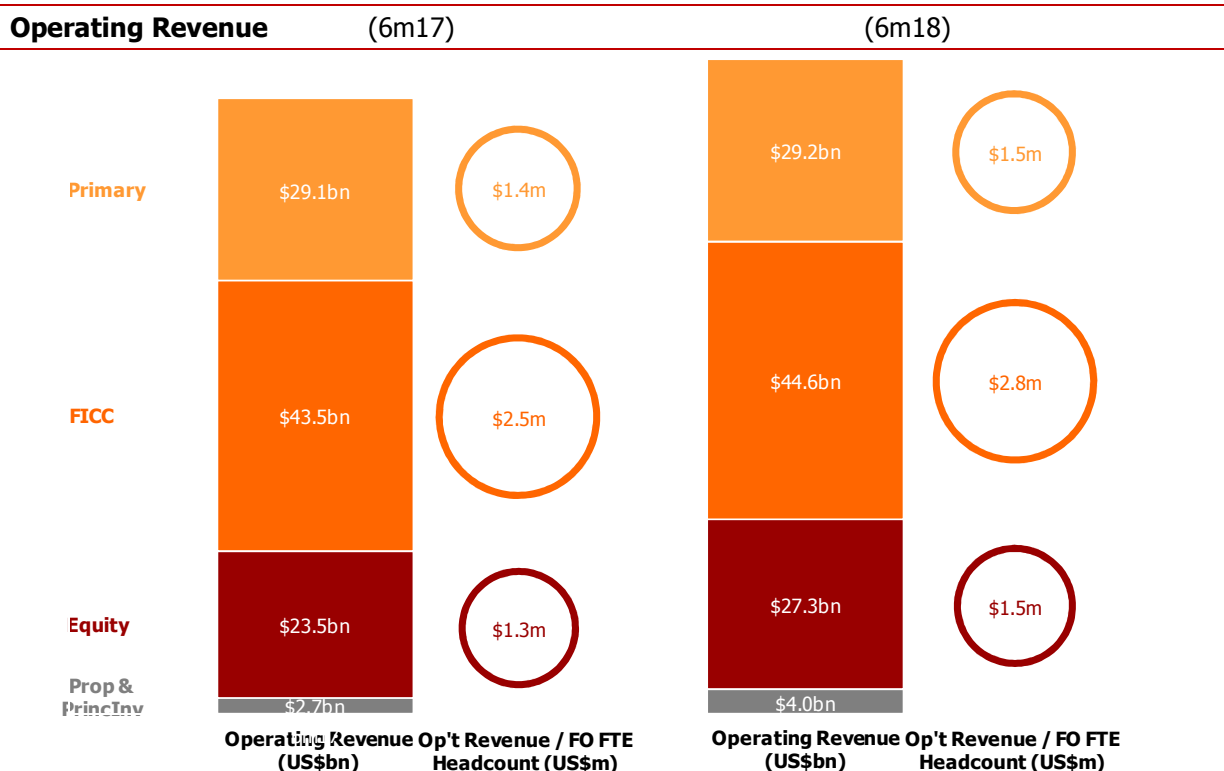


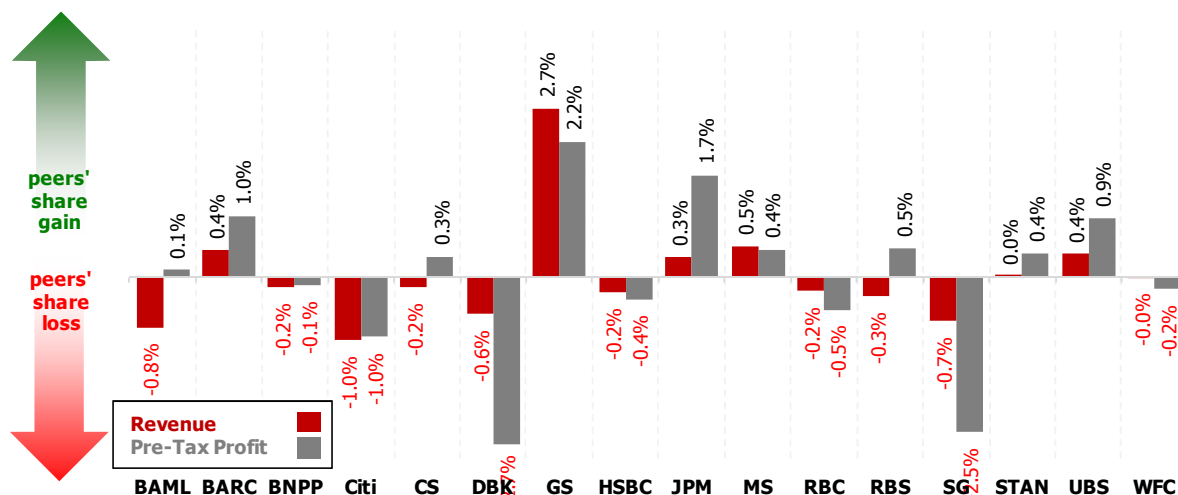
## Results Review 2Q18 / 6m18

### Capital Markets: Overview

- The operating revenue of Top 16 banks reached \$105bn in 6m18, a \$6bn y/y increase. Overall, European banks outperformed their US peers in primary/Banking revenues (+4% vs -1%), but American banks reported a 12% y/y increase in sales and trading (to \$47bn) versus just 1% for European banks. Pre-tax profits for all 16 banks grew by 3%, entirely due to strong Equities; US peers grew 6m18 profit by 7% y/y, while Europeans' profits shrank, by 8%.
- In late May-18, President Trump signed into law a measure which exempts smaller banks from certain Dodd-Frank rules - most notably, the 'Volcker Rule' on prop trading. The ban on prop trading for big banks remains in place, but with less red tape to consider; and this change suggests that further weakening of the Volcker Rule is on the cards. To our mind, this is a positive development, mostly because we view Volcker Rule as unnecessary: prop losses totalled <4% of total losses and writedowns sustained by 15 US and UK-based banks during the Crisis; and their prop gains in FY07-FY10 comfortably exceeded those losses.



### % change share of peer group operating revenue and pre-tax profit (6m18 / 6m17)

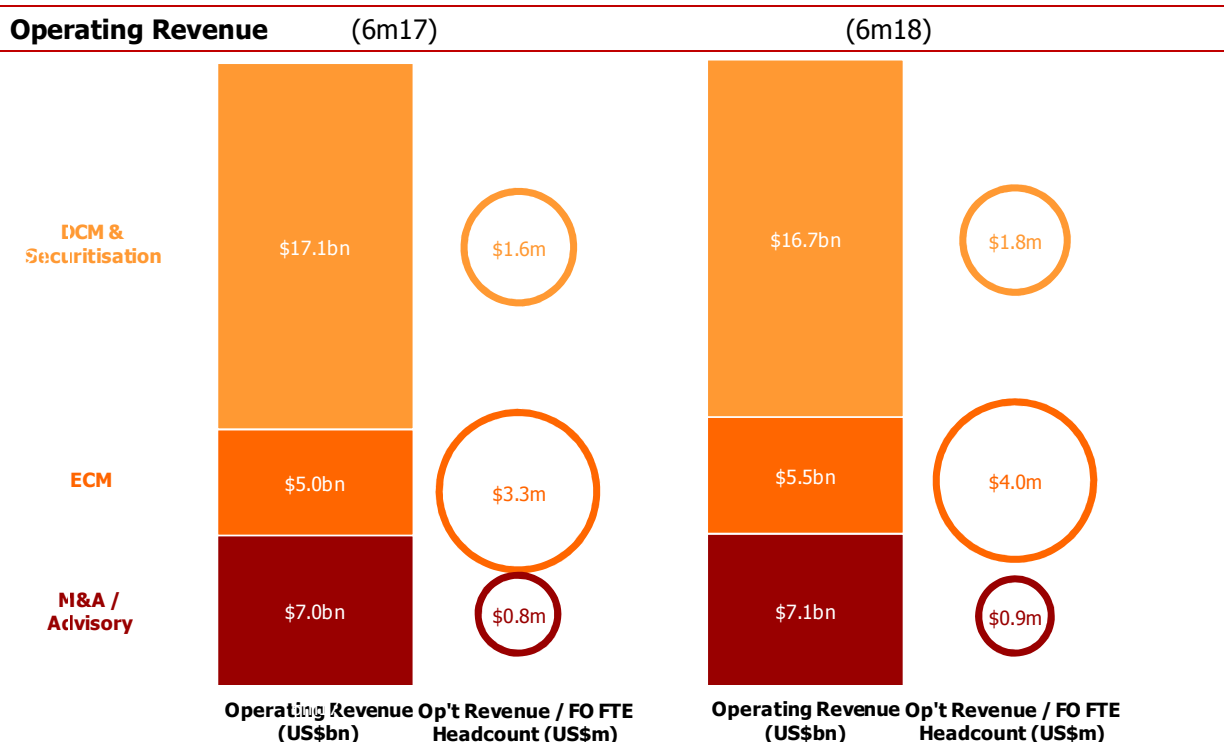


Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments..

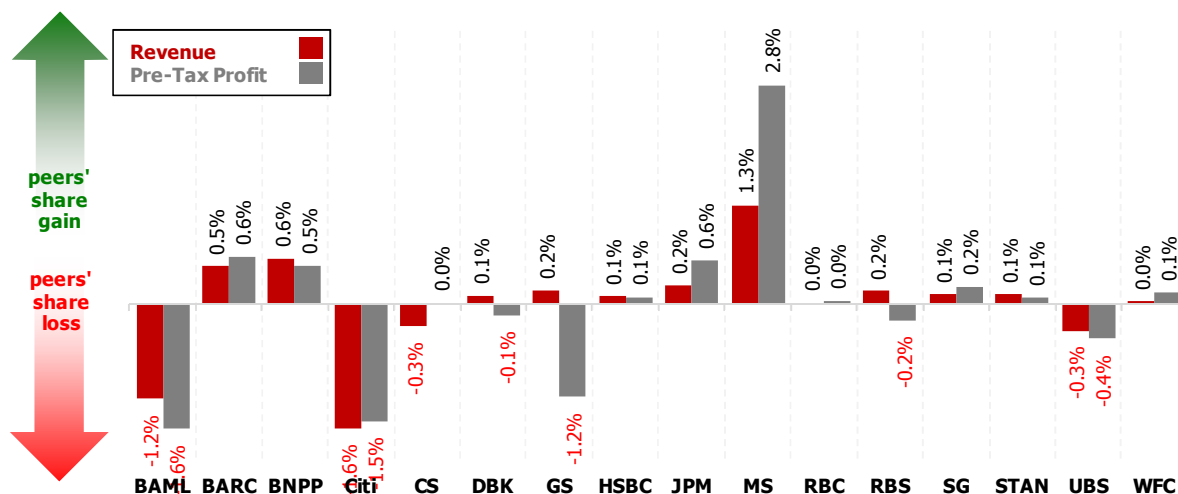
## Capital Markets (cont.): Primary issuance & Advisory

- In DCM bonds, the weakness seen in 1Q18 extended into 2Q18; a handful of APAC banks grew revenue in 6m18, but that was largely due to their comparably strong 1Q18. Fees earned by the banks in this report dropped 7% during 6m18/6m17. DCM loan fees for 'our' banks were stronger, though: +11% 6m18/6m17, on strong leveraged financing and M&A-related financing.
- ECM fees advanced 10% versus 6m17, to \$5.5bn. Globally, IPOs and converts reached new multi-year heights; the US banks were (again) the main beneficiaries, surging their 6m18 fees 14% y/y versus Europeans' 1%.
- As we expected, M&A/Advisory had a strong 2Q18: banks in this report grew their 2Q18 revenue by 7% y/y, reversing a decline seen in 1Q18. Regionally, Europe volumes nearly doubled in 6m18, with US not far behind. Banks remain optimistic regarding 2H18; we note, though, that mega-deals account for more than half of announced deals.

A new arrival in the market: Capital One. Better known for its credit cards, auto loans and other retail products, the firm has been quietly hiring capital markets specialists in recent years; and recently hired Jeffrey Porphy (ex-BAML) as Head of M&A.



### % change share of peer group operating revenue and pre-tax profit (6m18 / 6m17)

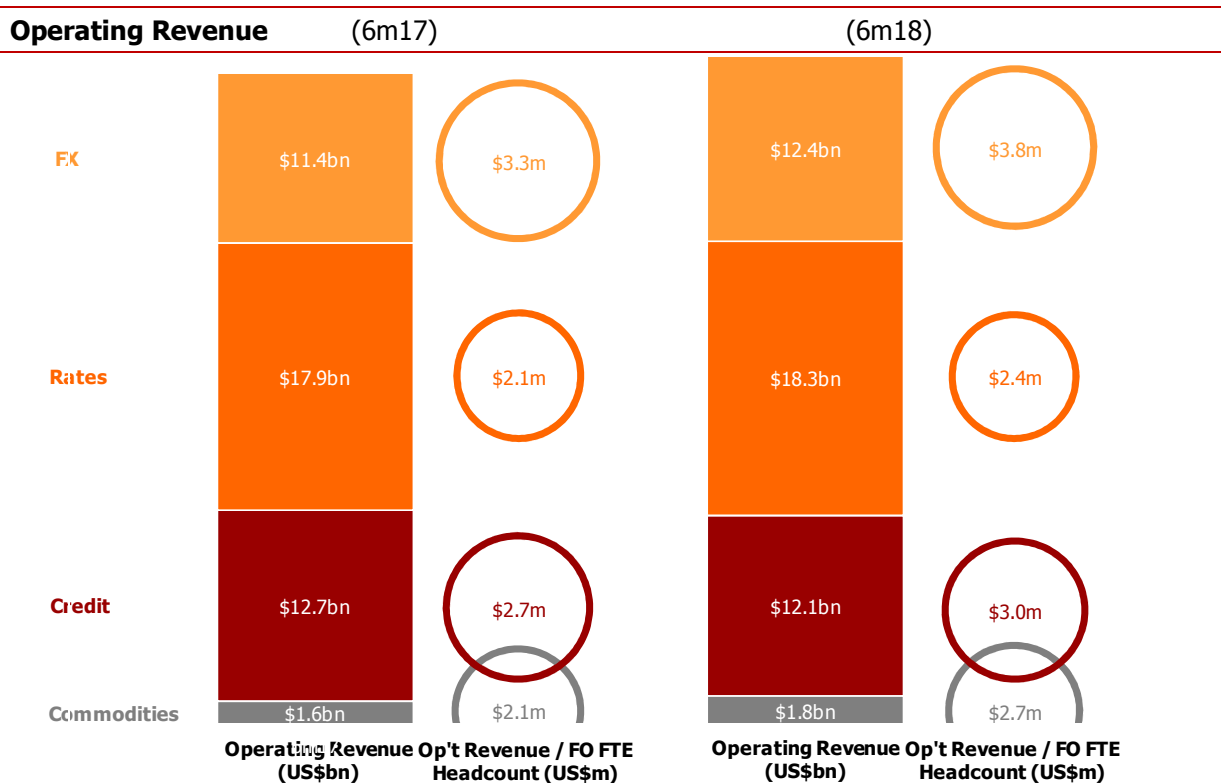


Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority.

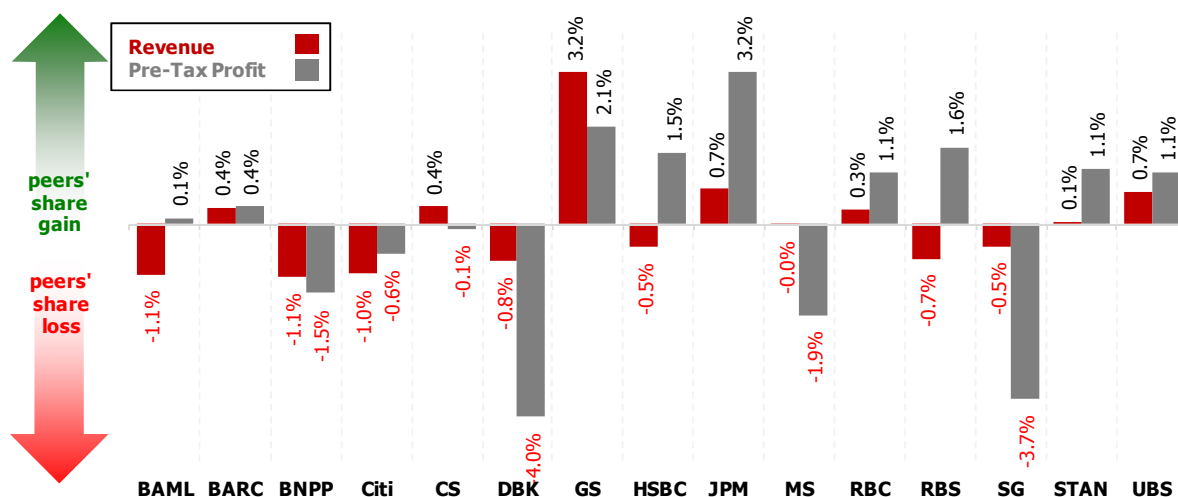
### Capital Markets (cont.): FICC

- Credit** revenue fell 4% y/y in 6m18; emerging market bonds - hit by fears of trade wars and the impact of recent elections in Turkey and Mexico - were a particular area of weakness; and outflows from EM funds suffered heavy outflows, reducing the available liquidity.
 

The 'credit portfolio trades' - blocks of securities traded via ETFs - boomed in 1H18, on the surge in popularity of ETFs. The strategy dramatically lowers transaction costs to 'authorised participants' (and therefore its clients). Goldman Sachs took an early lead in the market - the bank was offering the product in the US since 2016, and in Europe since early 2018, too - but other banks are getting in on the game, too: Citi and J.P.Morgan have established dedicated teams.
- Commodities** posted another strong quarter: Top 16' revenue grew 16%, with 'our' US banks - which retained some presence in the market in post-Crisis years - far ahead of their European peers. On a related note, US banks are active participants in risk premia investing, a relatively new strategy which places bets on factors other than price - including, for example, momentum and volatility. (See also equity derivatives, below). Escalating trade tensions, however, remain a worry for 'traditional' commodities trading, as does a threat of an economic slowdown in China.



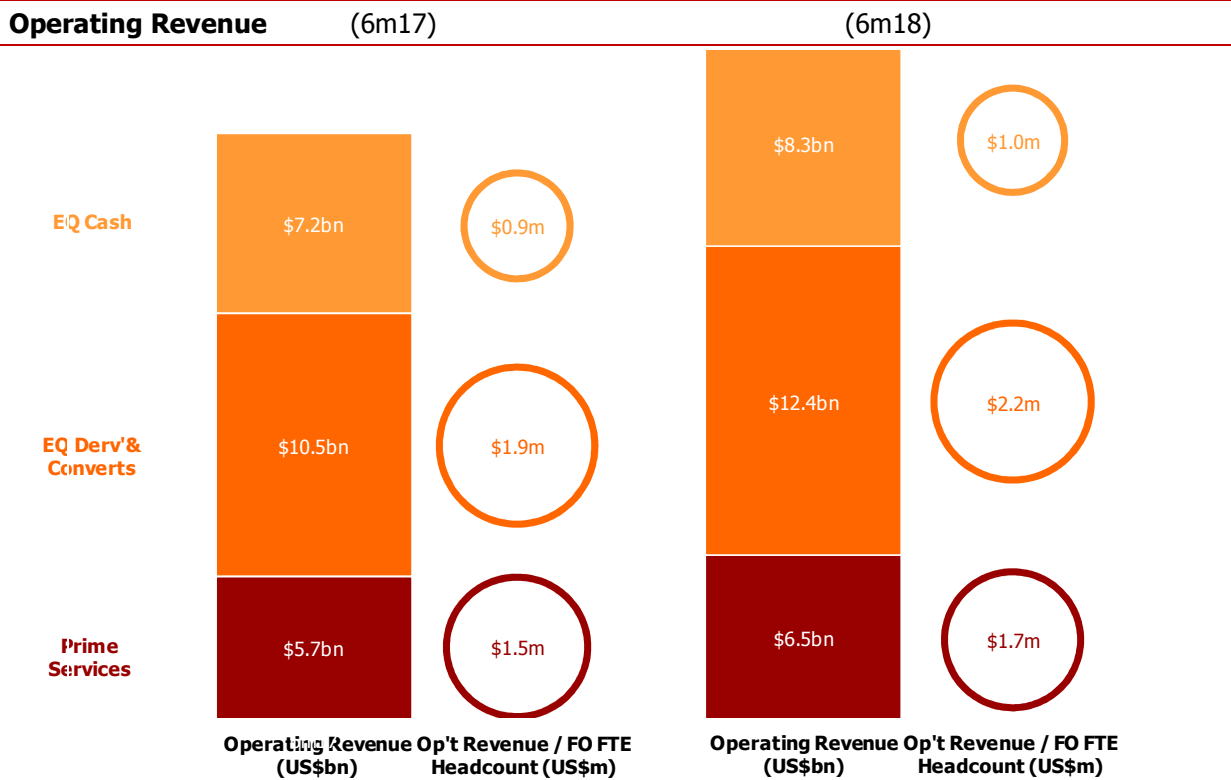
### % change share of peer group operating revenue and pre-tax profit: (6m18 / 6m17)



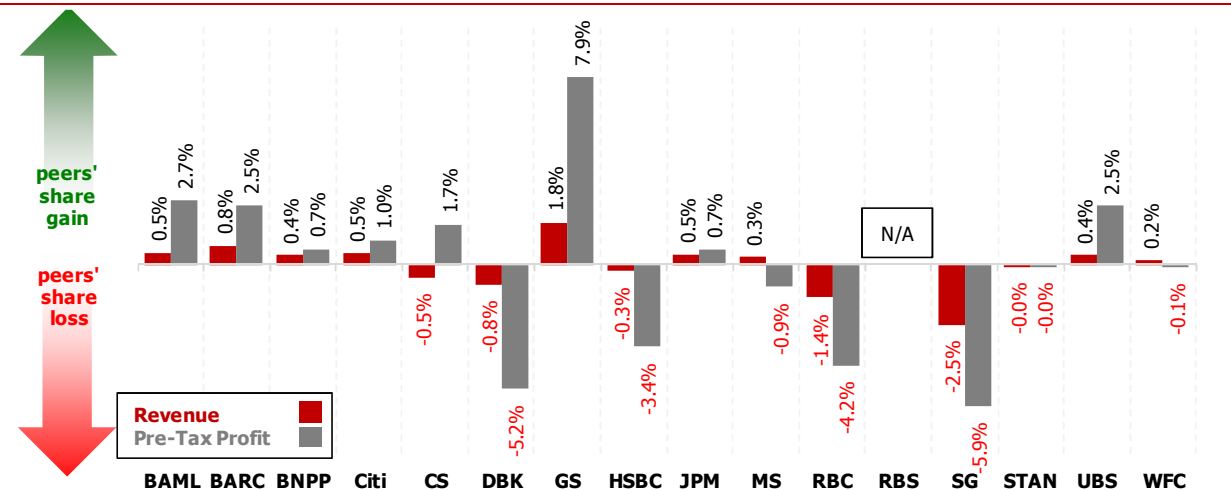
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments.

### Capital Markets (cont.): Equities

- MiFID 2 is reducing the quality of cash equity research - and liquidity, especially in mid-caps - as analysts defect to buy-side: major asset managers commented on research increasingly being short-term and less about the underlying quality of stocks. We expect clients will favour pan-regional providers over niche/specialised firms; and that macro research will be hit hardest.
- In derivatives, structurers are back: participants require minimisation of risk (sometimes at the expense of returns), incorporation of complex market factors, and understanding of other assets.
- Prime services revenue for Top 16 banks remained strong: in 6m18, 'our' banks combined revenue reached \$6.5bn, 15% ahead of 6m17, and only slightly below 19% y/y growth seen in 1Q18.  
 BNY Mellon entered FX prime brokerage in Jan-18; the unit is led by Jason Vitale (Deutsche Bank's ex-Head of listed derivatives, clearing and FX prime brokerage) and Michael Cooper (also ex-DBK). Others - for example, HSBC - have tried to combine prime services with fund admin, but have not been as successful as they have hoped, partly because hedge funds typically see these services as separate offerings. However, we believe BONY - which we follow closely - has a better chance of making inroads. In the US, the unit is run by Sam Osterman, Barclays' ex-Head of Flow Options.



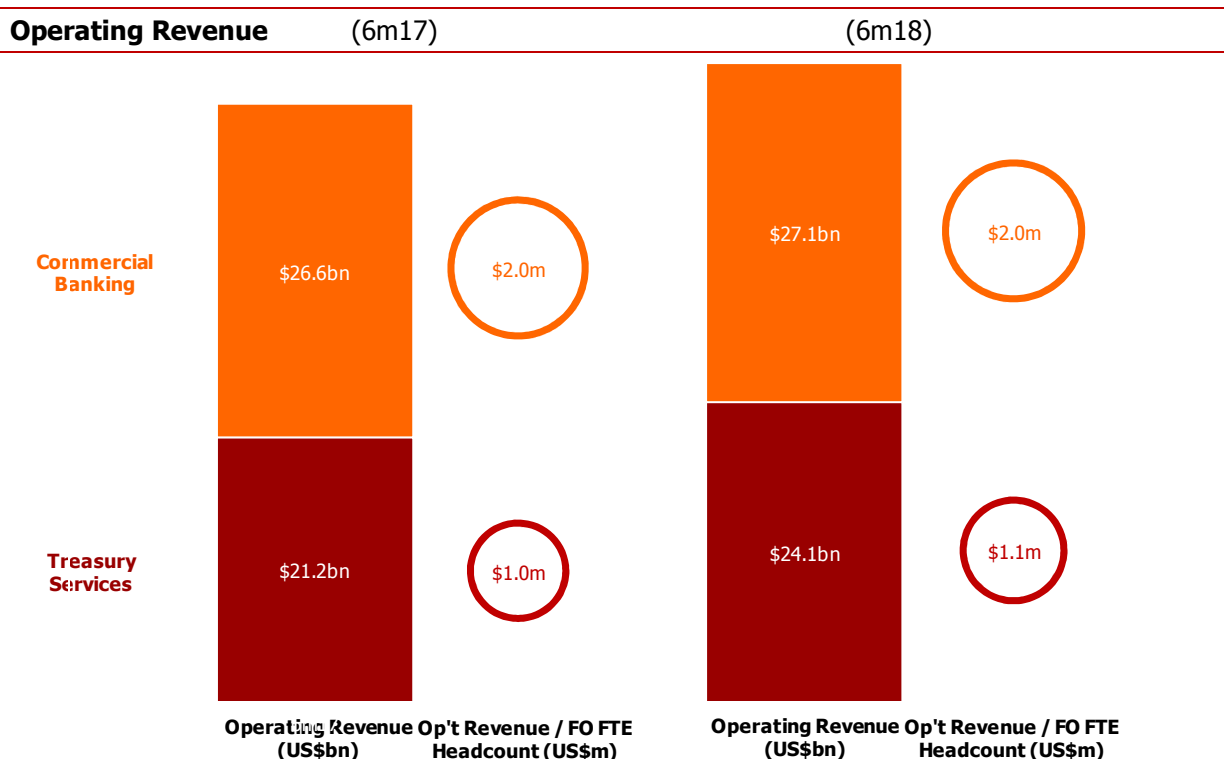
### % change share of peer group operating revenue and pre-tax profit (6m18 / 6m17)



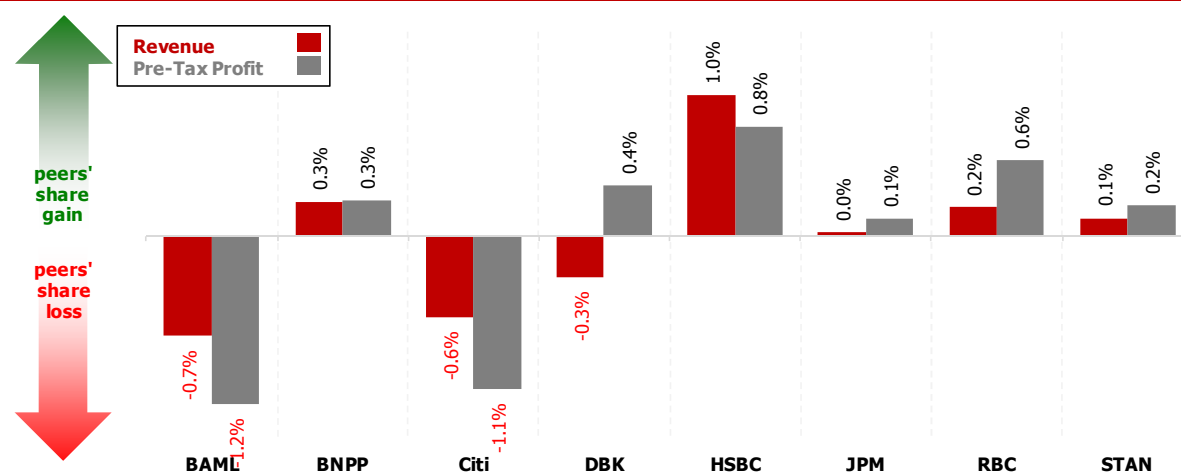
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments.

## Commercial/Transaction Banking

- The combined revenue of eight banks in our (current) universe reached \$51bn, 7% ahead of the prior-year period. Growth was driven by double-digit increase in payments volumes; APAC grew the most, followed by the US and then Europe. The commercial lending volumes in the US increased 4% while European volumes were largely flat. Treasury Services jumped 13%, and per-head productivity increased at a similar rate. Our sources are generally optimistic regarding the near-term outlook ...
- ... but Bain & Co. recently highlighted worrying trends in transaction banking. The sector is becoming both overcrowded and tech-intensive; and, on a related note, the consulting firm estimates that distributed ledger technology has the potential to reduce the trade finance operating costs by 50-80%, depending on the take-up among the participants. We note that, in June-18, BNPP joined the ING Ventures-led funding round to develop the UK-based, blockchain-powered TradeIX platform. TradeIX's Marco Polo project focuses on the connectivity between trade participants in risk mitigation, payables finance and receivables finance. J.P.Morgan's Treasury Services, for its part, launched a pilot of AI-powered service which will help its corporate clients move funds around the world - and anticipate their needs.



### % change share of peer group operating revenue and pre-tax profit (6m18 / 6m17)

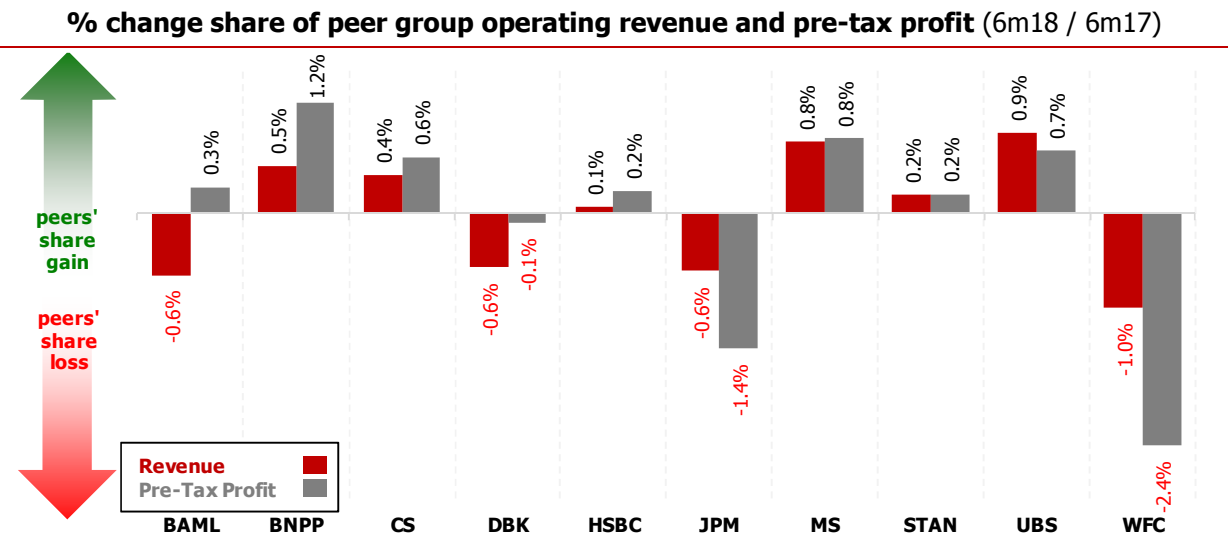
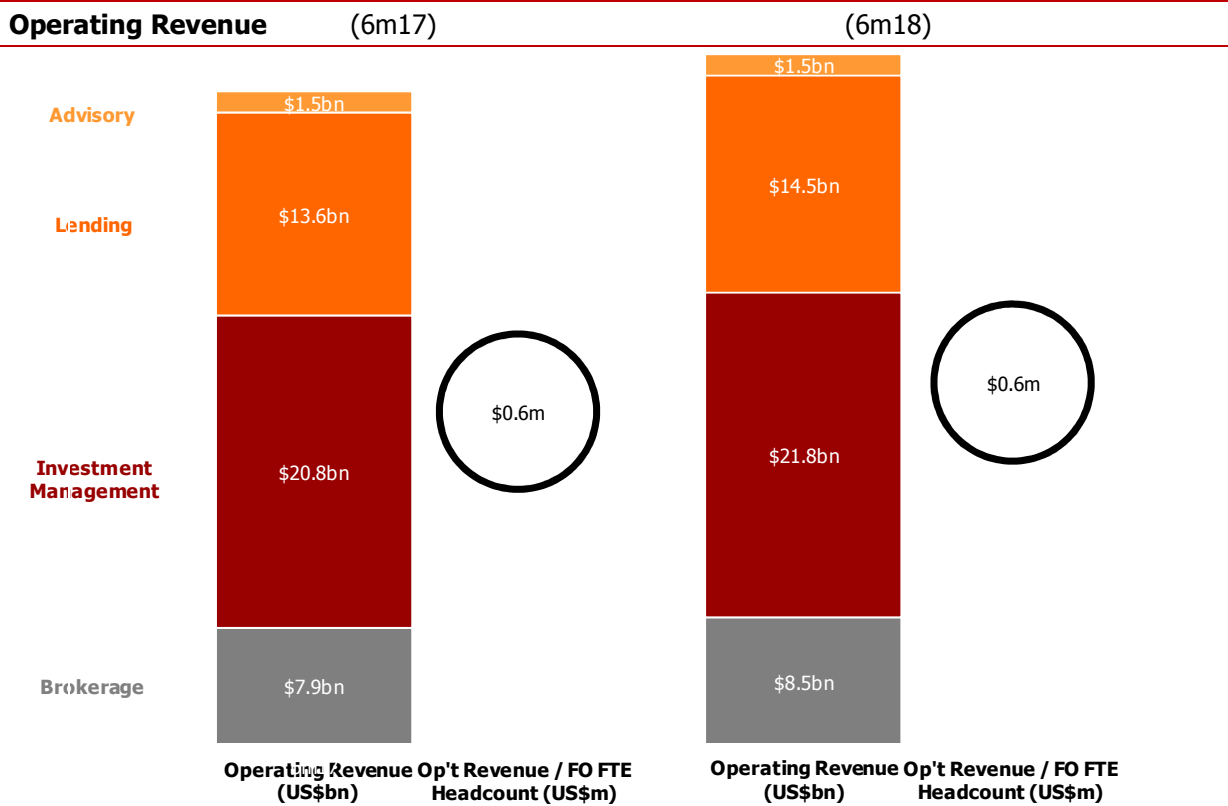


Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) In-scope: Large Cap/MNC and Mid-Cap/SMEs.

## Wealth Management

### New arrival: HSBC

- Banks in this note grew their 6m18 revenue by 6% y/y, to \$46bn; extending the trend of recent years, advisory revenue stalled, while all other areas grew at a healthy rate. Pre-tax profit jumped 9% to \$13bn. The outlook is uncertain: some banks pointed to headwinds in transaction revenues, and/or a higher interest expense due to diversification of sources of deposits.
- Several e-initiatives are worth highlighting. J.P.Morgan launched Digital Investing robo-advisor in Mar-18 and then YouInvest, a new digital brokerage service for 47m existing users of the bank's banking app or website. UBS launched Advice Advantage, an auto-advice platform developed with robo-advisor SigFig, and then, in June-18, reinvested in SigFig. Elsewhere, Blackrock is making inroads with Alladin, its risk analytics software - Morgan Stanley (which is, alongside Wells Fargo, is seen as the most focused on new tech in wealth) and UBS are among Blackrock's early customers.
- Reorganisations: Wells Fargo may combine wealth brokerage services and the private client group, two units with a wide overlap. Credit Suisse will split IWM into seven key regions from 1-Sept-18.



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

**6m18 / 6m17** (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%
<b>Capital Markets</b>	↓	↑	↓	↓	↔	↓	↑	↓	↔	↑	↓	↓	↓	↔	↑	↔	+10%	-3%
<b>Primary</b>	↓	↔	↑	↓	↓	↔	↓	↔	↓	↑	↓	↑	↔	↑	↓	↓	+10%	-0%
DCM Bonds	↓	↔	↑	↓	↓	↔	↓	↔	↓	↓	↑	↑	↓	↑	↓	↓	+13%	-14%
DCM Loans	↓	↔	↑	↓	↓	↔	↓	↔	↓	↑	↔	↑	↓	↑	↓	↓	+35%	-1%
Securisation	↔	↑	↑	↓	↓	↓	↓	↓	↓	↓	↑	↑	↓	↓	↓	↓	+8%	-6%
ECM	↔	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	N/M	↑	↓	↓	↓	+20%	-7%
M&A / Advisory	↓	↔	↔	↓	↑	↔	↓	↓	↑	↑	↓	N/M	↔	↓	↑	↓	+11%	-9%
<b>Sales &amp; Trading</b>	↓	↑	↓	↓	↔	↓	↑	↓	↑	↔	↓	↓	↓	↔	↑	↔	+11%	-4%
FX	↓	↑	↓	↔	↓	↓	↑	↔	↑	↔	↓	↓	↔	↓	↑	↓	+15%	-2%
Rates	↔	↑	↓	↓	↔	↓	↑	↓	↔	↓	↑	↓	↓	↔	↑	↓	+16%	-13%
Credit	↓	↔	↓	↓	↔	↓	↑	↓	↔	↓	↑	↓	↓	↓	↔	↓	+6%	-14%
Commodities	↓	N/M	↓	↓	↓	N/M	↑	↓	↑	↑	↔	N/M	↓	↑	↔	↓	+23%	-1%
EQ Cash	↔	↔	↓	↑	↓	↓	↑	↓	↑	↔	↓	N/M	↓	N/M	↓	↑	+20%	-5%
EQ Derv & Converts	↔	↑	↑	↔	↑	↓	↓	↓	↓	↓	↓	N/M	↓	N/M	↔	↑	+37%	+17%
Prime Services	↓	↑	↓	↓	↔	↑	↓	↓	↔	↑	↓	N/M	↔	↓	↔	↑	+19%	+5%
Prop Trading	N/M	N/M	↔	N/M	↓	N/M	↑	N/M	↓	N/M	N/M	N/M	↔	N/M	N/M	N/M	+43%	+1%
<b>Principal Investments</b>	N/M	N/M	N/M	N/M	↓	↔	↑	↔	N/M	↑	N/M	N/M	N/M	N/M	N/M	N/M	+52%	+5%
<b>Commercial / Transaction Banking</b>	↓	N/M	↔	↓	N/M	↓	N/M	↑	↓	N/M	↔	N/M	N/M	↑	N/M	N/M	+9%	+3%
Commercial Banking	↓	N/M	↑	↑	N/M	↓	N/M	↑	↓	N/M	↑	N/M	N/M	↑	N/M	N/M	+4%	-3%
Treasury Services	↓	N/M	↑	↓	N/M	↓	N/M	↑	↔	N/M	↓	N/M	N/M	↔	N/M	N/M	+17%	+8%
<b>Wealth Management</b>	↓	N/M	↑	N/M	↑	↓	N/M	↔	↓	↓	N/M	N/M	N/M	↑	↔	↓	+11%	+3%
Advisory	↓	N/M	↓	N/M	↑	↓	N/M	↑	↓	↓	N/M	N/M	N/M	↑	↔	↔	+7%	-8%
Lending	↓	N/M	↑	N/M	↔	↓	N/M	↔	↓	↓	N/M	N/M	N/M	↑	↑	↓	+14%	+2%
Investment Management	↓	N/M	↑	N/M	↔	↓	N/M	↓	↓	↓	N/M	N/M	N/M	↑	↔	↓	+12%	-1%
Brokerage	↓	N/M	↑	N/M	↑	↓	N/M	↔	↑	↓	N/M	N/M	N/M	↔	↓	↓	+17%	-2%

**2Q18 / 2Q17** (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%
<b>Capital Markets</b>	↓	↑	↓	↓	↔	↓	↑	↔	↔	↑	↓	↓	↓	↓	↑	↔	+12%	-1%
<b>Primary</b>	↓	↔	↑	↓	↓	↑	↑	↑	↔	↓	↓	↑	↓	↓	↓	↓	+12%	-6%
DCM Bonds	↓	↔	↔	↔	↓	↑	N/M	↓	↓	↓	↔	↑	↓	↑	↓	↓	+18%	-13%
DCM Loans	↔	↑	↑	↓	↓	↔	↓	N/M	↔	↓	↑	↑	↓	↓	↓	↓	+26%	+0%
Securisation	↓	↓	↑	↓	↓	↓	↓	↓	↓	↑	↑	↑	↔	↔	↔	↓	+8%	-7%
ECM	↔	↓	↓	↔	↔	↔	↑	↓	↑	↑	↓	N/M	↑	↓	↓	↓	+32%	-10%
M&A / Advisory	↓	↔	↑	↔	↑	↔	↓	↑	↑	↔	↓	N/M	↓	↓	↓	↓	+23%	-2%
<b>Sales &amp; Trading</b>	↔	↑	↓	↓	↔	↓	↑	↓	↑	↔	↓	↓	↓	↓	↑	↔	+13%	-6%
FX	↔	↓	↓	↑	↓	↓	↑	↔	↔	↔	↓	↓	↓	↓	↑	↓	+17%	-10%
Rates	↔	↔	↓	↓	↔	↓	↑	↓	↔	↓	↑	↓	↓	↔	↑	↓	+17%	-11%
Credit	↓	↔	↓	↓	↑	↓	↑	↓	↔	↔	↑	↓	↓	↓	↑	↔	+22%	-12%
Commodities	↔	N/M	↓	↓	↓	N/M	↑	↓	↑	↔	↓	N/M	↔	↑	↔	↓	+36%	-7%
EQ Cash	↓	↑	↔	↔	↓	↓	↑	↓	↑	↔	↓	N/M	↓	↓	↔	↑	+17%	-5%
EQ Derv & Converts	↓	↑	↔	↔	↑	↓	↓	↑	↔	↔	↓	N/M	↓	↓	↔	↑	+31%	+5%
Prime Services	↔	↓	↓	↓	↔	↑	↓	↓	↔	↔	↓	N/M	↑	↓	↑	↓	+14%	+2%
Prop Trading	N/M	N/M	↔	N/M	↓	N/M	↑	N/M	↓	N/M	N/M	N/M	N/M	N/M	N/M	N/M	+22%	-21%
<b>Principal Investments</b>	N/M	N/M	N/M	N/M	↓	↓	↔	↔	N/M	↑	N/M	N/M	N/M	N/M	N/M	N/M	+127%	+9%
<b>Commercial / Transaction Banking</b>	↓	N/M	↔	↓	N/M	↓	N/M	↑	↓	N/M	↔	N/M	N/M	↑	N/M	N/M	+11%	+5%
Commercial Banking	↓	N/M	↓	↔	N/M	↓	N/M	↑	↔	N/M	↑	N/M	N/M	↓	N/M	N/M	+4%	-5%
Treasury Services	↓	N/M	↑	↓	N/M	↓	N/M	↑	↔	N/M	↓	N/M	N/M	↔	N/M	N/M	+24%	+10%
<b>Wealth Management</b>	↓	N/M	↑	N/M	↓	↓	N/M	↔	↔	↓	↓	N/M	N/M	↑	↓	↓	+9%	+1%
Advisory	↓	N/M	↓	N/M	↓	↑	N/M	N/M	↔	↓	↓	N/M	N/M	↑	↓	↔	+5%	-7%
Lending	↓	N/M	↑	N/M	↓	↓	N/M	N/M	↓	↔	↓	N/M	N/M	↑	↑	↓	+12%	+1%
Investment Management	↓	N/M	↑	N/M	↔	↓	N/M	N/M	↓	↑	↓	N/M	N/M	↑	↓	↓	+8%	-4%
Brokerage	↔	N/M	↑	N/M	↓	↔	N/M	N/M	N/M	↓	↓	N/M	N/M	↔	↓	↓	+14%	-4%

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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Tricumen was founded in 2008. It quickly became a strong provider of diversified market intelligence across the capital markets and has since expanded into transaction and corporate banking as well as asset and wealth management. Tricumen's data has been used by many of the world's leading investment banks as well as strategy consulting firms, investment managers and 'blue chip' corporations.

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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