



AACEM/ISSA Quarterly Industry Trends Report

Second Quarter 2018



Prepared by Market Insights, LLC

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Executive Summary

U.S. Economy Summary

Burdened by years of economic uncertainty, stifling federal regulations, and unclear government policies, the U.S. economy struggled for years through a period of agonizingly slow growth during the recovery years of the great recession (2008-2010). Unlike prior recessions, this past recession had no clear recovery period of strong growth, which was the result of the burdens enumerated prior.

There is now a growing, renewed confidence among businesses and consumers alike that the new administration, which is casting a new and different vision regarding policies emanating from Washington. To be sure, there will be a vigorous attempt to change the direction and tone of federal government policies and just as vigorous will be the struggle to stay the prior course. This forecast to a large degree is a conservative one recognizing that the country is at a crucial crossroad and it will be difficult to determine which direction the economy will take in such a contentious environment. Therefore, the assumption is that the U.S. economy will essentially stay its course with initial changes at the margins of government policy.

On the positive side, housing continues to rebound and should return to the “normal” annual level of 1.4 million units in 2019. Also, consumer spending—always a mainstay of economic growth (averaging 70% of U.S. economic activity)—is forecasted to grow through 2023. Household income is on the rise. Commercial construction continues to rebound, albeit at mediocre rates, and corporate pre-tax profits grow, benefiting from recent tax cuts, and in turn will spur new commercial construction. Despite skyrocketing federal government debt, the Federal Reserve continues to monetize that debt, pumping money into banks and through the banks into the stock market, threatening interest rates and inflation. Still the consumer price index remains low and will continue to foster economic growth in the United States through 2023 with the forecasted growth in consumer prices remaining under 3% per annum through 2023, too.

By almost any measure, the U.S. economy is growing well. Bright spots in the U.S. economy that will drive continued growth include:

- Despite the doubling of the U.S. money supply (M1) from 2008 to 2017 as the Federal Reserve has bought up Federal government debt, inflation remains restrained (CPI average is up 1.5% from 2008 to 2017) and current bank interest rates, though rising, remain manageable (the bank prime rate as of April 7, 2018, was 4.75%)
- Housing starts continue to grow annually and should reach traditional levels (approximately 1.4 million units per year) by 2019
- Real Disposable Personal Income (inflation-adjusted, personal after-tax income) is rising and should continue to do so through the end of the forecast period
- Following strong but mixed overall growth over the last several years, commercial construction should improve moderately through the forecast horizon (the next five years)
- U.S. consumer spending will continue to drive the economy through 2023 as should the recent tax cuts, which will enhance spending and economic activity.

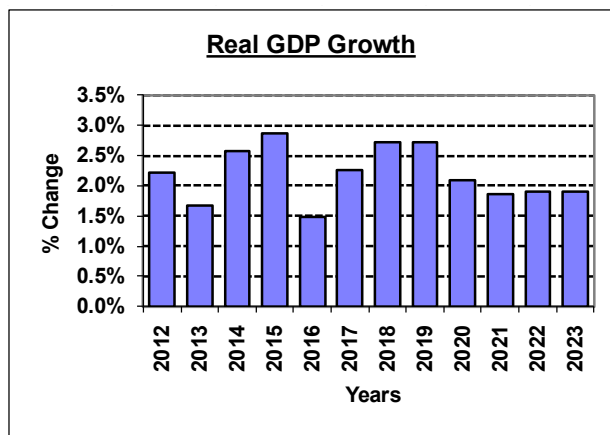
The greatest threats to U.S. economic growth include:

- Continued uncertainty about the costs and form of federal health insurance that can restrain consumer spending, employment growth, and business investment, threatening the U.S. economic recovery
- Although federal spending for fiscal year 2018 is up 5.6% over last year to \$4.2 trillion—and that spending is up 40% since 2008, which saw federal on-budget outlays of \$3 trillion—President Trump’s proposed budget’s total spending is up only 5% for fiscal 2018 over 2017. However, within this budget spending priorities are greatly changed

- Tax increases: Plans by government officials to increase income taxes, Medicare and social security taxes, and energy and other fees could drain currently available funds out of the economy and threaten to reduce U.S. economic activity if enacted
- Continued high energy costs will cause product manufacturing and shipping costs to remain elevated, reducing consumer spending and business investment
- Trade war: Should the current trade skirmish escalate to a full-blown trade war with China, Europe, and others, this situation could severely impact the U.S. economy in a negative fashion, disrupting trade and markets and raising prices
- This forecast does not include any terrorist attack, environmental calamity, government-imposed restrictions or trade wars, major foreign financial disaster, or other third-party event which could fracture the current fragile U.S. economy
- This forecast also assumes that federal budgets, deficits, and inflation will be managed so as not to be a significant threat to U.S. economic prosperity. Although not considered likely, the Trump administration's significantly altering economic and spending priorities could shock the economy negatively.

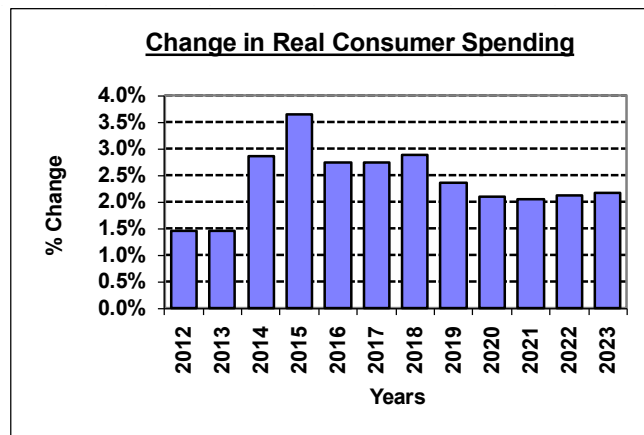
Real GDP is forecast to rise 2.7% in 2018, and is forecast to rise 2.7% in 2019 and 2.1% in 2020, and then average an increase at or near 2% per year for each subsequent year through 2023, slightly below trend growth (i.e., the average sustainable rate of economic growth or about 2.5% per annum) (re: Fig. 1.2). These rates of growth for Real GDP are considered modest considering the elimination of regulations, tax reductions, and other major policy shifts by the Trump administration.

Following its decline during the last recession in 2008 and 2009, real consumer spending has rebounded and continues to grow at a normal rate of growth. Spending by consumers will continue to be a driver of U.S. economic growth through 2022 (re: Fig. 1.3)



Sources: U.S. Commerce Dept., IHS Markit (forecast)

Fig. 1.2



Sources: U.S. Commerce Dept., IHS Markit (forecast)

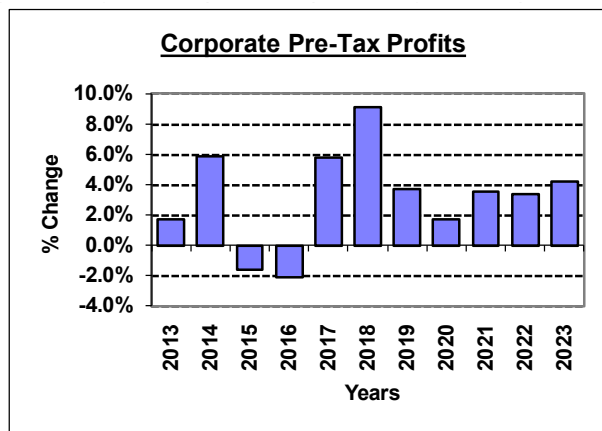
Fig. 1.3

Exports of U.S.-made goods have been and continue to be a strong driver of the U.S. economy. Exports of commercial aircraft and heavy equipment (e.g., bulldozers, road graders, etc.), and other goods are enhanced by a continued currency exchange rate favorable to U.S. exports.

The decline in the U.S. Dollar exchange rate is the result of the Federal Reserve purchasing federal government debt, significantly increasing the money supply caused by continued significant annual budget deficits. China has managed to maintain its currency rate of exchange with the U.S. Dollar in a very close band, which serves to support their exports to the United States. Lacking the fact that the Chinese Yuan maintains a close relationship to the value of the U.S. Dollar, Chinese exports to the U.S. would naturally rise in price as the value of the U.S. Dollar fell in value. President Trump has made currency manipulation by China a significant issue and has threatened to re-structure trade relations with China because of it. This could threaten Chinese imports and prices of cheap Chinese goods in the United States, robbing U.S. consumers' purchasing power.

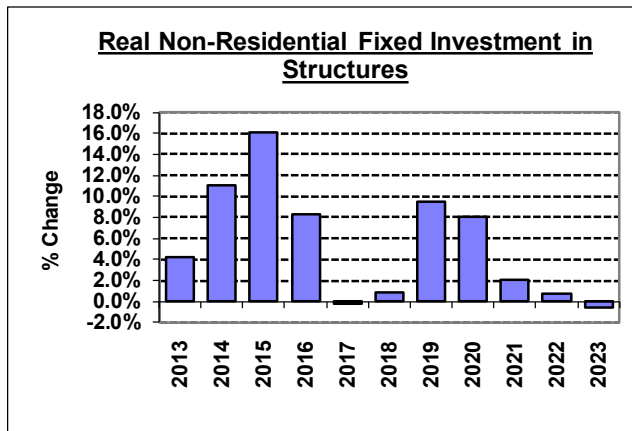
Nonresidential construction, and for that matter nonresidential replacement, too, is linked closely to corporate pre-tax profits. Corporate profits grew at a paltry rate in 2016 but recovered in 2017 and will do so again in 2018 (re: Fig. 1.4). Despite economic uncertainty, nonresidential construction will grow over the next five years as businesses grow to meet increased demand and re-base operations inside the United States due to the weak U.S. Dollar.

Barring any drastic mismanagement by the Federal government relative to the budget deficit, inflation, as measured by the Consumer Price Index, will continue to remain low (about 2.5% or less) through 2022 (re: Fig. 1.7), kept in check by continued gains in productivity (Fig. 1.6) and a liberal monetary policy of debt monetization.



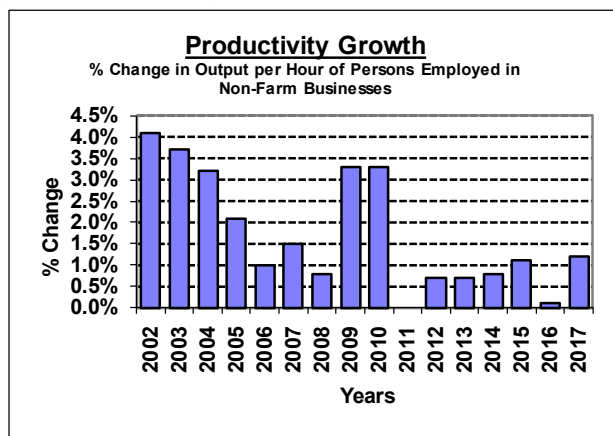
Sources: U.S. Commerce Dept., IHS Markit (forecast)

Fig. 1.4



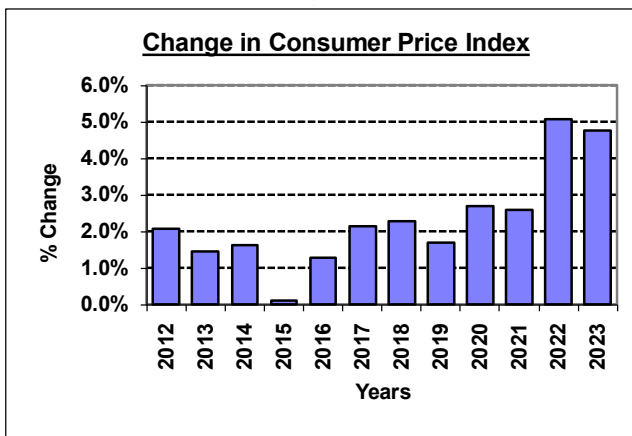
Sources: U.S. Commerce Dept., IHS Markit (forecast)

Fig. 1.5



Sources: U.S. Commerce Dept., IHS Markit (forecast)

Fig. 1.6



Sources: U.S. Commerce Dept., IHS Markit (forecast)

Fig. 1.7

Section 2: U.S. Flooring Market Forecast

U.S. Flooring Forecast Summary Report											U.S. FLOORReport- 2019 © Market Insights LLC, 2018	
Product Type & Market Segment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	% of 2017
Resilient Flooring												
Quantity Market (sf, MM):												
Resd'l Replace.	1,076	1,108	1,197	1,381	1,599	1,586	1,620	1,690	1,718	1,760	1,804	49%
New Resd'l	275	353	406	455	513	580	650	707	737	757	760	16%
Commercial	1,069	1,071	1,071	1,084	1,066	1,126	1,141	1,140	1,146	1,163	1,159	33%
Ind'l/ OEM	96	102	96	93	95	103	112	119	119	114	111	3%
Totals-	2,517	2,634	2,771	3,014	3,273	3,396	3,522	3,657	3,719	3,794	3,833	100%
% Change	--	4.7%	5.2%	8.8%	8.6%	3.7%	3.7%	3.8%	1.7%	2.0%	3.1%	
Dollar Value Market (\$, MM @ MSP):												
Resd'l Replace.	921	995	1,171	1,527	1,907	2,010	2,141	2,311	2,409	2,473	2,569	51%
New Resd'l	239	334	413	495	595	694	800	886	934	963	976	16%
Commercial	1,050	1,067	1,120	1,166	1,211	1,307	1,350	1,376	1,411	1,436	1,460	32%
Ind'l/ OEM	48	52	49	47	49	53	58	62	62	60	58	1%
Totals-	\$2,259	\$2,447	\$2,753	\$3,236	\$3,761	\$4,064	\$4,348	\$4,635	\$4,816	\$4,932	\$5,063	100%
% Change	--	8.3%	12.5%	17.5%	16.2%	8.0%	7.0%	6.6%	3.9%	2.4%	5.1%	
Average Price (\$/sq. ft.)	\$0.90	\$0.93	\$0.99	\$1.07	\$1.15	\$1.20	\$1.23	\$1.27	\$1.29	\$1.30	\$1.32	
Total Value by Type (\$, MM @ MSP):												
Resilient Sheet	823	847	862	880	906	906	910	926	936	954	967	24%
Resilient Tile/VCT	472	472	466	468	463	468	458	450	442	452	444	12%
Luxury Vinyl Tile	965	1,128	1,424	1,887	2,392	2,690	2,980	3,260	3,438	3,526	3,652	64%
Totals-	\$2,259	\$2,447	\$2,753	\$3,236	\$3,761	\$4,064	\$4,348	\$4,635	\$4,816	\$4,932	\$5,063	100%
Laminate Flooring												
Quantity Market (sf, MM):												
Resd'l Replace.	885	864	854	843	846	837	817	821	807	818	828	88%
New Resd'l	57	81	71	68	56	51	47	41	36	36	31	6%
Commercial	47	50	52	55	54	62	64	65	66	67	73	6%
Ind'l/ OEM	1	1	1	1	1	1	1	1	1	1	1	0%
Totals-	989	996	978	967	958	951	929	929	910	922	933	100%
% Change	--	0.6%	-1.7%	-1.1%	-1.0%	-0.7%	-2.4%	0.0%	-2.0%	1.3%	2.5%	
Dollar Value Market (\$, MM @ MSP):												
Resd'l Replace.	921	916	933	940	962	971	966	991	993	1,006	1,040	87%
New Resd'l	56	82	74	72	61	56	53	48	42	43	37	6%
Commercial	60	66	71	76	77	89	94	97	101	105	115	7%
Ind'l/ OEM	1	1	1	1	1	1	1	2	2	2	2	0%
Totals-	\$1,038	\$1,065	\$1,079	\$1,090	\$1,101	\$1,118	\$1,114	\$1,137	\$1,138	\$1,155	\$1,194	100%
% Change	--	2.6%	1.3%	1.0%	1.0%	1.5%	-0.3%	2.1%	0.1%	1.5%	4.9%	
Average Price (\$/sq. ft.)	\$1.05	\$1.07	\$1.10	\$1.13	\$1.15	\$1.18	\$1.20	\$1.22	\$1.25	\$1.25	\$1.28	
Wood Flooring												
Quantity Market (sf, MM):												
Resd'l Replace.	699.5	681.6	744.5	747.3	686.3	638.7	613.0	589.2	568.9	561.2	573.1	56%
New Resd'l	291.4	356.9	360.7	383.2	399.5	427.3	450.3	478.7	494.0	497.5	493.1	32%
Commercial	48.9	50.8	48.9	49.6	52.1	54.9	56.7	58.1	59.7	60.3	61.0	4%
Ind'l/ OEM	66.3	74.8	75.8	92.0	94.5	90.9	76.7	87.5	85.4	81.0	75.9	8%
Totals-	1,106.2	1,164.0	1,229.9	1,272.1	1,232.4	1,211.9	1,196.7	1,213.5	1,208.0	1,200.0	1,203.1	100%
% Change	--	5.2%	5.7%	3.4%	-3.1%	-1.7%	-1.3%	1.4%	-0.5%	-0.7%	-0.4%	
Dollar Value Market (\$, MM @ MSP):												
Resd'l Replace.	1,719	1,716	1,905	1,941	1,778	1,634	1,551	1,497	1,460	1,440	1,485	57%
New Resd'l	662	832	854	922	962	1,019	1,063	1,136	1,185	1,254	1,257	31%
Commercial	132	140	137	141	148	155	159	164	170	172	175	5%
Ind'l/ OEM	164	188	197	245	256	248	207	233	224	209	196	8%
Totals-	\$2,678	\$2,876	\$3,093	\$3,249	\$3,143	\$3,056	\$2,980	\$3,031	\$3,038	\$3,074	\$3,114	100%
% Change	--	7.4%	7.6%	5.0%	-3.2%	-2.8%	-2.5%	1.7%	0.2%	1.2%	2.5%	
Average Price (\$/sq. ft.)	\$2.42	\$2.47	\$2.51	\$2.55	\$2.55	\$2.52	\$2.49	\$2.50	\$2.52	\$2.56	\$2.59	
Total Value by Type (\$, MM @ MSP):												
Engineered	1,492	1,632	1,778	1,900	1,891	1,871	1,831	1,877	1,874	1,917	1,943	60%
Solid/ Pre-Finished	810	862	875	898	846	811	808	834	853	848	858	27%
Solid/ Site-Finished	347	352	412	423	380	348	314	293	284	283	286	12%
Parquet	29	30	29	27	27	27	27	27	26	27	26	1%
Totals-	\$2,678	\$2,876	\$3,093	\$3,249	\$3,143	\$3,056	\$2,980	\$3,031	\$3,038	\$3,074	\$3,114	100%
Bamboo Flooring	107	108	108	106	94	92	89	91	91	92	93	3%
Cork Flooring	52	53	56	57	53	52	48	48	46	46	47	2%

Section 2: U.S. Flooring Market Forecast

U.S. Flooring Forecast Summary Report											U.S. FLOORReport- 2019 © Market Insights LLC, 2018			
Product Type & Market Segment														% of 2017
Market Segment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023			
Ceramic Floor & Wall Tile														
Quantity Market (sf, MM):														
Resd'l Replace.	1,460	1,386	1,532	1,528	1,633	1,659	1,667	1,712	1,721	1,758	1,807		55%	
New Resd'l	477	557	614	655	682	729	766	821	854	867	866		23%	
Commercial	532	564	591	628	674	710	747	777	812	824	854		23%	
Ind'l/ OEM	4	4	5	6	7	8	9	10	11	10	10		0%	
Totals-	2,473	2,511	2,742	2,817	2,996	3,105	3,188	3,320	3,398	3,458	3,537		100%	
% Change	#REF!	1.5%	9.2%	2.7%	6.4%	3.6%	2.7%	4.1%	2.3%	1.8%	4.1%			
Dollar Value Market (\$, MM @ MSP):														
Resd'l Replace.	1,586	1,563	1,713	1,723	1,803	2,013	2,055	2,145	2,190	2,270	2,371		50%	
New Resd'l	446	550	616	667	707	768	820	893	943	971	985		20%	
Commercial	763	859	919	994	1,085	1,157	1,235	1,304	1,384	1,425	1,499		30%	
Ind'l/ OEM	4	4	5	6	7	9	10	11	12	12	12		0%	
Totals-	\$2,799	\$2,975	\$3,252	\$3,390	\$3,603	\$3,947	\$4,120	\$4,353	\$4,529	\$4,677	\$4,867		100%	
% Change	--	6.3%	9.3%	4.2%	6.3%	9.6%	4.4%	5.7%	4.0%	3.3%	7.5%			
Average Price (\$/sq. ft.)	\$1.13	\$1.19	\$1.19	\$1.20	\$1.20	\$1.27	\$1.29	\$1.31	\$1.33	\$1.35	\$1.38			
Total Value by Type (\$, MM @ MSP):														
Floor Tile	2,295	2,429	2,641	2,760	2,954	3,268	3,429	3,635	3,796	3,921	4,100		82%	
Wall/Other Tile	504	546	611	629	649	679	690	718	733	756	767		18%	
Totals-	\$2,799	\$2,975	\$3,252	\$3,390	\$3,603	\$3,947	\$4,120	\$4,353	\$4,529	\$4,677	\$4,867		100%	
% Floor/Total	82%	82%	81%	81%	82%	83%	83%	84%	84%	84%	84%			
Total Porcelain Tile	\$2,099	\$2,232	\$2,439	\$2,542	\$2,702	\$2,960	\$3,090	\$3,265	\$3,396	\$3,508	\$3,650			
% Porcelain/Total	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%			
Carpet & Rugs														
Carpet Rollgoods & Tile														
Quantity Market (sf, MM):														
Resd'l Replace.	5,402	5,194	5,182	5,212	5,209	5,131	4,996	4,971	4,837	4,809	4,847		61%	
New Resd'l	898	1,021	1,096	1,144	1,152	1,194	1,226	1,269	1,275	1,230	1,229		13%	
Commercial	2,504	2,486	2,482	2,423	2,248	2,296	2,347	2,369	2,388	2,454	2,505		26%	
Totals-	8,804	8,701	8,759	8,778	8,608	8,620	8,569	8,609	8,500	8,493	8,581		100%	
Ind'l/ OEM	173	185	202	234	271	296	320	342	341	326	318			
Total/ Sq. Yds. (MM)	978	967	973	975	956	958	952	957	944	944	953		100%	
% Change	--	-1.2%	0.7%	0.2%	-1.9%	0.1%	-0.6%	0.5%	-1.3%	-0.1%	0.9%			
Dollar Value Market (\$, MM @ MSP):														
Resd'l Replace.	4,261	4,013	3,886	3,748	3,879	3,862	3,801	3,823	3,760	3,738	3,809		36%	
New Resd'l	635	712	745	747	776	812	843	881	893	863	871		7%	
Commercial	3,600	3,704	3,794	3,749	3,589	3,752	3,901	4,001	4,099	4,300	4,463		33%	
Totals-	8,496	8,429	8,425	8,244	8,244	8,426	8,546	8,705	8,752	8,901	9,142		75%	
% Change	--	-0.8%	-0.1%	-2.1%	0.0%	2.2%	1.4%	1.9%	0.5%	1.7%	4.5%			
Average Price (\$/sq.yd.)	\$8.68	\$8.72	\$8.66	\$8.45	\$8.62	\$8.80	\$8.98	\$9.10	\$9.27	\$9.43	\$9.59			
Area Rugs & Bath Mats														
Dollar Value Market (\$,MM @ MSP)														
	\$2,226	\$2,326	\$2,396	\$2,579	\$2,677	\$2,710	\$2,745	\$2,864	\$2,922	\$3,048	\$3,173		25%	
Total Carpet & Rugs														
Dollar Value Market (\$,MM @ MSP)														
	\$10,722	\$10,755	\$10,821	\$10,823	\$10,921	\$11,136	\$11,290	\$11,569	\$11,675	\$11,948	\$12,316		100%	
% Change (Yr-Yr)	--	0.3%	0.6%	0.0%	0.9%	2.0%	1.4%	2.5%	0.9%	2.3%	5.5%			
Ind'l/ OEM	507	540	577	598	617	637	652	662	655	646	644			
Total Carpets & Rugs														
% of Total Carpet & Rugs Dollar Value of Consumption:														
Broadloom Rolls	61.7%	59.4%	56.8%	54.4%	52.4%	51.7%	51.0%	50.3%	49.5%	48.1%	47.5%			
6'-Rolls & Tile	17.5%	19.0%	21.1%	21.8%	23.1%	23.9%	24.7%	24.9%	25.4%	26.4%	26.7%			
Area Rugs	20.8%	21.6%	22.1%	23.8%	24.5%	24.3%	24.3%	24.8%	25.0%	25.5%	25.8%			
Total Market-	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

Section 2: U.S. Flooring Market Forecast

U.S. Flooring Forecast Summary Report												U.S. FLOORReport- 2019 © Market Insights LLC, 2018
Product Type & Market Segment	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	% of 2017
Rubber Flooring												
Quantity Market (sf, MM)	2,510	2,688	2,862	3,022	3,050	3,103	3,186	3,233	3,265	3,367	3,412	
% Change	--	7.1%	6.5%	5.6%	0.9%	1.7%	2.7%	1.5%	1.0%	3.1%	4.5%	
Dollar Value Market (\$, MM @ MSP)	\$504	\$544	\$584	\$622	\$632	\$649	\$671	\$687	\$699	\$721	\$736	
% Change	--	7.9%	7.4%	6.4%	1.7%	2.6%	3.5%	2.3%	1.8%	3.1%	5.4%	
Average Price (\$/sq. ft.)	\$0.20	\$0.20	\$0.20	\$0.21	\$0.21	\$0.21	\$0.21	\$0.21	\$0.21	\$0.21	\$0.22	
Total Flooring (xcluding Rubber)*												
Quantity Market (sy, MM):												
Resd'l Replace.	9,523	9,233	9,509	9,712	9,974	9,852	9,712	9,784	9,652	9,706	9,859	59%
New Resd'l	1,999	2,368	2,548	2,705	2,803	2,980	3,139	3,318	3,396	3,388	3,378	17%
Commercial	4,201	4,222	4,245	4,240	4,094	4,249	4,355	4,409	4,472	4,568	4,652	24%
Totals-	15,723	15,823	16,302	16,657	16,871	17,081	17,206	17,511	17,520	17,662	17,889	100%
% Change	--	0.6%	3.0%	2.2%	1.3%	1.2%	0.7%	1.8%	0.1%	0.8%	2.1%	
Ind'l/ OEM	339	367	379	426	469	499	518	560	557	532	516	
Dollar Value Market (\$, MM @ MSP):												
Resd'l Replace.	9,409	9,202	9,608	9,879	10,329	10,491	10,513	10,767	10,812	10,928	11,274	53%
New Resd'l	2,038	2,510	2,702	2,903	3,100	3,348	3,579	3,844	3,997	4,093	4,125	16%
Commercial	5,606	5,836	6,041	6,126	6,109	6,461	6,739	6,942	7,165	7,437	7,713	31%
	17,053	17,548	18,351	18,908	19,539	20,300	20,831	21,552	21,974	22,457	23,112	100%
Ind'l/ OEM*	217	244	251	300	313	312	276	309	299	282	268	--
Area Rugs	2,226	2,326	2,396	2,579	2,677	2,710	2,745	2,864	2,922	3,048	3,173	--
Rubber Floors & Mats*	504	544	584	622	632	649	671	687	699	721	736	--
Totals-	20,000	20,663	21,583	22,408	23,161	23,970	24,523	25,412	25,894	26,508	27,290	
% Change	--	3.3%	4.5%	3.8%	3.4%	3.5%	2.3%	3.6%	1.9%	2.4%	5.4%	
*Note: Rubber Flooring excluded from Total Flooring because a significant amount of Rubber Flooring is mats and floor runners and these products go atop other floorings thereby causing double-counting of floor area; Carpet OEM included with Residential & Commercial figures												
Average Price (\$/sq. ft.)	\$1.27	\$1.31	\$1.32	\$1.35	\$1.37	\$1.40	\$1.43	\$1.45	\$1.48	\$1.50	\$1.53	

Section 3: Commercial Market Report

The commercial market (also known as the nonresidential or contract market) is defined to encompass flooring sold and installed in any and all nonresidential buildings. Flooring sold for installation into retail stores, offices, schools, hotels, motels and dormitories, and other such building types all constitute the commercial market. Flooring sold and installed into apartment buildings, condominiums, public housing and other residential structures is not considered commercial but is included in the residential market segments. Flooring sold for dormitories in schools or colleges and nursing homes is considered part of the commercial market, as this sector is akin to hotel and motel building types. The commercial market is also divided into two sub-sectors: Main Street and Contract Commercial. The delineation between these sectors is the size of the building. The Main Street market is determined to be any nonresidential building, regardless of type, whose floor area is less than 25,000 square feet. The Contract Commercial market is thus all buildings of 25,000 square feet floor area or greater. Although the Main Street market varies by size per building type, on average, the Main Street market is 25% to 30% of the total commercial market in the United States as this is the average percentage of all nonresidential buildings that are less than 25,000 square feet floor area. Sales made direct to commercial building owners (not via commercial flooring contractors or retailers) are considered part of the Contract Commercial market. The Main Street market is sold by retailers and the contract commercial market is sold via commercial flooring contractors, with architects and designers serving to recommend and specify product.

For purposes of this analysis, the figures reported for the commercial market include new construction and replacement flooring sold for additions to and remodeling and rehabilitation in existing nonresidential buildings.

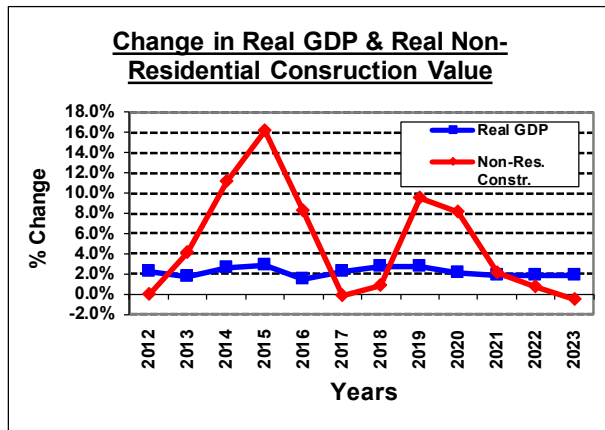
The commercial market is summarized into the following five building types:

Building Type	Definition
Health Care	Includes all veterinary and rehabilitation hospitals, clinics and nursing homes.
Education & Institutional	All private and public schools and college buildings, museums, casinos, theaters, houses of worship, convention centers, airport and other transportation terminals, police and fire stations, prisons, and other government buildings.
Retail	All retail stores, retail showrooms, restaurants, food, markets, and banks.
Offices	All professional and other office buildings including doctors, attorneys, and other professional offices such as corporate offices, etc.
Lodgings	All hotel and motel buildings and dormitories.

There are two major components to the commercial market: new construction and replacement/renovation. Each moves with similar dynamics, driven largely by employment, demographic and economic growth, business profits, and capital investment. Included in new construction are all newly built buildings and additions to existing buildings. Replacement and renovation encompasses all flooring sold as a replacement for floors in existing buildings for any reason. Replacement/renovation also includes flooring installed in an existing building where no finished flooring previously existed.

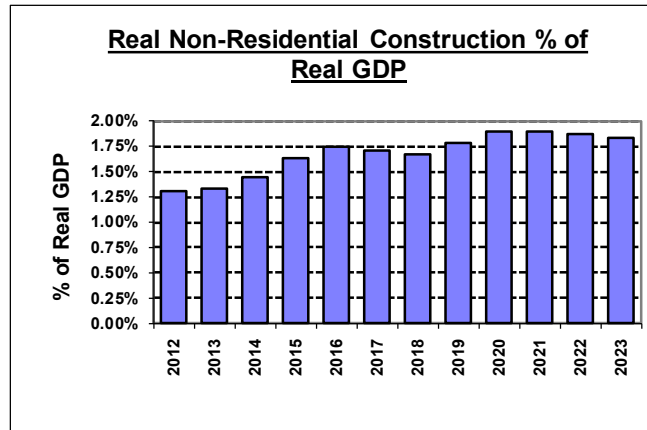
Overview

Commercial construction has been volatile over time, being affected greatly by interest rates, economic conditions, building demand, property value shifts, corporate profitability, tax law changes, and recently by the Affordable Care Act (Obamacare). Compared to Real GDP, Real Nonresidential Construction Value has been considerably more volatile (re: Fig. 4.1). Also, Real Nonresidential Construction Value has declined as a share of total Real GDP from a 30-year high of 3.4% in 1982 to about 1.25% in 2011. Commercial construction began to recover in 2013, improving each year. This trend is forecasted to continue, following closely with Real GDP, through 2023, all the while remaining below 2% (re: Fig. 4.2). This situation is mainly the result of restraint by firms in these uncertain economic times. Also contributing to restraint in the growth of commercial construction is retail consolidation, uncertain health care and other employment costs holding down new hires, online shopping, outsourcing, and diminished tax revenues causing local and state governments to postpone new construction and renovation projects.



Sources: U.S. Commerce Dept. & IHS Markit

Fig. 4.1 / Real GDP & Non-Res. Constr.



Sources: U.S. Commerce Dept. & IHS Markit

Fig. 4.2 / % Non-Res. Constr. of GDP

Building Type Segments

Although nonresidential construction has been volatile over the last several years, the commercial renovation market has grown steadily as more buildings get older each year and eventually require renovation, maintenance, repair, and remodeling.

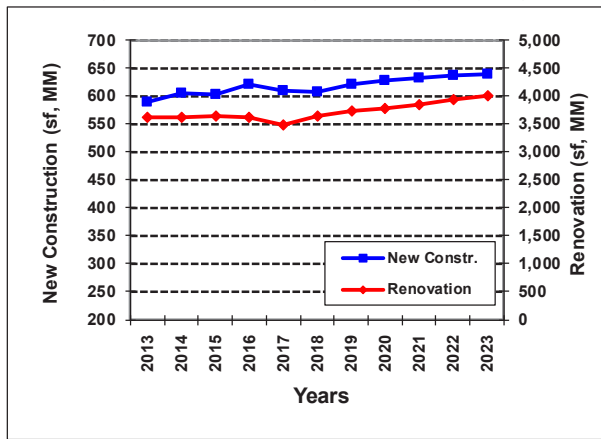
The entire nonresidential market is currently undergoing abnormal stress resulting from economic uncertainties governing costs, economic trends, and government policies. Further, the prior recession curtailed company expansion and in fact has caused many sectors to extend their re-trenching strategies into the current recovery. Renovation rates vary by building type and depend on economic and competitive conditions.

Traditionally the most frequently renovated buildings are lodgings, even though they constitute the smallest share of total commercial floor area in-place. Hotels and motels are constantly modifying their “market face” and this frequently entails flooring replacements. Further, there is considerable wear and tear on the floors of lodgings that necessitate replacement, especially in dormitory buildings. The hotel/motel portion of the lodgings industry is very competitive and frequent facelifts are needed to maintain market position.

Retail stores, which include restaurants, are another building type requiring frequent updates to their motifs to remain competitive. Styles and merchandising approaches change long before the floors wear out. Also, as population and new home construction patterns shift, retail stores need to adjust to follow this growth.

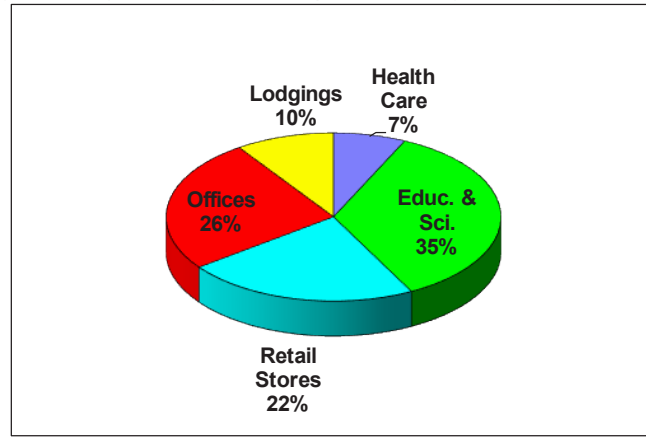
Commercial renovation, which had been languishing along with a lot of the U.S. economy over the past five years, is now rebounding and is forecasted to continue to grow slightly through 2023 (re: Fig. 4.3).

Examining commercial floor area in-place by building type in 2017, we see that educational and institutional is the largest end-use type, accounting for 35% of the commercial floor area. Next in total floor area is offices (26%), retail (22%), and lodgings (10%). The smallest building type segment is health care with only 7% of in-place floor area (re: Fig. 4.4).



Sources: U.S. Census Bureau, FMI, and Market Insights LLC

Fig. 4.3 / Non-Res. Flr.Area New/Repl.



Sources: U.S. Energy Info. Admin. & Market Insights LLC

Fig. 4.4 / In-Place Floor Area in 2017

A detailed discussion of market factors affecting each building type follows.

Health Care

Health care construction has lagged for the past seven years as shorter patient stays, rising health care costs, the need for more qualified health care workers, and continued uncertainty regarding The Patient Protection and Affordable Care Act (ACA or Obamacare), and then the recent repeal of the ACA mandate, all of which has moderated investment in new hospital space. Driving health care construction has been and remains an aging and increasing population, a booming stock market that is enriching hospital endowments and contributions, and increased government spending. Hospitals continue to show caution with new investments due to the changing nature of health care and insurance, as well as the need for more qualified health care workers. New hospital construction will force older facilities to remodel their operations to remain competitive and cost-efficient, and increasingly facilities will shift to suburban and sunbelt areas as the population migrates to warmer climates.

Shaping new hospital design and location are an aging U.S. population, new technologies, increased single-bed room demand, the need to continue to refine processes to be leaner and more efficient, and increased health care consumerism. Consumerism has a growing number of persons seeking primary care at retail-store clinics in pharmacies such as Wal-Mart and Walgreens. Ambulatory care now accounts for one-third of health care spending in the United States, slightly more than inpatient care and hospitals are adapting to this growing paradigm.

Many hospitals and health care facilities still are not prepared for the increased number of insured. The health care industry has not prepared for the shock of providing affordable health insurance for millions of Americans who are currently uninsured. Many in the industry have either ignored this situation or tried to legislate it away. The effects of a large number of newly insured, whether from the Patient Protection and Affordable Care Act (PPACA) or other replacement legislation are unsure and will likely create crowded conditions in hospitals which will likely lack the facilities, doctors, or support staff.

Consolidation is a major trend in the health care industry with mergers among major health systems, hospitals acquiring physician and specialist practices, and small physician groups combining their practices to save on real estate and overhead costs.

Hard surface floorings are best suited in health care facilities. Resilient flooring, especially resilient sheet, with its ease of maintenance and ability to handle wet spills and be more easily sterilized, is best suited for most applications in these facilities. Resilient tile, due to its low first cost is also preferred in the new cost-conscious environment predominating health care facilities. LVT is also appreciated in this environment as it can upgrade the look of any application without a significant increase in cost. Ceramic tile is increasingly being used in health care buildings in high-traffic floor areas and on walls because of its durability and ease of maintenance.

Education & Institutional

This category of building type encompasses several types of buildings: education (schools and colleges), public safety (jails and prisons, courthouses, police and fire stations, etc.), religious, transportation, and amusement and recreation (libraries, casinos, theaters, convention centers, etc.).

Education benefits from enrollment figures that continue to rise because of immigration, higher birth rates, and children of the Baby Boomers (Echo Baby Boomers). Secondary school (K-12) enrollment figures, currently at record levels, will continue to rise throughout the forecast period in both public and private institutions. Recent increases in state and local tax revenues have increased construction and renovation in some areas. Education is the largest single nonresidential building type market based on new construction.

Private schools suffered in the recent economic downturn as families that faced tight budgets moved to avoid the higher costs of such schools. States and communities with decreasing populations due to people moving to find better jobs, will need to consolidate older, underutilized schools. Also expect a rise in distance learning or online courses as this form of education becomes more acceptable.

The economic turnaround and stock market gains have revitalized endowments and this in turn has caused colleges and universities to reinstate building plans.

Education facilities are expected to be a major market for green construction and overall renovation. Private school construction and renovation will benefit from school voucher programs if they can survive the federal budgetary process.

Funding from overstretched state and local budgets will continue to be a major hurdle for school construction and renovation. Renovations to existing buildings will grow faster than new construction as maintenance and upgrades to current structures are required.

Higher educational facilities are being challenged by online, distance learning similar to trends in retail and e-commerce.

Public Safety

Public Safety building construction and renovation of courthouses, police and fire stations, and prisons are closely tied to the fiscal health of governments, with a lag. During the last recession, the erosion in the fiscal health of governments curtailed construction in this segment. Prisons continue to operate at rates of over-capacity ranging from 35% to 55%. Privately managed secure facilities account for 7% of state and 18% of federal prisoners and this figure continues to rise. President Trump recently directed the U.S. Justice Department to overturn President Obama's plan to phase out the use of private prisons. Prison construction will be enhanced by the rise in deportations and the roundup of illegal aliens. Lawsuits continue to propagate, taxing existing courthouse facilities.

Religious

Religious construction will see only mediocre growth as church finances are stretched to provide social services. Congregations will move to occupy vacant retail space or reoccupy older, closed church buildings. On the positive side, congregations will see rising contributions as more people are employed and there is more money to support religious buildings.

Transportation

Drivers in this segment are population growth, government spending, and transportation funding. A growing population is increasingly putting pressure on the capacity of U.S. transportation infrastructure. High-speed rail has yet to catch on in the United States but if it does it will require new rail terminals. Significant renovations are required at many of the nation's travel terminals to more effectively and efficiently deal with the heavier levels of required security and traffic volumes. Airports will need upgrades to accommodate more wide-bodied aircraft as airlines upgrade their air fleets.

Amusement and Recreation

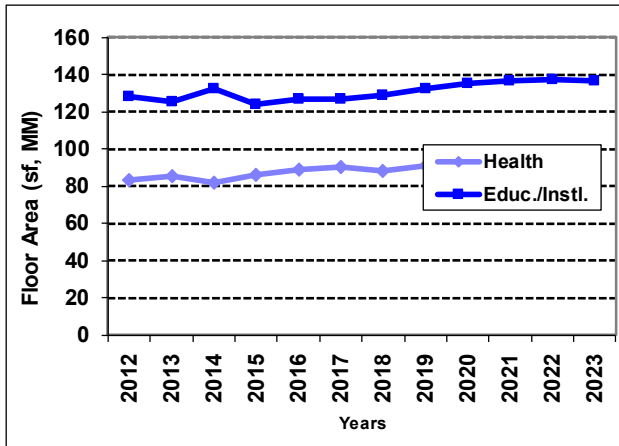
Amusement and recreation building construction (e.g., theaters, convention centers, casinos, etc.) and renovation has been and will continue to be driven by the same factors driving the tourism industry. Both are dependent on consumer confidence, in-

come, and available time. Specifically, household disposable income, travel costs, leisure time, and overall economic and social fear determine the level of construction and renovation activity in this sector.

The current unsettled economic environment and previous decline in disposable income had slowed construction and renovation activity for theaters, casinos, sports, and convention facilities. Projects put on hold during are resuming during this recovery, which should also contribute to a rise in construction and renovation in this sector.

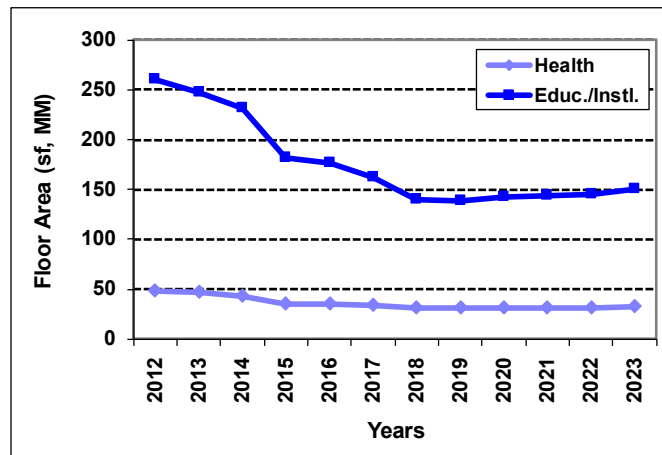
Carpet is used heavily in certain institutional settings like schools, airports, casinos, churches, theaters, etc. Resilient tile is a preferred product in schools, prisons, and government buildings due to its low cost, ease of maintenance, and general functionality. Ceramic tile has a solid niche in prisons and public buildings due to its high durability and ease of maintenance. Specialty wood sports floors are used mainly in gymnasiums.

See Figures 4.5 and 4.6 following for annual construction and renovation activity.



Sources: U.S. Census Bureau, FMI, and Market Insights LLC

Fig. 4.5 / Health and Educ./Instl. Constr.



Sources: U.S. Census Bureau, FMI, and Market Insights LLC

Fig. 4.6 / Health and Educ./Instl. Renov.

Retail

New retail construction is tied largely to residential construction and consumer spending with a turnaround in store construction lagging a turnaround in housing construction by 12 to 18 months. Saturation in the growth of big-box retailers has slowed retail construction. More than anything, retail construction over the last several years has been hampered by poor retail profitability, consolidation, and growing online sales. Following a period of store closings in 2008 and 2009 that were triggered by poor retail profitability and retail chains leaning their networks to adjust to changing economic conditions. Retail store closings today are the result of an antiquated distribution network that is losing its appeal to the average consumer. However, the continued increase and shift in U.S. population will cause retail construction to grow while online sales and downsized floor plans mean construction growth in this sector will be mitigated.

The trend may no longer be just consumer driven as commerce turns more to the internet to capture sales without adding more stores to the chain. Also, consumers are moving more to major metropolitan areas and more retail construction should follow this trend.

With shipping costs a major hurdle to e-commerce profitability, many firms are opting to ship product purchased by consumers online to local retail stores for pickup. Referred to as “bricks and clicks,” even Amazon is converting its newly acquired Whole Foods outlets to accept merchandise shipments made by Amazon customers in general. How this affects retail construction and renovation, if any, remains to be seen.

Renovation in retail has and will continue to be driven by changing merchandising efforts of retailers. Retailers revamp merchandising programs much faster than floors wear out. With a duration of approximately three to five years, merchandising program changes are the largest factor driving retail renovation. Renovation of vacant big-box stores will be driven by a desire

to reposition them for health care (clinical uses) and educational purposes (university annexes, trade schools, etc.) (re: Figs. 4.8 and 4.9).

Discount and food retailers have major expansion plans for price-conscious shoppers as do restaurants and drinking establishments.

It is also likely that retailers will be rethinking commercial construction space to accommodate smaller stores and to combine in-store sales with online shopping.

Carpet is very strong in this sector, especially in sit-down restaurants. Department stores and retailers of all types use carpet heavily. Resilient tile is preferred in discount retailers like Wal-Mart and Target and, given that this is a popular and dominating store format, should see continued impetus as these store types increasingly dominate the retail landscape. Wood flooring has a strong niche in the retail segment among boutique retailers and upscale restaurants. Ceramic tile also possesses a niche in traffic areas of malls and stores and in fast-food restaurants (e.g., McDonald's, Wendy's, etc.) that require durable flooring to hold up in their high-traffic environments. LVT has increasingly found its way into restaurants and retail stores as a more attractive upgrade over VCT and cheaper alternative to wood flooring.

Offices

The demand for office space is driven by employment growth rates which in turn are linked to company profitability, economic conditions and market demand, and office vacancy rates.

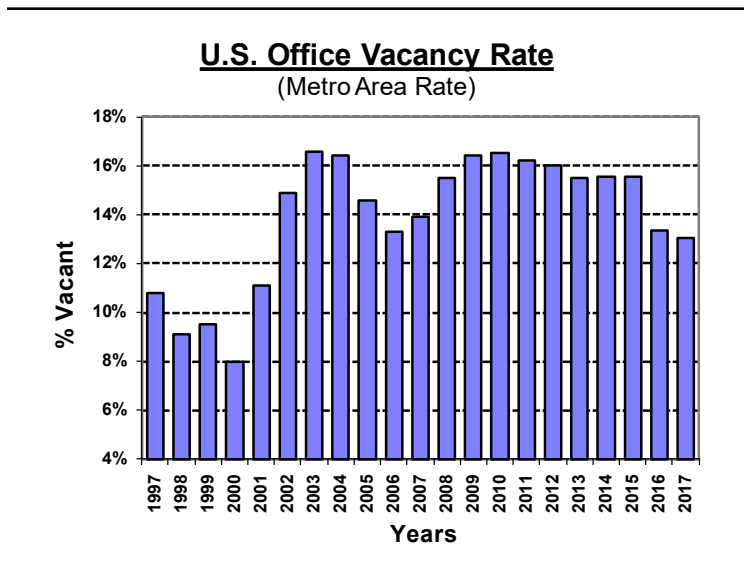
Office vacancy rates and unemployment are down, which should aid office construction, although hiring and investment in office construction remains reserved due to uncertainty in government policy and more outsourcing and home offices.

More home offices and new startups of small businesses by long unemployed or disaffected office workers will not necessitate the need for new office building.

Green construction and energy savings will be the focus of renovation and new buildings.

A large number of specifications required for the "wired" work of the information age are making existing space obsolete; tenants will continue to "trade up" in the near term by relocating or upgrading.

A new emphasis on esthetics will diminish some existing, older buildings.



Metro Area Vacancy Rate= Avg. of Downtown & Suburban Rates

Source: CB Richard Ellis

Fig. 4.7

Carpet tile, and to a lesser degree broadloom carpet, dominate the office sector. Carpet tile with its warmth, quietness, ease of maintenance, and ability to facilitate flat-wire technology dominates the wired office of the new millennium. Six-foot wide carpet rollgoods, once popular in this sector to mitigate the use of higher-cost carpet tiles, have increasingly fallen out of favor and use. Hard surface flooring is used in high-tech environments (e.g., labs, IT centers, etc.), restrooms, and lobby and kitchen areas.

Lodgings

The hotel and motel industry depends heavily on business travel and tourism, both of which fell significantly during the last recession. However, in 2012 lodgings construction came back strong as both consumers and business people have resumed traveling and this expected to continue at least through 2016. Occupancy rates are growing as is travel.

Also driving hotel construction and renovation is the fact that technology has reduced the need for business travel. Hotel performance is linked to local economies, added to this is the fact that travelers are seeking rate concessions.

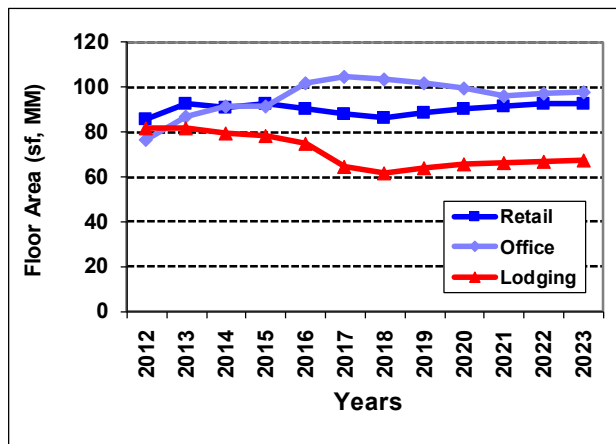
The largest growth in the coming years will be among upscale properties and event locations.

An obstacle to growth in this sector is the rise of Airbnb and similar organizations that allow individuals while they are away from home to rent their houses, condominiums, and apartments to business and leisure travelers.

As the economy continues to improve, business and vacation travelers will increasingly renew travel activities, but this will be a slow transition.

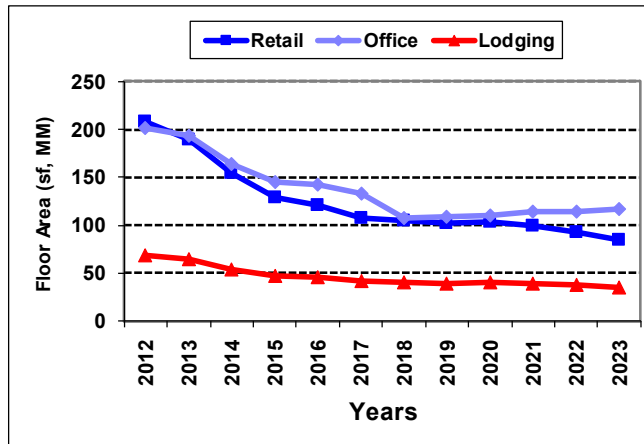
Dormitory construction should also see growth from Baby Boomer children as they begin to enter college and endowments benefit from a strong stock market.

The flooring product of choice in the lodgings sector is carpet for its ambience, residential look, warmth, ease of maintenance, and cost.



Sources: U.S. Census Bureau, FMI, and Market Insights LLC

Fig. 4.8 / Retail, Office, & Lodging Constr.



Sources: U.S. Census Bureau, FMI, and Market Insights LLC

Fig. 4.9 / Retail, Office, & Lodging Renov.

Section 4: Economic & Commercial Market Tables

Market Monitor Report

Table #1

Key U.S. Market Measures

Explanation of Measures Shown Below:

- (1)= **Change in Leading Economic Indicator Index:** Percent change in Leading Economic Indicators Index, current versus immediately prior period, shown at an annual rate; Index components are a mix of various economic variables.
- (2)= **Real GDP Growth:** Growth in overall economy; the inflation-adjusted, value of all domestic goods and services in the nation; traditional trend growth in the U.S.= 2.2% per annum: **a. Year-to-Year:** Percent change based on the current year compared to the prior year
b. Period-to-Period: Annualized percent change based on the current quarter compared to the immediately prior quarter
- (3)= **Bank Prime Rate:** Average interest rate charged by banks to their best customers
- (4)= **Change in Consumer Price Index:** Percent change in consumer prices for all items
- (5)= **Change in Real Personal Consumption Expenditures:** Percent change in the inflation-adjusted value of all consumer purchases of goods and services
- (6)= **Change in Real Disposable Personal Income:** Percent change in the inflation-adjusted value of all consumer's income after taxes and government social security & Medicare insurance premiums
- (7)= **Total Housing Starts:** Number of new housing units started in thousands & percent change; quarterly figures at seasonally adjusted annual rate
- (8)= **Household Growth:** Percent change in the number of new households per period at an annual rate; Source: US Census Bureau
- (9)= **Change in Real Commercial Construction:** Inflation-adjusted value and percent change in all commercial construction
- (10)= **Corporate Pre-Tax Profits:** Actual value and percent change in the pre-tax profits of all privately-held corporations

Key U.S. Measures

Period	Forecast = F	(1)	(2)		(3)	(4)	(5)	(6)	(7)		(8)	(9)		(10)	
		Chg. In Leading Ec. Ind.	Overall Economy			Residential/Consumer Market						Commercial Market			
			Real GDP Growth		Bank Prime Rate	Change in CPI	Change in Real P.C.E.	Chg. in Real Dis. Pers.Inc.	Total		Hshold. Growth	Real Value of		Corp. Pre-Tax	
			% Chg. (Yr.-Yr.)	% Chg. (Pd.-Pd.)					Housing Starts	Comm'l Constr.		Profits			
		(% chg.)	(% chg.)	(% chg.)	(%)	(% chg.)	(% chg.)	(units, M)	(% chg.)	(% chg.)	Value	% Chg.	Value	% Chg.	
Annual Results:															
												(\$9\$ Bns.,	(% chg.)	(\$ Bns.)	(% chg.)
												SAAR)			
2002		0.8%	1.8%	1.8%	4.7%	1.6%	2.6%	3.1%	1,710	6.8%	1.2%	275	-20.1%	907	20.3%
2003		3.0%	2.8%	2.8%	4.1%	2.3%	3.1%	2.7%	1,854	8.4%	1.3%	259	-5.8%	1,056	16.4%
2004		9.8%	3.8%	3.8%	4.3%	2.7%	3.8%	3.6%	1,949	5.2%	0.7%	265	2.2%	1,283	21.5%
2005		5.2%	3.3%	3.3%	6.2%	3.4%	3.5%	1.5%	2,073	6.3%	1.0%	263	-0.7%	1,478	15.1%
2006		0.8%	2.7%	2.7%	8.0%	3.2%	3.0%	4.0%	1,812	-12.6%	1.0%	281	6.8%	1,647	11.4%
2007		-2.1%	1.8%	1.8%	8.1%	2.9%	2.2%	2.1%	1,342	-25.9%	1.1%	317	12.9%	1,529	-7.1%
2008		-11.2%	-0.3%	-0.3%	5.1%	3.8%	-0.3%	1.5%	900	-32.9%	0.5%	332	4.6%	1,285	-16.0%
2009		-13.8%	-2.8%	-2.8%	3.3%	-0.3%	-1.6%	-0.4%	554	-38.4%	0.1%	259	-22.0%	1,397	8.7%
2010		7.4%	2.5%	2.5%	3.3%	1.6%	1.9%	1.0%	586	5.7%	0.6%	189	-27.1%	1,746	25.0%
2011		5.2%	1.6%	1.6%	3.3%	3.1%	2.3%	2.5%	612	4.5%	1.0%	182	-3.7%	1,817	4.0%
2012		2.1%	2.2%	2.2%	3.3%	2.1%	1.5%	3.1%	784	28.1%	1.0%	200	10.3%	1,998	10.0%
2013		2.9%	1.7%	1.7%	3.3%	1.5%	1.5%	-1.4%	928	18.4%	1.0%	209	4.2%	2,033	1.7%
2014		5.6%	2.6%	2.6%	3.3%	1.6%	2.9%	3.6%	1,001	7.8%	0.8%	232	11.1%	2,141	5.3%
2015		4.2%	2.9%	2.9%	3.3%	0.1%	3.6%	4.2%	1,107	10.6%	1.1%	269	16.2%	2,117	-1.1%
2016		1.2%	1.5%	1.5%	3.5%	1.3%	2.7%	1.4%	1,177	6.3%	0.7%	292	8.3%	2,073	-2.1%
2017		4.1%	2.3%	2.3%	4.1%	2.1%	2.7%	1.2%	1,207	2.5%	0.6%	291	-0.2%	2,194	5.8%
2018		4.3%	2.7%	2.7%	4.5%	2.3%	2.9%	3.1%	1,293	7.2%	1.3%	294	0.9%	2,395	9.2%
2019		--	2.7%	2.7%	--	1.7%	2.4%	3.7%	1,392	7.6%	1.3%	322	9.5%	2,485	3.7%
2020	F	--	2.1%	2.1%	--	2.7%	2.1%	2.6%	1,475	6.0%	1.2%	348	8.1%	2,527	1.7%
2021	F	--	1.9%	1.9%	--	2.6%	2.1%	2.3%	1,522	3.2%	1.1%	355	2.1%	2,616	3.5%
2022	F	--	1.9%	1.9%	--	2.4%	2.1%	2.2%	1,544	1.4%	1.0%	358	0.8%	2,705	3.4%
2023	F	--	1.9%	1.9%	--	2.3%	2.2%	2.1%	1,538	-0.4%	1.0%	356	-0.5%	2,818	4.2%

Economic & Commercial Market Tables

Key U.S. Measures														Table #1	
Period	Forecast F	(1)	(2)		(3)	(4)	(5)	(6)	(7)		(8)	(9)		(10)	
		Overall Economy					Residential/Consumer Market					Commercial Market			
		Chg. In Leading Ec. Ind.	Real GDP Growth		Bank Prime Rate	Change in CPI	Change in Real P.C.E.	Chg. in Real Dis. Pers.Inc.	Total Housing Starts		Hshold. Growth	Real Value of Comm'l Constr.		Corp. Pre-Tax Profits	
			% Chg. (Yr.-Yr.)	% Chg. (Pd.-Pd.)					Starts	% Chg.		Value	% Chg.	Value	% Chg.
	(% chg.)	(% chg.)	(% chg.)	(%)	(% chg.)	(% chg.)	(% chg.)	(units, M)	(% chg.)	(% chg.)	(2009 \$, Bns., SAAR)	(% chg.)	(\$Bns.)	(% chg.)	
Quarterly Results:															
2013Q1		1.6%	1.3%	2.8%	3.3%	1.7%	1.2%	-1.0%	952	34.6%	1.2%	205	5.5%	2,000	-0.8%
2013Q2		2.2%	1.0%	0.8%	3.3%	1.4%	1.2%	-1.1%	866	17.1%	1.1%	203	1.4%	2,019	1.3%
2013Q3		3.4%	1.7%	3.1%	3.3%	1.5%	1.4%	-0.5%	883	13.2%	1.0%	211	3.7%	2,035	1.8%
2013Q4		4.4%	2.7%	3.9%	3.3%	1.2%	2.0%	-2.8%	1,012	11.4%	0.8%	216	6.1%	2,078	4.7%
2014Q1		4.7%	1.7%	-0.9%	3.3%	1.4%	2.0%	2.5%	941	-1.2%	0.7%	216	5.3%	1,985	-0.8%
2014Q2		5.5%	2.7%	4.5%	3.3%	2.1%	2.7%	3.2%	984	13.7%	0.8%	225	10.8%	2,149	6.5%
2014Q3		6.1%	3.2%	5.1%	3.3%	1.8%	3.2%	3.7%	1,023	15.8%	0.9%	234	11.1%	2,197	8.0%
2014Q4		5.9%	2.7%	2.0%	3.3%	1.2%	3.6%	4.9%	1,056	4.4%	1.0%	252	16.8%	2,232	7.4%
2015Q1		5.3%	3.8%	3.2%	3.3%	-0.1%	4.0%	4.9%	987	4.9%	1.1%	258	19.6%	2,176	9.6%
2015Q2		5.1%	3.3%	2.7%	3.3%	0.0%	3.9%	4.6%	1,156	17.4%	1.1%	277	23.1%	2,175	1.2%
2015Q3		3.6%	2.4%	1.6%	3.3%	0.2%	3.6%	4.0%	1,161	13.5%	1.1%	274	16.9%	2,136	-2.8%
2015Q4		2.9%	2.0%	0.5%	3.3%	0.4%	3.0%	3.2%	1,124	6.4%	1.0%	268	6.5%	1,983	-11.1%
2016Q1		1.7%	1.4%	0.6%	3.5%	1.1%	2.6%	2.2%	1,153	16.8%	1.0%	280	8.3%	2,041	-6.2%
2016Q2		0.8%	1.2%	2.2%	3.5%	1.1%	2.8%	1.7%	1,158	0.2%	0.8%	288	3.8%	1,997	-8.2%
2016Q3		1.2%	1.5%	2.8%	3.5%	1.1%	2.8%	1.4%	1,150	-1.0%	0.7%	300	9.7%	2,101	-1.6%
2016Q4		1.2%	1.8%	1.7%	3.5%	1.8%	2.8%	0.2%	1,248	11.0%	0.5%	299	11.5%	2,155	8.7%
2017Q1		3.0%	2.0%	1.2%	3.8%	2.6%	2.9%	0.9%	1,238	7.3%	0.3%	299	7.0%	2,109	3.3%
2017Q2		3.6%	2.2%	3.0%	4.0%	1.9%	2.7%	1.1%	1,167	0.8%	0.4%	296	2.9%	2,123	6.3%
2017Q3		4.1%	2.3%	3.1%	4.3%	2.0%	2.6%	1.1%	1,172	1.9%	0.8%	285	-5.2%	2,214	5.3%
2017Q4		5.6%	2.6%	2.9%	4.3%	2.1%	2.8%	1.8%	1,256	0.6%	1.0%	288	-3.7%	2,213	2.7%
2018Q1		6.2%	2.7%	1.7%	4.5%	2.3%	2.7%	2.2%	1,285	3.8%	1.2%	294	-1.7%	2,166	2.7%
2018Q2 F	--	2.7%	3.0%	--	2.6%	2.6%	2.1%	1,308	12.1%	1.3%	296	0.1%	2,196	3.4%	
2018Q3 F	--	2.7%	3.2%	--	2.5%	2.7%	2.8%	1,320	12.7%	1.1%	302	6.0%	2,247	1.5%	
2018Q4 F	--	2.8%	3.1%	--	1.9%	2.3%	3.4%	1,338	6.5%	1.1%	308	6.8%	2,286	3.3%	
2019Q1 F	--	3.1%	3.1%	--	1.3%	2.7%	3.6%	1,356	5.6%	1.1%	316	7.4%	2,319	7.1%	
2019Q2 F	--	3.1%	2.7%	--	1.6%	2.7%	3.8%	1,366	4.4%	1.1%	322	8.6%	2,350	7.0%	
2019Q3 F	--	2.9%	2.5%	--	1.6%	2.7%	3.7%	1,381	4.6%	1.1%	328	8.6%	2,378	5.8%	
2019Q4 F	--	2.7%	2.3%	--	2.2%	2.7%	3.4%	1,393	4.1%	1.1%	334	8.4%	2,404	5.1%	
Remarks & Notes:															
- All dollar values in US Dollars															
- Quarterly figures are at seasonally adjusted annual rates, unless noted otherwise															
- Quarterly percent change is current quarter versus same quarter prior year, unless noted otherwise															
- Inflation-adjusted "real" values are expressed in constant, chained 2009 US Dollars															
- All actual figures are sourced from the U.S. Census Bureau and forecasts are as per Global Insights, unless noted otherwise															

Economic & Commercial Market Tables

Market Monitor Report

Table #3

Key U.S. Commercial Market Measures

Explanation of Measures Shown Below:

- (1)= **Corporate Pre-Tax Profits:** Actual value and percent change in the pre-tax profits of all privately-held corporations
- (2)= **Office Vacancy Rate:** The share of total office space that is vacant in the U.S.; includes both downtown & suburban areas combined; Source: Coldwell Banker
- (3)= **Real Value of Commercial Put-In-Place Construction:** Inflation-adjusted value of completed commercial construction by type; published current values are adjusted using the chained price deflator for non-farm construction to obtain the inflation-adjusted values shown (forecasts Source: FMI Corp.):
- **Total**= Total of all individual private & public building types shown
 - **Lodgings**= All hotel and motel buildings
 - **Offices**= All professional & other offices, including: financial, law & other professional offices, corporate offices, etc.
 - **Commercial/ Food & Beverage**= All restaurants & fast food stores, bars and bistros, and supermarkets, auto sales showrooms, and other retail store types
 - **Commercial/ Multi-Retail**= All malls, shopping centers, and general merchandise facilities
 - **Health Care**= All hospitals & clinics, doctor's offices, medical, rehabilitation, & veterinary facilities, and nursing homes
 - **Education**= All private & public secondary school and college buildings, dormitories, and museums & galleries related to the schools
 - **Religious**= All houses of worship
 - **Public Safety**= All police & fire stations, jails & prisons, and associated government administration buildings
 - **Transportation**= All airports, rail, and bus terminals
- (4)= **E-Commerce Sales Share of Total Retail Sales:** The percent share represented by total U.S. E-commerce dollar sales of total U.S. retail dollar sales

Key U.S. Commercial Market Measures

Period	Forecast=F	(1)	(2)	(3)											(4)
		Corp. Pre-Tax Profits	Office Vacancy Rate	Real Value of Put-In-Place Construction											E-Com. Share of Total Retail
				Total	Lodging	Offices	Retail Stores		Amuse. & Recr.	Health Care	Educ.	Relig.	Public Safety	Transp.	
							Food/Bev. Auto/Other	Multi- Retail							
		(\$, Bns.)	(%)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	(09\$, Bns., SAAR)	% E-Com./ Total
Annual Results:															
2002		907	14.9%	258	14,245	61,444	13,107	22,228	20,444	24,781	58,733	8,031	10,049	23,020	0.8%
2001		754	11.1%	250,852	12,115	57,248	12,502	23,527	19,327	23,403	61,888	8,078	9,558	23,207	1.1%
2002		907	14.9%	335,009	15,226	62,169	11,076	21,910	24,301	37,993	103,486	11,704	10,986	36,158	1.3%
2003		1,056	16.6%	321,170	14,646	53,912	11,440	21,074	23,013	40,093	101,620	11,717	9,793	33,862	1.6%
2004		1,283	16.4%	315,771	15,950	54,564	10,630	24,239	21,520	41,477	95,562	10,520	9,033	32,275	2.0%
2005		1,478	14.6%	306,390	15,219	54,357	9,285	26,921	18,097	40,792	94,323	9,177	8,634	29,585	2.4%
2006		1,647	13.3%	323,742	19,916	59,479	8,136	31,995	20,851	42,261	93,419	8,505	8,532	30,648	2.7%
2007		1,529	12.7%	360,715	29,820	67,728	8,280	35,911	21,990	45,422	100,260	7,834	10,544	32,927	3.1%
2008		1,285	13.9%	373,759	35,841	68,471	8,075	32,032	21,877	46,877	104,787	7,236	13,071	35,492	3.5%
2009		1,397	15.4%	325,765	25,558	52,196	4,903	18,548	19,442	44,992	103,485	6,224	13,848	36,568	4.0%
2010		1,746	16.5%	274,590	12,012	39,122	4,732	12,892	17,436	40,616	91,169	5,481	11,552	39,577	4.4%
2011		1,817	16.2%	257,390	9,245	36,443	5,290	13,526	16,259	40,704	85,842	4,302	10,523	35,256	4.7%
2012		1,998	16.0%	255,708	10,682	37,263	5,788	14,801	15,676	43,083	85,744	3,895	10,563	28,215	5.2%
2013		2,033	15.5%	256,859	12,972	36,536	6,326	16,177	14,991	40,111	77,937	3,539	9,371	38,899	5.5%
2014		2,141	15.6%	267,417	15,586	43,377	7,226	18,477	16,136	37,179	76,654	3,257	9,079	40,446	6.4%
2015		2,117	15.6%	284,384	21,908	50,684	7,438	19,019	18,864	36,454	78,939	3,331	7,900	41,758	6.5%
2016		2,073	13.4%	299,511	28,923	60,261	8,064	20,621	20,499	35,331	81,603	3,196	7,287	38,528	6.9%
2017		2,194	13.1%	301,201	29,571	59,587	7,805	20,429	21,071	35,892	81,973	2,854	7,364	39,153	7.1%
2018	F	2,395	12.1%	308,868	29,799	62,706	7,989	20,909	21,410	36,646	83,039	2,649	7,522	40,642	-
2019	F	2,485	--	323,884	31,330	74,416	8,174	21,395	21,589	36,967	84,539	2,528	7,573	41,220	-
2020	F	2,527	--	317,879	32,088	66,360	8,101	21,204	21,611	36,819	85,612	2,491	7,612	42,660	-
2021	F	2,616	--	318,931	33,094	65,919	8,106	21,216	21,503	36,867	86,355	2,467	7,615	43,429	-
2022	F	2,705	--	319,096	34,574	65,667	7,859	20,569	21,314	37,089	86,700	2,436	7,702	43,979	-

Economic & Commercial Market Tables

Key U.S. Commercial Measures															Table #3
Period	Forecast= F	(1)	(2)	(3)										(4)	
		Corp. Pre-Tax Profits	Office Vacancy Rate	Real Value of Put-In-Place Construction										E-Com. Share of Total Retail	
				Total	Lodging	Offices	Retail Stores		Amuse. & Recr.	Health Care	Educ.	Relig.	Public Safety		Transp.
		(\$, Bns.)	(%)	(09\$,Bns, SAAR)	(09\$,Bns, SAAR)	(09\$, Bns, SAAR)	Food/Bev. Auto/Other	Multi-Retail						(09\$,Bns, SAAR)	
Quarterly Results:															
2013Q1		2,000	16.0%	269.4	12.5	36.5	6.8	14.8	14.4	41.1	80.4	3.8	9.5	39.0	5.5%
2013Q2		2,019	15.9%	269.0	13.2	36.0	6.8	15.4	14.8	40.8	78.9	3.7	9.8	40.0	5.3%
2013Q3		2,035	15.1%	272.9	13.9	37.9	6.3	17.0	15.9	40.6	79.1	3.4	9.2	39.9	5.4%
2013Q4		2,078	14.9%	277.2	14.3	41.3	6.7	19.5	15.8	40.2	77.9	3.5	9.6	39.1	5.9%
2014Q1		1,985	15.8%	276.7	15.5	43.5	6.9	19.3	15.2	38.5	76.4	3.4	9.4	40.0	6.2%
2014Q2		2,149	15.8%	289.2	15.7	46.5	6.8	18.8	16.7	38.5	81.4	3.2	9.4	42.3	5.9%
2014Q3		2,197	15.7%	292.5	17.1	47.2	7.4	20.1	17.0	38.4	80.4	3.4	9.5	41.6	6.0%
2014Q4		2,232	14.9%	300.0	18.6	48.9	7.8	20.0	17.9	39.2	79.9	3.5	9.4	43.7	7.6%
2015Q1		2,176	15.1%	301.5	19.4	51.7	7.2	19.2	18.5	38.9	79.0	3.3	8.5	45.2	7.0%
2015Q2		2,175	15.9%	323.4	22.1	57.4	7.4	20.0	20.6	40.0	86.7	3.7	8.4	45.3	6.6%
2015Q3		2,136	15.8%	323.3	23.4	56.1	7.1	19.9	21.1	39.0	87.6	3.8	8.6	45.2	6.8%
2015Q4		1,983	15.5%	316.8	22.6	56.6	7.1	19.2	20.8	38.8	84.3	3.5	8.4	43.7	8.7%
2016Q1		2,041	15.3%	329.2	24.9	60.7	8.0	19.7	21.3	38.4	88.4	3.3	8.0	42.8	7.7%
2016Q2		1,997	12.3%	339.3	27.0	64.1	7.4	20.6	22.9	38.4	89.6	3.7	8.0	43.5	7.4%
2016Q3		2,101	12.9%	346.6	27.7	70.8	8.5	21.2	22.3	39.4	89.0	3.6	7.7	41.5	7.6%
2016Q4		2,155	12.9%	353.7	27.9	72.8	8.6	23.5	23.2	38.5	91.0	3.3	8.2	41.4	9.4%
2017Q1		2,109	13.6%	355.4	27.9	71.6	8.7	22.8	23.7	38.8	93.1	3.2	7.9	42.4	8.4%
2017Q2		2,123	12.7%	352.6	28.1	69.9	8.6	24.5	23.4	39.4	90.4	3.3	7.9	42.7	8.2%
2017Q3		2,214	12.9%	350.1	29.1	66.7	7.7	24.7	23.7	40.3	89.5	3.2	8.2	43.2	8.4%
2017Q4		2,213	13.0%	363.8	29.3	68.9	7.3	24.9	23.6	41.7	94.5	3.0	8.8	47.7	10.5%
2018Q1		2,166	--	--	--	--	--	--	--	--	--	--	--	--	--
2018Q2		2,196	--	--	--	--	--	--	--	--	--	--	--	--	--
2018Q3		2,247	--	--	--	--	--	--	--	--	--	--	--	--	--
2018Q4		2,286	--	--	--	--	--	--	--	--	--	--	--	--	--
2019Q1		2,319	--	--	--	--	--	--	--	--	--	--	--	--	--
2019Q2		2,350	--	--	--	--	--	--	--	--	--	--	--	--	--
2019Q3		2,378	--	--	--	--	--	--	--	--	--	--	--	--	--
2019Q4		2,404	--	--	--	--	--	--	--	--	--	--	--	--	--
Remarks & Notes:															
- All dollar values in US Dollars															
- Quarterly figures are at seasonally adjusted annual rates, unless noted otherwise															
- Quarterly percent change is current quarter versus same quarter prior year, unless noted otherwise															
- Inflation-adjusted "real" values are expressed in constant, chained 2009 US Dollars															
- All actual figures sourced from various U.S. Government sources and forecasts are as per Global Insights, unless noted otherwise															