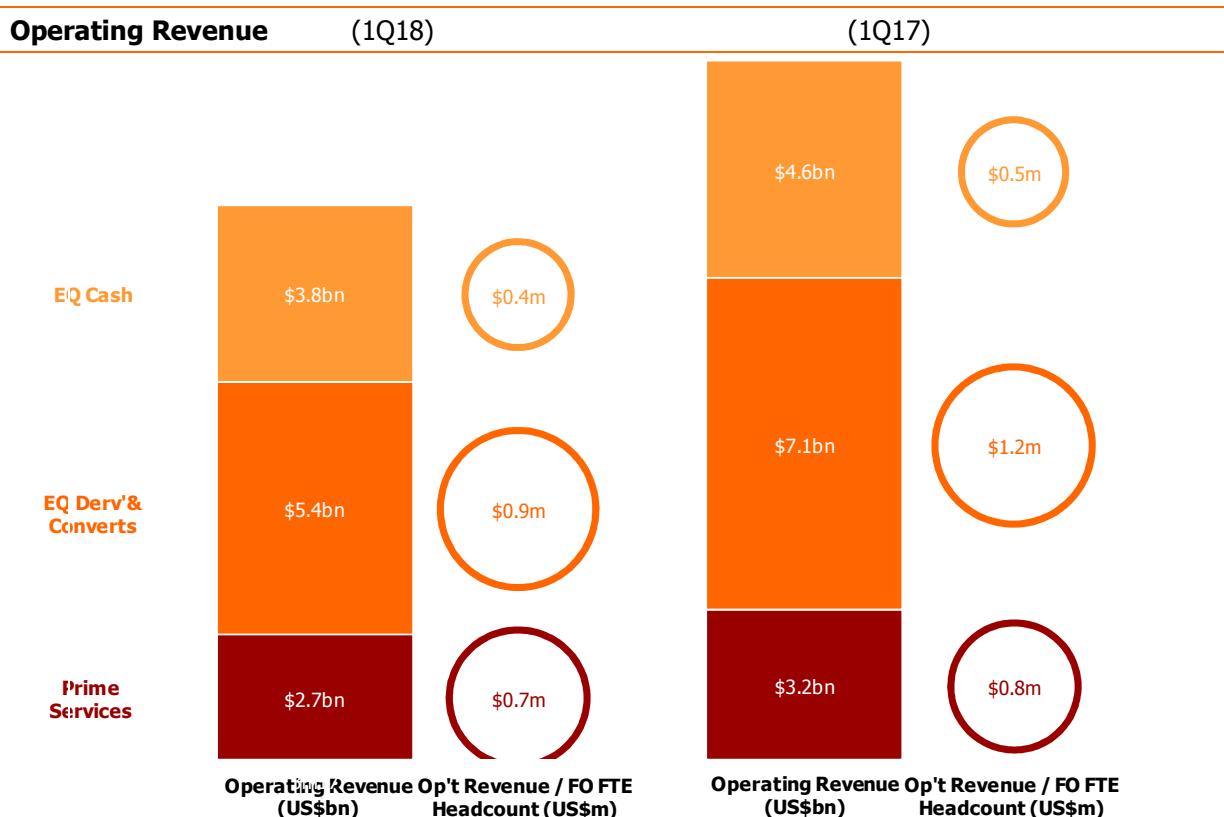
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments.

Capital Markets (cont.): Equities

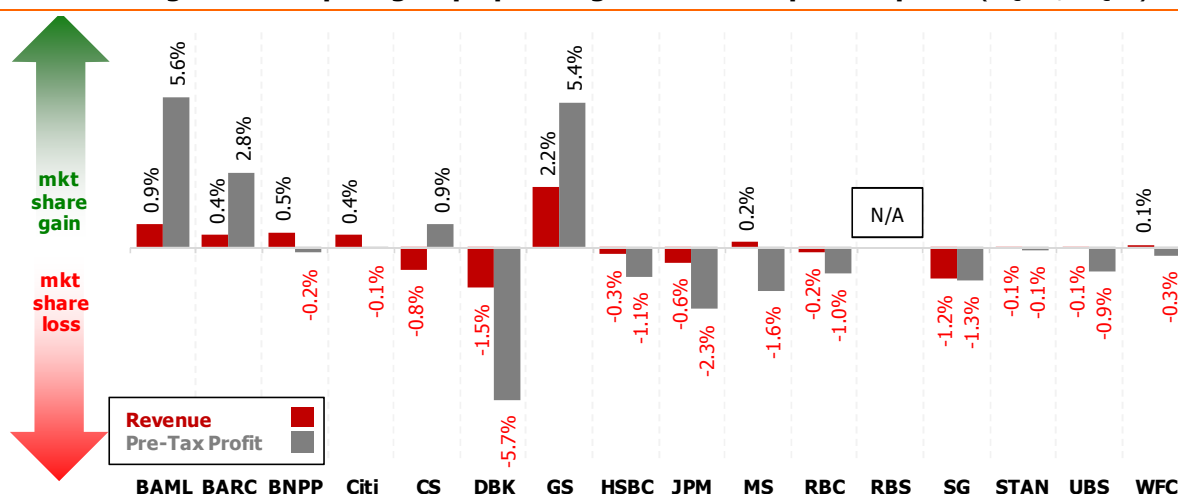
- Cash equity trading volumes grew across the globe. In the US and APAC, hi-touch volumes jumped 30% y/y; and, in the US, electronic trading surged 40% relative to 1Q17. Block trading proportion of dark trading exceeded 50% in weeks following the introduction of MiFID 2's double-volume cap.

A landmark development: China A shares went live on MSCI Emerging Market index on 1-June, following three straight years of denied admittance to the benchmark index. Initially, the index - which is tracked by an estimated \$2tn worth of funds under management worldwide - will initially include 230 large-caps, but MSCI expects to add many more in 2H18.

- Equity derivatives outperformed on strong growth in all major regions, in both flow and structured products. The US advanced the most, followed by APAC and Europe.
- Prime services benefitted from growth in hedge fund assets. However, securities lending volumes declined 12% versus 1Q17.



% change share of peer group operating revenue and pre-tax profit (1Q18 / 1Q17)

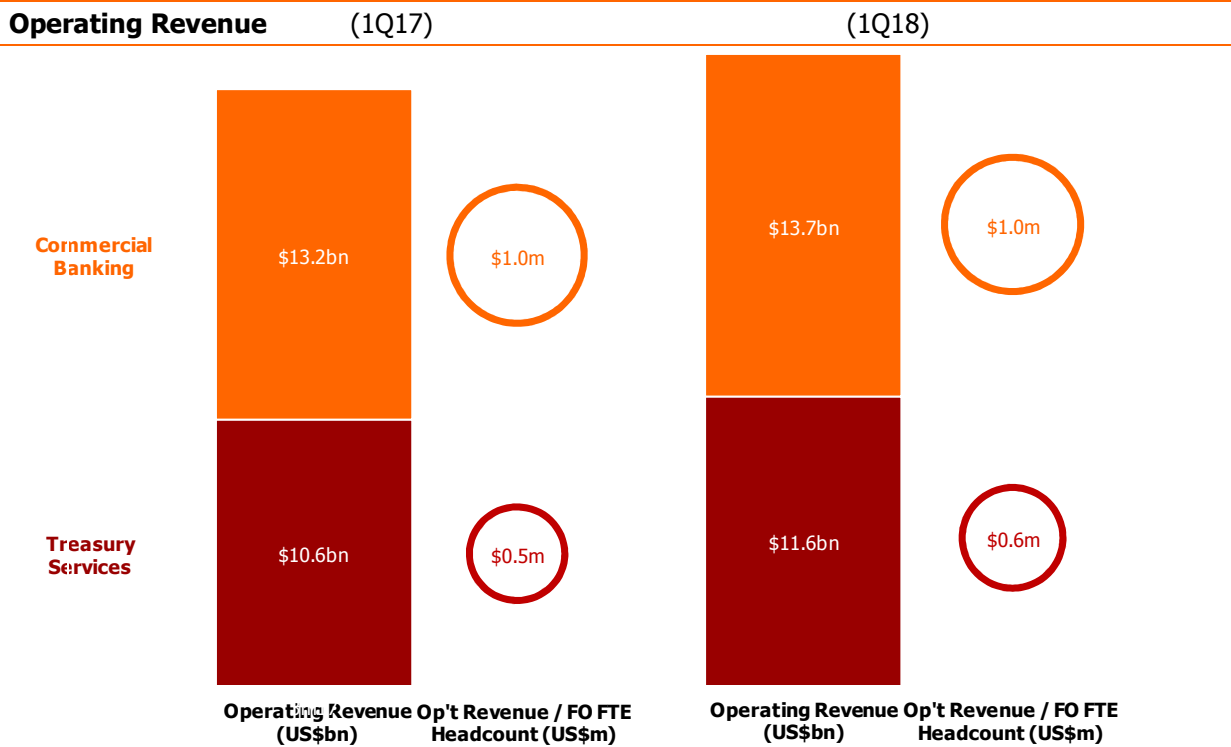


Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments.

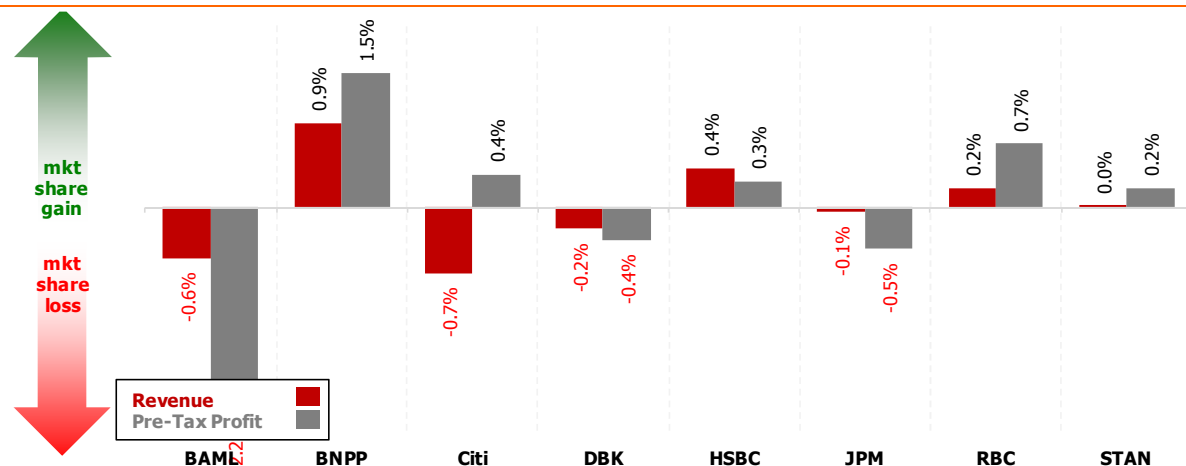
Commercial/Transaction Banking

New arrivals: Royal Bank of Canada, Standard Chartered

- Payments volumes grew 12% y/y, with APAC showing the strongest increase. Trade finance was flat, hampered by static volumes.
- Commercial lending in the US was essentially flat: new loans volumes were unchanged from 1Q17 and margins were also steady. In Europe, UK saw strong growth, with lending volumes rising as much as 10%. Germany, by contrast, suffered a decline in activity, with volume 11% below the prior-year period.



% change share of peer group operating revenue and pre-tax profit (1Q18 / 1Q17)

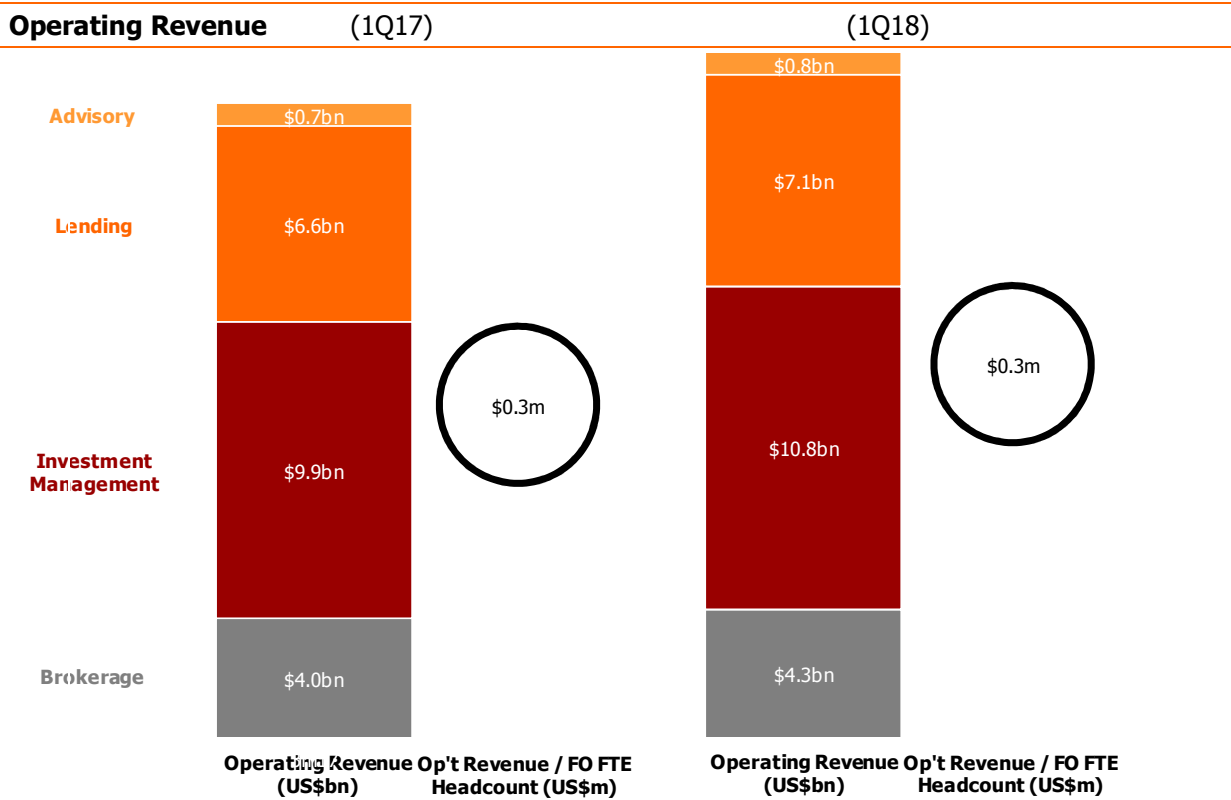


Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) In-scope: Large Cap/MNC and Mid-Cap/SMEs.

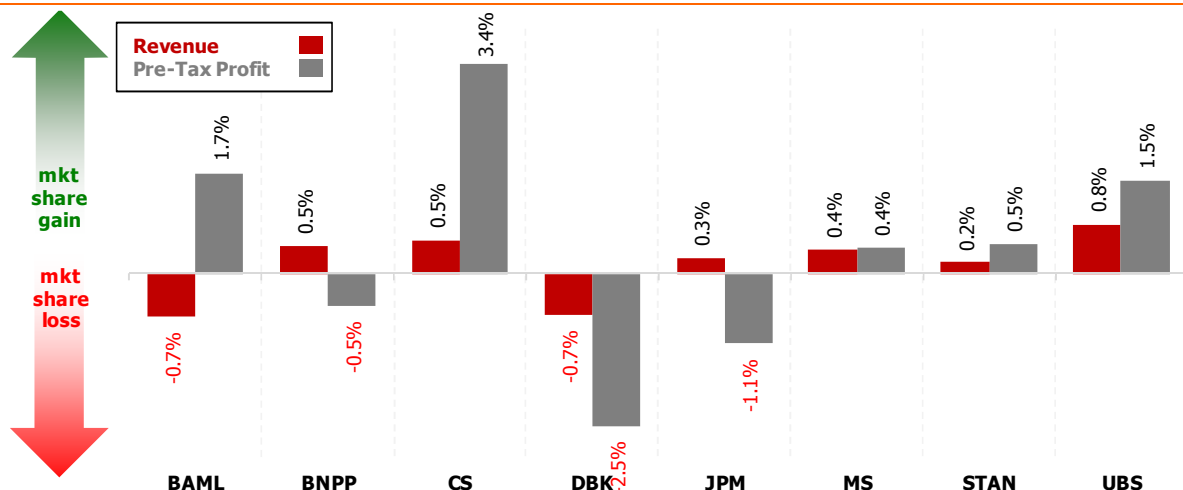
Wealth Management

New arrivals: *BNP Paribas, Standard Chartered*

- Banks in this note reported revenue of \$19bn in 1Q18, 8% ahead of 1Q17, and \$6.5bn pre-tax profit, up 16% y/y. This growth was evenly spread between lending, investment management and brokerage.
- The competition is intensifying in APAC, which became the world's largest HNWI market in 2017. Credit Suisse, J.P.Morgan and Standard Chartered all raised their minimum asset requirements in recent times; while BNPP, HSBC and UBS are targeting the sub-\$5m segment. Morgan Stanley has created a new 70-strong Family Office Resources team, focused on the bank's UHNWI clients.
- A digital wealth management startup Exo launched in the UK - and it shows how technology could further heat up the battle for fees. Exo offers AI-powered advice, choosing an investor's portfolio among 500+ ETFs. It's hardly alone in the field of AI investing - majors have been there for years - but Exo's offer is interesting: the minimum investment is £10k and the fee is 0.75% up to £100k, then it drops to 0.50% - a very competitive offering, comparable to single (i.e. no-advice) ETFs.



% change share of peer group operating revenue and pre-tax profit (1Q18 / 1Q17)



Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority.

Revenue dynamics

1Q18 / 1Q17 (Operating revenue, % change, US\$, Global Level 1)

	BAML	BARC	BNPP	Citi	CS	DBK	GS	HSBC	JPM	MS	RBC	RBS	SG	STAN	UBS	WFC	Top 25%	Bottom 25%
Capital Markets	↓	↑	↓	↓	↓	↓	↑	↑	→	→	↓	↓	↓	→	↑	→	+14%	-3%
Primary	↓	→	→	↓	↓	↓	↓	→	↓	↓	→	↑	↑	↑	↑	↓	+15%	-6%
DCM Bonds	↓	→	↑	↓	↓	↓	↓	→	↓	↓	↑	↑	↓	→	↑	→	+10%	-14%
DCM Loans	↓	→	↑	→	↓	↑	↓	→	↓	↑	↓	→	→	→	↓	↑	+19%	-11%
Securisation	↑	↑	↓	↓	→	→	↓	↓	↓	↓	↓	↑	→	↓	↓	→	+13%	-1%
ECM	↓	↑	↓	↓	↑	↓	↓	↓	↓	→	↓	N/M	→	→	↑	→	+16%	-13%
M&A / Advisory	↓	→	→	↓	→	↓	↓	↓	↑	↑	↓	N/M	↑	→	↑	↓	+9%	-21%
Sales & Trading	↓	↑	↓	↓	↓	↓	↑	↑	→	→	↓	↓	↓	→	↑	→	+13%	-1%
FX	↓	↑	↓	↓	→	↓	↑	→	↑	→	↓	↓	↓	↓	↓	→	+20%	-6%
Rates	→	↑	↓	↓	→	↓	↑	↑	→	→	↓	↓	↓	↓	↓	↓	+11%	-12%
Credit	↓	→	↓	↓	→	→	↓	↓	→	↓	↓	↓	↓	↓	↓	↑	+1%	-22%
Commodities	↓	N/M	↓	→	↓	N/M	↑	↓	↑	↓	→	N/M	↓	↓	↓	↑	+16%	-12%
EQ Cash	↑	↓	↓	↑	↓	↓	↑	→	→	↓	→	N/M	↓	N/M	↓	↑	+28%	-1%
EQ Derv & Converts	↑	↑	↑	→	↓	↓	→	↓	↓	↓	↓	N/M	↓	N/M	→	↑	+48%	+22%
Prime Services	↓	↑	↓	↓	↓	→	→	↑	↓	↑	↓	N/M	→	↓	→	↑	+22%	+7%
Prop Trading	N/M	N/M	→	N/M	↓	N/M	↑	N/M	→	N/M	N/M	N/M	↓	N/M	N/M	N/M	+39%	-38%
Principal Investments	N/M	N/M	N/M	N/M	↓	↓	→	↑	N/M	↓	N/M	N/M	N/M	N/M	N/M	N/M	+43%	-3%
Commercial / Transaction Banking	↓	N/M	→	↓	N/M	↓	N/M	↓	↓	↓	N/M	N/M	N/M	↓	N/M	N/M	+8%	+2%
Commercial Banking	↓	N/M	↑	↓	N/M	→	N/M	→	↓	N/M	↑	N/M	N/M	→	N/M	N/M	+10%	-3%
Treasury Services	↑	N/M	→	→	N/M	↓	N/M	↑	↑	N/M	↓	N/M	N/M	→	N/M	N/M	+13%	+3%
Wealth Management	→	N/M	↑	N/M	↑	↓	N/M	N/M	↑	↑	N/M	N/M	N/M	↑	↑	→	+18%	+6%
Advisory	↑	N/M	→	N/M	↑	↓	N/M	N/M	↓	→	N/M	N/M	N/M	↑	→	→	+24%	-3%
Lending	→	N/M	↑	N/M	↑	↓	N/M	N/M	↑	→	N/M	N/M	N/M	↑	↑	→	+12%	+4%
Investment Management	→	N/M	↑	N/M	↑	↓	N/M	N/M	↑	↑	N/M	N/M	N/M	↑	↑	→	+17%	+5%
Brokerage	→	N/M	↑	N/M	↑	↓	N/M	N/M	↓	↓	N/M	N/M	N/M	↑	→	→	+20%	-6%

Source: Tricumen. Notes: (1) Tricumen product definitions throughout. (2) Arrows show % change in revenue vs peers. Up-/down-arrows: top-/bottom-quartile. (3) Revenue is post-writedowns, excludes DVA/equivalent and one-offs, as described in the Company Section. (4) In-scope: Large Cap/MNC and Mid-Cap/SMEs.

Operating cost / income (US\$, Global Level 1)



Source: Tricumen. Notes: (1) TRIC product definitions, standard deviation, product Level 1; (2) Operating expenses exclude one-off non-operational items, insurance-related benefits & claims, and credit expense/recovery/NPL provisions. Capital expenditure is included as accrued. Litigation expense is allocated to front-line units. (3) positive values indicate outperformance; missing fields indicate that data is not meaningful, or available; (4) outliers are excluded. (5) RBS and STAN do not compete in Equities markets.

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Situated near Cambridge in the UK, Tricumen is almost exclusively staffed with senior individuals with an extensive track record of either working for or analysing banks; and boasts what we believe is the largest capital markets-focused research network of its peer group.

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