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# Equity Macro Themes & Tactical Indices

J.P Morgan Quant Conference  
June 2021

Kristen Keyes – Global Delta One  
Andrew Tyler – US Market Intelligence

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**J.P.Morgan**

# Agenda

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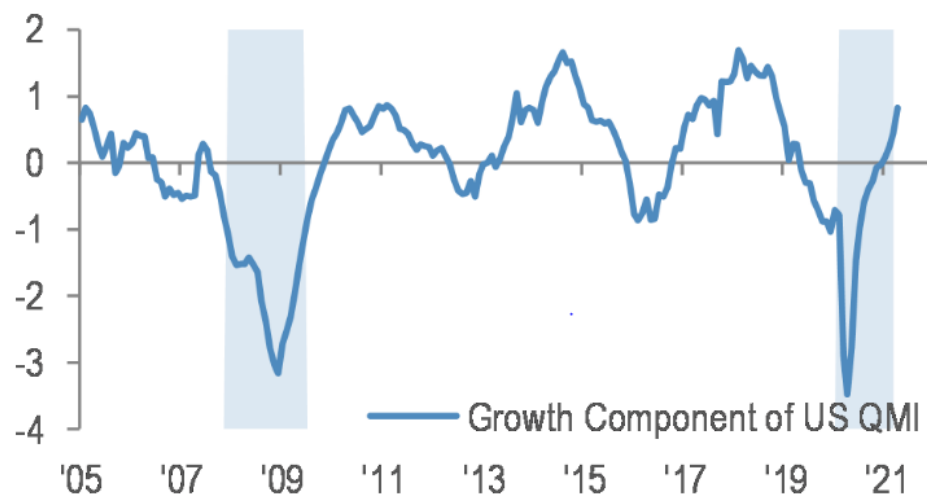
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# J.P. Morgan Macro View

## BULLISH on Equities

- Utilize a barbell strategy of being long Value/Cyclicals and long GARP names within Growth, such as FANG+
- View is driven by:
  - Global GDP growth expansion
  - Supportive fiscal and monetary policy
  - Significant revenue growth and operating leverage driving margin expansion
  - Strong balance sheets and improving capital return
  - 2021 EPS to \$200 (vs. \$185 prior; consensus \$188) and 2022 EPS to \$225 (vs. \$205 prior; consensus \$211)

Figure 2: US Growth QMI — In Expansion, Yet to Peak



Source for all: J.P. Morgan Equity Strategy & Global Quantitative Research

QMI = Quant Macro Index. The QMI is a proprietary JPMorgan methodology that uses growth, inflation, liquidity and sentiment indicators to identify the phase of the business cycle.

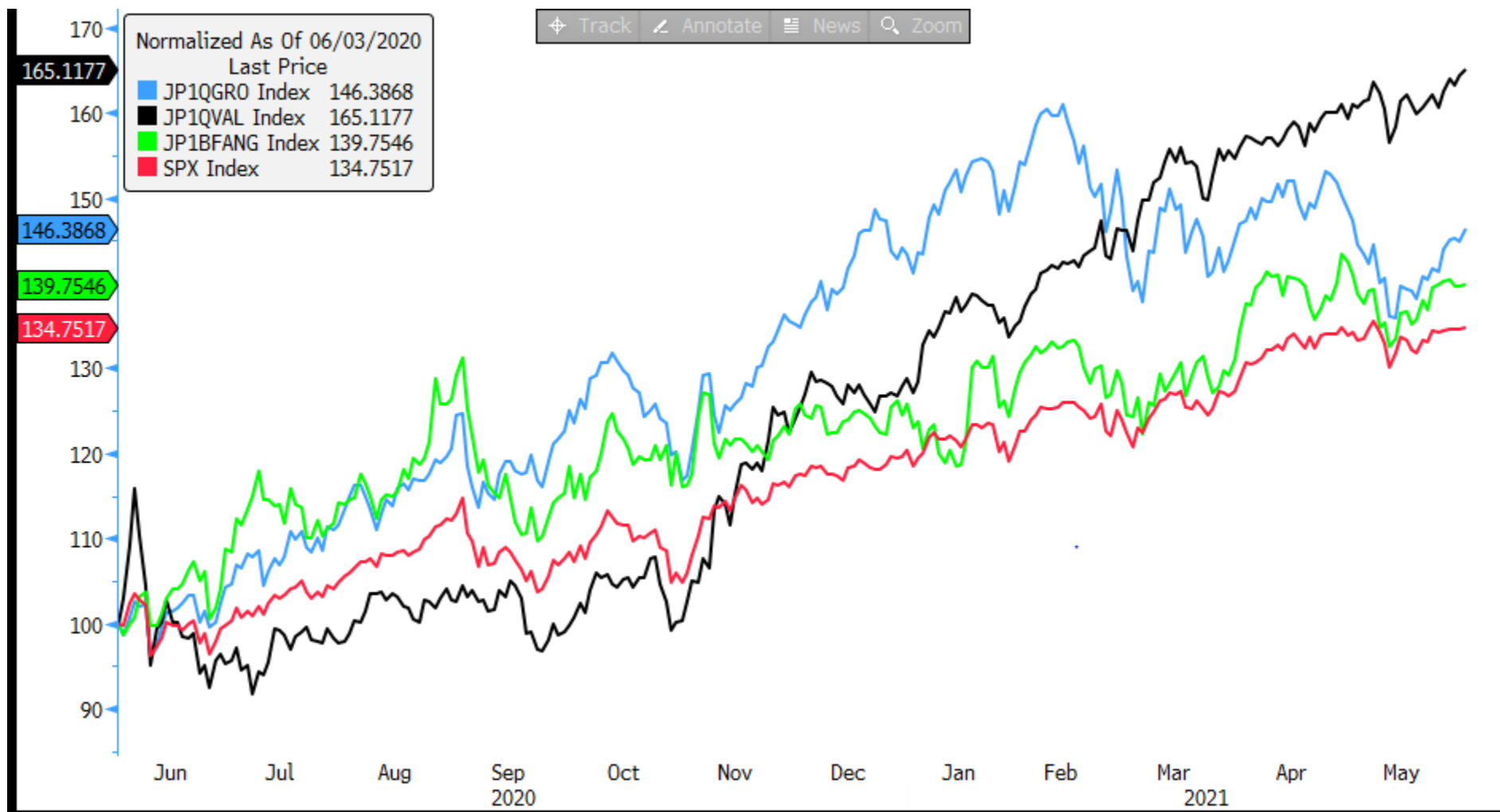
S&P 500 Actual and Projections based on Index EPS



Source: J.P. Morgan US Equity Strategy & Global Quantitative Research

## J.P. Morgan Macro View

### JPM GROWTH INDEX [JP1QGRO] vs. JPM VALUE INDEX [JP1QVAL] vs. JPM FANG+ INDEX [JP1BFANG] vs. SPX INDEX



Source: Bloomberg

# Agenda

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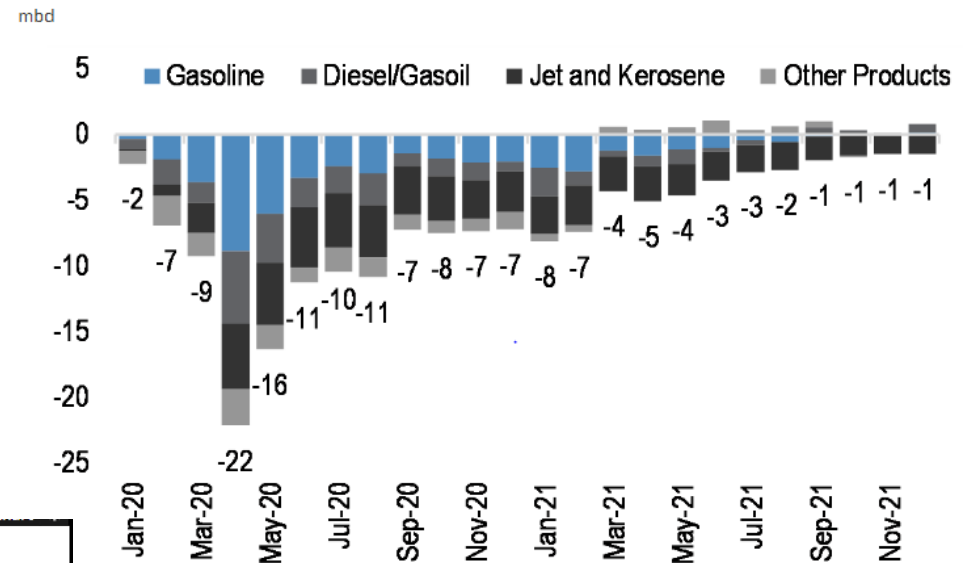
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# Energy

- Vaccination progress has accelerated the Reopening Trade
- Oil and gasoline demand continue to grow
- OPEC & US Shale dynamics supportive of oil prices
- JP Morgan Commodity Research forecasts \$71/bbl in WTI for 2021H2



Exhibit 1: Global oil demand by product, change vs 2019



| Groups (11)                  | Return | Positive Price Return |
|------------------------------|--------|-----------------------|
| S&P 500 ECO SECTORS IDX      | 11.17% |                       |
| All Groups                   |        |                       |
| 1) S&P 500 ENERGY INDEX      | 43.95% |                       |
| 2) S&P 500 FINANCIALS INDEX  | 28.73% |                       |
| 3) S&P 500 REAL ESTATE IDX   | 21.54% |                       |
| 4) S&P 500 MATERIALS INDEX   | 19.50% |                       |
| 5) S&P 500 INDUSTRIALS IDX   | 17.54% |                       |
| 6) S&P 500 COMM SVC          | 14.80% |                       |
| 7) S&P 500 HEALTH CARE IDX   | 6.40%  |                       |
| 8) S&P 500 INFO TECH INDEX   | 4.93%  |                       |
| 9) S&P 500 CONS DISCRET IDX  | 4.17%  |                       |
| 10) S&P 500 CONS STAPLES IDX | 4.15%  |                       |
| 11) S&P 500 UTILITIES INDEX  | 2.78%  |                       |

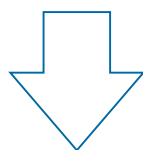
Source: Bloomberg

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## Energy – Bespoke Basket (JP66ENOP Index)

| Range 12/31/2020 - 06/02/2021 |          | Period Daily | No. of Period 153 Day(s) | Table    |           |  |
|-------------------------------|----------|--------------|--------------------------|----------|-----------|--|
| Security                      | Currency | Price Change | Total Return             | Relative | Annual Eq |  |
| 1) XOM US Equity              | USD      | 47.84%       | 52.56%                   | -.45%    | 173.92%   |  |
| 2) VLO US Equity              | USD      | 49.18%       | 53.25%                   | --       | 176.89%   |  |
| 3) MPC US Equity              | USD      | 52.27%       | 55.47%                   | 1.45%    | 186.54%   |  |
| 4) FANG US Equity             | USD      | 78.60%       | 80.46%                   | 17.75%   | 308.90%   |  |
| 5) SPX Index                  | USD      | 12.04%       | 12.73%                   | -26.44%  | 33.10%    |  |
| 6) XLE US Equity              | USD      | 45.73%       | 47.29%                   | -3.89%   | 151.87%   |  |

Source: Bloomberg



- The bespoke basket allows for greater flexibility to express your view, relative to existing ETFs.
- JPM Delta-One indices and baskets provide similar liquidity and can be traded in cash, option, or note formats.
- This basket (JP66ENOP)\* includes JPM Research OW-rated and N-rated stocks, which may continue to outperform the XLE

\*Can trade \$10mm in under 10mins targeting 20% of volume

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## Financials



Source: Bloomberg

Figure 7: Implied Median P/TBV Multiples and Upside Potential Across Various Scenarios

| 10-Year Treasury Yield | 2/10 Spread | Implied P/TBV | Upside Potential |
|------------------------|-------------|---------------|------------------|
| 1.00%                  | 50 bps      | 0.9x          | -27%             |
| 1.50%                  | 100 bps     | 1.4x          | 15%              |
| 2.00%                  | 150 bps     | 1.8x          | 48%              |
| 2.50%                  | 200 bps     | 2.1x          | 72%              |

Source: Bloomberg Finance L.P. and J.P. Morgan estimates. Upside potential is relative to current P/TBV for our group at 1.2x.

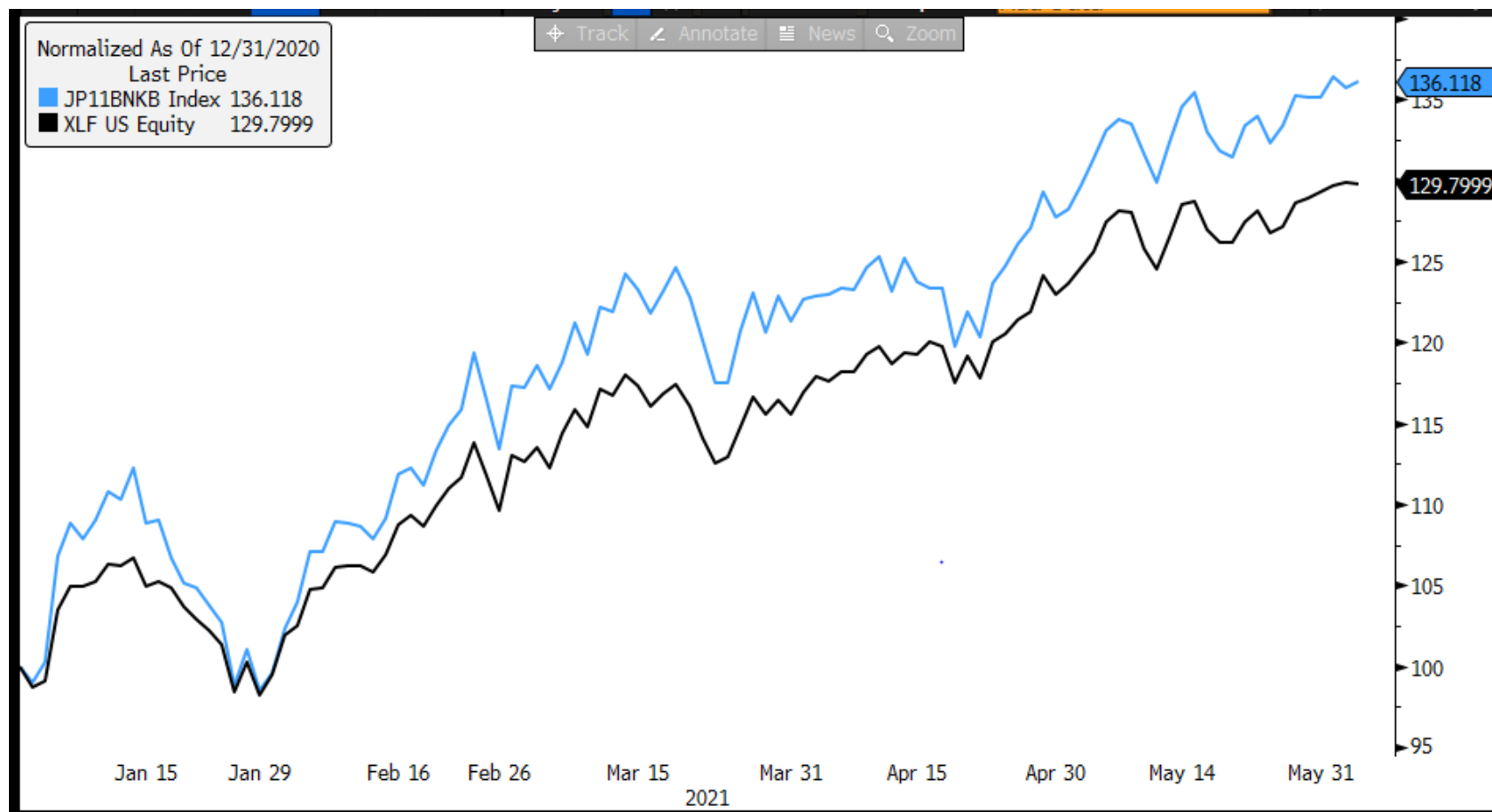
Source: JP Morgan Equity Research (JPM); page 15 – 17

- An improving economy and business cycle has strengthened the credit outlook for Consumers; and, will eventually increase loan growth.
- A steepening yield curve is beneficial for Banks.
- Large-cap banks will initiate buybacks following successfully passing CCAR (aka Fed's stress test).



## Financials – Bespoke Buyback Basket (JP11BNKB Index)

After conserving capital throughout 2020, companies are starting to re-engage in dividends and buybacks. This should be a notable tailwind particularly for banks when the Fed gives the greenlight in H2, assuming they clear the stress tests. Banks are also currently benefiting from macro tailwinds including: Inflation, Strong consumer, “Re-opening” trade, and Steeper yield curve

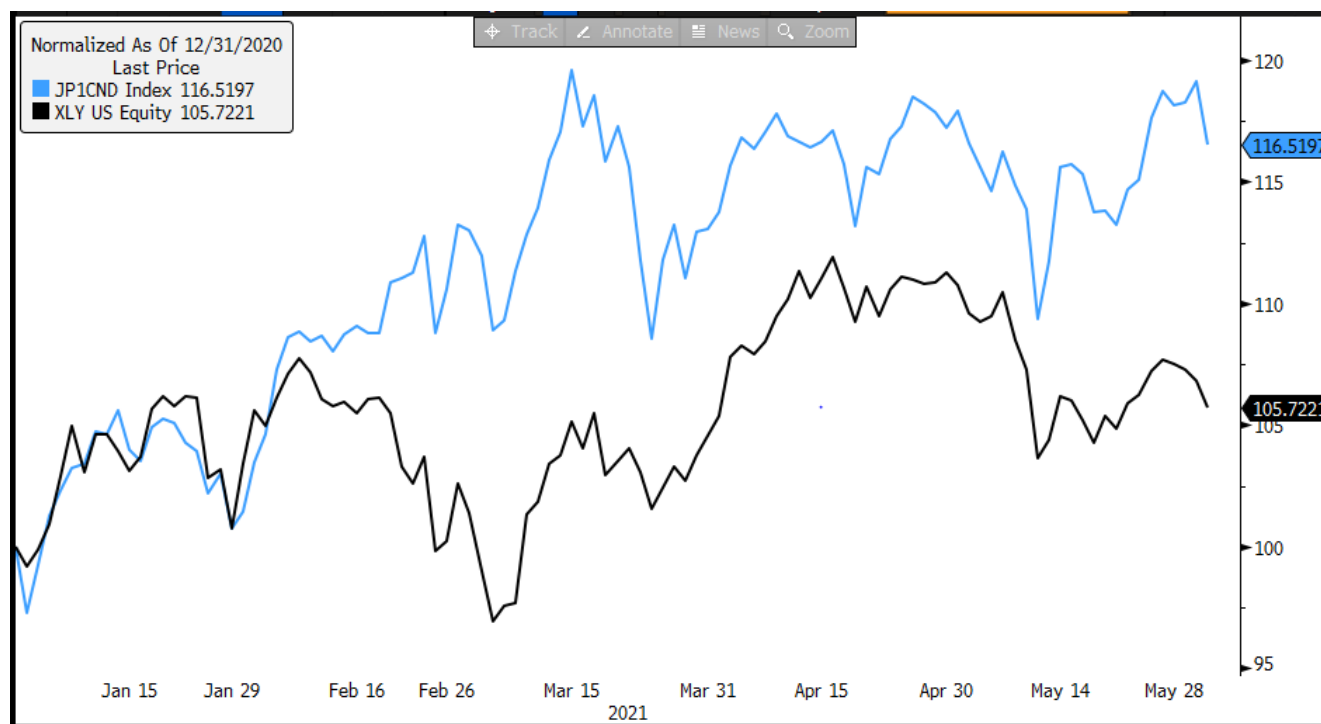


Source: Bloomberg

## Consumer – Discretionary, use JP1CND Index instead of XLY

- The US consumer has a strong and improving household balance sheet.
- The magnitude of the aid to state/local governments will drive hiring where peak job losses were ~1.4mm jobs during COVID
- The combination of stimulus plus job creation will create a powerful tailwind to spending. Further, IRS tax returns typically are sent beginning the first week of March.
- Consumer Discretionary and Retail have lagged other Reflation/Reopening themes, so there is an opportunity for a reversion as other sectors/sub-sectors start to look stretched.
- Positioning is favorable with levels near 3-year averages, so there is room to run to the upside.
- We prefer using the JPM Consumer Discretionary basket [Ticker: JP1CND Index] to the XLY given the ETF's heavy weighting of AMZN and TSLA.

|                                    | JP1CND  | XLY     |
|------------------------------------|---------|---------|
| Summary                            |         |         |
| # of names                         | 122     | 63      |
| % of top name                      | 4.6%    | 23.3%   |
| Market Cap (\$B) (Wtd Avg)         | \$121.5 | \$515.1 |
| GICS Industry                      |         |         |
| Hotels, Restaurants & Leisure      | 48.0%   | 20.0%   |
| Specialty Retail                   | 21.6%   | 21.0%   |
| Textiles, Apparel & Luxury         | 10.3%   | 6.0%    |
| Leisure Products                   | 6.9%    | 0.3%    |
| Internet & Direct Marketing Retail | 4.4%    | 25.0%   |
| Multiline Retail                   | 3.6%    | 5.1%    |
| Entertainment                      | 2.0%    | -       |
| Other                              | 0.8%    | -       |
| Household Durables                 | 0.8%    | 4.1%    |
| Distributors                       | 0.7%    | 1.4%    |
| Automobiles & Components           | 0.6%    | 17.1%   |

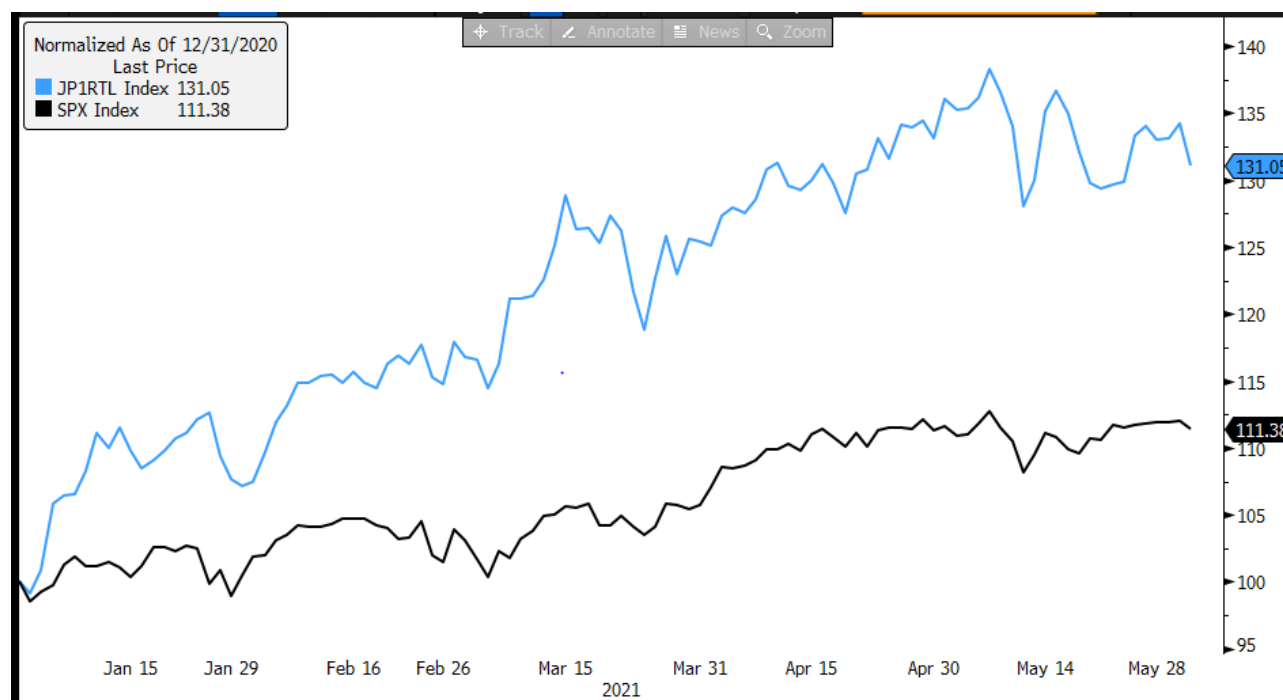


Source: Bloomberg

## Consumer – Retailers, use JP1RTL instead of XRT

- The Biden fiscal bill will be more impactful than the CARES Act or December's fiscal package, adding to the powerful pent-up demand story.
- Sector will benefit from the continuation of the value rotation.
- US Consumer debt service ratio is near a 40-year low.
- Matt Boss, II's #1 ranked analyst, has a 3-min segment on his bull case with stock picks on CNBC, [here](#)
- He uses a barbell approach of Value names (**AEO, GPS, JWN, LB, TPR**), Growth (**LEVI, LULU, MYTE, NKE, TJX**) and Laggards (**DG, VFC**).

|                                    | JP1RTL | XRT    |
|------------------------------------|--------|--------|
| <b>Summary</b>                     |        |        |
| # of names                         | 64     | 101    |
| % of top name                      | 3.4%   | 1.8%   |
| Market Cap (\$B) (Wtd Avg)         | \$40.9 | \$35.0 |
| <b>GICS Sub Industry</b>           |        |        |
| Apparel Retail                     | 22.1%  | 19.3%  |
| Specialty Stores                   | 13.5%  | 16.3%  |
| General Merchandise Stores         | 12.0%  | 5.7%   |
| Department Stores                  | 9.2%   | 4.5%   |
| Hypermarkets & Super Centers       | 8.2%   | 4.4%   |
| Computer & Electronics Retail      | 0.5%   | 3.1%   |
| Apparel, Accessories & Luxury      | 17.4%  | -      |
| Homefurnishing Retail              | 8.7%   | -      |
| Footwear                           | 7.4%   | -      |
| Personal Products                  | 0.4%   | -      |
| Internet & Direct Marketing Retail | -      | 20.0%  |
| Automotive Retail                  | -      | 17.9%  |
| Food Retail                        | -      | 6.3%   |
| Drug Retail                        | -      | 1.9%   |
| Advertising                        | -      | 0.6%   |



Source: Bloomberg

## J.P. Morgan iDex Consumer Suite vs Consumer ETFs

| Industry                     | Ticker     |      | Indicative Financing Rebate (bps) |      | Individual Single Stock Exposure |       | Wtd Avg Mkt Cap (\$B) |       | # of Names |     | Trade Time (min) \$10m @ 20% POV | Momentum Z-Score |       | Growth Z-Score |       | Value Z-Score |       |  |
|------------------------------|------------|------|-----------------------------------|------|----------------------------------|-------|-----------------------|-------|------------|-----|----------------------------------|------------------|-------|----------------|-------|---------------|-------|--|
|                              | iDex       | ETF  | iDex                              | ETF  | iDex                             | ETF   | iDex                  | ETF   | iDex       | ETF |                                  | iDex             | ETF   | iDex           | ETF   | iDex          | ETF   |  |
| Consumer                     |            |      | Financing                         |      | Top Wgt %                        |       | Size Comp             |       | Members    |     | Liquidity                        | Mo               |       | Growth         |       | Value         |       | Notes on iDex Index/Basket   |
| Retail                       | JP1RTL (i) | XRT  | -23                               | -150 | 3.0%                             |       | \$38                  |       | 65         |     | 3-4                              | 0.82             |       | -0.44          |       | 0.11          |       | JP1RTL includes Luxury/Apparel/Footwear (eg: RL, NKE) & excludes Internet (eg: AMZN), Auto & Drug (eg: RAD) Retail |
| Mall Retail                  | JP1MAL (i) |      | -23                               |      | 3.5%                             | 1.2%  | \$7                   | \$33  | 36         | 102 | 9-12                             | 1.12             | 1.09  | -0.88          | -0.36 | 0.05          | 0.15  |  |
| Non-Mall Retail              | JP1NML (i) |      | -23                               |      | 3.5%                             |       | \$45                  |       | 46         |     | 5-8                              | 0.64             |       | -0.01          |       | 0.46          |       | No listed comp   |
| Consumer Discretionary       | JP1CND (i) | XLY  | -23                               | -23  | 3.9%                             | 22.9% | \$111                 | \$511 | 124        | 63  | 1-2                              | 0.95             | 0.47  | 0.12           | 0.67  | -0.71         | -0.23 | JP1CND has less exposure to AMZN & excludes TSLA   |
| Consumer Staples             | JP1STP (i) | XLP  | -23                               | -23  | 3.5%                             | 15.8% | \$59                  | \$160 | 38         | 32  | 5-7                              | -0.41            | -0.66 | -0.53          | -0.65 | 0.33          | 0.27  | JP1STP excludes Food & Staples Retail & has a lower PG   |
| US Housing                   | JP1HOU (i) | XHB  | -23                               | -45  | 3.8%                             | 4.8%  | \$34                  | \$32  | 68         | 35  | 6-8                              | 0.62             | 0.49  | -0.23          | 0.00  | -0.46         | 0.59  | JP1HOU includes Construction Materials   |
| HomeBuilders                 | JP1BBLD    | ITB  | -23                               | -63  | 9.0%                             | 13.9% | \$11                  | \$37  | 19         | 46  | 53-74                            | 0.70             | 0.37  | 0.51           | 0.41  | 1.32          | 0.94  | JP1BBLD is 100% Homebuilders   |
| SMID Con Discretionary       | JP1SCD (i) | PSCD | -33                               | -500 | 1.1%                             | 6.5%  | \$2                   | \$4   | 95         | 90  | 8-11                             | 1.49             | 1.24  | -0.49          | -0.38 | -0.04         | 0.34  | -  |
| Restaurants                  | JP1RST (i) | -    | -23                               | -    | 10.0%                            | -     | \$41                  | -     | 24         | -   | 9-13                             | 0.53             | -     | 0.14           | -     | -0.49         | -     | No listed comp   |
| Travel & Leisure             | JP1TRL (i) | -    | -23                               | -    | 5.3%                             | -     | \$25                  | -     | 45         | -   | 5-8                              | 1.06             | -     | 0.10           | -     | -1.50         | -     |  |
| Cons Disc Long 12m Momentum  | JP1BLMC    | -    | -23                               | -    | 3.5%                             | -     | \$90                  | -     | 50         | -   | 6-9                              | 0.55             | -     | 0.39           | -     | -0.21         | -     | 12m Momentum sector baskets that rebalance monthly   |
| Cons Disc Short 12m Momentum | JP1BSMC    | -    | -23                               | -    | 3.5%                             | -     | \$9                   | -     | 50         | -   | 13-18                            | -0.29            | -     | 0.18           | -     | 0.26          | -     |  |

### iDex Indices

- Governed by a third party, based on a pre-specified, objective rule-set
- Monthly, M&A and Hard-to-Borrow names are removed
- Quarterly, stocks are rebalanced based on liquidity and a target weight limit identified in the index rules
- Rebalances do not require any booking. Non-PNL event.
- Priced history is dynamic based on the index recipe

### iDex Baskets

- Rebalances in the same way as an Index, but the client has more discretion
- Client can chose to opt out of rebalances and can change the basket as they so choose
- Baskets are not governed by a third party, therefore a booking is required
- Price history is based on a static basket

# Agenda

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# J.P. Morgan iDex Platform

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## Overview

- J.P. Morgan has created a unique suite of optimized indices called “iDex” that rebalance quarterly or monthly, depending on the index rules
- Each index has a recipe for inclusion that is filtered based on:
  - Industry
  - Liquidity
  - Announced M&A target names
  - Often cheaper financing
- These indices are liquidity-weighted with maximum weight limits
- Most Indices have a price return and total return version
- Announced M&A targets and hard-to-borrow names are removed on a monthly basis
- Rebalances occur on the 3<sup>rd</sup> Friday of the Month

## Why Trade J.P Morgan iDex<sup>SM</sup> Indices?

- More targeted, diversified way to express industry and sector view
- Often cheaper alternatives to shorting ETFs and listed indices
- Minimize single stock risk (with maximum weight constraints)
- Removal of announced M&A target companies
- Dynamic back-testing
- **\*\*\*Can be traded in Delta1 Format or via Options or Notes**

## Sample List of iDex Indices

- Indices that are more tailored to sector/industry exposure than ETFs:
  - Retail (ex Internet + Luxury, Footwear)
  - Consumer Discretionary (ex Autos & Media)
  - Consumer Staples (ex Food Staples Retails)
  - E&P (ex Refiners)
- Indices to fill “sector gaps” where a liquid ETF may not exist:
  - Restaurants
  - Leisure Travel
  - Media
  - Chemicals
  - Capital Goods
  - Momentum Indices
  - SMID Cap Sector Indies
- Indices for Macro & Thematic
  - Reflationary Indices
  - Growth / Value Indices
  - Momentum and other factor Indices

## iDex Baskets vs. Indices

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### Index:

- Governed by a 3<sup>rd</sup> party, based on a pre-specified, objective rule set
- Monthly, M&A and Hard-Borrow names are removed
- Quarterly, stocks are rebalanced based on liquidity and a target weight limit identified in the index rules
- Rebalances do not require any booking. Non-PNL event.

### Basket:

- Rebalances in the same way as an Index, but a booking is required
- Client can choose to opt in or out of rebalances
- Baskets are not governed by a 3<sup>rd</sup> party
- Clients can customize to their needs

### Potential Issues with Listed Indices:

- Expensive to short
- M&A deal exposure
- Often Market-cap weighted, which can lead to high single stock concentration
- Infrequent rebalances which can lead to:
  - Low Factor Sensitivity
  - High single stock concentration
- Exposures are not always targeted (large vs small cap, sector exposure)



# J.P. Morgan US iDex Launchpad: June 2021

| Ticker                              | %1D    | Pct Chg on Day (Z-Score) | %5D    | %1M     | %YTD   | Chg Pct 2020 | Chg Pct 2019 | Ticker                           | %1D    | Pct Chg on Day (Z-Score) | %5D     | %1M     | %YTD   | Chg Pct 2020 | Chg Pct 2019 |
|-------------------------------------|--------|--------------------------|--------|---------|--------|--------------|--------------|----------------------------------|--------|--------------------------|---------|---------|--------|--------------|--------------|
| Equities (3)                        |        |                          |        |         |        |              |              | Internet v Media                 |        |                          |         |         |        |              |              |
| ▶ Russell 2000                      | +2.5%  | 0.16                     | +3.01% | +1.66%  | +16.6% | 18.34        | 23.73%       | Barra Value L/S                  | +1.26% | 0.52                     | +2.35%  | -3.52%  | -21.0% | 78.02        | 4.70%        |
| ▶ S&P 500                           | +1.5%  | 0.15                     | +1.2%  | +6.5%   | +12.0% | 16.26        | 28.88%       | Software v Semis                 | +2.9%  | 0.16                     | -2.93%  | +2.55%  | +20.1% | -35.56       | -8.33%       |
| ▶ Nasdaq 100                        | +0.2%  | 0.01                     | +0.0%  | -1.47%  | +6.0%  | 47.58        | 37.96%       | New Tech v Old Tech              | +0.05% | 0.03                     | -1.18%  | -5.79%  | -16.5% | 16.55        | -18.18%      |
| Macro (4)                           |        |                          |        |         |        |              |              | Domestic v International         | -0.09% | -0.07                    | +2.13%  | -2.59%  | -10.1% | 37.39        | -11.33%      |
| Bitcoin                             | +3.54% | 0.76                     | -3.74% | -33.80% | +29.7% | 305.07       | 94.83%       | Barra Growth v Value             | -0.70% | -0.69                    | -1.32%  | -4.04%  | -8.0%  | -9.78        | -6.85%       |
| ▶ Crude Oil                         | +6.9%  | 0.49                     | +3.19% | +7.25%  | +40.5% | -20.54       | 34.46%       | SPY v IWM                        | -0.97% | -0.66                    | +7.78%  | -5.66%  | -21.1% | 35.38        | 4.91%        |
| US Dollar                           | +2.6%  | 0.77                     | +4.8%  | -1.33%  | +1%    | -6.69        | .22%         | Barra Growth L/S                 | -1.19% | -1.13                    | -2.88%  | -8.7%   | -4.9%  | -5.98        | 3.90%        |
| ▶ 10-Year Yield                     | -1.18% | -0.43                    | +2.17% | -2.15%  | +74.0% | -52.21       | -28.56%      | Financials (6)                   |        |                          |         |         |        |              |              |
| US Macro/Thematic (42)              |        |                          |        |         |        |              |              | ▶ REITs                          | +4.6%  | 0.47                     | +3.07%  | +3.35%  | +20.5% | -6.02        | 22.05%       |
| ▶ Inflation Winners                 | +2.69% | 1.63                     | +5.51% | +7.59%  | +35.4% | -9.74        | 19.14%       | ▶ Regional Banks (i)             | +3.35% | 0.19                     | +1.79%  | +4.34%  | +37.8% | -7.19        | 25.85%       |
| ▶ Crypto Exposure                   | +1.90% | 0.41                     | +5.22% | -11.08% | +32.7% | 156.86       | 29.01%       | ▶ Diversified Banks              | +2.25% | 0.16                     | +4.00%  | +6.21%  | +33.6% | -12.52       | 24.30%       |
| ▶ Renewable Energy                  | +1.43% | 0.50                     | +5.60% | -1.26%  | -3.7%  | 143.30       | 22.46%       | ▶ Insurance                      | +2.25% | 0.21                     | +2.64%  | +1.67%  | +20.6% | 2.00         | 26.72%       |
| ▶ Popular Retail HLDs               | +1.25% | 0.96                     | +3.69% | +3.61%  | +14.6% | 41.74        | 33.51%       | ▶ Diversified Financials         | +1.12% | 0.09                     | +3.59%  | +4.64%  | +26.7% | -51          | 25.32%       |
| ▶ Covid19 Underperformers (r)       | +9.6%  | 0.61                     | +3.16% | +3.12%  | +26.3% | 5.31         | 25.36%       | ▶ Capital Markets                | +0.01% | 0.01                     | +2.76%  | +4.01%  | +25.4% | 15.43        | 23.89%       |
| ▶ Consumer Recovery (r)             | +6.4%  | 0.44                     | +2.53% | +1.02%  | +21.3% | -58          | 5.51%        | Tech Media Telco (18)            |        |                          |         |         |        |              |              |
| ▶ Infrastructure                    | +6.0%  | 0.44                     | +1.83% | +3.00%  | +26.1% | 27.36        | 39.43%       | ▶ Comm Equipment                 | +3.36% | 0.21                     | +1.34%  | +2.55%  | +14.2% | 18.23        | 17.87%       |
| ▶ China Exposure                    | +5.6%  | 0.35                     | +2.25% | +1.41%  | +10.9% | 33.86        | 38.67%       | ▶ Tech Momentum Long             | +3.33% | 0.11                     | +4.00%  | -3.31%  | -2.3%  | 98.56        | 46.60%       |
| ▶ COVID Vaccine Tactical Shorts (r) | +5.4%  | 0.25                     | +3.77% | -2.81%  | +15.8% | 112.74       | 7.70%        | ▶ Hardware                       | +2.0%  | 0.11                     | +4.3%   | +5.4%   | +19.4% | 18.82        | 27.75%       |
| ▶ Biden Tax - Domestic (r)          | +3.9%  | 0.39                     | +1.24% | +1.72%  | +18.2% | 3.73         | 22.08%       | ▶ SMID Software                  | +1.6%  | 0.07                     | +2.08%  | -3.70%  | -2.6%  | 78.88        | 35.85%       |
| ▶ High Leverage (r)                 | +3.7%  | 0.34                     | +1.40% | +1.43%  | +17.8% | 3.03         | 24.53%       | ▶ FANG                           | +1.5%  | 0.10                     | -1.1%   | -1.76%  | +11.3% | 52.65        | 33.06%       |
| ▶ Bond Proxy                        | +2.6%  | 0.33                     | +9.3%  | -0.4%   | +12.0% | -6.58        | 23.36%       | ▶ New Media (i)                  | +0.8%  | 0.07                     | +4.2%   | -2.4%   | +11.7% | 37.11        | 32.56%       |
| ▶ Momentum Long - 6m (i)            | +2.6%  | 0.08                     | +5.08% | +4.90%  | +20.6% | 56.03        | 34.20%       | ▶ Telecom                        | +0.06% | 0.05                     | +1.21%  | +1.95%  | +8.1%  | 2.23         | 13.55%       |
| ▶ High Beta                         | +2.5%  | 0.10                     | +4.65% | -3.69%  | +18.8% | 64.65        | 35.51%       | ▶ 5G (r)                         | +0.06% | 0.03                     | +2.02%  | +2.75%  | +12.8% | 22.54        | 34.15%       |
| ▶ Rising Bond Yield Winners         | +2.3%  | 0.15                     | +3.89% | +6.08%  | +35.8% | -39          | 24.32%       | ▶ SMID Technology (i)            | +0.05% | 0.02                     | +2.67%  | -1.00%  | +8.2%  | 50.44        | 37.57%       |
| ▶ HY Debt Sensitivity               | +2.2%  | 0.15                     | +4.05% | +6.44%  | +30.3% | 24.31        | 27.89%       | ▶ TMT (i)                        | -0.03% | -0.02                    | +7.4%   | -2.2%   | +8.5%  | 44.35        | 43.56%       |
| ▶ High Short Interest               | +2.2%  | 0.06                     | +8.22% | +3.4%   | +36.2% | 65.60        | 16.97%       | ▶ Old Tech                       | -0.07% | -0.04                    | +4.5%   | +1.9%   | +10.5% | 40.47        | 46.94%       |
| ▶ Barra Value Long (i)              | +2.1%  | 0.20                     | +1.47% | +3.48%  | +28.1% | 11.31        | 24.10%       | ▶ Internet                       | -0.12% | -0.05                    | +3.67%  | -1.40%  | +2.5%  | 96.14        | 28.20%       |
| ▶ Defensives (r)                    | +1.9%  | 0.26                     | -5.3%  | +5.4%   | +8.4%  | 2.49         | 27.13%       | ▶ Software (i)                   | -0.14% | -0.07                    | -8.8%   | -4.67%  | +5.0%  | 90.14        | 36.35%       |
| ▶ Low Vol - 6m (i)                  | +1.7%  | 0.23                     | -1.03% | +3.9%   | +8.6%  | .67          | 23.29%       | ▶ Technology (i)                 | -0.14% | -0.08                    | +6.6%   | -2.3%   | +7.9%  | 47.26        | 44.86%       |
| ▶ Buyback                           | +1.7%  | 0.16                     | +5.0%  | +1.89%  | +14.9% | 11.84        | 32.08%       | ▶ New Tech                       | -0.15% | -0.07                    | +2.56%  | -2.41%  | -3%    | 101.37       | 32.52%       |
| ▶ EU Exposure                       | +1.6%  | 0.15                     | +8.2%  | +2.27%  | +12.8% | 22.17        | 27.67%       | ▶ Semiconductors                 | -0.22% | -0.08                    | +1.65%  | +1.39%  | +13.5% | 55.23        | 63.78%       |
| ▶ US Housing (i)                    | +1.4%  | 0.10                     | +2.68% | +9.0%   | +31.5% | 29.76        | 44.32%       | ▶ Tech Momentum Short            | -0.25% | -0.16                    | +3.16%  | -2.91%  | +4.4%  | 68.61        | 36.36%       |
| ▶ Momentum Long - 12m (i)           | +1.3%  | 0.04                     | +7.32% | +8.1%   | +16.3% | 55.39        | 27.66%       | ▶ Expensive Software             | -0.74% | -0.28                    | +8.5%   | -5.59%  | -9.6%  | 174.73       | 56.37%       |
| ▶ International (r)                 | +1.2%  | 0.09                     | +2.10% | +2.44%  | +19.0% | 27.78        | 37.73%       | Consumer (12)                    |        |                          |         |         |        |              |              |
| ▶ Domestic (r)                      | +1.2%  | 0.11                     | +1.16% | -1.64%  | +10.3% | 18.18        | 29.65%       | ▶ Autos                          | +0.64% | 0.37                     | +6.30%  | +7.27%  | +27.8% | 17.71        | 24.89%       |
| ▶ Momentum Short - 12m (i)          | +0.4%  | 0.03                     | +3.3%  | +1.71%  | +37.1% | 23.65        | 20.35%       | ▶ Cons Disc Winners - 12m        | +3.39% | 0.19                     | +5.38%  | +4.47%  | +29.1% | 23.67        | 20.85%       |
| ▶ ESGQ                              | +0.4%  | 0.04                     | +1.04% | +1.99%  | +15.4% | 15.43        | 33.31%       | ▶ SMID Cons Disc (i)             | +2.27% | 0.14                     | +4.28%  | +6.87%  | +50.9% | 31.20        | 17.90%       |
| ▶ Cyclical                          | +0.2%  | 0.01                     | +4.25% | +2.22%  | +21.8% | 47.17        | 31.94%       | ▶ Travel & Leisure (i)           | +2.24% | 0.11                     | +4.26%  | +1.05%  | +23.6% | 8.59         | 29.18%       |
| ▶ Barra Growth (i)                  | --     | .00                      | +2.26% | -2.57%  | +1.0%  | 64.17        | 31.23%       | ▶ Staples (i)                    | +2.22% | 0.26                     | -4.5%   | +2.12%  | +7.9%  | 11.96        | 24.75%       |
| ▶ High Vol - 6m (i)                 | -0.01% | 0.00                     | +7.88% | +1.20%  | +20.2% | 101.18       | 27.81%       | ▶ Restaurants (i)                | +1.5%  | 0.13                     | -0.4%   | -4.68%  | +14.2% | 34.21        | 25.86%       |
| ▶ US Importers (r)                  | -0.01% | -0.01                    | +1.37% | +4.9%   | +19.6% | 13.75        | 21.17%       | ▶ Non-Mall (i)                   | +1.12% | 0.09                     | +2.41%  | -1.3%   | +23.8% | 34.01        | 29.79%       |
| ▶ Barra Value Short (i)             | -0.03% | -0.01                    | +4.48% | +1.7%   | +3.2%  | 71.51        | 34.22%       | ▶ HomeBuilders                   | +1.11% | 0.04                     | +3.25%  | -0.97%  | +35.1% | 27.56        | 58.97%       |
| ▶ MAGA                              | -0.05% | -0.04                    | -1.02% | -3.31%  | +9.2%  | 57.75        | 47.45%       | ▶ The Mall (i)                   | +0.07% | 0.03                     | +4.62%  | +3.56%  | +51.4% | 12.65        | .22%         |
| ▶ Emerging Mkt Exposure             | -0.13% | -0.08                    | +2.77% | +2.88%  | +9.7%  | 25.09        | 31.97%       | ▶ Consumer Discretionary (i)     | +0.06% | 0.04                     | +3.10%  | +9.4%   | +18.3% | 29.28        | 23.74%       |
| ▶ Low Leverage (r)                  | -0.14% | -0.11                    | +1.30% | +5.3%   | +11.6% | 28.11        | 25.69%       | ▶ Retail (i)                     | +0.05% | 0.03                     | +2.73%  | +0.5%   | +33.2% | 28.44        | 16.24%       |
| ▶ Momentum Short - 6m (i)           | -0.30% | -0.26                    | +1.13% | -4.2%   | +12.0% | 61.11        | 36.44%       | ▶ Cons Disc Laggards - 12m       | -0.06% | -0.04                    | +1.47%  | -1.50%  | +40.6% | 37.60        | 16.17%       |
| ▶ Inflation Laggards                | -0.30% | -0.41                    | -6.0%  | +3.6%   | +5.5%  | 3.64         | 22.18%       | Energy Industrials Materials (9) |        |                          |         |         |        |              |              |
| ▶ Biden Tax - Foreign (r)           | -0.36% | -0.26                    | +3.2%  | +1.0%   | +10.7% | 26.50        | 39.51%       | ▶ Energy Recovery (r)            | +7.31% | 2.37                     | +12.58% | +25.64% | +80.5% | -29.46       | -19.15%      |
| ▶ WFT Tech Winners                  | -0.41% | -0.23                    | +7.6%  | -1.38%  | +7%    | 54.77        | 43.03%       | ▶ Energy Winners - 12m           | +7.10% | 2.41                     | +12.39% | +24.25% | +56.2% | -41.02       | 3.23%        |
| ▶ Covid19 Outperformers (r)         | -0.76% | -0.82                    | +8.1%  | +2.00%  | +12.3% | 44.66        | 15.70%       | ▶ Energy Laggards - 12m          | +4.19% | 1.56                     | +6.24%  | +11.71% | +66.9% | -11.29       | -18.01%      |
| ▶ SPACs                             | -0.90% | -0.31                    | +4.79% | +5.5%   | +3.2%  | 126.96       | 5.53%        | ▶ Industrials Winners - 12m      | +2.19% | 1.11                     | +6.24%  | +3.07%  | +15.4% | 17.30        | 27.04%       |
| US Pairs (13)                       |        |                          |        |         |        |              |              | ▶ SMID Energy (i)                | +8.4%  | 0.26                     | +8.85%  | +25.37% | +81.5% | -28.35       | -17.08%      |
| ▶ Momentum L/S (6m)                 | +4.78% | 1.89                     | +3.87% | +4.84%  | +8.3%  | -19.39       | -8.12%       | ▶ Oil Services                   | +7.5%  | 0.24                     | +8.71%  | +25.61% | +46.5% | -30.46       | -4.54%       |
| ▶ Inflation L/S                     | +3.00% | 1.74                     | +6.13% | +7.21%  | +27.9% | -10.17       | -3.10%       | ▶ Industrials Laggards - 12m     | +6.1%  | 0.50                     | +1.86%  | +3.64%  | +25.7% | 30.47        | 28.49%       |
| ▶ Momentum L/S (12m)                | +2.10% | 0.66                     | +6.94% | -1.19%  | -16.5% | -3.64        | .95%         | ▶ Airlines                       | +5.8%  | 0.24                     | +3.08%  | +3.27%  | +37.1% | -25.41       | 8.78%        |
| ▶ Volatility High v Low             | +1.78% | 0.54                     | +8.95% | +7.3%   | +9.5%  | 103.12       | 1.58%        | ▶ E&P (i)                        | +5.7%  | 0.18                     | +11.22% | +25.57% | +99.6% | -17.39       | -12.30%      |
| ▶ Cyclical v Defensives             | +1.48% | 0.79                     | +4.89% | +1.87%  | +12.5% | 46.08        | 3.79%        | ▶ MLPs                           | +5.4%  | 0.35                     | +2.53%  | +7.15%  | +35.9% | -32.93       | 4.04%        |

Source: Bloomberg 06/02/2021



Source: Bloomberg 06/02/2021

# J.P. Morgan US iDex Style Factors – Descriptions & Methodologies

| iDex Factor Indices                | Ticker    | Top Weight | # of Names | Wtd Avg Mkt Cap | Trade Time \$10m @ |   |
|------------------------------------|-----------|------------|------------|-----------------|--------------------|---|
| Style Factors                      |           | Stock      | Members    | Size (\$B)      | Liquidity          | Descriptions & Methodologies  |
| Cyclicals                          | JPAMCYCL  | 3.5%       | 78         | \$52.1          | 1-2 mins           | Cyclical Universe (Materials, Industrials, Discretionary, Technology) - Top stocks eq wgt ranked by: Beta to composite PMI (based on 5 yrs of monthly revenues) and Beta to the market (based on 12m of daily returns).   |
| Defensives                         | JPAMDEFN  | 2.9%       | 80         | \$101.2         | 1-2 mins           | Defensive Universe (Utilities, Staples, Telecoms, Healthcare, and Real Estate)- Bottom stocks eq wgt ranked by: Beta to composite PMI (based on 5yrs of monthly revenues) and Beta to the market (based on 12m of daily returns).   |
| Domestic Revenue Exposure          | JPAMDOME  | 2.8%       | 100        | \$38.4          | 1-2 mins           | Russell 3000 ex names w/ 3m ADV<\$10m or mkt cap<\$1B. Must have 100% domestic rev exposure and not be in Energy or Materials sectors. Ranked by: + correlation to USD Trade Weighted Index (JPMQUSD Index) and - correlation to VEU US Equity.   |
| International Revenue Exposure     | JPAMINTL  | 2.9%       | 100        | \$62.1          | 1-2 mins           | Russell 3000 ex names w/ 3m ADV<\$10m or mkt cap<\$1B. Int Exp> 40%, and not in Energy or Materials sectors. Ranked by: - correlation to USD Trade Weighted Index (JPMQUSD Index) and + correlation to VEU US Equity.   |
| China Exposure                     | JP11CHEX  | 2.5%       | 108        | \$111.9         | 1-2 mins           | US domiciled and ADR companies. At least 10% of rev from China, and appear to move in tandem w/ China trade newsflow. Screened for borrow and liquidity. Liquidity-weighted w/ 2.5% top weight cap. Initially constrained to be no more than 50% exposed to Tech (whereas FXI is 50% Financials).   |
| High Yield Debt Sensitive Equities | JPTUSHY4  | 1.5%       | 304        | \$15.6          | 1-2 mins           | US-listed Equities of HY debt issuers per Markit iBoxx Avg Rating (BB, B, CCC, C). Screened for names w/ 90d ADV>\$8mm and Borrow <OBFR-500 bps. No M&A or HTB. Rebalanced quarterly on a liquidity-weighted basis w/ 1.5% top-weight cap. For the historical back-test and moving forward, the basket is rebalanced to match the sector weights of the iBoxx HY Index (HYG benchmark). |
| High Short Interest                | JPTASHT   | 1.5%       | 89         | \$7.5           | 1-2 mins           | Created by screening active US listed stocks (excluding OTC exchange) for 3M ADV >= 80MM and Short Interest of Equity Float >= 10%. The top names are equal weight and the basket is rebalanced monthly on the 1st.   |
| Bond Proxies                       | JP11BPRX  | 4.2%       | 94         | \$26.8          | 2-4 mins           | Names in Russell 3000 ranked in terms of neg 1-year weekly correlation vs the 10-Year Treasury Yield (USGG10YR Index). Top 100 ranked names are scrubbed for borrow and M&A, and then liquidity weighted with a 2% top weight as of inception.  |
| Rising Bond Yield Winner           | JP11YLD   | 3.9%       | 98         | \$54.0          | 2-4 mins           | Names in Russell 3000 ranked in terms of pos 1-year weekly correlation vs the 10-Year Treasury Yield (USGG10YR Index). The top 100 ranked names are scrubbed for borrow and M&A, and then liquidity weighted with a 2% top weight as of inception.  |
| US Infrastructure                  | JPUSINF2  | 8.8%       | 31         | \$25.9          | 6-8 mins           | Companies included are those likely to be positively affected by a budget proposal favoring infrastructure spending. These are companies linked to domestic civil construction. The basket is based on Dubravko's "US Equity Markets 2018 Outlook" and other names from our Market Intelligence Desk.   |
| Inflation Laggards                 | JP11SHRT  | 3.8%       | 50         | \$101.1         | 1-2 mins           | Companies expected to underperform in an inflationary environment. Names have high positive correlation between excess returns to market and spread in inflation (50% 10Y TSY and 50% inflation breakeven).   |
| Inflation Winners                  | JP11LONG  | 4.3%       | 50         | \$20.4          | 5-7 mins           | Companies expected to outperform in an inflationary environment. Names have high negative correlation between excess returns to market and spread in inflation (50% 10Y TSY and 50% inflation breakeven).   |
| European Revenue Exposure          | JPTAEURV  | 6.2%       | 46         | \$42.6          | 2-4 mins           | US names with high European revenue exposure  |
| US Importers                       | JPAMUSIM  | 5.4%       | 44         | \$66.7          | 2-4 mins           | Features the largest publicly traded U.S. Importers by reported container shipping volume. Basket includes names with a market cap > \$1bn. Companies are expected to be more adversely affected if US trade strategy takes a severe route.   |
| Popular Retail Holdings            | JP1BRPOP  |            |            |                 |                    | Universe is based on US Broad Based Index. Basket encompasses top 100 favorite retail stocks. Stocks are based on their rank of 5d average turnover differential.   |
| US Housing                         | JP11HOU   | 5.7%       | 65         | \$29.5          | 2-4 mins           | US stocks exposed to the US Housing market  |
| Emerging Markets Exposure          | JP11EMRG  | 5.5%       | 163        | \$195.2         | 1-2 mins           | US stocks with high exposure to Emerging Market revenue   |
| Tactical Vaccine Shorts            | JPAMVACS  | 7.1%       | 25         | \$21.4          | 9-10 mins          | Stocks that are in the highest quartile of momentum and have crowded positioning. As consumer / corporate activity normalizes a derivative of their profit growth could decrease.   |
| Inflation                          | JPAMINFL  | 4.5%       | 53         | \$39.1          | 3-5 mins           | Expected to outperform when inflation moves higher. Comprised of 3 inflation-sensitive sectors: Energy, Materials and Real Estate. The names are scrubbed for borrow, 90d ADV > \$25mm, and market cap > \$2.5b and then weighted according to each stock's correlation to CPI as of inception.   |
| Renewable Energy                   | JP11RNEW  | 3.9%       | 44         | \$27.9          | 4-6 mins           | Liquid basket of renewable energy and related stocks. Basket is scrubbed for hard to borrow stocks, M&A targets and is optimized for liquidity with a 4% weight cap.  |
| SPACs                              | JP11SPAC  | 18.6%      | 10         | \$8.2           | 37-40 mins         | Tactical basket of closed SPACs. Basket is liquidity weighted with a 15% cap. Stocks removed if hard to borrow securities, M&A targets or 90d ADV is less than \$5mm.   |
| Trump Winners                      | JPAMTRMP  | 3.4%       | 50         | \$65.1          | 3-5 mins           | Created during the 2020 election to reflect the policy proposals of the incumbent President Trump. Deep value, namely Energy & Financials could be the key beneficiaries of a Trump victory, along COVID recovery / Epicenter stocks.   |
| Biden Winners                      | JPAMBIDEN | 4.3%       | 50         | \$75.3          | 5-7 mins           | Created during the 2020 election to showcase outperformers for presidential candidate Joe Biden. A Biden victory could enable profit taking in momentum stocks due to policy proposals, such as a higher capital gains tax. Top sectors include industrials and healthcare.   |
| Crypto Exposure                    | JP11CRYP  | 18.2%      | 12         | \$118.4         | 2-4 mins           | US Equities that have both direct and indirect exposure to XBT/USD. Correlation to XBT/USD also considered (1m/3m/12m equal weighted composite). Basket ensures diversification, with top weight of 20% and bottom weight of 2%.  |

# Agenda

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## J.P. Morgan US iDex Factor Suite

|                          | Ticker      |      | Top Weight  |       |        |     | # of Names |      | Wtd Avg Mkt Cap |       | Momentum Z-Score |       | Value Z-Score |       | Growth Z-Score |       | Rebal Frqncy |     |
|--------------------------|-------------|------|-------------|-------|--------|-----|------------|------|-----------------|-------|------------------|-------|---------------|-------|----------------|-------|--------------|-----|
| iDex Factor Indices      | iDex (TR)   | ETF  | iDex        | ETF   | iDex   | ETF | iDex       | ETF  | iDex            | ETF   | iDex             | ETF   | iDex          | ETF   | iDex           | ETF   | iDex         | ETF |
| Style Factors            |             |      | Stock       |       | Sector |     | Members    |      | Size (\$B)      |       | Mo               |       | Value         |       | Grow           |       | Rebals       |     |
| Long 12m Momentum        | JP1LMOT (i) | MTUM | 2.1%        | 6.3%  | 25%    | -   | 150        | 125  | \$32            | \$416 | 2.42             | 0.70  | -0.79         | -0.33 | 0.51           | 0.74  | 1M           | 2Y  |
| Long 6m Momentum         | JP16LMO (i) |      | 2.1%        |       | 25%    | -   | 150        |      | \$28            |       | 2.22             |       | -0.69         |       | 0.41           |       | 1M           |     |
| Short 12m Momentum       | JP1SMOT (i) | -    | 2.1%        | -     | 25%    | -   | 150        | -    | \$73            | -     | -0.16            | -     | -0.72         | -     | -0.56          | -     | 1M           | -   |
| Short 6m Momentum        | JP16SMO (i) | -    | 2.1%        | -     | 25%    | -   | 150        | -    | \$45            | -     | -0.36            | -     | 0.05          | -     | -0.02          | -     | 1M           | -   |
| Barra Growth Top Rank    | JP1QGRO (i) | IWF  | 2.5%        | 10.5% | 30%    | -   | 100        | 464  | \$110           | \$690 | 0.97             | 0.11  | -0.39         | -0.23 | 1.02           | 0.44  | 1M           | 1Y  |
| Barra Growth Bottom Rank | JP1QGRS (i) | -    | 2.5%        | -     | 30%    | -   | 100        | -    | \$32            | -     | 0.78             | -     | -0.65         | -     | -0.63          | -     | 1M           | -   |
| Barra Value Top Rank     | JP1QVAL (i) | IWD  | 2.5%        | 2.5%  | 30%    | -   | 100        | 860  | \$59            | \$145 | -0.19            | -0.26 | 0.83          | 0.31  | -0.47          | -0.55 | 1M           | 1Y  |
| Barra Value Bottom Rank  | JP1QVLS (i) | -    | 2.5%        | -     | 30%    | -   | 100        | -    | \$51            | -     | 1.16             | -     | -0.99         | -     | 0.42           | -     | 1M           | -   |
| High 6m Volatility       | JP1HVOT (i) | -    | 2.1%        | -     | 25%    | -   | 150        | -    | \$7             | -     | 2.02             | -     | -1.15         | -     | -0.52          | -     | 1M           | -   |
| Low 6m Volatility        | JP1LVOT (i) | SPLV | 2.1%        | 1.5%  | 25%    | -   | 150        | 100  | \$123           | \$105 | -0.72            | -0.55 | 0.33          | 0.30  | -0.52          | -0.42 | 1M           | 1Q  |
| US Broad Market ETFs     |             |      | Single Name |       | Sector |     | Members    |      | Size Comp       |       | Momentum         |       | Value         |       | Growth         |       | Rebals       |     |
| Russell 2000             | -           | IWM  | -           | 0.6%  | -      | -   | -          | 2056 | -               | \$4   | -                | 0.20  | -             | -0.09 | -              | -0.22 | -            | 1Y  |
| S&P 500                  | -           | SPY  | -           | 5.7%  | -      | -   | -          | 505  | -               | \$460 | -                | -0.05 | -             | 0.07  | -              | -0.11 | -            | 1Q  |
| Nasdaq 100               | -           | QQQ  | -           | 11.1% | -      | -   | -          | 102  | -               | \$747 | -                | 0.39  | -             | -0.14 | -              | 0.40  | -            | 1Y  |

Note: the letter (i) denotes a third party Index. The rest are custom baskets which follow the same iDex methodology.

Source: J.P. Morgan Stock Loan, Thompson Reuters Definitive M&A Deal Targets, and Bloomberg as of 3/23/21. OBFR was 7bps on on this date.

| iDex *Daily Rebalancing Tradable Pairs | Ticker   | Mo    | Val   | Gro   | Lev   | Vol   | Factor Legs       |
|--|----------|-------|-------|-------|-------|-------|-------------------|
| 12m Momentum Long v Short              | JPPQMO   | 2.58  | -0.07 | 1.07  | -0.98 | -0.16 | JP1LMOT v JP1SMOT |
| 6m Momentum Long v Short               | JPPQ6MO  | 2.58  | -0.74 | 0.43  | -0.06 | -0.07 | JP16LMO v JP16SMO |
| Value Long v Short                     | JPPQVAL  | -1.35 | 1.82  | -0.89 | 0.13  | 0.49  | JP1QVAL v JP1QVLS |
| Growth v Value                         | JPPQGRVL | 1.16  | -1.22 | 1.49  | -0.37 | -0.21 | JP1QGRO v JP1QVAL |
| Growth Long v Short                    | JPPQGRO  | 0.19  | 0.26  | 1.66  | -0.48 | -0.16 | JP1QGRO v JP1QGRS |
| Volatility High v Low                  | JPPQVOL  | 2.74  | -1.48 | 0.01  | -0.75 | 0.34  | JP1HVOT v JP1LVOT |

| iDex Factor Basic Descriptions |  |
|--------------------------------|--|
| 12m Momentum                   | Price Return Performance 12 month - 1 month                          |
| 6m Momentum                    | Price Return Performance 6 month - 1 week                            |
| Barra Growth                   | Predicted Earnings Growth 70%; Sales Growth 15%; Earnings Growth 15% |
| Barra Value                    | Book to Price 60%; Earnings Yield 30%, Dividend Yield 10%            |
| Volatility                     | Volatility Price Return Performance 6month - 1month                  |



## J.P. Morgan Global iDex Factor Suite

- The Tactical Factor suite has been developed by our Delta One team to provide clients with efficient tactical tools to manage and directionally position for short-medium term factor moves.
- The suite is cleaned for borrow, M&A targets and liquidity & is rebalanced on a monthly basis.

| Factor              | Region | Pair Ticker | Long Ticker | Short Ticker | Time to Trade \$10m | Description   |
|---------------------|--------|-------------|-------------|--------------|---------------------|---|
| Realized Volatility | Europe | JPPEVOL     | JPEBHVO     | JPEBLVO      | ~3 minutes          | Attempts to capture realized volatility style using 6M daily return volatility estimates. Signal: Standard deviation of trailing 180D daily total returns |
|                     | US     | JPPQVOL (i) | JP1HVO (i)  | JP1LVO (i)   | ~2 minutes          |   |
| Value               | Europe | JPPEVAL     | JPEBVLL     | JPEBVLS      | ~3 minutes          | Attempts to capture the Value style using a combination of Book/Price, Sales/Price, Est. Earnings/Price metrics (Sector neutralized)                      |
|                     | US     | JPPQVAL (i) | JP1QVAL (i) | JP1QVLS (i)  | ~2 minutes          | Attempts to capture the Value style through leveraging Barra's methodologies  |
|                     | Japan  | JPJBVAL     | JPJBTVAL    | JPJBBVAL     | ~ 25 -30 mins       | Attempts to capture the Value style using a combination of Book/Price, Sales/Price, Est. Earnings/Price, Est. Earnings/Price Rel. to sector avg metrics   |
| Momentum 12m        | Europe | JPPEMO      | JPEB1LMO    | JPEB1SMO     | ~4 minutes          | Attempts to capture price momentum using total stock returns from -12m to -1w   |
|                     | US     | JPPQMO (i)  | JP1LMO (i)  | JP1SMO (i)   | ~2 minutes          | Attempts to capture price momentum using total stock returns from -12m to -1m   |
|                     | Japan  | JPPJMO      | JPJB1LMO    | JPJB1SMO     | ~15 minutes         | Attempts to capture price momentum using total stock returns from -12m to -1w   |
| Momentum 6m         | Europe | JPP6EMO     | JPEB6LMO    | JPEB6SMO     | ~2 minutes          |   |
|                     | US     | JPPQ6MO (i) | JP16LMO (i) | JP16SMO (i)  | ~2 minutes          | Attempts to capture price momentum using total stock returns from -6m to -1w  |
|                     | Japan  | JPP6JMO     | JPJB6LMO    | JPJB6SMO     | ~11 minutes         |   |
| Earnings Momentum   | Europe | JPPEMOE     | JPEBLEMO    | JPEBSEMO     | ~3 minutes          | Attempts to capture earnings momentum using % change in mean consensus EPS estimates.   |
| Combined Momentum   | Japan  | JPJBMOM     | JPJBTMOM    | JPJBBMOM     | ~ 25 -30 mins       | Attempts to capture the Momentum factor using a combination of using 6M price, 12M Price, and 3M Earnings Momentum  |
| Growth              | US     | JPPQGRO (i) | JP1QGRO (i) | JP1QGRS (i)  | ~3 minutes          | Attempts to capture growth style through leveraging Barra's methodologies   |
|                     | Japan  | JPJBGRW     | JPJBTGRW    | JPJBBGRW     | ~ 25 -30 mins       | Attempts to capture growth style using historical Sales & Earnings Growth, Est. Earning Growth and volatility of Earnings                                 |

# J.P. Morgan US iDex Sector Suite

|  | Ticker      |      | Indicative Financing Rebate (bps) |      | Individual Single Stock Exposure |       | Wtd Avg Mkt Cap (\$B) |       | # of Names     |     | Trade Time (min) \$10m @ 20% POV | Momentum Z-Score |       | Growth Z-Score |       | Value Z-Score |       |
|--|-------------|------|-----------------------------------|------|----------------------------------|-------|-----------------------|-------|----------------|-----|----------------------------------|------------------|-------|----------------|-------|---------------|-------|
| Industry                                     | iDex        | ETF  | iDex                              | ETF  | iDex                             | ETF   | iDex                  | ETF   | iDex           | ETF | iDex                             | iDex             | ETF   | iDex           | ETF   | iDex          | ETF   |
| <b>Consumer</b>                              |             |      | <b>Financing</b>                  |      | <b>Top Wgt %</b>                 |       | <b>Size Comp</b>      |       | <b>Members</b> |     | <b>Liquidity</b>                 | <b>Mo</b>        |       | <b>Growth</b>  |       | <b>Value</b>  |       |
| Retail                                       | JP1RTL (i)  | XRT  | -23                               | -150 | 3.0%                             | 1.2%  | \$38                  | \$33  | 65             | 102 | 3-4                              | 0.82             | 1.09  | -0.44          | -0.36 | 0.11          | 0.15  |
| Mall Retail                                  | JP1MAL (i)  |      | -23                               |      | 3.5%                             |       | \$7                   |       | 36             |     | 9-12                             | 1.12             |       | -0.88          | -0.05 |               |       |
| Non-Mall Retail                              | JP1NML (i)  |      | -23                               |      | 3.5%                             |       | \$45                  |       | 46             |     | 5-8                              | 0.64             |       | -0.01          | 0.46  |               |       |
| Consumer Discretionary                       | JP1CND (i)  | XLY  | -23                               | -23  | 3.9%                             | 22.9% | \$111                 | \$511 | 124            | 63  | 1-2                              | 0.95             | 0.47  | 0.12           | 0.67  | -0.71         | -0.23 |
| Consumer Staples                             | JP1STP (i)  | XLP  | -23                               | -23  | 3.5%                             | 15.8% | \$59                  | \$160 | 38             | 32  | 5-7                              | -0.41            | -0.66 | -0.53          | -0.65 | 0.33          | 0.27  |
| US Housing                                   | JP1HOU (i)  | XHB  | -23                               | -45  | 3.8%                             | 4.8%  | \$34                  | \$32  | 68             | 35  | 6-8                              | 0.62             | 0.49  | -0.23          | 0.00  | 0.46          | 0.59  |
| SMID Con Discretionary                       | JP1SCD (i)  | PSCD | -33                               | -500 | 1.1%                             | 6.5%  | \$2                   | \$4   | 95             | 90  | 8-11                             | 1.49             | 1.24  | -0.49          | -0.38 | -0.04         | 0.34  |
| Restaurants                                  | JP1RST (i)  |      | -23                               | -    | 10.0%                            | -     | \$41                  | -     | 24             | -   | 9-13                             | 0.53             | -     | 0.14           | -     | -0.49         | -     |
| Travel & Leisure                             | JP1TRL (i)  |      | -23                               | -    | 5.3%                             | -     | \$25                  | -     | 45             | -   | 5-8                              | 1.06             | -     | 0.10           | -     | -1.50         | -     |
| <b>Financials (Including Real Estate)</b>    |             |      | <b>Financing</b>                  |      | <b>Top Wgt %</b>                 |       | <b>Size Comp</b>      |       | <b>Members</b> |     | <b>Liquidity</b>                 | <b>Mo</b>        |       | <b>Growth</b>  |       | <b>Value</b>  |       |
| Regional Banks                               | JP1RGB (i)  | KRE  | -23                               | -50  | 2.8%                             | 2.4%  | \$16                  | \$11  | 87             | 132 | 8-11                             | 0.24             | 0.25  | -0.71          | -0.71 | 0.80          | 0.75  |
| <b>Health Care</b>                           |             |      | <b>Financing</b>                  |      | <b>Top Wgt %</b>                 |       | <b>Size Comp</b>      |       | <b>Members</b> |     | <b>Liquidity</b>                 | <b>Mo</b>        |       | <b>Growth</b>  |       | <b>Value</b>  |       |
| Biotech                                      | JP1BTC (i)  | XBI  | -33                               | -125 | 2.5%                             | 0.8%  | \$15                  | \$8   | 167            | 191 | 5-8                              | 0.55             | 0.83  | -0.04          | -0.30 | -1.14         | -1.50 |
|  |             | IBB  |                                   | -80  |                                  | 8.3%  |                       | \$39  |                | 278 |                                  |                  | 0.32  |                | -0.20 |               | -0.56 |
| SMID Biotech                                 | JP1SBO (i)  | XBI  | -53                               | -125 | 2.0%                             | 0.8%  | \$2                   | \$8   | 234            | 191 | 9-12                             | 0.95             | 0.83  | -0.64          | -0.30 | -1.87         | -1.50 |
| Health Care                                  | JP1CHC (i)  | XLV  | -23                               | -23  | 2.4%                             | 9.8%  | \$92                  | \$162 | 88             | 63  | 1-2                              | -0.22            | -0.45 | -0.02          | -0.25 | 0.20          | 0.25  |
| Med Tech                                     | JP1MTC (i)  | IHI  | -23                               | -60  | 2.9%                             | 11.2% | \$56                  | \$90  | 89             | 66  | 5-7                              | 0.09             | -0.21 | 0.16           | -0.22 | -0.30         | -0.21 |
| SMID Health Care                             | JP1SHC (i)  | PSCH | -33                               | -500 | 1.1%                             | 4.9%  | \$2                   | \$3   | 351            | 73  | 4-6                              | 1.07             | 0.39  | -0.26          | -0.10 | -1.28         | -0.16 |
| Health Care Long Barra Momentum              | JP1QLMH (i) |      | -23                               | -    | 2.5%                             | -     | \$13                  | -     | 125            | -   | 3-4                              | 1.39             | -     | 0.42           | -     | -0.76         | -     |
| Health Care Long 12m Momentum                | JP1LMH (i)  |      | -23                               | -    | 2.5%                             | -     | \$5                   | -     | 50             | -   | 10-14                            | 2.54             | -     | -0.29          | -     | -1.28         | -     |
| Health Care Short 12m Momentum               | JP1SMH (i)  |      | -33                               | -    | 2.5%                             | -     | \$45                  | -     | 50             | -   | 20-28                            | -0.74            | -     | -0.48          | -     | -1.58         | -     |
| <b>Tech, Media, Telecom</b>                  |             |      | <b>Financing</b>                  |      | <b>Top Wgt %</b>                 |       | <b>Size Comp</b>      |       | <b>Members</b> |     | <b>Liquidity</b>                 | <b>Mo</b>        |       | <b>Growth</b>  |       | <b>Value</b>  |       |
| Technology                                   | JP1TECH (i) | XLK  | -23                               | -23  | 5.0%                             | 21.7% | \$300                 | \$887 | 64             | 74  | 1-2                              | 0.16             | 0.03  | 0.27           | 0.20  | -0.06         | -0.15 |
| TMT  | JP1TMT (i)  |      | -23                               |      | 5.0%                             |       | \$414                 |       | 88             |     | 1-2                              | 0.16             |       | 0.44           | 0.02  | -0.08         |       |
| New Media ("Comm Svcs")                      | JP1NMED (i) | XLC  | -23                               | -23  | 6.0%                             | 21.6% | \$240                 | \$568 | 32             | 26  | 2-3                              | 0.29             | -0.01 | 0.20           | 0.36  | 0.09          | 0.11  |
| SMID Technology                              | JP1STC (i)  | PSCT | -33                               | -500 | 1.1%                             | 4.3%  | \$3                   | \$3   | 158            | 71  | 6-8                              | 0.75             | 0.63  | 0.10           | -0.23 | -0.35         | -0.06 |
| Previous Media                               | JP1MDA (i)  |      | -23                               | -    | 7.0%                             | -     | \$69                  | -     | 31             | -   | 10-11                            | 0.23             | -     | -0.23          | -     | 0.23          | -     |
| Software                                     | JP1SFT (i)  | IGV  | -22                               | -125 | 3.5%                             | 8.7%  | \$109                 | \$223 | 104            | 111 | 1-3                              | 0.45             | 0.35  | 0.86           | 0.80  | -0.68         | -0.52 |
| <b>Energy</b>                                |             |      | <b>Financing</b>                  |      | <b>Top Wgt %</b>                 |       | <b>Size Comp</b>      |       | <b>Members</b> |     | <b>Liquidity</b>                 | <b>Mo</b>        |       | <b>Growth</b>  |       | <b>Value</b>  |       |
| E&P  | JP1ENP (i)  | XOP  | -23                               | -50  | 3.5%                             | 3.2%  | \$11                  | \$24  | 33             | 50  | 5-7                              | 1.58             | 0.81  | -0.98          | -0.82 | -0.03         | -0.33 |
| Energy                                       | JP1ENR (i)  | XLE  | -23                               | -23  | 4.8%                             | 22.6% | \$42                  | \$115 | 51             | 23  | 2-3                              | 0.27             | -0.10 | -0.94          | -0.93 | -0.45         | -0.22 |
| SMID Energy                                  | JP1SEN (i)  | PSCE | -33                               | -500 | 2.0%                             | 8.9%  | \$2                   | \$2.1 | 52             | 31  | 10-14                            | 1.28             | 1.62  | -0.73          | -0.84 | -0.24         | -0.32 |
| Energy Long 12m Momentum                     | JP1LME (i)  |      | -23                               | -    | 3.5%                             | -     | \$5                   | -     | 35             | -   | 20-28                            | 1.48             | -     | -0.81          | -     | -0.04         | -     |
| Energy Short 12m Momentum                    | JP1SME (i)  |      | -43                               | -    | 3.5%                             | -     | \$30                  | -     | 35             | -   | 19-26                            | 0.63             | -     | -0.83          | -     | -0.45         | -     |
| <b>Industrials (inclusive of Transports)</b> |             |      | <b>Financing</b>                  |      | <b>Top Wgt %</b>                 |       | <b>Size Comp</b>      |       | <b>Members</b> |     | <b>Liquidity</b>                 | <b>Mo</b>        |       | <b>Growth</b>  |       | <b>Value</b>  |       |
| Industrials                                  | JP1IND (i)  | XLI  | -23                               | -23  | 2.5%                             | 5.1%  | \$52                  | \$75  | 124            | 74  | 2-3                              | 0.01             | -0.17 | -0.40          | -0.47 | 0.07          | -0.06 |
| Cap Goods                                    | JP1CPG (i)  | XLI  | -23                               | -23  | 2.6%                             | 5.1%  | \$47                  | \$75  | 125            | 74  | 2-3                              | -0.05            | -0.17 | -0.35          | -0.47 | 0.02          | -0.06 |
| SMID Industrials                             | JP1SID (i)  | PSCI | -33                               | -500 | 1.1%                             | 3.1%  | \$3                   | \$3   | 123            | 96  | 11-16                            | 0.59             | 0.38  | -0.34          | -0.30 | 0.19          | 0.23  |
| Commercial & Prof Svcs                       | JP1CPST (i) |      | -23                               | -    | 4.5%                             | -     | \$14                  | -     | 47             | -   | 17-24                            | -0.09            | -     | -0.22          | -     | 0.08          | -     |
| <b>Materials &amp; Utilities</b>             |             |      | <b>Financing</b>                  |      | <b>Top Wgt %</b>                 |       | <b>Size Comp</b>      |       | <b>Members</b> |     | <b>Liquidity</b>                 | <b>Mo</b>        |       | <b>Growth</b>  |       | <b>Value</b>  |       |
| Chemicals                                    | JP1CHM (i)  | XLB  | -23                               | -23  | 6.5%                             | 15.7% | \$24                  | \$54  | 37             | 28  | 8-12                             | 0.39             | 0.04  | -0.91          | -0.80 | 0.31          | 0.25  |
| Utilities                                    | JP1UTE (i)  | XLU  | -23                               | -23  | 3.8%                             | 16.0% | \$30                  | \$53  | 54             | 28  | 5-7                              | -1.02            | -1.03 | -0.78          | -0.80 | 0.70          | 0.60  |

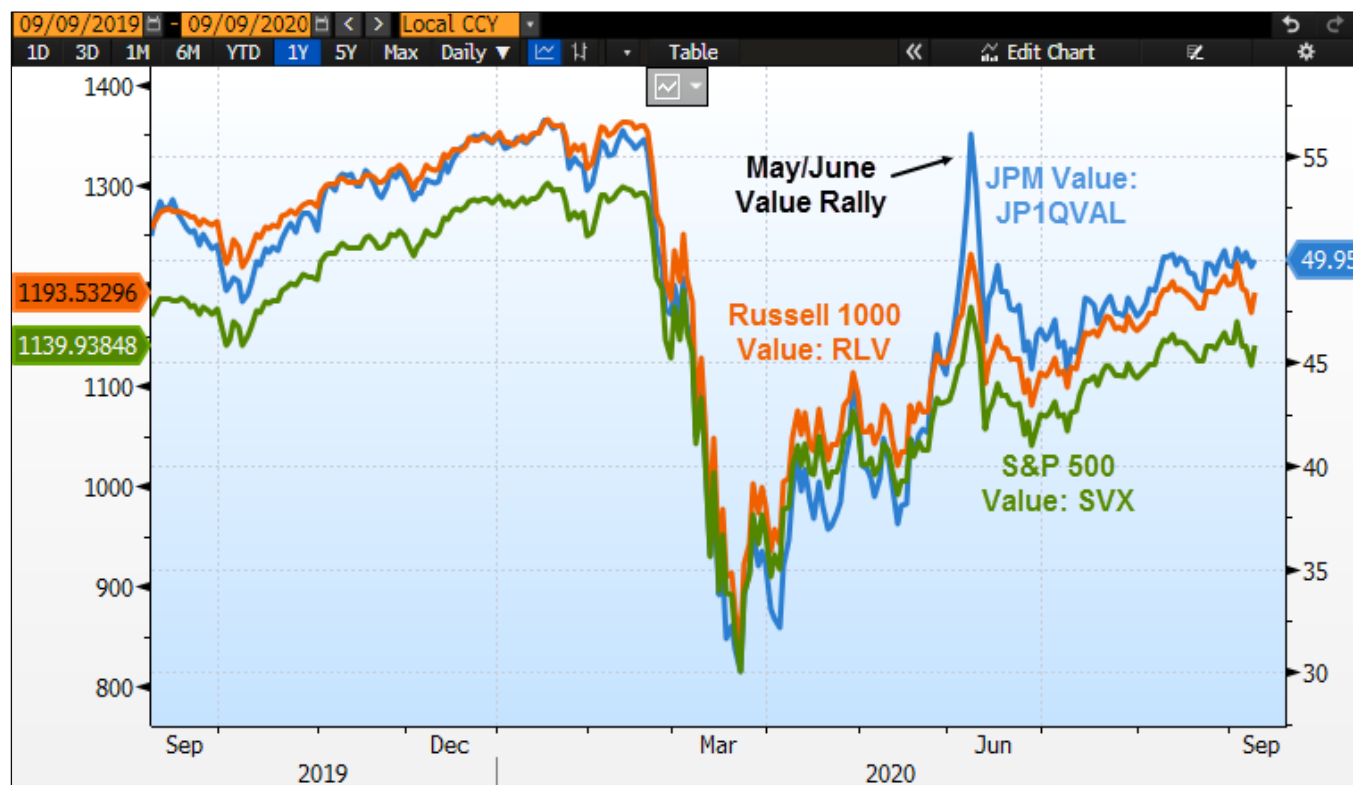
Note: Represented next to the iDex tickers, the letter (i) denotes a third party index. The rest are custom baskets which follow the same iDex methodology.

Source: J.P. Morgan Stock Loan, Thompson Reuters Definitive M&A Deal Targets, and Bloomberg as of 3/23/2021. OBFR was 7bps on this date.

|  |  |
|--|--|
| <b>Notes on iDex Index/Basket</b>  |  |
| JP1RTL includes Luxury/Apparel/Footwear (eg: RL, NKE) & excludes Internet (eg: AMZN), Auto & Drug (eg: RAD) Retail |  |
| No listed comp   |  |
| JP1CND has less exposure to AMZN & excludes TSLA   |  |
| JP1STP excludes Food & Staples Retail & has a lower PG wgt   |  |
| JP1HOU includes Construction Materials   |  |
| -  |  |
| No listed comp   |  |
| <b>Notes on iDex Index/Basket</b>  |  |
| -  |  |
| <b>Notes on iDex vs. ETF</b>   |  |
| -  |  |
| JP1CHC has less exposure to JNJ  |  |
| JP1MTC has less exposure to MDT & ABT  |  |
| -  |  |
| 12m Momentum sector indices that rebalance monthly   |  |
| <b>Notes on iDex vs. ETF</b>   |  |
| JP1TECH has less exposure to AAPL & MSFT   |  |
| JP1TMT includes comm svcs/media  |  |
| JP1NMED has less exposure to FB & Google   |  |
| -  |  |
| No listed comp   |  |
| -  |  |
| <b>Notes on iDex vs. ETF</b>   |  |
| JP1ENP excludes Refiners   |  |
| JP1ENR has less exposure to XOM & CVX  |  |
| -  |  |
| 12m Momentum sector indices that rebalance monthly   |  |
| <b>Notes on iDex vs. ETF</b>   |  |
| JP1IND excludes Airlines & has a lower BA weight   |  |
| JP1CPG is comprised only of Capital Goods  |  |
| -  |  |
| <b>Notes on iDex vs. ETF</b>   |  |
| JP1CHM is 100% Chemicals & has a lower LIN weight  |  |
| -  |  |

## Case Study: J.P. Morgan Value iDex (JP1QVAL)

- Common Factor ETFs and indices have low Factor sensitivity due to infrequent rebalances
- When market volatility is high, stocks that rank highest for Value can change quickly
- Monthly rebalances of the JPM iDex Value Index keep Factor sensitivity high and better capture factor moves

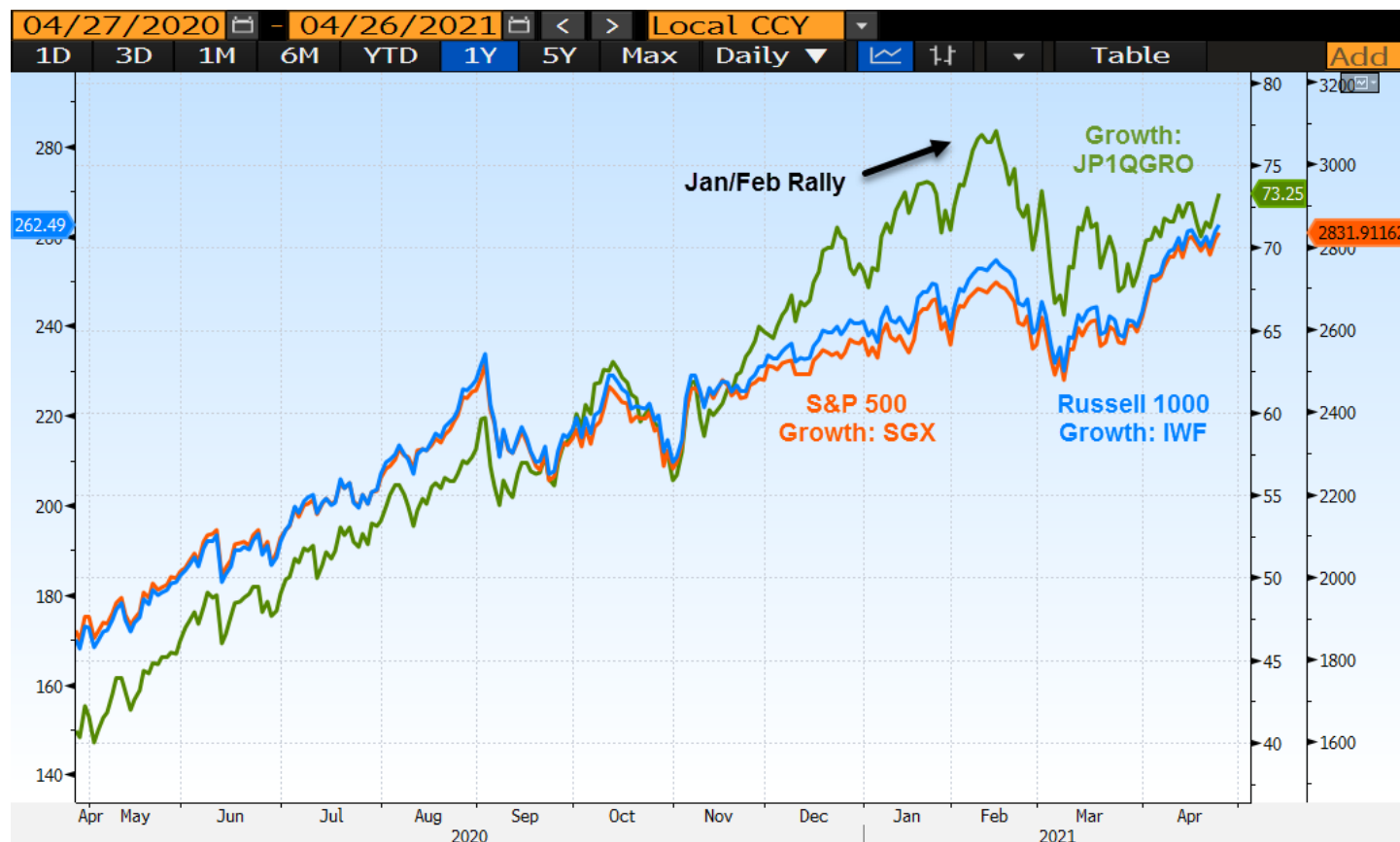


Source: Bloomberg

|  | RLV                | SVX           | JP1QVAL           |
|--|--------------------|---------------|-------------------|
| Summary                                    | Russell 1000 Value | S&P 500 Value | JPM iDex US Value |
| # of Names                                 | 837                | 390           | 100               |
| % of top name                              | 2.80%              | 3.4%          | 2.5%              |
| Weighting Type                             | Market Cap         | Market Cap    | Liquidity Cap     |
| Rebalance Summary                          | Yearly             | Quarterly     | Monthly           |
| Market Cap (\$B) (Wtg Avg)                 | 127bn              | 127.5bn       | 28.5bn            |
| Z-score to Factor*                         | 0.38               | 0.46          | 0.91              |
| 1yr Beta                                   | 1.01               | 1.01          | 1.15              |
| Return during Value rally (5/13/20-6/8/20) | 20.5%              | 18.9%         | 50.60%            |
| Time to Trade \$10mm (20% POV)             | 1-2mins            | 1-2mins       | 1-2mins           |

\*Source: Bloomberg PORT Analytics

## Case Study: J.P. Morgan Growth iDex (JP1QGRO)



|                                | JP1QGRO                 | IWF US Equity       | SGX Index      |
|--------------------------------|-------------------------|---------------------|----------------|
| Summary                        | Top Ranked Barra Growth | Russell 1000 Growth | S&P 500 Growth |
| # of names                     | 100                     | 464                 | 237            |
| % of top name                  | 2.8%                    | 10.5%               | 11.5%          |
| % of top 5 names               | 13.5%                   | 34.2%               | 37.7%          |
| Market Cap (\$B) (Wtd Avg)     | \$110                   | \$690               | \$795          |
| Weighting Type                 | Liquidity               | Market Cap          | Market Cap     |
| Rebalance Summary              | Monthly                 | Quarterly           | Quarterly      |
| Time to Trade \$10mm (20% POV) | 1-2 mins 23             | 1-2 mins            | 1-2 mins       |

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