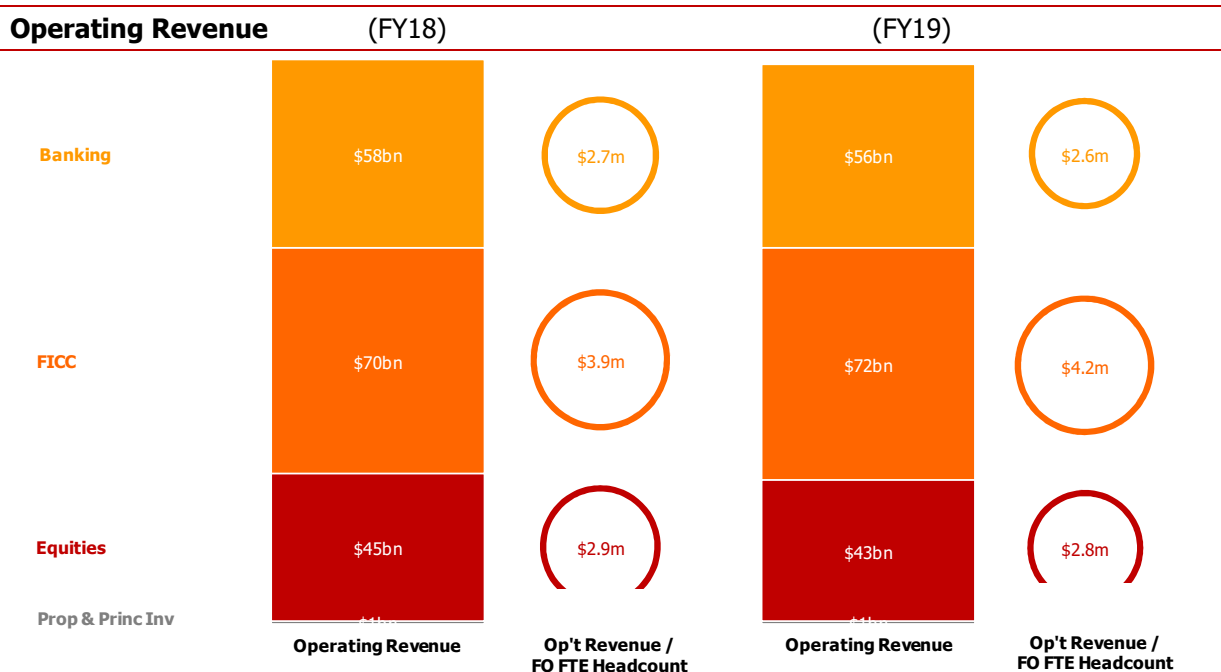


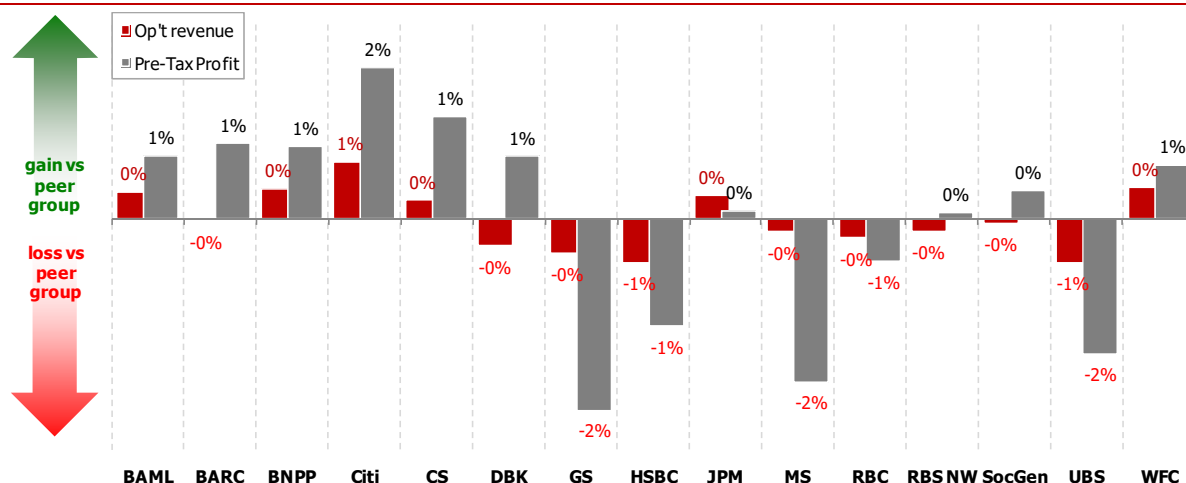
## Results Review 4Q19 / FY19

### Capital Markets: Overview

- The 15 banks<sup>5</sup> in this report generated \$172bn revenue in 2019, in-line with the previous year. The costs were firmly under control, resulting in pre-tax profit 3% down y/y, mostly on account of US banks' modest decline in profits. Before the arrival of Coronavirus in late Feb-20, sales and trading was thriving, more than offsetting the relative weakness in primary businesses.
- Banks are been reviewing cost-efficiencies of Support staff they accumulated in recent years. It seems that 'quiet' time is over: several banks in this report are reducing Support staff.
- As per recent buy-side surveys, the most prominent common themes for 2020E are: (1) increased volatility – mostly in equities but also bonds and FX partly due to geopolitical factors (e.g. Brexit and the US elections) and now, Coronavirus; this will highlight the importance of active strategies, but may also impact IPOs; (2) private equity and debt and other alternatives will continue to grow faster than other assets. Ultra-low rates and record public debt remains the biggest macro risk.
- We recently initiated coverage of big algo traders and liquidity providers, including Citadel Securities, Jump Trading, Tower Research, Virtu, XTX and others. Efficiency comparison with banks' trading desks may be unfair (to banks), but is also ... quite fascinating.



### % change share of peer group operating revenue and pre-tax profit (FY19 / FY18)



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. (4) This report is based on Tricumen's new product and headcount definitions. (5) Standard Chartered moved to Regional Banks Review.

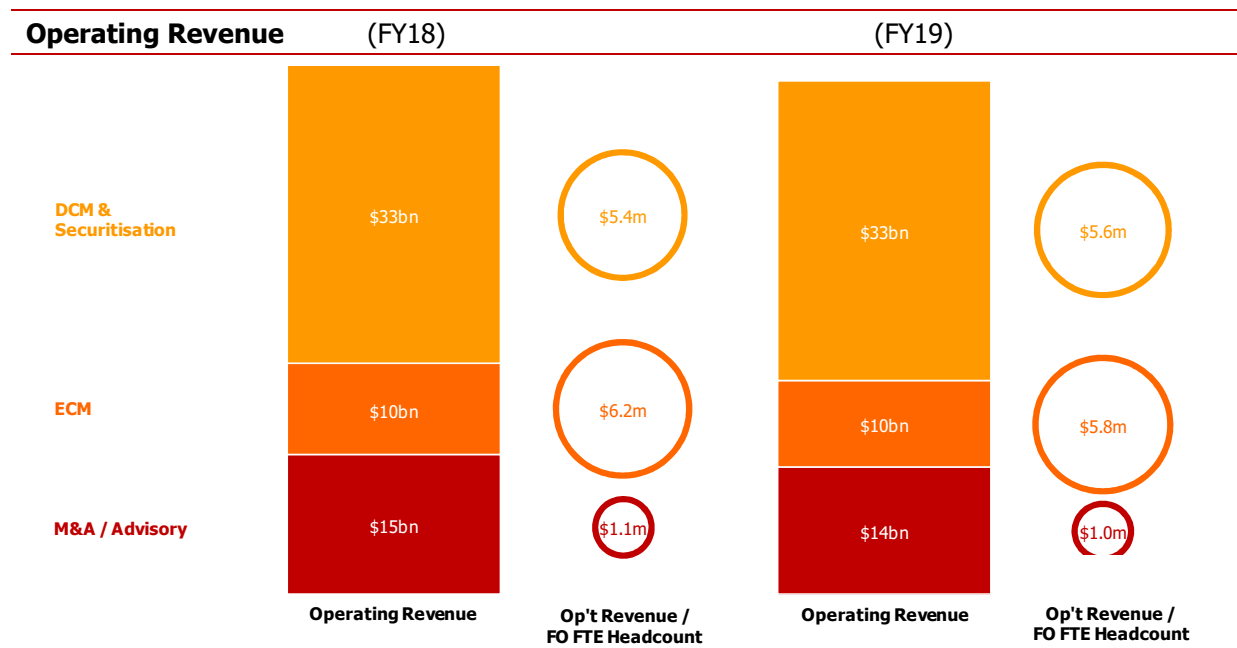
## Capital Markets (cont.): Banking

- DCM bond fees dipped relative to the strong 3Q19, but advanced meaningfully y/y across most regions and products, including high yield, emerging markets, international bonds and 'green' bonds. A notable exception was US high grade where, on full year basis, the issuance dropped to a five-year low.

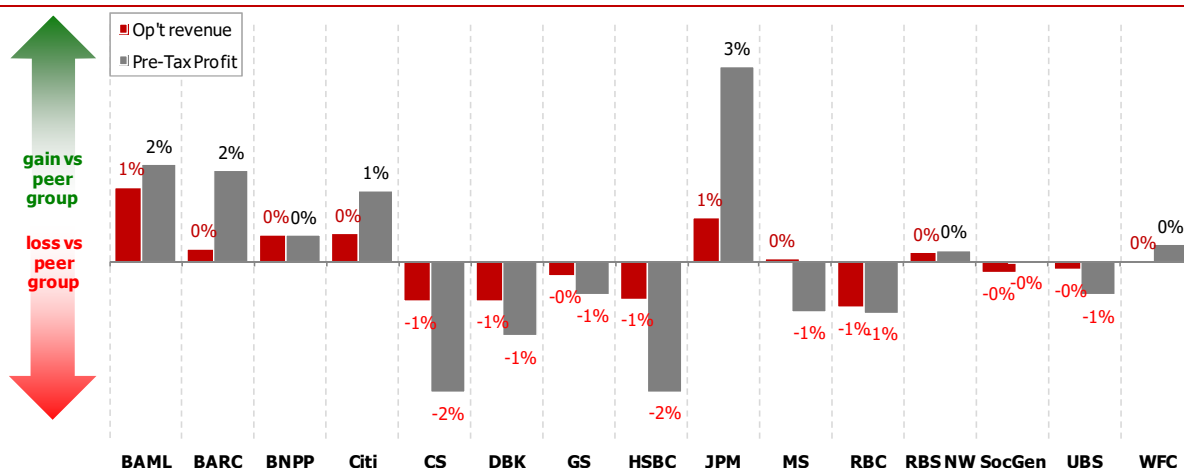
The 1Q20 had a strong start, with Jan-20 posting the highest monthly volume in 20+ years. However, loan issuance dropped sharply, across the board, in volumes and margins; and Coronavirus appears to have frozen the markets.

The most interesting development is the arrival of new competition: private equity giants. Apollo, Blackstone, KKR, and several others recently financed deals in excess of \$1bn, in direct competition with banks.

- The effect of the surge in ECM volumes in 4Q19 was somewhat muted by a decline in margins, despite the very strong IPO market. On full year basis, 15 banks' revenue and profit was 4% and 6% below FY18, respectively; EMEA banks' pre-tax profits plunged.
- M&A/Advisory fees dropped sharply in 4Q19: the strength in the US domestic market was not sufficient to offset declines in EMEA, APAC (excluding Japan) and cross-border deal volumes. Additionally, stronger competition for deals depressed margins, and, in turn, FTE productivity.



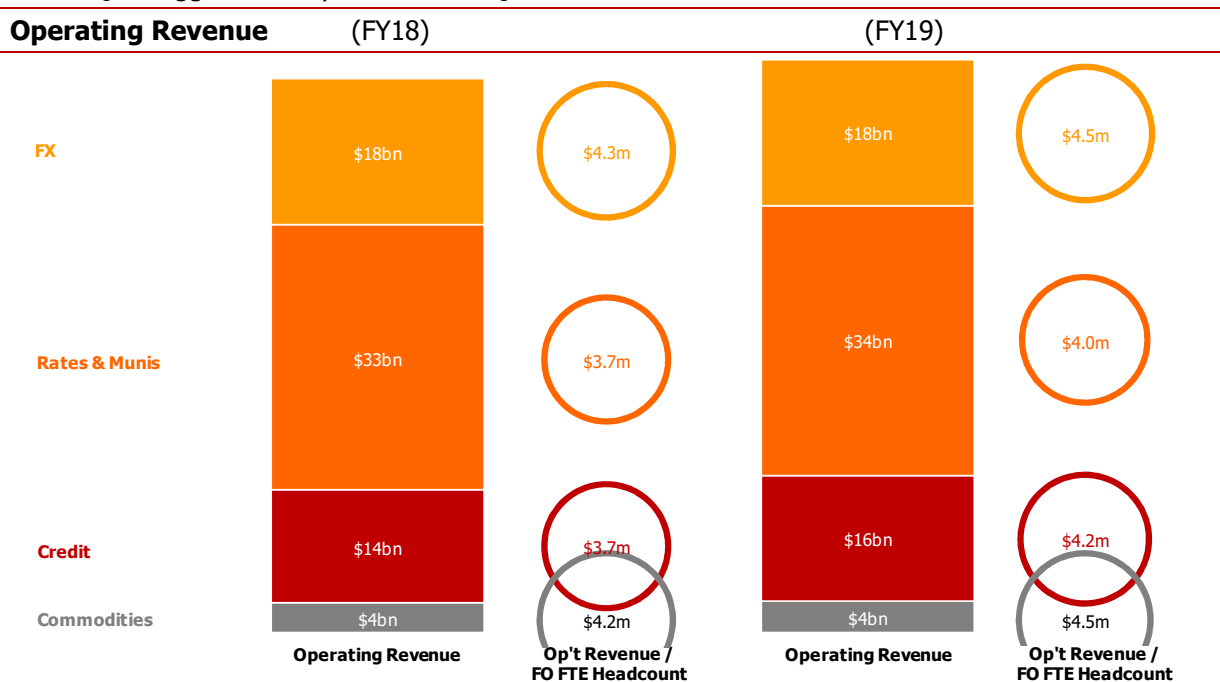
### % change share of peer group operating revenue and pre-tax profit (FY19 / FY18)



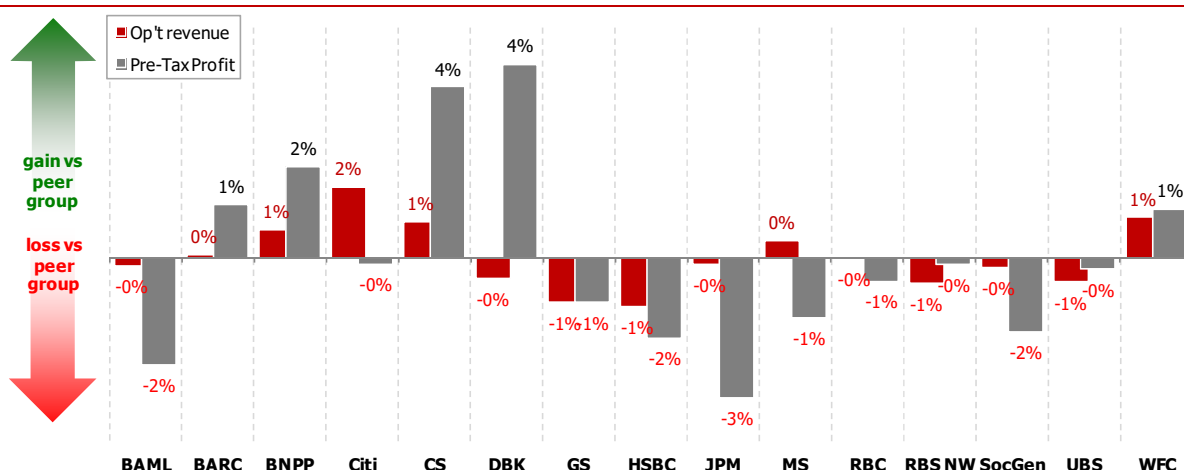
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority.

### Capital Markets (cont.): FICC

- Prior to the surge in late Feb-19, FX volatility plunged to the lowest level ever, reducing customers' premiums; and options continued gaining popularity as a hedging tool with corporate clients. Among the banks in this report, several global leaders recorded strong gains in revenue, while others were more muted. Looking ahead, we expect banks with strong emerging markets operations to benefit from improved client sentiment. Regionally, London extended its lead in global volumes, though there was plenty of action in APAC too, in Singapore/HK competition.
- Rates was the stand-out revenue generator in 4Q19. Muni markets were very strong, with 4Q19 issuance up 70% y/y, pushing the 2019 total to 25% ahead of FY18. So far in 1Q20, investor demand remains undiminished.
- Credit also made a strong contribution in 4Q19, further confounding lowly year-ago expectations. Warning signs on high yield are still there, but some banks benefitted from positioning in the asset class in 3Q/4Q19 and, more recently, significant players (from the buy- and sell-side) upgraded the outlook on widening spreads. Until Coronavirus, the near-term outlook appeared strong; in Europe, for example, funds stood ready to invest their growing cash pile into companies troubled by the economic slowdown. However, the sharp sell-off in high yield, especially in energy markets, puts a question mark on the outlook.
- Commodities advanced slightly vs 4Q18, on both energy and metals. Trading patterns seen so far in 1Q20 suggest healthy revenue in 1Q20.



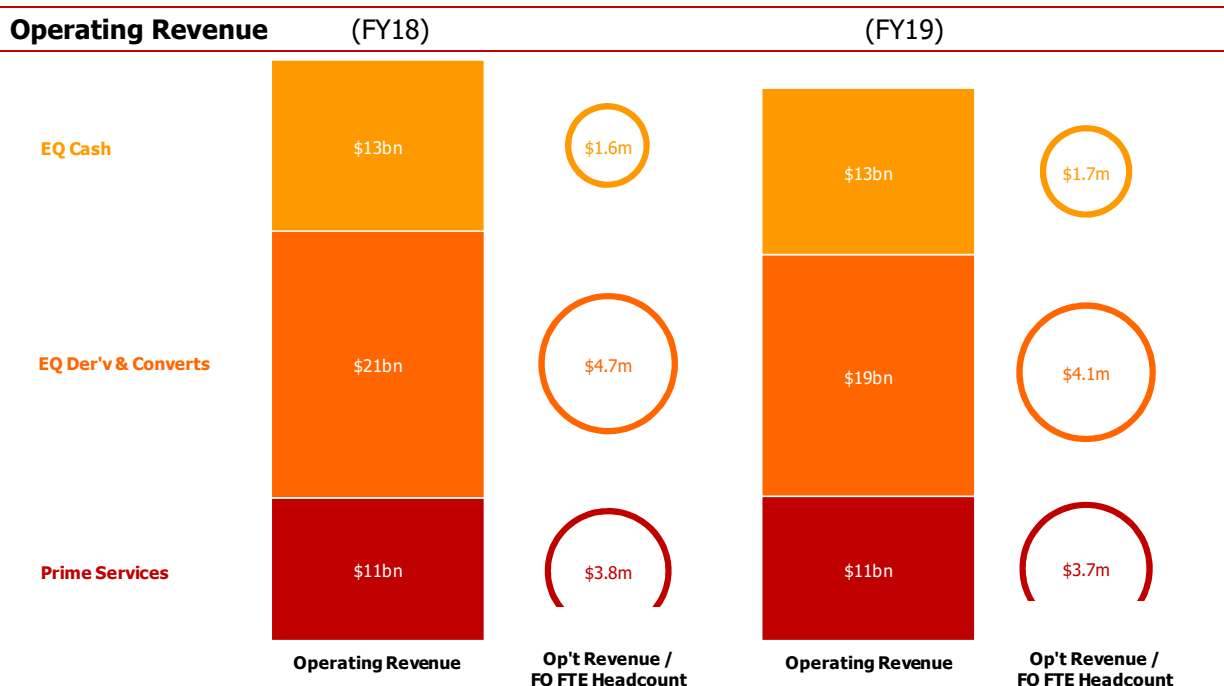
### % change share of peer group operating revenue and pre-tax profit: (FY19 / FY18)



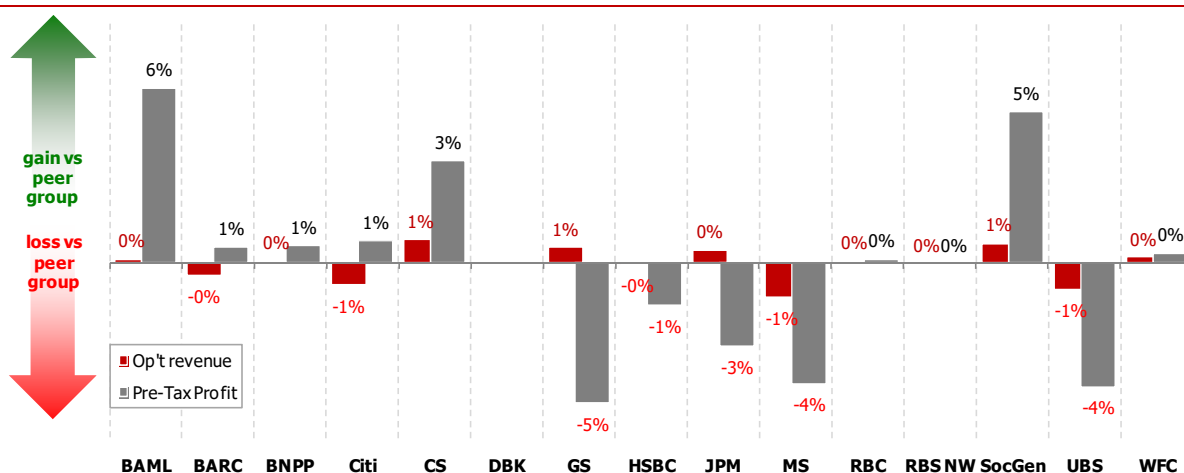
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments.

## Capital Markets (cont.): Equities

- Coronavirus hit equity markets badly; the spike in volatility, though, will produce some winners and losers, especially in volatility-related hedging and trading. Overall, we expect strong 1Q20 equity revenues from banks. On a related note, while 'regular' money managers suffered heavy outflows as the crisis deepened, several hedge fund giants made serious gains on short positions in companies that depend on travel and/or hospitality. Algo traders' contribution is an unknown: their exposure to equities surged in recent months, and it remains to be seen what effect the plunge in valuations in Feb-20 will have on their trading – and the wider market.
- Meanwhile, 4Q19 extended trends seen in 9m19: cash revenues held up well, with main players making big gains vs 4Q18 and boosting their FTE productivity. The latter, of course, was partly due to cuts in staffing levels - especially in research. Tech-led initiatives/solutions, many of which started in late 2018, have become key differentiators of their parent banks' research, especially in incorporation of analyst sentiment (e.g. Morgan Stanley, UBS) and/or alternative data (e.g. BAML, RBC, UBS). Overall, derivative revenue were steady in 4Q19, but with clear winners and losers. Structured derivative leaders surged (albeit against the weak 4Q18), while others lost ground. After a dip in 3Q19, hedge fund AuM grew in 4Q19, particularly in equities and emerging markets. Unsurprisingly, the leaders in this report reported strong y/y revenue gains in prime services.
- On full year basis, banks in this report – US banks in particular - suffered a drop in Equities profits.



### % change share of peer group operating revenue and pre-tax profit (FY19 / FY18)

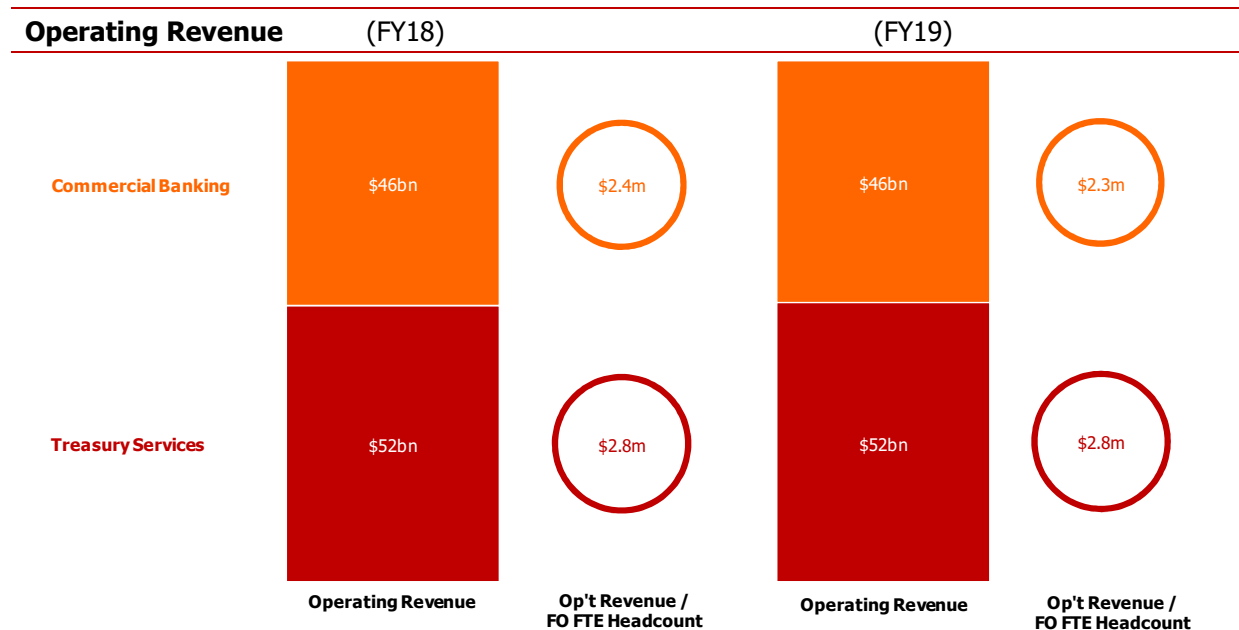


Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments.

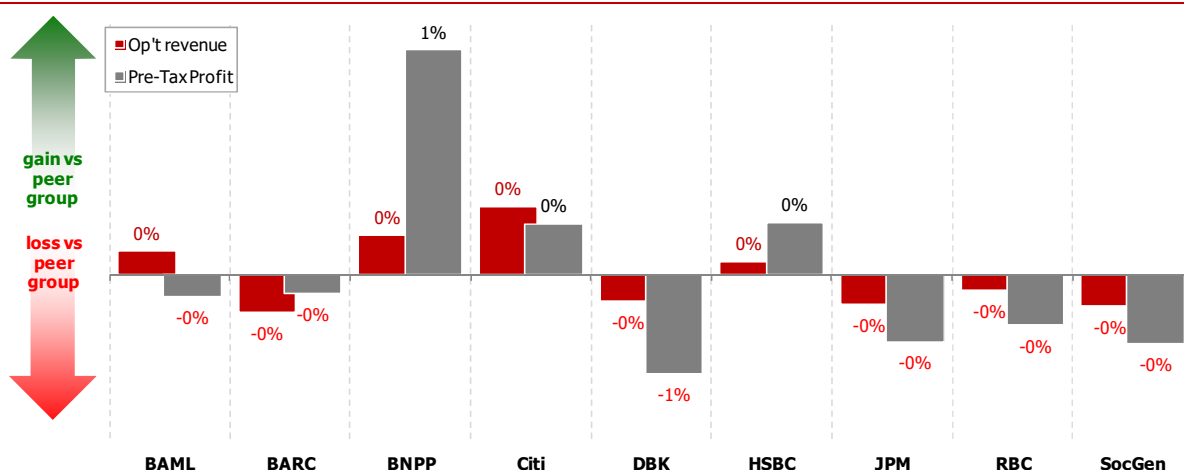
## Commercial Banking & Treasury Services

- In the run up to Brexit, the rate of growth in commercial lending volumes in the UK dropped, largely as a result of a slowdown in LME volumes; rates dropped sharply, especially in fixed-rates. In the EU, rates unexpectedly jumped in 4Q19; while in the US, both volumes and rates held steady.
- In trade finance, the troubling trends seen earlier in 2019 accelerated: relative to 2018, cash management grew at a healthy clip, but trade finance registered a double-digit drop.
- The dominant topic of 2020 will be banks' international expansion, driven by standardisation: Europe's Single Euro Payments Area (Sepa), Target Instant Payment Settlement (TIPS), Singapore's FAST and SWIFT's gpi Instant (successfully trialled in July-19 with 17 banks in seven countries), and others. In trade finance, recent times have seen an explosion of single-platform initiatives: Trade Finance Distribution Initiative, we.trade, Contour (launched in Jan-20; ex-Voltron), Komgo, and Marco Polo, to name a few. This is an unwieldy market, ready for consolidation.

On the whole, these initiatives ease international banks' drive into regions where they feel they don't have sufficient presence: in recent times, several banks in this note announced important initiatives for expansion outside their home markets (and that's in addition to money management giants, e.g. Allianz and AIG, venturing into trade finance). We expect acceleration of this trend in the current year. We also expect that European banks (hobbled by excessive regulation and, even more, by ultra-low/negative interest rates) will be hit particularly hard by US banks (chiefly, J.P.Morgan) offering their services to Europe's LMEs.



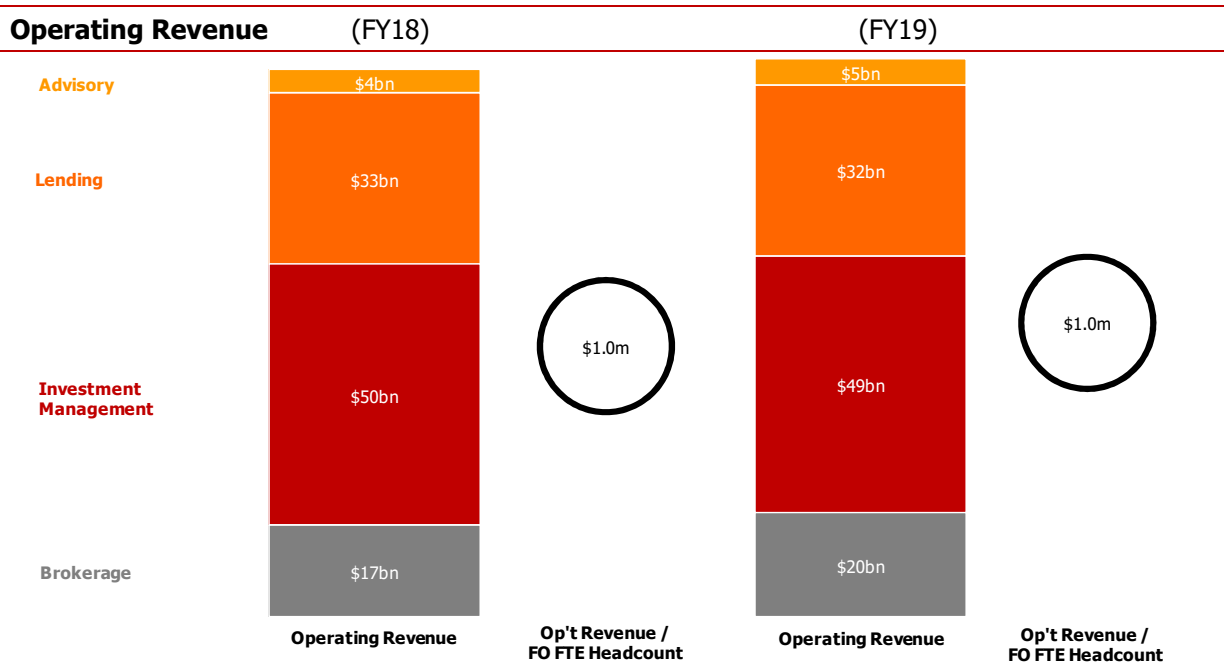
### % change share of peer group operating revenue and pre-tax profit (FY19 / FY18)



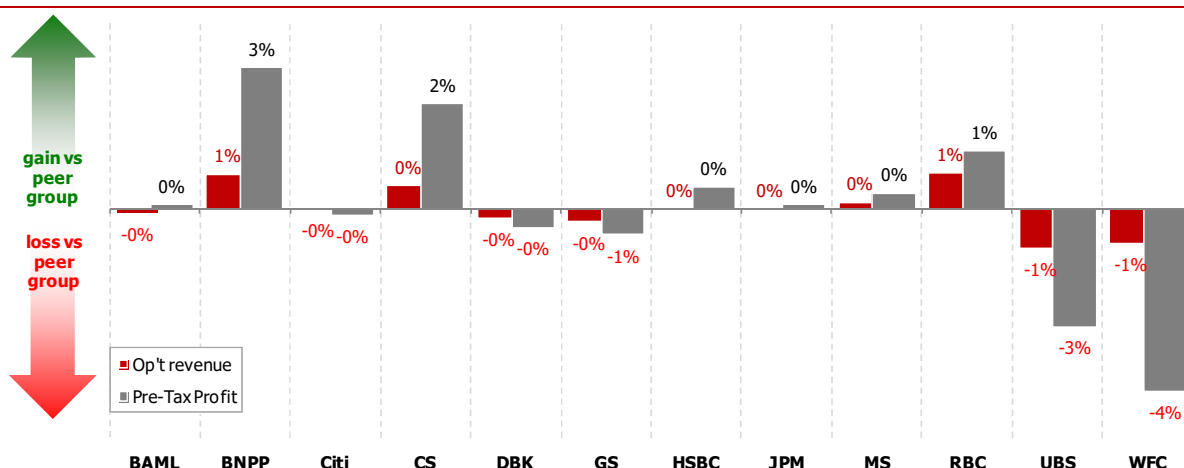
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) In-scope: Large Cap/MNC and Mid-Cap/SMEs.

## Wealth Management

- Most banks in this report announced major hiring programmes in recent months, especially in APAC.
- The battle for the small-bracket wealth management clients (investable AuM c.\$1-10m; 'Lower NWIs'/LNWIs in our classification) really heated up over the past year or so. For example, Credit Suisse recently set up a new Private Banking International (PBI) unit, specifically for sub-\$20m clients; HSBC added various experimental offerings to its Jade platform; and UBS is moving its \$2-5m clients into the category that does not automatically get an advisor (though they retain the right to access the advisors).
- Fees will remain under pressure for the foreseeable future. In the UK, Vanguard – which has been increasing its UK-domiciled offering and lowering fees across the board – received the licence from FCA to provide retail investment advice and has created a team focused on partnering with advisers to increase clients' net returns. Also, in Jan-20, the firm extended commission-free online trading for stocks and options to all Vanguard Brokerage clients. And in the US, Fidelity Investments in Feb-20 joined the (still very few) brokers which offer fractional trading in stocks and ETFs to its brokerage, HSAs, IRAs, and self-directed brokerage accounts via a workplace retirement plans.
- The biggest event, of course, was Morgan Stanley's 13bn E-Trade acquisition. It fills MS's gaps in coverage, but comes with a hefty price tag. We will comment on implications in a separate report.



### % change share of peer group operating revenue and pre-tax profit (FY19 / FY18)



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

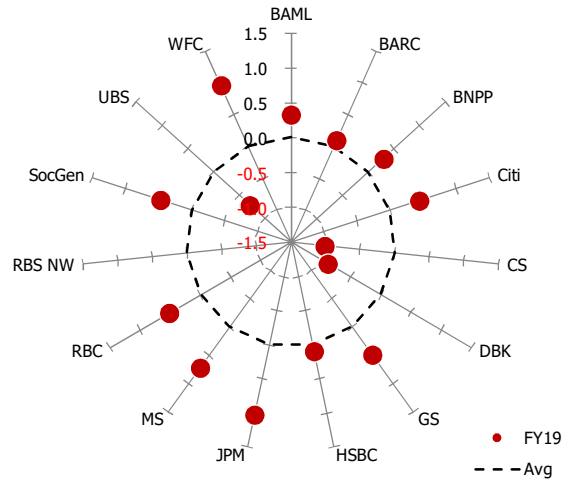
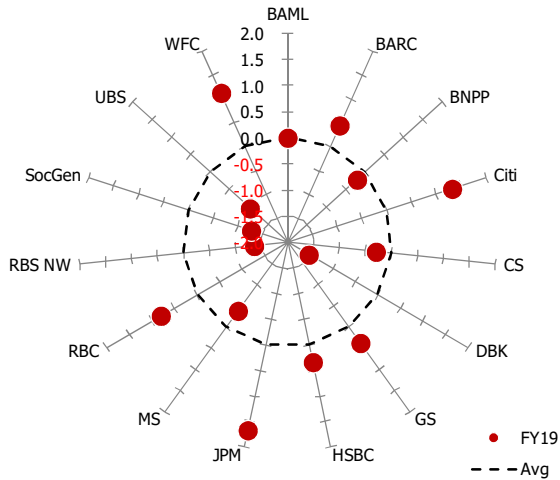
FY19/FY18 (Operating revenue, % change, US\$, Global Level 1)

	BAML	BARC	BNPP	Citi	CS	DBK	GS	HSBC	JPM	MS	RBC	RBS NW	SocGen	UBS	WFC
Capital Markets	↔	↔	↑	↔	↔	↓	↔	↓	↔	↔	↓	↓	↔	↓	↑
Banking	↔	↔	↑	↔	↓	↓	↔	↓	↔	↔	↓	↑	↓	↓	↔
DCM Bonds	↔	↔	↔	↔	↓	↓	↔	↓	↔	↔	↓	↑	↓	↔	↔
DCM Loans	↔	↔	↔	↑	↔	↔	↓	↓	↔	↔	↓	↔	↔	↔	↔
Securitisation	↔	↑	↓	↔	↑	↓	↓	↓	↔	↔	↓	↔	↑	↔	↓
ECM	↑	↑	↑	↔	↔	↔	↔	↔	↑	↑	↔	↔	↓	↔	↑
M&A / Advis	↑	↔	↔	↔	↓	↔	↔	↔	↔	↔	↓	↔	↓	↓	↑
Markets	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔	↓	↔	↓	↑
FICC	↔	↔	↑	↔	↑	↔	↓	↓	↔	↔	↔	↓	↔	↓	↑
FX	↓	↓	↑	↔	↑	↓	↓	↓	↓	↓	↓	↔	↔	↓	↔
Rates & Munis	↔	↔	↑	↔	↔	↔	↓	↓	↔	↔	↔	↓	↔	↓	↑
Credit	↔	↔	↔	↔	↑	↔	↔	↓	↔	↑	↔	↓	↔	↔	↑
Commodities	↓	↔	↔	↔	↔	↔	↑	↓	↓	↔	↑	↔	↓	↔	↑
Equities	↔	↔	↓	↔	↑	↓	↔	↓	↔	↔	↔	↔	↑	↔	↑
EQ Cash	↔	↔	↓	↔	↑	↔	↑	↓	↔	↔	↔	↔	↓	↔	↔
EQ Der'v & Conv't	↔	↓	↔	↔	↑	↓	↔	↔	↑	↓	↔	↔	↑	↓	↑
Prime Services	↑	↔	↔	↔	↔	↔	↔	↓	↑	↔	↔	↔	↓	↓	↑
Prop & PI	↔	↔	↔	↔	↓	↔	↔	↔	↔	↑	↔	↔	↔	↔	↔
Comm Bank / Treas Serv	↑	↓	↑	↑	↔	↔	↔	↑	↔	↔	↔	↔	↔	↔	↔
Comm Bank	↔	↓	↔	↑	↔	↑	↔	↔	↑	↔	↑	↔	↔	↔	↔
Treas Serv	↔	↔	↑	↑	↔	↔	↔	↑	↔	↔	↓	↔	↔	↔	↔
Wealth Management	↔	↔	↑	↔	↔	↓	↓	↔	↔	↔	↑	↔	↔	↓	↓
Advisory	↓	↔	↔	↔	↓	↓	↓	↔	↑	↔	↔	↔	↔	↓	↓
Lending	↔	↔	↑	↓	↓	↓	↔	↔	↔	↓	↑	↔	↔	↓	↓
Investment Management	↔	↔	↑	↔	↔	↓	↓	↔	↔	↔	↔	↔	↔	↓	↓
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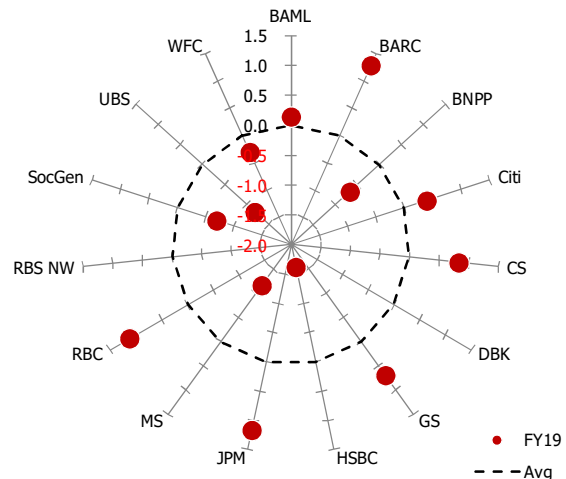
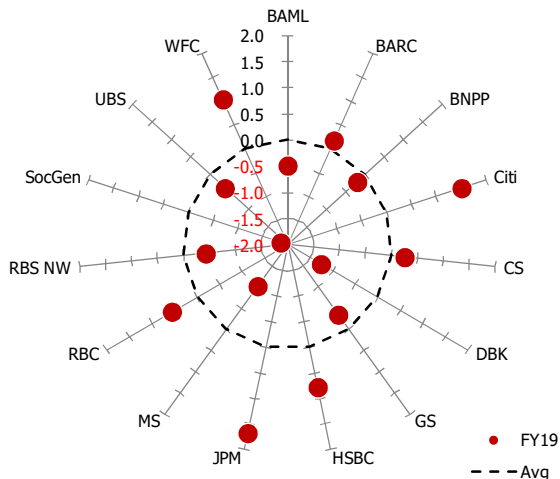
Source: Tricumen. Notes: (1) Tricumen product definitions throughout. (2) Arrows show % change in revenue vs peers. Up-/down-arrows: top-/bottom-quartile. (3) Operating revenue is post-writedowns, excludes DVA/equivalent and one-offs. (4) Commercial/Transaction Banking includes Large Cap/MNC and Mid-Cap/SMEs.

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

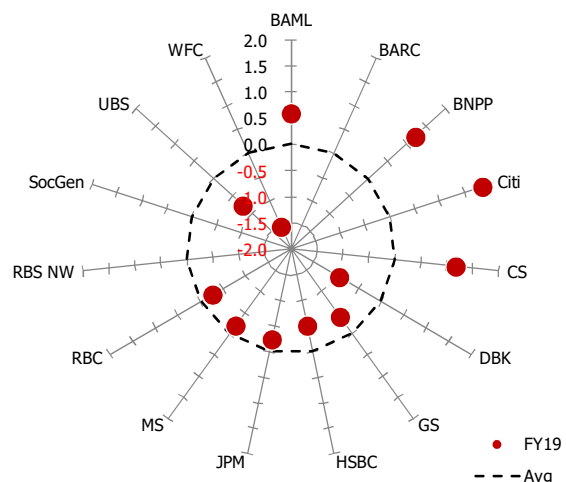
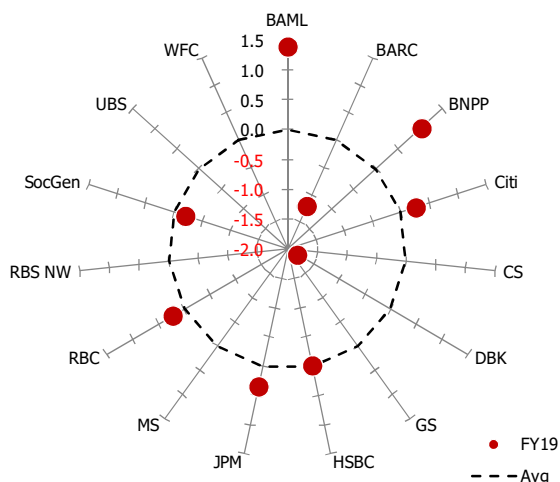
**Capital Markets** **Banking**



**FICC** **Equities**



**Commercial Banking / Treasury Services** **Wealth Management**

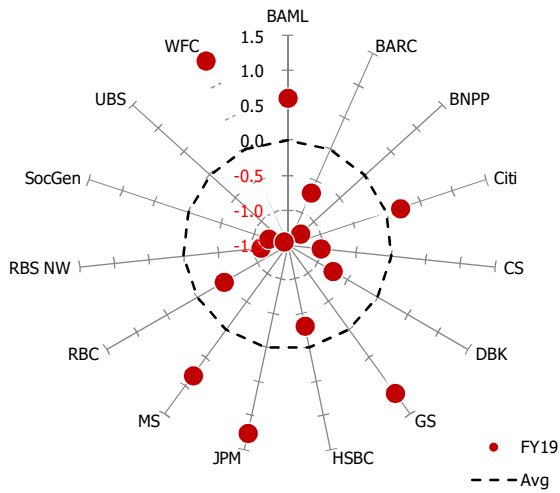


Source: Tricumen. Notes: (1) TRIC product definitions, standard deviation, product Level 1; (2) Operating expenses exclude one-off non-operational items, insurance-related benefits & claims, and credit expense/recovery/NPL provisions. Capital expenditure is included as accrued. Litigation expense is allocated to front-line units. (3) positive values = outperformance; negative values = underperformance, relative to the peer group featured in this report; (4) missing values = not included in ongoing coverage or a bank is not a significant competitor in this market; (4) outliers are excluded.

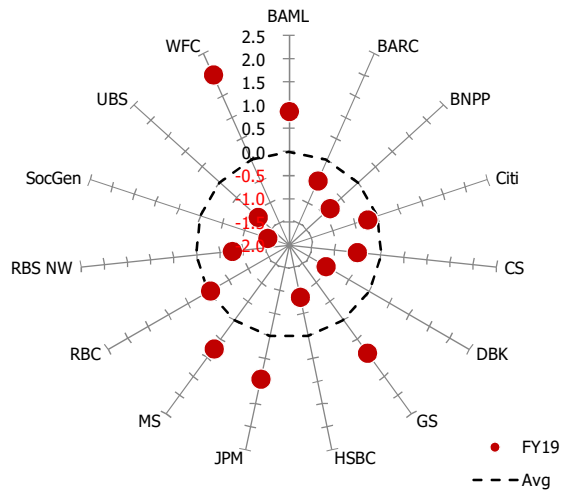


Operating Revenue / Front Office FTE (US\$, Global Level 1)

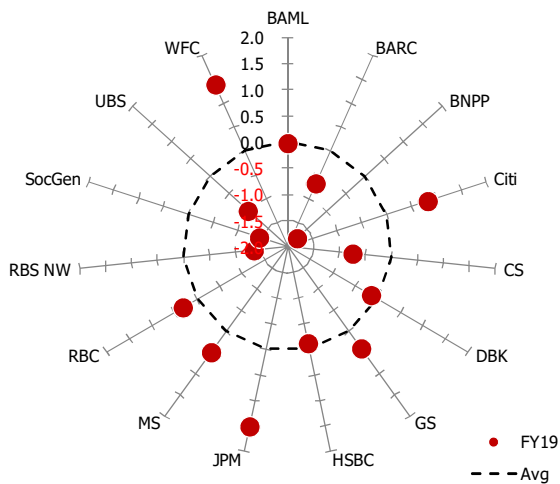
Capital Markets



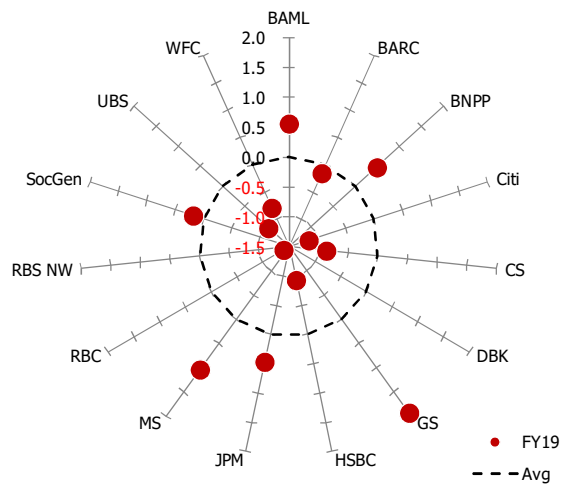
Banking



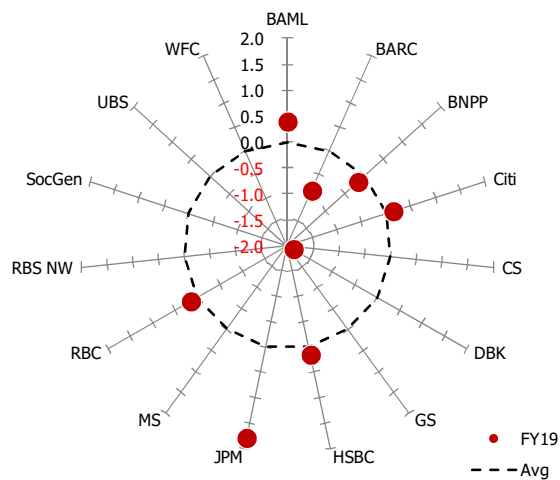
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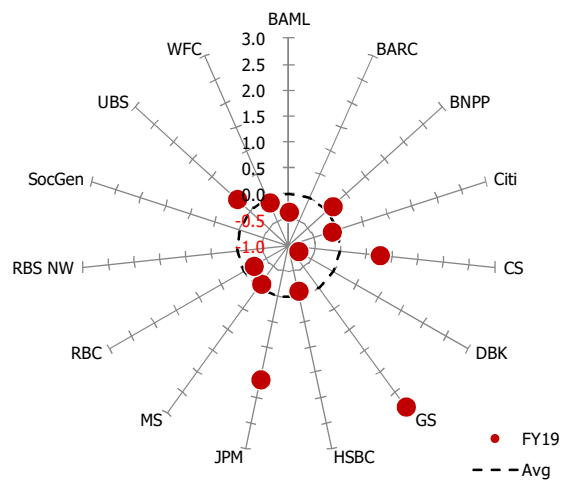
Equities



Commercial Banking / Treasury Services



Wealth Management



Source: Tricumen. Notes: (1) TRIC product definitions, standard deviation, product Level 1; (2) positive values = outperformance; negative values = underperformance, relative to the peer group featured in this report; (4) missing values = not included in ongoing coverage or a bank is not a significant competitor in this market; (4) outliers are excluded.

## About Tricumen

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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