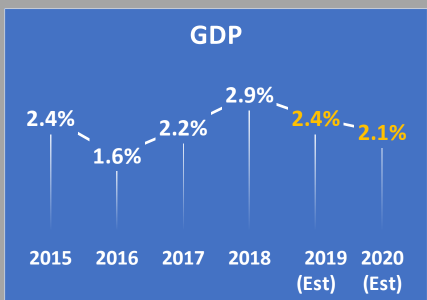
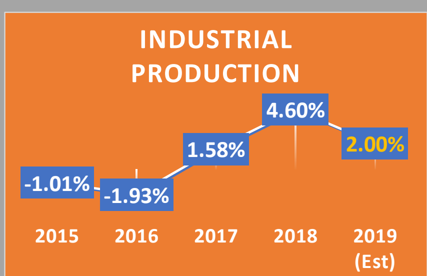
Monthly Economic Report

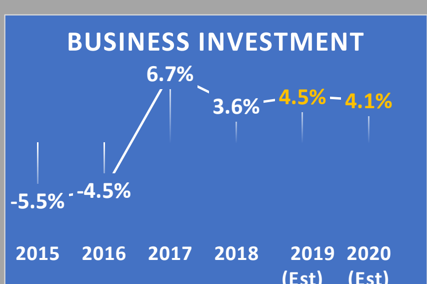
December 2019

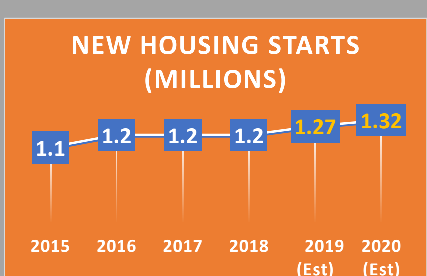
Executive Summary – December '19

Selected Indices









Big Items

GDP: Q4 GDP is currently trending at a growth rate of 2.3% according to the Atlanta Fed, which would be just shy of the 2.2% rate of growth posted in Q4 last year. Consumer spending, a stronger housing market, slight uptick in automotive and durable goods sales, and a strong financial sector are helping boost late 2019 GDP activity. 2019 still looks to be trending between 2% and 2.3% for the full year (compared to a 2.9% growth rate in 2018).

Industrial Production: As mentioned last month, industrial production data is divided into three sectors – manufacturing, mining and utilities. The dominant category is manufacturing (75.055 of total IP), and it is down 0.7% through November. The mining sector includes oil and gas and it has recently shown some signs of life, currently up by 2%. Utilities are struggling and are off 4%.

Housing Starts: Housing starts surged in November and hit highs not seen since June of 2007 at 1.365 million annual starts. On a 3-month rolling average, starts were still up 8% Y/Y. In addition, home builder confidence hit highs not seen in more than 20 years and permits were up nationally by 11.1% Y/Y. Single family was up 8.9% Y/Y and multi-family was up 16.4% Y/Y in November.

Home Improvement Retail: Home improvement retail activity was up just .4% YTD through November compared to the same 11 months in 2018. However, there is a slight deceleration occurring as sales have fallen by .5% Y/Y over the past three months.

Manufacturing: The latest reading from the Purchasing Managers' Index is still trending negatively – four months in a row with the sector in contraction. New orders even backslid in November. Analysts believe that a resumption of full production at GM could help lift activity in the coming months.

Big Risks

Trade Negotiations: Additional tariff risk is off the table for now after a Phase 1 trade deal seemingly will be signed in early January between the US and China. Further trade tensions are likely throughout 2020 however, as the EU, UK, and Japan trade negotiations take center stage – even before the China trade deal is fully settled.

Slowing Global Manufacturing: Global manufacturing may be "bottoming". Recent PMI's from around the world show that about 50% of the top trading partners with the US saw improvements in their manufacturing sectors in November. Time will tell if it's an anomaly or a trend.

What to Watch

Federal Reserve: The Fed watch may be over for a while. There are few in the financial community that think the need exists for lower rates and yet several factors will likely keep the Fed from raising rates in the next few months or more.

Oil Sector: Despite oil prices rising of late, there could be trouble brewing in the oil sector. The IEA reported that oil inventories are 4% higher than the 5-year average for this time of year, despite stronger US exports and what appears to be weaker global output from producer nations.

Macroeconomic Viewpoints

- Dr. Chris Kuehl

US Gross Domestic Product (GDP) for Q4 is expected to be a bit lower than it was in Q3 but that is a normal pattern as much of the economy slows during the holidays (retail is the big exception). The annual rate of GDP growth has fallen a little to 1.7% but that is still a little better than had been expected. The factors affecting growth remain as they have been – impact of the trade war, labor shortages and a slightly more cautious consumer.

ASA Advisor Contents:

Total Industrial Production (IP) improved this month by 1.1% after falling by 0.3% the month before. Much of the recovery was in manufacturing, but there was also a reversal in oil and gas sector. The manufacturing recovery owed a lot to the end of the GM strike and the slight improvements in the trade picture. Growth in durables manufacturing continued to decline but at a slower pace. Factory orders also started to fall as retailers were not seeking to replenish their inventories as holiday sales continue. The levels of capacity utilization had started to trend back towards normal but have now started to weaken again and are at the lowest levels in over a year.

Among key sub-sectors, motor vehicles and parts continued to trend better than anybody expected at this stage. The US market is still not as saturated as it is in most of Europe. The consumer is still buying cars, but the length of the average vehicle loan continues to worry the financial sector. Primary metals have been erratic with some prices going up and others falling. The reduction in production has started to take a toll in select sectors. Steel prices have continued to fall due to a reduction in demand, but consumption numbers have started to come back up as construction has regained a little momentum. Capex in the machinery sector continued to improve (but slowly) as capacity utilization numbers are still tracking in a slightly negative direction. Machine tool makers are still seeing demand, but buyers are asking for delivery next year and that has affected cash flow.

US rig counts continue to decline, and energy production is clearly in a slowdown. Canadian rigs have seen decline as well. The demand for crude is off from previous peaks as the pace of global growth has stalled. US competitiveness in global petroleum markets continues, but the demand for US crude did not surge as expected. The decision by OPEC and Russia to reduce output barely affected the price per barrel. The dollar has not weakened, and that continues to affect the level of exports in general and oil prices as well.

US manufacturing activity continues into contraction territory according to the Purchasing Managers' Index with readings under 50 for four months in a row, and now the New Orders Index has also started to fade. Housing starts have suddenly recovered some of that lost momentum despite the season and much of that activity is in multi-family. The permit numbers have recovered as well. The new home market continues to be driven by upper end homes. Growth is still slow but senior housing is back. The most important factor driving demand for higher end homes has been the performance of the stock market (as opposed to mortgage rates). The overall market performance has contributed to higher levels of consumer confidence. But, both the Conference Board and University of Michigan surveys continue to be less robust than they have been as consumers start to express worry about the political future. Retail numbers had been stronger than expected but the deep discounts will come back to haunt retailers as their revenues are up while profit numbers have been down.

Reader Question of the Month

Q: What is a Repo and why does it matter to the average businessperson?

A: I got this question from a CEO that was puzzled by the Federal Reserve's pumping of nearly $86 billion of cash into the banking system. After all, the last time the Federal Reserve was pumping liquidity into the banking sector, we were trying to survive the Great Recession. Why is this time different and shouldn't we panic? Are we on the verge of a financial crisis?

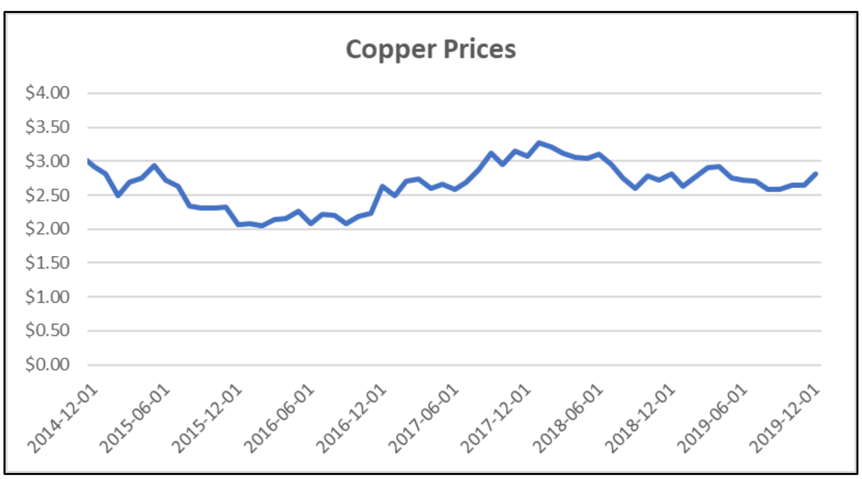
First, repo is short for Repurchase Agreement and it's how very large transactions get financed overnight. On a typical day, nearly $3 trillion in debt gets financed in overnight loans to corporations, banks, and a variety of other financial institutions. It's a very easy, secure way of moving massive amounts of money over a short period of time (to oversimplify it).

Second, the problem is that we had an unexpected spike in demand in the repo market in September and the interest rate for lending in the repo market shot up from @2% to @10% - overnight. For some borrowers, that rate was prohibitive, and parts of the financial system could have started to show stress very quickly. Some companies couldn't afford to borrow. Interest rates shot up simply because there wasn't enough cash available in the system. Simply, some believe that an unusual number of companies borrowed money to make tax payments and it ran the system low of cash. So, the Federal Reserve stepped in and pumped liquidity into the system and interest rates came back down to normal levels.

Since September, rates have steadied in the low 3's, and some of the jittery nerves on Wall Street have settled back down. It's far from a crisis and doesn't really signal recessionary pressure. The only knock on the Fed was that it didn't see this liquidity problem coming quicker so that it could head it off and prevent some of the overnight panic that was created. – Keith

Key Commodity Outlook

The following section includes viewpoints on key commodities. Wherever possible, the Producer Price Index (PPI) is used as a gauge of prices for specific commodities. The PPI is derived from monthly Government surveys of those that purchase specific products and services. The PPI includes views on both spot and contract pricing for a given product or service and is more representative of general changes in street-level pricing trends.



Copper Prices (WPUSI019011)

- Copper prices were $2.81/lb. in early Dec, up sharply from $2.65 in Nov.
- The Producer Price Index (PPI) for copper was up at 365.9, 1.2% higher month-over-month (down .8% last month). It was also lower than last year, falling by 2.5% Y/Y (down 3.9% last month). The ten-year high was 535.4 in 2011 and the low was 302.9 in 2016.
- **Looking Ahead**: Prices should continue to remain steady as slight upticks in global manufacturing hint at a bottoming of global demand curves.

General Commodities Discussion:

Nickel:

- Nickel Prices have fallen over the past 30 days to @$6.39 per lb. ($6.80 in the last update). Warehouse levels have surged to 124,158 tons (64,106 tons in the last update).
- **Outlook**: Unexpected "off-exchange" hidden inventories surfaced in November – pushing inventory levels up more than 40% on the LME. Some estimates suggest that there could be as much as 300,000 tons of "unreported nickel sitting off exchange".

Carbon Steel: (WPU10170301)

- NYMEX Domestic Hot-rolled Coil steel prices were $557 per ton for December futures ($502 per ton in the last update).
- Producer prices for steel pipe and tube were down 1.0% month-over-month in Nov (down .4% last month). Year-over-year, prices are 5.9% lower (also 5.9% lower Y/Y last month).
- **Outlook**: Carbon steel pipe continues its rapid devaluation as inventories remain strong and competition among mills heats up. Larger diameter and especially seamless material has held its value more than smaller diameter welded product. Anticipation is that prices will stay depressed through the end of calendar year. Long-term worldwide developments and consumer spending trends predict a strong five years for carbon steel tube and pipe ahead of us.

Stainless Steel:

- Nickel Prices have fallen over the past 30 days to @$6.39 per lb. ($6.80 in the last update). Warehouse levels surged to 124,158 tons (64,106 tons in the last update).
- Producer prices for stainless pipe were higher through November rising by 3.0% M/M (up 4.3% last month); but were down 1.0% Y/Y (down 3.2% last month).
- **Outlook**: Higher nickel prices and speculative buying continue to make stainless markets volatile. Between export controls in Indonesia and lackluster Philippine efforts to boost production, to slowdowns in Chinese production, uncertainties are keeping the market unusually fluid and difficult to predict month-over-month.

Ferrous Metal Scrap: (PPI: PCU42993042993O1)

- Producer prices for ferrous metal scrap were mixed in November. The November producer price index reading was up 8.5% M/M (down 16% last month). Year-over-year it plummeted again this month, falling -35.2% Y/Y (-38.0% in the last update). The highest prices since the end of the recession were in 2011 when the average reading was 585 points.
- **Outlook**: November saw a sharp rise in producer prices for metal scrap, which coincides with a slight improvement or "bottoming" of the global manufacturing downturn that we have seen for most of 2019. Against pricing levels last year, prices are significantly weaker. The peak season sell-through will be important in understanding whether business inventories are low enough to restart new orders – leading to more metal demand.

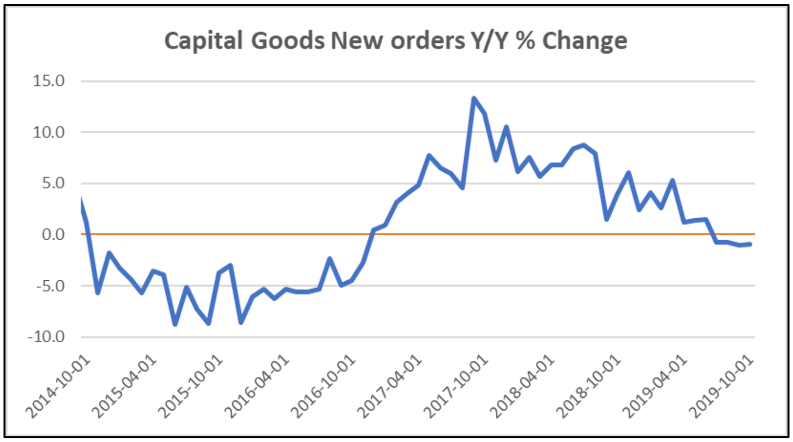
Additional commodities and finished product pricing are addressed in the Producer Price Index review on the next page.

Producer Price Index – Key Industry Products

The Producer Price Index (PPI) for key supply industry metrics is listed in the chart below including month-over-month and year-over-year comparisons. To the degree that the PPI is derived from monthly Government Surveys of actual purchasers and users of the following products, it provides a more accurate street-level pricing viewpoint. Some data is delayed and may not have been updated by the time of publication.

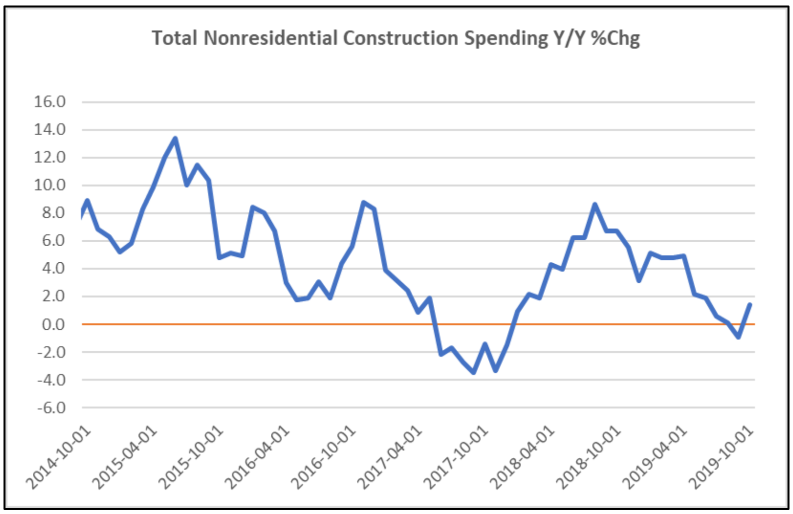
Producer Price Index - Key Industry Products						
Category	PPI Code	Nov-19	Oct-19	M/M% Chg	Nov-18	Y/Y % Chg
Pipe, Valves and Fittings						
Metal valves, except fluid power	WPU114902	342.0	341.4	0.2%	334.4	2.3%
Gates, globes, angles and check valves	WPU114902011	129.7	129.7	0.0%	125.1	3.7%
Ball valves	WPU11490202	445.7	445.7	0.0%	436.7	2.1%
Butterfly valves	WPU11490203	240.6	240.6	0.0%	229.6	4.8%
Industrial plug valves	WPU11490204	234.6	234.6	0.0%	233.7	0.4%
Plumbing and heating valves (low pressure)	WPU11490205	329.4	329.4	0.0%	329.4	0.0%
Solenoid valves	WPU11490208	366.2	366.2	0.0%	348.8	5.0%
Other industrial valves, including nuclear	WPU11490209	313.7	311.7	0.6%	310.3	1.1%
Automatic valves	WPU11490211	192.9	192.9	0.0%	191.7	0.6%
Metal pipe fittings, flanges and unions	WPU11490301	322.0	320.7	0.4%	312.3	3.1%
Steel pipe and tube	WPU101706	277.0	279.7	**-1.0%**	294.3	**-5.9%**
Steel pipe and tube, alloy	WPU10170673	104.4	105.4	**-0.9%**	113.8	**-8.3%**
Steel pipe and tube, stainless	WPU10170674	105.9	102.8	3.0%	104.9	1.0%
Copper & copper-base alloy pipe and tube	WPU10250239	191.1	191.2	**-0.1%**	197.6	**-3.3%**
Plastic pipe	WPU07210603	108.0	108.8	**-0.7%**	113.1	**-4.5%**
Plastic pipe fittings and unions	WPU07210604	174.5	174.5	0.0%	168.3	3.7%
Plumbing Fixtures, Fittings and Trim	WPU105402	333.7	333.7	0.0%	320.6	4.1%
Bath and shower fittings	WPU10540211	278.1	278.1	0.0%	268.5	3.6%
Lavatory and sink fittings	WPU10540218	167.5	167.5	0.0%	160.4	4.4%
Enameled iron and metal sanitary ware	WPU1056	224.5	239.2	**-6.1%**	230.8	**-2.7%**
Steam and Hot Water Equipment	WPU1061	300.0	300.0	0.0%	293.4	2.2%
Cast iron heating boilers, radiators and convectors	WPU10610106	191.6	191.6	0.0%	187.2	2.4%
Domestic water heaters	WPU106601	420.6	419.8	0.2%	410.7	2.4%
Electric water heaters	WPU10660101	410.7	410.7	0.0%	402.4	2.1%
Non-electric water heaters	WPU10660114	259.0	259.0	0.0%	252.2	2.7%
Warehousing, Storage and Relates Services	WPU321	107.6	107.2	0.4%	107.6	0.0%

PHCP & PVF



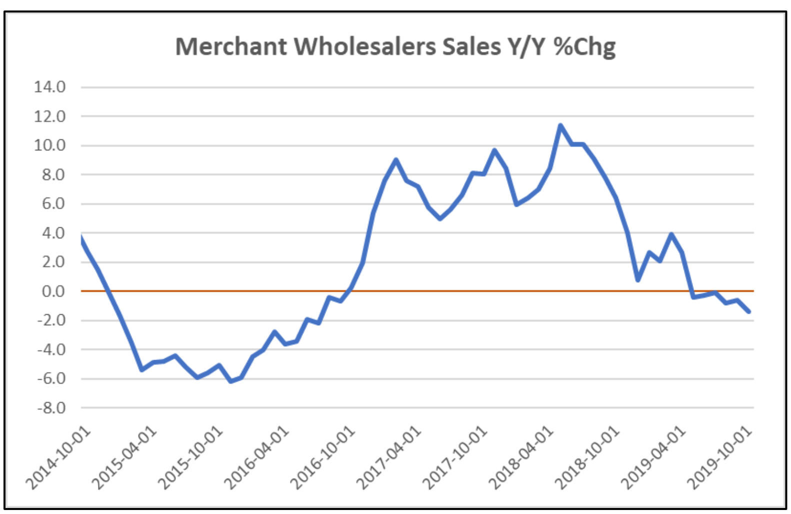
Capital Goods New Orders (NEWORDER)

- Value of manufacturers new orders for capital goods were up in October, rising by 1.1% M/M (down -.6% last month). They were down .9% Y/Y (-1.0% last month). Capex has generally been down, but not necessarily in machine tools acquisition.
- These figures continue a downward trend that started in July of 2018. Despite being up month-over-month, investment is generally weaker than expected.
- **Outlook**: This figure is a proxy for capital expenditures by corporations on everything from machinery to structures. When capital investment starts to fall, there is a real risk that it spills over into the consumer markets, and a general economic downturn can follow. For now, it remains contained to the corporate sector.



Total Non-Residential Constr. (TLNRESCONS)

- Total Non-Residential Construction was 1.4% higher than it was a year ago (.9% lower last month) but was down .7% M/M (up .5% in the last report). Overall spending is off peak levels at $776B (vs. $795B peak in April '18) but is well above pre-recession levels.
- **Outlook**: Construction firms are reporting that they can't start commercial projects because of a lack of sub-contractor support (due to labor shortages in some key sectors). However, builder sentiment is improving into 2020. Continuing strong corporate profitability, moderate economic growth rates, favorable interest rates, and improving sentiment has many analysts expecting an uptick in construction activity in 2020.

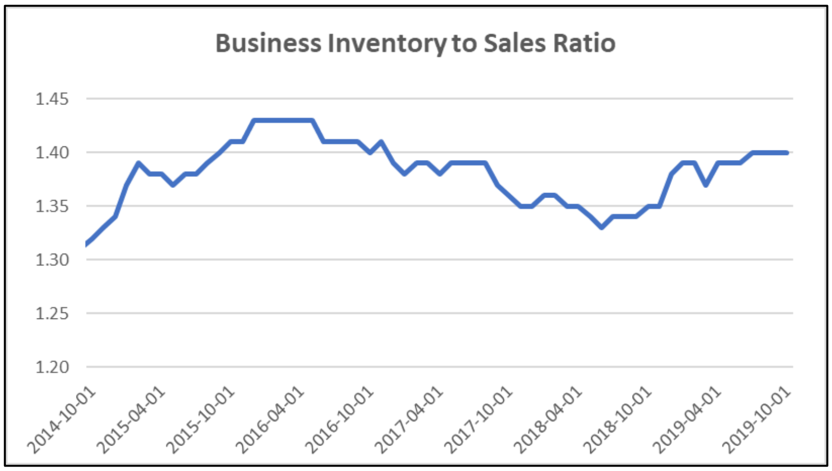


Wholesale Trade (WHLSLRSMSA)

- Merchant wholesalers' sales were down 1.4% Y/Y through October (down .6% Y/Y in the last update). Month-over-month, sales were down .7% (flat last month).
- Wholesaler inventories were up 5.4% year-over-year (also up 5.4% last month).
- **Outlook**: Wholesale inventories have only been this high twice in history. Once in February of 2016 and at the height of the Great Recession in 2009. As wholesalers tried to get ahead of tariffs, they pulled-forward too much inventory and are now overstocked. Until they can sell-through some of this inventory, sales of raw materials and finished goods will remain sluggish.

Manufacturing (AMTMNO)

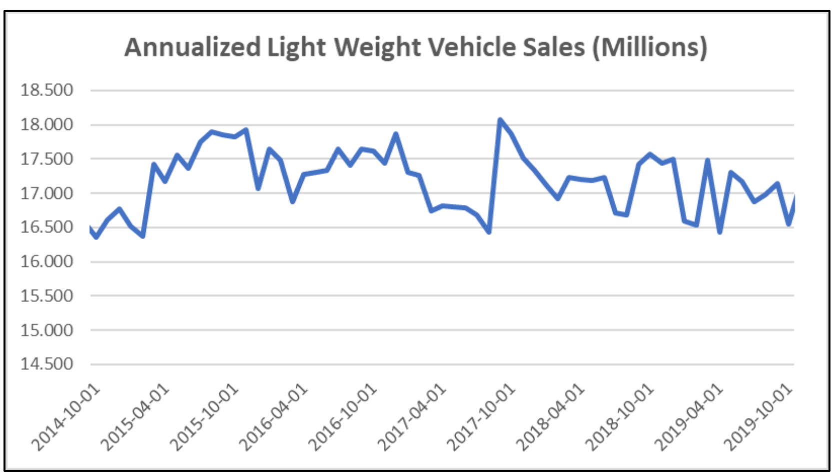
- Federal data on manufacturing was 1.2% lower Y/Y (down 3.5% last month) through October (latest available). It was down .3% month-over-month (down .6% last month).
- The ISM's PMI reading also slipped in November. The PMI fell slightly from 48.3 to 48.1 and was in contraction for the fourth month.
- New orders in the ISM report fell sharply, falling to 47.2 from 49.1 last month. This also remained in contraction.
- **Outlook**: Generally, higher inventory levels have reduced total manufacturing demand, despite strong consumer spending. As inventories come back in-line, manufacturing demand will pick up.



Business Inventory to Sales Ratio (ISRATIO)

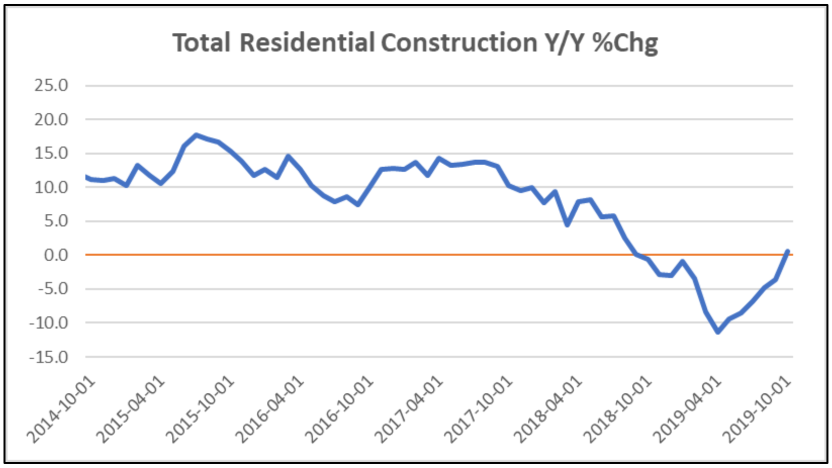
- The current inventory to sales ratio for all businesses remained at 1.40 months of inventory on hand in October (latest available). Relative to sales, inventories are elevated. This ratio is still 2.9% higher Y/Y (also 2.9% higher last month).
- **Outlook:** Inventories remain elevated in relation to the last 5 years of activity. Analysts will be watching inventory levels closely through the peak holiday retail season to see if consumption can pull them back down into a lower range. That would restart the order cycle and improve raw material and component demand up and down the global supply chain. It would help build economic momentum.

PHCP



Auto Sales (ALTSALES)

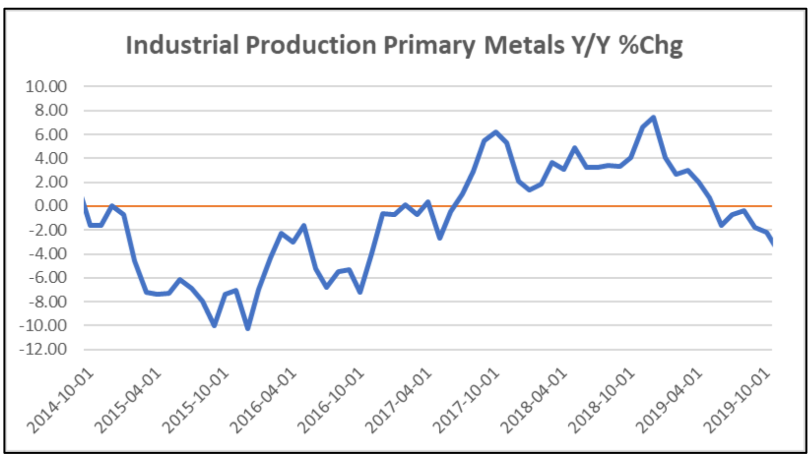
- US auto sales were trending at a 17.092-million-unit annual rate (16.546 last month) through November.
- This is down 1.7% from November of last year (-5.4% in the last update).
- **Outlook**: Credit remains available for consumers and rates are still low. Dealers are also starting to offer significant incentives to spur sales. As expected, a resumption of GM activity has helped spur auto sales and production. With housing inventory being tight and home prices remaining slightly elevated, some consumers are opting to replace older vehicles with extra income rather than moving to a new home at this time. It boosts auto sales.



Total Residential Construction (PRRESCONS)

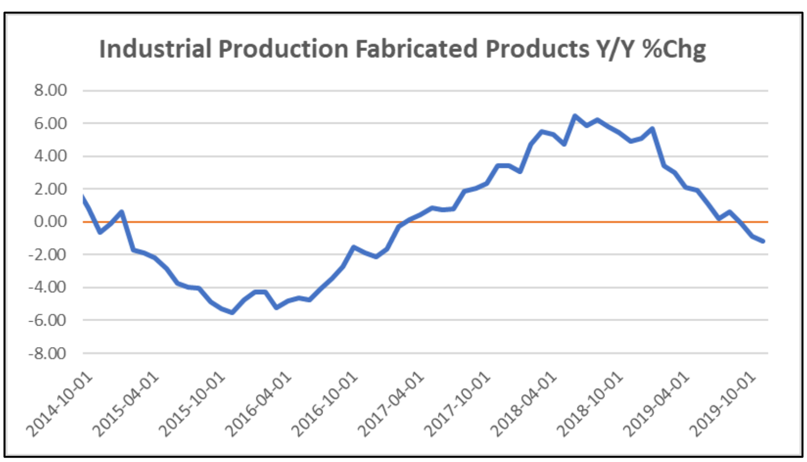
- Total residential construction rose in October (latest available), rising .5% Y/Y (down 3.6% last month). However, it was down M/M falling by .9% (up .6% last month).
- **Outlook**: New housing data from November (from alternative sources) are showing some strong surges in activity. Permits and new starts are strong, home builder confidence is surging to 20-year highs and conditions are generally favorable for a strong housing market in the months to come. As mentioned, any weakness in construction activity is attributed to labor availability issues (although that issue is improving). Many construction firms are hesitant to produce as many homes as they likely could, for fear that they can't get suitable sub-contractor capacity to produce adequate volumes of new homes. That is expected to improve.

PVF



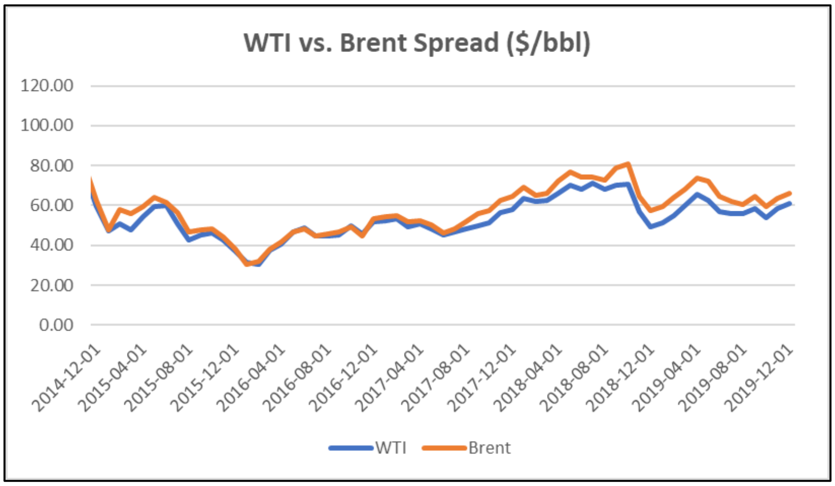
Industrial Production Primary Metals (IPG331S)

- Industrial production primary metals were down 3.7% Y/Y through November (down 2.2% in the last update). It was up 2.9% M/M (down .3% M/M in the last update).
- There's a deceleration that has continued since December of last year in primary metals output. That's a reflection of both weaker demand, stronger supplies and stockpiles of primary metals. We continue to see the impact in other price measures.
- **Outlook**: New upticks in construction activity and a mild improvement in global industrial production should help absorb existing inventories. Primary metal production is likely to pick back up into 2020 – at least through part of the first half. Again, much of it will depend on global manufacturing recovery.



Industrial Production Fabricated Metals (IPG332S)

- Fabricated metal industrial production was down 1.2% Y/Y through November (down .9% last month). It was down .2% on a month-over-month basis, (also down .2% in the last update).
- **Outlook**: The slump in manufacturing has affected the fab market and there has been little to compensate. The energy sector was playing that role, but this arena has also had some issues of late. The sliding in demand has been spreading through a variety of industrial sectors.



WTI and Brent

- WTI is currently at $60.93 a barrel ($55.90 in the last update) and Brent is at $66.17 ($61.38 in the last update).
- **Outlook:** OPEC and non-OPEC nations have agreed to cut production – which has helped push the price of oil on a global basis higher. Recent data from the Dallas Federal Reserve shows that economic metrics following US oil production continue to fall (employment, investment, new well production, etc.). However, US oil output continues to rise – on fewer wells producing oil. The efficiency and productivity of modern technologies allows more oil to come out of fewer wells, and at a lower cost per barrel. That trend is likely to continue and could impact how we analyze the relationship between oil sectors and use of PVF materials in the future.

Area	Last Count	Count	Change from Prior Count	Date of Prior Count	Change from Last Year
U.S.	13-Dec-19	799	0	6-Dec-19	-272
Canada	13-Dec-19	153	15	6-Dec-19	-21
International	Nov-19	1,096	-34	Oct-19	105

Rotary Rig Counts (Baker Hughes)

- Baker Hughes US rig counts were down by 272 Y/Y (-276 in the last update); Canadian counts were down by 21 (down 63 in the last update). International counts are now up by 105 (up by 113 in the last update).
- **Outlook**: As mentioned, global oil demand is still sluggish and the outlook for global demand remains weak into the first half of 2020. That, plus improvements in rig productivity and ample supply of oil in stockpiles have helped keep new production weaker – despite higher prices for crude oil.

Construction Outlook

<u>Residential construction</u>: 30-year mortgage rates have fallen since November's peak of 4.94%, currently sitting at 3.73% (3.75% in the last update). As mentioned, this has combined with a slipping of regional home prices. Unemployment remains very low and these are the three most important motivators for the housing market.

Table 1. NAHB/Wells Fargo National and Regional Housing Market Index (HMI)

NATIONAL

(Seasonally Adjusted)	2018 Dec.	2019 Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov. *Revised*	Dec. *Prelim.*
Housing Market Index	**56**	**58**	**62**	**62**	**63**	**66**	**64**	**65**	**67**	**68**	**71**	**71**	**76**
Housing Market Index Components													
Single Family Sales: Present	61	64	66	68	69	72	71	71	73	75	78	77	**84**
Single Family Sales: Next 6 Months	61	63	68	72	71	72	70	71	71	70	76	78	**79**
Traffic of Prospective Buyers	43	44	48	44	47	49	47	48	50	50	54	54	**58**

REGIONAL HMI

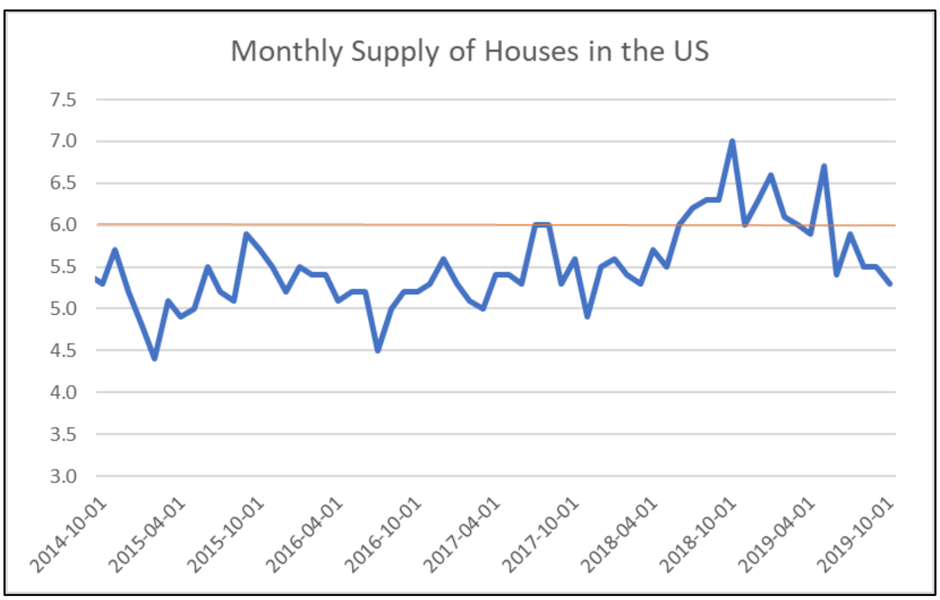
(Seasonally Adjusted)	2018 Dec.	2019 Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov. *Revised*	Dec. *Prelim.*
Northeast	36	47	45	52	55	65	59	55	57	64	60	64	**58**
Midwest	52	49	54	49	56	56	58	54	59	58	57	58	**73**
South	61	61	66	70	66	68	68	69	69	73	76	75	**77**
West	65	70	67	69	71	73	69	74	75	76	83	85	**83**

Source: National Association of Home Builders and Wells Fargo; https://www.nahb.org/research/housing-economics/housing-indexes/housing-market-index.aspx

The NAHB/Wells Fargo Housing Market Index was much stronger month-over-month in early December. The national index posted a reading of 76 (preliminary in December), which would be sharply higher from 71 in November and up sharply (+35%) from 56 posted in December of last year.

Housing inventories were lower in October, coming in at 5.3 months of inventory on hand. This is far lower than the high of 7 months of inventory-on-hand last December. Six months is the "ideal" level of inventory.

When housing inventory is balanced, prices are generally more controlled. Builder sentiment surged in November and starts and permits both hit decade highs. Some measures of home construction have hit highs not seen since the late 1990's.



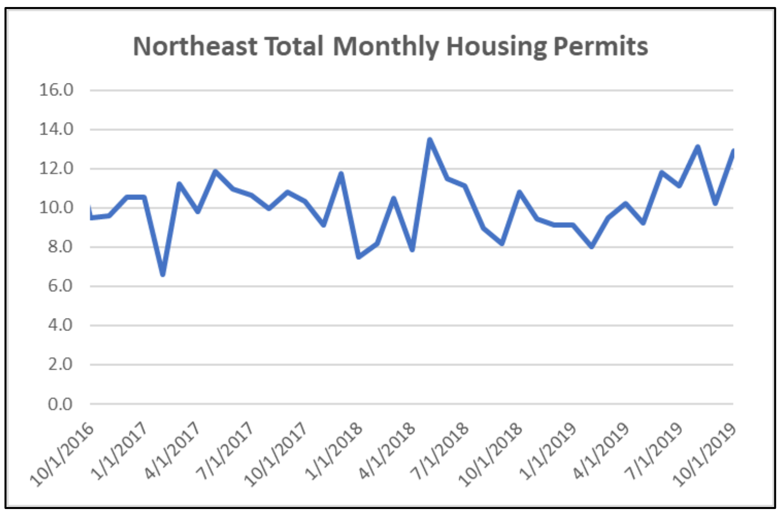
<u>National Outlook</u>: The outlook for mortgage rates has stabilized at an accommodative rate for borrowers, the Federal Reserve has signaled that it will leave rates unchanged through the end of the year. It is expected that home starts, and sales could continue to accelerate through 2020 if employment, wages, and accommodative rates continue. Labor availability has become a bigger issue holding back new home construction, but builder sentiment has surged to decade highs in recent weeks.

The forecasts below are for the national market.

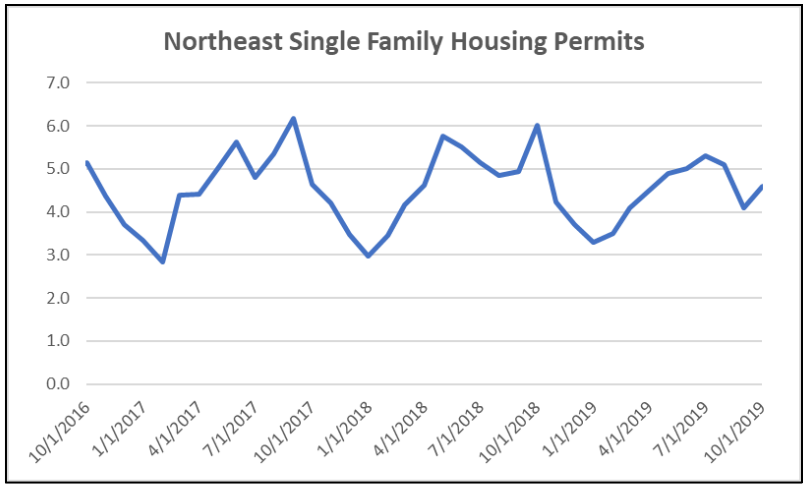
NAHB	2014	2015	2016	2017	2018	2019	2020
Housing Activity (000)							
Total Housing Starts	999	1,107	1,177	1,208	1,262	1,272	1,312
Single Family	645	713	785	852	876	894	928
Multifamily	354	394	393	356	386	379	384
New Single Family Sales	440	502	560	616	628	632	647
Existing Single-Family Home Sales	4,338	4,623	4,825	4,910	4,764	4,679	4,657
Interest Rates							
Federal Funds Rate	0.09%	0.13%	0.40%	1.00%	1.83%	2.67%	2.95%
Freddie Mac Commitment Rates:							
Fixed Rate Mortgages	4.17%	3.85%	3.65%	3.99%	4.53%	4.81%	5.08%
ARMs	3.02%	2.94%	2.88%	3.20%	3.83%	4.46%	4.63%
Prime Rate	3.25%	3.26%	3.51%	4.10%	4.81%	5.45%	5.95%

Regional market outlook: Northeast

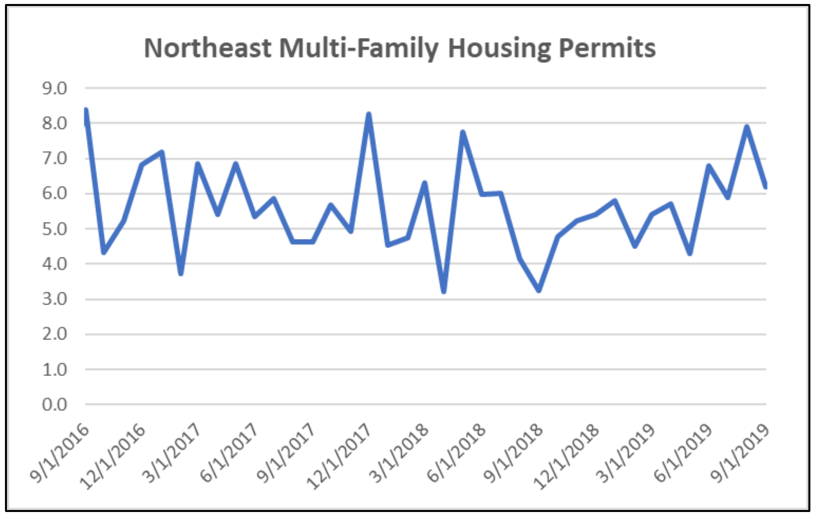
- Northeast total housing units authorized for construction were down in October by 26% (down 22% last month) M/M. October was the latest regional data available. The 3-month moving monthly average was up by 7%.
- On a year-over-year basis, they were up 19.5% (up 24.9% in the last update). This continues to be a strong showing for the Northeast.
- Volatility in housing permits is normally expected. We continue to believe that housing permits will generally improve overall through the next two quarters, weather permitting. Population studies show a net migration out of areas of the northeast. Higher tax structures and a higher cost of living are pushing some to relocate – much of them to the southeast coast.



- Single family housing permits were up on a month-over-month basis. Month-over-month single family permits were up 12% in October (down 20% last month). On a 3-month moving monthly average basis, permits were down 4%.
- Year-over-year permits were down 23.5% (down 16.8% last month).
- Lower mortgage rates and job expansion in the Northeast should continue to be favorable for acceleration of permits into Q1. Labor availability and good weather conditions will be critical in helping single-family new starts.

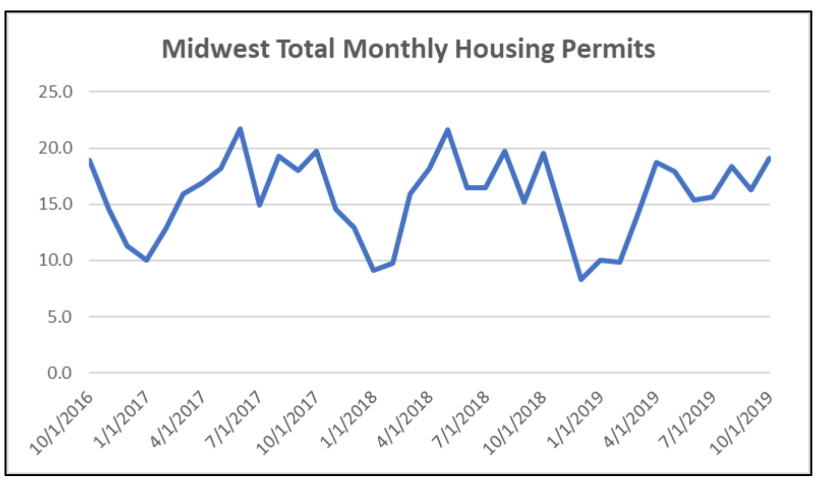


- Multi-family housing permits authorized for construction were up by 34% month-over-month through October (down 22% in the last update). They were up 15.4% on a rolling 3-month average.
- On a year-over-year basis, they were up by 73.6% (up 91.7% in the last update) – these are based on small numbers, the percent change still seems dramatic.
- Obviously, there is volatility in these housing figures, the 3-month average being the most telling. Most demographic and economic trends support continued growth in multi-family units the rest of the year as the 3-month rolling average showed.

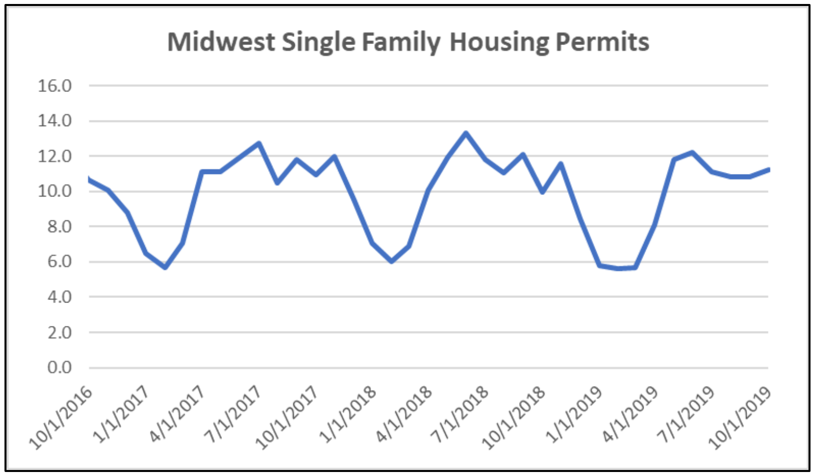


Regional market outlook: Midwest

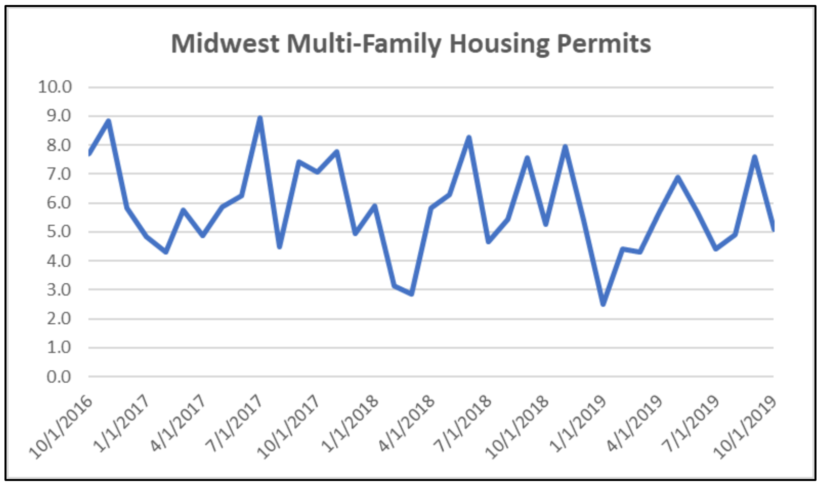
- Midwest total housing permits were up 17% month-over-month in October (down 11% in the last update). The rolling 3-month average was an increase of 8%.
- On a year-over-year basis, permits were down by 2.2% in October (up 6.9% in the last update).
- Housing activity should generally improve in the coming quarters with favorable labor and interest rate conditions. Weather will begin to be a factor in future starts through the winter.



- Monthly volatility in housing permit activity can make it difficult to make sense out of month-over-month data. In October, M/M permit volumes were up 6% (up 4% last month). The 3-month rolling average shows that it was up by 3.3%.
- Year-over-year, single family homes authorized by permit were up 2.7% (up 12.3% in the last update).
- Again, builder's willingness to start new homes in the starter or mid-market categories are slowing demand. Upper-end home sales have slowed of late.

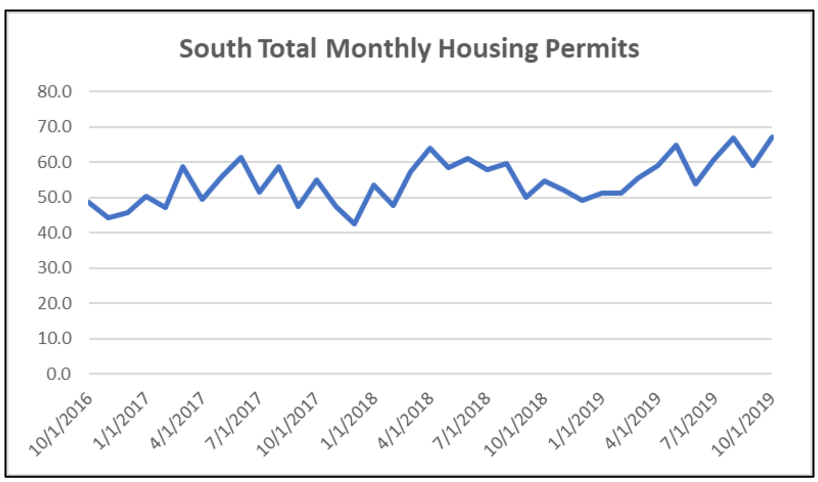


- Multi-family housing permits, again, are volatile month-over-month. In October, they were up 41% (down 33% last month). On a 3-month rolling average basis, they were up 21%.
- On a year-over-year basis, permits were down 9.3% (down 3.2% in the last update). Still, multi-family construction is stronger in many markets.

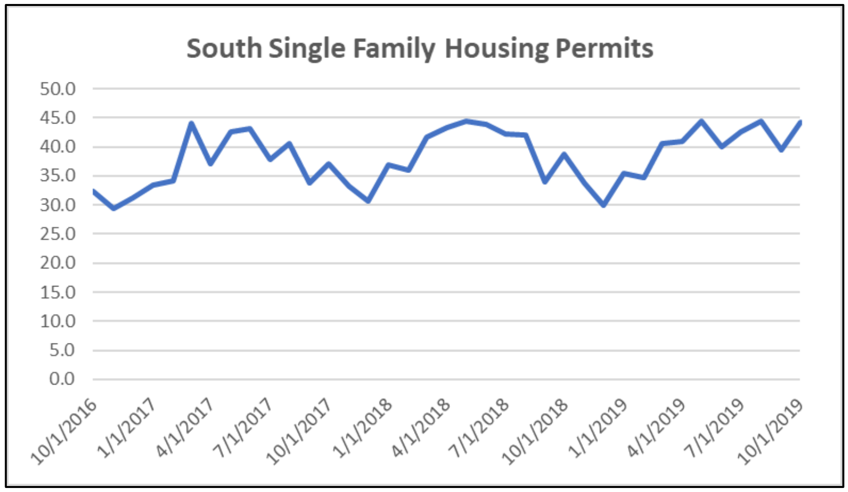


Regional market outlook: South

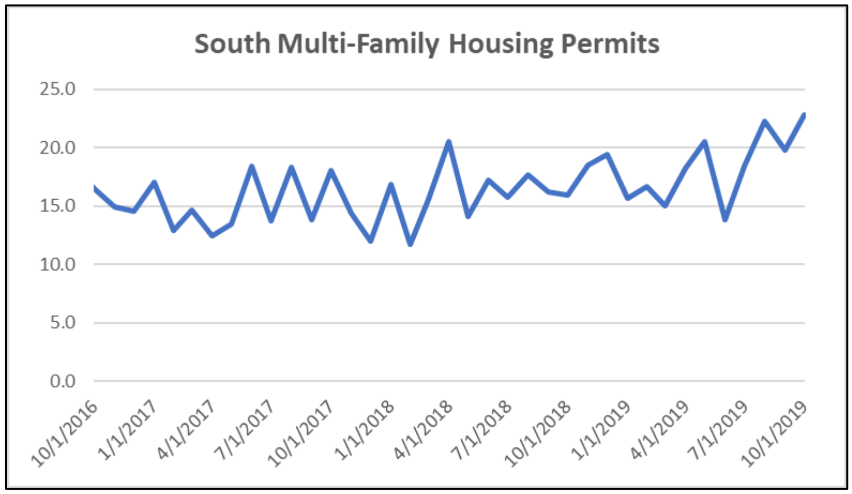
- Southern region housing permits were up month-over-month by 13% (down 11% in the last update). On a 3-month rolling average basis, permits were up 3.9%.
- On a year-over-year basis, total permits were up 22.7% (up 17.8% in the last update).
- Looking forward, population growth trends continue to support strong growth rates throughout the southern region. Florida continues to have some of the top 10 fastest growing cities in the country. That trend should continue with both residential and commercial construction trends remaining strong in 2020. Labor constraints will be the strongest headwind the sector faces.



- Southern region single family home permits were up 12% M/M (down 11% last month). On a 3-month rolling average, they were up 1.9%.
- On a year-over-year basis, single family permits were up 14.3% (up 15.8% in the last update).
- Single family permits should be among some of the strongest in the country in this region. Unemployment rates in the South are at 15-year lows, job creation is robust, and wages are also growing. Labor shortages in the construction sector could be a looming factor slowing construction activity.

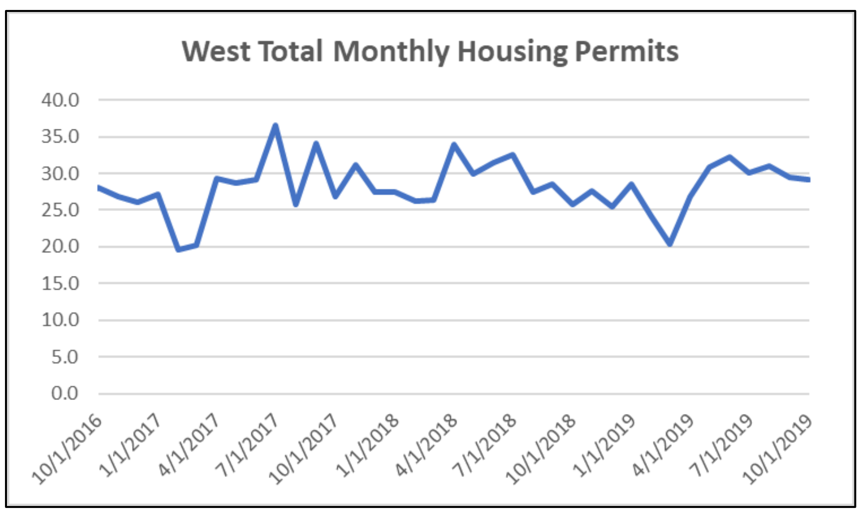


- Southern multi-family permits were up 15% M/M (down 11% last month). On a 3-month rolling average basis, permits were up 8.4%.
- On a year-over-year basis, permits for multi-family housing were up 43.2% (up 22.1% in the last update).
- High housing prices have kept many families from purchasing single family homes. Household debt levels are not ridiculously out of control but are elevated enough that multi-family demand should continue.

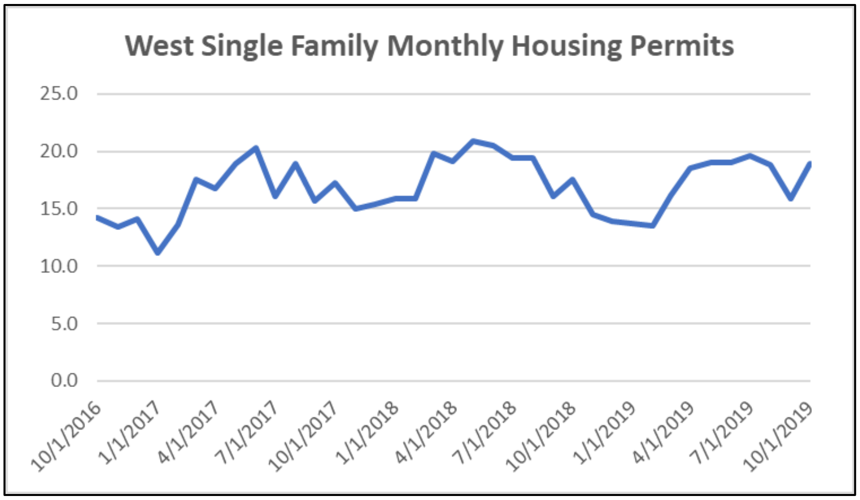


Regional market outlook: West

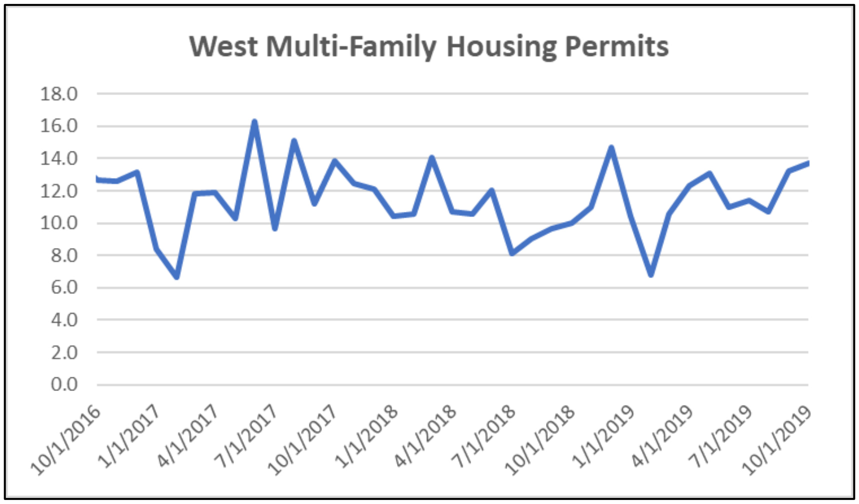
- Western region total monthly housing permits were up 12% M/M in October (down 1% last month). On a 3-month rolling average basis, they were up 1.9%.
- On a year-over-year basis, permits were up 18.3% Y/Y (up 13.5% in the last update).
- Looking ahead, conditions should remain favorable for new housing starts and permits. Just like other regions, the west is facing some tough labor shortages in the construction sector. That has slowed housing and commercial construction starts around the country, and it is a big factor holding west coast starts back.



- Single-family permits were up 19% M/M (down 15% last month) in October. Month-over-month changes in permits can be highly volatile. On a 3-month moving average basis, permits were down .2%.
- Year-over-year, single family permits were up 7.7% (down 1.1% in the last update).
- Again, single family units should remain strong through Q4 of this year because of a favorable mortgage interest rate environment, strong wage growth, and a steady employment environment.



- Multi-family permits were up 4% M/M (up 23% in the last update) in October. On a 3-month rolling average, it was up 7%.
- Year-over-year, multi-family unit permits were up 36.8% (also up 36.8% last month).
- Multi-family starts are volatile – especially in the western regions. On a historical basis, starts are within a strong average range. Year-over-year, we do continue to see strong demand vs. much of 2018.



Industry Outlook

Updates to the industry outlook are provided quarterly.

ASA Sales were **up 6.4% Y/Y in the Third Quarter**. Year-to-date through September, sales across the industry were **up 4.8%** on average and **up 6.0%** for the trailing twelve months prior. The next quarterly update will be available in January. The following chart shows the breakdown by primary business type and region.

	Q3 Y/Y % Change in Total Dollar Sales	YTD % Change vs. YTD 2018	Sept Trailing Twelve Months % Change
Primary Business			
PHCP	4.8%	4.7%	5.1%
PVF	5.0%	3.0%	3.0%
PHCP & PVF	7.9%	8.6%	8.0%
By Region			
1 (SWPD)	7.1%	5.8%	7.9%
2 (MWD)	3.7%	1.0%	0.7%
3 (SWCD)	NA	NA	NA
4 (NCWA)	6.5%	6.0%	6.8%
5 (ASA Northeast)	7.7%	4.6%	4.7%
6 (SWA)	10.3%	7.6%	7.0%

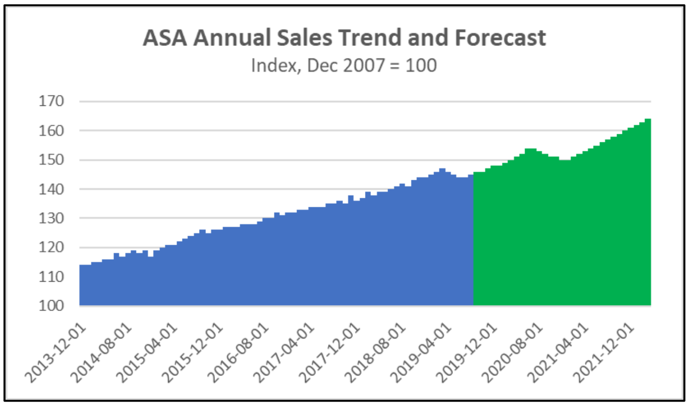
We continue to expect Sales to rise moderately throughout the final quarter of 2019, but at a slower rate. As mentioned last month, the economy remains strong (fundamentally) but faces a few headwinds (that could easily become tailwinds).

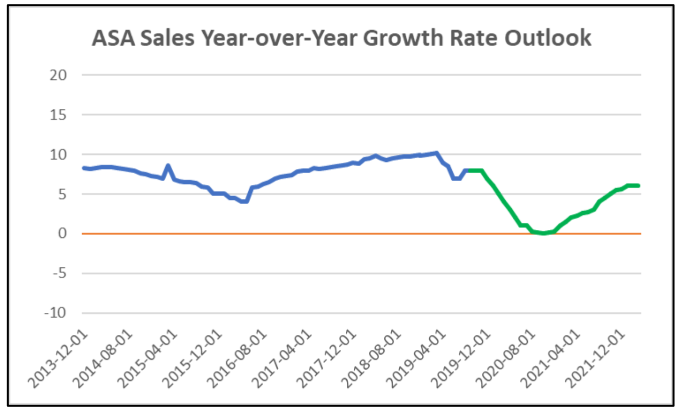
- **Global Growth Slowdown.** Global markets have perhaps bottomed, based on the latest manufacturing reports from across Europe, Asia, and South America. One of the earliest gauges for economic activity in many countries is the manufacturing PMI. Among the top 18 trading partners with the US, 6 had manufacturing sectors that were expanding in November. However, 50% of the countries on the list had manufacturing sectors that saw month-over-month improvement in November. China continued to improve into expansion territory, Canada, France, India, and Brazil had manufacturing sectors in solid growth ranges for the month. But overall, weakness continues, but we believe that the trend is bottoming.

- **Two Continuing Items to Watch.** Improvements in housing construction is a positive story for the industry, and several forecasts for 2020 expect housing to remain a bright spot with new starts remaining on the upper end of 20-year high forecasts. Trade agreements are also likely heading to conclusion across several key markets including China, USMCA, and eventually the EU and UK. Those agreements will help ease tariff fears and increase investment and spending.

The US Transportation Services Freight Index (TSIFRGHT), which typically leads ASA Sales by about five months, took another downturn in the last report. The October report (latest data available) showed that the FTSI was up by 1.3% month-over-month (down 2.5% in the last update). On a year-over-year basis it was up .5% (down .1% last month).

Looking forward over the next 36 months, the ASA Sales forecast continues to be bullish, but just as with most economic outlooks, there's slight recession risk on the horizon.





As mentioned in prior months, the soft period would likely be timed with the 2020 presidential election (during the lead-up in Q2/Q3 of 2020). Typically, in major Presidential elections, private investment and spending slows during that time, and likely would provide the impetus for an economic slowdown. In Q2 and Q3 of 2019, and now into the first 2/3rds of Q4, investment and spending has slowed as mentioned earlier in the briefing. Many additional factors would be involved in a recession, affecting the depth and longevity of a downturn.