Review of Q2 2021 Economy and Current Capital Markets

August 24, 2021

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Executive Summary

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- Equity markets appreciated 7.4% during Q2 2020 (ACWI Index) and have modestly appreciated further through the end of July.
  - The pace of global vaccinations accelerated rapidly with most economies showing improving momentum as re-openings increase and progress towards normalization continues.
  - US markets have significantly outperformed international markets YTD in USD terms since Q1 (S&P 500 up 11.0% vs. 3.7% for Intl stocks given: a) extremely strong and higher-than expected US corporate earnings growth and b) sharp selloffs in July for emerging markets indexes following China regulatory actions.
- Corporate earnings continue to materially exceed expectations (especially in the US).
  - 88% of S&P 500 companies beat Q2 earnings forecast (highest on record).
    - S&P 500 earnings grew 86% YOY in Q2 , with average earnings beats in the 15%-20% range (highest on record).
    - For 2021, S&P 500 earnings are now forecast at $198 / share vs. $165 / share roughly nine months ago. S&P 500 earnings have eclipsed pre-pandemic levels. Earnings across international markets are also eclipsing initial forecasts.
      - As such, analysts have been consistently upgrading earnings forecasts for 2021 and 2022 across most markets.
- However, equity valuations remain elevated relative to historical averages.
  - Equity market valuations are quite elevated based on NTM and 2022 earnings. Based on NTM earnings, equity markets are trading at 15%-30% higher valuations vs. historical NTM levels.
    - *Relative* to Treasuries however, valuations based on 2022 earnings appear reasonable.
  - Markets are already pricing in strong earnings growth in 2021 and 2022.
    - However, 2022 earnings forecasts may prove more challenging to exceed. Near-term market risks include **a**) faster than anticipated inflation which could lead to faster-than-expected interest rate hikes or lower-than-expected profit margins, **b)** potential tax policy changes, **c**) geopolitical risks, and **d)** negative economic impact stemming from a widespread surge in the Delta or other COVID variants.

We are incorporating these views into portfolio positioning by:

- Increased allocations to alternatives with less correlation to public equities and credit
- Increasing allocations to private equity and other private strategies

Strategic Asset Allocation View (7-years)

- Given elevated equity valuations globally, <u>we continue to expect the low-end of mid-single digit nominal pre-tax equity returns (5.0%-6.0%) annually</u> over the next seven years.
  - As we flagged entering 2021, the early year(s) in the forecast period may see outsized returns given the highly positive global re-opening momentum coupled with ample fiscal stimulus and easy monetary policy.
  - However, we anticipate increasing bouts of volatility over the next twelve months (surge in headline inflation, COVID variants, tax policy uncertainty and slowdowns from stimulus-induced peak growth levels).
    - *We recommend investors maintain some dry powder and opportunistically add to risk assets at lower price levels.*
- <u>High-yield and leveraged loan credit spreads are now trading at pre-pandemic levels with absolute yields near historic lows</u>
- Relative to public markets, *we forecast significantly higher returns for risk assets across private market strategies* (i.e., private equity, stressed credit and real estate funds).

ASSET CLASS: STRATEGIC OUTLOOK (7-YEAR TIMEFRAME)	Negative ----- Neutral ----- Positive	Average Annual Return
EQUITIES		
US Large Cap (S&P 500)		Mid Single-Digit
US Small Cap (S&P 600)		
MSCI Intl. Developed Markets		
MSCI Emerging Markets		
FIXED INCOME		
US Treasury		Low Single-Digit
US Corp Investment Grade		
US Corp High Yield		Low-Mid Single-Digit
US Corp Levered Loans		
ALTERNATIVES, PRIVATE EQUITY, & REAL ESTATE		
Real Estate Asset Level (Unlevered)		Upper Mid-Single-Digit
Hedge Funds		
Private Equity (Corp. + RE)		High-SD to Mid-Teens
Private Credit		

Tactical Allocation View

- **From a shorter-term standpoint (next 6-12 months),** we believe that equity markets' direction will primarily be driven by : **a)** corporate earnings trajectory vs. expectations, **b**) inflation developments and rhetoric surrounding potential central bank actions, **c**) impact from spread of Delta variant or other COVID mutations, and **d)** potential tax or regulatory policy changes.
- **Equity market valuations have become elevated by most measures with several risks mounting (especially in the US).**
  - *Rapidly accelerating headline inflation,* driven by large increases in commodity prices and shortages of key materials, may spook markets going forward. While central banks currently view this surge in inflation as transitory, investor views may differ especially if inflation figures significantly exceed expectations during the back half of 2021 and into 2022.
    - Sustained higher inflation may affect corporate earnings (rising costs that may not be able to be fully passed on) and may lead to a faster pace of interest rate hikes than currently forecast by central banks.
  - Several regions within the world are dealing with a resurgence in COVID cases (driven by the Delta variant) which may delay full economic re-opening. Additionally, vaccination levels remain low in many emerging markets which increases the potential for further virus mutations and variants to develop.
- **Public fixed income yields and spreads are at record lows, with unattractive risk / reward.**
  - Elevated duration leads to high interest-rate risk for government bonds. Corporate bond spreads are now at pre-pandemic levels despite still uncertain credit fundamentals for Covid-affected issuers.
    - While slight near-term further spread compression may occur given Fed support and liquidity, risk / reward is increasingly asymmetric towards the downside.
- **We view private market strategies as more compelling relative values versus public markets.**
  - Better potential for lower entry valuations vs. public markets via proprietary-sourced deals.
  - Broader value creation opportunities via operational improvements, platform M&A and a wider range of exit options.
  - Mid-teens returns are achievable across several different middle-market private-equity strategies.
  - Select multifamily, office and self-storage private equity real estate funds appear highly interesting.

Economic Activity

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- <u>Major world economies largely experienced sharply accelerating recoveries during Q2.</u>
  - US Real GDP increased at a 6.5% annualized rate Q/Q. Eurozone GDP sharply accelerated at 2% Q/Q as vaccination rollouts progressed swiftly and economies reopened. China's GDP grew 7.9% YOY (but 1.3% Q/Q) as its economic recovery continued at stabilizing levels. However, Japan is expected to have much slower GDP growth at 0.5% Q/Q due to increasing emergency COVID measures.
    - The IMF is forecasting Global Real GDP growth of 6% in 2021 and 4.9% in 2022. Forecasts have been raised for developed markets where vaccination levels are higher and have been cut across certain emerging markets.
  - Global PMI services indexes are sharply accelerating as economies reopen and consumers are spending on previously unavailable services and experiences.
  - Significant consumer savings has led to pent up demand. Retail sales have returned to sharply-positive growth YOY across all major economies.
- <u>However, inflation is increasingly rapidly.</u>
  - Across many geographies, sharply accelerating consumer demand coupled with supply-chain disruption has led to spikes in headline inflation.
    - US CPI increased by 0.9% MOM and 5.4% YOY in June (highest level in 13 years).
  - These spikes are seen in underlying inputs (copper, steel), finished goods, housing prices and increasingly in wages (especially for service industry workers).
    - Key inputs such as global semiconductors remain in severe shortage.
- <u>Whether inflation proves transitory remains a key question and is impossible to know.</u>
  - Global central banks are viewing inflation as transitory and point out that headline figures are distorted by a) base-year-effects and b) sharp one-off spikes in items such as used cars or travel-related costs (which only account for a small percentage of the inflation basket).
  - However, in the US, rental prices are accelerating swiftly (lagging home sale prices), and wages especially in the service industry are also exhibiting sharp increases.
    - US employers are desperately seeking workers across the service industry. Unfilled job openings rose to 9.5 million in June, yet there remain 6.8 million fewer people employed relative to pre-pandemic levels.
  - For now, inflation expectations remain well anchored with US five-and ten-year inflation rates forecast between 2.0% to 2.5%.

Vaccinations and the Delta Variant

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- <u>Significant differences in vaccination rates among developed and emerging markets.</u>
  - Vaccination rates are above 50% in the US, UK and most of continental Europe. However, rates are lower in developed Asia and very low in certain emerging markets.
  - The Delta variant (originally seen in India before spreading to the UK and rest of the world) has proved to be far more contagious.
  - COVID cases are increasing sharply in the US (60K 7-day moving average currently vs. 10K one month ago) which is leading to a rise in hospitalizations.
    - However, the vast majority of hospitalizations and / or deaths are among the non-vaccinated population.
    - The UK's experience with a surge in Delta cases provides some hope for other highly vaccinated nations where cases initially surged but the level of hospitalizations and deaths was far lower than during previous COVID waves.
  - Fears are increasing that Delta variant surges may lead to a pause in economic activity (especially for sectors such as travel, leisure and dining that are beginning to benefit from a rapid acceleration in demand).
    - Additionally, with large portions of the world's population still unvaccinated, health officials fear that new variants emerge for which existing vaccines provide less protection.
- <u>The Delta variant surge has likely contributed to a de-coupling of risk assets vs. safe government bond yields.</u>
  - Global equity markets appreciated 7.3% from April through July (with the US appreciating 10.7%). Credit spreads continued to contract to levels below those seen pre-pandemic.
  - Inflation picked up significantly as one might expect with surging economic activity and demand coupled with supply chain bottlenecks.
  - However, in contrasting fashion,10-year bond yields declined significantly. US 10-year Treasury yields declined from 1.75% in March to 1.22% by July-end.
    - Bond markets seem more concerned that the Delta variant may lead to slowdowns in economic growth, from current peak growth levels.
    - These lower yields have created a positive backdrop for equities (low yields amidst sharply improving earnings).
  - The question remains – which narrative is correct – the equity market or the government bond market?
    - Our base case forecast is that the Delta variant will remain relatively contained within the US and that higher levels of inflation will remain throughout 2021. As such, we believe Treasury yields will rise over the remainder of 2021.

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Capital Markets Review

Equity Markets - Performance

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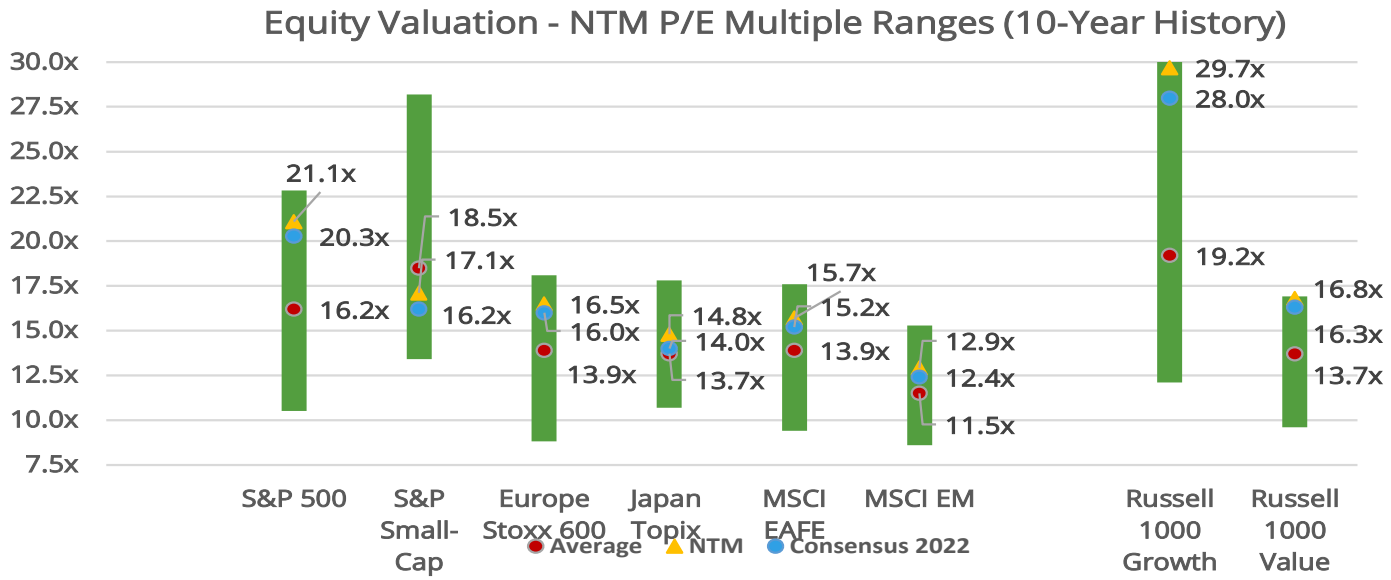
- Global equity markets appreciated 7.3% during Q2 (with continued modest appreciation in July).
  - Since the beginning of the year (in USD terms), US stocks (+17.7%) have outperformed international stocks (+7.4%) driven by a) sharply better than anticipated US corporate earnings, b) higher US fiscal stimulus measures adopted post New Year, c) earlier pace of population vaccination, and d) unanticipated hostile regulatory actions taken by the Chinese government against certain domestic Chinese industries.
  - Global growth stocks outperformed global value stocks from April through July (11.6% vs. 4.8%). This follows a period from early November 2020 through March 2021 where cyclical value stocks outperformed growth stocks by 15% as interest rates climbed swiftly and markets embraced stocks more levered to economic and COVID recovery.
- Over our 7-year forecast period, we continue to believe that stocks of high-quality companies will continue to outperform given their better business models, superior earnings growth and strong returns on capital.
  - However, over the next 12-18 months, we expect periods of alternating outperformance between growth / quality stocks vs. value stocks as the economic recovery continues and the trajectory of Delta / other COVID variants becomes clearer.
  - We advocate a barbell approach in terms of equity positioning with exposure to both high-quality compounders and technology growth stocks as well as cyclical stocks in economically-sensitive sectors (financials, energy, industrials, materials).

Equity Indices - (As of 07/31/2021)

	Cumulative Perf.			Total Returns (%) - USD *				
	YTD 2021	2/19/20 - 3/23/20	3/23/20 - Present	June Qtr	Annualized Returns 1Y	3Y	5Y	7Y
US Large Cap (S&P 500)	17.7%	-33.8%	99.5%	8.4%	35.8%	17.5%	16.7%	14.0%
US Small Cap (Russell 2000)	13.3%	-40.7%	129.6%	4.3%	52.0%	11.6%	14.2%	11.8%
MSCI EAFE	9.7%	-32.7%	77.0%	5.2%	30.3%	7.7%	9.3%	5.4%
MSCI Emerging Markets	0.2%	-31.2%	73.9%	5.0%	20.6%	7.9%	10.6%	5.1%
MSCI ACWI	13.1%	-33.6%	92.8%	7.4%	33.2%	13.7%	13.8%	10.0%
Russell 1000 Growth	16.7%	-31.4%	115.9%	11.9%	36.7%	25.3%	23.3%	19.4%
Russell 1000 Value	18.0%	-38.0%	93.9%	5.2%	39.3%	11.2%	11.4%	9.8%

Equity Markets - Valuation

- Current equity valuations are high relative to historical averages
  - Multiples based upon NTM and 2022 earnings appear 15%-30% and 10%-25% higher than historical averages, respectively.
    - Investors are clearly pricing in continued global corporate earnings recovery coupled with the likely maintenance of low interest rates (10-year government bonds as proxies).
      - Should either earnings growth rates prove lower vs. expectations or interest rates begin to rise (if investors view higher inflation as non-transitory), equity markets may experience 10%-15% corrections.
- With the recent decline in interest rates rising, equity market valuations still appear fair relative to bonds.
  - The S&P 500 presently trades at 20x consensus 2022 earnings. If interest rates remain near present levels, this multiple may be justified vs. the 16x historical average.
    - These multiples are based upon a 350bps spread (average over the last 20 years) between S&P 500 earnings yield vs. 10-Year Treasury yields. US Ten-year treasury yields reached 1.75% in March 2021 before declining to 1.22% by July month end.



Fixed Income Markets - Performance

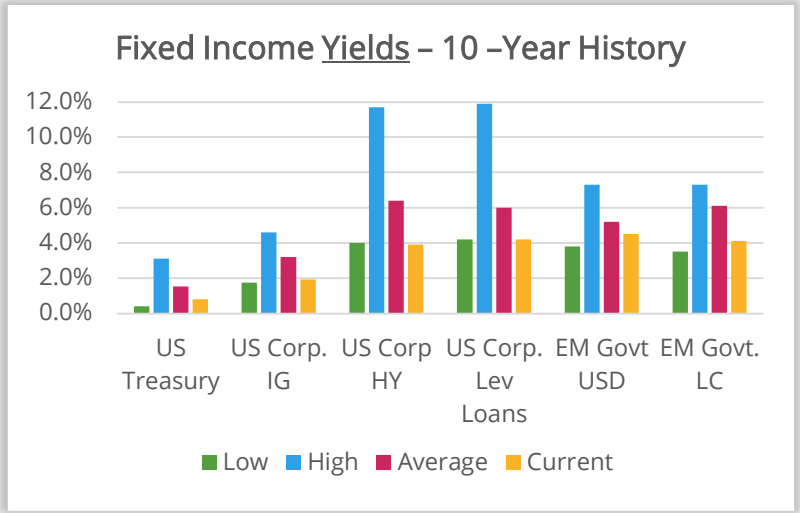
- Fixed income markets moved in tandem in Q2 with both "safe" government bonds and riskier corporate credit appreciating.
  - US Treasuries and Investment Grade bonds returned 1.8% and 3.6% respectively during Q2. The positive returns were largely driven by declines in interest rates due to these bonds' longer durations.
  - Riskier credit appreciated modestly during the quarter (+2.7% and +1.5% for high-yield and leveraged loans).
    - Underlying corporate earnings have been significantly better than expected driven by better-than-expected demand and aggressive cost management, which has led to further tightening in credit spreads.
  - EM hard currency (USD) bonds appreciated by 4.1% during the quarter, largely offsetting Q1's decline.
  - EM local currency bonds appreciated 3.5% in Q2 due largely due to EM currency appreciation as COVID counts stabilized and the pace of vaccinations began to increase in many EM nations.

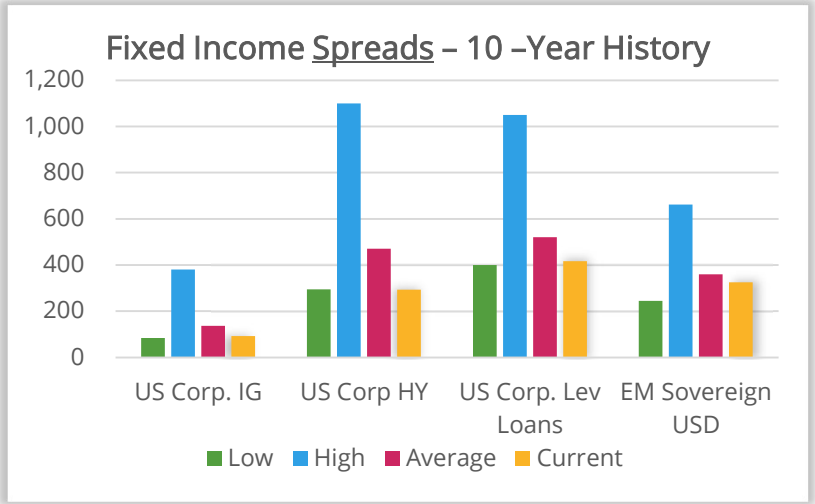
Fixed Income Indices - Characteristics and Performance in USD (as of 07/31/2021)

	Cum. Performance (%)				Annualized Returns				
	YTD 2021	2/19/20 3/23/20	3/23/20 -Present	June Qtr.	1Y	3Y	5Y	7Y	Duration (yrs)
US Treasury	-1.3	5.4	-1.5	1.8	-3.0	5.3	2.4	3.0	7.1
US Corp. IG	0.1	-12.3	14.1	3.6	1.5	8.1	4.9	4.9	8.8
US Corp HY	4.0	-20.8	27.6	2.7	10.8	7.2	7.0	5.7	3.9
US Corp Lev. Loans	3.3	-20.6	22.5	1.5	9.6	4.0	4.7	3.9	NA
EM Sovereign USD	-0.3	-20.7	21.2	4.1	4.5	6.0	4.6	4.9	8.5
EM Sovereign LC	-3.7	-18.0	17.1	3.5	3.4	2.5	2.3	0.0	6.7
Barclays US Aggregate	-0.5	-0.9	3.7	1.9	-0.6	5.8	3.1	3.5	6.6

Fixed Income Markets - Valuation

- Absolute yields are still well lower than historical averages across both government debt and corporate credit. Given high duration, the risks from movements in interest rates are tilted to the downside.
- Corporate spreads (investment grade and high yield) are at-or-near record tight levels.
  - IG and HY spreads have both compressed to below pre-pandemic levels.
  - Abundant liquidity and generally improving economic data may buoy sentiment for investment-grade and high-yield bonds, leading to further modest spread compression in the near-term.
    - However, when looking at current yields combined with spreads, risk / reward is tilted towards the downside for publicly traded corporate credit (investment grade, high yield and leveraged loans) over a mid-term time-frame.
- We prefer credit exposure through *private* stressed credit and direct lending strategies.
  - These strategies can invest in smaller off-the-run restructurings and rescue financings with higher yields, albeit the opportunity set is more limited in the current liquidity environment.
  - However, we believe that these funds will be well placed to make investments 18-24 months from now when several companies will need to permanently fix their balance sheets after taking on significant debt to ensure liquidity during the peak of the COVID crisis.





Alternatives and Currencies

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- Hedge funds had a decent quarter with several major sub-strategies posting positive returns.
  - The HFRX Global Hedge Fund Index was up 2.4% during Q2 with modest declines post quarter.
    - Long-short equity strategies (+5.1%) were the star-performer during the quarter with most other sub-strategies returning 1%-2%.
- Private real estate (as measured by the NCREIF Index) increased by 5.4% during Q2.
  - Performance driven by slight compression in cap-rates coupled with sharply improving underlying NOI fundamentals across several property types.
- In Q2, both private equity deal activity and fund raising increased sequentially with global private equity fundraising hitting an all-time high at nearly $300bln.
  - Underlying profit fundamentals continued to improve across PE portfolio companies with most materially exceeding budget plans.
  - Valuation markups also increased in Q2 for PE portfolio companies driven by improving underlying EBITDA and rising public and private comparable multiples.
  - US buyout and venture capital exits reached quarterly highs during Q2.
- The USD modestly weakened in Q2 as vaccination progress across the rest of world started to catch up to US vaccinations.
  - The Euro modestly strengthened vs. the USD during Q2 and has remained flattish post quarter.
  - The Canadian Dollar modestly appreciated vs. the USD in Q2 but has weakened since then. Intra-quarter, the CAD strengthened to near 1.20 in early June before weakening to 1.25 by end of July.
  - EM currencies generally appreciated in Q2 (especially those outside of Asia).

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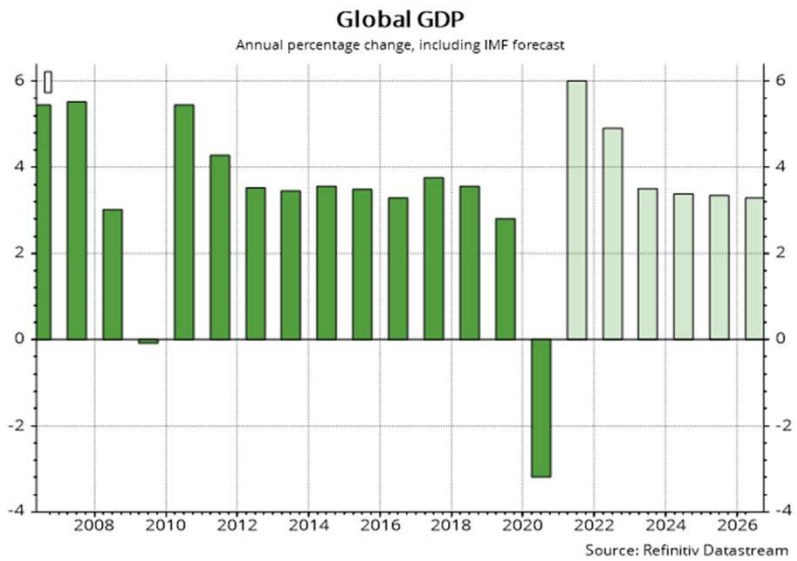
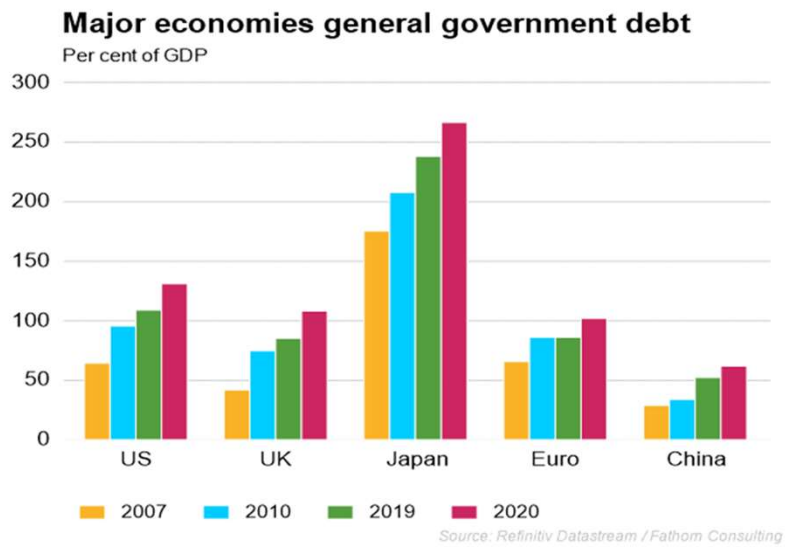
Economic Review

Global Real GDP Growth

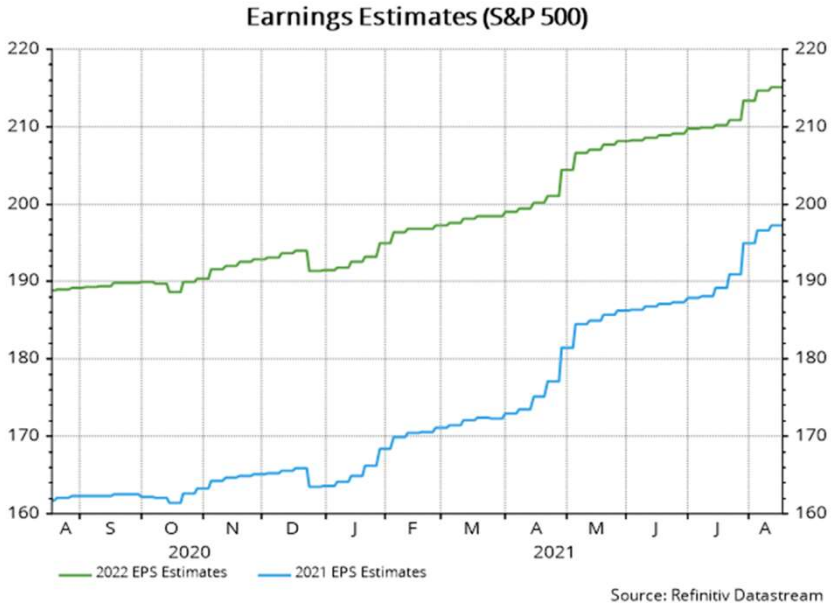
- The IMF is forecasting synchronized global recovery (6.0% GDP growth forecast for 2021 and 4.9% for 2022). The IMF has revised its 2021 forecasts upwards for developing markets while reducing its 2021 forecasts for developing markets.
  - Advanced economies are forecast to grow at 5.6% and 4.4% GDP growth rates for 2021 and 2022 while emerging economies are forecast to grow at 6.3% and 5.2% and respectively during those years.
  - However, the rapid rise in Delta Variant cases in certain developed nations may temper the expected growth in H2 2021.
- Governments have continued to rollout new stimulus programs to help economies recover from the pandemic.
  - These programs are causing government deficits to spike to historically high levels across various regions.
  - While debt service is currently manageable given ultra-low interest rates, the ability to reduce deficits post-pandemic and the long-term effects of such elevated debt levels remains unknown.

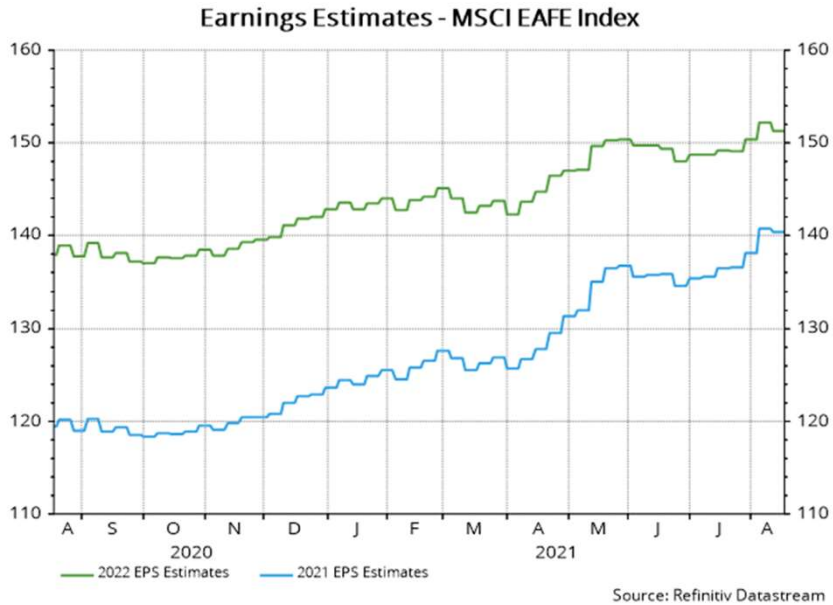




Global Corporate Profits

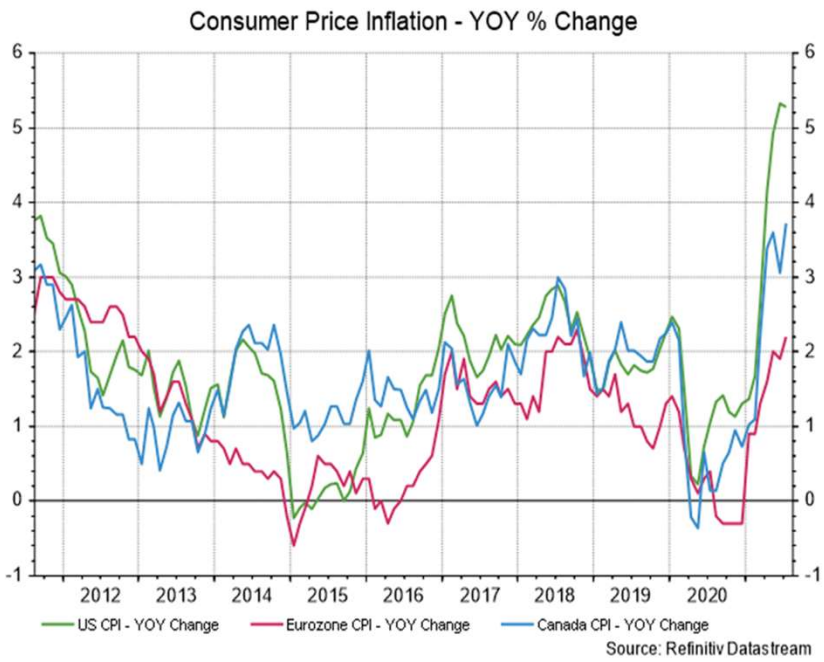
- Economic data and corporate earnings have been consistently surprising to the upside.
  - Analysts have been playing "catch-up" and sharply raising earnings' forecasts for both 2021 and 2022.
  - Both S&P 500 and MSCI EAFE earnings forecasts for 2021 now exceed pre-pandemic 2020 earnings forecasts. Previously, analysts were forecasting a return to these levels by 2022.
- The competing dynamic between large-scale global pent-up demand vs. potential emerging inflation pressures will determine whether 2022 earnings forecasts are achievable.
  - The combination of significant pent-up consumer demand, massive stimulus, business inventory restocking, resumption in world trade growth and stringent cost controls augur well for continued strong economic and corporate earnings growth.
  - However, producer and supply-chain costs have risen rapidly over the past six to nine months. Corporate profits may come under pressure if these inflationary costs cannot be passed on (without demand reduction).

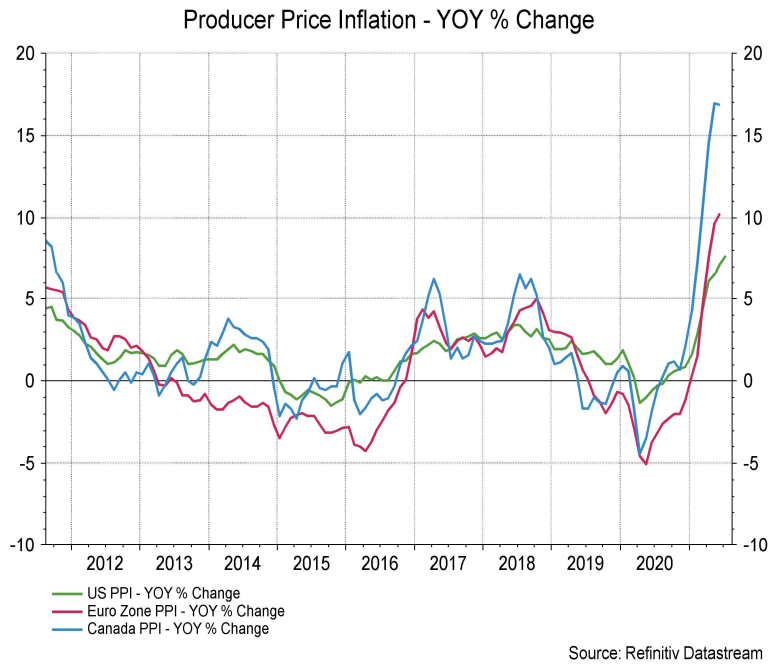




Inflation

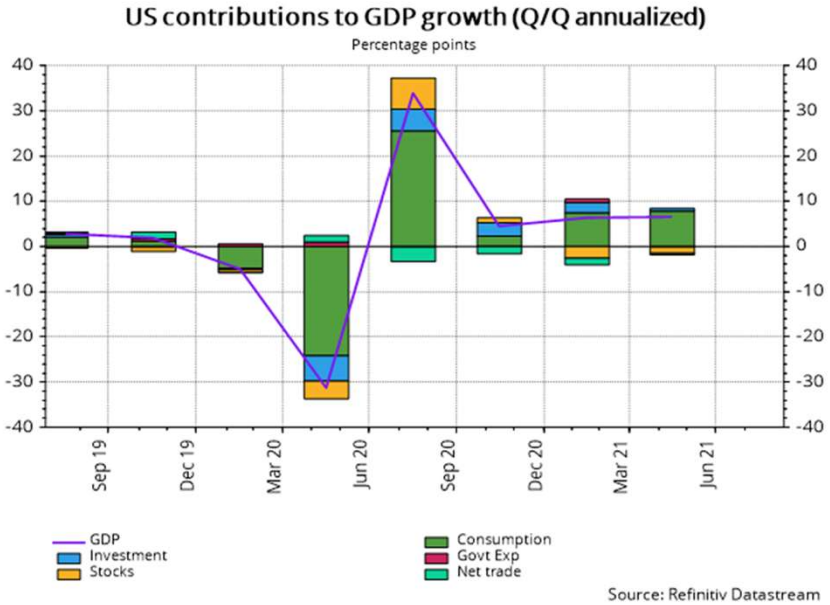
- Consumer and Producer inflation has risen sharply thus far in 2021.
  - Thus far, producer inflation has increased at a faster pace in 2021 driven by rapid advances in commodity prices and lagged effects throughout the supply chain.
  - It remains to be seen whether producers increasingly pass on these costs to consumers over the back half of 2021 and into 2022.
    - On the positive side, historically high consumer balance sheet levels coupled with significant consumer pent-up demand may lead to higher willingness on consumers to absorb cost pass throughs.
    - However, if the pass throughs breach critical levels, it may impact consumers' mid-term inflation expectations, which can lead to further self-fulfilling increases in inflation.
- A key debate remains as to whether this inflation is transitory or more permanent in nature.

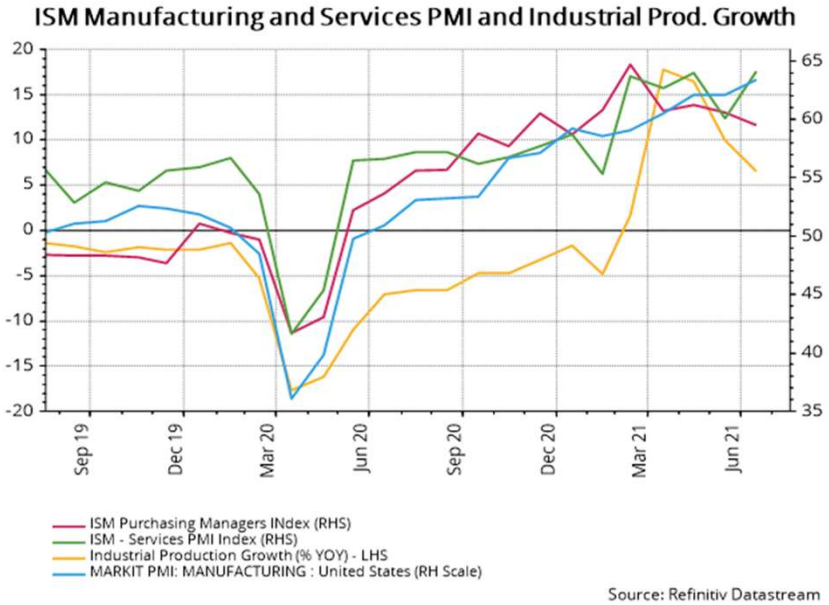




United States

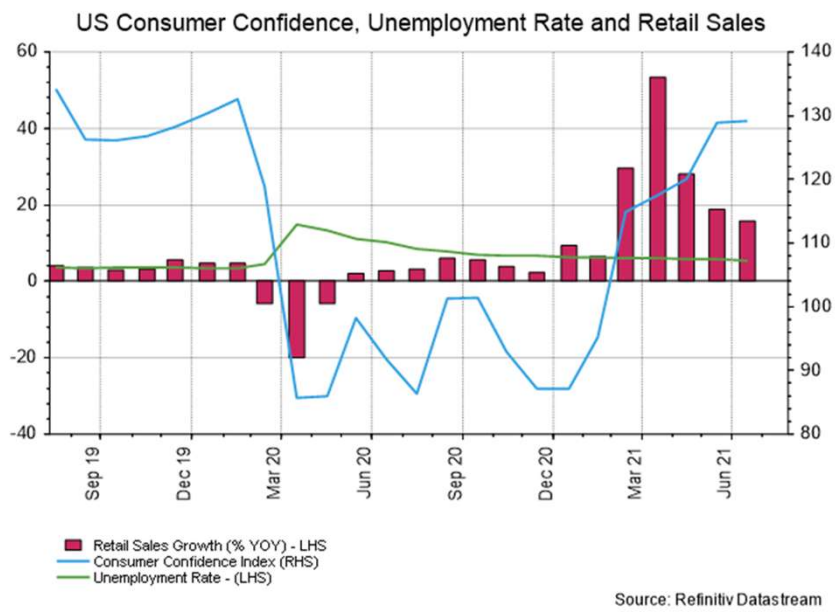
- Real GDP grew by 6.5% Q/Q on an annualized basis in Q2 2021, with economists projecting 6.5% GDP growth in 2021 followed by a still healthy 3.7% growth in 2022.
  - Q2 GDP figures missed estimates of 8% Q/Q annualized growth. However, consumer spending was robust and accounted for over 100% of the GDP growth (8% attribution) with a drawdown in inventories shaving roughly 1% of the total GDP growth.
- Leading indicators such as Manufacturing and Services PMI Indexes have remained healthy.
  - However, there has been an uptick in service PMIs as consumers are consistently shifting spending to deferred services that were unavailable during the pandemic.
  - Until the recent surge in US Delta variant cases, there were clears signs of demand acceleration across several hard-hit COVID sectors including travel and lodging (based on near-term and future booking trends).
  - Manufacturing PMIs have retreated from earlier high levels as supply constraints have remained (semiconductors) or in some cases worsened.

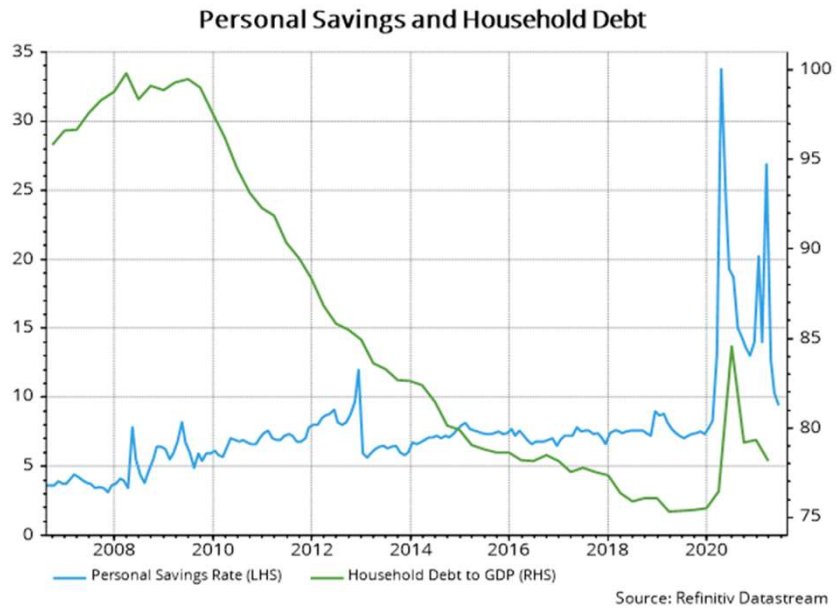




United States (Cont.)

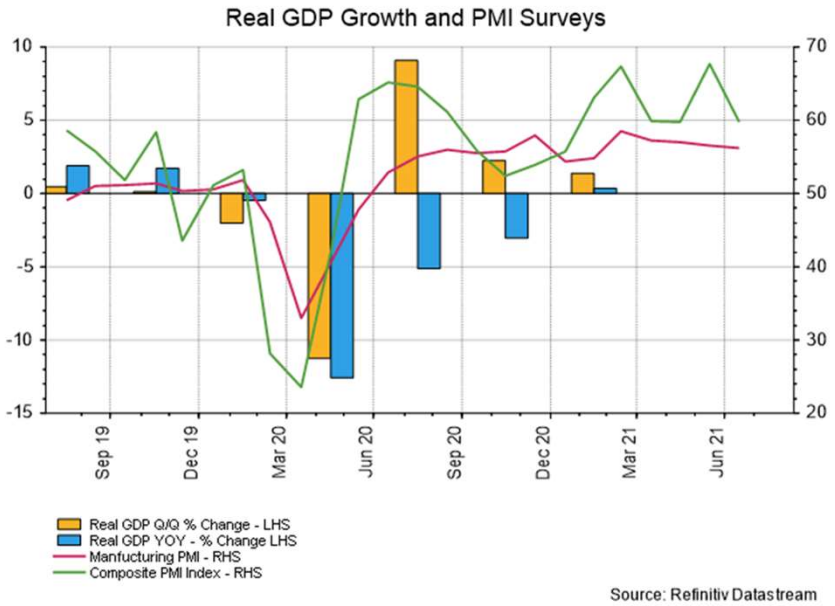
- <u>US consumption remained strong throughout Q2 with healthy retail sales growth and continued declines in unemployment rates.</u>
  - Consumer balance sheets are at healthy levels following significant stimulus in 2020 and early 2021.
    - These elevated personal savings rates are driving significant gains in consumption as evidenced by record retail sales growth and surging big-ticket expenditures (housing and auto sales). Retail sales are 15% higher than pre-pandemic levels.
  - The unemployment rate declined to 5.4% in July vs. 6.7% at the beginning of 2021.
    - Net job growth of 943,000 was strong in July. However, overall number of unemployed are still 3 million higher as of July 2021 vs. pre-pandemic levels.
    - Interestingly, the number of job openings have accelerated sharply indicating that many small businesses were having difficulty finding workers to fill vacancies. This labor shortage is especially prevalent in service-oriented industries, particularly those hit hard by COVID (restaurants, retail and hotels).
      - This apparent contrast has led to debate regarding whether current stimulus benefit policies are creating disincentives for workers to return to the workforce.

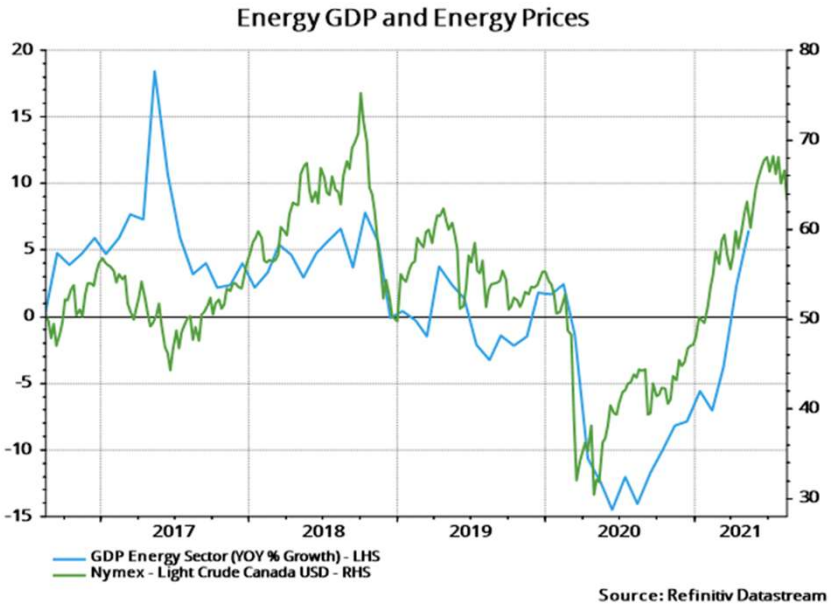




Canada

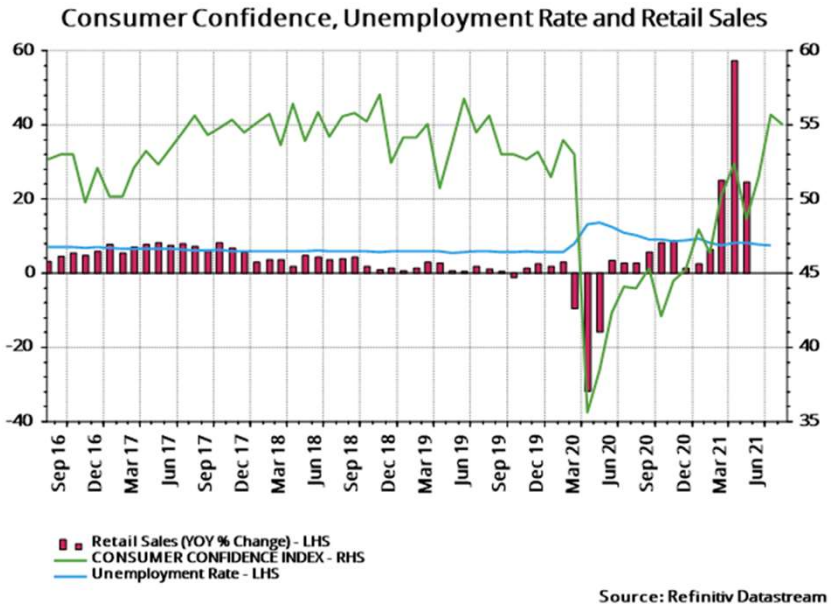
- Canada's economy likely experienced modest recovery in Q2 2021, with sharp rebounds expected over the balance of the year and into 2022
  - 2021 GDP is now forecast to grow at 6.0% YOY with a further growth of 4.3% in 2022.
  - Both Manufacturing and Services PMI Index remain at healthy levels.
  - COVID vaccinations have ramped up, with roughly 70% of Canada's population having received at least one shot (among the highest in the world).
    - This surge in vaccinations should lead to a reduction in public-health measures, which should enable a considerable uplift in pent-up consumer demand for services.
  - Canada's economic growth has consistently exceeded consensus expectations (the Canada Citi Economic Surprise index has remained well above zero and has been positive for 427 consecutive days, a record).
  - Strong commodity prices (the Bank of Canada Commodity Index is at a 13-year high) should also aid Canada's economic recovery throughout 2021 and into 2022.

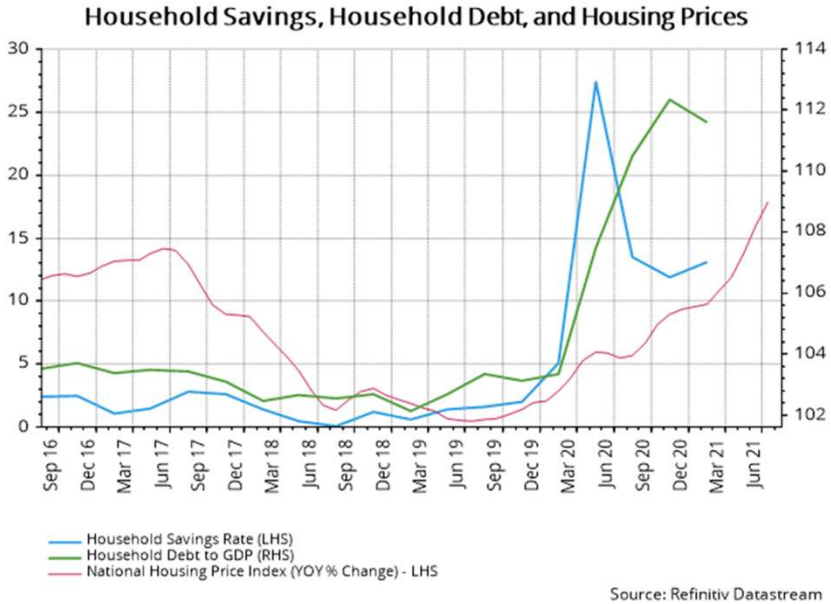




Canada (Cont.)

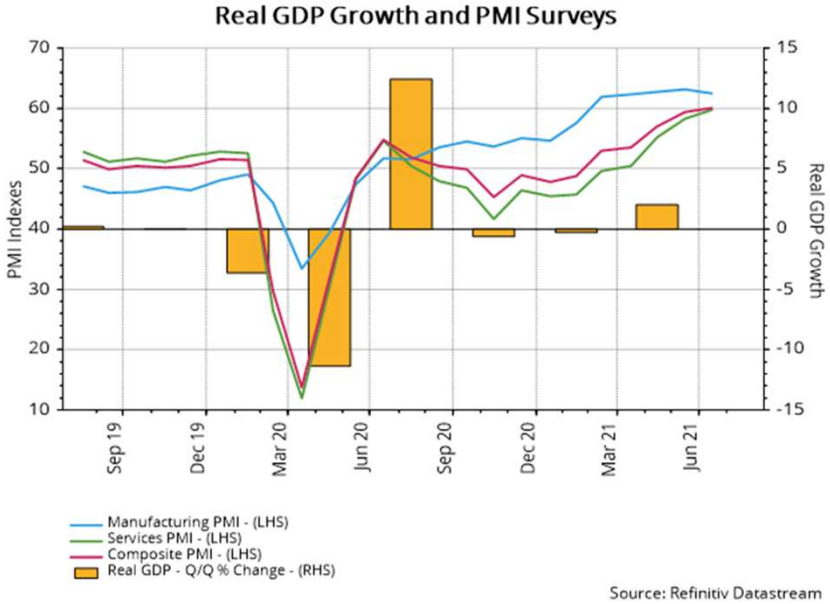
- Canadian consumer and employment indicators remained highly positive in Q2 2021.
  - Retail sales have shown continued positive YOY growth with economists projecting strong second-half performance as COVID restrictions are loosened due to the rapid pickup in vaccinations.
  - Household savings rates remain elevated at near 12% indicating substantial capacity for pent-up demand.
  - Employment has steadily improved with the unemployment rate declining to 7.5% by July 2021 vs. 9.4% at the beginning of the year.
    - However, as in the US, small and medium businesses are also reporting acute worker shortages despite the unemployment rate a full two percentage points higher than pre-pandemic.
    - This labor shortage has been driven by generous Canadian government benefits provided to unemployed workers through programs such as the Canada Emergency Wage Subsidy and the Canada Recovery Benefit. These program are scheduled to diminish considerably in August which should lead to a faster uptick in employment.
  - Housing activity remains robust with strong single-family home sales and home price appreciation reaching surpassing mid-teens YOY (affordability needs to be monitored).

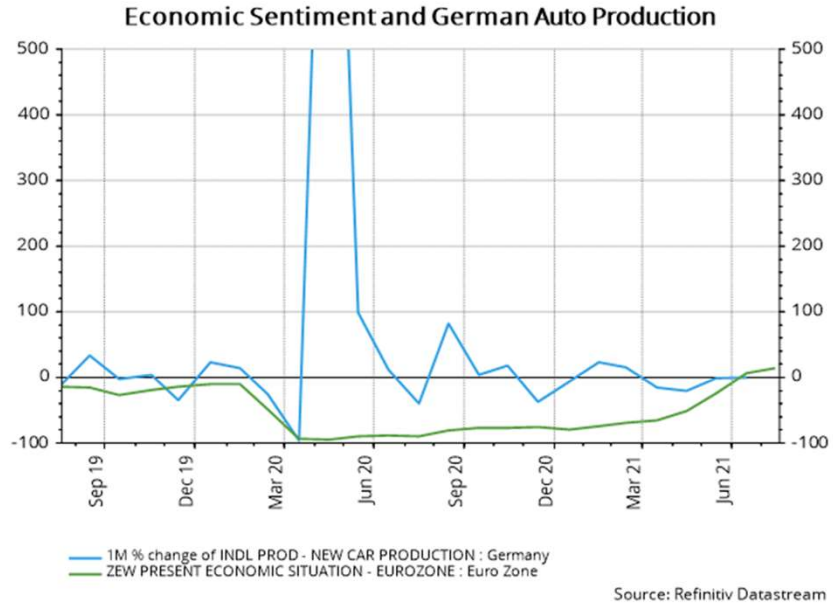




Eurozone

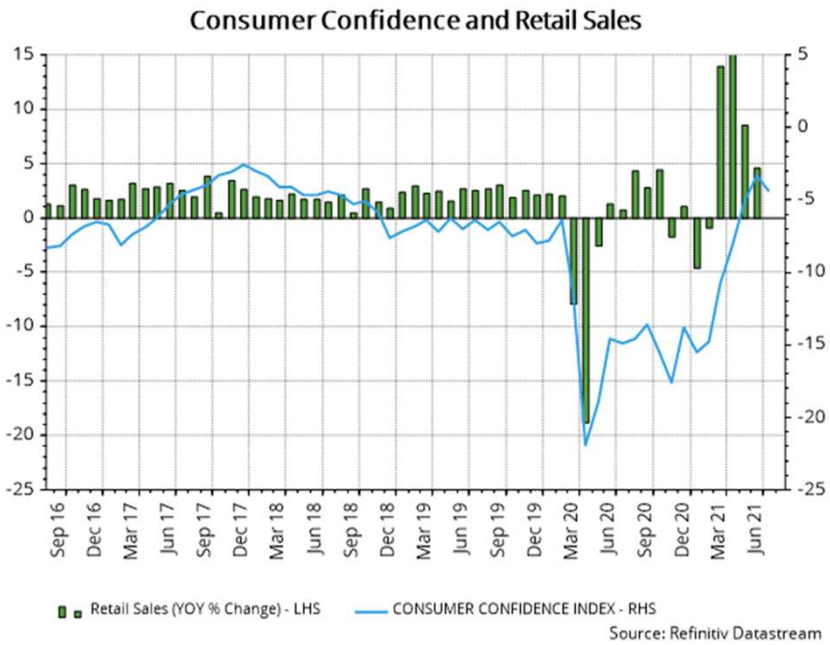
- Eurozone (ex UK) GDP increased by 2.0% Q/Q in Q2 2021, rebounding from recession.
  - The pace of vaccinations picked up rapidly with Eurozone vaccinations now exceeding the US.
  - Leading indicators such as PMI indexes have remained strong with service PMIs rapidly expanding as Europeans are accessing previously deferred and unavailable services.
  - Business confidence has steadily increased and has eclipsed pre-pandemic levels.
  - The ECB is projecting 4.6% real GDP growth for 2021, followed by 4.7% in 2022.
  - Inflation may surpass the ECB's target of 2%, with this period of higher inflation viewed as transitory.
- However, the economic outlook remains delicate.
  - The Delta variant has led to a surge in COVID cases across many countries within Europe. Thankfully, hospitalizations have not been severely impacted thus far.
  - While current forecasts are for expanding growth rates through the back half of 2021, it remains to be seen whether economic activity and consumer spending slows in response to the Delta variant.

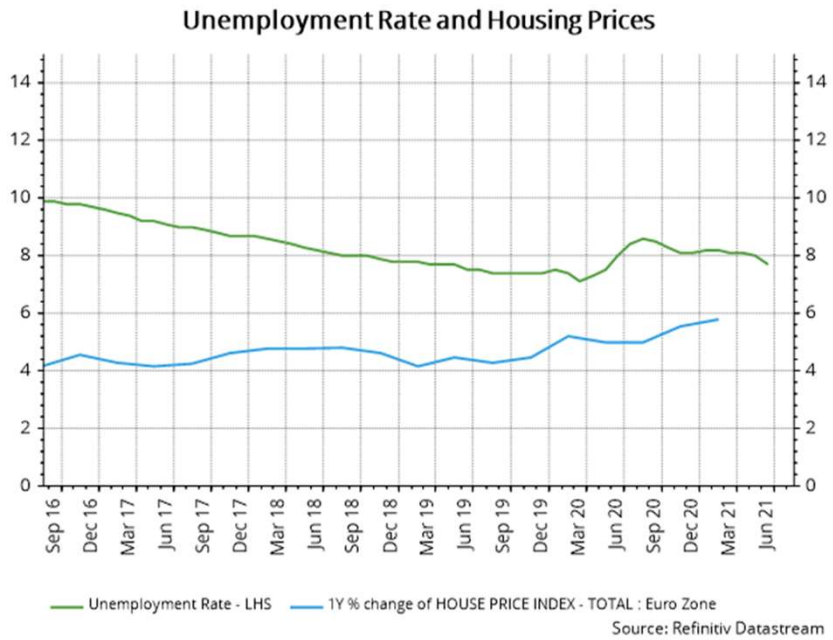




Eurozone (Cont.)

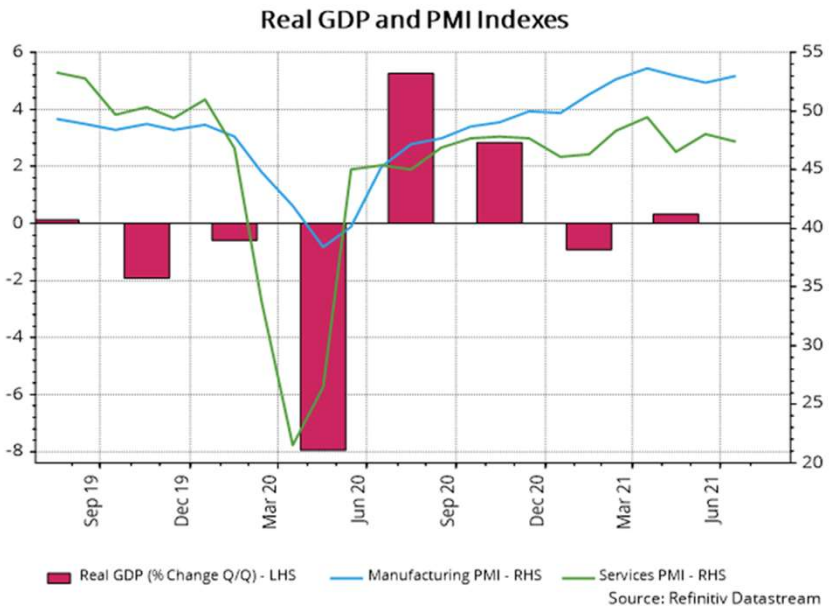
- <u>European consumption improved in Q2 with swifter improvement likely in H2</u>
  - YOY retail sales growth remained strong in Q2, and consumer confidence has rebounded to above pre-pandemic levels
  - Upbeat survey results among consumers and businesses, as well as data tracking mobility, suggest that the rebound in consumption is likely to strengthen into the second half of 2021.
    - However, the Delta variant may cause this burgeoning recovery to stagnate.
  - Eurozone unemployment rates continued to declined modestly since an initial uptick occurred at the onset of the pandemic.
    - Social protections and employee-friendly labor laws coupled with wage-replacement-based fiscal stimulus kept massive layoffs at bay.
  - Home price appreciation has remained steady and mortgage interest rates continue at rock-bottom levels.

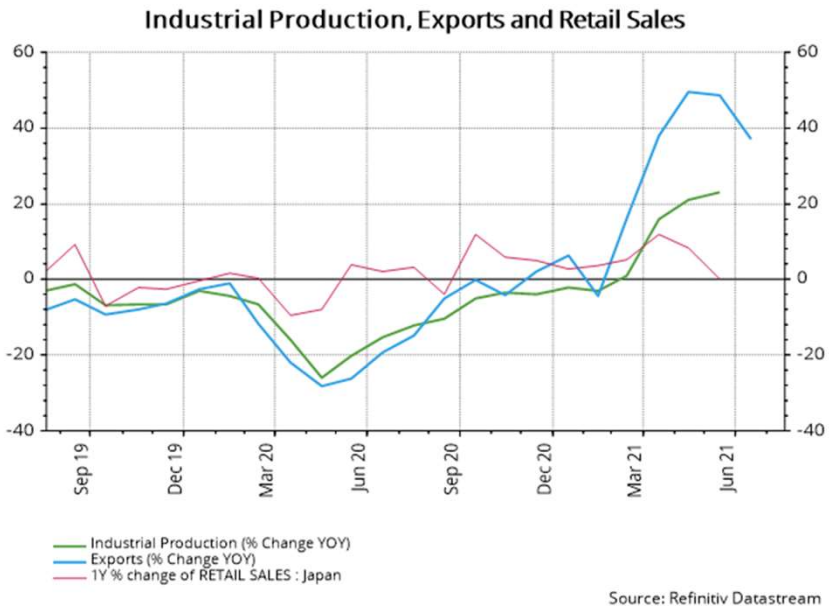




Japan

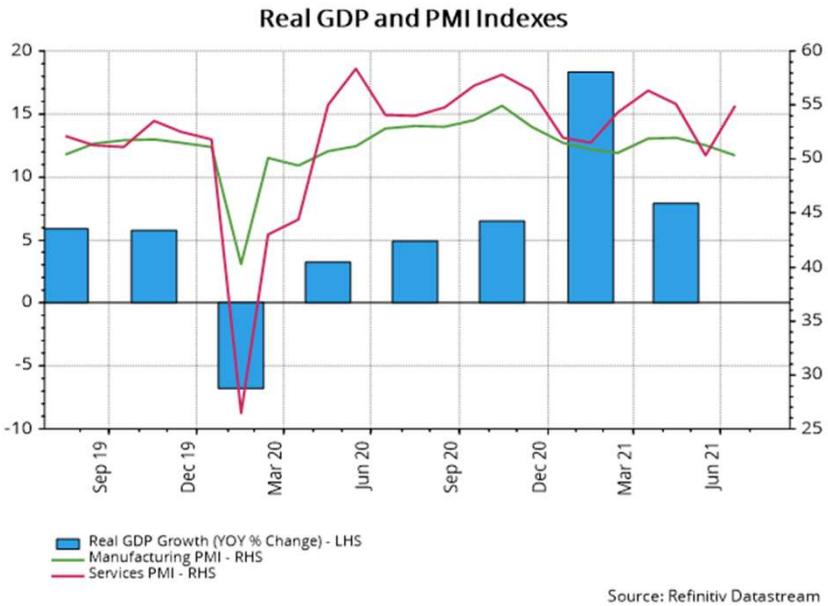
- Japan's economy delivered mixed performance in Q2.
  - Japan's GDP grew at 0.3% Q/Q (1.3% annualized), surpassing analyst expectations.
  - Japan's exports remained strong against easy compares (2.9% annualized Q/Q growth) driven by strong demand from its largest trading partners (the US and China). External demand for Japan's electronic exports has been very strong.
  - Domestic consumption also rebounded modestly (0.8% annualized Q/Q growth) but the recovery remains far below that seen in the US and Europe.
  - Japan has deployed some of the most aggressive stimulus measures with fiscal measures taken amounting to 44% of GDP (16% in direct public spending and 28% in liquidity support).
  - However, economists are forecasting muted growth for Q3 as expanded COVID curbs and surging infection levels are likely to negatively effect domestic consumption.

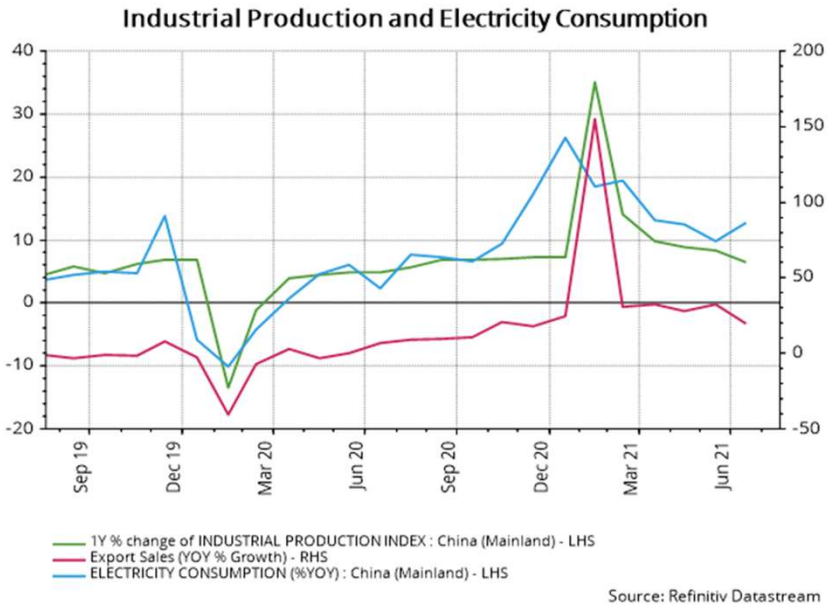




China

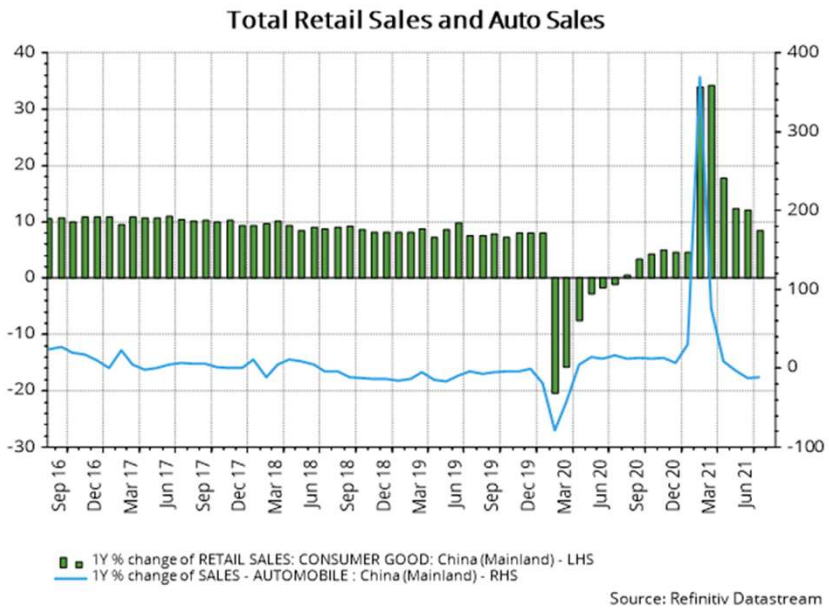
- <u>China continued growing at a healthy clip with some signs of slowdown manifesting themselves.</u>
  - China's YOY GDP growth was 7.9% (1.3% sequentially Q/Q), slightly missing forecasts for 8.1% YOY growth.
    - China is much further along in its recovery relative to other nations; as such – a slowdown from lofty growth rates was expected.
  - Manufacturing activity growth modestly slowed due to supply constraints and rising input costs.
    - Export sales grew by 19% YOY (down from the heady 30%+ plus YOY growth seen earlier this year) with overall industrial production up 6.4% YOY.
  - Vaccination rates have accelerated sharply. Service demand has remained strong with the Services PMI Index having a limited impact from COVID resurgence in South China's Guandong province.
  - While the government is maintaining some stimulatory measures (such as reducing bank reserve ratio requirements), it is also aggressively targeting excess speculation in the property markets.

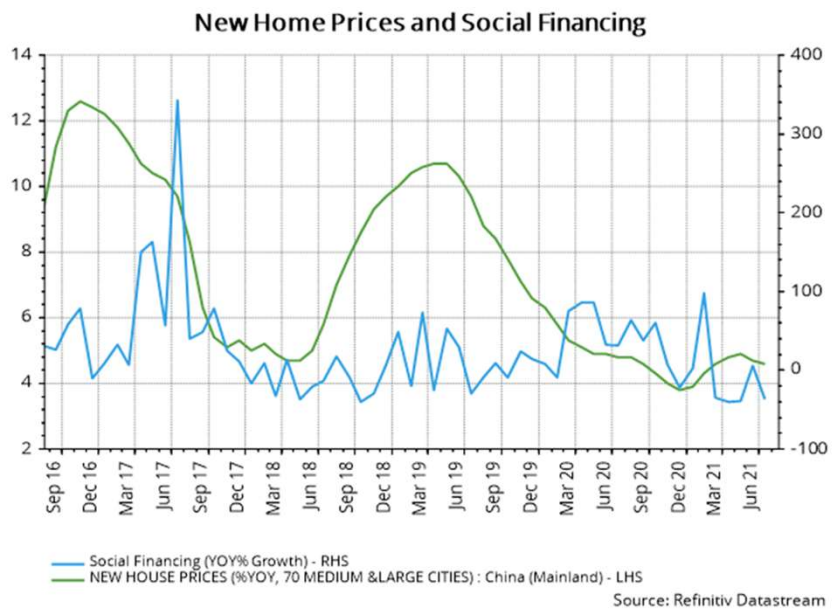




China (Cont.)

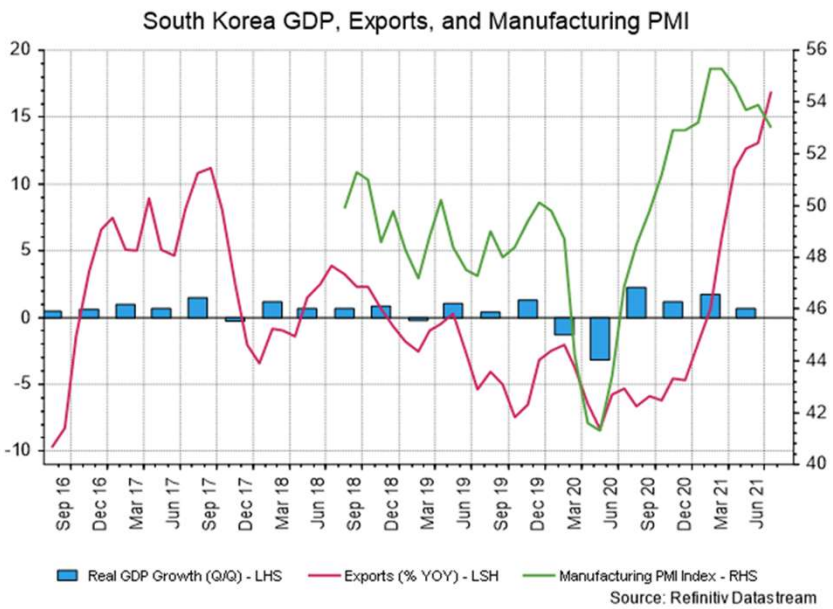
- <u>Chinese consumption is now recovering at a steady pace with greater government oversight.</u>
  - Retail sales growth remained healthy and grew 14% YOY in Q2 as consumption continued to recover.
  - However, there has been some shift towards spending on services vs. large-ticket items as evidenced in negative YOY growth in auto sales in June and July.
  - New home price appreciation has ticked back up (steadily above 4%) and the government is aggressively targeting property speculation (as it views housing prices as unsustainably high given large spikes in 2017 and early 2019).
  - The government is also playing a greater role in targeting wealth inequality by imposing more labor-friendly practices in sectors such as food delivery and the "gig" economy.
  - Overall unemployment rates remained steady at 5% but unemployment among 16-24 year-olds remains high at over 15%.

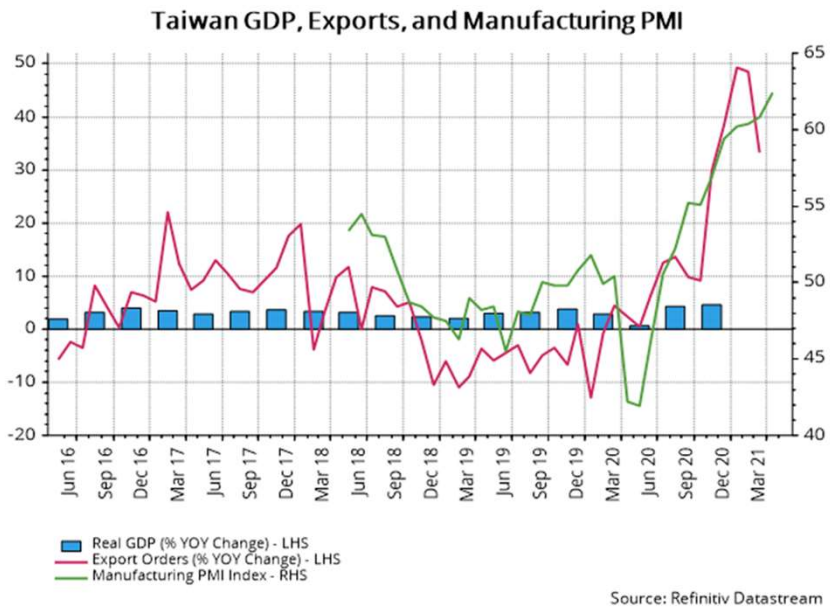




South Korea & Taiwan

- South Korea and Taiwan's economies both grew robustly in Q2.
  - South Korea's GDP expanded 0.7% Q/Q (5.9% YOY) driven by a recovery in private consumption and aggressive government expenditures.
    - 2021 GDP forecasts have been raised to 4.2% (the fastest growth in 11 years) from 3.3% previously.
    - However, there is growing pessimism for the back-half of 2021 as vaccination progress has stalled and the country is facing a fourth wave of COVID.
  - Taiwan's economy expanded at 7.5% YOY in Q2 driven by strong global export demand.
    - The "work-from-home" boom and demand for 5G buildouts sparked strong global demand for the island's hi-tech exports.
    - Domestic fixed investment also expanded 8.6% YOY as many local manufacturers invested in capacity expansions.
    - Private consumption fell 0.4% YOY due to COVID outbreaks and increased restrictions.
    - Analysts are now forecasting GDP growth of roughly 6% for 2021.





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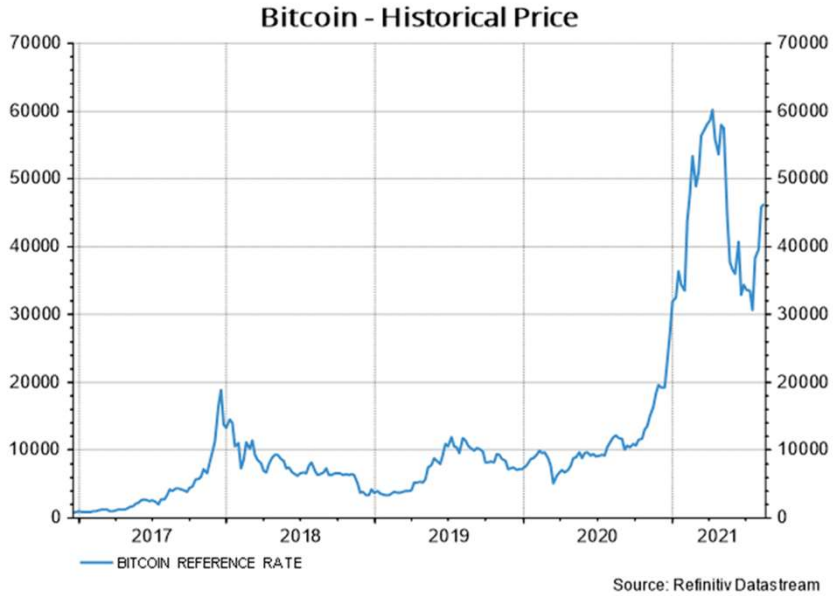
Special Topic: Cryptocurrencies

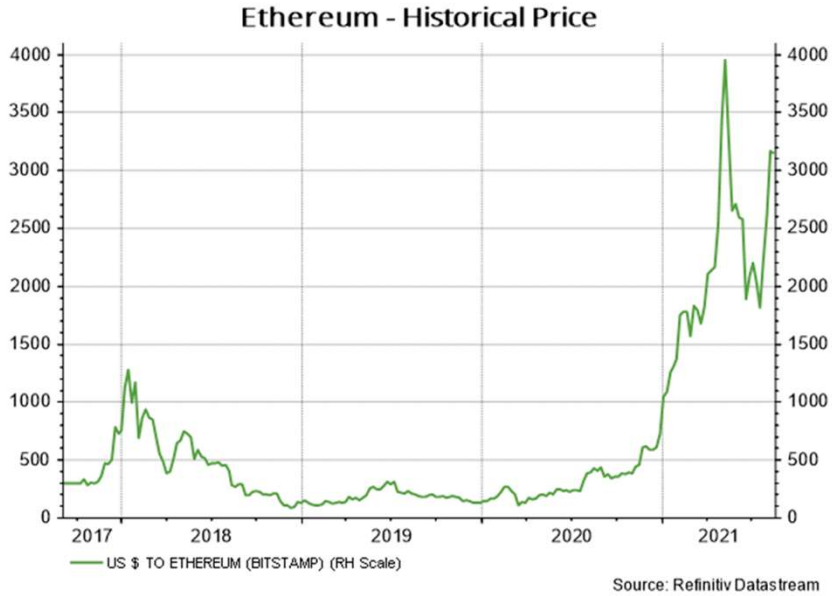
Cryptocurrencies – Introduction

- Cryptocurrency assets have grown explosively to become a $1.6 trillion asset class. The crypto ecosystem consists of a) tradable instruments such as Bitcoin, Ethereum, Dogecoin, Stablecoins, and other tokens and b) crypto networks facilitating various use cases.
  - Bitcoin is the largest crypto asset with a market capitalization of $860bln followed by Ethereum which has a market capitalization of $375bln.
- There are several forces that have contributed to the rapid growth and development of cryptocurrency as an asset class including:
  - Delivering efficient means of transferring money over the Internet and controlled by a decentralized network with a transparent set of rules, thus presenting an alternative to central-bank controlled fiat-money.
  - The pandemic and the resultant explosion in central bank debt coupled with rapid money supply growth has led to increasing concerns regarding the value of money and currencies.
    - With most asset classes trading at historically high valuations, Investors are increasingly seeking alternate "stores of value" and portfolio diversifiers.
  - The emerging of true scarce digital assets as alternative stores of value (previously these stores of value were physical in terms of assets such as gold, art, and other collectibles).
  - Increased institutional participation in the asset class driven by a) need for portfolio diversity, b) deep and growing pool of liquidity, c) expanding regulatory framework, d) expansion in availability of products and e) network effects with increasing number of prominent institutions investing in crypto.
- Nonetheless, cryptos remain highly controversial with several troublesome characteristics
  - High volatility (roughly 100%) – far greater than other asset classes, which seems to question the "store of value" premise.
  - Lack of backing behind the assets (they are not fiat).
  - Light regulatory framework with potential for significant modification over time .
  - Potential for displacement (should governments establish government-backed digital currencies).

Bitcoin and Ethereum – Historical Prices

- Both Bitcoin and Ethereum have experienced high levels of volatility.
  - Both crypto assets experienced a retail-driven price surge in late 2017 followed by collapses swiftly thereafter. Subsequently, prices were relatively range bound till early October 2020. The price of both assets peaked in April 2021 followed by rapid falls and rallies since.





Bitcoin - Digital Gold

- Bitcoin is the largest and most prominent crypto digital asset with a market cap of roughly $860 billion as of Aug. 2021. The value of an individual coin has skyrocketed over the past few years.
- The Bitcoin network solves computational problems enabling rapid transfers between network participants without intermediary organizations (i.e. banks). The network uses blockchain technology that links transactions together in a transparent manner utilizing a series of blocks. All participants have access to the transaction ledger with transactions verified quickly and its open-source nature makes it highly tamper resistant.
- Bitcoin is not widely used as a means of payment for everyday transactions. Rather, it is viewed as a digital asset, a "store of value" that derives value from its inherent scarcity.
  - There is a finite capacity of 21 million Bitcoin with 18.7 million mined as of today. It is projected that Bitcoin will reach its capacity by 2140 given the declining amounts of new Bitcoin mined each year (per its protocol).
  - Unlike currencies which are fiat, Bitcoin is not backed by any government or other asset. *Bitcoin only has value because people perceive that it has value.*
- As seen in the table below, Bitcoin compares favorably to gold across several attributes.
  - With that being said, gold has had a much longer history among investors as a) a store of value and b) a portfolio diversifier.

Bitcoin vs. Gold and Fiat Currencies

	Bitcoin	Gold	Fiat (US Dollar)
Scarcity	High	Moderate	Low
Divisibility	High	Moderate	Moderate
Portability	High	Moderate	High
Easily Transactable	High	High	Low
Sovereign (Govt. Issued)	Low	Low	High
Decentralized	High	Low	Low
Secure (cannot be counterfitted)	High	Moderate	Moderate

BITCOIN - Potential Valuation Framework

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- Bitcoin is not backed by physical assets, nor does it have any cash flows associated with it. These features make it extremely difficult to establish valuations for Bitcoin.
- However, if one accepts that Bitcoin is a scarce digital asset and is a store of value, one can establish potential valuation frameworks using a market penetration analysis.
- In this analysis, we define "total stores of value" as including a) large time deposits, b) gold, c) art and other collectibles.
  - We estimate the total market capitalization of "stores of value" at $62 trillion

Total - Global Stores of Value	$ Bln
Gold	12,000
Art & Other Collectibles	4,000
Large time deposits	45,000
Bitcoin	900
Total "Stores of Value"	61,900
Current Bitcoin Penetration	1.5%

	Potential Bitcoin Penetration in 10 Years			
	2.5%	5.0%	7.5%	10.0%
Bitcoin Market Value ($bln)	1,548	3,095	4,643	6,190
Bitcoin Value Per Coin *	77,375	154,750	232,125	309,500
Bitcoin Price 8/20/21	46,500	46,500	46,500	46,500
Potential Cumulative Return	66.4%	232.8%	399.2%	565.6%

* estimated 20mm Bitcoins in circulation 10 years from now

- As seen in the tables above, if Bitcoin continues to achieve increased adoption, the potential price appreciation may be substantial over the next decade
  - However, we emphasize that Bitcoin is a nascent and evolving asset. It only has value because people perceive it to have value. Investor speculation has led to large trading volatility over its lifetime.
  - Additionally, Bitcoin's value could easily depreciate due to adverse developments including emergence of alternative digital currencies and negative regulatory burdens. *Investors should be prepared to potentially lose substantial amounts or all of their investment.*

Ether (Ethereum) - Digital Oil

- Ethereum is a blockchain-based network and Ether (synonymous with Ethereum Coin) is the fuel necessary to power the blockchain platform.
  - As such, while Bitcoin is considered digital gold, Ether (Ethereum) is considered digital oil.
  - Unlike Bitcoin, Ether does not have a finite capacity of coins. However, per the protocol rules, the annual rate of increase in circulation (4.6% currently) is declining over time.
- The Ethereum network has some similarities and differences relative to the Bitcoin network.
  - Like the Bitcoin network, the Ethereum network utilizes open-sourced blockchain technology that enables peer-to-peer transaction and eliminates intermediaries.
  - Also, similar to the Bitcoin network, the code written on the Ethereum blockchain cannot be altered, tampered with or hacked.
  - However, the Ethereum network allows for far more complexity in terms of types of transactions. The platform enables the writing of smart contracts and decentralized applications which are self-executed when certain programmed, coded conditions are met.
  - This programmability and ability to execute massive amounts of smart contracts rapidly leads to the Ethereum network having a much larger range of potential use cases versus the Bitcoin network.
- The largest potential use case for the Ethereum network involves Decentralized Finance (DeFi).
  - Decentralized finance (DeFi) applications aim to use decentralized, non-custodial financial products to replace centralized middlemen in financial applications such as loans, insurance and derivatives.
    - The contract value of de-centralized finance applications has exploded to $50bln-$75bln from $1bln two years ago.
    - A real-world example is an exchange called Uniswap - this exchange allows for trading of crypto assets with high efficiency and at a much cheaper cost than incurred through Coinbase.
    - Decentralized finance applications run on blockchain networks like the Ethereum network and require specific tokens to facilitate these transactions. The Ethereum network accepts a variety of tokens called Stablecoins that are pegged to the USD (crypto-dollars).
- The Ethereum network displays classic network effects. The more services that are offered, the more users that will utilize the network, and the more valuable the network becomes.

Ethereum - Potential Valuation

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- To estimate potential valuations for Ether (Ethereum) coins, one potential framework involves a) valuing the overall Ethereum network and b) estimating the value split between the underlying Ether and the applications residing on the network generating the revenues.
  - In determining the value of the Ethereum network, one might estimate the $ value of the potential annual transactions flowing on the network and apply a "take-rate" to quantify the network's revenue or earnings (similar to PayPal as an example)
    - In the tables below, we calculate the Ethereum network value based upon the hypothetical growth in ten years of annual contract value transaction on the network to $1 trillion to $3 trillion (vs. $50bln-$75bln) today.

Ethereum - Estimating The Value of the Network in 10 Years ($bln)			
Contract / Transaction Value on Ethereum Network	1,000	2,000	3,000
Take Rate *	1%	2%	3%
Annual Ethereum Network Earnings or Revenue	10	40	90
Valuation Multiple	30x	45x	60x
Implied Ethereum Network Valuation ($bln)	***300***	***1,800***	***5,400***
** Paypal take rates are close to 2%*			

Ethereum (Ether) - Estimating the Value of the Coin in 10 Years			
Step 1: Implied Ethereum Network Valuation	300	1,800	5,400
Step 2: Ether's Share of Valuation	80%	70%	60%
Step 3: Calculating Ether Market Cap	240	1,260	3,240
Step 4: Per Coin Ether (Ethereum) Value *	***1,529***	***8,025***	***20,637***
Ethereum Coin Price Today	3,253	3,253	3,253
Cumulative Return Potential	*-53%*	*147%*	*534%*
** Based on 157mm coins in circulation in 10 years vs. 118mm today*			

- *This valuation framework and illustration is highly speculative*.
  - The Ethereum network may face competitive pressures and the volume of defi contracts may end up being far lower than we have illustrated.
  - Significant risks remain and investors may lose substantial amounts or all of their investment.

Crypto Assets - Conclusions

- Cryptocurrency asset values have rocketed over the past few years and the asset class is gaining greater acceptance among retail and institutional investors.
  - Credible cases can be made for Bitcoin increasing its penetration as a "store of value" and for use cases on the Ethereum network exponentially growing (thereby increasing the value of Ether coins).
- However, crypto asset price volatility remains extremely high, and the future of these assets remains highly uncertain as they are not backed by physical assets or government guarantees.
- Investors can invest in Bitcoin and Ethereum directly (through exchanges such as Coinbase) or through ETFs.
  - Bitterroot does not have a view with regards to either current or future crypto asset valuations.
    - Given the rapid growth in the nascent crypto asset class, we have attempted to provide illustrative frameworks for potential valuations of Bitcoin and Ethereum.
  - Should investors wish to invest in Bitcoin or Ethereum (either directly or through ETFs), they should acknowledge a wide range of potential outcomes (from making 5x-6x over 10 years to losing all of their investment should either asset prove worthless).
  - Given the inherent volatility and wide range of outcomes, crypto investments should be limited to 1%-2% of investors' portfolios.
- Alternatively, investors may wish to gain exposure to the digital asset ecosystem via investments in early-stage companies providing digital asset services or solutions. Since these companies are providing "plumbing or infrastructure" types of services, they should be agnostic as to the underlying crypto assets serviced.
  - There are venture capital funds focused on making portfolio company investments in this arena.
  - Bitterroot prefers more broadly diversified venture firms (for whom digital asset related investments are part of a broader portfolio) as opposed to specialized digital asset venture firms.

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