Portfolio Strategy

Long-Term Winners

In periods of extreme market volatility we are often asked for “shopping lists.” In response, rather than try to time the market, we asked our analysts the following question, “When you look back on the volatility in 2018, taking a longer term perspective, what stock will you be happy you bought?” Understanding that institutional performance is often focused on shorter term returns, we nevertheless compiled a list of stock ideas where time is your friend. These companies all have dominant positions in large addressable markets, with strong management teams leading the way. Therefore, we believe any potential future market turmoil should create opportunities for investors focused on the following technology and healthcare investment ideas:

- Arie Pharmaceuticals
- ANSYS
- Apple
- Boston Scientific
- G-III Apparel
- Monolithic Power
- NVIDIA
- ON Semiconductor
- Pluralsight
- Roku
- Splunk
- Square
- Xilinx
- Vertex
- Zscaler
- Zuora

On the following pages are excerpts from recently published reports, including relevant news, investment thesis, valuation, and risks. For a detailed report on each company, please contact your Needham sales representative or go to www.needhamco.com.

Companies Mentioned in Report:

- AAPL: $218.86, PT: $260.00
- ANSS: $149.55, PT: $172.00
- GIII: $39.86, PT: $56.00
- NVDA: $210.83, PT: $350.00
- PS: $22.41, PT: $38.00
- SPLK: $99.84, PT: $145.00
- SPLK: $99.84, PT: $145.00
- VRTX: $169.46, PT: $195.00
- ZS: $36.29, PT: $47.50
- AERI: $53.18, PT: $86.00
- BXS: $36.14, PT: $43.00
- MPWR: $118.12, PT: $150.00
- ON: $17.00, PT: $22.00
- ROKU: $55.60, PT: $85.00
- SQ: $73.45, PT: $75.00
- XLNX: $85.37, PT: $100.00
- ZUO: $20.42, PT: $38.00

Relevant disclosures begin on page 8 of this report.
Commentary from Recently Published Reports

**Note published 10/26 - Aerie Pharmaceuticals (AERI): Specialty Pharmaceutical Weekly Prescriptions**
Serge Belanger  sbelanger@needhamco.com  (212) 705-0407

We include weekly prescription trends for Aerie Pharmaceuticals' (AERI) Rhopressa for the week-ending 10/19/18, using data from IQVIA Health and Symphony Health. Overall Rx levels this week are lower than usual due likely to the Columbus Day holiday. Rhopressa generated weekly Rxs of 4,425 (IQVIA), up +8.0% wk/wk, and total glaucoma Rxs were up +1.5% wk/wk. Based on Symphony Health, Rhopressa Rxs were 4,222 (+4.1% wk/wk). Rhopressa weekly Rxs continue to track solidly above Vyzulta, which had weekly Rxs of 1,751 (+7.3% wk/wk). Based on the recent weekly Rx, we estimate Rhopressa sales are now annualizing at $23.0MM. AERI reaffirmed its 2018 Rhopressa sales guidance of $20-30MM during its last quarterly update in early August. We reiterate our Buy rating. Our price target is based on a discounted P/E approach, applying a multiple of 15-20x, equivalent to "growthy" specialty pharmaceutical and biopharmaceutical peers, to estimated 2024 EPS of $9.87. Discounting back to present at 10-12.5%, we arrive at our $86 price target. Risks to our price target include regulatory and commercialization exposure.

**Note published 10/29 - ANSYS (ANSS): Upgrade to Buy from Hold with $172 PT**
Richard Valera  rvalera@needhamco.com  (212) 705-0373

We have been appreciative of ANSS' strong fundamentals and execution, but have been deterred by its valuation. With the recent 20%-plus pullback in the shares, with what we believe are largely unchanged fundamentals, we see a more favorable risk/reward profile and are upgrading ANSS to Buy from Hold and establishing a $172 price target, equivalent to a P/E of ~30x our ex-cash 2019 estimate. We believe the most likely drivers of near-to-medium-term upside are: 1) continued improvements in sales capacity and effectiveness; and 2) success with the company's Discovery Live product in 2019 and beyond. ANSS has been undergoing a transformation of its sales organization with a focus on both increasing capacity and increasing penetration of large accounts. This effort has been driven by 2016 hire of Sr. VP of Worldwide Sales, Rick Mahoney, who built an extremely effective global strategic sales organization at Cadence. We see the continued strategic scaling of ANSS' sales organization as a likely ongoing tailwind for bookings and revenue growth. ANSS’ Discovery Live, introduced in 1Q18, is a relatively easy to use simulation product enabling rapid, interactive design exploration during the design process with relatively modest training. It is aimed at proliferating simulation among product designers, which outnumber traditional simulation specialists by ~10 to 1. Notably, we believe a partnership with CAD vendor PTC, in which Discovery Live will be offered as an option embedded within PTC’s Creo CAD software, has the potential to generate ~$100MM of annual revenue over time, assuming PTC management's estimate of an eventual 25% penetration of its Creo base is correct. We believe the 25% decline in ANSS' shares since September 14 peak (vs. 8% drop in S&P 500 over the same period) has brought valuation to a level than can be justified by ANSS’ exceptional margins and top-line growth, which is nearly at the company's DD% 2020 target. ANSS’ NTM P/E of ~25x is a level not seen since February 2017 and is below its trailing two-year average of 31x. Ex-cash, its 2019 P/E stands at ~25x vs. its peer group median of ~28x. Risks to our price target include multiple compression if interest rates continue to rise.
Note published 9/13 - Apple (AAPL): PT to $260 from $220 on Lock-In, On-Ramps and Churn Stats
Laura Martin, CFA & CMT lmartin@needhamco.com (917) 373-3066
The best news, in our opinion, from Apple’s recent product announcements include: 1) release windows; 2) churn stats; and 3) ecosystem lock-in. For the first time, the most expensive iPhones are available five weeks before cheaper iPhones, which is a release windowing strategy the movie industry has used for decades to maximize total revenue. The XS and XS Max iPhones will be available in stores five weeks before the much cheaper XR iPhone. Separately, Tim Cook announced that “AAPL is about to ship its 2 billionth iOS device,” so we calculate iPhone churn at 4% annually, based on 1.3B active devices, representing a 3.5-year average life, implying new products are successfully driving ecosystem lock-in. If this number is close to correct, then AAPL’s job #1 should be attracting new unique users into its ecosystem, since users never leave. To that end, we applaud lower priced products and a wider variety of products that may spur faster entry into any part of the AAPL ecosystem. Since churn is low, ecosystem “on-ramps,” like the $750 XR, add more value than their price implies. Despite its lower price point, AAPL’s watch drives incremental stickiness, which lowers churn, plus it adds to the ARPU per AAPL ecosystem user. We reiterate our Buy rating and raise our 12-month price target to $260 from $220. Risks include price competition and lower unit sales of future products.

Note published 10/24 - Boston Scientific (BSX): Robust Organic Growth Continued in 3Q18
Mike Matson, CFA mmatson@needhamco.com (617) 457-0949
BSX’s 3Q18 revenue missed consensus owing to currency while its EPS beat consensus. Management lowered its revenue guidance due to currency and narrowed its EPS guidance. BSX’s organic revenue growth improved to 9% in 3Q18 from 8% in 2Q18, given an easier comp and improved growth in two of its three segments. BSX more than offset a 50-basis-point currency headwind to drive its gross and operating margins up 50 basis points y/y. We reiterate our Strong Buy rating, given BSX’s strong product cycle, sustainable upper-single-digit organic growth, and potential for upside to estimates. Our $43 price target is based on 25.0x our 2020 EPS estimate, which is above BSX’s large-cap medical device peers and large-cap cardiovascular peers, given its higher revenue and EPS growth. Risks include worse than expected structural heart sales.

Note published 9/7 - G-III Apparel Group (GIII): Growth Drivers Remain Intact; PT to $56 from $53
Rick Patel, CFA rpatel@needhamco.com (212) 705-0361
We reiterate our Buy rating on GIII and raise our price target to $56 from $53 on higher estimates and increased confidence. Near term, we think that GIII’s positive momentum across products and brands, combined with a healthy department store environment, should enable the company to meet or beat its targets for FY19 (CY2018). Long term, we continue to see significant growth potential across underpenetrated brands, notably DKNY/DK, Tommy Hilfiger, and Karl Lagerfeld, which are outperforming and have a sizeable runway for growth. We also believe that EBIT margins have the potential to improve through the benefits of scale for its smaller brands, the outperformance of licensed products, and the narrowing of losses at retail. Net, we believe GIII remains on track to achieve EPS power of >$5.00 over the long run. Our $56 price target reflects a 19x P/E on our FY20 EPS estimate. Risks include Bon-Ton sales to limit upside to Calvin Klein and exposure to shrinking department stores.

Note published 10/26 - Monolithic Power Systems (MPWR): 18th-Consecutive Quarter of Solid Results
N. Quinn Bolton, CFA qbolton@needhamco.com (212) 705-0322
Marking MPWR’s 18th-consecutive quarter of posting in-line to better than expected results, the company's 3Q18 report and 4Q18 guidance were slightly better than expected with 3Q18 revenue reaching a new high watermark. MPWR experienced y/y growth in all markets except Consumer in 3Q18. Management believes its business within the China market, most notably for traditional
Consumer products, has been adversely affected by the geopolitical environment. Despite the slowing in Chinese Consumer market, MPWR’s share gains across its high-growth markets (Computing and Storage, Auto and Industrial) remain on track. Given MPWR’s ability to deliver growth across diversified markets, we remain buyers of MPWR. We reduce our price target to $150 from $155, reflecting a slightly higher share count and modestly lower GM assumptions. We base our $150 price target on a discounted cash flow analysis of our 10-year financial model. Risks include global macro conditions and dependence on third-party suppliers.

**Note published 9/14 - NVIDIA (NVDA): Fast Becoming the "Wintel" for AI; PT to $350 from $325**

We hosted an investor meeting with Mr. Ian Buck, GM of NVIDIA’s Data Center Business, and Ms. Simona Jankowski, Director of IR. We see striking parallels between NVIDIA’s dominance in AI/ML and the "Wintel" platform during the era of PC computing. We think that the company’s unified CUDA platform, combined with its proprietary interconnect and comprehensive inference/training software, makes it uniquely positioned to capitalize on this next wave of computing. We raise our FY20 estimates and price target to $350 from $325, based on increased confidence that NVDA will begin to take a larger share of the inference market with its new TensorRT Hyperscaler Platform. We raise our overall data center revenue forecast by $500MM in FY20, reflecting an incremental 1MM servers deployed with GPU-accelerators. Neural networks are exploding everywhere. Data centers the world over are building neural networks at an exponential rate to process the unprecedented amount of unstructured data. Based on our conversations, we believe the major server OEMs, enterprise and hyperscalers are adopting GPU accelerators to process the explosion of heterogeneous workloads, including voice queries, images and videos, natural language processing, and recommender systems. Each of these workloads requires a separate neural network residing on the server where the processing takes place. In our view, customized ASICs or FPGAs can’t keep up with this magnitude of data activity or the immensurable use cases. As these neural networks get bigger in size, the use cases expand exponentially and the demand for maximum throughput and server utilization becomes even more vital. We reiterate our Buy rating. Our $350 price target implies a 36.9x P/E, excluding FY19 net cash per share of $12.59, on our FY20 EPS estimate of $9.15. Risks include deceleration of GPU growth rates.

**Note published 10/30 - ON Semiconductor (ON): Semi Content Growth Outweighs Softness in Units**

We reiterate our Strong Buy and increase our price target to $22 from $20 following a clean beat and raise quarter. Despite several macro headwinds, ON is benefiting from secular drivers in ADAS, electrification/power management and sensor proliferation, which is driving content gains across auto, industrial and cloud server. As we’ve stated in the past, we see ON as well positioned across these industries with its comprehensive portfolio of sensors, power management, and analog products. While clearly not immune to a broad slowdown, we believe ON can manage through this down cycle given its product mix and manufacturing flexibility. ON cited a favorable demand environment, with only a few weak spots in China white goods and industrial. We believe that ON is offsetting this weakness, which is relatively small, with strength in other end markets and geographies. ON is prudent in managing its internal inventory—reduced it by 6 days q/q to 116. Moreover, ON is actively managing channel inventory, and we expect distribution inventory to be within normal ranges. Our $22 price target is based on 11.3x P/E multiple on our 2019 non-GAAP EPS estimate. Risks include semiconductor cyclical.
Note published 10/25 - Pluralsight (PS): Accelerating Net Dollar Retention Powers Solid 3Q Beat
Scott Berg  sberg@needhamco.com  (763) 350-4027
We reiterate our Buy rating and $39 price target after the company reported another strong quarter in its second public quarter with revenue outperforming our estimates by 7.0%. B2B sales continue to power the company’s growth, with B2B billings increasing 53% y/y driven by strong ASP uplift and seat expansion. Net Dollar Retention increased to 127% y/y, which we believe to be the best rate in our SaaS universe. Although sales growth remains above expectations, we were most impressed with operating cash flow, which turned positive ahead of expectations and improved visibility into how the company can drive positive FCF in FY19. The company raised FY18 guidance double the 3Q outperformance, which we believe reflects strong post-customer conference sales to end 3Q. We value the company at 12x our FY20 revenue estimate. We arrive at an enterprise value of roughly $4.6B, and after adding approximately $207MM in net cash, we believe PS should have a market value of $4.9B, or $38 per share. Risks include weakening macro-economic environment could reduce or delay IT training spend.

Note published 10/11 - Roku (ROKU): Buy on Weakness
Laura Martin, CFA & CMT lmartin@needhamco.com (917) 373-3066
With ROKU down over 20% in the past several weeks, owing in part to sector rotation, we recommend buying on weakness. We believe ROKU is a less risky investment today than it was 12 months ago even though its valuation is much higher. Why? Because ROKU’s management team has made many value-creating decisions and innovations, and has demonstrated best-in-class execution toward the vision it communicated to Wall Street 12 months ago, plus it expanded its total addressable market (TAM), in our opinion. What we like most about ROKU to date are its TAM expanding decisions that open up entirely new revenue streams that were not available to ROKU’s shareholders before. The Roku Channel added to Samsung TVs in March 2018 is a great (but old) execution that adds $1.6B to Roku’s valuation. In June 2018, ROKU added the Audience Marketplace that adds about $600MM to its valuation. Wireless speakers (July 2018) are a third TAM expansion execution. Last week, ROKU announced a “Measurement Partner Program” with 11 large partners to generate a new revenue stream from its data—representing another TAM expansion. We believe ROKU is a pure play way to invest in growth of the OTT video ecosystem at a much lower valuation than Netflix. In addition, rapid industry and revenue growth, margin expansion, growing pricing power, and falling capital intensity all suggest earnings over-delivery and/or valuation multiple expansion. It's relatively small size suggests a potential takeover exit strategy. We reiterate our Buy rating and $85 price target, which is based on a DCF valuation. Risks include competition, negative EPS, and consumer behavior shifts.

Note published 8/24 - Splunk (SPLK) Continued Acceleration Despite Faster Subscription Transition
Jack Andrews  jandrews@needhamco.com  (415) 262-4898
SPLK reported a strong F2Q19, highlighted by a third-consecutive quarter of accelerating growth, and the anticipated achievement of a 75% subscription license mix a year early. SPLK reported F2Q19 revenue of $388.3MM, above our $358.7MM estimate, consensus of $358.5MM, and guidance of $356-$358MM. Non-GAAP EPS were $0.08, above our $0.06 estimate and consensus $0.05. Despite some confusion regarding ASC 606 optics, we believe SPLK’s momentum remains robust and unchallenged. We believe the best way to discern SPLK’s business momentum is to add the company’s software revenue (including both license and cloud) to the change in RPO (revenue performance obligation). In our opinion, this methodology “normalizes” for the effect of a mixed license revenue model. For F2Q19, this equates to $316MM compared with $205.5MM in F2Q18 (+54%). In SPLK’s move towards becoming more of a subscription license revenue company, management had originally targeted the FY19 year-end mix to be 65% subscription/35% perpetual, moving towards a 75% subscription/25% perpetual license mix by FY20 year end. Impressively, SPLK is already tracking well ahead of this plan, as 72% of
SPLK’s software bookings in the first half of FY19 are subscription based. Thus, SPLK expects to achieve the 75% subscription goal one year ahead of schedule. We reiterate our Buy rating and raise our price target to $145 from $127, which is based on a discounted cash flow analysis. Risks include macroeconomic and competitive environment.

**Note published 8/2 - Square (SQ): Strong Quarter Results & Guidance; Raising PT to $75 from $65**
Mayank Tandon mtandon@needhamco.com (617) 457-0943
SQ delivered another strong quarter, exceeding expectations on all fronts. Subscription and services revenues were the primary source of upside driven by strength from larger sellers and success in cross-selling. Take rates and transaction margins remained stable even as larger sellers continue to become a greater piece of GPV, while operating leverage drove the upside performance on adjusted EBITDA. Management raised FY18 revenue growth by 6% at the midpoint, but held the adjusted EBITDA guidance and EPS range intact to reflect higher investments. We believe SQ remains a strong fit for aggressive growth portfolios looking for exposure to the secular trends in payments. We see SQ’s success in penetrating the large TAM, moving up-market and cross-selling, and the inherent leverage in the model driving sustained upside results. We reiterate our Buy rating and raise our price target to $75 from $65, equal to an EV/revenue multiple of 12.5x our FY20 estimate. Risks include competitive pressures from POS hardware and software vendors.

**Note published 10/25 - Xilinx (XLNX): Communications and DC & TME Drive F2Q Beat and FY19 Raise**
N. Quinn Bolton, CFA qbolton@needhamco.com (212) 705-0322
XLNX’s F2Q19 results and F3Q19 guidance beat expectations. The company also increased its FY19 guidance driven by broad strength across multiple markets. Six of the company’s nine core end-markets grew q/q with Comms and Data Center and TME markets growing the fastest. Comms strength was driven by LTE upgrades, 5G trials, and early 5G deployments, while growth in DC and TME was driven by increasing adoption of XLNX’s products in the Data Center, and emulation and prototyping demand was able to offset weakness in the semiconductor test market. We believe Xilinx's transition to a platform company has enabled the company's entry into new growth markets, thereby reducing exposure to specific industry downturns. We reiterate our Buy rating and $100 price target, based on a P/E of 23x expected CY20 NG EPS (excluding SBC). Risks include increased costs or shortages of wafers and materials.

**Note published 10/25 - Vertex Pharmaceuticals (VRTX): 3Q18 Results; Cystic Fibrosis Sales Slight Miss**
Alan Carr, Ph.D., CFA acarr@needhamco.com (212) 705-0435
VRTX reported $783MM in 3Q18 worldwide cystic fibrosis sales, below our $794MM and consensus $790MM estimates. Symdeko sales were $255MM and Orkambi sales $282MM, reflecting continued growth for Symdeko. Sales and opex guidance were unchanged. Non-GAAP EPS were $1.09, matching our estimate, but above consensus $1.02. Results from VX-659/IVA/TEZ Phase 3 trials are expected soon, followed by VX-445 in 1Q19. Management continues to guide for NDA submission of best triple-drug regimen by mid-2019. We await results of competitor Proteostasis Phase 2 trial of triple-drug regimen in 4Q18. Although Abbvie is taking control of Galapagos CF program, new Phase 2 triple-drug regimen data are underwhelming. We continue to have a bias toward VRTX retaining leadership position in CF for an extended period. AAT Deficiency may be next major driver beyond CF. Our $195 price target is 27.5x our 2021 EPS estimate, discounted 10% annually. Risks include regulatory and commercial.
Note published 10/18 - Zscaler (ZS): Zscaler Visit—Security Is Moving to the Cloud
Alex Henderson  ahenderson@needhamco.com (212) 705-0432
We visited ZS on the heels of the Okta analyst day. Our key takeaways are the acceptance that the
direct-to-Cloud architecture is building a head of steam and uptake of the ZPA and Transformation
Packages are accelerating. We believe that the center of gravity in Security is moving to the Cloud from
the Enterprise Data Center. Management retained its strong confidence, suggesting to us continuing
robust growth. We think investors understand ZS’s tough billings comps revealed on its July quarter call
and that critical indicators will be the degree of shift to ZPA and Transformation bundles. We see high
rates of growth in these offerings as positive indications of strong future growth. We reiterate ZS as our
single best idea and Strong Buy rating. Our $47.50 price target is based on EV/Sales multiple of 22x our
CY19 estimate. Risks include cloud platform adoption, which is critical to future growth and profitability,
and future growth depends on attracting new customers.

Note published 9/26 - Zuora (ZUO): Buy the "Lock-Up Dip" as Financial Metrics Have Been Impressive
Scott Berg  sberg@needhamco.com (763) 350-4027
We attribute ZUO's recent sell-off to sloppy and unorganized selling of many of the nearly 23 million
pre-IPO shares that were unlocked on August 31. We think ZUO's 34.5% decline over this period (the
NASDAQ composite is down 1%) created an attractive entry point for investors. The decline depressed
ZUO's EV/revenue multiple to 7.7x our FY20 estimate even though we anticipate a multi-year 25-30%
growth opportunity with rapidly improving FCF. We believe our SaaS universe has historically valued
similar growth companies at 7-9x revenue for multiple years and believe ZUO's position as the early
leader in the fast-growing Subscription Economy compares favorably with many of its peers. While the
final unlocking of pre-IPO shares in October may extend this price pressure, we would be aggressive
buyers at current levels. We apply an EV/revenue multiple of 11x to our FY21 revenue estimate of
$354MM. We arrive at an enterprise value of roughly $3.9B and add $187MM in net cash to derive a
projected market value of $4.1B, or a price target of $38. Risks include weakening macro could reduce
or delay IT spending.
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