Positioning Still Driving

Performance over the last month across stocks and sectors has been driven by position covering. Through the first 2 months of the year, long/short equity hedge funds and mutual funds were neutral the market but long growth stocks, which helped underpin outperformance through the Jan-Feb selloff. The rotation out of growth and into value starting in early March hurt and funds were forced to unwind positions. The hedge fund growth unwind is ongoing but looks advanced (Hedge Fund Unwind, March 28 2014). It is however now spilling over to mutual funds that are still long growth with outflows from growth funds exacerbating performance. Sector performance over the last month has been inversely correlated to fund positioning.

Most shorted stocks outperforming. Heavily shorted stocks have outperformed the broader market by ~7pp since the Feb bottom and performed in line this week as the market sold off.

Hedge fund growth longs underperforming. The performance of popular hedge fund longs has closely matched that of growth stocks. Top HF longs outperformance of 6pp through early March has been largely wound down in the subsequent selloff and the pace of underperformance slowed this week.

Mutual fund growth overhang remains. Mutual fund beta is elevated but primarily reflects high exposure in growth funds which are underperforming the broader market and their benchmark while value and blended funds are neutral. The relative valuation premium of growth stocks relative to value is down from a recent high of 4 multiple points but at 3 still above the historical average of 2.5. The relative under-performance of growth is now being exacerbated by a rotation of flows out of growth and into value/blended funds over the last 2 weeks.

Sector performance inversely correlated to positioning. Outperformance of Utilities, Energy, Telecom and Consumer Staples since the March rotation and also over the last week was closely tied to an unwind of persistently underweight positions. Healthcare, Consumer Discretionary and Tech were the biggest overweights and have sold off the most. Financials have underperformed despite underweight positioning as rates have moved lower.

EM inflows follow short covering rally. EM assets have rallied sharply since Mar 20th initially on short covering but inflows have resumed over the last 2 weeks.

Treasury supply drops, while demand rises on bond inflows and bank buying. Rolling monthly Treasury issuance has slowed from $300b in mid-March to $50b. This drop in supply has coincided with a pickup in demand as bond fund inflows have resumed and banks ramped up Treasury buying.

Source: Deutsche Bank
Summary of positioning and flows

Aggregate equity positioning has risen sharply and is notably o/w
- MFs exposure levels modestly raised, o/w positioning is at 2y highs (+7.7 pp);
- Long positions in L/S HFs up further and positioning remains elevated (+12.7 pp);
- Macro HFs turned u/w after a small dip in exposure (-1.7 pp);
- Hybrid funds remain u/w (-2.1pp) after a modest cut in exposure;
- MFs and HFs positioning is similar across 7 of the 10 sectors; o/w Cons Disc, Healthcare and IT and u/w Staples, Telecom and Financials;
- Across regions, all DM funds are o/w while LATAM and GEM funds are u/w. Exposure increased across US and Global funds while LATAM and GEM funds saw a decline in exposure over the past month

Rates positioning turned further underweight ahead of FOMC minutes
- 10y and 2y positions went further short ahead of Tuesday’s FOMC minutes; 5y shorts were trimmed and longs added in longer dated bonds
- USD longs were raised slightly while EUR longs trimmed; JPY and CAD shorts flat;
- AUD positions went net long for the first time since May 2013; GBP longs raised;
- WTI longs raised; shorts continued to be pared in copper;
- Gold and silver longs continued to be cut;
- Corn longs raised to highest since Dec 2012; Soybean longs trimmed.

Bond inflows pick up; EM receives inflows
- Bonds continue to receive inflows at a faster pace ($6.3b last week and $6.9b in previous week) following $11.3b in prior 3w;
- Rate-sensitive funds inflows continue ($4.1b last week and $3.5b in previous week) after receiving $3.1b in prior 3w;
- EM bond inflows ($1.8b, highest in 48w) after inflows of $1.1b in previous week;
- Govt. bonds saw modest outflows after inflows of $1.1b each in previous 2w;
- Corp IG ($0.6b, $9.7b in previous 9w) and HY ($1.4b, $14.7b in previous 8w) continue to receive inflows at a slower pace;
- Long term ($0.1b), intermediate ($0.7b) and short term bonds ($0.7b) received inflows, inflows to floating rate decline ($0.1b in each of the last 2w);
- TIPS funds saw modest inflows last week after -$0.9b outflows in previous 3w;
- Money market funds continue to witness huge outflows (-$14.9b and -$9.8b in last 2w) and -$42.1b in prior 2w.

Equity inflows strengthen led by US and as EM receive inflows
- Equity funds saw strong inflows ($11.2b) after outflows of -$8.1b in previous week;
- ETFs ($8.2b) as well as MFs ($3.0b) saw inflows;
- US inflows ($6.3b and $3.4b) in last 2w after outflows of -$9.1b in prior week;
- Europe ($1.3b) inflows continued but Japan (-$0.6b) and UK (-$0.4b) saw outflows;
- EM saw strong inflows ($2.9b) driven by broader GEM funds and EMEA while Latam and Asia ex Japan saw outflows;
- Large caps ($4.9b), mid caps ($0.7b) saw inflows; smalls cap saw outflows (-$0.8b);
- Across styles growth funds saw outflows (-$1.7b, and -$3.4b in previous 2w) while value funds saw strong inflows($1.9b, highest in 29w) and $1.7b in previous week;
- Across sectors, Consumer Goods, Utilities and Energy saw inflows while Tech, Healthcare and Financials saw outflows;
- Buyback announcements ($1.3 bn) has been moderate in the last two weeks, however, it’s running at a strong rate of $140b over the last 3 months and $547b last 12 months.
Figure 1: The most shorted stocks have been outperforming since the Feb bottom...

Performance of Most Shorted Stocks YTD

(Dec 31, 2013 = 100)

Most shorted stocks
S&P 500
Pure Growth
Pure Value

Source: NYSE, Factset, Deutsche Bank

Figure 2: ...but the pace of outperformance is moderating

Relative Perf. of Most Shorted Stocks vs S&P 500

(Dec 31, 2013 = 100)

S&P 500

Source: NYSE, Factset, Deutsche Bank
Figure 3: Growth stocks driven by hedge fund unwind

Perf. of stocks with high hedge fund ownership YTD
(Dec 31 2013 = 100)

S&P Pure Growth
Stocks with high hedge fund ownership

Note: HF index based on top 50 companies of S&P 500 with highest HF ownership.

Source: Factset Lionshare, Deutsche Bank

Figure 4: Underperformance of hedge fund owned stocks is moderating

Relative performance of HF index vs S&P 500

Note: HF index based on top 50 companies of S&P 500 with highest HF ownership.

Source: NYSE, Factset, Deutsche Bank
Figure 5: Mutual fund beta is elevated...

Large Cap Mutual Funds: Beta to the S&P 500: 10d Rolling

Source: Deutsche Bank

Figure 6: ...but reflects extended positions in growth funds while value and blended funds are close to neutral

Performance of funds by style relative to benchmark (Dec 2013=100)

Source: NYSE, Factset, Deutsche Bank
Figure 7: Growth fund underperformance exacerbated by rotation of flows out of growth and into value

![Growth vs Value](image)

Source: EPFR Global, Haver, Deutsche Bank

Figure 8: Relative valuation premium of growth over value stocks still high

![Growth vs value: NTM P/E differential](image)

Average (Jun 2010 - Dec 2013): 2.5

Source: IBES, Factset, Deutsche Bank
Figure 9: Sector returns since the March rotation has been inversely related to fund positioning...

Sector returns and Positioning since Mar 20th

- Fund positioning
- Sector relative returns (rhs)

Note: Weighted MFs (2/3) and HFs (1/3) positions. Sector returns relative to S&P 500

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Figure 10: ...as is performance over the last one week

Sector returns and Positioning since April 3rd

- Fund positioning
- Sector relative returns (rhs)

Note: Weighted MFs (2/3) and HFs (1/3) positions. Sector returns relative to S&P 500

Source: Bloomberg Finance LP, Factset, Deutsche Bank
Figure 11: EM assets have rallied on short covering initially…

Source: CFTC, Haver, Deutsche Bank

Figure 12: …but seeing inflows last 2 weeks

Source: EPFR Global, Haver, Deutsche Bank
Figure 13: Treasury issuance has slowed significantly since mid-March

- Daily Treasury Net Issuance ($tn, 1m moving sum, lhs)
- 10y yields (%), rhs

Source: FRB, Haver, Deutsche Bank

Figure 14: Banks have ramped up Treasury holdings...

Bank Treasury holdings
($bn, sa)

Source: FRB, Haver, Deutsche Bank
Figure 15: …and bond inflows resumed

Rate sensitive bond fund flows (cumulative)

All funds except short term, floating rate & HY, last 12m, $ bn

Source: EPFR Global, Haver, Deutsche Bank
Equity Positioning

Overall Equity Positioning

Figure 16: Composite equity beta

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Figure 17: Positioning across fund types – relative to historical average beta exposure

Source: Bloomberg Finance LP, Factset, Deutsche Bank
Equity Positioning by Fund Type

Figure 18: US mutual fund positioning

Figure 19: Equity long-short hedge fund positioning

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Figure 20: Macro hedge fund positioning

Figure 21: Hybrid fund positioning

Source: Bloomberg Finance LP, Deutsche Bank

Note: Beta to the S&P 500 calculated using a rolling 21 day regression of the fund type daily index returns against daily S&P 500 returns. We create an index of the largest mutual funds and hybrid funds with fund weights based on assets under management.
**Sector Positioning**

**Figure 22: Sector positioning for mutual funds and equity long-short hedge funds**

1m Correlation of Excess Returns

<table>
<thead>
<tr>
<th>Sector</th>
<th>Mutual Funds</th>
<th>Long Short Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cons Disc</td>
<td>-70%</td>
<td>-50%</td>
</tr>
<tr>
<td>Health Care</td>
<td>-30%</td>
<td>-10%</td>
</tr>
<tr>
<td>Info Tech</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td>Materials</td>
<td>50%</td>
<td>70%</td>
</tr>
<tr>
<td>Industrials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>-70%</td>
<td>-50%</td>
</tr>
<tr>
<td>Energy</td>
<td>-30%</td>
<td>-10%</td>
</tr>
<tr>
<td>Cons Staples</td>
<td>-50%</td>
<td>-30%</td>
</tr>
<tr>
<td>Telecom</td>
<td>-70%</td>
<td>-50%</td>
</tr>
</tbody>
</table>

Source: Bloomberg Finance LP, Factset, Deutsche Bank

**Figure 23: One month change in sector positioning**

Change in Correlation of Excess Returns Over Last Month

<table>
<thead>
<tr>
<th>Sector</th>
<th>Increase in Beta</th>
<th>Decrease in Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cons Disc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Info Tech</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cons Staples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cons Staples</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecom</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Note: We calculate the 21 day correlation of MF or HF daily excess returns (vs. the S&P 500) and the sector excess daily excess returns (vs. the S&P 500) to get a timely estimate of over or underweight positioning.
Mutual Fund Betas Across Regions

**Figure 24: Mutual fund betas across regions**

Regional Mutual Fund Positioning

- **Overweight**: Median beta of region to benchmark is higher than avg (Z-score)
- **Underweight**: Median beta of region to benchmark is lower than avg (Z-score)

<table>
<thead>
<tr>
<th>Region</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latam</td>
<td>-2.0</td>
</tr>
<tr>
<td>GEM</td>
<td>-1.5</td>
</tr>
<tr>
<td>Japan</td>
<td>-1.0</td>
</tr>
<tr>
<td>Europe</td>
<td>-0.5</td>
</tr>
<tr>
<td>Asia ex</td>
<td>0.0</td>
</tr>
<tr>
<td>UK</td>
<td>0.5</td>
</tr>
<tr>
<td>EMEA</td>
<td>1.0</td>
</tr>
<tr>
<td>US</td>
<td>1.5</td>
</tr>
<tr>
<td>Global</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Source: Bloomberg Finance LP, Factset, Deutsche Bank

**Figure 25: Change in mutual fund betas across regions**

1m Change in Regional Mutual Fund Beta (Z-Score)

- **Increase**: Median beta increased
- **Decrease**: Median beta decreased

<table>
<thead>
<tr>
<th>Region</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latam</td>
<td>-2.2</td>
</tr>
<tr>
<td>GEM</td>
<td>-1.2</td>
</tr>
<tr>
<td>EMEA</td>
<td>-0.2</td>
</tr>
<tr>
<td>UK</td>
<td>0.8</td>
</tr>
<tr>
<td>Japan</td>
<td>0.8</td>
</tr>
<tr>
<td>Europe</td>
<td>1.8</td>
</tr>
<tr>
<td>Asia ex</td>
<td>2.8</td>
</tr>
<tr>
<td>US</td>
<td>3.8</td>
</tr>
<tr>
<td>Global</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Note: For each of the largest dedicated mutual funds in each region, we calculate the rolling 21 day beta of daily fund returns against the daily returns of their stated benchmark. The betas displayed above represent the z-score of the median for the respective region versus the historical average.
Skew across regions

Figure 26: Option skew across regional equity indices

Figure 27: Change in option skew across regions

Note: Skew is calculated as difference in 3m Implied Volatility for 90% strike minus 110% strike of respective indices. Indices used for region/country:
Figure 28: Total short interest as % of S&P 500 market cap

Figures showing short interest from Jan-03 to Feb-14. Peaks in 2008 and 2011.

Note: S&P Futures data as of Apr 8, Cash equities and ETF shorts data as of Mar 14.

Source: NYSE, CFTC, Haver, Factset, Bloomberg Finance LP, Deutsche Bank

Figure 29: S&P 500 net futures speculative positioning

Graph showing total net position (Bigs + Minis) and S&P 500 from Jan-10 to Apr-14.

Note: Non-commercial futures positions are open positions held by traders who are in the market for speculative motives – non-commercial players include individual investors, financial institutions and hedge funds.
**Figure 30: Components of total short interest**

![Graph showing components of total short interest]

Shorts % of S&P 500 Market Cap
- Futures
- Cash Equities
- ETFs

Source: CFTC, Haver, NYSE, Factset, Deutsche Bank

**Figure 31: Short interest by sector**

![Bar chart showing short interest by sector]

S&P 500 mkt value wtd short interest
(Deviation from Average Since 2010)

Source: NYSE, Factset, Deutsche Bank

**Figure 32: Change in short interest by sector**

![Graph showing change in short interest by sector]

1m change in S&P 500 mkt value wtd short interest
as % of o/s shares as of Mar 31, 2014

Source: NYSE, Factset, Deutsche Bank
Bond Positioning

Bond mutual fund positioning

**Figure 33: Broad bond market beta**

- **Beta (lhs)**
- **Average Beta: 0.83**
- **US Broad Market Index (rhs)**

Source: Bloomberg Finance LP, Haver, Factset, Deutsche Bank

**Figure 34: Duration beta**

- **Beta (lhs)**
- **Average Beta: -0.01**
- **US 10y-2y: Rel. Performance (rhs)**

Source: Bloomberg Finance LP, Haver, Factset, Deutsche Bank

**Figure 35: Credit beta**

- **Beta (lhs)**
- **Average Beta: -0.08**
- **BBB-AA: Rel. Performance (rhs)**

Source: Bloomberg Finance LP, Haver, Factset, Deutsche Bank
Rates futures positioning

Figure 36: Non-commercial net long positions in US treasuries

Treasuries: Net longs in 10y equivalents (in '000)

Source: CFTC, Haver, Deutsche Bank

Figure 37: Current net speculative positioning in US treasuries

Treasuries: Net Long in 10Yr Equivalent (in '000)

Source: CFTC, Haver, Deutsche Bank
FX & Commodity Positioning

Figure 38: USD Positions
Trade Weighted Dollar F&O Positions vs USD Index
Net Long Contracts (Thous, lhs) | US TWI, Major Currencies (rhs)

Figure 39: Euro Positions
Euro F&O Positions vs EURUSD
Net Long Contracts (Thous, lhs) | EURUSD (rhs)

Figure 40: JPY Positions
JPY F&O Positions vs USDJPY
Net Long Contracts (Thous, lhs) | USDJPY (rhs, inv)

Figure 41: GBP Positions
GBP F&O Positions vs GBPUSD
Net Long Contracts (Thous, lhs) | GBPUSD (rhs)

Figure 42: AUD Positions
AUD F&O Positions vs AUDUSD
Net Long Contracts (Thous, lhs) | AUDUSD (rhs)

Figure 43: CAD Positions
CAD F&O Positions vs USDCAD
Net Long Contracts (Thous, lhs) | USDCAD (inv, rhs)

Source: CFTC, Haver, Deutsche Bank
Figure 44: Oil

WTI F&O Positions vs WTI Price

Net Long Contracts (Thous, lhs) – WTI ($/Barrel) (rhs)

Figure 45: Copper

Copper F&O Positions vs Copper Price

Net Long Contracts (Thous, lhs) – Copper ($/Lb) (rhs)

Figure 46: Gold

Gold F&O Positions vs Gold Price

Net Long Contracts (Thous, lhs) – Gold ($/Troy oz) (rhs)

Figure 47: Silver

Silver F&O Positions vs Silver Price

Net Long Contracts (Thous, lhs) – Silver ($/Troy oz) (rhs)

Figure 48: Corn

Corn F&O Positions vs Corn Price

Net Long Contracts (Thous, lhs) – Corn ($/Bu) (rhs)

Figure 49: Soybean

Soybean F&O Positions vs Soybean Price

Net Long Contracts (Thous, lhs) – Soybean ($/Bu) (rhs)
Fund Flows

Cross Asset Fund Flows

Figure 50: Equity, bond and money market flows

![Chart showing 4w ma of flows (% of assets) for equities, bonds, and money market funds from Jan-10 to Apr-14.

Source: EPFR Global, Haver, Deutsche Bank]

Figure 51: Cumulative equity, bond and money market flows over the last year

![Chart showing cumulative flows (last 12m, % of assets) for equities, bonds, and money market funds from Apr-13 to Apr-14.

Source: EPFR Global, Haver, Deutsche Bank]
Figure 52: Fund flows across assets for the last 4 weeks

Cross asset flows as a % of assets (last 4 weeks)

Source: EPFR Global, Haver, Deutsche Bank

Figure 53: Bond flows across regions

Source: EPFR Global, Haver, Deutsche Bank

Figure 54: Equity flows across regions

Source: EPFR Global, Haver, Deutsche Bank
Bond Flows – Regions, Sectors

Figure 55: Global bond flows across sectors

Cumulative Bond Flows (last 12m, % of assets)
- Govt Bonds
- Corp IG
- Corp HY
- EM Bonds

Source: EPFR Global, Haver, Deutsche Bank

Figure 56: US and Europe bond flows across sectors

Cumulative Bond Flows (last 12m, % of assets)
- US HG
- US HY
- Europe HG
- Europe HY

Source: EPFR Global, Haver, Deutsche Bank

Figure 57: DM bond flows

Cumulative Bond Flows (last 12m, % of assets)
- US
- Europe
- Japan

Source: EPFR Global, Haver, Deutsche Bank

Figure 58: EM bond flows

Cumulative Bond Flows (last 12m, % of assets)
- EM Bonds
- Latam
- Asia ex Japan
- EMEA

Source: EPFR Global, Haver, Deutsche Bank

Figure 59: Global bonds flows by tenor

Cumulative Bond Flows (last 12m, % of assets)
- Long Term
- Short Term
- Intermediate Term
- Floating rate

Source: EPFR Global, Haver, Deutsche Bank

Figure 60: EM hard and local currency fund flows

Cumulative EM Bond Flows (last 12m, % of assets)
- Hard Currency
- Local Currency

Source: EPFR Global, Haver, Deutsche Bank
Equity Flows – Regions, Sectors, Styles

Figure 61: Developed market regions

Cumulative Equity Flows (last 12m, % of assets)

Source: EPFR Global, Haver, Deutsche Bank

Figure 62: Emerging market regions

Cumulative Equity Flows (last 12m, % of assets)

Source: EPFR Global, Haver, Deutsche Bank

Figure 63: Cyclical sectors

Cumulative Equity Flows (last 12m, % of assets)

Source: EPFR Global, Haver, Deutsche Bank

Figure 64: Defensive sectors

Cumulative Equity Flows (last 12m, % of assets)

Source: EPFR Global, Haver, Deutsche Bank

Figure 65: Size

Cumulative Equity Flows (last 12m, % of assets)

Source: EPFR Global, Haver, Deutsche Bank

Figure 66: Style

Cumulative Equity Flows (last 12m, % of assets)

Source: EPFR Global, Haver, Deutsche Bank
Country-wise Equity Flows

Figure 67: Europe country flows

Figure 68: Other developed market country flows

Figure 69: Asian emerging markets country flows

Figure 70: Other emerging markets country flows

Source: EPFR Global, Haver, Deutsche Bank
Fund Liquidity Ratios

Figure 71: Equity funds – US and EM

Liquidity Ratio (%)

US Equity

EM Equity

Dec-03
Jul-04
Feb-05
Sep-05
Apr-06
Dec-06
Jul-07
Feb-08
Sep-08
May-09
Dec-09
Jul-10
Feb-11
Sep-11
May-12
Dec-12
Jul-13
Feb-14

Source: ICI, Haver, Deutsche Bank

Figure 72: Hybrid funds

Liquidity Ratio (%)

Dec-03
Jul-04
Feb-05
Sep-05
Apr-06
Dec-06
Jul-07
Feb-08
Sep-08
May-09
Dec-09
Jul-10
Feb-11
Sep-11
May-12
Dec-12
Jul-13
Feb-14

Source: ICI, Haver, Deutsche Bank

Figure 73: Government bond funds

Liquidity Ratio (%)

Govt Bond

Dec-03
Jul-04
Feb-05
Sep-05
Apr-06
Dec-06
Jul-07
Feb-08
Sep-08
May-09
Dec-09
Jul-10
Feb-11
Sep-11
May-12
Dec-12
Jul-13
Feb-14

Source: ICI, Haver, Deutsche Bank

Figure 74: Corporate bond funds

Liquidity Ratio (%)

Corp Bond

Dec-03
Jul-04
Feb-05
Sep-05
Apr-06
Dec-06
Jul-07
Feb-08
Sep-08
May-09
Dec-09
Jul-10
Feb-11
Sep-11
May-12
Dec-12
Jul-13
Feb-14

Source: ICI, Haver, Deutsche Bank

Figure 75: High yield bond funds

Liquidity Ratio (%)

HY Bond

Dec-03
Jul-04
Feb-05
Sep-05
Apr-06
Dec-06
Jul-07
Feb-08
Sep-08
May-09
Dec-09
Jul-10
Feb-11
Sep-11
May-12
Dec-12
Jul-13
Feb-14

Source: ICI, Haver, Deutsche Bank

Figure 76: World bond funds

Liquidity Ratio (%)

World Bond

Dec-03
Jul-04
Feb-05
Sep-05
Apr-06
Dec-06
Jul-07
Feb-08
Sep-08
May-09
Dec-09
Jul-10
Feb-11
Sep-11
May-12
Dec-12
Jul-13
Feb-14

Source: ICI, Haver, Deutsche Bank
Buyback Tracker

Figure 77: Recent S&P 500 buyback announcements

<table>
<thead>
<tr>
<th>Date</th>
<th>Ticker</th>
<th>Company Name</th>
<th>Sector</th>
<th>Industry Group</th>
<th>Mkt Cap ($mn)</th>
<th>Buyback Programs $mn</th>
<th>% of mcap</th>
<th>Excess Ret (-1d to +1d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/4/14</td>
<td>KMX</td>
<td>CarMax Inc</td>
<td>Consumer Discretionary</td>
<td>Retailing</td>
<td>10,100</td>
<td>1,000</td>
<td>9.9%</td>
<td>-5.8%</td>
</tr>
<tr>
<td>3/31/14</td>
<td>T</td>
<td>AT&amp;T Inc</td>
<td>Telecommunication Services</td>
<td>Telecommunication Servic</td>
<td>183,287</td>
<td>300</td>
<td>0.2%</td>
<td>-1.5%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>MS</td>
<td>Morgan Stanley</td>
<td>Financials</td>
<td>Diversified Financials</td>
<td>60,719</td>
<td>1,000</td>
<td>1.6%</td>
<td>-1.3%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>USB</td>
<td>US Bancorp/MN</td>
<td>Financials</td>
<td>Banks</td>
<td>78,318</td>
<td>2,300</td>
<td>2.9%</td>
<td>-1.3%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>PNC</td>
<td>PNC Financial Services Group Inc</td>
<td>Financials</td>
<td>Banks</td>
<td>45,476</td>
<td>1,500</td>
<td>3.3%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>CCF</td>
<td>Capital One Financial Corp</td>
<td>Financials</td>
<td>Diversified Financials</td>
<td>42,928</td>
<td>2,500</td>
<td>5.8%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>BK</td>
<td>Bank of New York Mellon Corp/IT Financials</td>
<td>Diversified Financials</td>
<td>Banks</td>
<td>40,150</td>
<td>1,740</td>
<td>4.3%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>BAC</td>
<td>Bank of America Corp</td>
<td>Financials</td>
<td>Banks</td>
<td>181,967</td>
<td>4,000</td>
<td>2.2%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>KEY</td>
<td>KeyCorp</td>
<td>Financials</td>
<td>Banks</td>
<td>12,657</td>
<td>542</td>
<td>4.3%</td>
<td>-2.0%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>JPM</td>
<td>JPMorgan Chase &amp; Co</td>
<td>Financials</td>
<td>Banks</td>
<td>224,991</td>
<td>6,500</td>
<td>2.9%</td>
<td>-0.8%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>WFC</td>
<td>Wells Fargo &amp; Co</td>
<td>Financials</td>
<td>Banks</td>
<td>254,972</td>
<td>16,975</td>
<td>6.7%</td>
<td>1.2%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>STT</td>
<td>State Street Corp</td>
<td>Financials</td>
<td>Diversified Financials</td>
<td>30,291</td>
<td>1,700</td>
<td>5.6%</td>
<td>-1.5%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>NTRS</td>
<td>Northern Trust Corp</td>
<td>Financials</td>
<td>Diversified Financials</td>
<td>15,348</td>
<td>425</td>
<td>2.8%</td>
<td>-0.6%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>CMA</td>
<td>Comerica Inc</td>
<td>Financials</td>
<td>Banks</td>
<td>9,385</td>
<td>236</td>
<td>2.5%</td>
<td>-1.9%</td>
</tr>
<tr>
<td>3/26/14</td>
<td>MRO</td>
<td>Marathon Oil Corp</td>
<td>Energy</td>
<td>Energy</td>
<td>23,858</td>
<td>500</td>
<td>2.1%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Figure 78: Weekly buybacks and rolling 3m sum

Figure 79: Sector buyback announcements

Figure 80: Quarterly history of buyback announcements

Figure 81: Actual buybacks net of issuance
Small Cap Tracker

Figure 82: Small cap mutual fund equity positioning

Rolling 1m Beta of Small Cap funds to Russell 2000

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Figure 83: Small cap value and growth fund positioning

Rolling 1m Beta of Small Cap Growth & Value Funds

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Figure 84: Small cap fund sector positioning

1m Correlation of S&P 600 Sectors Excess Returns

Source: Bloomberg Finance LP, Factset, Deutsche Bank

Figure 85: Small cap equity flows

Cum. Equity Flows (Smallcap, last 12m, % of assets)

Source: EPFR Global, Haver, Deutsche Bank

Figure 86: S&P 600 short interest

S&P 600 Mkt cap wtd Short Interest as % of o/s shares

Source: NYSE, Bloomberg Finance LP, Factset, Deutsche Bank

Figure 87: Russell 2000 net speculative futures

Russell 2000 F&O Positions vs Russell 2000

Source: CFTC, Deutsche Bank
The primary author of this report, Keith Parker, wishes to acknowledge the contributions made by Prakash Chithambaram, Karthik Prabhu, Manish Kothari and Magesh Kumar employees of Irevna, a division of CRISIL Limited, a third-party provider of offshore research support services to Deutsche Bank.
Appendix 1

Important Disclosures

Additional information available upon request

For disclosures pertaining to recommendations or estimates made on securities other than the primary subject of this research, please see the most recently published company report or visit our global disclosure look-up page on our website at http://gm.db.com/ger/disclosure/DisclosureDirectory.eqsr

Analyst Certification

The views expressed in this report accurately reflect the personal views of the undersigned lead analyst about the subject issuers and the securities of those issuers. In addition, the undersigned lead analyst has not and will not receive any compensation for providing a specific recommendation or view in this report. Parag Thatte/Keith Parker/John Tierney/Binky Chadha

<table>
<thead>
<tr>
<th>Equity rating key</th>
<th>Equity rating dispersion and banking relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy: Based on a current 12-month view of total share-holder return (TSR = percentage change in share price from current price to projected target price plus projected dividend yield), we recommend that investors buy the stock.</td>
<td>![Diagram showing equity rating dispersion and banking relationships]</td>
</tr>
<tr>
<td>Sell: Based on a current 12-month view of total share-holder return, we recommend that investors sell the stock.</td>
<td></td>
</tr>
<tr>
<td>Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.</td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td></td>
</tr>
<tr>
<td>1. Newly issued research recommendations and target prices always supersede previously published research.</td>
<td></td>
</tr>
<tr>
<td>2. Ratings definitions prior to 27 January, 2007 were:</td>
<td></td>
</tr>
<tr>
<td>Buy: Expected total return (including dividends) of 10% or more over a 12-month period</td>
<td></td>
</tr>
<tr>
<td>Hold: Expected total return (including dividends) between -10% and 10% over a 12-month period</td>
<td></td>
</tr>
<tr>
<td>Sell: Expected total return (including dividends) of -10% or worse over a 12-month period</td>
<td></td>
</tr>
</tbody>
</table>
Regulatory Disclosures

1. Important Additional Conflict Disclosures

Aside from within this report, important conflict disclosures can also be found at https://gm.db.com/equities under the "Disclosures Lookup" and "Legal" tabs. Investors are strongly encouraged to review this information before investing.

2. Short-Term Trade Ideas

Deutsche Bank equity research analysts sometimes have shorter-term trade ideas (known as SOLAR ideas) that are consistent or inconsistent with Deutsche Bank’s existing longer term ratings. These trade ideas can be found at the SOLAR link at http://gm.db.com.

3. Country-Specific Disclosures

Australia and New Zealand: This research, and any access to it, is intended only for “wholesale clients” within the meaning of the Australian Corporations Act and New Zealand Financial Advisors Act respectively.

Brazil: The views expressed above accurately reflect personal views of the authors about the subject company(ies) and its(their) securities, including in relation to Deutsche Bank. The compensation of the equity research analyst(s) is indirectly affected by revenues deriving from the business and financial transactions of Deutsche Bank. In cases where at least one Brazil based analyst (identified by a phone number starting with +55 country code) has taken part in the preparation of this research report, the Brazil based analyst whose name appears first assumes primary responsibility for its content from a Brazilian regulatory perspective and for its compliance with CVM Instruction # 483.

EU countries: Disclosures relating to our obligations under MiFID can be found at http://www.globalmarkets.db.com/riskdisclosures.

Japan: Disclosures under the Financial Instruments and Exchange Law: Company name - Deutsche Securities Inc. Registration number - Registered as a financial instruments dealer by the Head of the Kanto Local Finance Bureau (Kinsho) No. 117. Member of associations: JSDA, Type II Financial Instruments Firms Association, The Financial Futures Association of Japan, Japan Investment Advisers Association. Commissions and risks involved in stock transactions - for stock transactions, we charge stock commissions and consumption tax by multiplying the transaction amount by the commission rate agreed with each customer. Stock transactions can lead to losses as a result of share price fluctuations and other factors. Transactions in foreign stocks can lead to additional losses stemming from foreign exchange fluctuations. “Moody’s”, “Standard & Poor’s”, and "Fitch" mentioned in this report are not registered credit rating agencies in Japan unless Japan or "Nippon" is specifically designated in the name of the entity. Reports on Japanese listed companies not written by analysts of Deutsche Securities Inc. (DSI) are written by Deutsche Bank Group's analysts with the coverage companies specified by DSI.

Qatar: Deutsche Bank AG in the Qatar Financial Centre (registered no. 00032) is regulated by the Qatar Financial Centre Regulatory Authority. Deutsche Bank AG - QFC Branch may only undertake the financial services activities that fall within the scope of its existing QFCRA license. Principal place of business in the QFC: Qatar Financial Centre, Tower, West Bay, Level 5, PO Box 14928, Doha, Qatar. This information has been distributed by Deutsche Bank AG. Related financial products or services are only available to Business Customers, as defined by the Qatar Financial Centre Regulatory Authority.

Russia: This information, interpretation and opinions submitted herein are not in the context of, and do not constitute, any appraisal or evaluation activity requiring a license in the Russian Federation.

Kingdom of Saudi Arabia: Deutsche Securities Saudi Arabia LLC Company, (registered no. 07073-37) is regulated by the Capital Market Authority. Deutsche Securities Saudi Arabia may only undertake the financial services activities that fall within the scope of its existing CMA license. Principal place of business in Saudi Arabia: King Fahad Road, Al Olaya District, P.O. Box 301809, Faisaliah Tower - 17th Floor, 11372 Riyadh, Saudi Arabia.

United Arab Emirates: Deutsche Bank AG in the Dubai International Financial Centre (registered no. 00045) is regulated by the Dubai Financial Services Authority. Deutsche Bank AG - DIFC Branch may only undertake the financial services activities that fall within the scope of its existing DFSA license. Principal place of business in the DIFC: Dubai International Financial Centre, The Gate Village, Building 5, PO Box 504902, Dubai, U.A.E. This information has been distributed by Deutsche Bank AG. Related financial products or services are only available to Professional Clients, as defined by the Dubai Financial Services Authority.
Global Disclaimer

The information and opinions in this report were prepared by Deutsche Bank AG or one of its affiliates (collectively “Deutsche Bank”). The information herein is believed to be reliable and has been obtained from public sources believed to be reliable. Deutsche Bank makes no representation as to the accuracy or completeness of such information.

Deutsche Bank may engage in securities transactions, on a proprietary basis or otherwise, in a manner inconsistent with the view taken in this research report. In addition, others within Deutsche Bank, including strategists and sales staff, may take a view that is inconsistent with that taken in this research report.

Opinions, estimates and projections in this report constitute the current judgement of the author as of the date of this report. They do not necessarily reflect the opinions of Deutsche Bank and are subject to change without notice. Deutsche Bank has no obligation to update, modify or amend this report or to otherwise notify a recipient thereof in the event that any opinion, forecast or estimate set forth herein, changes or subsequently becomes inaccurate. Prices and availability of financial instruments are subject to change without notice. This report is provided for informational purposes only. It is not an offer or a solicitation of an offer to buy or sell any financial instruments or to participate in any particular trading strategy. Target prices are inherently imprecise and a product of the analyst’s judgement.

In August 2009, Deutsche Bank instituted a new policy whereby analysts may choose not to set or maintain a target price of certain issuers under coverage with a Hold rating. In particular, this will typically occur for “Hold” rated stocks having a market cap smaller than most other companies in its sector or region. We believe that such policy will allow us to make best use of our resources. Please visit our website at http://gm.db.com to determine the target price of any stock.

The financial instruments discussed in this report may not be suitable for all investors and investors must make their own informed investment decisions. Stock transactions can lead to losses as a result of price fluctuations and other factors. If a financial instrument is denominated in a currency other than an investor’s currency, a change in exchange rates may adversely affect the investment. Past performance is not necessarily indicative of future results. Deutsche Bank may with respect to securities covered by this report, sell to or buy from customers on a principal basis, and consider this report in deciding to trade on a proprietary basis.

Global Disclaimer

Copyright © 2014 Deutsche Bank AG