Review of Q3 2021 Economy and Current Capital Markets

November 12, 2021

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Contents

* All market data are as of 11/8/21 unless indicated otherwise.

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Executive Summary

Capital Markets

- <u>Equity markets modestly declined by 1.1% in USD terms during Q3 2021 (ACWI Index)</u> but have since rebounded by 5.1% through the end of October.
  - During the quarter, COVID cases initially increased sharply in the US and across parts of Southeast Asia. However, since the end of quarter, the case counts have declined considerably in the US and across some key Asian supply-chain nations (Vietnam, Malaysia).
  - US markets have significantly outperformed international markets YTD in USD terms from 12/31/20 through Oct. end (S&P 500 up 7.5% vs. -0.7% for Intl stocks) given: a) Strong and higher-than expected US corporate earnings growth and b) sharp selloffs in July for emerging markets indexes following China regulatory actions.
- <u>Corporate earnings continue to materially exceed expectations (especially in the US).</u>
  - 82% of S&P 500 companies beat Q3 earnings forecast (among highest on record).
    - S&P 500 earnings grew 37% YOY in Q3 , with average earnings beats in the 10% range (higher than average). Importantly, earnings beat analyst expectations by 10% with sales beating by 2% (thus indicating margin growth).
    - For 2021, S&P 500 earnings are now forecast at $210 / share vs. $165 / share roughly nine months ago. S&P 500 earnings have handily eclipsed pre-pandemic levels. Earnings across international markets are also eclipsing initial forecasts. As such, analysts have continued to upgrade earnings forecasts for 2021 and 2022 across most markets.
- <u>Equity valuations remain elevated relative to historical averages.</u>
  - Equity market valuations are quite elevated based on NTM and 2022 earnings. Based on NTM earnings, equity markets are trading at 15%-25% higher valuations vs. historical NTM levels.
    - *Relative* to Treasuries however, valuations based on 2022 earnings continue to appear reasonable.
    - Corporate earnings forecasts for 2022 and beyond 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 and/or lower-than-expected profit margins, b) geopolitical risks, c) potential for negative economic impact stemming from continued COVID episodic flare-ups and d) potential changes in tax policy (less likely than a few months ago).

<u>We are incorporating these views into portfolio positioning by:</u>
- Increased allocations to alternative assets 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, we expect mid-single digit nominal pre-tax equity returns (5.0%-6.0%) annually over a seven-year forecast period.
  - Returns in any individual year may vary considerably vs. the 7-year annualized forecast. Thus far, 2021 has delivered outsized returns YTD, given surprisingly strong corporate earnings coupled with ample fiscal stimulus and easy monetary policy (we have flagged this possibility previously).
    - However, we anticipate increasing bouts of volatility over the medium-term (surge in headline inflation, slowdowns from stimulus-induced peak growth levels, episodic COVID flare-ups, and uncertainty over regulatory policy).
    - *Investors may choose to maintain some dry powder and opportunistically add to risk assets at lower price levels.*
- Government bond yields remain near historic lows and high-yield and leveraged loan credit spreads are now trading at pre-pandemic levels
- Relative to public markets, *we forecast significantly higher returns for risk assets across private market strategies* (i.e., private equity, private 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 (Russell 2000)		Mid Single-Digit
MSCI Intl. Developed Markets		Mid Single-Digit
MSCI Emerging Markets		Mid Single-Digit
FIXED INCOME		
US Treasury		Low Single-Digit
US Corp Investment Grade		
US Corp High Yield		Mid Single-Digit
US Corp Levered Loans		
ALTERNATIVES, PRIVATE EQUITY, & REAL ESTATE		
Real Estate (Private) / Infrastructure		Mid/High-Single-Digit
Alternatives (Hedge Funds)		Mid/High-Single-Digit
Private Credit		High SD / Low DD
Private Equity		Low-Teens

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 remain elevated by most measures with several potential risks (especially in the US).
  - *Headline and core inflation remains higher than anticipated.* Importantly, inflation in wages and rental prices increasingly seem to be structural in nature rather than transitory (as opposed to inflation in semiconductors, autos, materials, and natural gas prices in certain regions).
    - 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.
      - Thus far, US companies have largely passed on price hikes to consumers and have more than offset inflationary pressures. However, as the benefit from 2020 and 2021 fiscal stimulus fades, elevated consumer savings rates will likely decline to more normalized levels (making it harder for consumers to absorb further price hikes).
  - China's growth has decelerated sharply as the country is dealing with a resurgence in COVID, severe electricity shortages and a residential property sector slowdown driven by increasing governmental regulation aimed at reigning in over-levered property developers.
    - Chinese authorities are likely to increase stimulus going into 2022. However, should property sector weakness spill over to the broader economy, global growth may be negatively affected.
  - COVID cases are escalating again in Europe and remain an ongoing threat for several emerging markets.
- 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 generally at pre-pandemic levels (even for many Covid-affected issuers with highly-leveraged balance sheets).
- We view alternatives (which we define as hedge funds) as increasingly compelling.
  - As we expect greater equity market volatility coupled with less attractive equity return potential, we recommend hedge fund strategies that exhibit low correlations with equity markets and with each other.
    - A well-constructed alternatives portfolio should be able to deliver 5%-9% annual returns with less than ½ the volatility of equity markets over multi-year time periods (enhancement to fixed income).

Economic Activity

- <u>Major world economies experienced varying recovery rates during Q3.</u>
  - US Real GDP increased at a sharply slower 2.0% annualized rate Q/Q due to rising delta variant cases and supply chain constraints. Eurozone GDP sharply accelerated at 2% Q/Q as vaccination rollouts progressed swiftly and economies reopened. Canada's economy is expected to have rebounded nicely in Q3, but China's GDP growth decelerated to 4.9% YOY amid power supply shortages and global supply chain disruptions.
    - The IMF is forecasting Global Real GDP growth of 5.9% in 2021 and 4.9% in 2022 (0.1% lower than forecast in July).
- <u>However, both actual headline inflation and future inflation expectations continue to rise.</u>
  - Across many geographies, sharply accelerating consumer demand (especially for consumer durable goods) coupled with supply-chain disruption has led to spikes in headline inflation (well in excess of the 2% levels targeted by most central banks). The US CPI Index grew by 6.2% YOY in October (the highest since 1990)!
    - These disruptions have persisted for longer than expected and are likely to last well into 2022.
    - In addition, certain regions like the US are experiencing major labor shortages which is driving wage inflation (tends to be longer-lasting and non-transitory).
  - Short-and-mid-term inflation expectations (both in terms of consumer expectations and in terms of financial markets) have steadily increased over several months.
    - Inflation expectations bear watching as rising inflation expectations can lead to a self-fulling rise in actual inflation.
      - 5-Year inflation breakeven rates have risen sharply whereas 10-Year break-evens have remained contained (investors are more concerned about inflation over the short-to-medium term than over the longer term).
- <u>Major central banks are exhibiting different views with regards to inflation.</u>
  - Centrals Banks in Canada, and Australia recently adopted more hawkish monetary policy views.
  - On the other hand, the US Fed and the ECB continue to maintain relatively dovish views.
    - Bond markets (as evidenced by front-end interest-rate curve movements) have been highly volatile recently.
- <u>There are credible arguments on both sides as to whether inflation is transitory or permanent</u>
  - On the transitory side, consumer savings rates are starting to decline as fiscal stimulus rolls off (which should lead to reduced demand for goods) at a time when supply chain disruptions should ease materially.
    - Additionally, technological and demographic forces generally should continue to prove deflationary over time.
  - On the permanent side (especially in the US), wage growth is clearly accelerating as are home rental prices, and inflation is broadening across a wider range of categories.

Global Supply Chain Disruptions and Rising Energy Costs

- Supply Chain Bottlenecks Remain Persistent, with uneven signs of improvement.
  - Several factors are simultaneously contributing to global supply chain disruption, including: a) sporadic factory closures among manufacturing hubs in Southeast Asia, b) skyrocketing costs for shipping containers and shipping port congestion, c) shortage of truck drivers, and d) continued semiconductor shortages.
  - Most analysts are now forecasting supply chain disruption well into 2022 although there have been some signs of recent improvement.
    - COVID restrictions have been eased in Malaysia, Thailand and Vietnam (large manufacturing centers).
    - Semiconductor manufacturers such as Taiwan Semiconductor are ramping up capacity.
    - Ocean freight costs have modestly decreased from summer peaks.
- Several Regions are Experiencing Sharply Rising Energy Costs or Power Shortages
  - In Europe, natural gas prices have risen six-fold during 2021 due to surging demand coupled with declining production.
    - The shortage of natural gas has been exacerbated by a reduction in European wind power output
    - Europe is dependent upon natural gas imports primarily from Russia and Norway (with Russia potentially reticent to provide Europe with more gas than contractually required)
  - China is experiencing its worst electricity crisis in over a decade due to sharply rising coal prices (driven by abruptly surging demand from construction and manufacturing sectors coupled with years of production declines) and a ban on Australian coal.
    - China depends on coal for 70% of its electricity generation needs and electricity has been rationed across several provinces which is negatively affecting economic activity.
      - The government had previously capped prices charged to consumers but generators had chosen to idle capacity rather than incur substantial losses.
      - Governmental regulations around price caps are being modified and we would expect the energy shortage to abate over the next several months.

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Capital Markets Review

Equity Markets - Performance

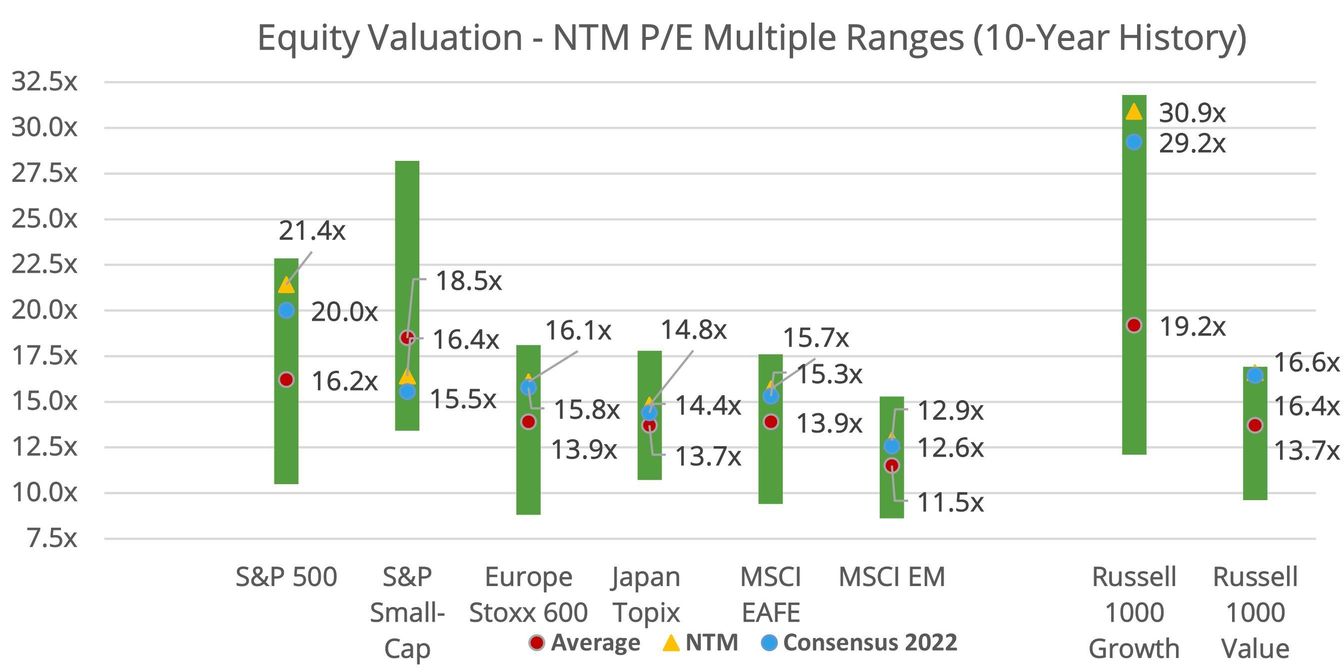
- Global equity markets declined 1.1% during Q3 (but have since appreciated by 5.1% in October).
  - US stocks have continued to outperform international stocks since the end of Q2 (+8.1% vs. +0.1%) and since the beginning of the year (25.1% vs. 9.8%).
    - US outperformance driven by a) greater levels of fiscal spending, b) faster corporate earnings growth, and c) poor performance in emerging markets driven by Chinese equity market declines due to regulatory policy shifts.
  - Global growth stocks outperformed global value stocks from July through October (5.4% vs. 2.6%). Thus far in 2021, equity markets have witnessed rotations between growth and value style outperformance driven by episodic flareups in COVID cases and uneven economic growth across various regions.
- 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 continue to 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 11/03/2021)

	Cumulative Perf.			Total Returns (%) - USD *				
	YTD 2021	2/19/20 3/23/20	3/23/20 - Present	Sept Qtr	Annualized Returns 1Y	3Y	5Y	7Y
US Large Cap (S&P 500)	25.1%	-33.8%	112.0%	0.4%	39.8%	17.5%	16.7%	14.0%
US Small Cap (Russell 2000)	22.7%	-40.7%	144.2%	-4.4%	50.4%	11.6%	14.2%	11.8%
MSCI EAFE	12.4%	-32.7%	81.4%	-0.5%	30.8%	7.7%	9.3%	5.4%
MSCI Emerging Markets	-0.5%	-31.2%	72.7%	-8.1%	14.9%	7.9%	10.6%	5.1%
MSCI ACWI	18.0%	-33.6%	101.8%	-1.1%	34.5%	13.7%	13.8%	10.0%
Russell 1000 Growth	25.7%	-31.4%	132.4%	1.2%	41.5%	29.7%	26.1%	19.6%
Russell 1000 Value	23.7%	-38.0%	103.4%	-0.8%	40.2%	14.1%	13.0%	9.9%

Equity Markets - Valuation

- Current equity valuations are high relative to historical averages
  - Multiples based upon next-twelve-months (NTM) and 2022 earnings generally 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 sharply (if investors view higher inflation as non-transitory), equity markets may experience 10%-15% corrections.
- 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. Presently, rates are hovering around 1.5% as of early November 2021.



Fixed Income Markets - Performance

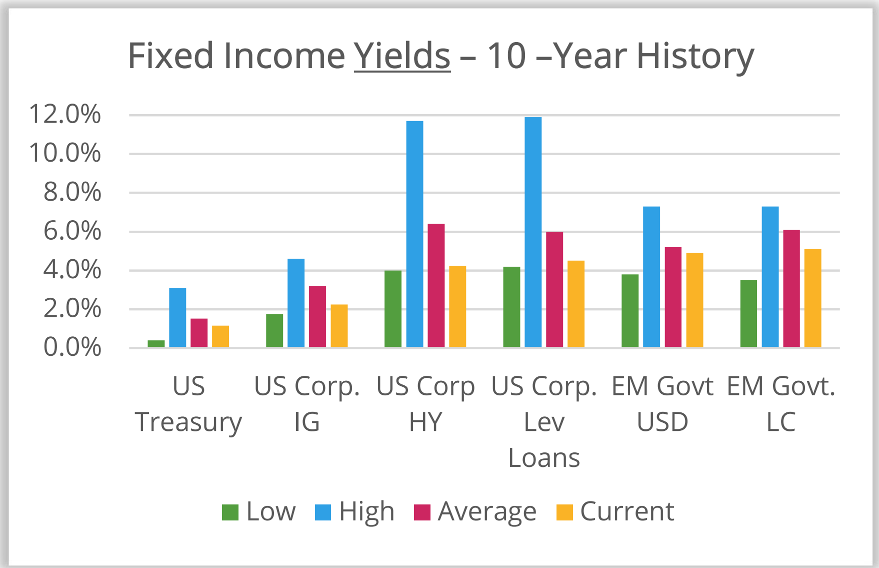
- Fixed income markets were relatively quiet during Q3
  - US Treasuries and Investment Grade bonds were relatively flat as interest rates were generally stable.
  - Riskier credit appreciated modestly during the quarter (+0.9% and +1.1% for high-yield and leveraged loans).
    - Underlying corporate earnings have continued to be better than expected driven by better-than-expected demand and aggressive cost management, which has led to further modest tightening in credit spreads.
  - EM local currency bonds depreciated by 3.1% in Q3 driven by a) several EM central banks hiking interest rates due to rising inflation pressures and b) continued EM currency depreciation across several markets.

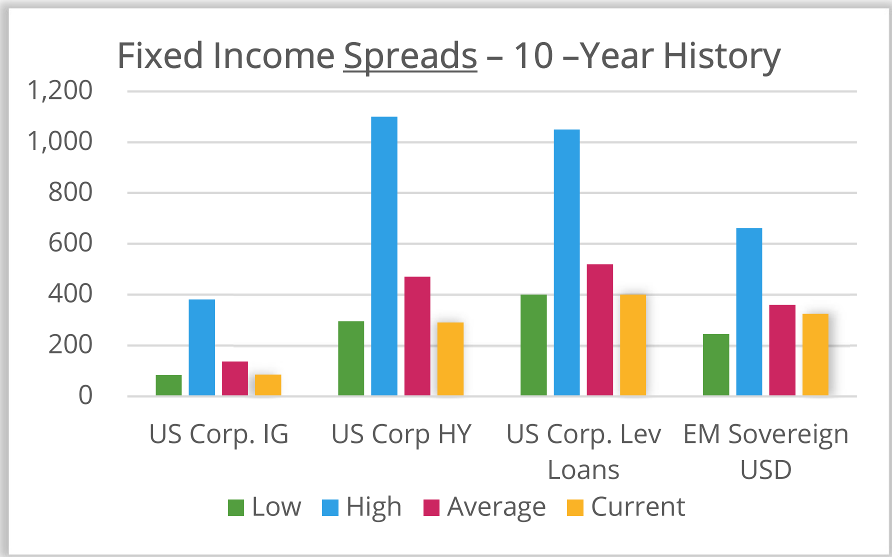
Fixed Income Indices - Characteristics and Performance in USD (as of 11/03/2021)

	Cum. Performance (%) YTD 2021	Cum. Performance (%) 2/19/20 3/23/20	Cum. Performance (%) 3/23/20 -Present	Sept. Qtr.	Annualized Returns 1Y	Annualized Returns 3Y	Annualized Returns 5Y	Annualized Returns 7Y	Duration (yrs)
US Treasury	-2.7	5.4	-2.6	0.1	-2.5	5.1	2.4	2.5	7.2
US Corp. IG	-1.2	-12.3	20.6	0.0	1.8	8.1	4.8	4.6	8.7
US Corp HY	4.4	-20.8	39.4	0.9	0.8	7.4	6.6	5.7	4
US Corp Lev. Loans	4.7	-20.6	35.1	1.1	8.4	4.4	4.5	3.2	NA
EM Sovereign USD	-1.6	-20.7	27.7	-0.7	3.6	6.0	4.2	4.6	8.5
EM Sovereign LC	-8.0	-18.0	17.2	-3.1	-0.3	2.4	1.3	-0.1	5.1
Barclays US Aggregate	-1.7	-0.9	4.6	0.1	-0.6	5.8	3.1	3.1	5.7

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.





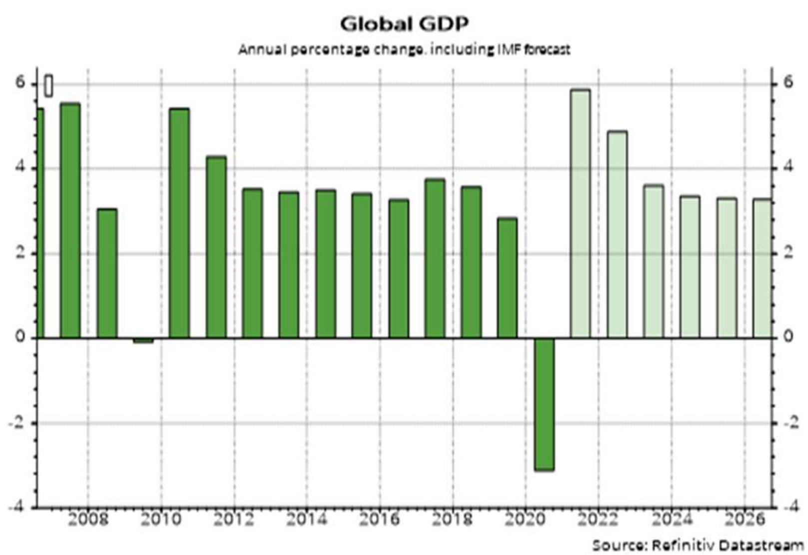
Alternatives and Currencies

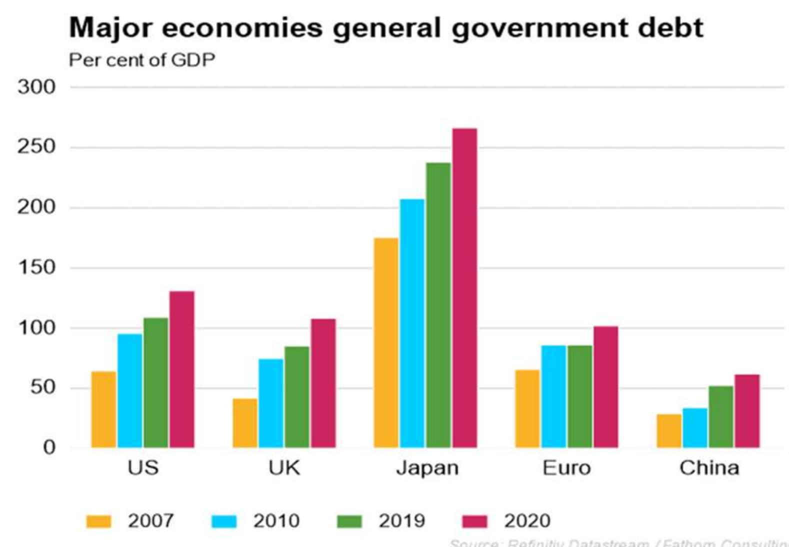
- Hedge fund returns were essentially flat in the quarter.
  - The HFRX Global Hedge Fund Index was down 0.1% in the quarter
    - Long-short equity strategies (+1.3 during the quarter followed by another 2.3% in October) were the best performing strategies in the quarter with other strategies generally down less than 1%.
- Private real estate (as measured by the NCREIF Index) increased by 5.3% during Q3.
  - Performance driven by sharply improving underlying NOI fundamentals across several property types.
- In Q3, both private equity deal activity and fund raising were among the highest on record.
  - Underlying profit fundamentals continued to improve across PE portfolio companies.
  - Valuation markups also increased in Q3 for PE portfolio companies driven by improving underlying EBITDA and rising public and private comparable multiples.
  - US PE Deal volume YTD has exceeded 2019 full-year record levels of $787bln.
    - Deal volume is extremely robust given high levels of dry powder held at PE firms coupled with high seller exit motivation (in many cases ahead of potential changes in tax laws).
  - US PE exits have exceeded $638bln YTD, more than 50% above previous highs.
- The USD Index strengthened by 2% during the quarter
  - The USD strengthened by 2.4% vs. the Euro during the quarter and has remained relatively flat since.
  - The Canadian Dollar depreciated by 2.2% vs. the USD during the quarter but has since appreciated back to Q2 levels.
  - EM currencies generally depreciated in Q3 (especially those outside of Asia).

Economic Review

Global Real GDP Growth

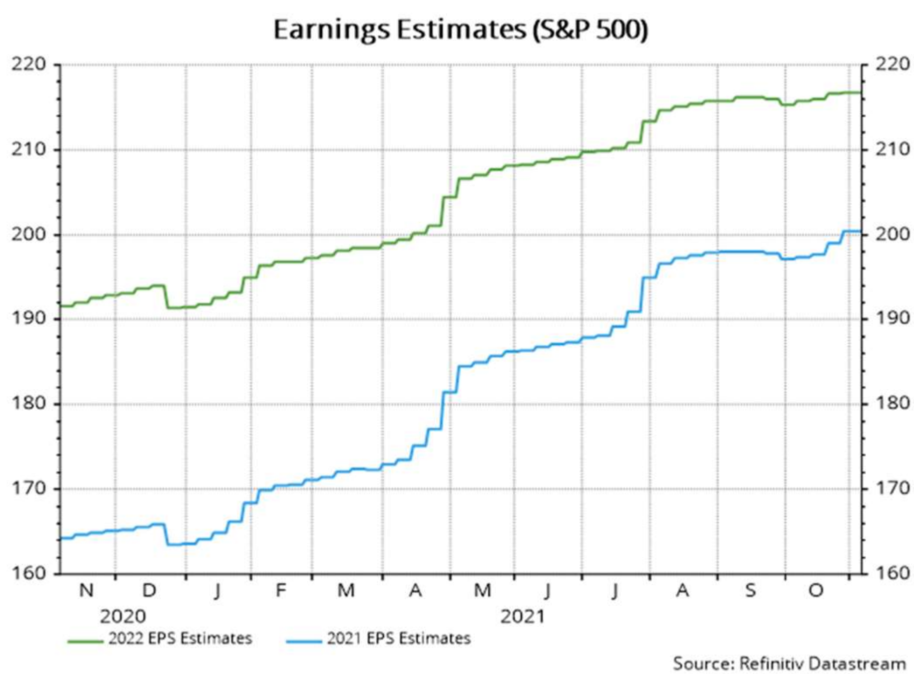
- The IMF modestly cut its latest global growth forecasts by 0.1% in both 2021 and 2022 (5.9% GDP growth now forecast for 2021 and 4.9% for 2022).
  - For 2021, the IMF now forecasts reduced growth from advanced economies due to supply disruptions and or low-income emerging markets due to worsening pandemic dynamics. This is partially offset by stronger near-term prospects among some commodity-exporting emerging markets.
- 2021 GDP growth has been outsized due to aggressive short-term government fiscal stimulus packages (which resulted in a sharp uptick to consumer savings and demand)
  - Major world developed economies adopted aggressive short-term fiscal stimulus packages ranging between 15%-25% of 2021 GDP, with Japan an outlier at 56% of GDP.
  - As inflation surges and employment continues to recover sharply, governments are taking varied approaches to withdrawing this stimulus
    - It remains unclear as to what "normalized" global GDP growth will be from H2 2022 onward in the post-stimulus period.
    - Government debt ratios have significantly increased. 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 remain unknown.

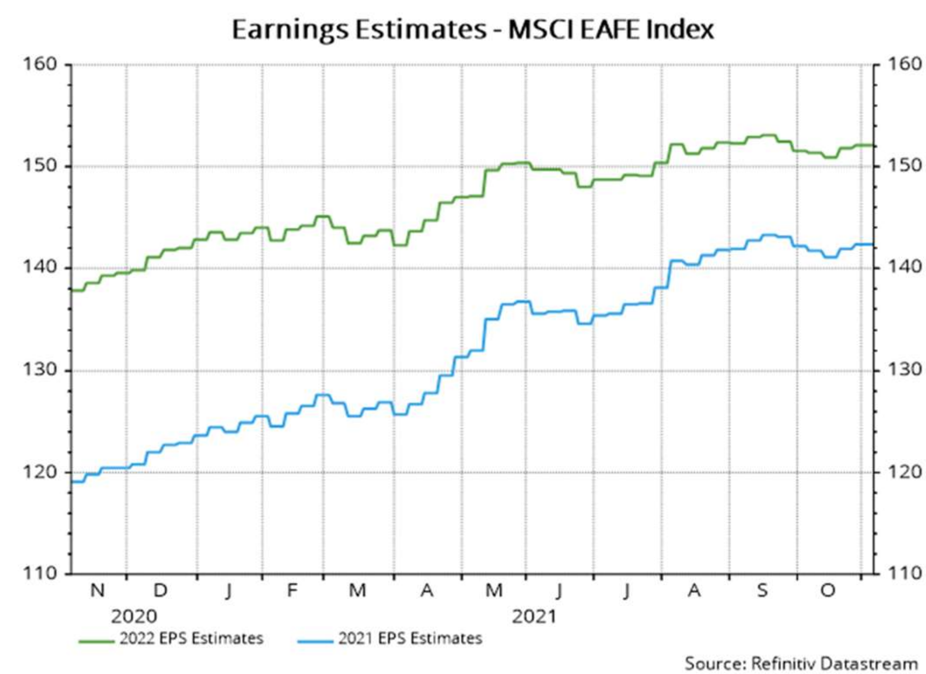




Global Corporate Profits

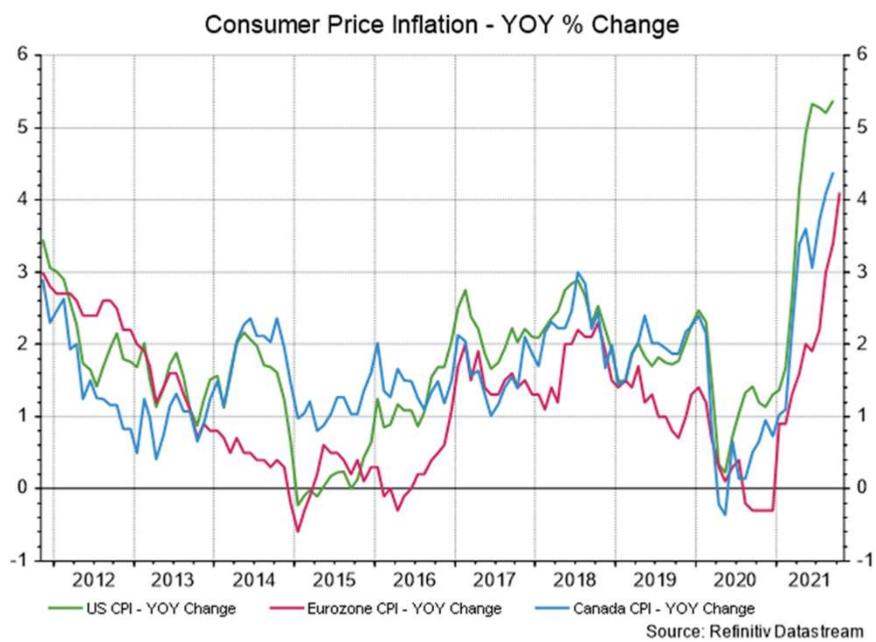
- Corporate earnings continue surprising to the upside (especially in the US)
  - Analysts have been playing “catch-up” and sharply raising earnings’ forecasts for both 2021 and 2022.
  - Both S&P 500 and MSCI EAFE earnings forecasts for 2021 now exceed pre-pandemic 2020 earnings forecasts. Previously, 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).

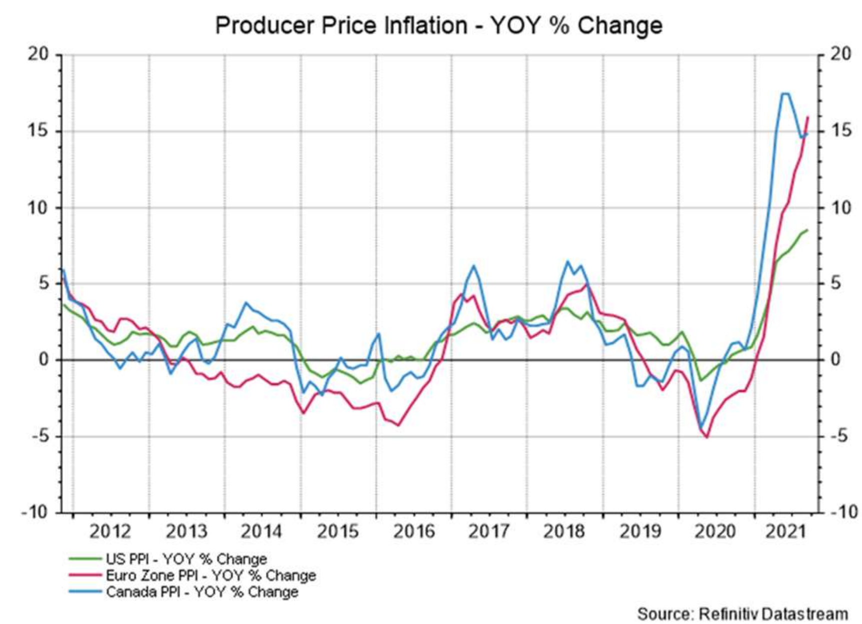




Inflation

- Consumer and Producer inflation have 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.
  - Producers are increasingly passing on these costs to consumers.
    - Consumer Price headline inflation accelerated to 6.2% YOY in October in the US (the highest since 1990)!   Core inflation rose to 0.6% MOM and 4.2% YOY as well.
    - Thus far, historically strong consumer balance sheet levels coupled with significant consumer pent-up demand has led to higher willingness from 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.
  - Supply chain disruptions are likely to abate by H2 2022 and early 2023 (and may even prove deflationary if elevated consumer goods spending drops).   However, wage and rental price increases may remain stickier.

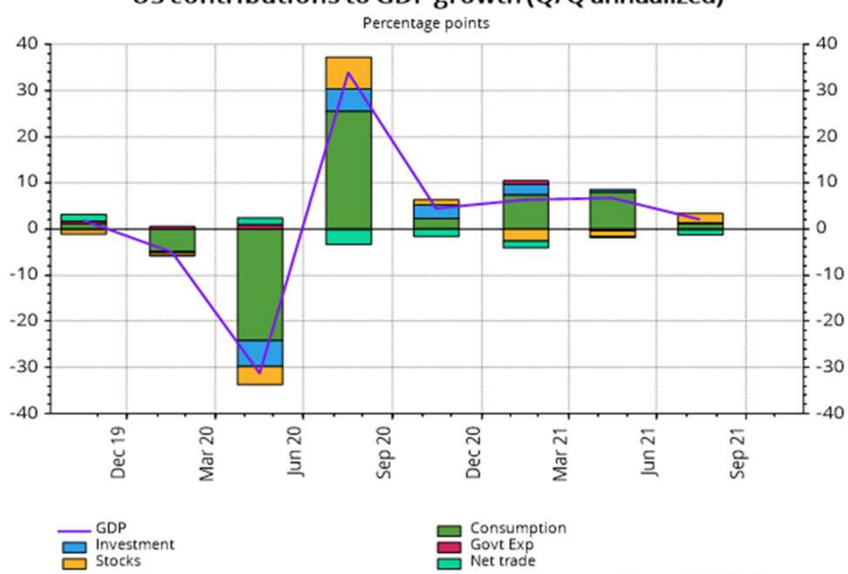




United States

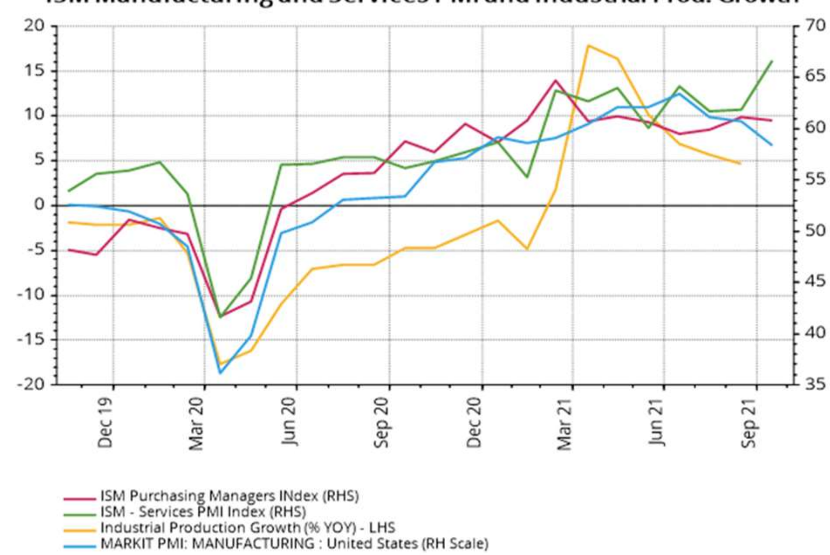
- Real GDP grew by 2.0% Q/Q on an annualized basis in Q3 2021 as Delta variant cases rose sharply earlier in the quarter and supply-chain disruptions heavily distorted the growth picture.
  - The slowdown in automotive sales due to supply issues alone reduced US GDP by 2.4% in Q3!
  - Covid cases have receded since quarter-end, consumer demand remains robust, and there are nascent signs of some easing in supply-chains. Hence, most economists are forecasting a sharp uptick in Q4 GDP growth.
- Leading indicators such as Manufacturing and Services PMI Indexes have remained healthy.
  - Service PMIs appear especially strong and have continued moving upward as COVID cases have receded.
    - Demand continues to accelerate 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.
- Monetary policy remains highly accommodative with US financial conditions the loosest in four decades.

US contributions to GDP growth (Q/Q annualized)



Source: Refinitiv Datastream

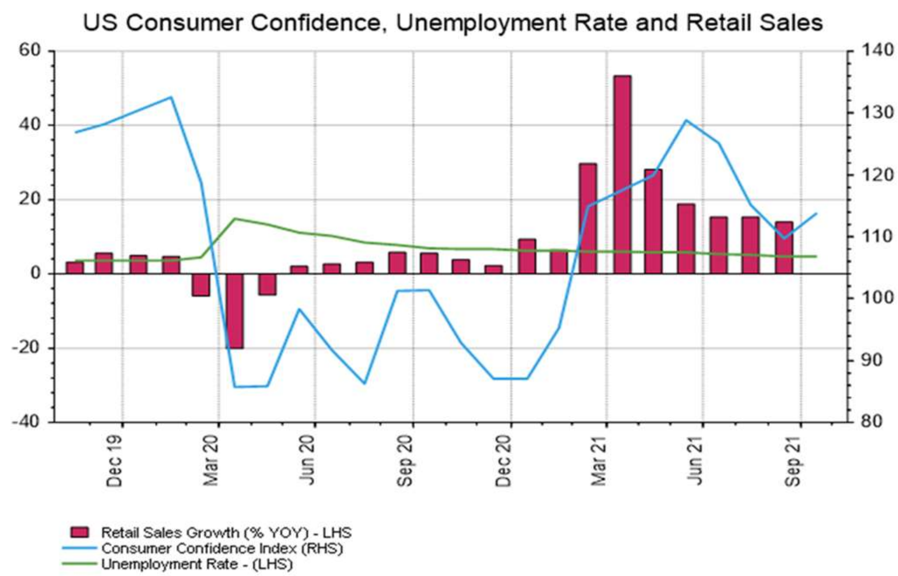
ISM Manufacturing and Services PMI and Industrial Prod. Growth



Source: Refinitiv Datastream

United States (Cont.)

- US consumption remained strong throughout Q3 with healthy retail sales growth and continued declines in unemployment rates.
  - Elevated personal savings rates drove significant gains in consumption as evidenced by record retail sales growth and surging durable goods expenditures.
    - However, savings rates are trending down towards pre-pandemic levels (2022 likely will see a sharp rotation in spending towards services from durable goods).
  - Consumer confidence declined throughout the fall (before recently ticking up) as COVID cases increased and inflation and goods shortages reared their head.
  - The unemployment rate declined to 4.8% in October vs. 6.7% at the beginning of 2021.
    - Net job growth of 530.000 beat expectations in October (following a couple of months of disappointing figures). However, overall number of unemployed are still 4.7 million higher as of July 2021 vs. pre-pandemic levels.
    - Despite the improving employment date, the US is facing an acute labor-shortage (especially in services driven industries despite sharply rising wage growth).
      - > Wages increased 0.4% MOM and 4.9% YOY in October (among the highest in recent times). The potential for development towards a negative wage-price spiral needs to be monitored.



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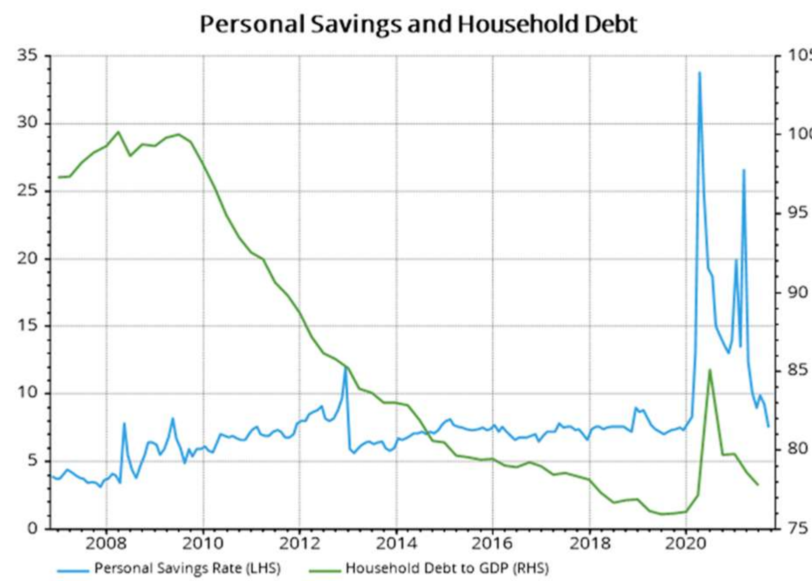
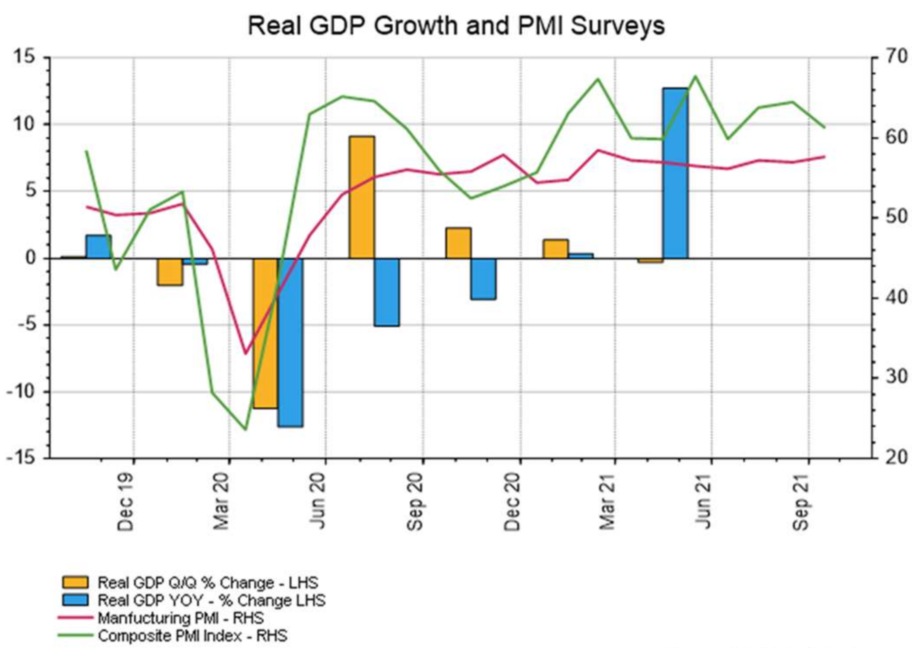


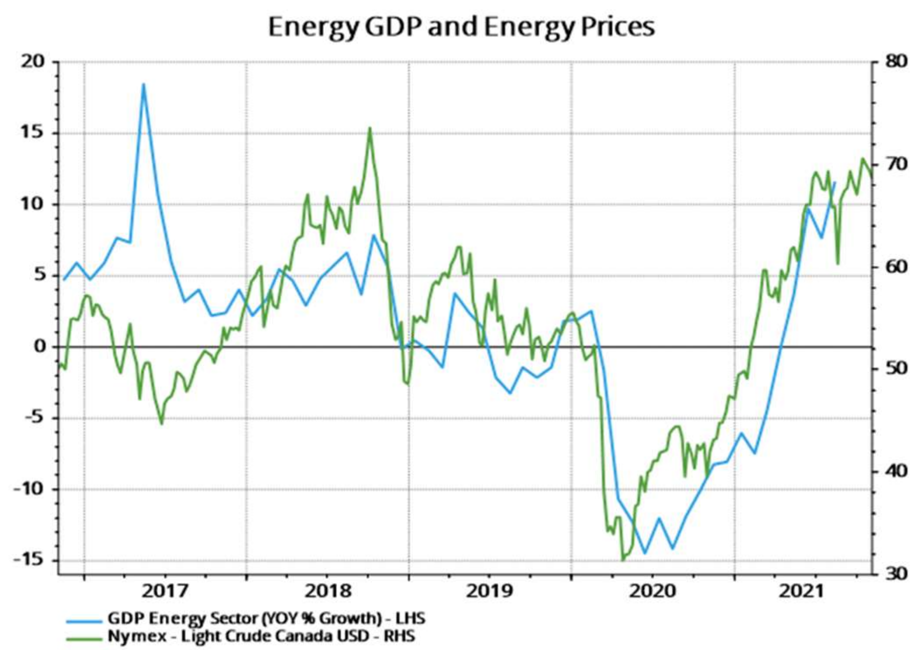
Source: Refinitiv Datastream

Canada

- <u>Canada's economy likely experienced strong recovery in Q3 2021, with continued rebound expected over the balance of the year and into 2022</u>
  - 2021 GDP is now forecast to grow at 5.0% YOY with a further growth of 4.4% in 2022.
  - Both Manufacturing and Services PMI Index remain at healthy levels.
  - 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.
  - However, CPI inflation continues to run well above the Central Bank's 2% long-term target driven by higher energy prices and pandemic-related supply bottlenecks.
  - The Central Bank recently ended quantitative easing (now only purchasing Canadian government bonds to replace maturing bonds).
    - The Central Bank is closely watching inflation expectations and labor costs to ensure that temporary forces pushing up prices do not become embedded in ongoing inflation.



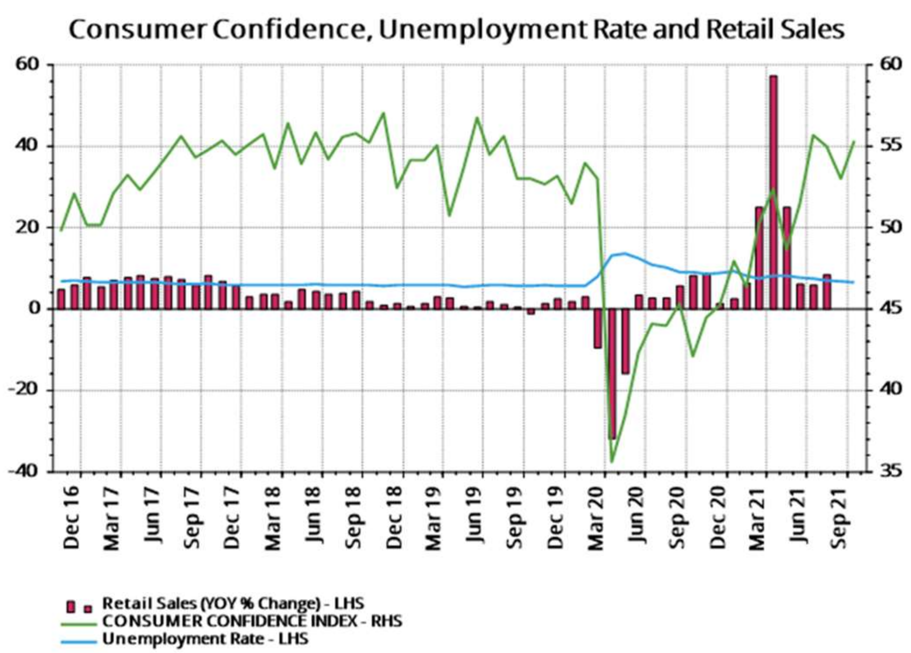
Source: Refinitiv Datastream



Source: Refinitiv Datastream

Canada (Cont.)

- <u>Canadian consumer and employment indicators remained highly positive in Q3 2021.</u>
  - Retail sales have shown continued positive YOY growth as COVID restrictions have been loosened due to the rapid pickup in vaccinations.
  - Household savings rates remain elevated indicating substantial capacity for pent-up demand.
    - Consumer surveys indicate high willingness to spend portions of these built-up savings in late 2021 and 2022.
  - Employment has steadily improved with the unemployment rate declining to 6.4% by September 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.
  - Housing activity appears to be moderating with sequential home price appreciation flattening after a torrid increase earlier in the year.
    - Home price affordability needs to monitored as does household debt levels well-above pre-pandemic levels.



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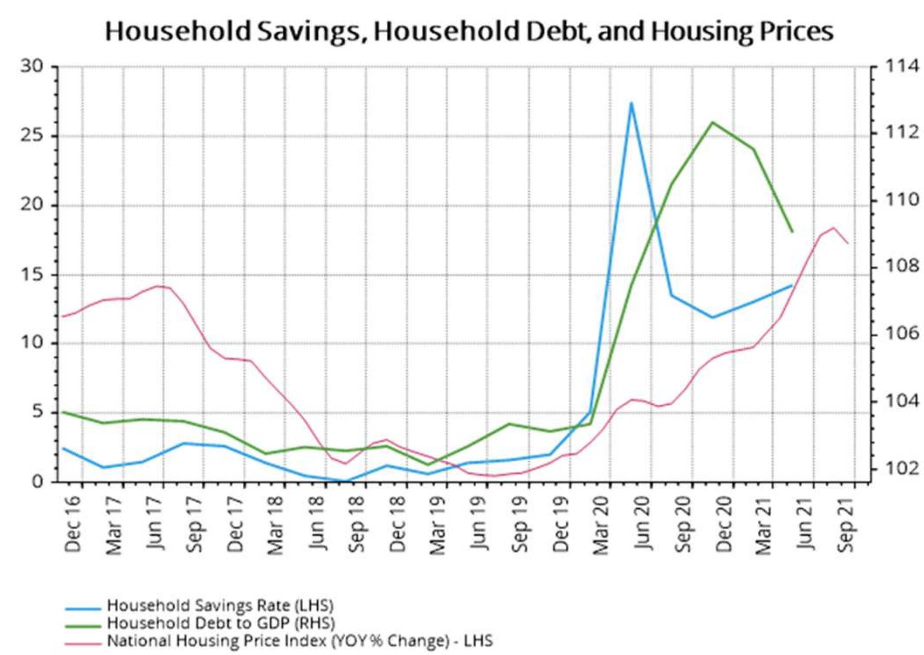
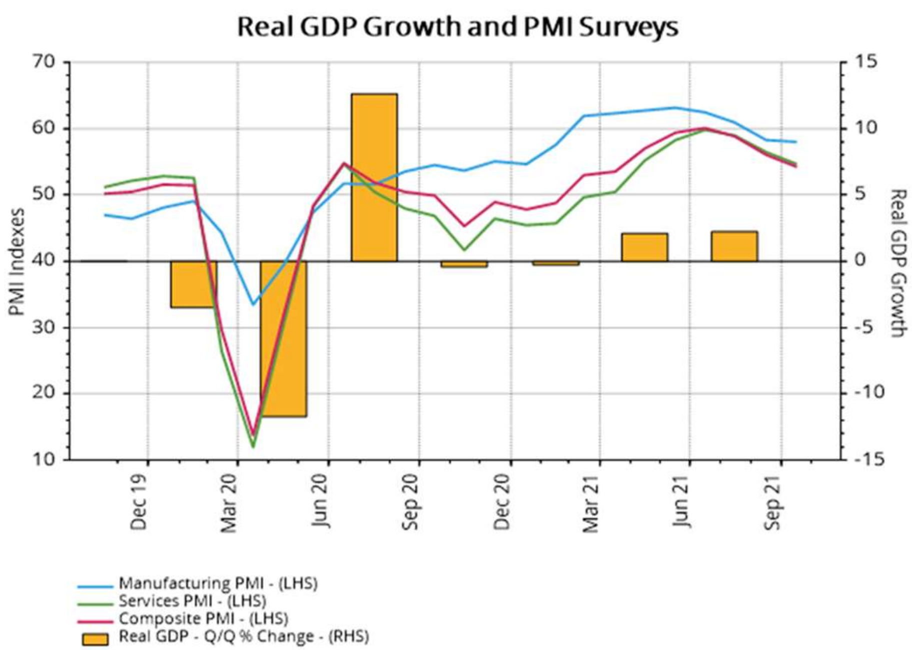


Source: Refinitiv Datastream

Eurozone

- <u>Eurozone (ex UK) GDP increased by 2.2% Q/Q in Q3 2021</u> and is now only 2.5% lower than pre-pandemic peaks levels.
  - Leading indicators such as PMI indexes have remained relative stable at strong levels. Business confidence continued to rise throughout the quarter (although any slowdown in China economic growth bears watching given the importance of China to European exports).
    - Encouragingly, this strong performance came despite Germany struggling due to chip shortages affecting production in its vast auto manufacturing sector. France, Italy, Belgium and Austria outperformed expectations.
  - Inflation surged to 4.1% (twice the ECB's 2.0% target). However, the ECB largely views the recent increases as transitory (in large part driven by surging natural gas prices and supply disruptions)
    - The ECB has thus far firmly pushed back on market expectations for rate hikes in 2022
- However<u>, the economic outlook remains delicate.</u>
  - COVID cases are rising sharply, and the Eurozone continues to be affected by supply shortages.



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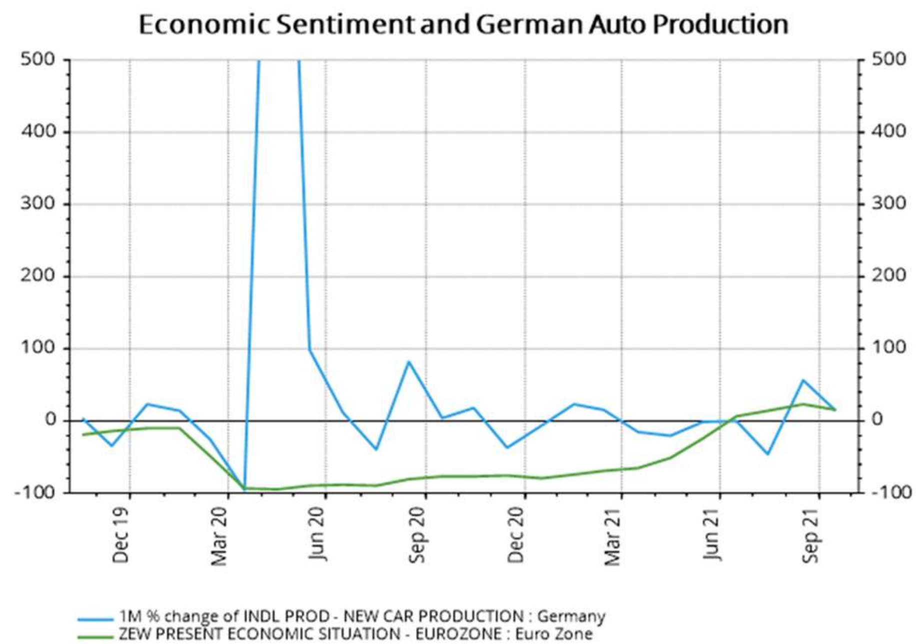
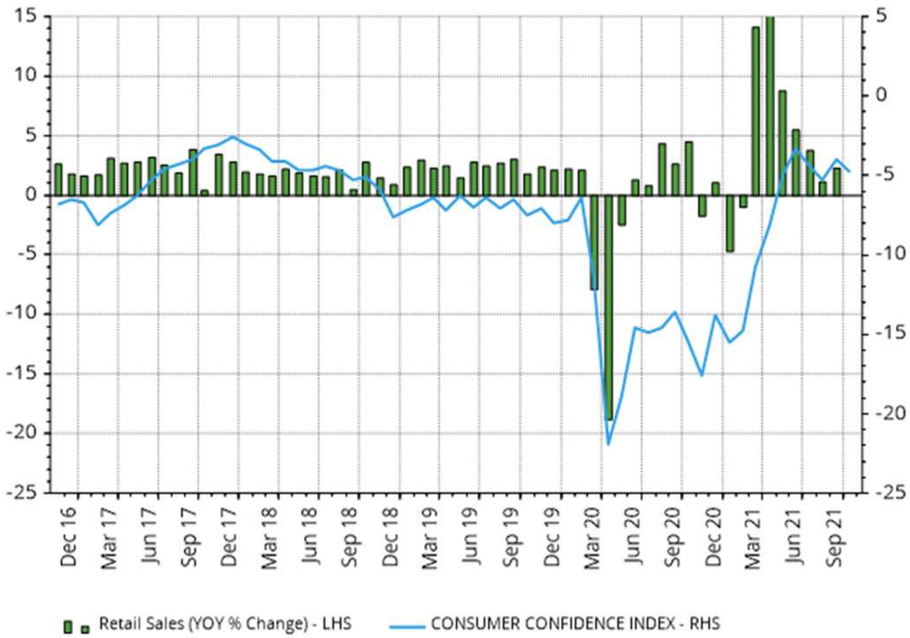


Source: Refinitiv Datastream

Eurozone (Cont.)

- <u>European consumption remained strong in Q3</u>
  - YOY retail sales growth maintained solid YOY growth against difficult compares with consumer confidence remaining high and above pre-pandemic levels.
    - However, consumer inflation expectations surged to the highest levels since 1993 (with surging natural gas prices ahead of winter driving worries).
  - Eurozone unemployment rates continued to declined modestly since an initial uptick occurred at the onset of the pandemic.
    - Since social protections and employee-friendly labor laws coupled with wage-replacement-based fiscal stimulus kept massive layoffs at bay, wage growth has been relatively subdued.
  - Home price appreciation has continued to accelerate and mortgage interest rates continue at rock-bottom levels.
    - Housing affordability needs to be monitored.

Consumer Confidence and Retail Sales



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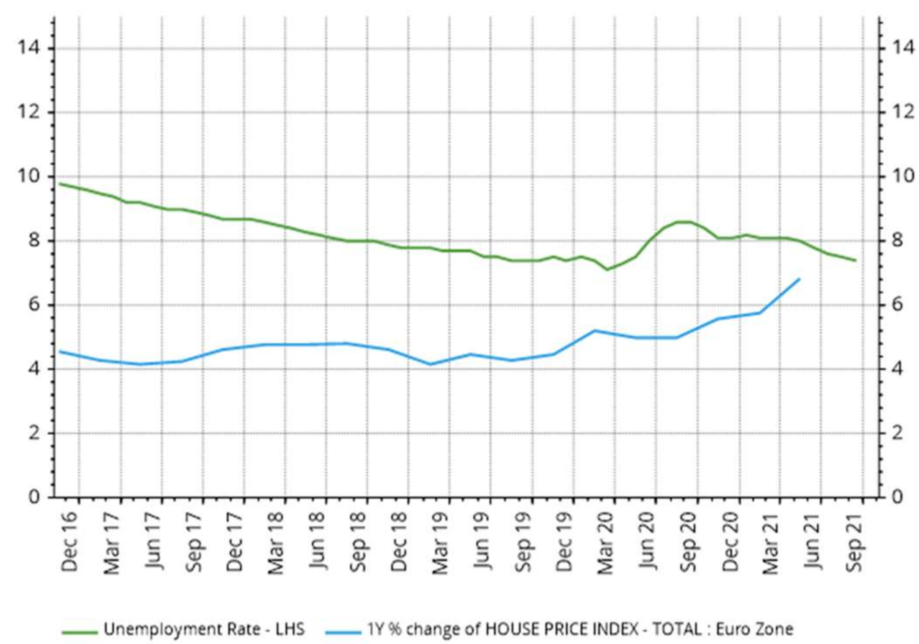
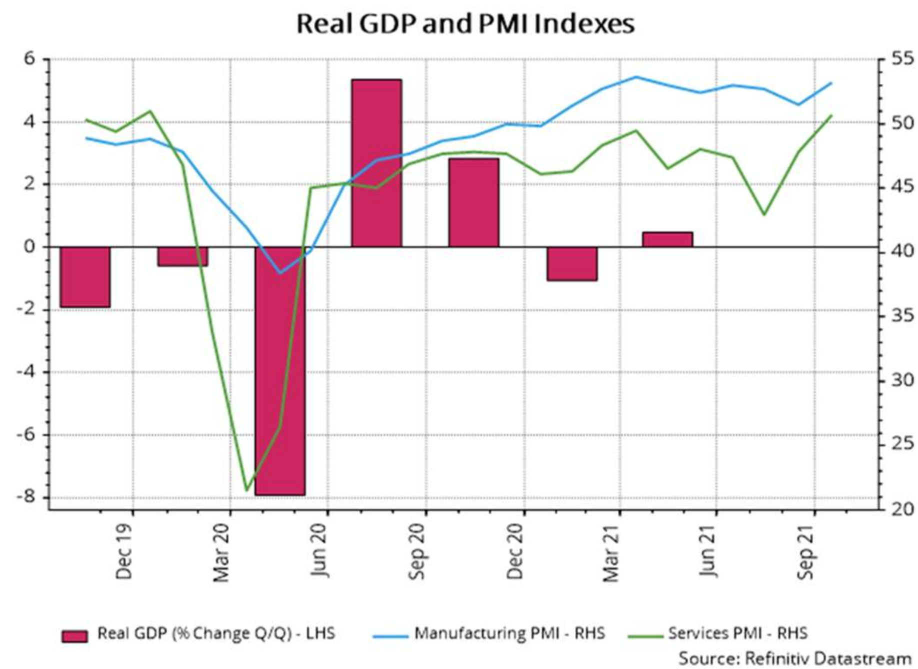
Unemployment Rate and Housing Prices

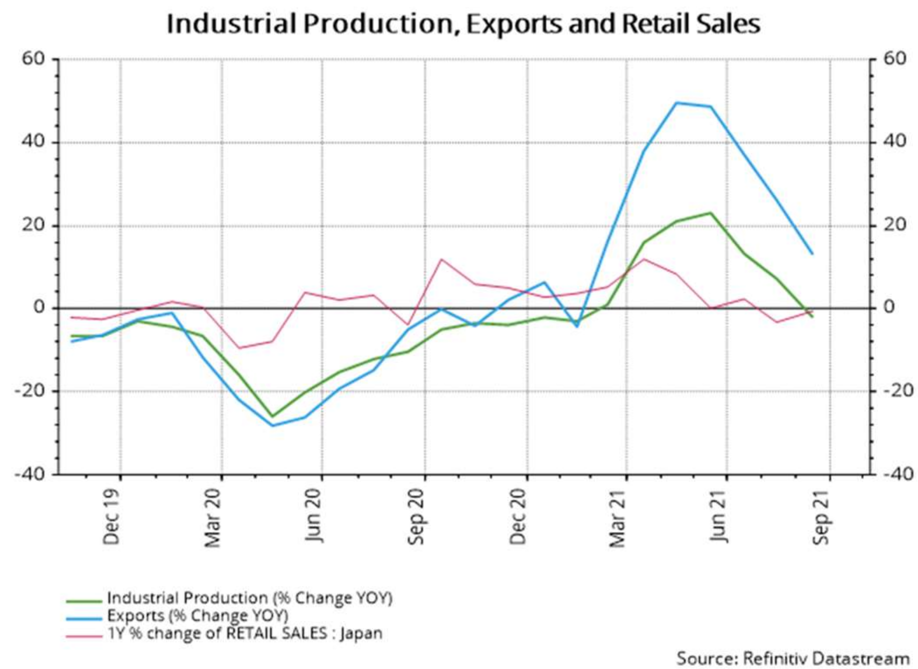


Source: Refinitiv Datastream

Japan

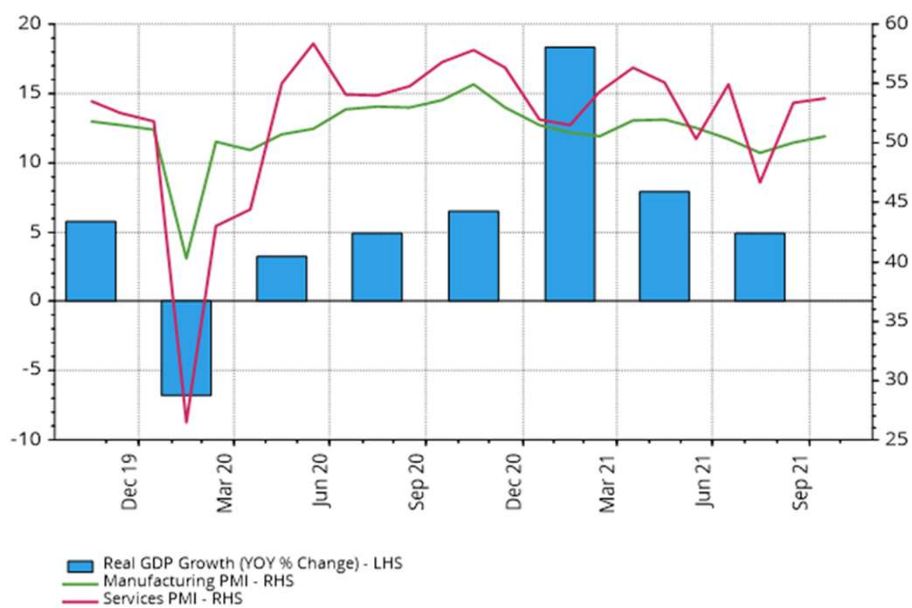
- <u>Japan's economy delivered weak performance in Q3, but should accelerate in Q4.</u>
  - Japan's GDP likely contracted 0.8% Q/Q (annualized) as curbs to contain COVID and supply constraints hit consumption and output.
  - Japan's export growth moderated in the quarter as automakers were forced to cut production due to parts shortages and factory disruptions in Southeast Asia,
    - Japanese companies also face rising raw materials costs, aggravated by a weaken yen which could affect profit margins in the near team.
  - Domestic consumption likely shrank by 0.5% Q/Q (annualized) due to a resurgence in COVID.
  - However, economists are forecasting strong 4.4% growth in Q4 as the government is expected to end state of emergency curbs (which should boost consumption in corporate activity).
    - Encouragingly, both manufacturing and services PMIs accelerated towards the end of the quarter and a recent Economy Watchers survey of Current Conditions jumped 13 points higher to a 7-year high.





China

- <u>China's YOY GDP growth slowed in Q3 2021 to 4.9% from 7.9% in Q2.</u>
  - A combination of a global supply chain bottleneck, a power crunch within China and weakness among real estate property developers all contributed to the slowdown.
  - China's property sector is undergoing a sharp slowdown driven by regulatory policy actions aimed at a) curbing excessive leverage among real estate developers (Evergrande the most prominent example) and b) restraining home price appreciation which was leading to affordability concerns and growing social inequality
    - Importantly, however, the real estate sector indirectly accounts for 1/3 of GDP so governmental policy will need to be managed effectively to engineer a soft landing.
  - Power supply restrictions coupled with increases in bulk commodity costs have curtailed downstream industrial production.
    - Industrial production ticked up a mere 3.1% YOY (the lowest rate since March 2020).
  - China has a zero-COVID tolerance policy and recent flare-ups across various provinces is expected to further constrain near-term GDP growth.



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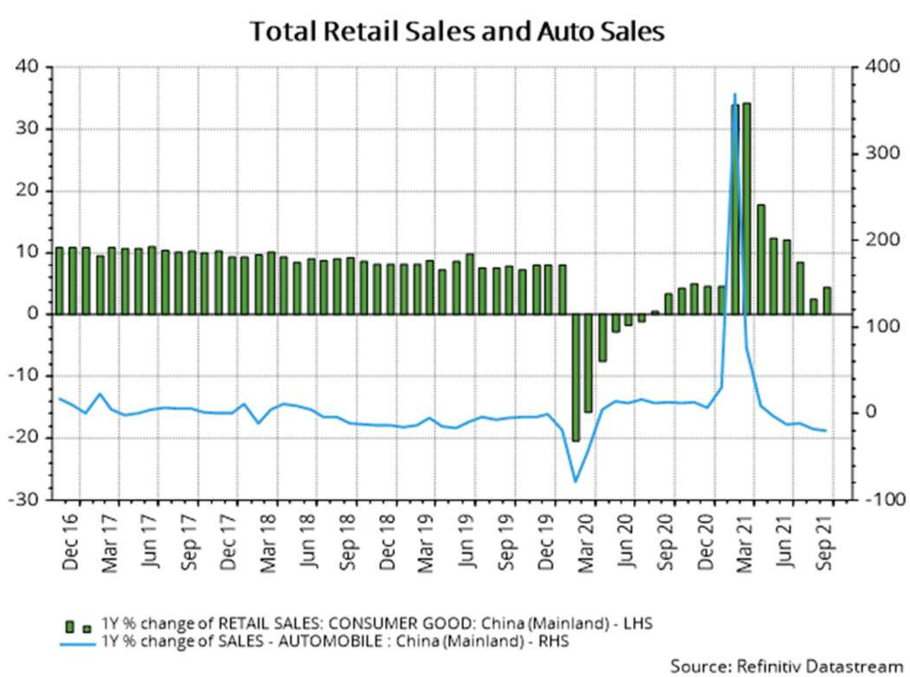
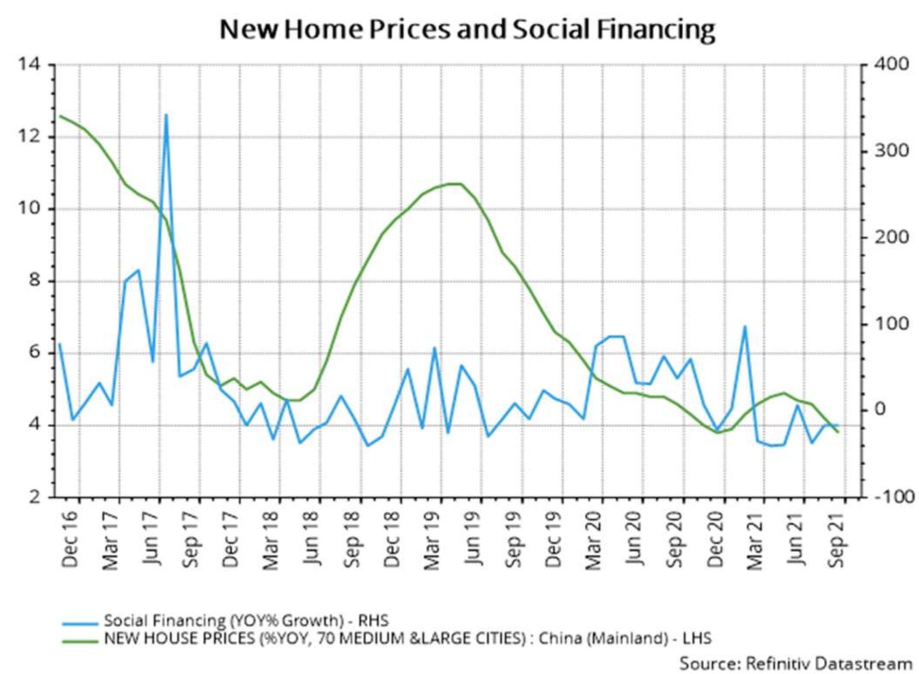
Source: Refinitiv Datastream

China (Cont.)

- <u>Chinese consumption was relatively mixed during Q3.</u>
  - YOY Retail sales growth slowed to 2.5% in August and 4.4% in September against relatively easy comparisons from the prior year.
    - Large-ticket items such as auto sales continued to show negative YOY growth while spending on services accelerated.
    - However, Alibaba just reported record sales for its annually-held "Singles Day Sales Festival " ending in early November, which may alleviate concerns surrounding a potential slowdown in consumption.
  - YOY new home price growth decelerated throughout Q3 as the government's regulatory measures aimed at curbing excess speculation are taking growth.
    - Additionally, the leverage problems exhibited by several prominent real estate developers are also restraining customer demand.
  - To ensure a managed "soft landing" for the property development sector, the government is likely to relax some aspects of overall credit policies (throughout the economy).

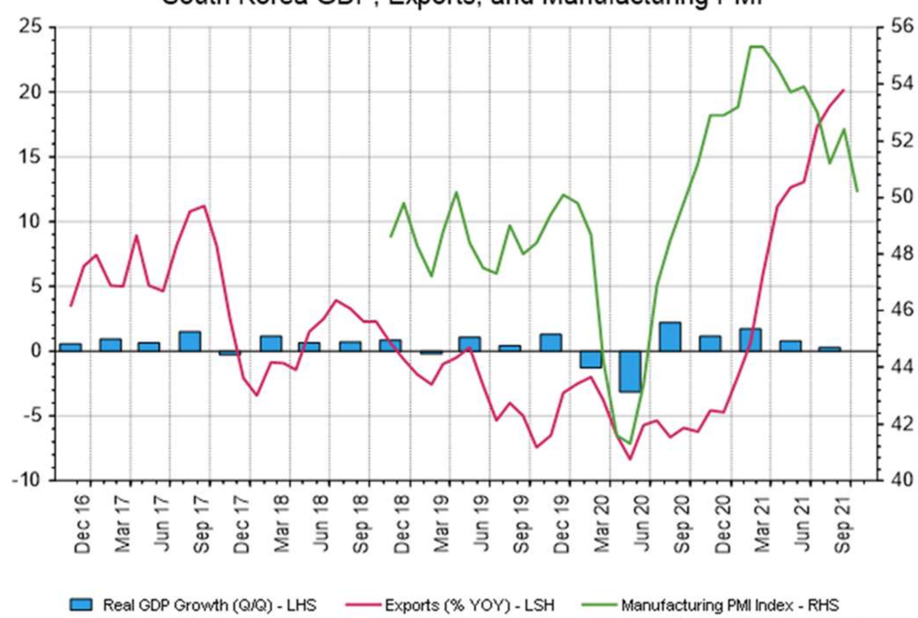




South Korea & Taiwan

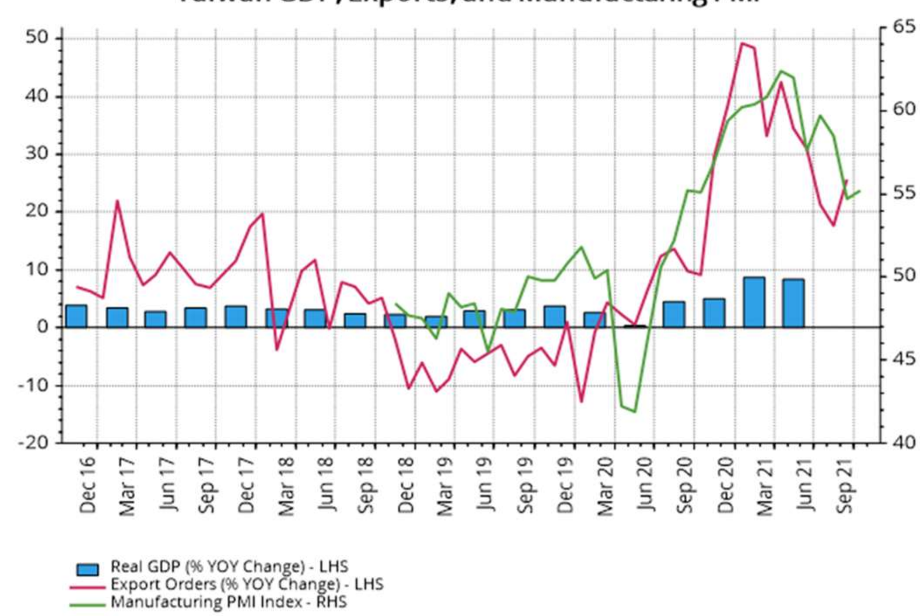
- <u>South Korea and Taiwan's economies delivered mixed performance in Q3.</u>
  - South Korea's GDP growth slowed sequentially to 0.3% Q/Q (4.0% YOY) from 0.8% in Q2 driven by subdued private consumption and weak construction and facility investment.
    - Export growth has remained robust thus far, but manufacturing PMIs rolled over during the quarter.
    - Toughened social distancing measures, impacts from a heat wave and rising raw material prices limited the recovery in domestic demand.
  - Taiwan's economy expanded at 3.8% YOY in Q3 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 by over 20% YOY as many local manufacturers invested in capacity expansions.
    - However, private consumption fell 5.5% YOY due to COVID outbreaks and increased restrictions.
      - > Consumption is expected to improve in Q4 due to declining COVID cases coupled with government stimulus.

South Korea GDP, Exports, and Manufacturing PMI



Source: Refinitiv Datastream

Taiwan GDP, Exports, and Manufacturing PMI



Source: Refinitiv Datastream

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Special Topic: Music Royalties

Music Royalties - Attributes

- Music royalties as an asset class have several positive attributes:

Investment Attributes	Comment
Relatively Predictable Cash flows with long duration	Well-constructed catalog purchases can provide predictable, growing annuity-level cash flow streams that are paid quarterly. Mature catalogs are also long-duration in nature
Low Correlation with Broader Equity Markets	Music revenues tend to demonstrate resiliency throughout economic cycles and cash flows are not correlated with equity markets
Structural Growth Opportunities	Streaming represents the largest structural growth driver as does new licensing opportunities to content providers such as Pelaton, TikTok, etc.
Attractive Yield	In a low-yield world, music royalties can provide attactive mid-to-high-single digit yields for investors

- The music industry is set to experience accelerating revenue growth (high single-digit CAGR) over the next several years driven by the rapid uptake of streaming.
  - Music royalties should concurrently benefit from overall music industry growth and may even outpace industry growth driven by growth from new licensees (need for content across social media apps like TikTok and entertainment like Peloton).
- These positive attributes have led to increasing institutional activity in the space over the past several years.
  - Several pure-play music royalty private equity funds have raised capital (Lyric, Primary Wave, Round Hill).
  - Additionally, larger PE organizations have engaged in music royalty transactions included KKR and Northleaf.
  - Publicly traded companies dedicated to music royalty acquisition including Hipgnosis (UK-listed).
  - Additionally, Warner Music and Universal Music Group have undertaken IPOs relatively recently and trade at 25x EBITDA multiples (based upon high music industry organic growth prospects).

Music Royalties - Background

- Intellectual property is the framework that underpins the economics of the music industry. Copyright protection arises once a musical work has been created – a musical work constitutes musical notes (with lyrics where relevant), written down, arranged, or recorded.
  - Investors pay fixed amounts to the songwriter (or subsequent owner of copyrights) to acquire the copyrights associated with songs. A catalog constitutes a collection of songs. Following the purchase of catalogs, investors are entitled to receive royalty payment cash flows for the duration of the copyright.
  - Generally, music royalties can be characterized by the following types of royalties:

Royalty Type	Manner in Which Royalties are Generated
Mechanical	Sale of music through physical formats (CDs, DVDs) or digital
Performance	Public performance of music through broacast TV, radio, cable, streamed, and live performance at concert or other venues
Synchronization	Music used in connection with visual images such as films, TV programs and commercials and video games
Digital	Music streamed on a digital platform like Spotify or Apple Music
Other	Used in mobile ringtones, toys, and novelty items

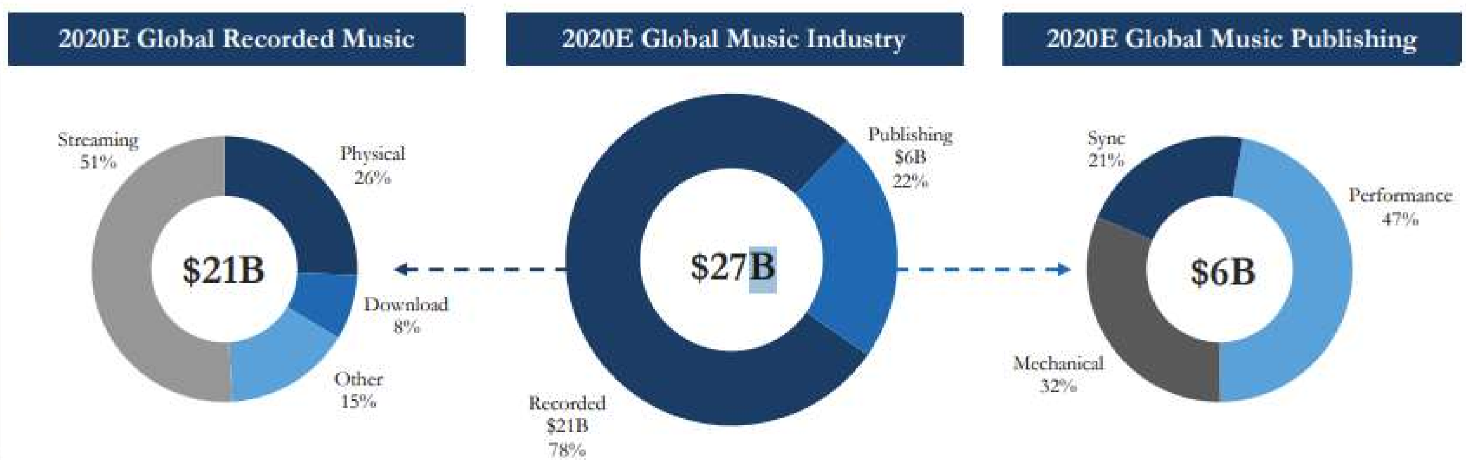
- Generally, music royalties track the overall revenues of the music industry. Royalty rates are typically set by regulatory bodies (publishing) or market negotiations (masters).
  - The regulatory environment has been favorable to copyright owners over the past several years, especially with regards to royalty rates set for streaming and digital music.
  - Recent examples of positive regulatory changes include a) Music Modernization Act of Oct. 2018 – codified music platforms' obligation to identify and pay royalties to rights holders, b) Copyright Royalty Board Standards Update of 2018 – resulted in expected 40% increase in streaming mechanical royalty rate to copyright owners (decision is currently being challenged by major music platforms).

Music Industry – Revenue Trends

- After suffering 15 years of declines from 1999 peak revenues of $27bln due to piracy and illegal downloading, the music industry has steadily grown over the past seven years.
  - Digital streaming has been the major contributor to the resumption of music industry growth. The global uptake of broadband and penetration coupled with the proliferation of social media sites has made music more accessible than ever before.

Catalyzed by music streaming demand, the global music industry has **grown at a 4% CAGR since 2014** and is expected to grow at a **9% CAGR over the next 10 years**

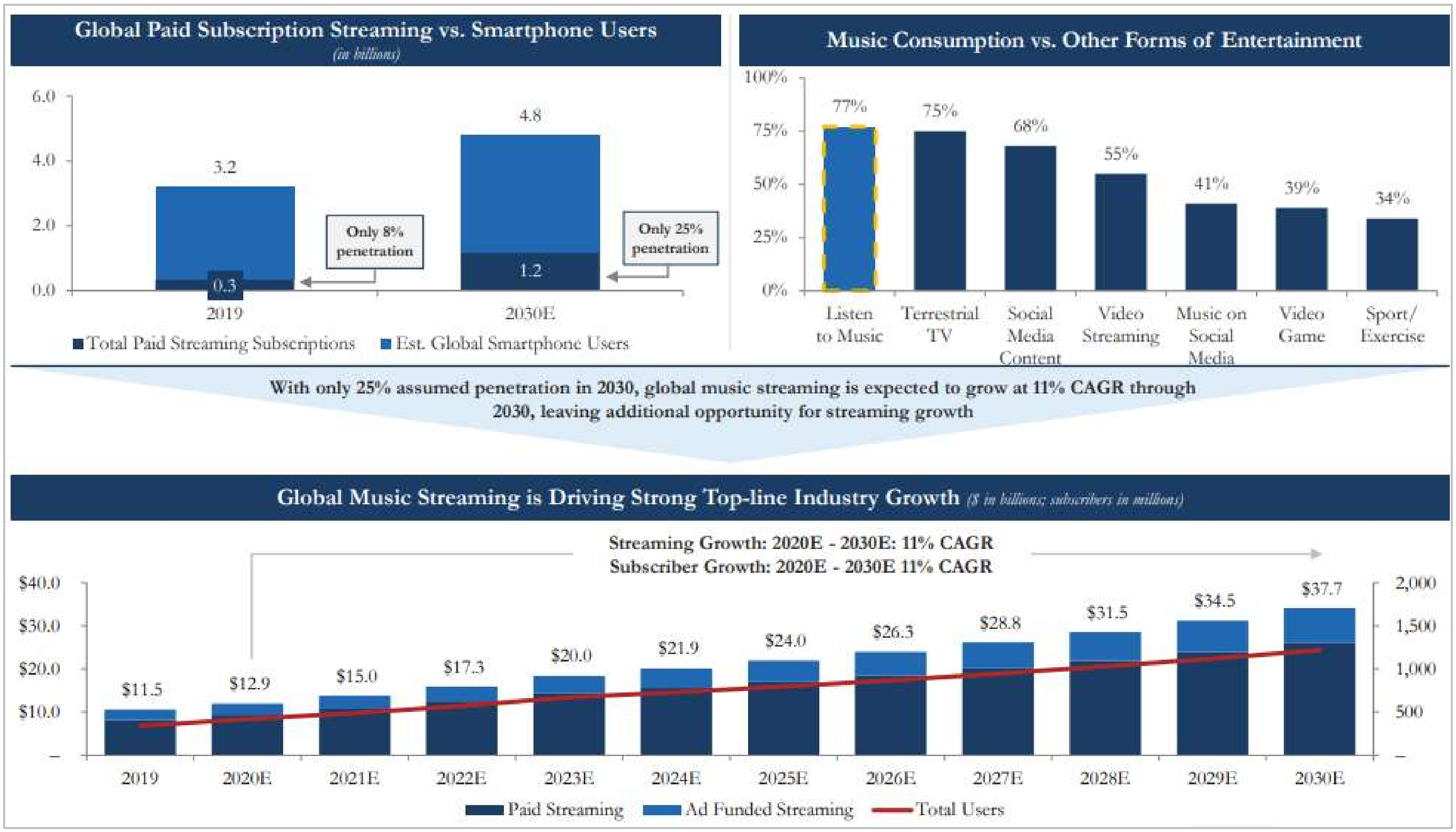
In 2020, the **recording** and **music publishing** is estimated to be a **$27B** total addressable market(1)



Source: Goldman Sachs Equity Research

Music Industry – Streaming

- The growth of streaming is one of the industry's largest catalysts with streaming estimated to account for roughly 72% of industry revenues vs. 51% presently
  - Still limited global penetration of paid streaming subscribers as a % of global smartphone users
  - Major markets like the US are still at only 27% penetration vs. early adopters like Sweden at 45%



Source: Goldman Sachs Equity Research

Music Royalties - Conclusion

- The $27bln global music industry has steadily grown since 2014 driven by new technology adoption and the emergence of digital streaming platforms (Apple Music, Spotify, etc.). Growth is expected to accelerate to 9% CAGR through 2030 as streaming penetration accelerates (especially in emerging markets).
  - Music royalties are expected to grow in tandem with the broader music market and have experienced an increasingly favorable regulatory environment.
- The music industry's attractive growth profile that is relatively non-correlated to equity markets and economic conditions has led to increased participation from institutional investors.
- Several institutional funds have raised music royalty funds (both public and private vehicles).
  - Funds vary in terms of AUM, transaction size with regards to catalog transactions, vertical integration with regards to copyright administration and royalty collection, etc.
- BCA is evaluating prospective music royalty private equity funds currently in market and is focused on identifying funds with the following characteristics:

Fund Characteristics	Comment
Team composition - mix of music industry operators and financial investment professionals	Look for funds with investment teams comprised of music industry veterans (industry contacts and knowledge) and financial executives (deal structuring and valuation)
Smaller Deal Sizes	Focused on purchasing smaller "non-marquee" catalogs through propreitary sourcing - often through direct deals with artist or band manager
In-house operational and adminstrative value-add team	Funds with in-house royalty administration teams that can increase royalty compliance, find non-paying licensees, etc.
Portfolio aggregator strategy	Focused on building attractive, diversified portfolio of catalogs through one-off purchases that can be scaled and sold in aggregate to larger institutional investors

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