



Review of Q4 2021 Economy and Current Capital Markets

February 21, 2022





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* All market data are as of 2/11/22 unless indicated otherwise.



Executive Summary



Capital Markets



- **Equity markets appreciated sharply by 6.7% in USD terms during Q4 2021 (ACWI Index) but have since declined by 5.1% through Feb 11, 2022.**
 - Q4's performance was driven by strong corporate earnings and economic data coupled with the Omicron variant proving to be much milder than originally feared. US markets significantly outperformed international markets in USD during full-year 2021 (S&P 500 +28.7% vs. 7.8% for MSCI ACWI Ex USA).
 - However, thus far in 2022, global stocks have declined sharply in the face of persistently high inflation and increased hawkishness from global central banks. US stocks have experienced larger pullbacks (-7.2%) given the S&P 500's higher exposure to quality and growth sectors such as technology, which have been hardest hit in the face of rising interest rates.
- **Corporate earnings remain strong but continued outperformance vs. expectations is less likely.**
 - During Q4, S&P 500 earnings grew 29% YOY while Stoxx 600 earnings (Europe) increased 20% YOY.
 - However, analysts are projecting lower rates of growth in 2022 (8% for S&P 500 and 7% for Stoxx 600).
 - These forecasts may prove more challenging to exceed as many companies are noting margin pressures from surging input and labor costs.
- **Equity valuations are elevated relative to historical averages, with multiple compression likely.**
 - Equity market valuations are somewhat elevated based on forward 2022 earnings. Stocks are trading at valuations 10%-20% higher than historical NTM levels.
 - *Relative to Treasuries* however, valuations based on 2022 earnings continue to appear reasonable (especially when factoring in real-yields).
 - As the economic recovery moves towards mid-cycle conditions, we expect equity market multiples to compress and to partially offset returns driven by corporate earnings growth.
 - The ultimate level of interest rates and the duration of the interest rate hiking cycle will ultimately determine where equity market multiples settle over the next two to three years.

We are incorporating these views into portfolio positioning by:

- Increased allocations to alternative assets with less correlation to public equities and credit
- Increased 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 (5.5%-6.5%) annually over a seven-year forecast period.
 - Returns in any individual year may vary considerably vs. the 7-year annualized forecast. We expect returns in 2022 could be well below the 7-year forecast given tougher comparisons with 2021 and the impact of a monetary policy tightening cycle just getting underway by central banks.
 - We anticipate increasing bouts of episodic volatility over the medium term (driven by surges in headline inflation, slowdowns from stimulus-induced peak growth levels, geopolitical tensions, and uncertainty regarding the magnitude and duration of interest rate hikes by central banks, especially the US Fed).
- US and Canadian government bond yields have risen from historically low levels
 - US and Canadian 10-year Treasury bond yields have risen sharply and now yield 2%. If rates were to rise an additional 50bps, we may recommend adding intermediate duration (5-10 year) bonds to portfolios.
- 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 Europe		Mid Single-Digit
Japan Topix		Mid-Single-Digit
MSCI Emerging Markets		Mid Single-Digit
FIXED INCOME		
US Treasury		Low Single-Digit
US Corp Investment Grade		Low Single-Digit
US Corp High Yield		Mid Single-Digit
US Corp Levered Loans		Mid Single-Digit
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) inflation and interest rate developments, b) corporate earnings trajectory vs. expectations, and c) geopolitical dynamics.
- In 2022, equity market may likely experience a regime shift.
 - For the first time in many years, US equities may very well underperform international equities during 2022.
 - The combination of still strong global economic growth, higher than normal inflation, and rising interest rates is favorable for cyclical sectors such as financials, energy, and materials and unfavorable for more highly valued growth companies (especially in the technology sector) and quality compounders.
 - Equity markets outside of the US have a much higher weighting towards these cyclical sectors than US markets.
 - US equity markets are most exposed (across developed equity markets) to growth and quality factors. Additionally, facing the highest levels of inflation, the US will likely experience a faster pace of monetary tightening.
 - > As such, US equity markets are at greater risk from short-term valuation multiple compression.
 - The last sustained period of relative International equity outperformance vs. US equities occurred during the 2003-2007 period, driven by synchronized global growth (especially China and other emerging markets) and a commodities super-cycle.
 - However, since the GFC, International outperformance vs. the US has been fleeting (as value stocks have outperformed growth stocks in limited instances and for short durations lasting up to three months).
- Government bonds are finally becoming more interesting as a portfolio construction tool.
 - Ten-year government bond yields have swiftly reached 2% in the US and Canada. We believe that the risk / reward becomes quite interesting around yields of 2.5% as intermediate duration government bonds have proven to be attractive hedges and money-making securities during recessions (which could occur in the event of a Fed or other central bank policy mistake).
- 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 one another.
 - A well-constructed Alternatives portfolio should be able to deliver 5%-9% annual returns with less than half the volatility of equity markets over multi-year time periods (offering a complement to fixed income).

Economic Activity

- Major world economies generally experienced strong GDP growth in Q4.
 - US Real GDP increased at a sharply higher 6.9% annualized rate Q/Q with strong consumer demand and limited effects from Omicron. Eurozone GDP grew only 0.3% Q/Q as many countries reintroduced COVID restrictions due to Omicron spread. Canada's economy is expected to have expanded at an annualized 5.5% Q/Q, and China's GDP growth was up 4.0% YOY (ahead of expectations but still a quarterly deceleration).
 - The IMF is forecasting above-trend Global Real GDP growth of 4.4% in 2022 and 3.8% in 2022.
- However, headline inflation continues to ramp and has yet to peak 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 developed nation central banks). The US CPI Index grew by 7.5% YOY in January 2022, the highest since February 1982.
 - However, inflation dynamics have been different across regions.
 - In the US, both headline (including energy and food categories) and core (excluding energy and food) inflation figures are well higher than normal (6.0% YOY or higher).
 - The US is showing signs of broadening inflation especially in shelter costs and across core services. Accelerating wage growth bears watching as this can create the dreaded wage / cost spiral leading to sustained inflation.
 - In Europe, inflation has largely been driven by sharp spikes in natural gas costs and from supply-chain disruptions. European inflation appears to be more transitory in nature.
 - Encouragingly, mid-term inflation expectations remain well-anchored for now.
- Major central banks are becoming more hawkish and many are raising interest rates.
 - However, the number of rate hikes and the magnitude of the total number of hikes are presently unknown.
- Inflation may start to decline in H2 2022 although there are credible arguments for it remaining elevated well into 2023.
 - 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.
 - However, (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 are showing signs of easing, although progress remains uneven.**
 - Container shipping costs from China to the US West Coast have declined 30% from their peak, and the number of idle containers sitting at the Port of Los Angeles is down 40% since early November.
 - Surveys of US manufacturing firms point to a moderation in supplier delivery times and backlogs.
 - Easing seasonal demand, an improving energy-price picture (in China) and resumption towards normal factory activity (especially in Southeast Asia) point towards an improving supply-chain picture throughout 2022.
 - However, the semiconductor shortage still shows few signs of abating with impact felt most acutely in the automotive sector.
 - It is likely well into 2023 before the global supply chains return close to normal operating conditions.
- **Rising energy costs bear watching.**
 - Oil prices have surged towards \$95 driven by higher-than expected-demand (as economies continue to re-open), sharply recovering travel, one-off supply disruptions, and heightened geopolitical concerns.
 - Thus far, publicly traded US shale producers (marginal suppliers) have maintained production discipline while several OPEC+ member countries have struggled to meet production expansion quotas.
 - In the short-term, oil prices could surpass \$100 and possibly reach \$120 / barrel levels by early summer.
 - However, rising oil prices will increase inflationary pressures which increase the risk of central banks hiking interest rates higher and faster than expected, which in turn could lead to global recessionary conditions.
 - In Europe, natural gas remains near all-time highs with storage levels below historical averages.
 - While weather pressure are likely to abate, the major flare-up in Ukraine / Russia tensions has the potential to severely restrict Europe's gas supply access and further drive up European natural gas prices.
 - A sustained rise in European energy costs could delay or reverse Europe's nascent post-pandemic recovery.
- **Rising geopolitical tensions are adding to equity market volatility.**
 - A sustained conflict between Russia and Ukraine could lead to sharp spikes in energy prices which would further exacerbate inflation and may ultimately lead the world closer to recession.



Capital Markets Review



Equity Markets - Performance

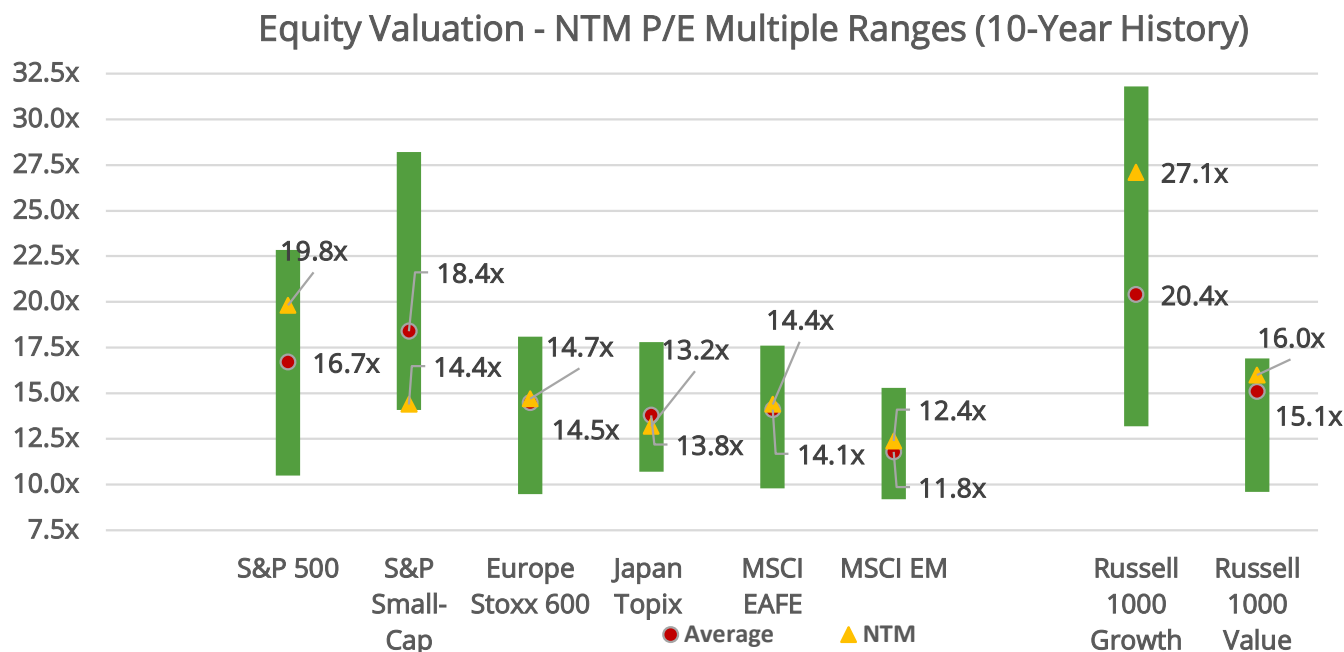
- Global equity markets appreciated 6.7% during Q4 (but have since declined by 5.1% in 2022).
 - US stocks continued to outperform international stocks during Q4 (+10.9% vs. +1.8%) and for full-year 2021 (28.2% vs. 7.8%).
 - However, international stocks have outperformed US stocks thus far in 2022 (-1.2% vs. -7.2%).
 - US stock markets are more exposed to companies exhibiting quality and growth style factors whereas international stock markets have greater exposure to cyclical sectors such as financials, materials, and energy.
 - > Global value stocks have sharply outperformed global growth stocks thus far in 2022 (0.0% vs. -10.1%) as growth stocks have been hit hard due to rising interest rates coupled with valuation compression.
- Over our 7-year forecast period, we continue to believe that stocks of high-quality companies will outperform cyclical stocks given their better business models, superior earnings growth and strong returns on capital.
 - However, over the next 6-12 months, we may experience a regime shift where value stocks outperform quality and growth stocks in a period of still strong economic growth, high inflation, and rising interest rates.
 - 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, certain industrials, and materials).

Equity Indices - (As of 2/11/2022)

	YTD 2022	Dec-21 Qtr	Total Returns (%) - USD			
			Annualized Returns			
			1Y	3Y	5Y	7Y
US Large Cap (S&P 500)	-7.2%	10.9%	13.5%	19.1%	15.2%	13.0%
US Small Cap (Russell 2000)	-9.5%	2.1%	-10.3%	11.5%	9.3%	9.2%
MSCI EAFE	-2.4%	2.7%	5.0%	10.8%	8.3%	6.2%
MSCI Emerging Markets	0.8%	-1.3%	-11.3%	8.6%	8.4%	6.1%
MSCI ACWI	-5.1%	6.7%	6.8%	15.5%	12.2%	9.9%
Russell 1000 Growth	-12.0%	11.6%	6.9%	24.5%	20.8%	17.0%
Russell 1000 Value	-2.3%	7.8%	16.2%	13.8%	10.2%	9.4%

Equity Markets - Valuation

- Current equity valuations are still elevated (but relatively less so compared with most of 2021).
 - Multiples based upon next-twelve-months (NTM) earnings appear 5%-15% higher than historical averages.
 - Investors are pricing in solid corporate earnings growth coupled with the likely maintenance of low interest rates relative to historical averages (10-year government bonds as proxies).
 - > Should either earnings growth rates prove lower vs. expectations or interest rates begin to rise further, equity markets may easily experience 10%+ corrections (with US equities most susceptible).
- Equity market valuations still appear fair relative to bonds.
 - The S&P 500 presently trades at 19.8x consensus 2022 earnings. If 10-Year Treasuries remain near present levels, this multiple may be justified vs. the 16.7x historical average.
 - Historically, the S&P 500 earnings yield (inverse of multiple) has averaged 300-350bps over 10-Year Treasuries. Based on that metric, an 18x-20x forward EPS multiple is “fair” for the S&P 500.
 - > However, one could argue that equities are still undervalued on a real-yield basis. Presently, the real yield on 10-Year Treasuries is slightly negative (using 10-year expected inflation rates). If the S&P 500 traded at 450-500bps premium to real-yields which would justify a 20x-23x forward multiple.



Fixed Income Markets - Performance

- Fixed income markets were relatively quiet during Q4.
 - In Q4 US Treasuries and Investment Grade bonds were relatively flat as interest rates were generally stable.
 - Corporate credit spreads tightened modestly in Q4 driven by continued strong corporate earnings.
- Thus far in 2022, fixed income markets have stumbled in the face of rising interest rates.
 - Persistently higher levels of inflation has led to increased hawkishness by major central banks. The US and Canadian central banks are now signaling rate hikes in 2022 and likely into 2023.
 - High yield bonds have declined due to a rise in base interest rates coupled with some modest spread widening (as markets have become more risk-off in the face of inflationary and geopolitical pressures).
 - However, leveraged loans are holding up well as investors have flocked to floating rate debt securities.

Fixed Income Indices - Characteristics and Performance in USD (as of 02/11/2022)

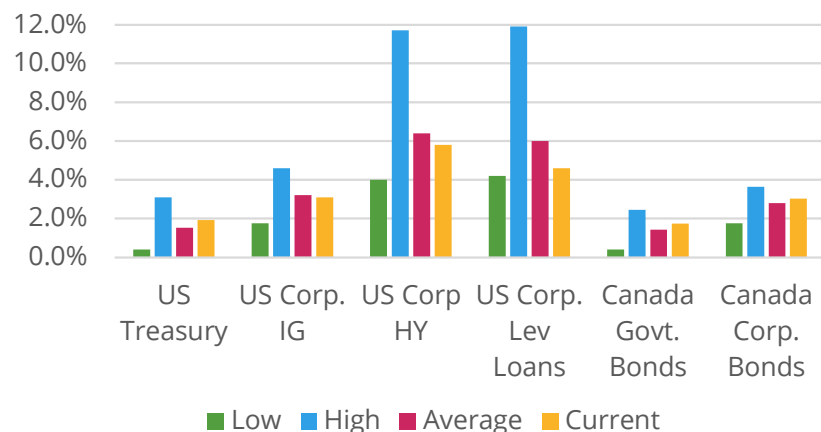
	% Ret YTD 2022	% Ret Dec. 2021 Qtr.	Annualized % Returns				Duration (yrs)
			1Y	3Y	5Y	7Y	
US Treasury	-3.1	0.2	-4.0	2.9	2.3	1.9	7.0
US Corp. IG	-4.9	0.2	-4.5	4.9	4.0	3.5	8.3
US Corp HY	-4.1	0.7	-0.3	5.7	5.0	5.3	4.1
US Corp Lev. Loans	0.4	0.8	4.0	4.7	4.2	4.3	NA
Barclays US Aggregate	-3.5	0.0	-4.0	3.2	2.8	2.4	6.6
Barclays Canada Agg. *	-4.1	1.4	-4.9	2.2	2.3	1.9	7.9

* Barclays Canada Aggregate Index returns in CAD

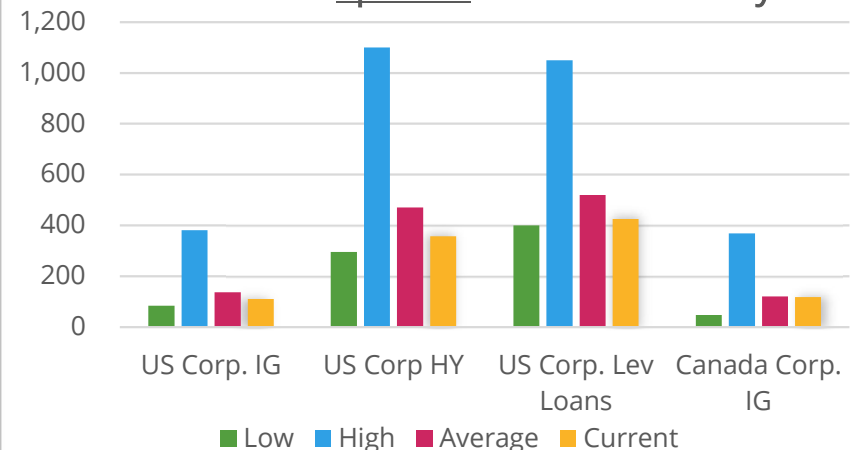
Fixed Income Markets - Valuation

- Government bond yields have risen sharply since year-end
 - Bond yields are now modestly higher than 10-year average levels although still below 20-year averages
- Corporate spreads (investment grade and high yield) have widened modestly.
 - IG and HY spreads are now at pre-pandemic levels.
 - Credit performance remains strong with default rates well below historical levels. Abundant liquidity raised during the pandemic coupled with strong economic conditions and corporate earnings are likely to result in range-bound credit spreads over the next 12-18 months.
 - However, credit spreads may widen if investors believe central banks may commit policy mistakes by raising interest rates too quickly.
- We prefer credit exposure through hedge funds and *private* credit strategies.
 - Hedge funds tend to invest in more catalyst-driven special situations with higher upside and contained downside (via single-issuer short positions).
 - Private 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.

Fixed Income Yields – 10 –Year History



Fixed Income Spreads – 10 –Year History



Alternatives and Currencies

- Hedge fund returns were essentially flat in the quarter.
 - Long-short equity strategies (+2.7%) were the best performing strategies in the quarter while event-driven strategies fared worse (-1.8%).
- Private real estate (as measured by the NCREIF Index) increased by 6.2% during Q4.
 - Performance driven by sharply improving underlying NOI fundamentals across several property types.
 - Industrial and multi-family properties are experiencing robust rental growth amidst strong demand.
- In 2021, private equity deal activity, exits, and fund raising were among the highest on record.
 - US PE deals increased to 8,624 in 2021 from 5,729 in 2020 with deal \$ volume increasing to \$1.24 trillion in 2021 from \$600 billion to \$750 billion annually from 2017 through 2020.
 - Valuation markups also increased in Q4 for PE portfolio companies driven by improving underlying EBITDA and rising public and private comparable multiples.
 - US PE exits increased to \$854bln in 2021, far eclipsing the previous record of \$413bln in 2018.
- Venture capital had a banner year in 2021 with records set for fundraising, deals, and exits.
 - US VC-backed companies raised \$330bln during 2021 (vs. \$167bln in 2020, the previous record) while the total number of VC deals increased to 17,054 in 2021 from 12,183 in 2020.
 - Exits increased to \$774bln with the vast majority of exits achieved through public listings.
 - Valuations across all stages (early to pre-IPO) increased markedly until late in Q4 2021.
 - Valuations across the venture complex have stumbled in early 2022 (especially in the public markets) as high-flying technology company valuations have compressed markedly in conjunction with rising bond yields.
- The USD Index strengthened by 1.5% during the quarter and has remained relatively flat since.
 - The USD strengthened by 1.8% vs. the Euro during the quarter and has remained relatively flat since.
 - The Canadian Dollar was relatively flat vs. the USD (the CAD appreciated by 0.3%).
 - The Russian Ruble and Turkish Lira were among the largest decliners in terms of EM currencies vs. the USD during Q4 and have remained volatile thus far in 2022.

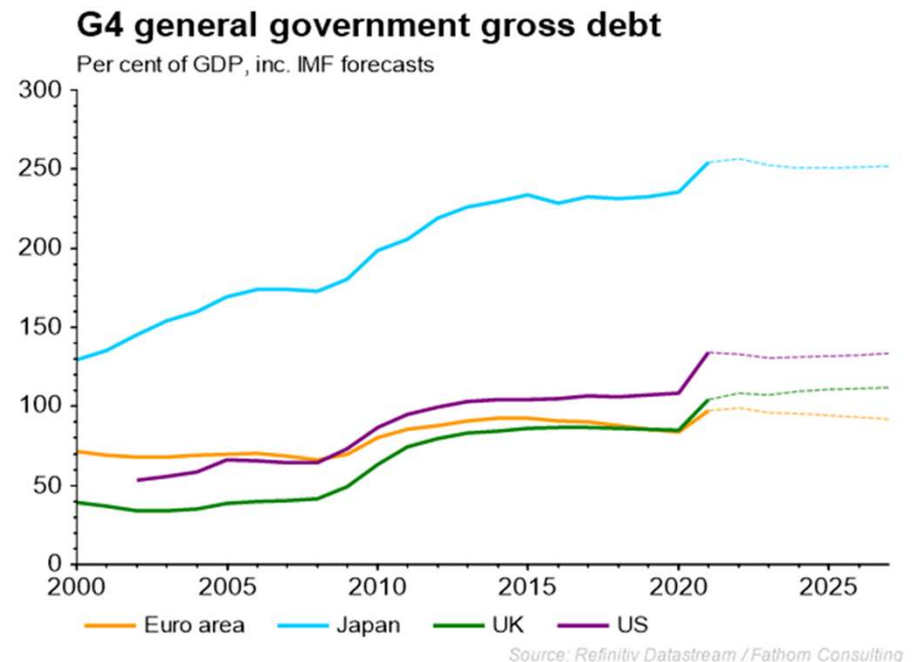
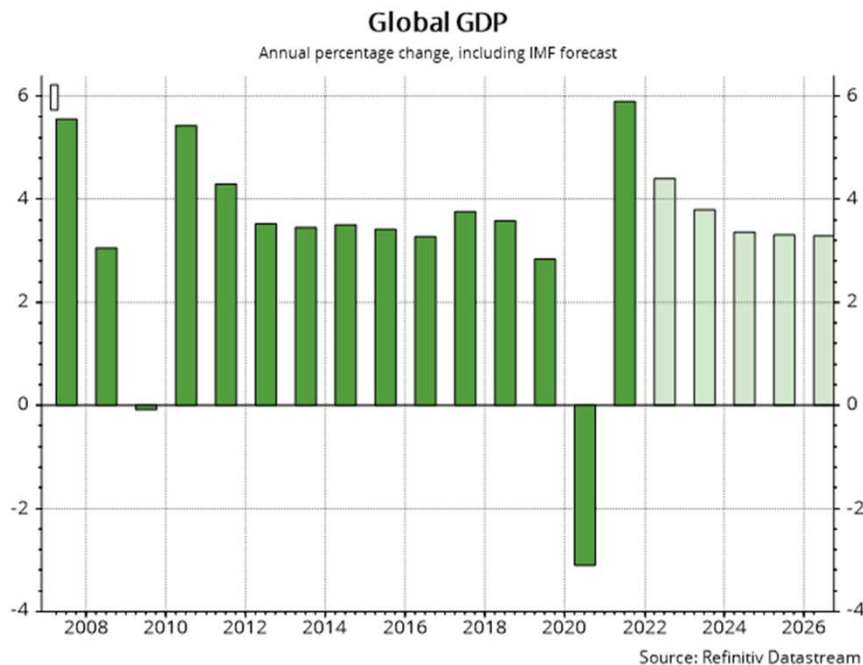


Economic Review



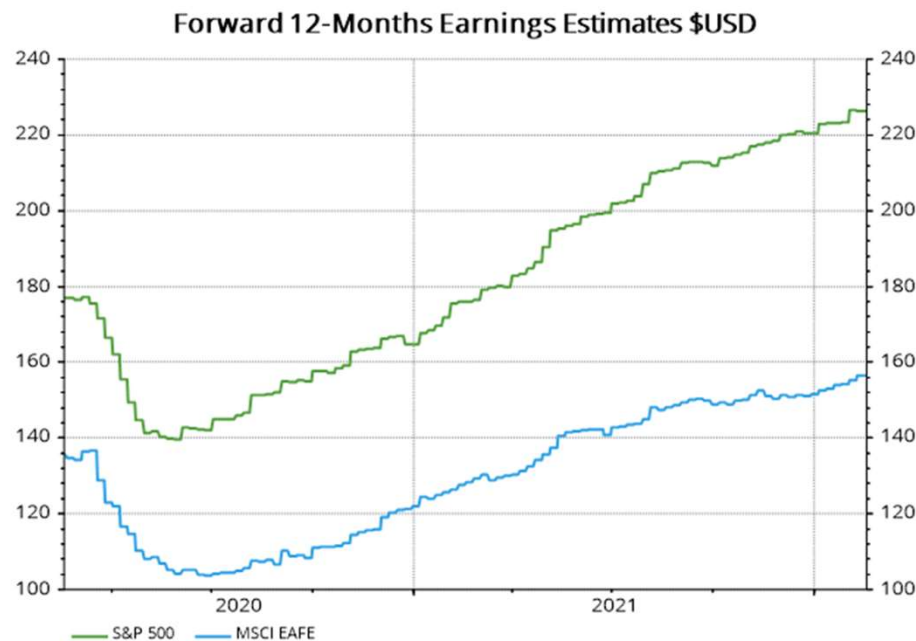
Global Real GDP Growth

- The IMF is projecting reasonably strong Global GDP growth for 2022 at 4.4% and 3.8% for 2023.
 - The US, Canada, and the Eurozone are forecasted to grow at 4.0% each during 2022 followed by more muted (but still-above trend) 2.5%-2.8% growth in 2023.
 - Emerging markets are forecasted to grow at 4.8% and 4.7% in 2022 and 2023, respectively. China growth is forecast to average 5.0%, India at roughly 8%, and other EM countries ranging between 2% to 3%.
- However, this forecast (especially from 2023 onwards) is subject to considerable uncertainty as governments across the world are withdrawing emergency pandemic fiscal stimulus and several central banks globally are enacting tighter monetary policy (in the face of inflation spikes).



Global Corporate Profits

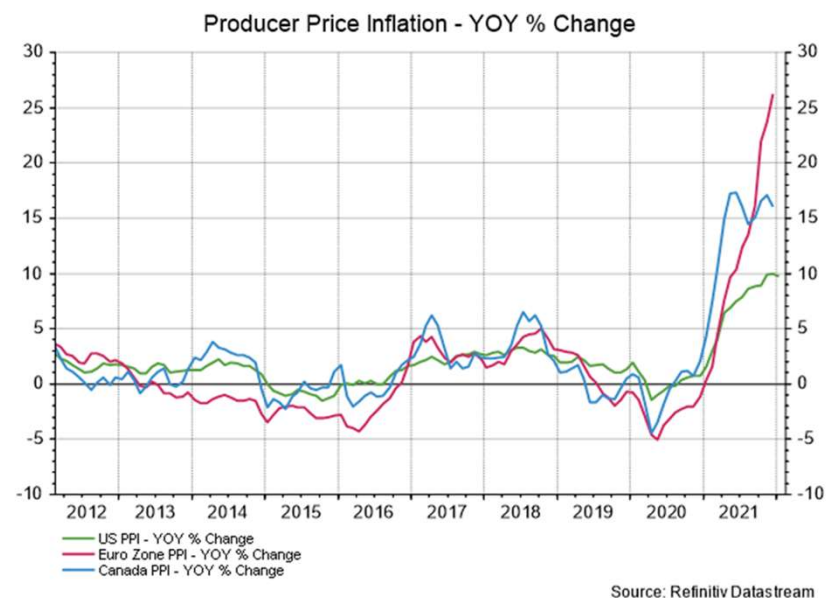
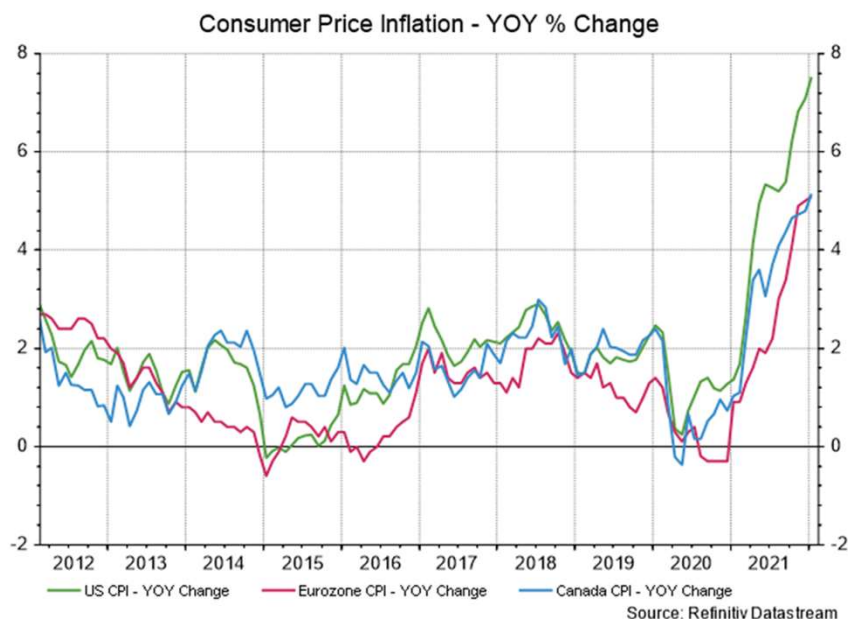
- Corporate earnings growth is stabilizing at more normalized levels versus the 50%+ levels experienced in 2021.
 - Both S&P 500 and MSCI EAFE earnings far surpassed analyst expectations throughout 2021 and exceeded pre-pandemic trend levels.
 - However, earnings growth for both indexes are now forecast in the 7%-8% range for 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, business inventory re-stocking, and resumption in world trade growth 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 continue to be passed on (without demand reduction) to end consumers. Additionally, labor costs are also rising sharply in the US.



Source: Refinitiv Datastream

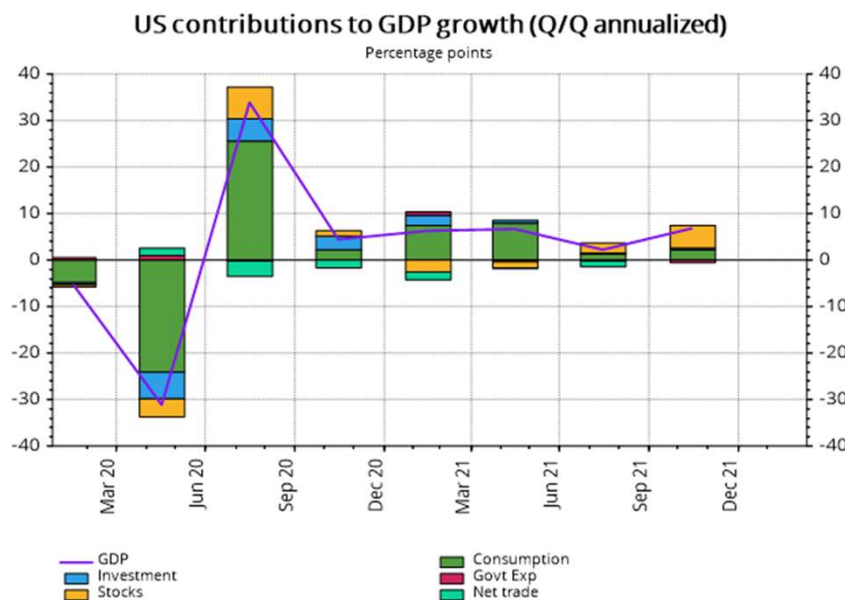
Inflation

- Both Consumer and Producer inflation have risen sharply throughout 2021 and into 2022.
 - Initially, producer inflation increased at a much faster pace during 2021 driven by rapid advances in commodity prices and lagged effects throughout the supply chain.
 - In Canada and Europe, rising energy costs are the primary driver behind the inflationary pressures whereas in the US, the pressures have been more widespread across numerous inputs.
- Corporations (especially in the US) have thus far been able to easily pass on these inflationary costs and then some to consumers (given consumers' very high excess pandemic savings).
 - However, corporations are increasingly citing inflationary pressures on earnings calls and consumer savings rates are back to pre-pandemic norms (although consumer balance sheets are still much wealthier).
- Inflation has proven to be much longer-lasting than initially expected. In the US, inflation has become relatively widespread across categories with wages and rental rates continuing to rise.
 - Supply-chain pressures are starting to ease and may normalize at some point in 2023.

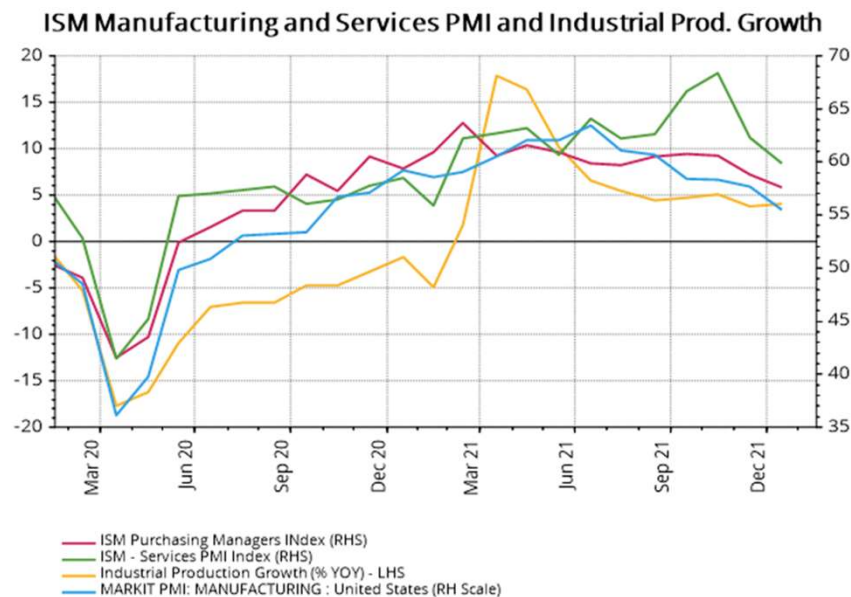


United States

- Real GDP grew by 6.9% Q/Q on an annualized basis in Q4 2021, a sharp increase from Q3.
 - Key drivers included robust consumer spending and business inventory restocking.
 - Omicron cases appear to be receding sharply and most economists are forecasting another strong year of GDP growth above 4% in 2022.
- Leading indicators such as Manufacturing and Services PMI Indexes have remained healthy.
 - Manufacturing PMIs have retreated from earlier high levels as supply constraints have remained (semiconductors) or in some cases worsened.
 - Services PMIs have retreated from extremely high levels in the Fall in conjunction with Omicron spread. However, most economists expect service activity to accelerate during 2022 given robust demand and sharply declining COVID case counts.
- Monetary policy is likely to become more restrictive as the Fed embarks on an interest rate hiking cycle (although policy still loose by historical standards).



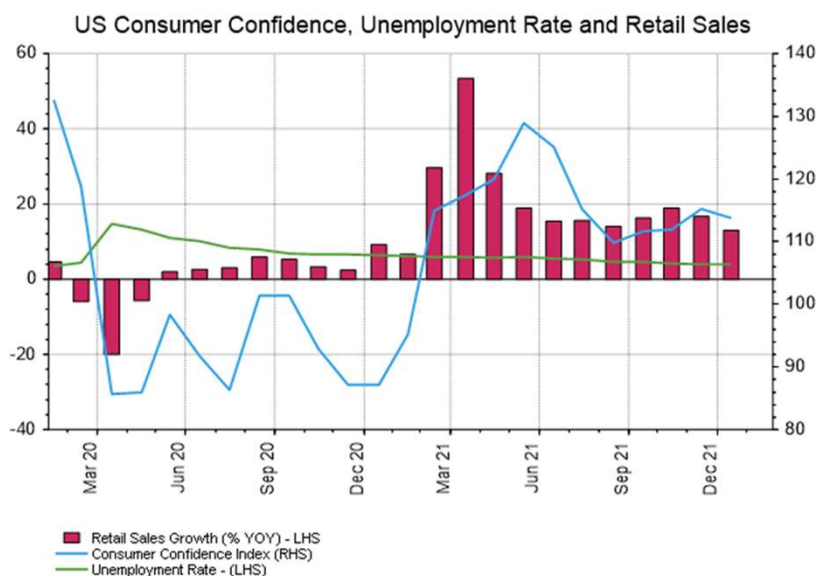
Source: Refinitiv Datastream



Source: Refinitiv Datastream

United States (Cont.)

- US consumption remained strong throughout Q4 with healthy retail sales growth and continued declines in unemployment rates.
 - Elevated personal savings balances drove significant gains in consumption as evidenced by record retail sales growth and surging durable goods and services expenditures.
 - Consumer savings balances and household wealth remain sharply elevated.
 - However, personal savings rates (as a % of income) are trending down towards pre-pandemic levels. As such, consumer savings balances will need to be monitored as 2022 progresses and into 2023.
 - Consumer confidence remains mixed as inflation continues unabated and has broadened.
 - The unemployment rate has declined to 4.0% by YE 2021 vs. 6.7% at the beginning of 2021.
 - However, the US is facing an acute labor-shortage (especially in services driven industries despite sharply rising wage growth).
 - > Wages increased 0.7% MOM and 5.7% YOY in January (among the highest in recent times).
 - > In January 2022, monthly wage growth outpaced inflation for the first time in several months (due to surging wage growth).
 - > The potential for development towards a negative wage-price spiral needs to be monitored.



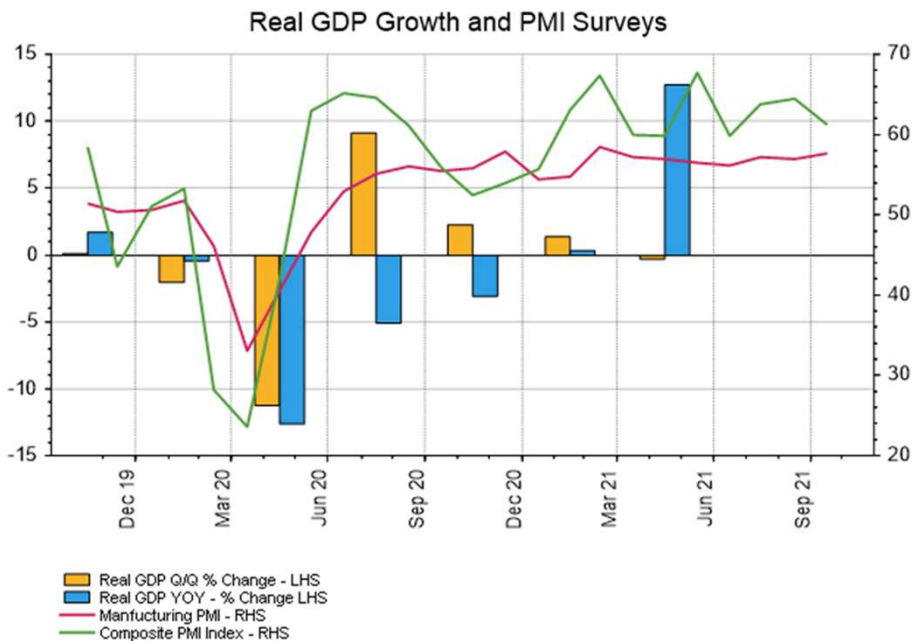
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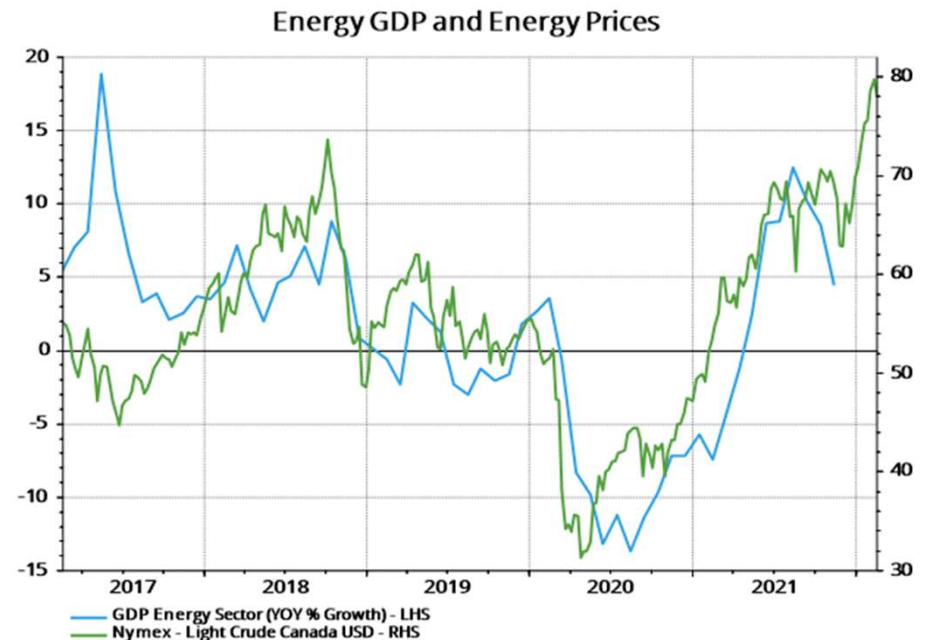
Source: Refinitiv Datastream

Canada

- Canada's economy likely experienced strong recovery in Q4 2021, with further above-trend growth projected for 2022.
 - 2021 GDP is now forecast to grow at 4.7% YOY with a further growth of 4.1% 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, consumer inflation has escalated to 5.1% (highest since 1991), driven primarily by higher energy prices and pandemic-related supply bottlenecks coupled with robust consumer demand.
 - The Central Bank is likely to embark on an interest rate hiking cycle beginning in March 2022.
 - Markets are currently pricing in 7 hikes over the course of 2022 and 2023.
 - The Central Bank is also likely to begin reducing its balance sheet in Q1 or Q2 2022.



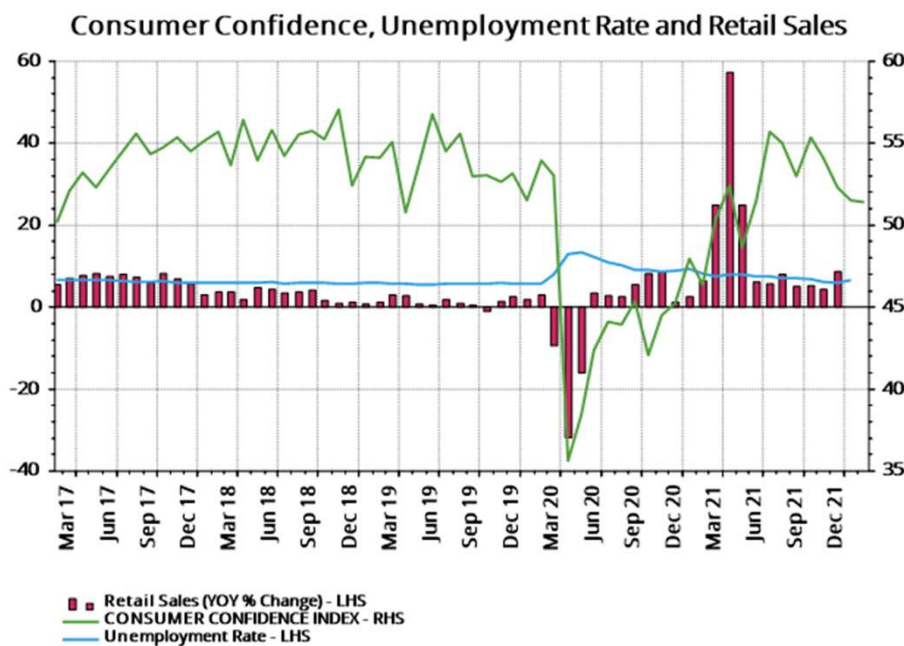
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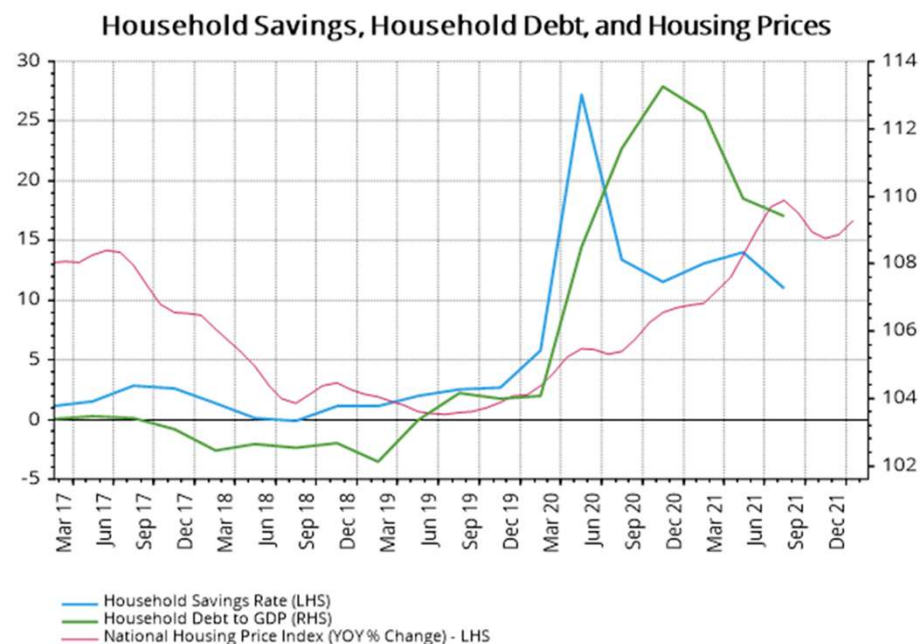
Source: Refinitiv Datastream

Canada (Cont.)

- Canadian consumer and employment indicators remained highly positive in Q4 2021.
 - Retail sales have demonstrated continued strong YOY growth as consumers are spending elevated savings.
 - Employment steadily improved through most of 2021 with the unemployment rate declining to 6.0% by December 2021 vs. 9.4% at the beginning of the year.
 - However, the rate ticked back up to 6.5% in January (likely due to seasonal effects and some COVID restrictions due to Omicron).
 - On a positive note, hiring intentions as reported in the Bank of Canada's Business Outlook Survey were the highest ever recorded.
 - As in the US, small and medium businesses are also reporting significant worker shortages.
 - Housing prices have continued to appreciate at mid-teens levels YOY with home price affordability declining.
 - Household debt levels remain well-above pre-pandemic levels and need to be monitored.



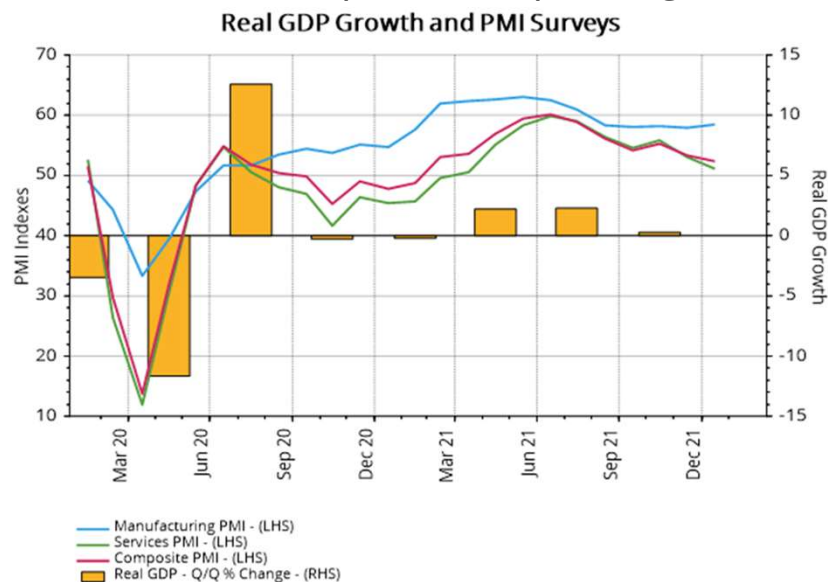
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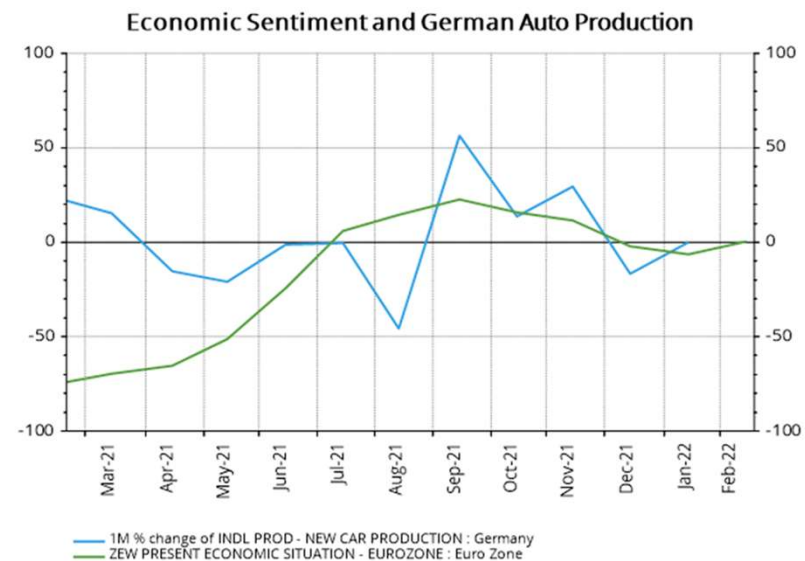
Source: Refinitiv Datastream

Eurozone

- Eurozone (ex UK) Real GDP increased by 0.3% Q/Q in Q4 2021, a slowdown from Q3 levels due to rising Omicron cases.
 - Manufacturing PMIs have remained strong while services PMIs declined due to increased COVID restrictions.
 - 2021 also saw varied Real GDP growth rates across EU members with France, Italy and Spain registering 4.9% to 6.7% annual growth whereas Germany witnessed slower growth at 2.7%.
 - Leading indicators have picked up sharply in February 2022 as COVID restrictions were loosened.
- Inflation has surged to 5.1% (well-ahead of the ECB's 2.0% target).
 - The bulk of the surge was driven by rising energy (natural gas) prices with energy costs up over 35% YOY. Fortunately, energy costs are abating as Europe has imported LNG and winter weather has been warmer than forecast.
 - The ECB has adopted a more hawkish tone in recent weeks with officials considering potential rate hikes in late 2022 should inflation not subside.
- Rising tensions between Russia and Ukraine could impact Europe adversely should the conflict broaden into a deeper more-prolonged war.



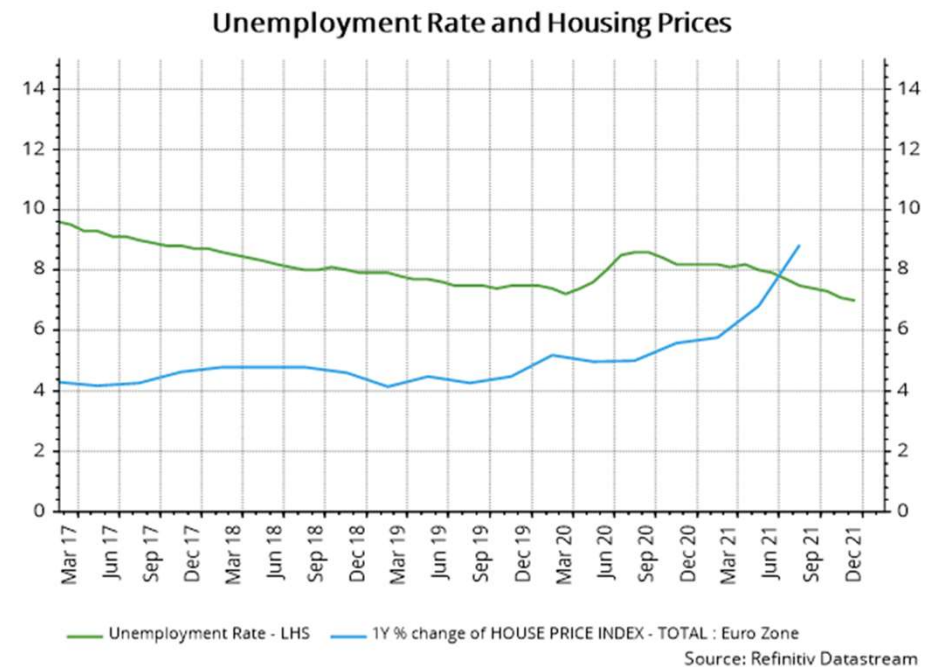
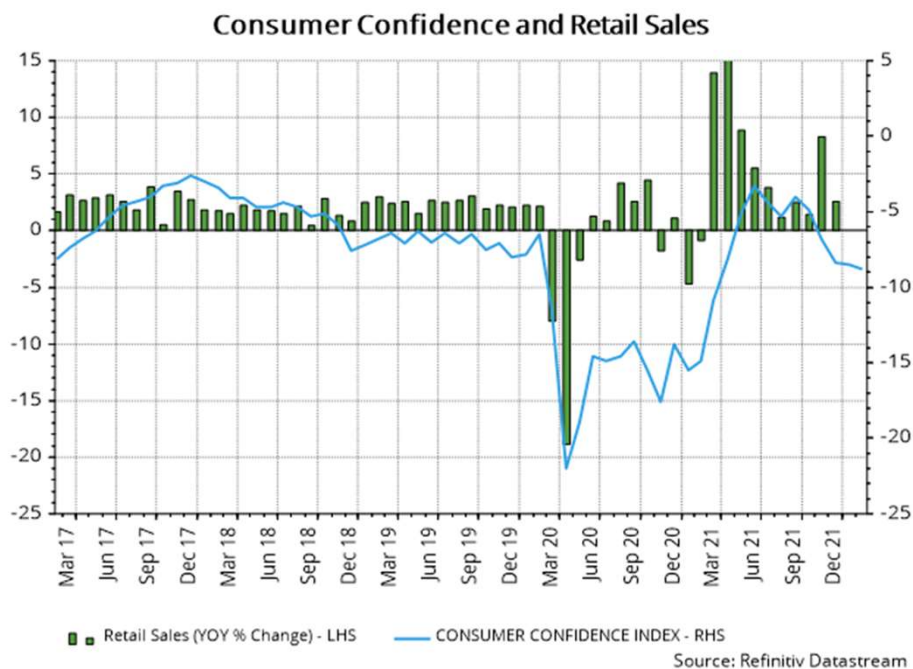
Source: Refinitiv Datastream



Source: Refinitiv Datastream

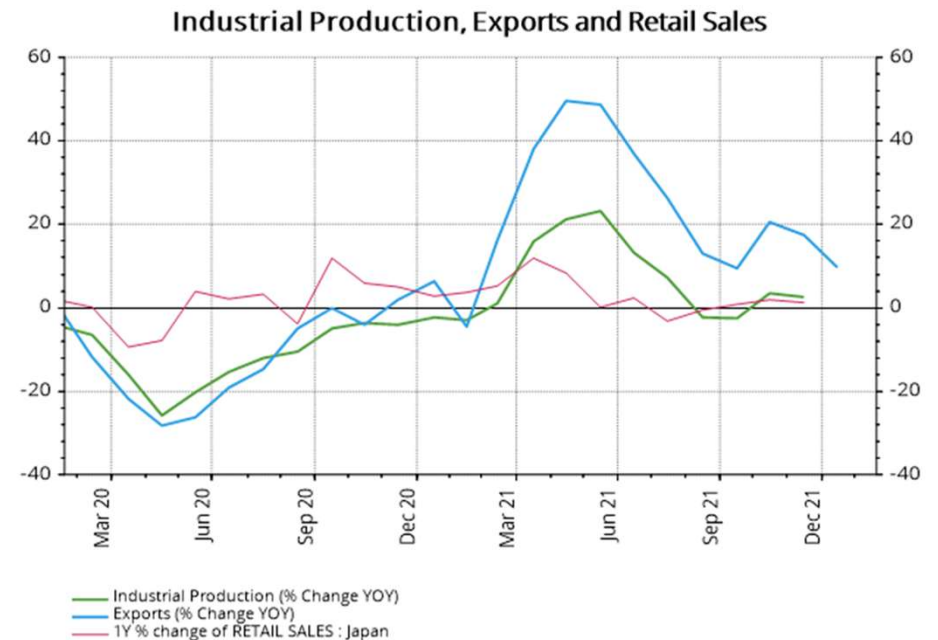
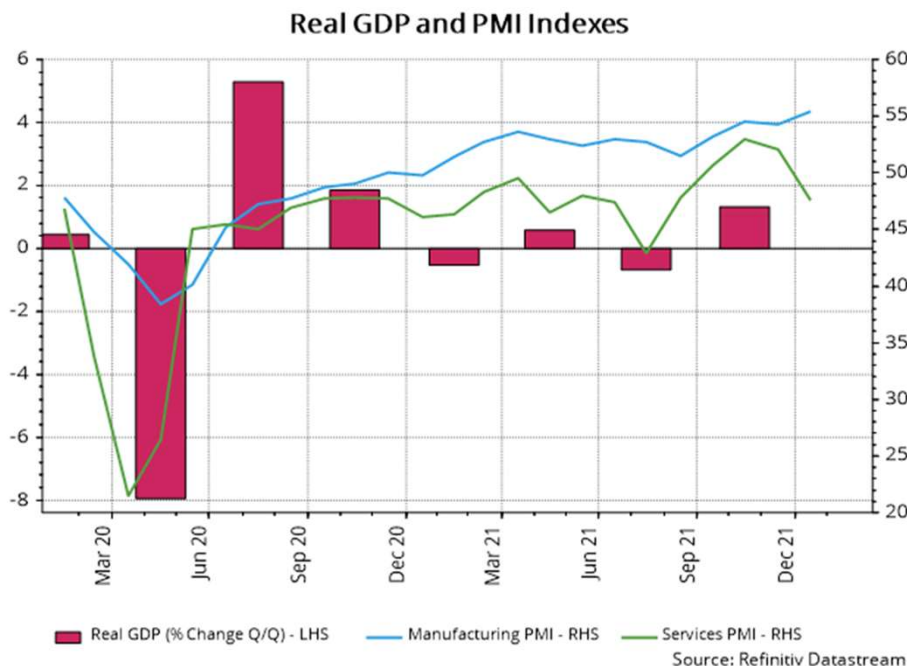
Eurozone (Cont.)

- European consumption remained strong in Q4 as a whole
 - Overall, retail sales exhibited strong YOY growth during Q4. However, December retail sales declined 3% m/m and grew at a lower 2% YOY as Omicron spread led to higher COVID restrictions.
 - Additionally, consumer inflation has surged to the highest levels since 1991 with spiking energy costs accounting for the bulk of the cost inflation.
 - Consumer sentiment has declined in recent months and bears watching as European consumers have built up significant excess savings but are facing rising cost pressures.
 - Eurozone unemployment rates have continued to decline and are now back at pre-pandemic levels.
 - Home price appreciation has accelerated sharply throughout 2021 as consumers are flush with excess savings and European mortgage rates remain near rock-bottom levels.



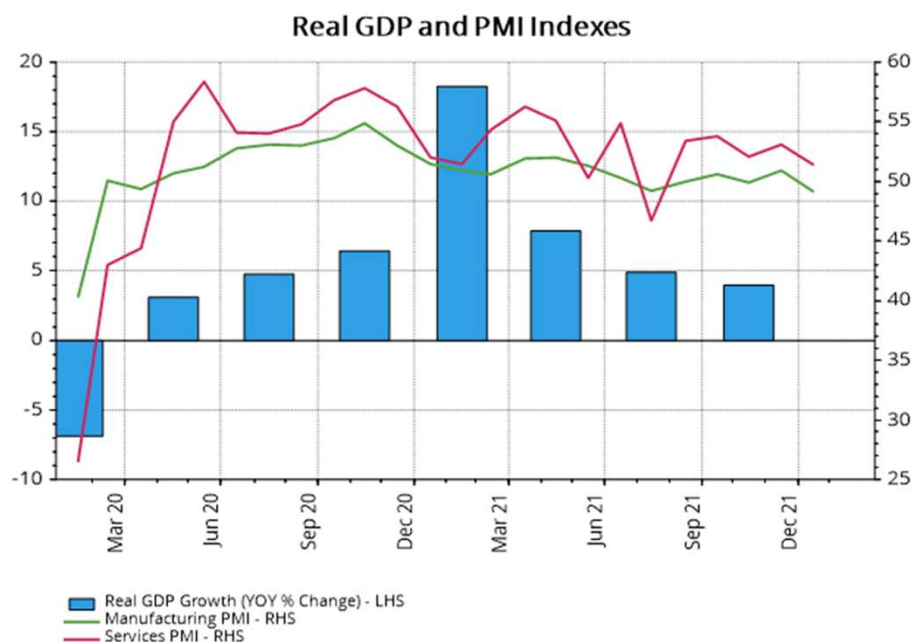
Japan

- Japan's economy accelerated in Q4 after recovering from a weak Q3.
 - Japan's GDP increased 1.3% Q/Q and 5.4% on an annualized basis as domestic consumption recovered due to loosened COVID restrictions. However, the economy may slow in Q1 2022 due to Omicron spread.
 - Manufacturing PMIs have continued to grow whereas services PMIs contracted in January likely due to Omicron spread and increased COVID restrictions.
 - However, companies are facing rising raw materials costs, aggravated by a weakening yen which could affect profit margins in the near term. Wholesale prices increased 8.2% YOY in December after increasing 9% in November.
 - Most economists are forecasting a stalling of the economy in Q1 2022 as rising COVID cases will likely lead to reduced consumption and supply chain delays may affect export growth.
 - In 2021, Japan recovered at a far slower pace than other developed economies. As such, the Central Bank continues to maintain ultra-loose policies while other central banks embark with monetary tightening.

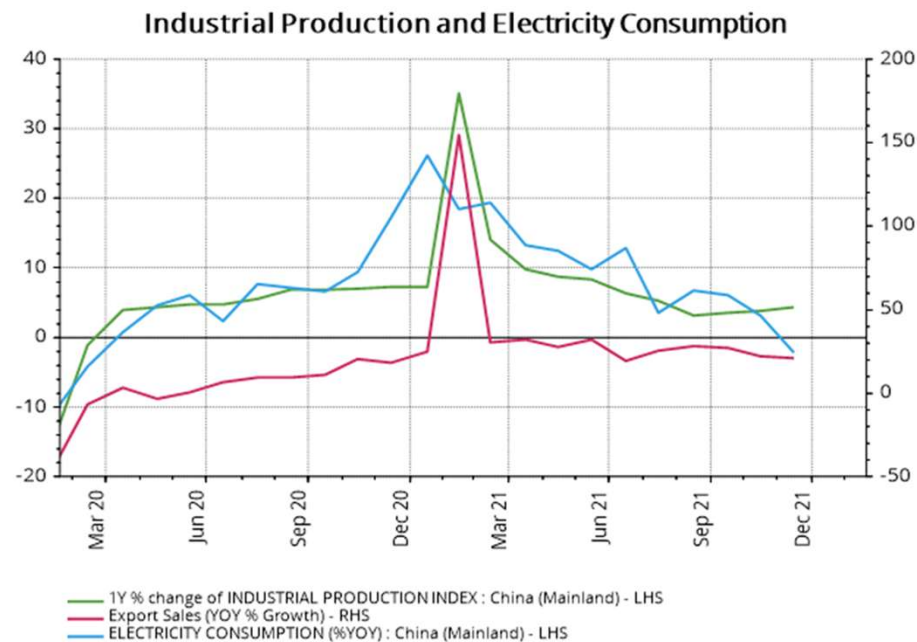


China

- China's YOY GDP growth slowed further in Q4 to 4.0% YOY (but grew 8.1% for full-year 2021).
 - A combination of COVID-19 resurgence and a real estate downturn restrained economic momentum.
 - However, growth in Q4 was bolstered by industrial production which rose 4.3% in December YOY (accelerating from November's 3.8% YOY growth).
 - Exports were a key bright spot and grew 21% YOY
 - Consumption weakened significantly amid renewed COVID-related disruptions in certain cities.
 - Economists believe that China will struggle to achieve 5% GDP growth in 2022 as the country is facing a deepening real estate crisis coupled with maintaining a zero-tolerance approach towards COVID.
 - However, Chinese authorities are already loosening monetary policy and will like encourage local banks to increase lending to stimulate regional economic growth.
 - Unlike in most other parts of the world, consumer inflation has remained very low in China (sub 2%) which grants the Central Bank flexibility to deploy a variety of monetary easing measures.



Source: Refinitiv Datastream



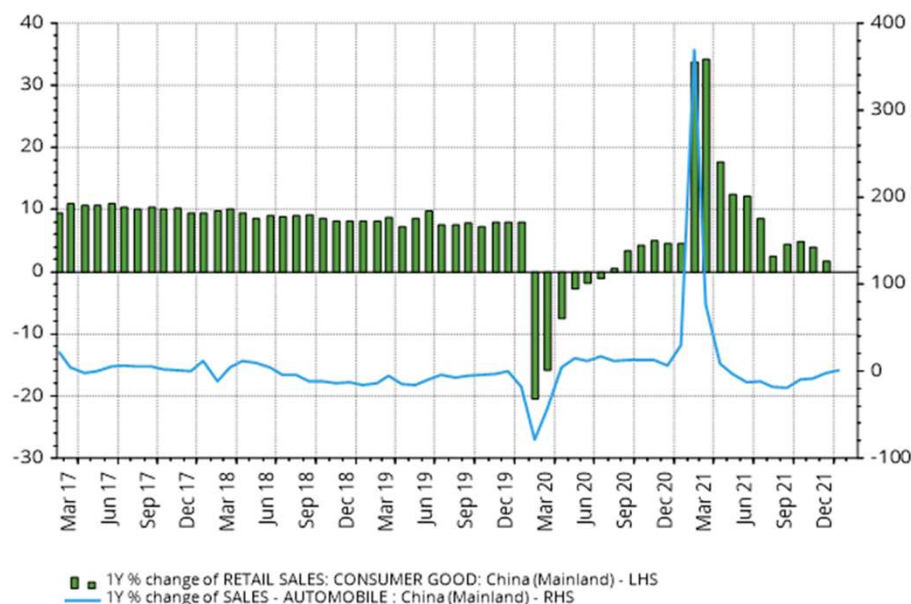
Source: Refinitiv Datastream

China (Cont.)

■ Chinese consumption slowed over the course of Q4.

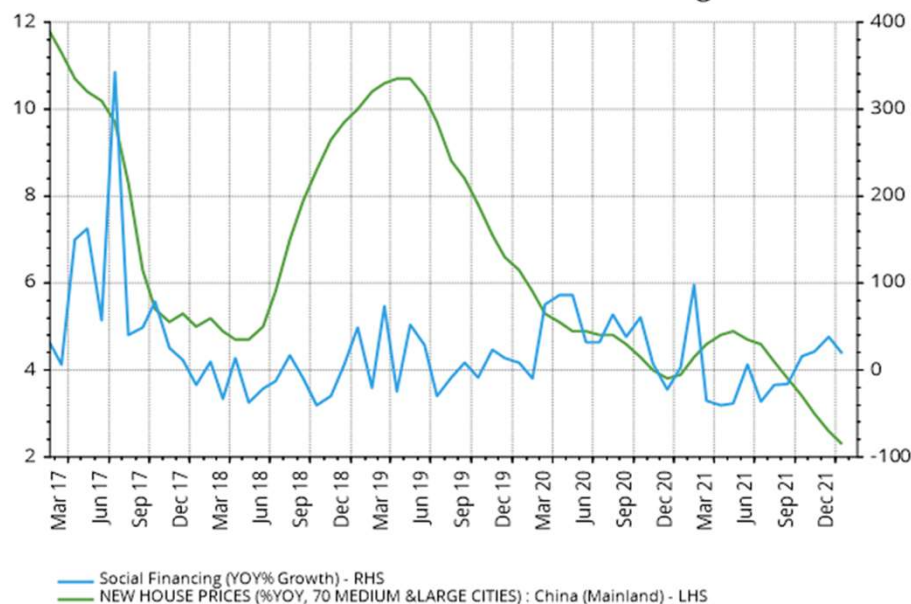
- YOY retail sales growth declined to 1.7% in December from 4.9% in October.
 - Sales growth remained relatively muted for big-ticket items such as autos and appliances but remained robust for personal care items.
 - Sales for entertainment and dining declined in December as COVID restrictions intensified.
- YOY new home price growth decelerated sharply throughout Q4 (and has declined sequentially) as the government's regulatory measures aimed at curbing excess speculation are taking hold.
 - A combination of weakening consumer demand and tight financing constraints for developers led to a decline of 13.2% in December property investment YOY.
- 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).
 - Social Financing (a broad-based measure of credit flows in the economy) has accelerated in recent months and is likely to remain robust as Chinese authorities are loosening monetary policy.

Total Retail Sales and Auto Sales



Source: Refinitiv Datastream

New Home Prices and Social Financing



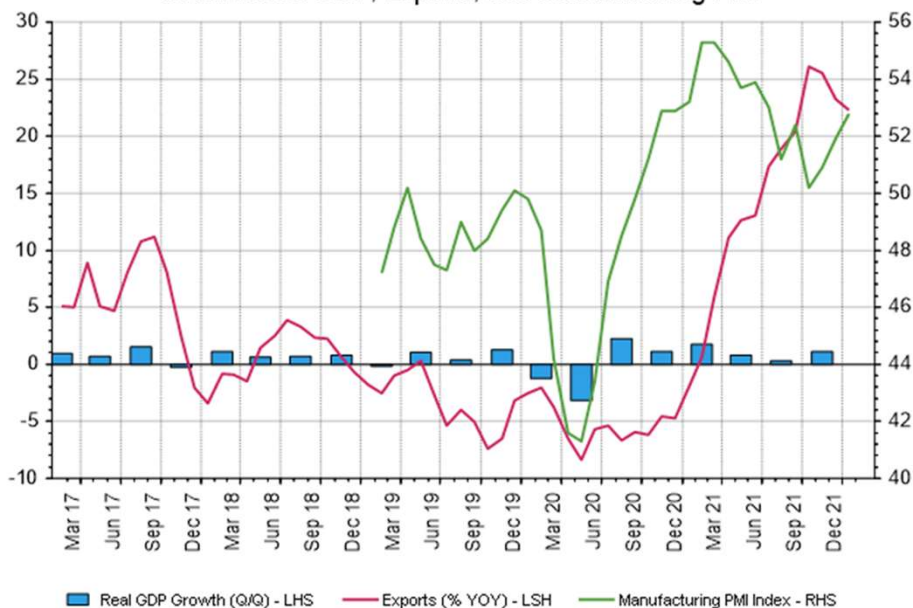
Source: Refinitiv Datastream

South Korea & Taiwan

■ South Korea and Taiwan's economies delivered strong growth in Q4.

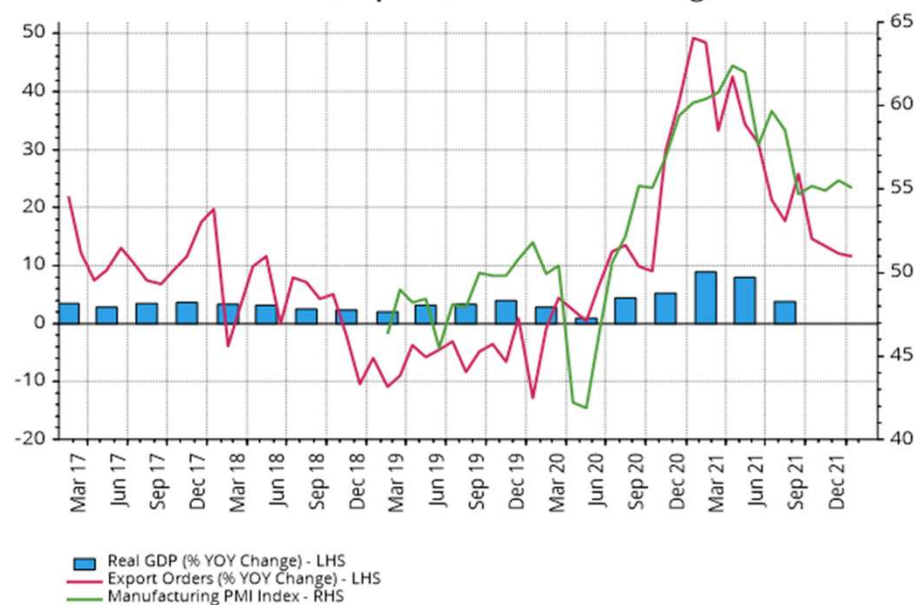
- South Korea's GDP growth increased by a record 1.1% Q/Q (4.1% YOY) driven by strong exports and construction spending.
 - Exports grew by 4.3% Q/Q while private investment and construction also expanded 1.7% and 2.9% respectively.
 - On a full-year basis, the economy had uneven performance with robust exports growth offset by muted consumption growth due to social distancing curbs.
- Taiwan's economy likely expanded at 4.9% YOY in Q4 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 which grew 12% on a YOY basis.
 - Domestic fixed investment also expanded by over 14% YOY as many local manufacturers invested in capacity expansions, especially those in the semiconductor industry.
 - Private consumption rebounded by 1.6% YOY as COVID restrictions were loosened.

South Korea GDP, Exports, and Manufacturing PMI



Source: Refinitiv Datastream

Taiwan GDP, Exports, and Manufacturing PMI



Source: Refinitiv Datastream



Special Topic: US Self Storage



US Self Storage Industry - Background

- The US Self Storage industry is large but highly fragmented
 - Only 9.5K of the 50K self-storage facilities in the US are owned by the top 50 owners in the country. In aggregate, the publicly traded REITs own less than 12% of the outstanding self-storage units. “Mom & Pops” own the vast majority of the 40K facilities not owned by the top 50 owners.

	# OF FACILITIES	% TOTAL	RENTABLE SQ. FT. (MM)	% TOTAL
NON INSTITUTIONAL OWNERS	39,762	80.8%	1,333	68.1%
TOP 50 OWNERS	9,471	19.2%	623	31.9%
TOTAL	49,233	100.0%	1,956	100.0%

- This high ownership by non-institutional owners leads to interesting dynamics including:
 - Sub-optimal property management practices (in terms of rent rates and services offered).
 - High physical occupancy but low economic occupancy due to well below-market rental rates (often due to providing below-market rents to friends and family)
 - Aging demographic of facility owners that lack clear-cut succession plans.
 - Reluctance to sell properties through publicized brokerage processes (leading to off-market sourcing opportunities).

Self Storage Attributes

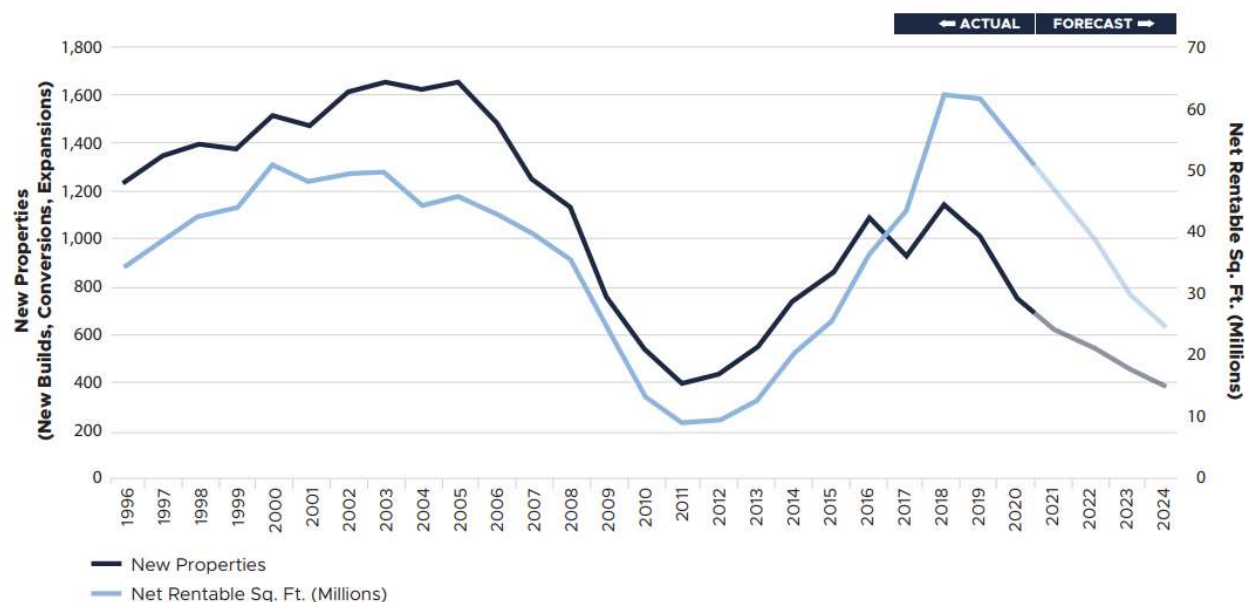
- The US Self Storage industry has several positive attributes including:
 - Attractive secular demand trends with consistent demand from individuals experiencing “life” events, increased space demand from millennials as well as increasing demand from small & medium businesses (driven by contractors and ecommerce trends).
 - Customers are relatively sticky (length of stay is higher than multi-family apartment renters).
 - High profit margins as relatively low operating expenses lead to 65%-70% profit margins.
 - Easy to modify units for new tenants (unlike other real estate asset classes such as office or retail).
 - Attractive inflation hedge – short lease terms enable rental rates to be raised monthly.
 - Recession resistant – occupancy tends to remain above 90% during recessions as a) much of storage demand is due to “life events” and b) monthly rental rates at \$145 are low relative to other real estate.
 - High barriers to entry in denser metro markets given tough zoning laws.
 - Undervalued relative to other real estate asset classes with opportunity for cap-rate compression
 - Self-storage facilities trade at near 6% cap-rates nationally (roughly a 400bps spread over US Treasuries) whereas other real estate asset classes exhibiting strong fundamentals (multi-family and industrial) are trading closer to 4% cap-rates.
 - Significant opportunity to execute property roll-up strategy.
 - Large institutional investors (Blackstone, sovereign wealth funds, pension funds) are increasingly looking to acquire large stabilized core self-storage assets.
 - > These investors’ scale do not permit them to engage in Mom & Pop property buys.
 - > Rather, they will pay a premium (at ~4.5% cap-rates) to acquire larger well-diversified stabilized portfolios of aggregated self-storage assets

Self Storage Near-Term Fundamentals

- The near-to-mid-term fundamentals appear robust for the US self storage industry:
 - Robust demand from positive housing dynamics (need for increased space), population migration to the Sunbelt, and increasing demand from small-business customers coupled with a dearth of new supply during the pandemic has driven occupancy rates to 96%-97% range.
 - Rental rates have been steadily increasing by 10%+ on YOY basis through 2021. Near-term industry-level rent growth is likely to abate going forward but still remain solidly positive.
 - Supply growth is forecast to remain manageable over the next several years which should lead to continued high levels of occupancy and positive rental rate dynamics.
 - A strong industry-wide rental dynamic adds further tailwind to institutional funds' abilities to drive up acquired Mom & Pop facility rents closer to market levels.

CONSTRUCTION HISTORY AND FORECAST

Forecasts show new construction of self storage dropping for the foreseeable future



Self Storage – Portfolio Rollup Strategy



- Institutional private self-storage funds have ample opportunities to acquire Mom & Pop properties and drive significant property-level operational improvements.
 - Importantly, funds in the \$500mm-\$2bln range are best placed to execute a series of one-off facility acquisitions from Mom & Pops or small portfolio acquisitions.
 - Funds can improve underlying net operating income by 30%-50% over a 4-to-5-year ownership period by employing various levers including a) revenue growth through rent increases and provision of ancillary services such as 24/7 monitoring and insurance, b) reduction of operating expenses and c) targeted capital expenditures enhancing curb appeal and unit productivity.
- Sales of large portfolios take place very rarely and large institutions (Blackstone, sovereign wealth funds) are willing to pay premiums to acquire larger portfolios consisting of well-diversified stabilized assets.
 - These larger institutions are willing to transact at cap rates of 4.5% vs. the national average of 6.0% cap rates at the individual property level.
 - Smaller private self-storage funds can capitalize on this arbitrage by enacting a roll-up strategy.
 - One of the funds BCA is evaluating recently completed a large portfolio sale to GIC (the Singapore sovereign wealth fund) in August 2021.
 - This fund bought 67 self-storage facilities over a four-year period and improved underlying net operating income by 40% over that time frame.
 - The fund then sold the entire portfolio of 67 properties to GIC at an implied 4.5% cap-rate and achieved 3x net MOIC and 28% net IRR for investors.

Self Storage – Private Fund Selection

- BCA is evaluating prospective self storage private equity funds currently in market and is focused on identifying funds with the following characteristics:

Fund Strengths:	Description
Sourcing:	Well-established business development team with national coverage with proven ability to enact off-market acquisitions from Mom & Pops.
Operational Value Add Capabilities	Proven playbook to drive operating income growth at acquired facilities through combination of revenue, cost, and capex initiatives.
Exit and Monetization Strategies	Ability to conduct large portfolio sales to core institutional real estate buyers. Strong relationships with capital markets to engage in periodic debt refinancing.



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