

October 23, 2023

Romeo Alvarez

Director, Research Analyst
romeo.alvarez@williamoneil.com
 310.448.6913

Cornelio Ash

Director, Research Analyst
cash@williamoneil.com
 310.448.6859

Derek Higa

Director, Research Analyst
derek.higa@williamoneil.com
 310.448.6910

If you have a question for the team on individual stocks, investment themes, or anything related to O'Neil or markets, please [email us](#).

List Changes

Additions	Lasertec (LASE.JP; 6920 JP)
Removals	Aixtron (AIXAX.DE; AIXA GR), HUBS
Actionable Focus List Ideas	ADBE , ANET , Constellation Software (CSU.CA; CSU CN), Lasertec (LASE.JP; 6920 JP), Persistent Systems (PYE.IN; PSYS IN), SNPS
Best Technical Setup (LONG) outside Focus List	Software: <ul style="list-style-type: none"> U.S.: EA, ESTC, PSN, VERX, and VRNS International: Birlasoft (KPD.IN; BSOFT IN), Computacenter (CCC.GB; CCC LN), Computershare (CPU.AU; CPU AU), Hcl Technologies (Nse) (HTE.IN; HCLT IN), LTIMindtree (LR1.IN; LTIM IN), Tata Elxsi (Nse) (TAL.IN; TELX IN)
	Hardware/Semiconductor: <ul style="list-style-type: none"> U.S.: DELL, FORM, MSI, OLED, STX and RMBS International: Alchip Technologies (ATG.TW; 3661 TT), ASE Technology (AIH.TW; 3711 TT), Asmedia (ASM.TW; 5269 TT), Aspeed (ASP.TW; 5274 TT), Canon (CN@N.JP; 7751 JP), Ememory (EME.TW; 3529 TT), Getac (MIT.TW; 3005 TT), Hanmi Semiconductor (HSD.KR; 042700 KS), King Yuan Eltn. (KYE.TW; 2449 TT), Kokuyo (EI@N.JP; 7984 JP), Mediatek (MDT.TW; 2454 TT), and Realtek (RES.TW; 2379 TT)
	Communications: <ul style="list-style-type: none"> U.S.: NWSA, NYT, YELP International: Advanced Info Service (AIS.TH; ADVANC TB), Bharti Airtel (ART.IN; BHARTI IN), Kddi (DDIC.JP; 9433 JP), Meitu (MEIT.HK; 1357 HK), Publicis Groupe (PUB.FR; PUB FP), Pvr Inox (PV.IN; PVR IN), Telefonica Brasil (TEE.BR; VIVT3 BR), Tim On (TCS.BR; TIMS3 BZ)
Best Technical Setups (SHORT)	COHU , QRVO , Z
Earnings Previews	GOOGL , META , SPOT , CHTR , CMCSA , TMUS , MSFT , NOW , SPSC

Indices Commentary



IG Ranking (as of October 20, 2023)

Software (IGV): Last week, the software benchmark pulled back ~3% on above average volume and closed below its 50-DMA (\$348). Immediate support is at \$330, followed by the rising 200-DMA (\$318). Quantitative metrics remain stable, with Up/Down Volume ratio staying above 1 and the numerical A/D Rating still positive, albeit declining slightly week-over-week. RS line is also consolidating near highs, implying overall outperformance compared with the broader indices. With last week's decline, stocks at or near breakout levels remain few and far between – **ADBE, SNPS, CYBR, and ESTC** are forming the right side of their respective bases. Large cap software stocks – **CDNS, MSFT, NOW, and IBM** are reporting this week and will set the tone for the IGV's performance in the coming weeks. Though the IGV has outperformed on a relative basis, a breach below \$330 could signal additional weakness. Reduce exposure to stocks breaching logical levels of support and await positive price action in quality stocks pulling back to moving average supports.

Semiconductors (SOXX): We remain cautious on the sector as the SOXX stays below the 50-DMA. Next support level: 200-DMA (\$455). Last week, the index fell over 3% despite positive results from TSMC. U.S.-China trade tensions and rising Treasury yields continue to put pressure on the sector. The technical profile of the SOXX remains mixed: high RS Rating of 90, A/D Rating of -21, and Up/Down Volume ratio of 1.0. **TSMC (TSM.TW)** reported better-than-expected Q3 results and Q4 guidance, and noted that the semiconductor industry is close to the bottom as they see demand stabilization in PC and smartphone end-markets. **LRCX** reacted negatively to results despite strong print as there are concerns that strong China demand won't be sustainable. Leading industry groups: Computer-Hardware/Peripheral (#3; **DELL, LOGI**), Contract Manufacturing (#5, **JBL, CLS**), and Data Storage (#15, **STX**).

Communication Services (XLC): The index has breached 21- and 50-DMA on high volume and is trading near the pivot of its double bottom base. Next support is at its 100-DMA (\$66.1; -1%) followed by \$64.2 (-3%). It is trading 4% below its 52-week high. RS line is near its 52-week high with RS Rating of 92. RS Rating has remained above 85 over the last nine weeks. A/D Rating has turned negative this week indicating distribution and Up/Down Volume Ratio remains less than 1. Groups that are ranked among the top 50 in the O'Neil 197 groups include Internet - Content (**GOOGL, META, YELP**) and Telecom Services - Integrated (**CHTR**). **GOOGL** will be reporting its Q3 results on Tuesday after market close and **META** will be reporting its Q3 results on Wednesday after market close.

Best Technical Setups (LONG)

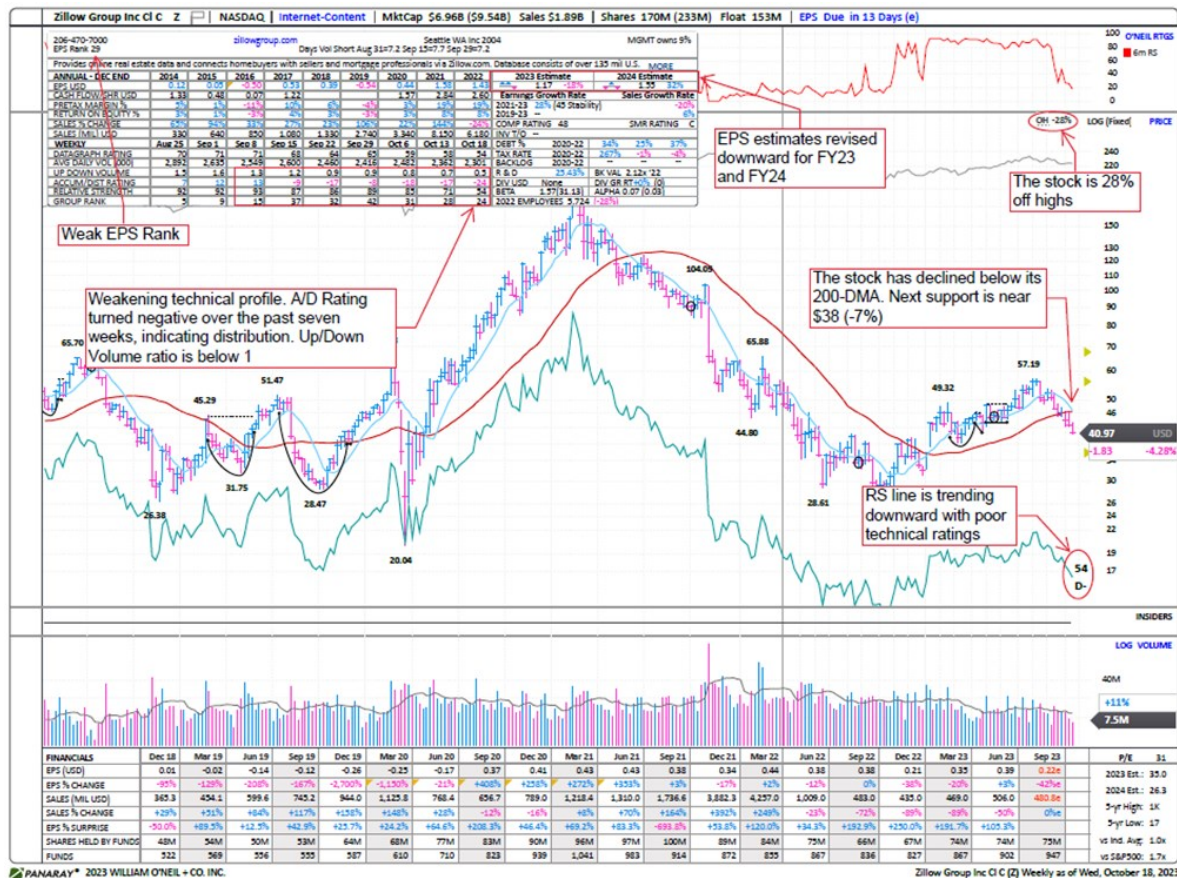
None

Best Technical Setups (SHORT)

Qorvo (QRVO; \$ 9B market cap): See annotated chart [here](#)



Zillow (Z; \$9B market cap): See annotated chart [here](#)



Focus List Additions

Lasertec (LASE.JP; 6920 JP; \$17B market cap): We added Lasertec to our Developed Markets Focus List as the stock forms the right side of a stage-two consolidation base. Lasertec develops inspection equipment for the semiconductor industry. The company's strategy is to target niche markets, such as EUV technology, where it can leverage its expertise to gain substantial market share and maximize profits. We believe Lasertec will outperform other equipment stocks due to its exposure to the high-growth EUV ecosystem. See full note [here](#).

Focus List Removals

Aixtron (AIXAX.DE; AIXA GR; \$3.5B market cap): We removed Aixtron from our Developed Markets Focus List as the stock breached key levels of support, including its 100- and 200-DMA. See full note [here](#).

Hubspot (HUBS; \$21B market cap): We removed Hubspot from our U.S. Focus List as the stock breached key levels of support, including its 200-DMA. The stock is 25%+ off highs and is under distribution. See full note [here](#).

Focus List Updates

TSMC (TSM.TW; 2330 TT; \$437B market cap) reported Q3 2023 numbers with revenue in line with preliminary results, while EPS beat estimates by 10%. Q4 2023 revenue guidance beat estimates by 5%. We recommend that investors hold positions and **look for the stock to retake its 100-DMA (TWD 556.7) on above average volume before accumulating**. On the downside, look for the first level of support at its 50-DMA (TWD 542), followed by its 200-DMA (TWD 532). The company noted that the semiconductor

market is close to the bottom as they see demand stabilization in PC and smartphone end-markets. See annotated chart [here](#).

Persistent Systems (PYE.IN; PSYS IN; \$5B market cap) reported overall in-line Q2 FY24 results. The stock is forming the right side of a stage-four six-week flat base with a pivot of INR 6,035. It has strong support at its rising 50-DMA (INR 5,554). **Hold positions.** The company reported EPS of INR 34.22 (+19% y/y) and revenue of INR 24.1B (+18% y/y; +4% q/q), both in line with estimates. Revenue in dollar terms rose 3% q/q to \$292M. Operating margin declined 86bps y/y to 13.7%, down 122bps sequentially, 170bps below consensus, mainly driven by higher sales and marketing and admin expenses. Total contract value of contracts won in the quarter rebounded strongly sequentially to \$479M (+9% y/y) from \$380M in Q1. See annotated chart [here](#).

Sector/Theme/Stocks of Interest

ASML (ASML.NL; ASML NA; \$240B market cap) reported its Q3 2023 results with revenue missing estimates by 1%, while EPS beat by 4%. The stock is trading below all its key moving averages including its 50- and 200-DMA. Support is at its recent low of €534.4, followed by €500. **Avoid.** The order intake of €2.6B (consensus: €4.5B) was the lowest since Q2 2020, as customers remain cautious on capex spending due to the uncertain demand environment. For 2024, the company expects revenue growth to be flat, which missed consensus of 4% growth.

Netflix (NFLX; \$178B market cap) reported mixed Q3 FY23 results last Wednesday after market close. The stock gapped up 16% on heavy volume and retook its 200-DMA. It is 17% off highs and is testing its 50-DMA. Next resistance is near its 100-DMA (\$415; +3%). Revenue growth accelerated 5ppts to 8% y/y, in line with estimates. EPS increased 20% y/y, beating estimates by 7%. The company added 8.8M subscribers compared with estimates of 6.2M and 2.4M adds in Q3 FY22. ARPU was down 1% y/y despite strong subscriber additions amid higher growth from lower ARPU regions and limited price increases over the last 18 months. Q4 Revenue is expected to be \$8.7B (+11% y/y), largely in-line with estimates. Q4 FY23 paid net additions are expected to be similar to that of Q3 FY23. ARPU is expected to be flat y/y due to limited price increases. For FY23, it expects an operating margin of 20% which is in the high end of its prior guidance of 18–20%. It expects FCF to be \$6.5B compared with a prior forecast of at least \$5B.

Looking Ahead

Focus List

Alphabet (GOOGL; \$1.7T market cap) will report Q4 results tomorrow after market close. The stock is trading close to a 52-week high and is slightly extended from the pivot of its recent base. **Hold positions.** Support is along its rising 21-DMA (\$135; -2%). Consensus estimates revenue of \$75.5B (+9% y/y) and EPS of \$1.45 (+35% y/y). Advertising revenue is expected to increase 8% y/y to \$58.9B. Cloud revenue is expected to increase 25% y/y and YouTube ads are expected to increase 10% y/y. Look for comments on digital advertising trends and YouTube. See annotated chart [here](#).

Meta Platforms (META; \$805B market cap) will report Q3 results on October 25 after market close. The stock is trading 4% below the pivot (\$326) of its recent stage-two consolidation base. **Hold positions.** Support is along its rising 21-DMA (\$310; -1%). Consensus expects revenue of \$33.5B (+21% y/y) and EPS of \$3.6 (+120% y/y). META expects revenue between \$32B–\$34.5B (+20% y/y at midpoint). The strong performance is due to comparison with a weaker demand period from over a year ago, FX tailwinds, and execution on core monetization. DAUs are expected to increase 4% y/y to 2.0M. Look for comments on advertising demand and reels monetization. See annotated chart [here](#).

Microsoft (MSFT; \$2.4T market cap) will report Q1 FY24 results on Tuesday after market close. The stock is ~11% off its all-time highs and is forming the right side of a stage-one consolidation base. Immediate support is at its 50-DMA (\$325), followed by \$309. For Q1, consensus expects adjusted EPS at \$2.65 (+13% y/y) and revenue of \$54.5B (+9% y/y). Azure growth in constant currency terms is expected to decelerate sequentially to ~25.6% y/y (-40bps q/q), though still higher than consensus expectations for AWS (up ~12.4% y/y). Google Cloud in actual terms is expected to be up ~25.3% y/y. Key monitorable would be management commentary around AI pricing and margins, as well as overall demand for cloud computing. See annotated chart [here](#).

ServiceNow (NOW; \$111B market cap) will report Q3 results on October 25 after market close. The stock is trading within a stage-two flat base and 4% below its 50-DMA resistance. Immediate support is at \$528, followed by the 200-DMA (\$507). For Q3, consensus expects adjusted EPS of \$2.56 (+31% y/y) and revenue of \$2.27B (+24% y/y). Adjusted operating margin is seen rising ~80bps y/y to 27.0%. Current remaining performance obligation (cRPO) terms is expected to be \$7.36B (+25% y/y). Look for commentary on the overall demand environment and cRPO growth guide for Q4, which is expected at ~21.1%. For FY23, subscription revenue guide is seen up ~25% at \$8.59B and adjusted operating margin guide is expected to be 26.5% (+73bps y/y).

See annotated chart [here](#).

SPS Commerce (SPSC; \$6B market cap) will report Q3 results on October 26 post market close. The stock is ~20% off highs and is testing support at its 200-DMA (\$161). Next support is near \$155. For Q3, consensus expects adjusted EPS of \$0.67 (+6% y/y) and revenue of \$134M (+17% y/y). Adjusted EBITDA is expected to increase to ~\$40M (+15% y/y), translating to an EBITDA margin of 29.7% (-57bps y/y). Apart from the headline numbers, look for management commentary on overall tech spending, percentage of recurring revenue, recurring revenue customers, and wallet share. See annotated chart [here](#).

Non-Focus List

Spotify (SPOT; \$29B market cap) will report Q3 FY23 results tomorrow before the market open. The stock is trading 8% below the pivot of its recent stage-two cup-with-handle base. Look for the stock to hold above its 50-DMA (\$151). Consensus expects revenue of €3.3B (+10% y/y) and adjusted EPS of (€0.2) compared with (€1.0) in Q3 2022. MAUs are expected to be 572M (+25% y/y), including premium subscribers of 212M (+16% y/y). The company expects a gross margin of 26%. Price increases are expected to have a meaningful impact on revenue per user from Q4 FY23 and beyond. See annotated chart [here](#).

T Mobile (TMUS; \$162B market cap) will report Q3 results on October 25 before market open. The stock breached its 50-DMA and is testing support at its 100 DMA. Next support is at ~\$135 (-2%). RS line is trending downward with an RS Rating of 62 and poor A/D Rating of E. Consensus expects revenue of \$19.3B (-0.7% y/y) and EPS of \$1.69 (+324% y/y). T-Mobile is expected to add 777K postpaid phone customers in Q3, a decline of 9% y/y. Postpaid churn is at 0.86% (-2bps y/y). Postpaid phone ARPU is expected to be \$48.95, flat y/y. Look for comments on postpaid phone additions and churn rate. See annotated chart [here](#).

Comcast (CMCSA; \$178B market cap) will report Q3 FY23 results on October 26 before market open. The stock is forming the right side of a stage-one flat base with pivot of ~\$47.5 (+9%). It breached its 100-DMA and has next support at \$42.3 (-2%). It is trading 9% off its 52-week highs. RS line is starting to point downward but has a good RS Rating of 90. However, the stock has been under distribution over the last eight weeks. Q3 revenue is estimated at \$29.8B (-0.1% y/y) and EPS is at \$0.94 (-1.8% y/y). Peacock paid subscribers are expected to grow to 26.4M (+65% y/y). Total customer relationship is at 34.3M (-0.1% y/y). Total high speed subscribers are expected to be flat y/y. See annotated chart [here](#).

Charter Communication (CHTR; \$65B market cap) will report Q3 results on October 27 before market open. The stock breached its 10- and 21-DMA and is currently testing its 50-DMA support. Next support is at ~\$425 (-2%). RS line is pointing downward with an RS Rating of 93 and an A/D Rating of B-. Consensus expects Q3 revenue of \$13.6B (+0.7% y/y) and EPS of \$8.09 (+8% y/y). Net broadband adds are expected to be 88K compared with 75K in Q3 2022. Total wireless subscribers are at 7.2M (+54.5% y/y). Total customer relationship is at 32.2M (+0.2% y/y). See annotated chart [here](#).

Upcoming Earnings

Earnings Date	Ticker	Name	Market Cap (\$B)
23-Oct-2023	CDNS	Cadence Design Systems	64.9
24-Oct-2023	MSFT*	Microsoft	2430.0
	TXN	Texas Instruments	137.0
	GOOGL*	Alphabet Inc Cl A	132.8
	SPOT	Spotify Technology S A	29.2
	SNAP	Snap Inc Cl A	27.8
	ASIN.NL	Asm International	19.3
	VZ	Verizon Communications	15.7
	MANH	Manhattan Associates	11.7
25-Oct-2023	TMUS	T-Mobile U.S. Inc	804.9
	META*	Meta Platforms Inc Cl A	162.2
	IBM	Intl Business Machines	125.0
	NOW*	Servicenow Inc	110.7

26-Oct-2023	KLAC	K L A Corp	63.6
	SCHB.NO	Schibsted B	2.5
	INTC	Intel Corp	149.4
	HYI.KR*	Sk Hynix	67.5
	UNMG.NL*	Universal Music Group	47.3
	CMCSA	Comcast Corp Cl A	44.9
27-Oct-2023	SPSC*	SPS Commerce	5.9
	CHTR	Charter Comm	65.2
	WDC	Western Digital Corp	13.9

*Focus List Idea

O'Neil TMT Focus List

Industry	Ticker	Name	Bloomberg Ticker	Market Cap (\$B)	Trading Country	Date Added to FL	Performance since Addition
United States							
Software	MSFT	Microsoft Corp	MSFT US	2,427.1	United States	31-Mar-23	13.3%
	ADBE	Adobe Inc	ADBE US	246.3	United States	25-May-23	38.0%
	CRM	Salesforce Inc	CRM US	198.2	United States	23-Mar-23	8.7%
	NOW	Servicenow Inc	NOW US	110.7	United States	13-Apr-23	12.2%
	PANW	Palo Alto Networks	PANW US	75.0	United States	10-Oct-23	-5.3%
	SNPS	Synopsys Inc	SNPS US	71.1	United States	2-Feb-23	26.9%
	WDAY	Workday Inc Cl A	WDAY US	55.3	United States	2-Feb-23	10.6%
	CRWD	CrowdStrike Holdings A	CRWD US	42.7	United States	1-Sep-23	10.9%
	VEEV	Veeva Systems Inc Cl A	VEEV US	32.2	United States	1-Sep-23	-7.5%
	SPSC	S P S Commerce Inc	SPSC US	5.9	United States	1-Dec-22	9.5%
International							
	CSU.CA	Constellation Software	CSU CN	43.8	Canada	9-Jan-23	27.7%
	XRO.AU	Xero	XRO AU	10.5	Australia	18-May-23	6.9%
	PYE.IN	Persistent Systems	PSYS IN	5.4	India	22-May-23	17.2%
	KEP.IN	Kpit Technologies Limited	KPITTECH IN	3.9	India	21-Oct-22	67.9%
United States							
Semiconductors	NVDA	Nvidia Corp	NVDA US	1,039.9	United States	23-Jan-23	119.4%
	AVGO	Broadcom Inc	AVGO US	358.2	United States	24-May-23	27.7%
	AMD	Advanced Micro Devices	AMD US	165.5	United States	16-Mar-23	6.0%
	ANET	Arista Networks Inc	ANET US	59.3	United States	8-Jan-23	3.2%
	ON	ON Semiconductor Corp	ON US	37.6	United States	6-Aug-23	-3.3%
	ONTO	Onto Innovation	ONTO US	6.0	United States	6-Oct-23	-10.0%
International							
	TSM.TW	Taiwan Semicon.Mnfg.	2330 TT	436.9	Taiwan	17-Jan-23	8.5%
	RG@N.JP	Tokyo Electron	8035 JP	67.1	Japan	18-May-23	14.9%
	HYI.KR	Sk Hynix	000660 KS	63.5	South Korea	14-Jul-23	9.9%
	LASE.JP	Lasertec	6920 JP	16.7	Japan	16-10-23	-0.4%
	ACC.TW	Accton Technology	2345 TT	8.6	Taiwan	6-Mar-23	62.4%
	DIX.IN	Dixon Technologies	DIXON IN	3.9	India	8-Aug-23	13.2%
United States							
Internet/Media	GOOGL	Alphabet	GOOGL US	1,736.9	United States	26-Jul-23	6.6%
	META	Meta Platforms	META US	804.9	United States	12-Oct-23	-3.5%

TTD	The Trade Desk	TTD US	37.2United States	23-May-23	13.5%
International					
NTT.JP	Nippon Telg. & Tel.	9432 JP	104.7Japan	4-Mar-22	26.5%
UNMG.NL	Universal Music Group	UMG NA	47.3Netherlands	6-Oct-23	-0.4%

Glossary

Focus List: Comprises our top stock ideas that best fit our time-tested O'Neil Methodology (OM).

Breakout: The action by a stock when it surpasses its resistance level, usually a price ceiling at which the stock has previously encountered selling. In many cases, but not always, that resistance level is the highest point in a "handle" portion of a base pattern. Successful breakouts usually occur when the stock's trading volume rises significantly.

EPS Rank: The EPS Rank is a single earnings measure that gives insight into one of the most important factors of evaluating a stock – earnings per share. Four different fundamental factors are calculated: the percent increase in the most recent quarter versus a year ago; the percent increase in the prior period versus the same quarter a year ago; the five-year earnings growth rate (three-year earnings growth rate if five-year earnings growth rate is unavailable); and the earnings stability factor. These factors are ranked separately and weighted. The result is then ranked on a scale from 1 to 99, with 99 being the highest. The EPS Rank is calculated as a country-specific rank and a global rank.

SMR Rating: The SMR Rating measures a firm's sales (S), profit margins (M), and return on equity (R). All stocks are ranked in order from A to E, with A=best and E=worst. An SMR Rating of "A," for example, places a stock in the top 20% of companies in terms of sales growth, profitability, and return on equity. This rating combines four fundamental calculations: a company's sales growth rate over the last three quarters; pretax profit margins; after-tax profit margins; and ROE. Sales growth and after-tax margins are calculated using quarterly figures while ROE and pretax margins are calculated using annual figures. All four factors take into account acceleration (rate of increase).

Relative Strength Rating: This technical tool is one of the most popular ways for clients to see the market's top performers. The Relative Strength Rating is the result of calculating a stock's percentage price change over the last 12 months. A 40% weight is assigned to the latest three-month period; the remaining three quarters each receive 20% weight. All stocks are arranged in order of greatest price percentage change and assigned a percentile rank from 99 (highest) to 1 (lowest). For example, a value of 85 means the stock has outperformed 85% of all other stocks in its trading country. The Relative Strength Rating is available as a country-specific and a global rating.

Composite Rating: The Composite Rating combines the EPS Rank, Relative Strength Rating, Industry Group Rank, SMR Rating, Accumulation/Distribution Rating, and the stock's percent off its 52-week high. More weight is placed on EPS Rank and Relative Strength Ratings. The resulting rating of technical and fundamental factors is compared against all other stocks in the trading country and assigned a rating from 1 to 99, with 99 being the best. A rating of 90 means the stock has outperformed 90% of all other stocks.

Disclaimer

U.S. FOCUS LIST & GLOBAL FOCUS LISTS DEVELOPED, EMERGING & FRONTIER MARKETS

The U.S. Focus List and Global Focus List for Developed, Emerging, and Frontier Markets seek to identify equity ideas for further research for institutional investors. Investors, before making investment decisions, should review and evaluate additional information, such as a company's SEC filings, business model, industry fundamentals, management team, and products and services.

EXPLANATION OF PERFORMANCE CHARTS FOR U.S. FOCUS LIST & GLOBAL FOCUS LISTS

Performance results do not represent actual trading, and may not reflect the impact that material economic and market factors might have had on the investment decision-making process if actually managing client money. There is substantial speculative risk in most international stocks. Past performance is not necessarily an indication of future performance. Performance computations for the U.S. Focus List and Global Focus Lists reflect a time weighted rate of return. All holdings are rebalanced to equal dollar amounts daily. Dividends are not considered in computations. Commissions used in calculations are 50 basis points for stocks in the Global Focus List Emerging Markets and 20 basis points for stocks in the Global Focus List Developed Markets. Percent gains and losses are calculated for all issues that remain on the "Buy Recommendations" at the end of the week. For issues that were added to the "Buy Recommendations" intra-week, the basis used to calculate the percent change is the price noted when the issue appeared as a "Buy Recommendation" in both the U.S. Focus List or Global Focus List Confidential Alerts. For issues that were "Removed" intra-week, the selling price used to calculate the percent change is the price noted when the issue appeared as "Removed" in the U.S. Focus

List or the Global Focus List Confidential Alerts.

The iShares MSCI EAFE Index Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of publicly traded securities in the European, Australasian and Far Eastern markets, as measured by the MSCI EAFE Index. The iShares MSCI Emerging Markets Index Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of publicly traded securities in emerging markets, as represented by the MSCI Emerging Markets Index.

The benchmark is the S&P 500 Index, which is a market-capitalization weighted index containing the 500 most widely held companies (400 industrial, 20 transportation, 40 utility and 40 financial companies) chosen with respect to market size, liquidity, and industry. The volatility of the S&P 500 Index may be materially different from that of the strategy depicted, and the holdings in the strategy may differ significantly from the securities that comprise the S&P 500 Index. The S&P 500 Index is calculated on a total return basis with dividends reinvested and is not assessed a management fee.

All charts in this presentation are intended to be used as a tool to assist investors in identifying equity ideas worthy of further review. Charts provide certain current and historical information, but are not a substitute for a comprehensive analysis of individual stocks, and should not be relied on as the sole factor in determining whether to buy, sell or hold. Nothing in this communication should be construed as an offer to buy or sell any security.

William O'Neil + Co. Incorporated is an SEC Registered Investment Adviser. Employees of William O'Neil + Company and its affiliates may now or in the future have positions in securities mentioned in this communication. Our content should not be relied upon as the sole factor in determining whether to buy, sell, or hold a stock. For important information about reports, our business, and legal notices (including our Privacy Policy), please go to williamoneil.com/legal.

WILLIAM O'NEIL+CO | Institutional Sales | 12655 Beatrice Street | Los Angeles, CA 90066 | 800.545.8940

© 2023, William O'Neil + Company, Inc. All Rights Reserved.

No part of this material may be copied or duplicated in any form by any means or redistributed without the prior written consent of William O'Neil + Co.