



## MORNING BRIEFING

October 31, 2019

### As Goes Tech, So Goes the Market

See the [pdf](#) and the [collection](#) of the individual charts linked below.

(1) Tech is leading the way higher for stocks. (2) Outsized market-cap and earnings shares. (3) A third of S&P 500 market cap in IT and Communication Services. (4) Hard to keep a good FAANGM down. (5) The march of the giants. (6) A close-up of Google and Netflix. (7) Ultracapacitors vs batteries. (8) Musk is on it.

**Tech I: Back on Top.** The new highs that the S&P 500 eked out this week owe much to the revival of the S&P 500 Information Technology sector, which likewise hit a new high, on Monday. That brings its ytd return to a lofty 34.2% through Tuesday's close ([Fig. 1](#)). The importance of Tech to the broader market can't be overstated. Consider the following:

(1) *A fine performance.* The Tech sector has outperformed the next-best-performing sector, Real Estate, by a whopping 8.1ppts ytd. Here's the performance derby for the S&P 500 sectors ytd through Tuesday's close: Information Technology (34.2%), Real Estate (26.1), Communication Services (23.2), Industrials (23.0), Consumer Discretionary (21.4), Financials (21.1), S&P 500 (21.1), Consumer Staples (19.9), Utilities (19.7), Materials (16.5), Health Care (8.7), and Energy (3.3) ([Fig. 2](#)).

Trump has been good for Tech, despite his complaints about some of Tech's giants. Here is the performance derby since Trump was elected president on 11/8/16: Information Technology (82.6%), Consumer Discretionary (51.6), Financials (44.5), S&P 500 (41.9), Health Care (37.9), Industrials (32.6), Real Estate (29.2), Utilities (29.0), Materials (24.5), Consumer Staples (15.7), Communication Services (9.2), and Energy (-14.2).

(2) *Land of the Giants.* The Tech sector's market cap is almost twice that of the next largest sector. Fortunately, its earnings contribution is outsized as well. Here are the capitalization and earnings contributions of the 11 S&P 500 sectors: Information Technology (21.8%, 19.2%), Health Care (13.8, 16.3), Financials (13.0, 18.1), Communication Services (10.4, 10.1), Consumer Discretionary (10.1, 8.2), Industrials (9.3, 9.9), Consumer Staples (7.5, 6.5), Energy (4.5, 4.7), Utilities (3.5, 3.0), Real Estate (3.3, 1.3), and Materials (2.7, 2.7) ([Fig. 3](#)).

With giants like Apple and Microsoft as members, the S&P 500 Information Technology sector's market capitalization is 21.8% of the S&P 500's total market cap, and its earnings share 19.2%. The S&P 500 Communication Services sector—home of Facebook, Netflix, and Alphabet—has market-cap and earnings shares of 10.4% and 10.1%.

Add them together, and you've got nearly a third of the S&P 500's market capitalization

covered, or 32.2%, with a combined earnings share of 29.3%!

**Tech II: FAANGM Fandango.** The stock market continues to be heavily influenced by just six technology stocks that represent 18.3% of the S&P 500's market cap: FAANGM (Facebook, Apple, Amazon, Netflix, Google [or rather its parent company Alphabet], and Microsoft) ([Fig. 4](#)). FAANGM bounced sharply from the December selloff and rallied 39% to a new high on 7/26, according to Joe's calculations. After that, FAANGM traded in a sideways range for the next few months before returning to a new high last week ([Fig. 5](#)).

So if you'd like to know who deserves credit for this week's first record high in the S&P 500 since 7/26, look no further. Google, Apple, and Microsoft have kept marching higher to new record or near-record highs. Facebook, Amazon, and Netflix each stopped falling and rose modestly, but they all remain at least 10% below their record highs in mid-2018. Here's how each of the stocks have performed ytd through Tuesday's close: Apple (54.2%), Facebook (44.4), Microsoft (40.6), Google (20.6), Amazon (17.4), and Netflix (5.1). Altogether, the FAANGM index is up about 33% ytd.

FAANGM's gains relative to the broader market have slowed this year. From 2013 through its 2018 peak, FAANGM outperformed the S&P 500 by 290 percentage points. But since the 2018 peak, the tech giants have gained only 3.2% while the S&P 500 has risen 4.7% ([Fig. 6](#)). FAANGM's earnings have grown far faster over the past five years (83.6%) than the S&P 500's ex-FAANGM earnings (25.8%) ([Fig. 7](#)). And the faster growth has commanded a much higher forward price/earnings multiple, of 30.3, for the FAANGM stocks than the market has granted the S&P 500 (17.2) and the S&P 500 ex-FAANGM (15.7) ([Fig. 8](#) and [Fig. 9](#)).

Many of the tech giants were among the parade of companies reporting earnings this week. Let's take a look at Google and Netflix:

(1) *Alphabet*. The parent of Google showed amazing growth in Q3 for a company of its size. Revenue jumped 20.0% to \$40.5 billion, and the company is sitting on a \$121.2 billion mountain of cash, equivalents, and marketable securities. Alphabet upped its stock buyback program last quarter, repurchasing \$5.7 billion of shares, and still its cash pile edged higher q/q!

However, money is going out the door almost as fast as it's coming in. Operating expenses rose 24.7% y/y in the quarter, so operating income rose only 6.4% y/y. A \$1.5 billion unrealized loss on an equity investment contributed to the 23.1% y/y drop in the company's net income to \$7.1 billion. The shares fell only modestly as adjusted earnings per share of \$12.32 beat analysts' consensus expectation of \$10.12.

This company has so many irons in the fire that its stock can be viewed as one giant option. The Alphabet family includes Waymo's driverless cars and Wing's drones, which recently started making deliveries. Alphabet is also a big quantum-computing player, last week announcing its 53-qubit quantum computer performed a computation faster than a traditional supercomputer.

No longer is Alphabet content to rely on other companies to make advancements in computing power, explained CEO Sundar Pichai. It's prioritizing advancing computer power itself to ensure that it has the power it needs for its own business goals. In addition, Alphabet wants to offer quantum computing via the Google Cloud, which it believes will be a competitive advantage. Finally, Alphabet plans to move beyond the Internet of Things, where individual devices communicate via the Internet, to "ambient computing." Many of its offerings will work together for customers in ways that are more intuitive. "[C]omputing should adapt to users, not the other way around," explained Pichai. A 10/16 *Stratechery* [article](#) describes the seamless-across-devices user experience achievable with ambient computing and how it will leverage multiple Alphabet offerings and AI research.

Little was said on the call about criticisms the company has faced related to user privacy. And the company continues to provide little financial transparency (it doesn't break out the results of YouTube, Google Cloud, or Waymo). Given how quickly the company is growing, though, we're sure Alphabet soon will have to pull back the curtain.

(2) *Netflix*. The streaming company's stock has fallen by roughly a third since July 2018 as the entertainment industry's largest players have evolved from partners to competitors. AT&T announced its streaming pricing earlier this week: HBO Max will charge \$14.99 for its service to launch in May. This follows announcements earlier this year from Disney, which will have a \$6.99 streaming service live on 11/12, and Apple TV+, which on 11/1 will launch a streaming service for \$4.99 a month.

When Netflix reported Q3 earnings, it missed its own q/q US and international subscriber-growth targets. The company attributed the lower-than-expected subscriber count to the price increase it took earlier this year.

Nonetheless, Netflix's Q3 revenue jumped 31% to \$5.2 billion, and net income rose 65% to \$665.2 million. The concern: The company's operating cash flow was a negative \$501.8 million, hurt by the mounting expenses of paying for new content. The cost to execute competitive projects has jumped 30% y/y because of all the competition entering the streaming market, the company stated. Netflix indicated it would fund more of its content expenses with internally generated cash flows as its revenue continues to increase.

**Disruptive Technology: Ultracapacitors.** We've been tracking developments in the battery market for some time now because the company that develops the smallest battery that can hold the most power for the longest time will be integral in advancing the broad adoption of electric cars and solar-powered homes.

A reader recently brought ultracapacitors to our attention. Sometimes called "supercapacitors," they're an alternative to lithium ion batteries and have some positives and some negatives. Ultracapacitors don't catch fire like lithium ion batteries can, but they can't hold as much energy as lithium ion batteries either.

Companies are developing various ways to improve the performance of ultracapacitors. And ultracapacitors are slowly being tested in the real world. Tesla recently acquired a company

that makes both ultracapacitors and traditional batteries, and ultracapacitors are being used in buses in London and China. Here's Jackie's look into this electrifying subject:

(1) *Pluses and minuses.* Batteries and ultracapacitors, as currently constructed, have dissimilar strengths and weaknesses that make them ideal for different functions.

Traditional lithium ion batteries use a chemical reaction to generate electricity, whereas ultracapacitors, made of carbon, use an electric field. A lithium ion battery holds 20 times more energy than an ultracapacitor, so its energy density is greater. However, an ultracapacitor is 100 times more powerful, but only for a very short time. Finally, ultracapacitors have a longer life, roughly 1 million cycles (from fully charged to empty) versus 3,000-5,000 for a lithium ion battery.

(2) *Skeleton Technologies.* To increase ultracapacitors' energy density, industry players are experimenting with various materials. Skeleton Technologies has developed an ultracapacitor using curved graphene, cutting the cost of an ultracapacitor by 40%.

Skeleton sees ultracapacitors being used in conjunction with traditional batteries. Ultracapacitors are terrific at starting and accelerating a car because they provide a burst of energy. That burst creates a lot of heat and drains a traditional lithium ion battery. In addition, ultracapacitors fully charge in only a few seconds, which makes them good for absorbing the energy generated when drivers hit the brakes.

By using the two different types of batteries in combination, there's a 10% reduction in overall cost, the battery's efficiency is increased, the size of the lithium battery is decreased, and the lithium battery's life is increased by a factor of two, according to Taavi Madiberk, Skelton's CEO, in this 7/23/18 InsideEVs [video](#). He predicted that in five to seven years almost all new vehicles will have both an ultracapacitor and a battery.

Last year, the company signed a contract to supply ultracapacitors in 1,000 London double-decker hybrid buses that use diesel and electricity for fuel—tripling the buses' battery lifetime to an estimated 12-15 years compared to a lithium ion-powered bus.

(3) *Seeing the future.* Superdielectrics is working with the material used in contact lenses to increase the energy density of a supercapacitor. Superdielectrics claims its supercapacitor has 26 watt-hours/kilogram (Wh/kg), while a traditional supercapacitor has 4 Wh/kg. The company hopes Moore's Law will apply to supercapacitors, driving the cost down and doubling the energy density every 18 months, ultimately to 250 Wh/kg, according to CEO Jim Heathcote in a 2/13 [presentation](#). A lithium ion battery has energy density of about 100-120 Wh/kg.

The material in a Superdielectrics ultracapacitor has advantages over traditional batteries including recyclability, sustainability (they don't contain rare earth metals, which require a lot of energy to be mined and manufactured), and operability in a wide variety of temperatures.

Heathcote believes large supercapacitors will be used to store wind and solar energy and will be used in charging stations. If Superdielectrics succeeds at increasing energy density to 250

Wh/kg, its supercapacitor could be used in aircraft. He also believes that cars will have batteries and supercapacitors working together.

That said, the company is still in its infancy. Superdielectrics is looking to commercialize its technology with a large multinational partner.

(4) *Musk enters the field.* Last May, Tesla acquired Maxwell Technologies, an ultracapacitor and lithium ion battery company, for \$235 million in stock. The unanswered question: Why?

Tesla could be looking to use Maxwell's dry, lithium ion battery technology, which could allow Tesla to produce its own batteries without relying on Panasonic. Most lithium ion batteries are "wet" and use a liquid. "Maxwell claims that its dry electrode tech enables an energy density of over 300 Wh/kg in current demonstration cells and they see a path to over 500 Wh/kg. That's believed to be about 15 to 100 percent better than Tesla's current technology," a 5/16 Electrek [article](#) reported.

Tesla might also be interested in Maxwell's ultracapacitors. When Musk first moved to California in the 1990s, it was to get a PhD in ultracapacitors, but he stopped those studies to start an internet company. Maxwell's ultracapacitors are typically used in plug-in hybrid vehicles, Electrek notes. Tesla could consider adding ultracapacitors to its electric vehicles to increase the range and life of its cars' lithium ion batteries. We'll be watching.

(5) *China's one step ahead.* China has a line of buses in Shanghai that run solely on ultracapacitors, per a 9/27 Shine [article](#). Since ultracapacitors quickly run out of charge, charging stations were installed at bus stops to give the buses a quick hit of energy when needed. Regenerative braking on the buses, manufactured by Shanghai Sunwin Bus Corp., further boosts the batteries' charge.

## CALENDARS

**US. Thurs:** Personal Income 0.3%, Nominal & Real PCE 0.2%/0.2%, Headline & Core PCED 1.4%/1.7% y/y, Jobless Claims 215k, Employment Cost Index 0.7%, Chicago Purchasing Managers Index 48.0, Challenger Jobs Cut, EIA Natural Gas Storage. **Fri:** Payroll Employment Total, Private, and Manufacturing 88k/85k/-53k, Unemployment Rate & Participation Rate 3.6%/63.1%, Average Hourly Earnings 0.3%/m/m/3.0%/y/y, Average Workweek 34.4hrs, ISM & IHS Markit M-PMIs 49.0/51.5, Construction Spending 0.2%, Baker-Hughes Rig Count, Williams, Clarida, Quarles, Kaplan. (DailyFX estimates)

**Global. Thurs:** Eurozone GDP 0.1%q/q/1.1%/y/y, Eurozone Headline & Core CPI Flash Estimates 0.7%/1.0% y/y, Eurozone Unemployment Rate 7.4%, Germany Retail Sales 0.2%/m/m/3.4%/y/y, Italy GDP 0.0%q/q/0.2%/y/y, Canada GDP 0.2%/m/m/1.4%/y/y, Japan Consumer Confidence 35.2, Japan Housing Starts 878k, Japan Jobless Rate 2.2%, China Caixin M-PMI 51.0. **Fri:** UK M-PMI 48.3. (DailyFX estimates)

## STRATEGY INDICATORS

**Stock Market Sentiment Indicators** (*link*): The Bull/Bear Ratio (BBR) ratio climbed for the third week this week to 3.04; it fell from 3.28 to 2.77 the previous two weeks. The wide swings between the bullish and correction camps since early June continue. Bullish sentiment is up 6.6ppts the past three weeks to 54.2%, after plunging 7.7ppts the prior week from 55.3% to 47.6%. Meanwhile, the correction count is down 7.2ppts the past three weeks to 28.0%, after jumping 7.6ppts the prior week to 35.2%. Bearish sentiment ticked down from 17.9% to 17.8% this week—fluctuating in a narrow band most of this year. The AAll Ratio increased for the second week last week to 55.7% after falling from 46.9% to 31.6% the previous two weeks. Bullish sentiment rose from 20.3% to 35.6% over the two-week period, while bearish sentiment fell from 44.0% to 28.3%.

**S&P 500 Earnings, Revenues, Valuation & Margins** (*link*): Consensus S&P 500 forward revenues and earnings dropped for a third straight week from their record highs. Analysts expect forward revenues growth of 5.1% and forward earnings growth of 8.7%, down from 5.2% and 8.8% a week earlier. Forward revenues growth is down 1.2ppt from a seven-year high of 6.3% in February 2018 and is closing in on its 31-month low of 5.0% in mid-February. Forward earnings growth is down 8.2ppts from a six-year high of 16.9% in February 2018 but is still comfortably above its 34-month low of 5.9% in February 2019. Prior to the passage of the Tax Cuts and Jobs Act (TCJA), forward revenues growth was 5.5% and forward earnings growth was 11.1%. Turning to the annual growth expectations, analysts expect revenues growth to slow from 8.5% in 2018 to 4.0% in 2019 and 5.2% in 2020. They're calling for earnings growth to slow sharply from 23.9% in 2018 to 1.3% in 2019 before improving to 9.7% in 2020. The forward profit margin was steady w/w at a five-month low of 12.0% and is down 0.4ppt from a record high of 12.4% in September 2018. That compares to 11.1% prior to the passage of the TCJA in December 2017 and a 24-month low of 10.4% in March 2016. Analysts are expecting the profit margin to drop 0.3ppt y/y from 11.9% in 2018 to 11.6% in 2019 before improving to 12.1% in 2020. The S&P 500's forward P/E rose 0.1pt w/w to a 13-week high of 17.2, which compares to an 18-month high of 17.4 in late July. That's up from 14.3 during December, which was the lowest reading since October 2013 and down 23% from the 16-year high of 18.6 at the market's valuation peak in January 2018. The S&P 500 price-to-sales ratio gained 0.01pt w/w to 2.06, also a 13-week high, which compares to an 11-month high of 2.10 in late July. That's up from 1.75 during December, when it was the lowest since November 2016, and down 19% from its then-record high of 2.16 in January 2018.

**S&P 500 Sectors Earnings, Revenues, Valuation & Margins** (*link*): Consensus forward revenues rose w/w for four of the 11 S&P 500 sectors, and forward earnings was higher for 5/11 sectors. Financials, Health Care, and Real Estate saw both measures rise w/w. Forward revenues and earnings are at or around record highs for 4/11 sectors: Consumer Discretionary, Health Care, Industrials, and Tech. Forward P/S and P/E ratios remain near record or cyclical highs for Communication Services, Consumer Discretionary, Information Technology, Real Estate, and Utilities. Health Care is near a cyclical low while the remaining sectors are above their multi-year lows during December 2018. Due to the TCJA, the profit margin for 2018 was higher y/y for all sectors but Real Estate. The outlook for 2019 shows higher margins are expected y/y for just one sector now: Financials. The forward profit margin rose to record highs during 2018 for 8/11 sectors, all but Energy, Health Care, and Real Estate. Since then, it has moved lower for nearly all the sectors. Industrials and Utilities are the



only sectors still at record highs. Here's how the sectors rank based on their current forward profit margin forecasts versus their highs during 2018: Information Technology (21.6%, down from 23.0%), Financials (18.2, down from 19.2), Real Estate (16.0, down from 17.0), Communication Services (15.0, down from 15.4), Utilities (13.1, record high), S&P 500 (12.0, down from 12.4), Health Care (10.6, down from 11.2), Industrials (10.4, record high), Materials (10.2, down from 11.6), Consumer Discretionary (7.6, down from 8.3), Consumer Staples (7.4, down from 7.7), and Energy (6.3, down from 8.0).

**S&P 500 Q3 Earnings Season Monitor** ([link](#)): With the Q3-2019 earnings reporting season now past the halfway mark, S&P 500 revenues and earnings are beating the consensus forecasts by 1.1% and 4.8%, respectively. At the same point during the previous earnings season for Q2, revenues and earnings had beaten forecasts by 1.1% and 6.4%, respectively. A similar percentage of companies has recorded a positive earnings surprise in Q3 as in Q2—76% versus 76%. However, a slightly lower percentage of companies showed a positive revenue surprise—60% versus 61%. The 262 companies in the S&P 500 that have reported through mid-day Wednesday collectively have recorded a y/y earnings gain of 1.2%, dragged down by Micron Technology's earnings deceleration. On the revenue side, results are 2.8% higher than a year earlier. Ex-Micron, y/y earnings growth for the S&P 500 jumps 1.5ppts to 2.7% and revenue growth improves 0.3ppt to 3.1%. Overall, Q3 earnings growth results are positive y/y for 66% of companies versus a higher 70% at the same point in Q2, and revenues have risen y/y for 70% compared to a higher 72% in Q2. These figures will continue to change markedly as more Q3-2019 results are reported in the coming weeks, but the near-midpoint results indicate that y/y earnings growth could be positive after all. However, y/y earnings growth may trail revenue growth for a third straight quarter. Regardless, what companies say about their expectations for Q4-2019 and their early peek at 2020 prospects will be investors' main focus.

## US ECONOMIC INDICATORS

**GDP** ([link](#)): Real GDP growth slowed for the second consecutive quarter to 1.9% (saar) last quarter from 2.0% during Q2 and 3.1% during Q1, but was above expectations. Consumer and government spending were the main drivers of Q3 growth, though both slowed from Q2's pace. Real consumer spending expanded 2.9% (saar), easing from Q2's 4.6% pace, yet goods consumption (5.5%, saar) remained strong, with both durable (7.6) and nondurable (4.4) goods consumption posting solid gains. Spending on services slowed to 1.7% (saar) from 2.8% during Q2. Total government spending grew 2.0% (saar), with federal and state & local government expenditures up 3.4% and 1.1%, respectively. The increase in federal spending followed an 8.3% surge during Q2—which was the fastest since October 2009. Real residential investment was in the plus column for the first time since Q4-2017, expanding an impressive 5.1% (saar). Meanwhile, real nonresidential fixed investment declined 3.0% (saar) during Q3 following a 1.0% decrease during Q2—the first back-to-back quarterly losses since Q4-2015 and Q1-2016. Real investment on structures contracted sharply for the second straight quarter, posting double-digit declines of 15.3% (saar) and 11.1% during Q3 and Q2, respectively. Real spending on equipment dropped 3.8% (saar) during Q3, while investment in intellectual property products accelerated 6.6% (saar)—nearly double Q2's pace and the 11th straight quarterly advance. The real trade deficit widened to -\$986.4 billion (saar) from -\$980.7 billion

as imports (1.2%, saar) grew at a faster pace than exports (0.7). Real inventory investment was little changed at \$69.0 billion (saar) last quarter.

**Contributions to GDP Growth** ([link](#)): Real consumer spending was the biggest positive contributor to real GDP growth during Q3, while real business investment was the biggest negative contributor. The details: 1) Real consumer spending added 1.93ppts to Q3 GDP growth last quarter, with services (0.79ppt), nondurable goods (0.61), and durable goods (0.53) consumption all strong contributors. 2) Real government spending (0.35ppt) contributed to GDP growth for the third straight quarter, with both federal (0.22) and state & local (0.12) government spending pitching in. 3) Real residential investment (0.18ppt) contributed to GDP growth for the first time in seven quarters. 4) The biggest drag on GDP growth came from real nonresidential fixed investment (-0.40ppt), which subtracted from GDP growth for the second quarter, propelled by a sharp drop in structures (-0.48) and to a lesser extent equipment (-0.23); spending on intellectual property products (0.30) continued to add to GDP growth. 5) Real net exports of goods & services (-0.08ppt) was a slight drag on growth, as an increase in imports (-0.17) more than offset the gain in exports (0.09). 6) Real inventory investment (-0.05ppt) was also only a slight drag on growth—all nonfarm (-0.07).

**ADP Employment** ([link](#)): “Job growth has throttled way back over the past year. The job slowdown is most pronounced at manufacturers and small companies. If hiring weakens any further, unemployment will begin to rise,” according to October’s report. Private industries added 125,000 to payrolls in October, following a big downward revision to September (to 93,000 from 135,000) and a slight upward revision to August (159,000 from 157,000) payrolls, for a net loss of 40,000. The average monthly gain in payrolls the past six months slowed to 112,170—half the 224,250 monthly increase reported the first four months of this year. Goods-producing employment has declined five of the past six months, down 13,000 in October and 40,000 over the period—with natural resources & mining (-24,000), manufacturing (-10,000), and construction (-6,000) all falling over the six-month span. Service-providing industries added 138,000 to payrolls this month, up from September’s 98,000 though below the average monthly gain of 179,000 the first four months of 2019. The biggest gain in the service-providing sector was once again posted by health care & social assistance (35,000), followed by trade, transportation & utilities (32,000); leisure & hospitality (19,000), professional & business services (18,000), and financial activities (17,000) employment rose at roughly half the pace of the top two. Medium-sized companies (to 64,000 from 34,000 in September) moved up to the top of the leader board in October; large companies (to 44,000 from 37,000) fell to the number-two slot, though exceeded September’s pace; and small companies (to 17,000 from 21,000) remained in the cellar.

## GLOBAL ECONOMIC INDICATORS

**Eurozone Economic Sentiment Indicators** ([link](#)): The Economic Sentiment Indexes (ESI) for both the Eurozone (-0.9 point to 100.8) and the EU (-0.9 to 99.0) fell again in October to their lowest readings since January 2015 and October 2013, respectively. Among the Eurozone’s largest economies, Spain’s ESI (-3.0 to 101.2) posted another sizeable decline, sinking to its lowest reading since July 2014. Meanwhile, there was little movement in the remaining four top economies, with the ESIs for the Netherlands (+0.2 to 101.8) and Italy (+0.1 to 100.0) ticking



up this month and Germany's (-0.2 to 99.2) and France's (-0.1 to 103.4) ticking down—with Germany's the lowest since April 2013. At the sector level, consumer (-1.1 to -7.6) confidence posted the biggest decline this month, followed by retail trade (-0.9 to -0.7), industry (-0.6 to -9.5), and services (-0.5 to 9.0) confidence; construction (+1.3 to 4.7) confidence improved for the first time in four months.

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