REDW WEALTH MANAGEMENT
2021 YEAR IN REVIEW:
EMBRACING RESILIENCE

Daniel Yu, CFA, CFP®, AIF®
Robert Elzholz, CFP®, AIF®, CRPC®,
AAMS®

January 5, 2022

The information provided herein is for informational purposes only and should not be construed as financial, investment, tax, accounting or legal advice.
AGENDA

- Welcome
- A Look Back - Markets
- A Look Back - Economics
- A Look Ahead
- Questions
MAJOR THEMES

- COVID responses
- Economic Recovery
- China
- Inflation and Rates
- Government Spending
### Equities Around the Globe 2021

- Russell 3000 Level % Change
- MSCI EAFE Level % Change
- MSCI Emerging Markets Level % Change

![Equities Chart](chart)

Jan 03 2022, 12:59PM EST. Powered by **YCharts**
2021 – US EQUITIES

US Equities 2021

- Russell 1000 Level % Change
- Russell 2000 Level % Change
- CRSP US REIT Index Level % Change
2021 – US EQUITIES - SECTORS

US Equities 2021 - sectors
- Energy Select Sector SPDR® ETF Price % Change
- Technology Select Sector SPDR® ETF Price % Change
- Health Care Select Sector SPDR® ETF Price % Change
- Utilities Select Sector SPDR® ETF Price % Change
LOOK BACK - ECONOMICS
ECONOMIC FOUNDATION – UNEMPLOYMENT
ECONOMIC FOUNDATION – MANUFACTURING & SERVICES

ISM Mfg. and Services 3 Year

- US ISM Manufacturing PMI
- US ISM Services PMI

Jan 04 2022, 11:30AM EST. Powered by YCHARTS
ECONOMIC FOUNDATION – INFLATION

Inflation

- US Core Consumer Price Index YoY
- US Core PCE Price Index YoY
- US PCE Price Index YoY
2022 – A LOOK AHEAD
MAJOR THEMES 2022

- Economic Foundation
- Market Valuations
- Inflation and Rates
- Government Spending
- COVID Responses – An Evolution
  - Expansion of Therapies
  - Review of Past Policies
- China
ECONOMIC FOUNDATION - HOUSEHOLD

Consumer finances

Consumer balance sheet
3Q21, trillions of dollars outstanding, not seasonally adjusted

- Total assets: $162.7tn
- 3Q07 Peak: $85.1tn
- 1Q09 Low: $73.9tn

- Homes: 25%
- Other tangible: 5%
- Deposits: 9%
- Pension funds: 19%
- Other financial assets: 42%
- Total liabilities: $18.0tn

Household debt service ratio
Debt payments as % of disposable personal income, SA

- 1Q07: 16.6%
- 4Q07: 13.2%
- 4Q21**: 9.0%

Household net worth
Not seasonally adjusted, USD billions

- 3Q07: $70,726
- 4Q21**: $150,788

Source: FactSet, FHHL, J.P. Morgan Asset Management; (Top and bottom right) BEA.
Data include households and nonprofit organizations. SA = seasonally adjusted. *Revolving includes credit cards. Values may not sum to 100% due to rounding. **4Q21 figures for debt service ratio and household net worth are J.P. Morgan Asset Management estimates.


J.P.Morgan
ASSET MANAGEMENT
MARKET VALUATIONS

S&P 500 valuation measures

### S&P 500 Index: Forward P/E ratio

<table>
<thead>
<tr>
<th>Valuation measure</th>
<th>Description</th>
<th>Latest</th>
<th>25-year avg.</th>
<th>Std. dev.</th>
<th>Over-/Under-Valued</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/E</td>
<td>Forward P/E</td>
<td>21.16x</td>
<td>16.83x</td>
<td>1.30</td>
<td></td>
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<tr>
<td>CAPE</td>
<td>Shiller's P/E</td>
<td>40.0</td>
<td>27.08</td>
<td>2.05</td>
<td></td>
</tr>
<tr>
<td>Div. Yield</td>
<td>Dividend Yield</td>
<td>1.35%</td>
<td>2.00%</td>
<td>1.97</td>
<td></td>
</tr>
<tr>
<td>P/B</td>
<td>Price to book</td>
<td>4.41</td>
<td>3.06</td>
<td>1.06</td>
<td></td>
</tr>
<tr>
<td>P/CF</td>
<td>Price to cash flow</td>
<td>16.17</td>
<td>11.11</td>
<td>2.30</td>
<td></td>
</tr>
<tr>
<td>EV/Spread</td>
<td>EV minus Bao yield</td>
<td>1.35%</td>
<td>0.16%</td>
<td>0.60</td>
<td></td>
</tr>
</tbody>
</table>


Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months provided by I/B/E/S since December 1996, and J.P. Morgan Asset Management for December 31, 2021. Current and 10-month consensus earnings estimates are average $238. Average P/E and standard deviations are calculated using 25 years of I/B/E/S history. Shiller’s P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is calculated by I/B/E/S cash flow. EV minus Bao yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody’s Baa bond corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25-years for each measure. P/CF is a 20-year average close to cash flow availability.

MARKET VALUATIONS

Corporate profits and sources of total return

S&P 500 earnings per share
Index annual operating earnings

$275
$250
$225
$200
$175
$150
$125
$100
$75
$50
$25
$0

88 91 94 97 00 03 06 09 12 15 18 21

Consensus analyst estimates
Earnings recessions

Percent change in S&P 500, earnings and valuations
Year-to-date, indexed to 100

Share of return 2021
Earnings growth 34.5%
Multiple growth -7.6%
S&P 500 price return 26.9%

Source: FactSet, Compustat, Standard & Poor’s, J.P. Morgan Asset Management.
Historical EPS levels are based on annual operating earnings per share. Earnings estimates are based on estimates from Standard & Poor's and FactSet Market Analysts. Past performance is not indicative of future returns.

GTM to the Markets—U.S. Data are as of December 31, 2021.

J.P.Morgan
ASSET MANAGEMENT
INFLATION – EXPECT IT

M2 and US GDP Growth since 12/31/16

- US M2 Money Supply % Change
- US Monthly GDP % Change

Jan 03 2022, 1:57PM EST. Powered by YCharts
DIRECTION OF RATES?

The Fed and interest rates

Federal funds rate expectations
FOMC and market expectations for the federal funds rate

| FOMC December 2021 forecasts |
|-------------------------------|---|---|---|---|---|
| Percent                       | 2021 | 2022 | 2023 | 2024 | Long run |
| Change in real GDP, 4Q to 4Q  | 5.5  | 4.0  | 2.2  | 2.0  | 1.8      |
| Unemployment rate, 4Q         | 4.3  | 3.5  | 3.5  | 3.5  | 4.0      |
| Headline PCE inflation, 4Q to 4Q | 5.3 | 2.6  | 2.3  | 2.1  | 2.0      |


Market expectations are based off of the HED-OIS Overnight Index Forward design rates. *Long run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.

GOVERNMENT SPENDING – MODERATION

Federal finances

The 2022 federal budget
CBO Baseline forecast, USD billions

- Total spending: $5.5tn
  - Other: $987bn (17%)
  - Net int.: $308bn (6%)
  - Non-defense disc.: $168bn (3%) (10%)
  - Defense: $749bn (14%)
  - Social Security: $1.1trn (22%)
  - Medicare & Medicaid: $1.45tn (26%)

- Borrowing: $1.15tn (21%)
  - Other: $386bn (6%)
  - Social insurance: $921bn (25%)
  - Corporate: $317bn (6%)

Total government spending: $5.7tn
Total sources of financing: $5.0tn

Federal budget surplus/deficit
% of GDP, 1990 – 2031, CBO Baseline Forecast

- 2021: -12.4%
- 2022: -4.7%
- 2023: -4.5%

Federal net debt (accumulated deficits, and of fiscal year)
% of GDP, 1990 – 2031, CBO Baseline Forecast

- 2021: 100.4%
- 2031: 108.4%

Sources: CBO, J.P. Morgan Asset Management. (Top and bottom right) BEA, Treasury Department. Estimates are based on the Congressional Budget Office (CBO) July 2020 update to the Budget and Economic Outlook, except for 2021 estimates of the federal deficit and net debt levels. These estimates and the details on the breakdown of spending, excluding net interest, are J.P. Morgan Asset Management estimates. Other spending includes, but is not limited to, health insurance outlays, income security and federal civil and military retirement. Forecasts are shown for fiscal years. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based on current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur, given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements. Actual events, results or future performance may differ materially from those reflected in contemplation.

COVID-19: Cases, fatalities and immunity

Change in confirmed cases and fatalities in the U.S.
7-day moving average

Progress toward immunity
Percentage of population, end of month

Source: Centers for Disease Control and Prevention, Johns Hopkins CSSE, Our World in Data, J.P. Morgan Asset Management

*Estimated the total population that has received at least one vaccine dose.
**Est. Infected only refers to the number of people who may have been infected by COVID-19 by using the CDC’s estimate that 1 in 42 COVID-19 infections were reported.
***Est. Infected & vaccinated reflects those that have been both infected and vaccinated, assuming those infected equally likely to be vaccinated as those not infected. Unless otherwise noted, data are as of December 31, 2021.
COVID 19 – CHANGING ARSENAL

- Growing list of treatments
- Changing profile of severity
- Hybrid work environment
CHINA

- Views on regulatory environment
- Growing middle class
- Future demographic issues
STRATEGY – LONGER VIEWS

Time, diversification and the volatility of returns

Range of stock, bond and blended total returns
Annual total returns, 1950 - 2021

<table>
<thead>
<tr>
<th></th>
<th>Annual avg. total return</th>
<th>Growth of $100,000 over 20 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stocks</td>
<td>11.6%</td>
<td>$880,148</td>
</tr>
<tr>
<td>Bonds</td>
<td>5.8%</td>
<td>$308,786</td>
</tr>
<tr>
<td>50/50 portfolio</td>
<td>9.0%</td>
<td>$562,115</td>
</tr>
</tbody>
</table>


Returns shown are based on calendar year returns from 1950 to 2021. Stocks represent the S&P 500 Composite and Bonds represent Strategies/BBG. Data is for periods from 1990 to 2010 and Bloomberg Aggregate thereafter. Growth of $1,000,000 is based on annual average total returns from 1990 to 2021.

STRATEGY – DIVERSIFICATION

Diversification and the average investor

Portfolio returns: Equities vs. equity and fixed income blend

20-year annualized returns by asset class (2001 – 2020)

Source: Bloomberg, FactSet, Standard & Poor’s, J.P. Morgan Asset Management; (Bottom) Dalbar Inc., MSCI, MSCI, Russell.

Indices used were as follows: REITs MSCI US REIT Index, Small Cap Russell 2000, EM Equity MSCI EM, DM Equity MSCI EM, REITs MSCI, High Yield Bloomberg Global HY Index, Bonds: Bloomberg U.S. Aggregate Index, Homes: median sale price of existing single-family homes, Cash: Bloomberg 13th Treasury, Inflation: CPI, 10/20/22, A balanced portfolio with 60% invested in U.S. stocks, 20% in bonds and 20% invested in high-quality U.S. fixed income, represented by the Bloomberg U.S. Aggregate Index. The portfolio is rebalanced annually. Average asset allocation investor return is based on an analysis by Dalbar Inc., which utilizes the not of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior.

Guide to the Markets – U.S. Data as of December 20, 2021
CONTACT US!

Please don’t hesitate to reach out if you have questions.

Robert Elzholz, CFP®, AIF®, CRPC®, AAMS®
Robert.Elzholz@redw.com
602-730-3624

Daniel Yu, CFA, CFP®, AIF®
dyu@redw.com
505-998-3230