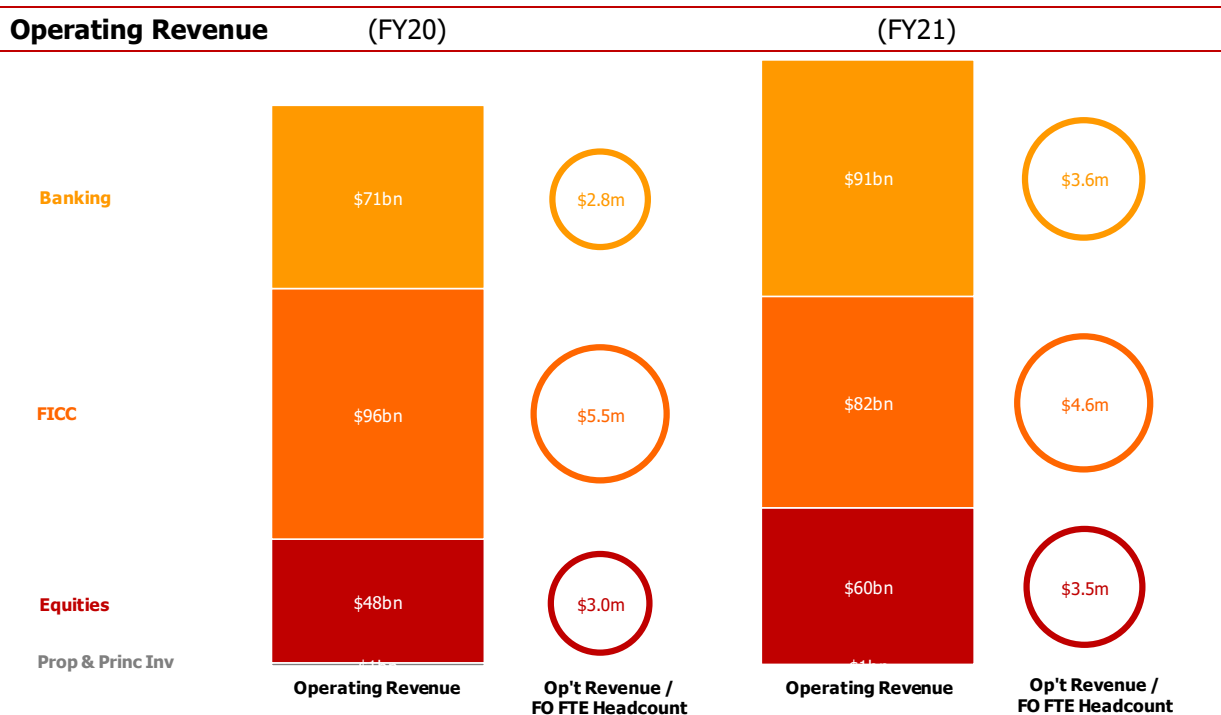


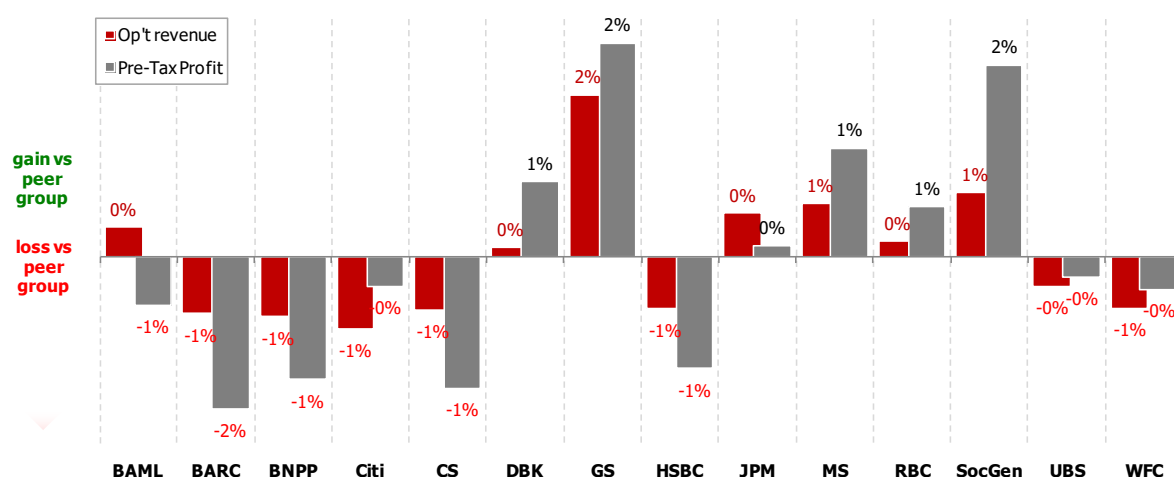
Results Review 4Q21 / FY21

Capital Markets: Overview

- The 14 banks in this report generated \$50bn of revenue in 4Q21, lifting the 2021 total to \$233bn, 8% up y/y. All three business areas registered a slowdown in 4Q21 compared to the first nine months of the year, but only FICC suffered a sharp drop, due to G10 rates, securitisation and credit. Equities were broadly unchanged vs 4Q20 and Banking surged, driven by M&A, ECM (except converts) and loans. The AMER leaders grew revenue 12% y/y in 2021, while EMEA-headquartered peers, in aggregate, stagnated.
- The 2021 pre-tax profit was 8% ahead of 2020: AMER banks' +12% y/y, Europeans' -3% y/y.
- 1Q22 had a strong start, but the outbreak of war in Ukraine upended projections. Primary/issuance volumes and emerging markets credit and rates will likely take an immediate hit, but elevated volatility in other areas may compensate, at least to an extent.
- Banks are scrambling to assess their individual exposures to Russia/CIS, both current and potential – especially their compliance with the raft of sanctions being rolled out against Russia and Russian entities. This won't be easy: in an interview, JPM's CEO Dimon pointed out there is a real possibility of unintended consequences; e.g. limiting access to SWIFT is not the same as a clear sanction.



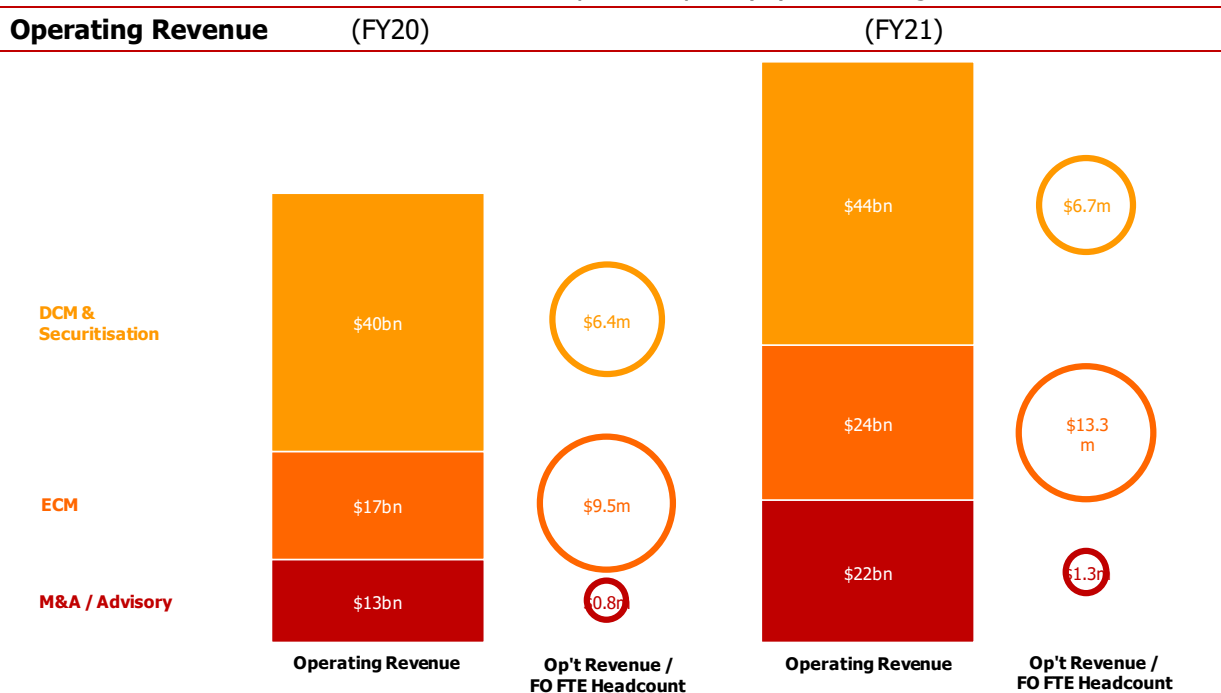
% change share of peer group operating revenue and pre-tax profit (FY21 / FY20)



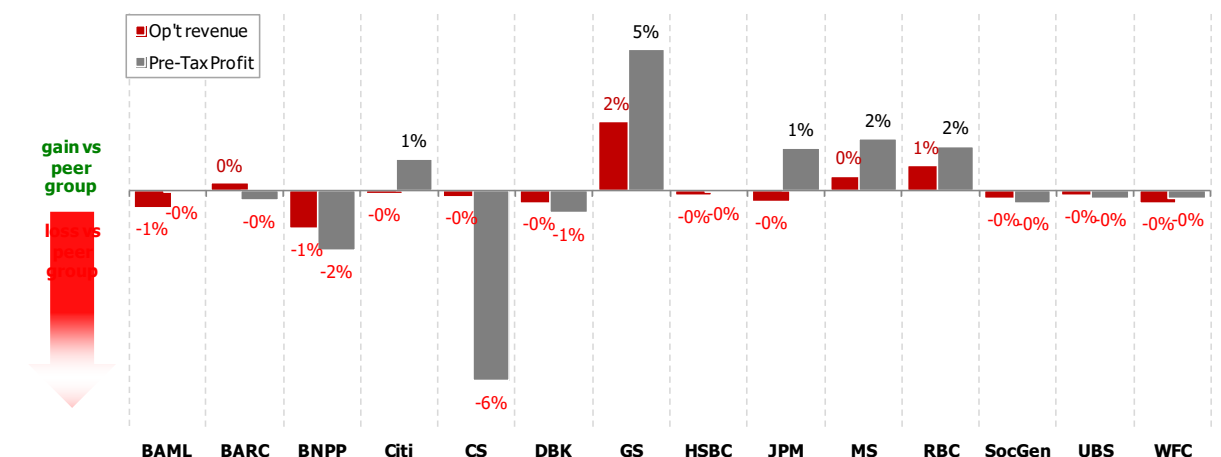
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments..

Capital Markets (cont.): Banking

- In DCM, a slowdown in high grade and international bond issuance in 2021 was more than offset by high-yield bonds and syndicated loans, across all regions and especially in acquisition-related financing. Bond issuance surged in January as companies rushed to lock in low borrowing costs before the expected increases in base rates; USA, unsurprisingly, grew at the fastest rate, followed by Europe. Prior to the outbreak of war in Ukraine, the boom in LBOs was expected to support loan markets deep into 1H22.
- ECM dipped y/y in 4Q21, but ended the year 43% ahead of 2020, on record IPO and APOs. After a (relatively) slow 9m21, EMEA banks' fee growth caught up with their AMER peers. Most of the banks in this report were also able to increase their margins, with fees growing significantly faster than volumes. China's crackdown on overseas listings is driving investors into private capital markets: market participants estimate that \$200-250bn was raised in 2021, and there are no signs of a slowdown - unless China's regulators intervene.
- M&A/Advisory also broke multiple records; banks in this note surged their collective revenue by 70% in 2021 (4Q21: +53%), led by AMER globals. SPAC accounted for c.20% of US volume. Sponsor-backed volumes doubled from 2020, while the average deal size in public-going-private deals topped \$3bn. Prior to the war, market participants expected a strong 2022, driven by topping bids, divestures, IPOs and inter-industry PE deals; in financials, energy, natural resources and industrials. The outlook is uncertain; M&A may be hit by low(er) economic growth and risk aversion.



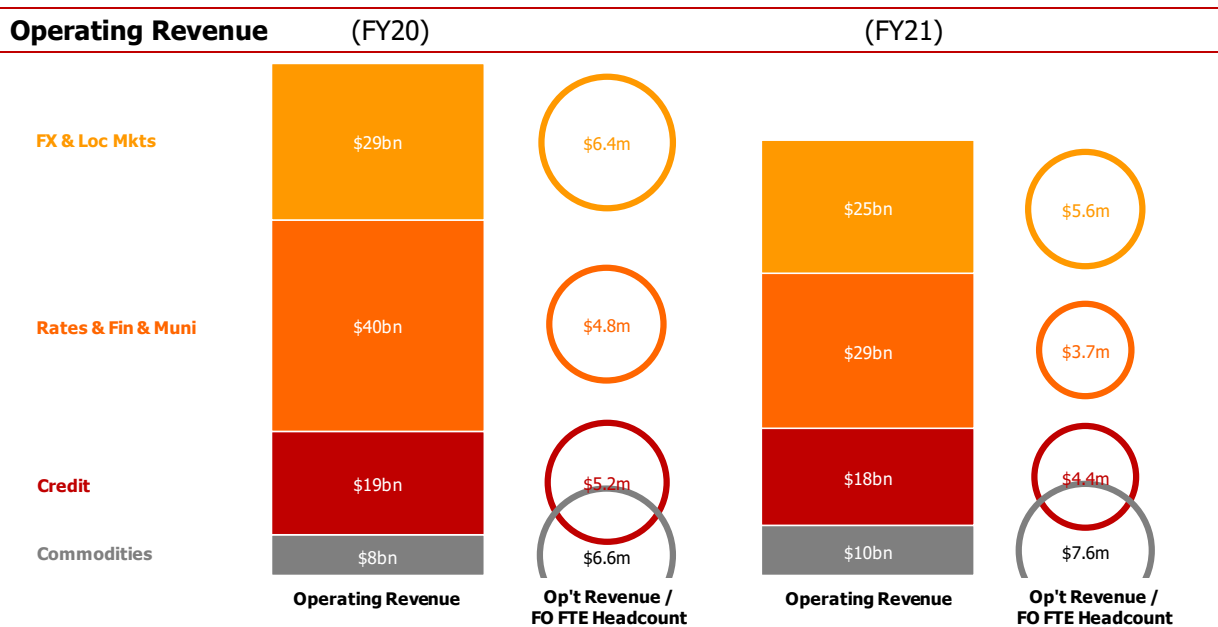
% change share of peer group operating revenue and pre-tax profit (FY21 / FY20)



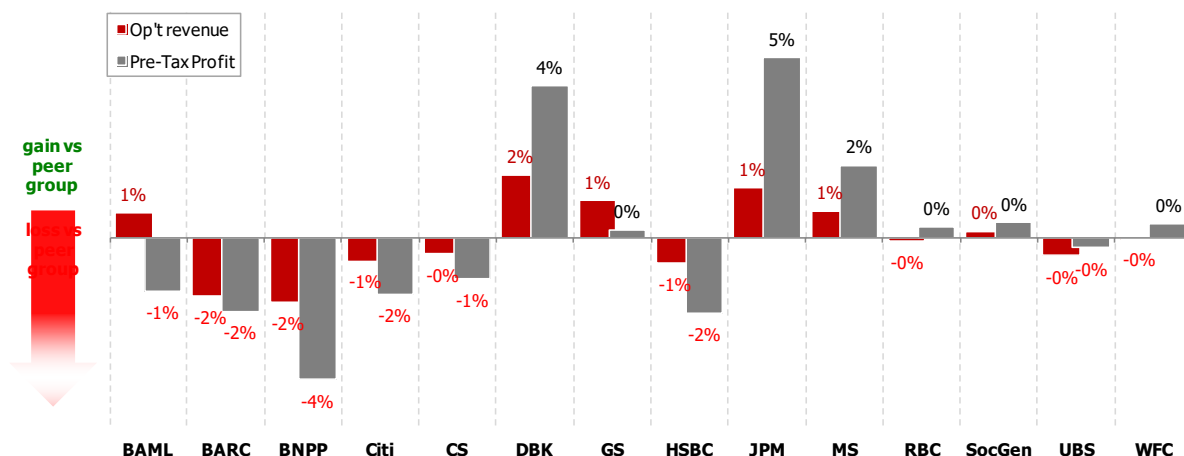
Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority.

Capital Markets (cont.): FICC

- **FX** revenue remained weak in 4Q21 due to a fall in emerging markets volumes, spot margins and lower institutional flow. APAC held up better, but aggregate revenue for banks in this report was 15% below 2020. Before the war, 2022 was shaping up to a profitably busy year: central banks' varying approaches to withdrawing stimulus led market participants to anticipate a sharp rise in volatility. The outbreak of war roiled emerging markets currencies: ruble slumped 40%+ in the initial few days; significant emerging markets currencies also weakened, as did Euro. Crypto trading surged on expectation that anti-Russia sanctions will spur demand.
- **Rates** also dropped, by 30% y/y, in 4Q21 on weak steepeners, convexity and specific areas of long-end volatility. Munis have been impacted by the surge in Treasury yields, driven by expectations of steep rate rises by The Fed. January – typically a strong month – has had the worst start in more than two decades; then, in February, volatility surged.
- **Credit** dropped 30% y/y in 4Q21, depressed by corporate product; central banks' likely curtailment of stimulus is prompting a sell-off in European corporate debt, both high grade and high yield. However, CLOs did very well on strong institutional demand – especially from US pension funds – and financials' CoCo also made a positive contribution. Distressed private credit financing/lending could outperform in 2022; but the war will likely hit emerging market products hard.
- Despite a slowdown in 4Q21, **commodities** revenue jumped 20% y/y in 2021, driven by power and gas and, to a lesser extent, metals. It seems that 2022 will be a busy year, too, with rising (though not - yet - spiking) volatility across oil and precious metals.



% change share of peer group operating revenue and pre-tax profit: (FY21 / FY20)

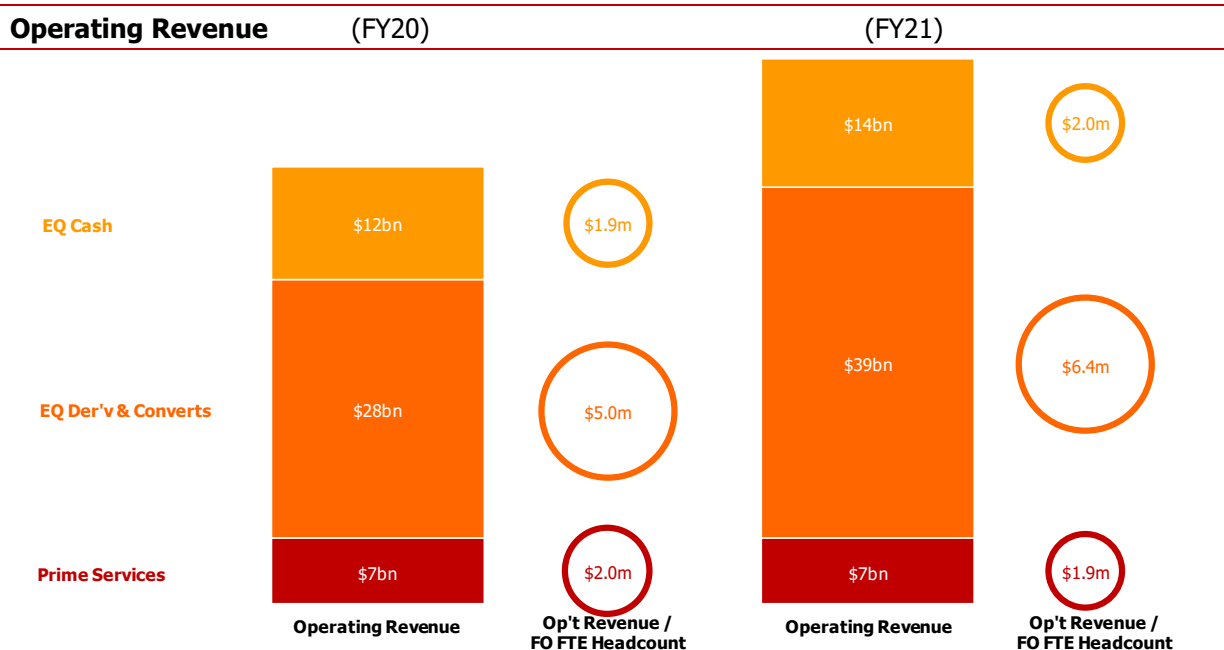


Notes: (1) Tricumen product definitions throughout. (2) Revenue is post-writedowns, excludes DVA/equivalent and one-offs. (3) Headcount: Front office full-time equivalent, adjusted for seniority. (4) Pre-tax profit excludes Prop & Principal Investments.

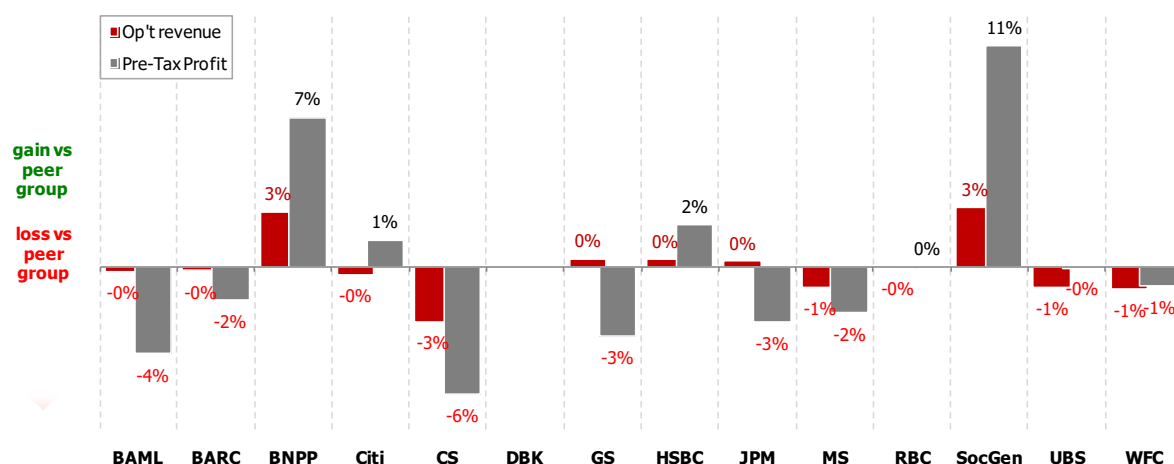
Capital Markets (cont.): Equities

- Cash equity slowed in 4Q21 due to weak blocks, which offset a seasonal uptick in index balancing day trades. Still, 2021 ended well ahead of 2020. The outbreak of the war will likely pause central banks' drive to increase interest rates and, in doing so, brighten the outlook for equities – barring, of course, a severe deterioration in the global economic outlook.
- Equity derivatives revenue was unchanged vs 4Q20 (despite a decline in convergence trades and converts); but 2021 revenue was well ahead of the difficult 2020, when French banks suffered severe losses in structured derivatives in 1H20. Options trading surged, with contracts up to 35% ahead of 2020, and retail traders accounting for 25% of total activity.
- Prime services aggregate revenue was 15% up vs 4Q20; on full year basis, there was little change vs 2020. Hedge funds and HFoFs grew AuM by 12% in the first three quarters of 2021, and then extended that growth into 4Q21, led by balanced, multi-strategy, long-only equity, event-driven and fixed income strategies. However, margins remained depressed even for top players, which extended their overall lead. The outlook is positive: moderate (or slightly weaker) economic growth, high inflation and likely lower returns on public market investments may motivate investors to increase allocations to hedge funds, especially market-neutral strategies.

In the US, Managed Funds Association (MFA) expressed concerns that SEC's proposed changes to securities lending laws would allow competitors to reverse-engineer hedge fund short-selling trading strategies. This view was echoed by London-based AIMA.



% change share of peer group operating revenue and pre-tax profit (FY21 / FY20)



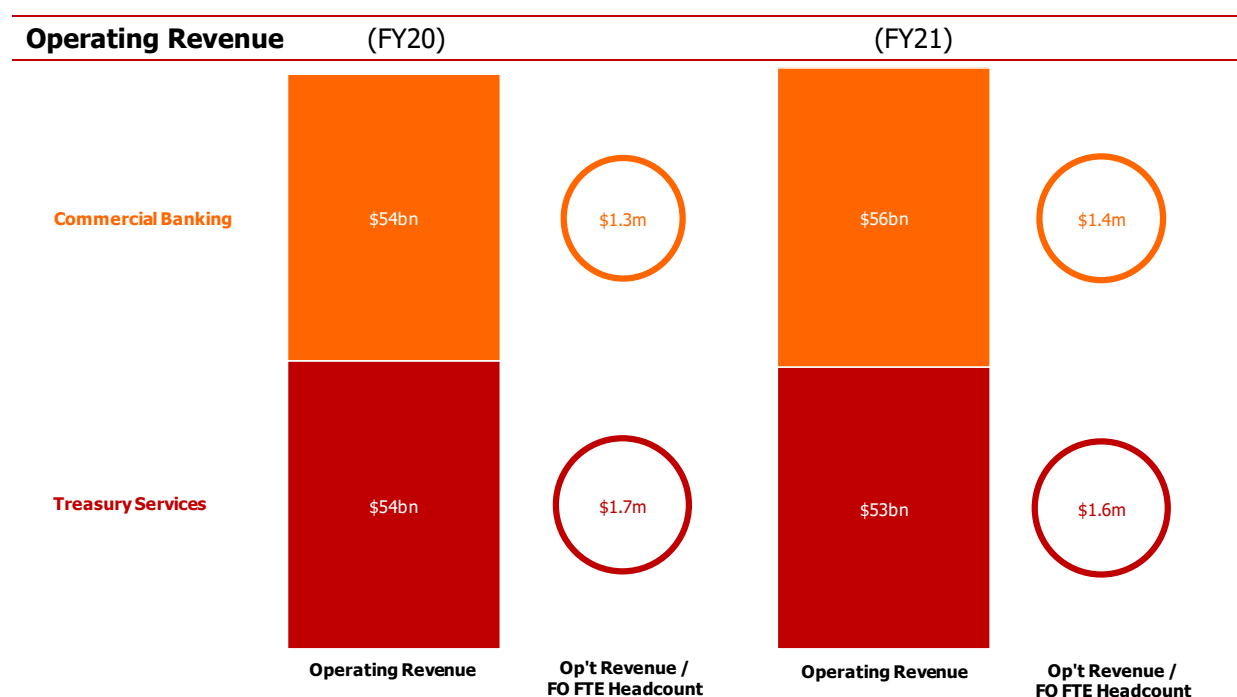
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Commercial Banking & Treasury Services

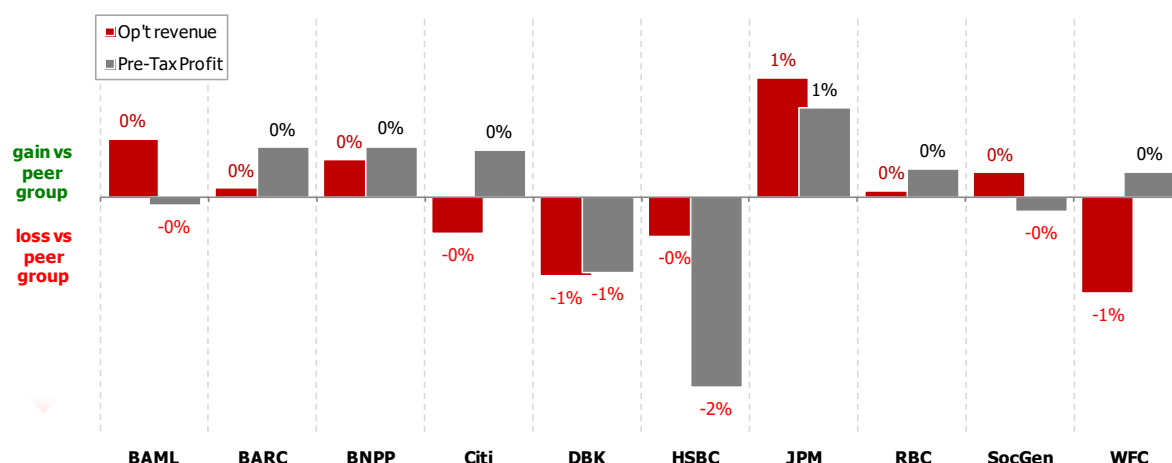
- Commercial banking revenue advanced 4% in 4Q21. Lending revenues and fees from LME clients were the primary driver, partly offset by deposits margin compression. SME/business banking also grew – driven by uptick in revolver utilisation rates, a trend that is shifting to larger clients - but at a slower pace.

Most banks in this report reported higher volume of referrals between commercial and investment banking.

- In Treasury services, the positive impact of higher balances and margins and client activity, especially in LME, were offset by lower deposit spreads.



% change share of peer group operating revenue and pre-tax profit (FY21 / FY20)



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.

Revenue dynamics

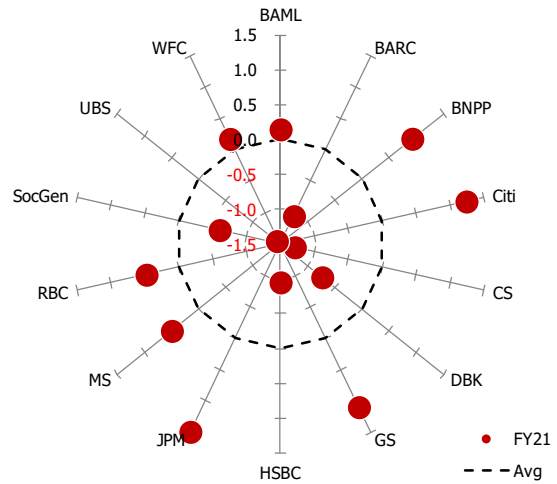
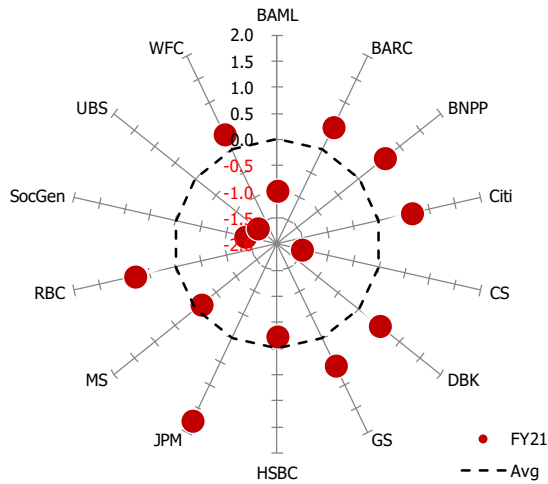
FY21/FY20 (Operating revenue, % change, US\$, Global Level 1)

	BAML	BARC	BNPP	Citi	CS	DBK	GS	HSBC	JPM	MS	RBC	SocGen	UBS	WFC
Capital Markets	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Banking	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
DCM Bonds	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
DCM Loans	↗	↘	↘	↘	↘	↘	↗	↘	↘	↘	↘	↘	↗	↘
Securitisation	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
ECM	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
M&A / Advis	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Markets	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
FICC	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
FX & Loc Mkts	↗	↘	↘	↘	↘	↗	↗	↘	↘	↘	↘	↘	↘	↗
Rates & Fin & Mur	↘	↘	↘	↘	↘	↗	↗	↘	↘	↘	↘	↘	↘	↘
Credit	↘	↘	↘	↘	↘	↗	↘	↘	↘	↘	↘	↘	↘	↘
Commodities	↗	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Equities	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
EQ Cash	↗	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
EQ Der'v & Conv't	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Prime Services	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Prop & PI	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Comm Bank / Treas Serv	↗	↗	↗	↘	↘	↘	↘	↘	↗	↘	↘	↗	↘	↘
Comm Bank	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘	↘
Treas Serv	↗	↗	↗	↘	↘	↘	↘	↘	↗	↘	↘	↗	↘	↘

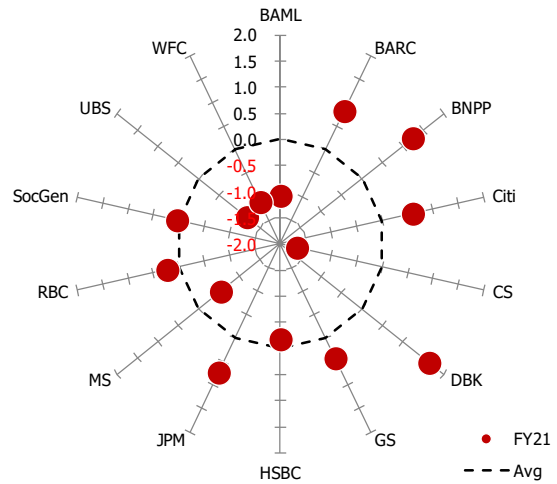
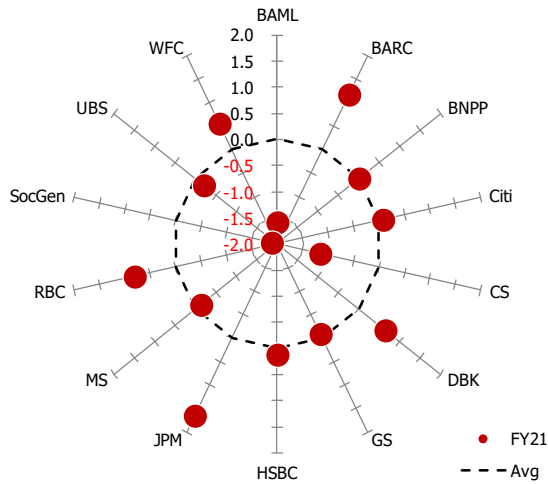
Source: Tricumen. Notes: (1) Tricumen product definitions throughout. (2) Arrows show % change in revenue vs peers. Up-/down-arrows: top-/bottom-quartile. (3) Operating revenue is post-writedowns, excludes DVA/equivalent and one-offs. (4) Commercial/Transaction Banking includes Large Cap/MNC and Mid-Cap/SMEs.

Pre-tax profit margin (US\$)

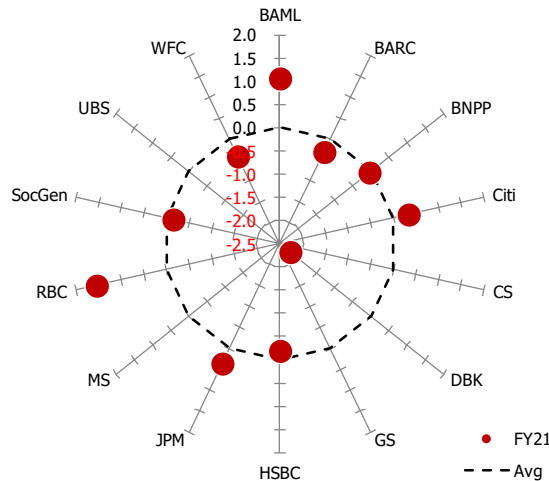
Capital Markets Banking



FICC Equities



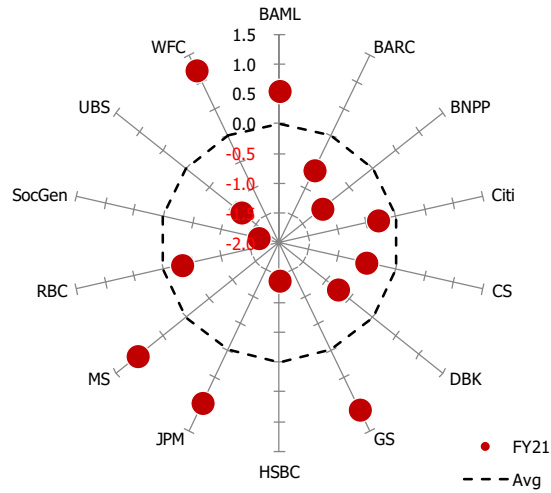
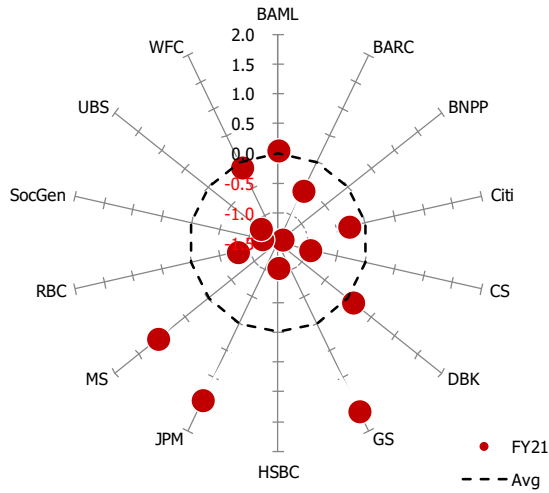
Commercial Banking / Treasury Services



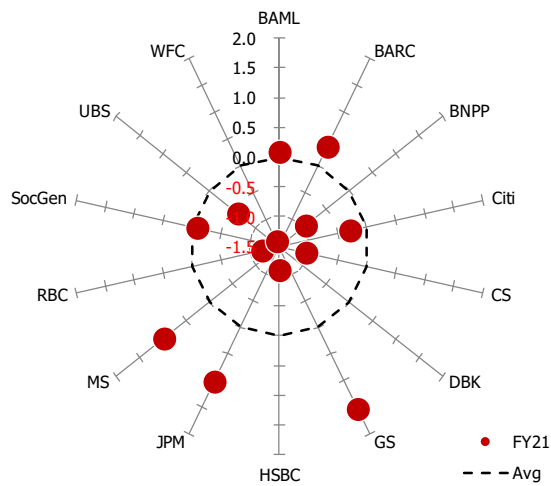
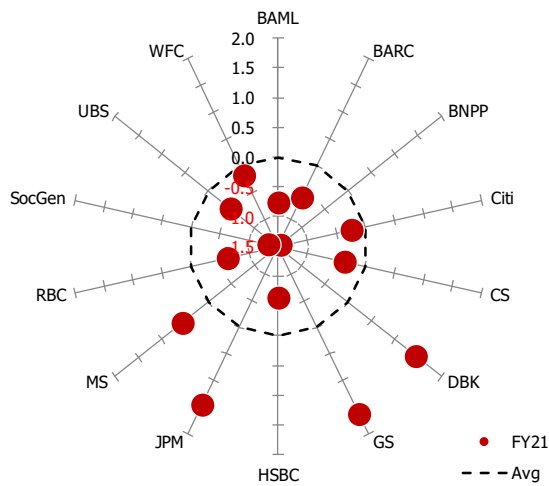
Source: Tricumen. Notes: (1) TRIC product definitions, standard deviation, product Level 1; (2) Operating expenses exclude one-off non-operational items, insurance-related benefits & claims, and credit expense/recovery/NPL provisions. Capital expenditure is included as accrued. Litigation expense is allocated to front-line units. (3) positive values = outperformance; negative values = underperformance, relative to the peer group featured in this report; (4) missing values = N/M; no Tricumen coverage; or a bank is not a significant competitor.; (5) outliers are excluded.

Operating Revenue / Front Office FTE (US\$)

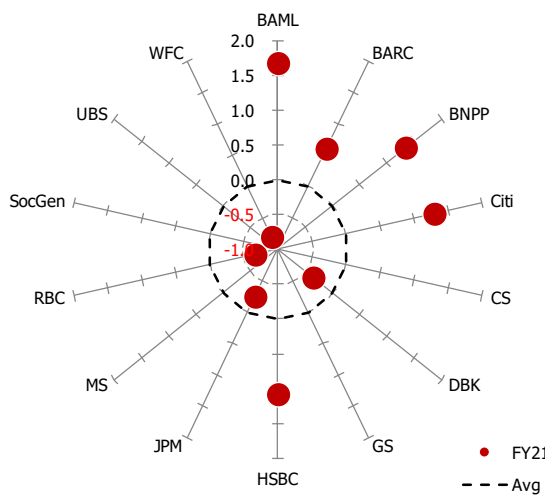
Capital Markets **Banking**



FICC **Equities**



Commercial Banking / Treasury Services



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; (3) missing values = N/M; no Tricumen coverage; or a bank is not a significant competitor; (4) outliers are excluded.

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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, asset servicing, and 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 financial markets-focused research network of its peer group.

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