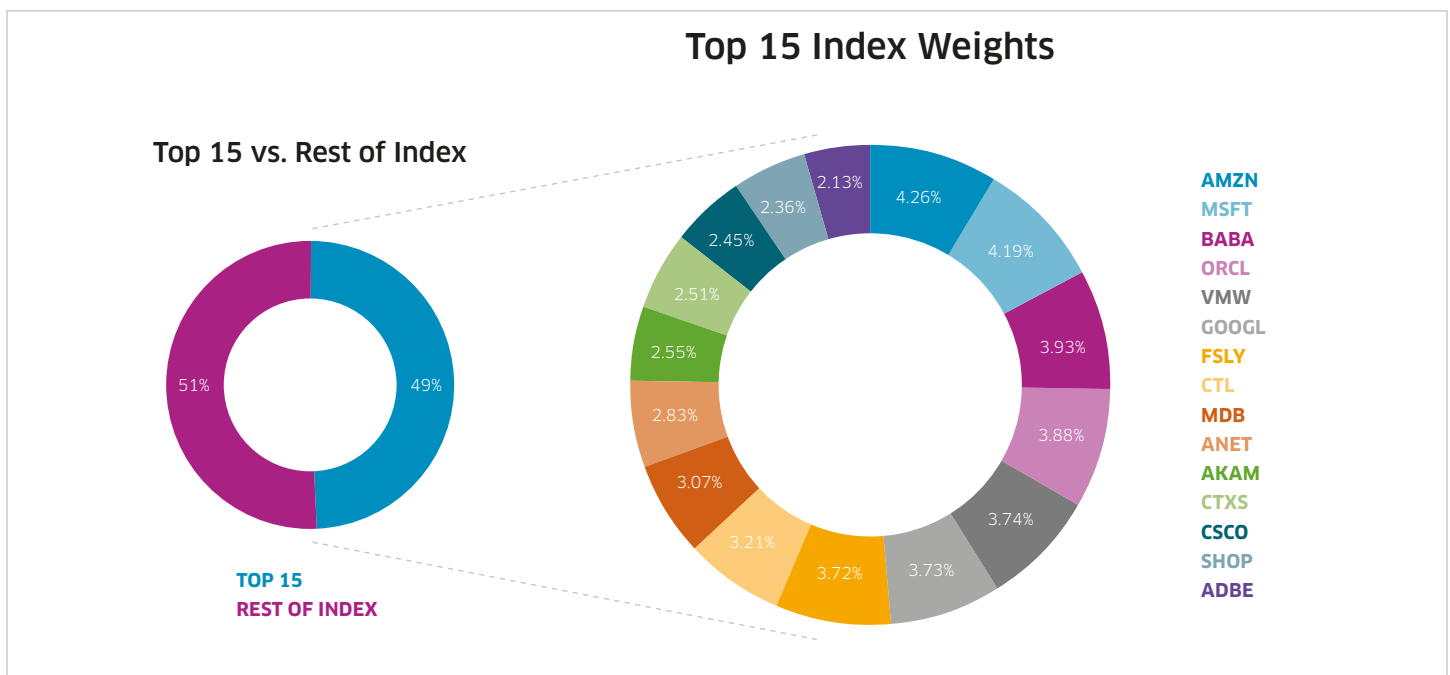


# Cloud Computing Meets a Brave New World

Mark Marex, Product Development Specialist

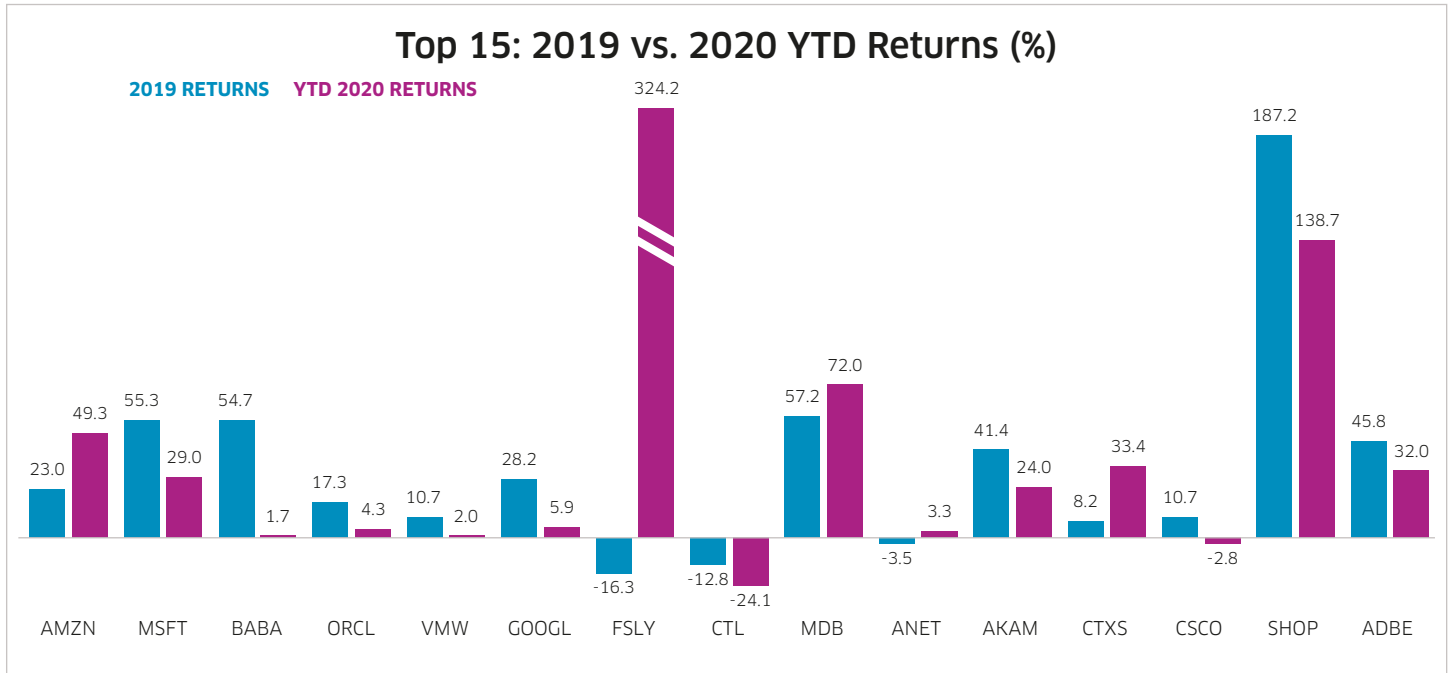
The ISE CTA Cloud Computing Index (CPQ) was launched on December 31, 2007, when the industry was still nascent and about to experience a rapid phase of expansion and maturation. During the 2010s, CPQ returned 506% on a total return basis, besting even the Nasdaq-100 (NDX) Index, which soared 426%. Its constituent basket expanded from 28 to 62 in 2019 as a result of a methodology revamp that sought to identify a wider and more suitable spectrum of companies involved in cloud computing, falling into one of three main categories (Infrastructure-as-a-Service, Platform-as-a-Service, Software-as-a-Service). With the input of the Consumer Technology Association (CTA), companies now receive points for their involvement in one or more categories (3 for IaaS, 2 for PaaS, 1 for SaaS) and are weighted accordingly. Constituents are capped at 4.5% at each index rebalance and reconstitution. Let's review how CPQ has performed in the recent past and what its components look like today, followed by a consideration of the drivers of future performance.

## Current Composition



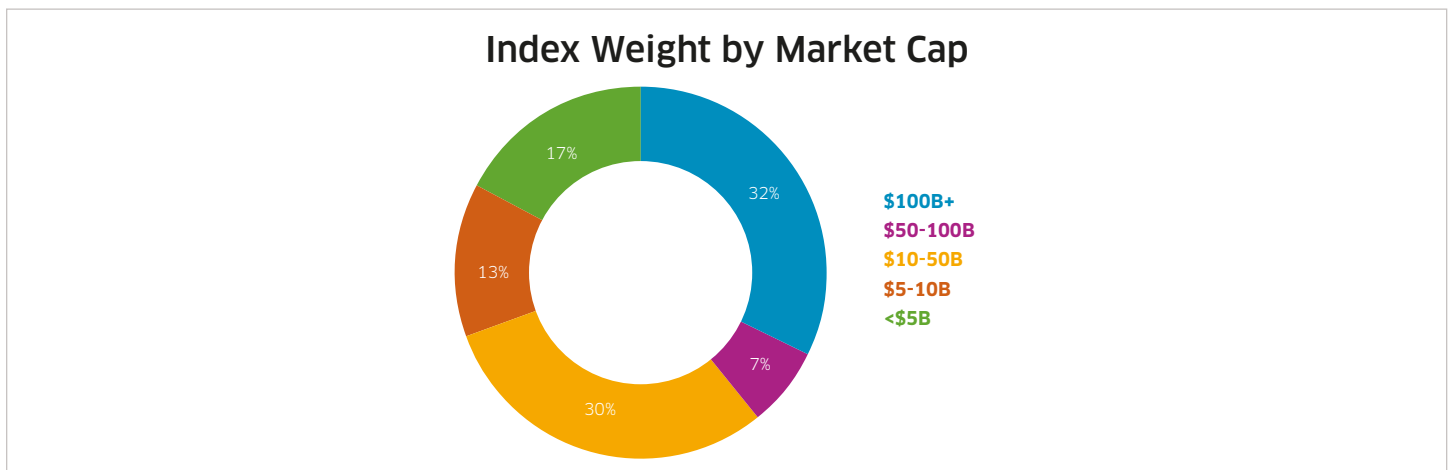
(Data as of June 30, 2020)

Of the 64 constituents in CPQ, the top 15 represented 49% of the index weight as of the end of 2Q'20. The top 32 names represented approximately 79%, while the top 5 represented 20%. The largest of these were Amazon (AMZN) and Microsoft (MSFT), with weights above 4% and returns of 49.3% and 29.0%, respectively. Most of the others in the top 15 have fared well despite the volatility and economic upheaval attributed to the Coronavirus pandemic, with an average YTD return of nearly 46%; only CenturyLink (CTL) has seen its price decrease. The biggest standouts have been Fastly (FSLY), up over 300%, and Shopify (SHOP), up nearly 140% after being the top performer in the index during 2019. Names not in the top 15 performed somewhat worse, with an average YTD return of approximately 32%.



(Data as of June 30, 2020)

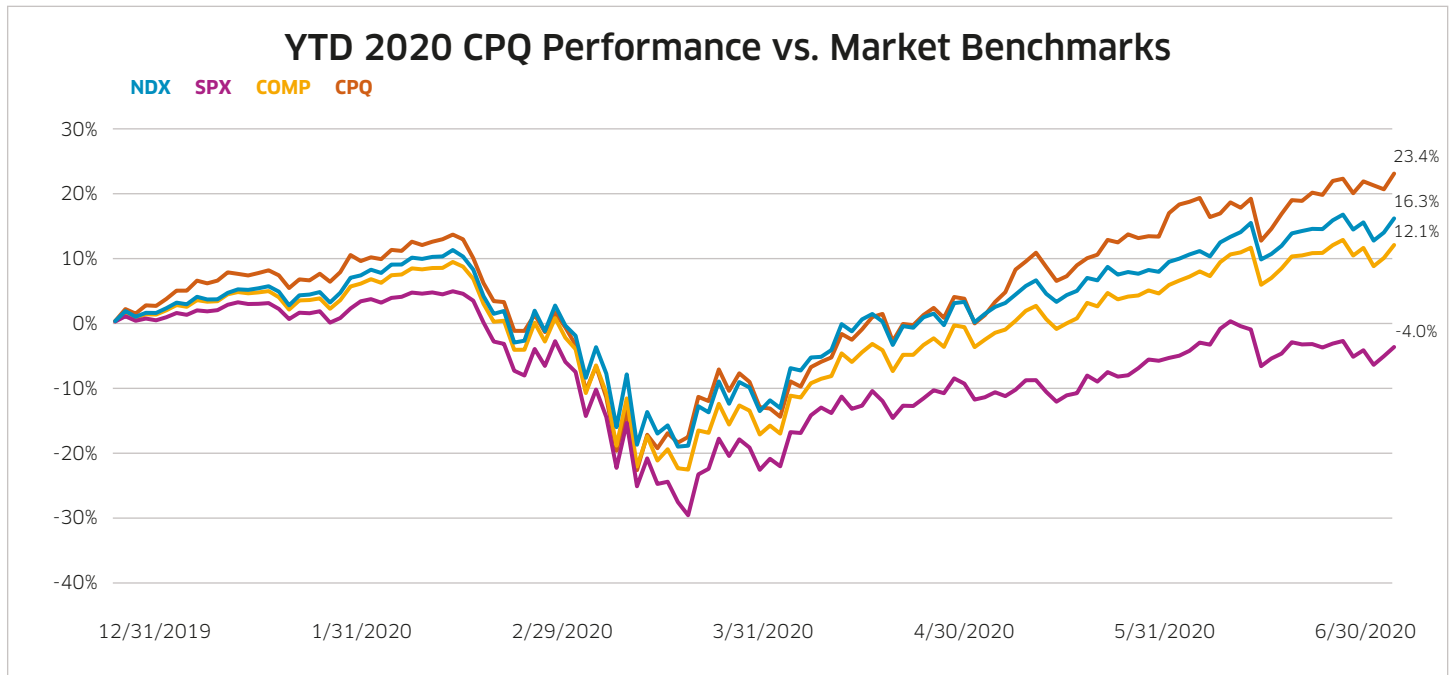
In terms of market capitalization for the overall group, the average was \$101.0bn, while the weighted average was \$221.3bn. The median was only \$11.3bn, however. This large skew results from the outsized market caps of Amazon, Microsoft, and Google - all in the vicinity of \$1-1.5 Trillion (and to some extent, also Alibaba (BABA) at more than \$500bn). Yet, the fat tail at the top of the size distribution does not necessarily mask a long tail at the bottom end, as only 5 constituents fall into a true "small-cap" designation with market caps less than \$2.5bn, representing less than 5% of the total index weights. CPQ is still, ultimately, an index of mostly large-cap companies with a sizable mid-cap segment as well.



(Data as of June 30, 2020)

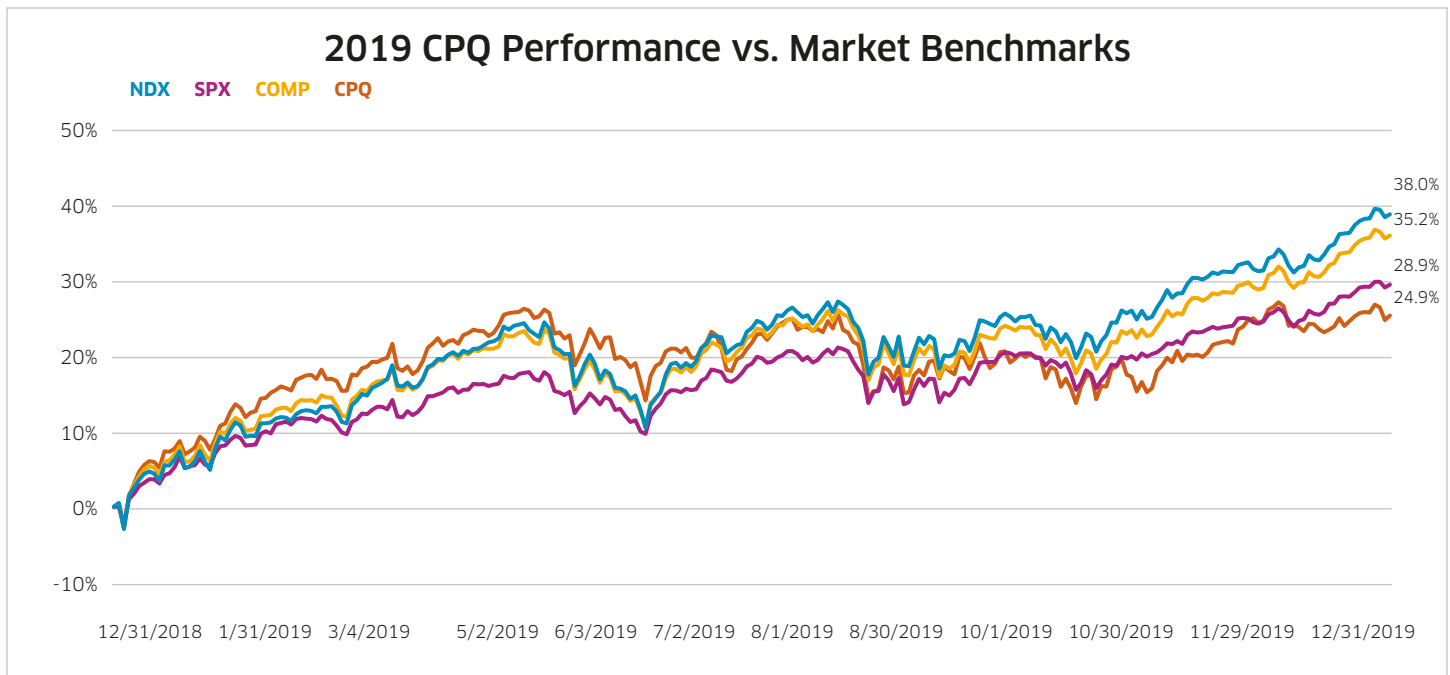
## Recent Performance

CPQ has outperformed both the Nasdaq-100 and the broader Nasdaq Composite (COMP) in the first six months of 2020, with a gain of more than 23% (price-return basis).

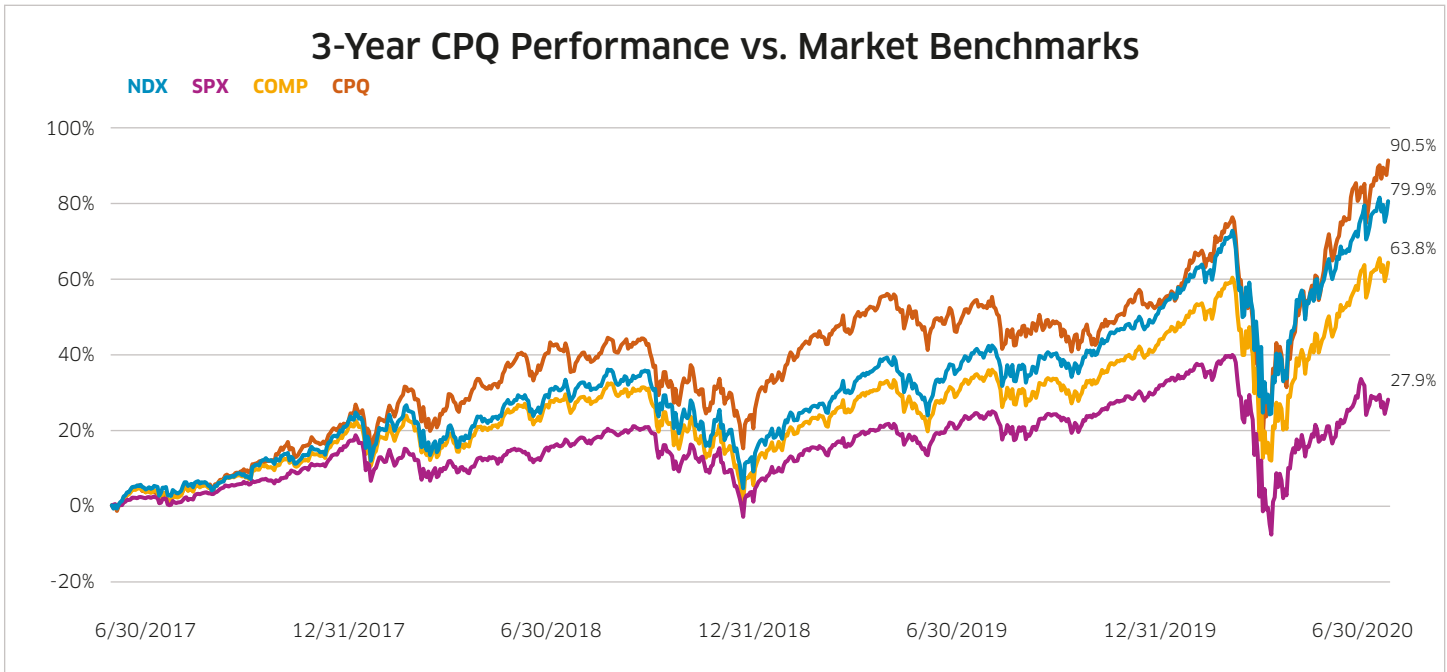


(Data as of June 30, 2020)

Unlike in the first half of 2020, full-year performance in 2019 was noticeably weaker, especially in the second half of the year following a brief but sharp correction in late July/early August.



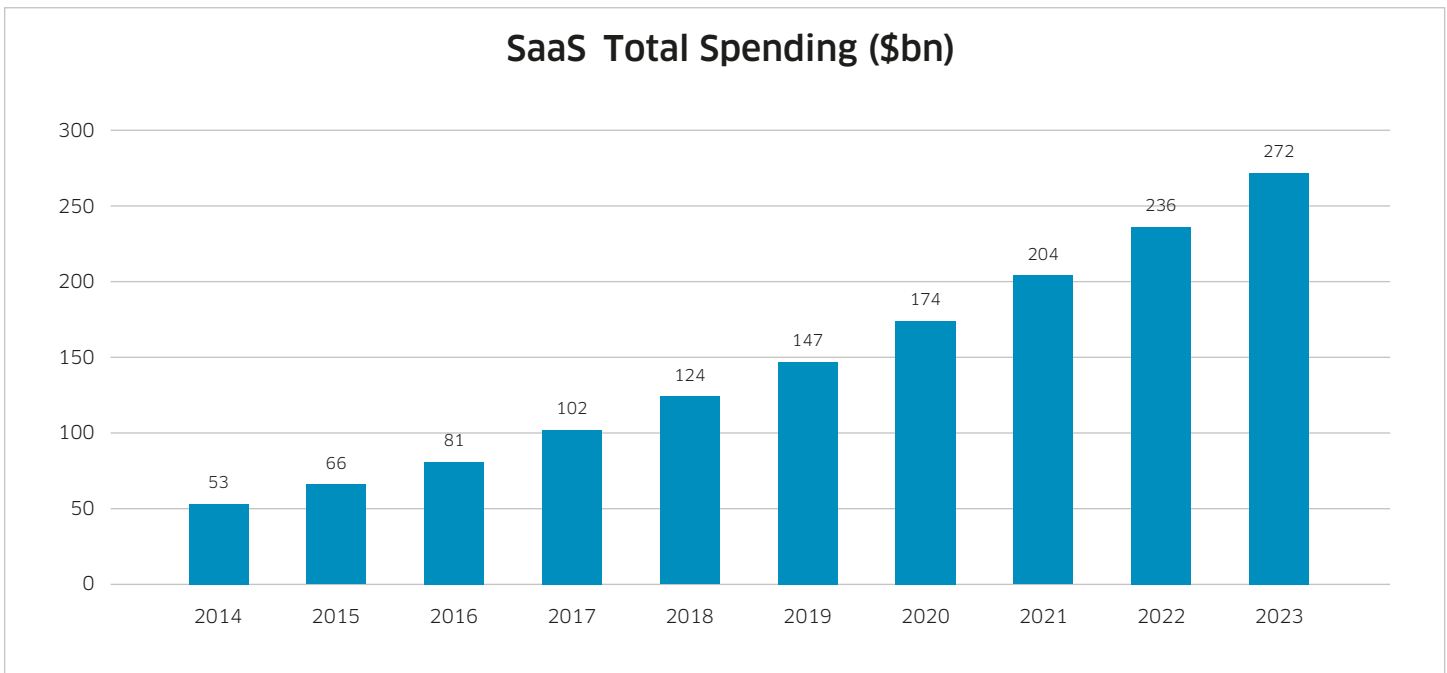
Putting it all together, CPQ slightly exceeded the performance of NDX on a trailing 3-year basis, and has outperformed the S&P 500 by more than 60% (almost 3x) on a price-return basis. It also notably outperformed COMP over the same time frame.



(Data through June 30, 2020)

## Drivers of Continued Outperformance

CPQ's constituents disproportionately benefit from participation in a growing industry with secular tailwinds in terms of customer demand, low capital intensity, and healthy margins. As companies continue to shift from legacy IT systems to cloud-based infrastructure, spending on SaaS will remain a key driver of overall cloud industry revenue growth. Per IDC, SaaS represents more than 60% of total cloud spending, and is expanding at more than 15% annually:<sup>1</sup>

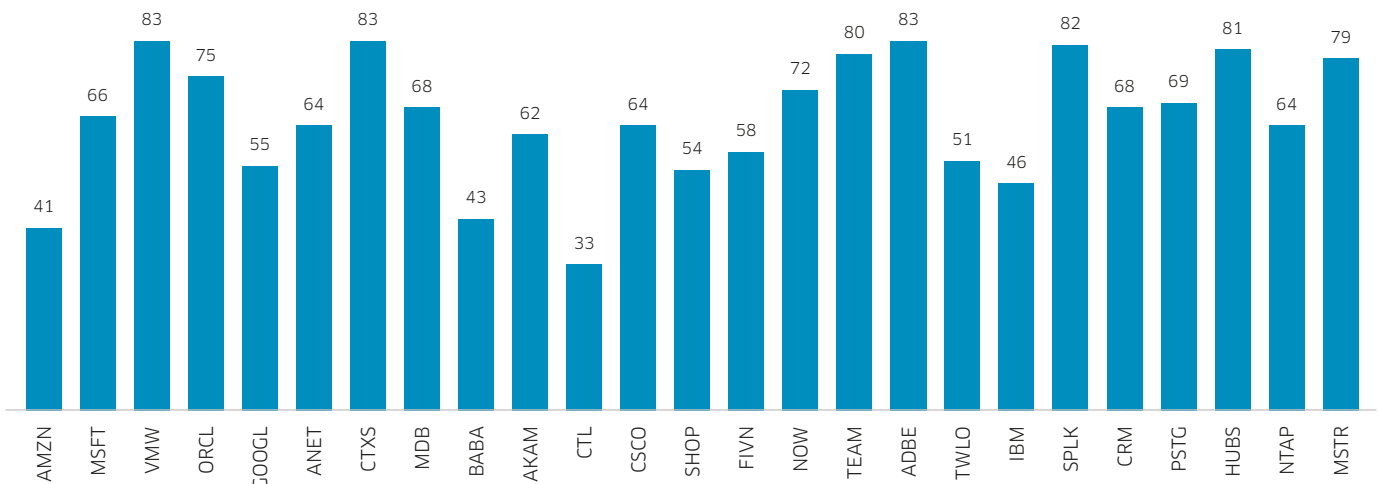


1. <https://blinks.bloomberg.com/news/stories/Q9HU34T0G1KW>

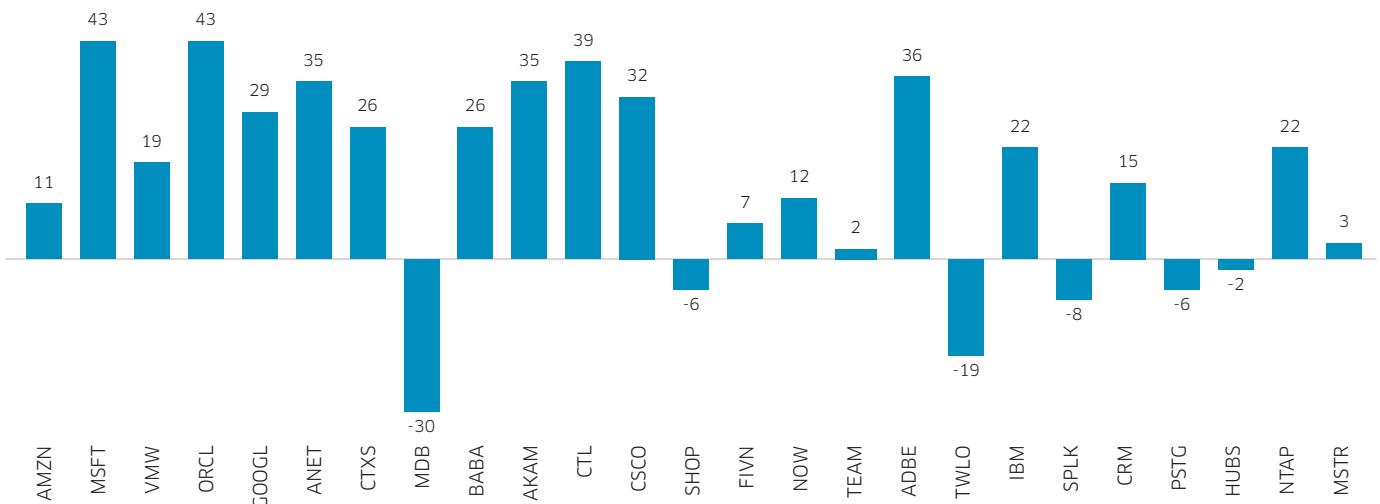
IaaS and PaaS, meanwhile, represent smaller segments but are growing at an accelerating pace. While there may be some near-term impacts on corporate budgets from the Covid-19-induced economic uncertainty, there exists a massive counterbalancing effect from widespread adoption of work-from-home policies and their potential extension beyond the timeline of the pandemic. Bloomberg currently estimates average revenue growth of 27% annually through 2022 among pure-play cloud infrastructure providers such as Zoom, Slack, Twilio, Okta, and Atlassian.<sup>2</sup>

Many of these firms maintain a balance-sheet-light model with high gross margins thanks to low acquisition costs and fast deployment cycles, ideally situated to maintain high operating leverage even in the face of increased demand and expansion. Among the top 25 constituents in the index representing 68% of the total weights, the average gross margin was 63% in 2019. And even among those with lower operating (i.e. EBITDA) margins, elevated cost bases are often driven by their salesforces and marketing budgets, the drag of which may somewhat moderate thanks to more widespread referrals and self-reinforcing adoption trends in the aftermath of the Covid-19 shock.

### Top 25 CPQ Constituents, % Gross Margin (2019)



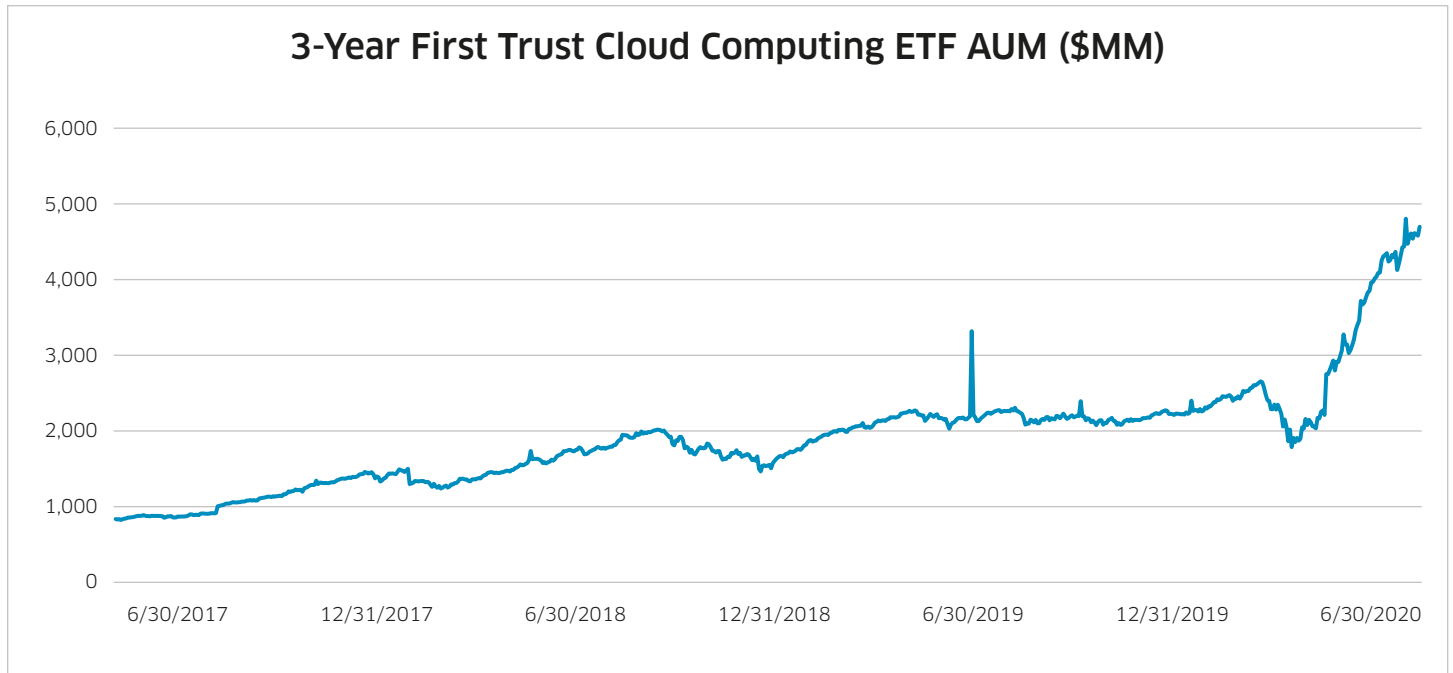
### Top 25 CPQ Constituents, % EBITDA Margin (2019)



<sup>2</sup> <https://blinks.bloomberg.com/news/stories/Q8D536T0AFBM>

## CPQ ETP Assets

Finally, we look at how assets under management (AUM) have grown over the last 3 years within the exchange-traded products tracking CPQ - the First Trust Cloud Computing ETFs listed in the U.S. and London. Despite the most recent downturn, AUM is at an all-time high of more than \$4.7bn, which is 5.3x larger than our reference point from month-end of June 2017 and 2.6x higher than the recent low point of 2020 on March 16.



(Data through June 30, 2020)

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## Summary

CPQ has just experienced an exceptional decade of returns alongside broader Tech-heavy benchmarks like the Nasdaq-100 and the Nasdaq Composite. At the beginning of 2020, the Index was well-positioned for continued outperformance, with a recently revamped composition of firms weighted according to their intensity within the cloud computing ecosystem – as all-encompassing Infrastructure players, essential Platform providers, pure-play Software developers, or some combination of the three. While the SaaS sub-industry has already greatly matured, it remains positioned for years of double-digit annualized growth. Meanwhile, IaaS and PaaS are still early in their evolutions toward ultimately displacing the legacy IT environments built over decades past. While it may seem counterintuitive to expect any industry to experience substantial growth in the Covid-19-altered near-term (with the exception of perhaps Healthcare), cloud computing firms stand a reasonable chance of actually benefiting from accelerated shifts by their corporate customers to bring remote-work onto a level playing field with onsite employee productivity. Cloud computing holds the keystones to enabling better collaboration, communication, analytics, content-management, and security – all within a future that is trending towards work-from-anywhere, anytime, at any required level of intensity.

ETFs currently tracking CPQ include the US-listed First Trust Cloud Computing ETF (Ticker: SKYY) and London-listed First Trust Cloud Computing UCITS ETF (Ticker: FSKY).

Sources: FactSet, Bloomberg, Nasdaq Global Indexes.

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