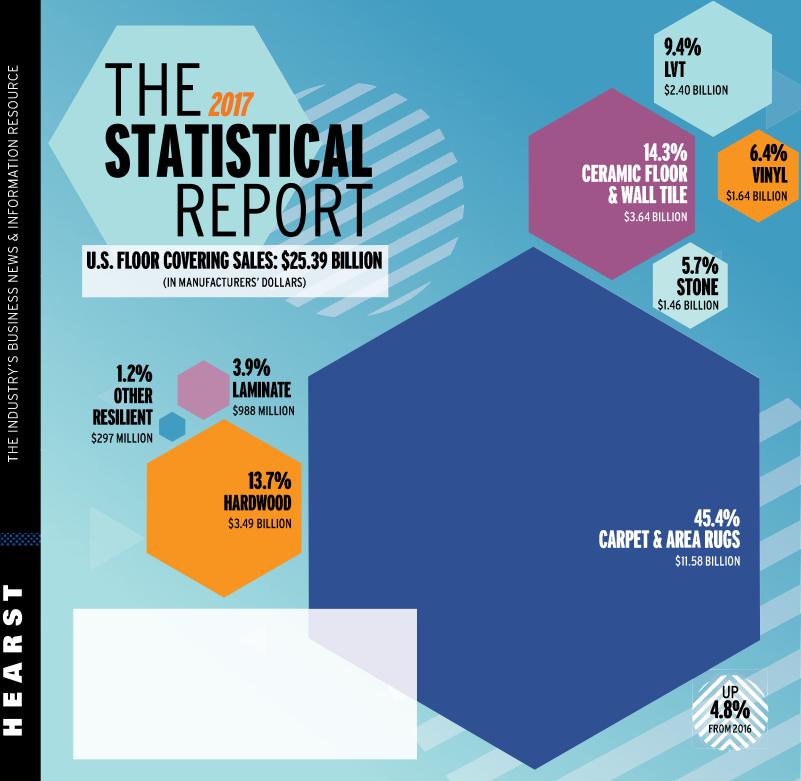
JULY 23, 2018 \$75





The builder market makes gains and offers opportunity for the floor covering industry. See story on page 3.



VOL. 67 | NO. 17

Small Gains

Dollar sales up due to consumer confidence, new construction but other markets challenged

U.S. floor coverings sales strengthened in 2017 due to rising consumer confidence and sharper increases in single-family home construction. According to Catalina Research, U.S. floor coverings dollar sales are estimated to have increased by 4.8 percent in 2017 to \$25.5 billion. This is up from a dollar sales gain of 4.4 percent in 2016. Square foot sales increases, however, did not keep pace due to a decline in multi-family housing starts and a slowdown in commercial markets. As a result, quantity sales increased

2017 U.S. Floor Covering Sales: \$25.39 billion

(IN MILLIONS OF MANUFACTURERS' DOLLARS)



+4.8% from 2016

1 20/ Carly subbar abbar plactics 5 linelaum	\$297million
1.2% Cork, rubber, other plastics & linoleum (OTHER RESILIENT)	+2.4% from 2016
3.9% Laminate	\$988 million +3.3% from 2016
5.7% Stone	\$1.46 billion +4.6% from 2016
6.4% Vinyl Sheet & Floor Tile	\$1.64 billion +4.6% from 2016
9.4% LVT	_
	\$2.4 billion +28.3% from 2016
14.3% Ceramic Floor & Wall Tile	_
	\$3.64 billion +6.8% from 2016
13.7% Hardwood	
	\$3.49 billion +2.0% from 2016
45.4% Carpet & Area Rugs	
	\$11.58 billion +1.4% from 2016

by 3.7 percent to 22.4 billion square feet. This is down from a 4.9 percent increase in 2016. A 1.2 percent increase in average selling prices contributed to weaker square foot growth.

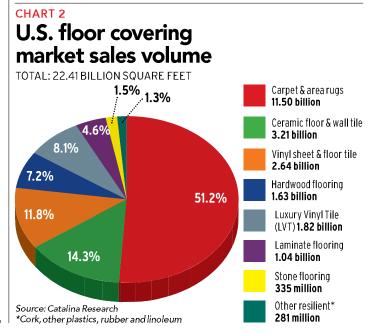
The most surprising trend in 2017 came from the growth in residential replacement sales. Household floor coverings spending increased an estimated 5.5 percent in 2017, after increasing by only 3.4 percent in 2016. Household floor coverings spending benefited from a double-digit increase in residential improvement construction spending. In 2017, homeowners grew more confident and invested in improvements due to rising home prices, a soaring stock market and continued gains in employment and personal income. Builders too remained

a growth leader in 2017 as construction of single-family homes offset the decline in multi-family starts. In 2017, single-family home starts increased by 8.6 percent, while multi-family starts declined by 9.8 percent. This is important since the average single-family home built is more than twice the size of the average multi-family housing unit constructed. As a result, square feet built increased by some 10 percent in 2017, and builders increased their share of total U.S. floor coverings sales.

On the other hand, commercial market gains weakened as increases in nonresidential building construction spending slowed substantially. In 2017, total nonresidential building construction spending increased by only 2.1 percent, down from an 8.2 percent gain in 2016. The decrease was led by a significant slowdown in the private commercial market.

Meanwhile, sales continued to shift to hard surface flooring in all end-use markets as demand for wall-to-wall carpet declined. Hard surface flooring sales received a boost from the surge in luxury vinyl tile (LVT), wood plastic composite (WPC) and other hybrid product sales. Sales gains were also relatively strong in the ceramic tile sector. These trends resulted in hard surface flooring square foot sales increasing by an estimated 7.2 percent in 2017, while soft surface flooring square foot sales increased only 0.6 percent. This caused soft surface flooring to lose share. In 2017, soft surface flooring accounted for 51.2 percent of total square foot floor coverings sales, down from 52.8 percent in 2016. Carpet and area rug dollar sales, however, dropped to 45.4 percent of total floor covering sales since hard surface flooring selling prices are some 26 percent above those for soft surface flooring. In comparison, soft

Continued on page 10



Small Gains

Continued from page 8

surface flooring captured more than 70 percent of total floor coverings sales in the mid-1990s. Consumer preferences shifted to hard surface flooring as manufacturers introduced innovations such as floating-floor click-installed engineered wood flooring, digitally-printed porcelain tile and vinyl planks.

To meet rising U.S. demand, domestic- and foreign-based manufacturers increased investment in new U.S. production capacity. Despite this effort, imports continued to take share from U.S.-made flooring, particularly in the resilient and laminate categories. In 2017, imports accounted for an estimated 36.5 percent of total dollar sales. This is up from 35 percent in 2016 and 32.9 percent in 2015. Foreign-sourced products continue to make inroads in the U.S. flooring market since they remain price-competitive, primarily sourced from Chinese manufacturers. In 2017. Chinese-produced flooring accounted for 44 percent of total dollar imports and an estimated 16.1 percent of total U.S. sales. This is up from 40.1 percent and 13.3 percent, respectively, in 2015. Chinese manufacturers have also made inroads by introducing innovative products. Chinese import gains were led by LVT and related floorings between 2015 and 2017. Chinese imports of these products increased by 118.2 percent over this period, while total U.S. sales rose by an estimated 70.6 percent.

Changes in product mix and sourcing is not expected to change the growth prospects of U.S. floor coverings sales over the next five years. Catalina forecasts dollar and square foot sales to increase 3 percent to 4 percent annually over this period. Growth is expected to remain in this range as long as U.S. economic growth keeps employment and personal income on an upward trend. Builder purchase gains could continue to gain share as Millennials begin to form households

METHODOLOGY

Floor Covering Weekly collaborated with Catalina Research for this 26th annual statistical analysis of the U.S. floor covering market. Catalina compiled and analyzed data from the U.S. Department of Commerce, the Bureau of Labor Statistics and proprietary sources to provide the floor market's trends in this issue.

In this year's Statistical Report, sales for some previous years were revised based on new shipment data from the U.S. Department of Commerce. All 2017 numbers, however, are preliminary (except exports and imports) and are subject to revision.

U.S. market sales (shipments minus exports plus imports) are in manufacturers' dollars and exclude installation costs.

Numbers in Tables 1 and 2 have been rounded. More detailed calculations appear in each product section.

All retail information is courtesy of Jonathan Trivers' exclusive marketWise report. Product sales are derived from Catalina's numbers. Numbers for "Who sells it" and "Who the customer pays" are from the Economic Census report. and enter the housing market. However, rising interest rates could be a headwind for consumer and business floor coverings spending over the next few years.

CARPET & AREA RUGS

Carpet and area rugs continued to lose share to hard surface flooring in 2017. Carpet and area rug sales increased an estimated 1.4 percent in dollars and 0.6 percent in square feet, while hard surface flooring increased 7.8 percent and 7.2 percent, respectively. These trends dropped carpet and area rugs' share of total dollar floor coverings sales to an estimated 45.4 percent in 2017 and 51.2 percent share in square feet. In 2016, carpet and area rugs' dollar share was 46.9 percent and square foot share was 52.8 percent.

In 2017, the growth of commercial sales lagged those for residential sales. Commercial sales in dollars increased an estimated 0.6 percent, versus a 1.9 percent increase for residential sales. Commercial sales were adversely affected by the slowdown in nonresidential building construction. Residential sales, despite stronger gains, continue to lag total residential floor coverings growth. Residential carpet and area rug growth has lagged overall residential market trends as consumers move away from the use of wall-to-wall carpet.

At the same time, consumers increased their purchases of area rugs as accent accessories over their newly installed hard surface flooring. Since a significant portion of imports are area rugs, this trend can be seen in carpet and area rug imports. In 2017, square foot carpet and area rug imports increased by about 11.9 percent, while average import prices declined. Import shipments are primarily from manufacturers located in China, India, Turkey and Egypt. To take advantage of growing area rug selling opportunities, a number of companies expanded their area rug selling capabilities, especially the ability to sell area rugs online.

Commercial product manufacturers are also increasing their reliance on carpet tile. Carpet tile now

GRAPH 1

accounts for about 60 percent of total commercial carpet sales, up from one-third of total sales a decade ago. In recent years, the leading U.S. carpet tile manufacturers have been aggressive by expanding product lines and manufacturing facilities.

CERAMIC TILE & STONE

Ceramic tile continues to make inroads in the U.S. floor coverings industry. This sector is the number two growth sector, only outpaced by surging LVT. In 2017, ceramic tile sales increased by an estimated 6.8 percent in dollars and 5.4 percent in square feet. These gains increased ceramic tiles' share of total floor covering sales to 14.3 percent in dollars and square feet. This is up from about 14 percent of total sales in 2016.

Ceramic tile gained share over the current recovery period since this flooring sector can provide stone- and wood-looks at competitive prices. Ceramic tile manufacturers were able to provide these more upscale designs by investing in digital printing and other technologies. Innovative manufacturing processes also led to the availability of larger-size tile and large thin porcelain panels. Panels are used for floors, walls, countertops and other interior and exterior applications. These innovations further contributed to ceramic tiles' growing popularity in residential and commercial markets.

In addition, ceramic tile sales benefited from the rebound in single-family home construction and sharp gains in homeowner bathroom renovating projects. In 2017, builder dollar purchases are estimated to have increased by 9.1 percent and residential replacement sales by 8.3 percent.

To take advantage of sector growth, U.S- and foreign-based manufacturers have been investing in new domestic production capacity. New plants and equipment are improving plant efficiency and moving U.S. output to higher-end products. This caused the domestic/import price gap to widen somewhat in 2017. As a result, imports continue to capture about two-thirds of U.S. square foot ceramic tile sales. In



2017, competition increased from manufacturers located in China, Spain, Turkey, Brazil and Peru.

Stone flooring sales, however, have not kept pace on a dollar and square foot basis due to ceramic tiles' pricing advantage. Average manufacturer stone floor tile prices could have been \$4.36 in 2017. Meanwhile, ceramic tile manufacturers can offer stone looks for about \$1.13 per square foot. Therefore, Catalina estimates stone flooring sales could have increased by 4.6 percent in dollars in 2017; and square foot sales by 3.4 percent.

A growing labor shortage and sharp increases in installation costs could adversely affect ceramic and stone tile demand in the future. In 2017, employment at tile and stone contractors increased by 4.5 percent, while ceramic and stone tile square foot sales increased by an estimated 5.2 percent.

WOOD FLOORING

Wood flooring sales continued to lose momentum in 2017 due to weak pricing and increased competition from wood-look flooring such as ceramic tile planks and LVT/WPC products. Wood flooring dollar sales increased an estimated 2 percent in 2017 since average selling prices decreased by 1.8 percent. Square foot sales increased an estimated 4.2 percent. Wood flooring sales declined in dollars and square feet in 2016. As a result, wood floorings' share of total floor coverings dollar sales declined to an estimated 13.7 percent in 2017, down from 14.1 percent in 2016. Meanwhile, square foot shares could have been 7.2 percent in 2017, the same level seen in 2016. This indicates that flooring purchasers continue to maintain their preference for real wood floors. Sharp increases in lumber costs, however, are making it harder to keep flooring buyers from shifting to ceramic tile and LVT/WPC during 2018.

Pricing may also strengthen as sourcing shifts to U.S. plants. Imports could have accounted for only about 25 percent of total U.S. dollar sales in 2017, down from a 28 percent share in 2016. The decline in import penetration levels primarily reflects a severe drop in solid wood flooring imports. Engineered wood flooring imports also declined from China. On the other hand, engineered wood flooring imports increased at relatively strong rates from manufacturers located in Vietnam, Poland, Cambodia and Spain. Chinese imports could remain depressed since the International Trade Commission (ITC) ruled in November 2017 that existing antidumping and countervailing duty orders on Chinese engineered wood flooring would remain in place. The ITC states lifting the duty will lead to the recurrence of material injury.

RESILIENT FLOORING

Resilient flooring (vinyl, other plastics, rubber, linoleum and cork) manufacturer sales increased sharply in 2017 taking significant share from other floor covering materials. Sharper growth reflected a surge in LVT sales, as new and innovative products took hold in residential and commercial applications. LVT advances were especially significant for newer waterproof WPC products and other rigid core products primarily made of vinyl. The new rigid core floors reduce the cost of surface preparation and have greater resistance to humidity and the temperature variations than traditional LVT.

In 2017, manufacturer dollar sales increased by an estimated 16.3 percent to \$4.3 billion and square foot sales could have risen by 10.8 percent to 4.7 billion. This strong growth resulted in resilient flooring increasing to 17 percent of total U.S. floor covering dollar sales and 21.2 percent of total square foot sales. This is up from 15.3 percent and 19.7 percent, respectively, in 2016.

Resilient flooring has significantly increased its share of the U.S. floor coverings market due to the growing acceptance of technologically advanced LVT, WPC and other hybrid rigid core products in residential and nonresidential markets. Catalina estimates that LVT and related product dollar sales could have increased by 28.3 percent in 2017, and square foot sales by 21.4 percent. LVT and related products took share from vinyl sheet, vinyl composite tile and other resilient floorings since sales of these products increased by only 4.2 percent in dollars and 5.1 percent in square feet. LVT and related products are also taking share from all other flooring products. Domestic manufacturers, however, lost share

to Asian manufacturers. Shipments from Chinese

Continued on page 12

TABLE 1

U.S. floor covering market sales value

(IN MILLIONS OF MANUFACTURERS' DOLLARS)

Product Sector	2013	2014	2015 [₽]	2016 ^R	2017 [₽]	Percent Change
Carpet & area rugs	\$10,511 [®]	\$11,269 [®]	\$11,280	\$11,414	\$11,577	1.4%
Hardwood flooring	2,781	3,337	3,504	3,423	3,490	2.0
Ceramic floor & wall tile	2,642	2,882	3,065	3,407	3,639	6.8
Laminate flooring	922	932	950	956	988	3.3
Luxury vinyl tile (LVT) ¹	895	1,109	1,405	1,869	2,397	28.3
Vinyl sheet & floor tile ²	1,495	1,490	1,427	1,572	1,644	4.6
Other resilient flooring ³	250	260	275	290	297	2.4
Stone flooring⁴	1,175	1,237	1,310	1,398	1,462	4.6
Total Sales	\$20,671 [®]	\$22,510 [®]	\$23,216	\$24,329	\$25,494	4.8%
R= Revised Source: Catalina Research						

R= Revised P= Preliminary

TABLE 2

1 LVT includes WPC and hybrid floors if the flooring is primarily made of vinyl 2 Other vinyl tile includes VCT and other vinyl tile not classified as LVT 3 Cork, linoleum, non-vinyl plastics and rubber

4 Natural stone. Excludes manufactured and engineered stone

U.S. floor covering market sales volume

(IN MILLIONS OF SQUARE FEET)

Product Sector	2013	2014	2015 ^R	2016 ^R	2017 [⊳]	Percent Change
Carpet & area rugs	10,865	11,358	11,280	11,426	11,495	0.6%
Hardwood flooring	1,357	1,496	1,600	1,562	1,627	4.2
Ceramic floor & wall tile	2,366	2,640	2,812	3,045	3,209	5.4
Laminate flooring	993	1,002	1,010	1,008	1,040	3.2
Luxury vinyl tile (LVT) ¹	852	1,002	1,177	1,495	1,815	21.4
Vinyl sheet & floor tile ²	2,181	2,357	2,201	2,504	2,639	5.4
Other resilient flooring ³	200	204	241	273	281	2.9
Stone flooring⁴	286	295	312	324	335	3.4
Total Sales	19,100	20,354	20,633	21,637	22,441	3.7%

R= Revised

P= Preliminary

Source: Catalina Research

1 LVT includes WPC and hybrid floors if the flooring is primarily made of vinyl 2 Other vinyl tile includes VCT and other vinyl tile not classified as LVT 3 Cork, linoleum, non-vinyl plastics and rubber 4 Natural stone. Excludes manufactured and engineered stone

STATISTICAL REPORT 2017

Small Gains

Continued from page 11

plants soared since U.S. producers could not keep up with domestic demand. Chinese producers are also making inroads since they are able to supply the rigid core products gaining in popularity. U.S. producers could not keep up with the growth in demand despite extensive investments in new domestic production capacity over the past few years. Utilization of the new production capacity was slow to ramp up since manufacturers need more time to gain experience with new rigid core technology and manufacturing processes, as well as convert existing capacity to rigid core from flexible products.

LAMINATE FLOORING

In 2017, laminate flooring manufacturer sales could have increased at a sharper rate. Most of the growth, however, occurred in the first half of the year. Sales increased in the first half as manufacturers shipped product to refill the supply chain as demand rebounded from the Chinese formaldehyde controversy. This process seems to have run its course and manufacturer sales are now more in line with demand.

In 2017, dollar laminate flooring manufacturer sales could have increased by 3.3 percent and square foot sales could have increased by 3.2 percent. This compares to flat sales in 2016. Sales gains benefited from the introduction of more waterproof products to compete with LVT and WPC.

TABLE 5

Resilient

Laminates ⁴

Total imports

Year-to-year change

Ceramic floor & wall tile

Vinyl sheet & floor tile ² Other resilient ³ Stronger growth allowed laminate flooring to hold onto its share of total U.S. floor coverings sales after considerable decline in share over the past five years. In 2017, laminate flooring accounted for an estimated 3.9 percent of total floor coverings dollar sales and 4.6 percent of total square foot sales. This compares to 3.9 percent and 4.7 percent, respectively, in 2016.

Marketers also increased their reliance on foreign-made products. Imports' share of laminate flooring square foot sales could have increased to 67.9 percent in 2017. This is up from 62.9 percent in 2016, and reversed the decline in square foot import shipments between 2014 and 2016. Sourcing shifted to Canadian, German, Swiss and Chilean suppliers.

1.988.4

2,778.2

246.4

633.7

8,906.8

12.6%

2.097.1

3,147.1

264.0

706.5

9,774.5

9.7%

TABLE 3

U.S. floor covering imports value

(IN MILLIONS OF DOLLARS)

Industry Sector	2013	2014	2015	2016	2017
Carpet & area rugs ¹	\$2,318.7	\$2,622.0	\$2,673.8	\$2,814.5	\$2,933.3
Hardwood flooring	853.5	959.4	970.3	959.0	872.9
Ceramic floor & wall tile	1,724.6	1,823.5	2,007.4	2,097.8	2,218.3
Resilient Vinyl sheet & floor tile ²	1,055.5	1,191.5	1,381.1	1,937.6	2,492.2
Other resilient ³	104.7	108.5	107.6	127.4	141.4
Laminates ⁴	522.4	575.1	565.1	571.2	644.6
Total imports	\$6,579.4	\$7,280.0	\$7,705.3	\$8,507.5	\$9,302.7
Year-to-year change	11.1%	10.6%	5.8%	10.4%	9.3%

Source: U.S. Department of Commerce and Catalina Research

Note: U.S. Customs revised historical data

1 Includes imports of roll goods, bath mats, area rugs, auto and aircraft carpeting and artificial grass.

2 Includs LVT, WPC and hybird floors if the flooring is primarily made of vinyl.

3 Includes imports of flooring made of cork, linoleum, non-vinyl plastics and rubber.

4 Estimated by Catalina Research, Inc. based on U.S. Customs import data for finished laminate flooring and laminate flooring materials and component parts. * Includes LVT,

WPC, and hybrid floors if the flooring is primarily made of vinyl

U.S. floor covering exports value

(IN MILLIONS OF DOLLARS)

Industry Sector	2013	2014	2015	2016	2017
Carpet & area rugs 1	\$1,114.7	\$1,107.9	\$1,024.3	\$968.7	\$993.0
Hardwood flooring	128.0	166.0	149.3	77.8	60.1
Ceramic floor & wall tile	52.7	55.1	61.4	57.1	44.5
Resilient Vinyl sheet & floor tile ² Other resilient ³	148.3	157.5	147.5	154.7	188.8
	37.8	47.7	32.5	38.9	38.5
Total exports	\$1,481.5	\$1,534.2	\$1,415.0	\$1,297.2	\$1,324.9
Year-to-year change	-0.4%	3.6%	-7.8%	-8.3%	2.1%

TABLE 6

U.S. floor covering exports volume

(IN MILLIONS OF SQUARE FEET)

Industry Sector	2013	2014	2015	2016	2017
Carpet & area rugs ¹	1,065.6	985.8	874.4	856.7	900.5
Hardwood flooring	54.4	59.3	52.5	36.1	25.4
Ceramic floor & wall tile	51.3	47.9	51.3	46.2	35.6
Resilient Vinyl sheet & floor tile ² Other resilient ³	263.7	268.6	229.4	200.0	208.8
	70.2	77.0	70.7	86.7	76.6
Total exports	1,505.2	1,438.6	1,278.3	1,225.7	1,246.9
Year-to-year change	-0.2%	-4.4%	-11.1%	-4.1%	1.7%

Source: U.S. Department of Commerce and Catalina Research

Note: U.S. Customs revised historical data

1 Includes exports of roll goods, bath mats, area rugs, auto and aircraft carpeting and artificial grass.

2 Includes LVT, WPC and hybrid floors if flooring is primarily made of vinyl.

3 Includes exports of flooring made of linoleum, non-vinyl plastics and rubber.

12 JULY 23, 2018 | FLOOR COVERING WEEKLY

U.S. floor covering imports volume (IN MILLIONS OF SQUARE FEET) **Industry Sector** 2013 2017 2.158.5 2.425.0 2.550.4 2,755.7 Carpet & area rugs¹ 3.084.9 Hardwood flooring 531.8 530.0 569.4 504.4 474.6

1.722.6

1,825.8

168.1

612.8

7,019.6

11.8%

1.709.9

2,124.7

173.8

657.0

7,620.4

8.6%

1.881.1

2,047.9

210.2

649.5

7,908.5

3.8%

Ceramic tile continues climb

Innovation spurs trajectory

By Caroline Alkire

Ceramic tile continued its upward trajectory in 2017 outpaced only by luxury vinyl tile (LVT).

Overall in 2017, ceramic tile sales are estimated to have increased by 6.8 percent in dollars and 5.4 percent in square feet, according to Catalina Research. These gains increased ceramic tile's share of total floor covering sales by 14.3 percent in dollars and square feet, which is up from about 14 percent of total sales in 2016. Total ceramic tile sales are estimated at \$3.6 billion, while stone is estimated at \$1.5 billion.

Industry experts believe this growth is largely due to innovation, as well as a variety of other factors, including greater consumer accessibility, strong builder and housing markets and continued economic growth.

Key Drivers

There are a plethora of design factors contributing to the tile sector's growth

CHART 28 **Ceramic tile** purchases by end-use market (TOTAL: \$3,639 MILLION) 0.2% 0.4% 21.8% 20.2% 21.3% 36.1% Residential builder \$733 million Residential replacement \$1,315 million Manufactured housing \$14 million Commercial new construction \$776 million **Commercial replacement** \$794 million Transportation & other industries \$7 million

Source: Catalina Research

in 2017. As well, new tile formats and technologies are driving opportunity.

"In the last year, subtle textured concrete looks, bold wood looks with color variation and innovative three-dimensional wall tiles are only a few of the cutting-edge tile opportunities available to consumers, thanks to the incorporation of high-resolution digital printing," explained Barbara Haaksma, vice president of marketing at Emser.

Technology has been spurring growth in the sector for years because of inkjet printing's design capabilities.

"Manufacturers are able to create a vast array of visuals and offer consumers printed tile and stone alternatives to more expensive natural products," said Vance Hunsucker, national sales manager, ceramic tile and stone, at Shaw, adding that inkjet printing may be the most influential driver.

In fact, digital printing has become so advanced that client mentality has drastically evolved. "It used to be architects, designers and even the client didn't want imitation or faux material," explained Kelly Thomas, senior director of marketing, Stone Source. "Now ... it's sought after. Tile is their answer to project parameters related

Continued on page 34



Tile

CHART 29

3.5

3.0

2.5

2.0

1.5

1.0

2

S2.

Continued from page 33

to aesthetics, performance, availability and so on."

Now, more recently, technology is spurring the creation of new tile product options - such as thinner (3.5mm) and thicker (2cm) slabs which are available at retail stores and home centers. This increase in product breadth has made ceramic tile and stone more available to the consumer.

"A product needs to become more accessible and affordable. In the case of tile, this has definitely happened," explained Raj Shah, co-president of MSI. "Although the average price per square foot has generally increased, this is due to innovation, which is allowing tile to be a substi-

and volume (IN BILLIONS)

Market sales

.37

Ceramic tile market value

2.64

Square feet

\$3.07

81



Emser's three-dimensional Nuovo wall tile, seen here, is an example of one of the cutting-edge products driving growth in the tile sector.

tute for much higher priced flooring items ... The consumer wins and the industry wins."

As well, because of digital web capabilities, inspiration can be shared at a much cheaper and faster pace.

\$3.41

3.05

\$3.64

2017^P

3.21

BOOMING BUSINESS

The builder market continues to boost sales as well. In 2017, Catalina Research estimated builder dollar purchases may have increased by 9.1 percent and residential replacement sales by 8.3 percent.

According to Shaw's Hunsucker, as the U.S. economy improves, bank lending standards are becoming less stringent, unemployment rates are lower and the market for single family home construction has improved. "With these changes, the builder market continues to grow, and demand for materials such as tile and stone increases as well," he explained.

Gianni Mattioli, executive vice president, Dal-Tile (a Mohawk Industries company), revealed new single-family home construction is up by almost 10 percent. "Tile consumption is closely correlated to single-family growth," he explained. "The commercial market has grown 3 percent to 4 percent, with residential remodeling a little softer than that."

Market sales

1,723

\$**1.72**5

2013

1,500

1 0 0 0

500

\$1,824

2014

l,710

Square feet

\$2,007

2015

881

CHART 32

CHART 31 Ceramic tile average value per square foot \$1.2 1.15 \$1.13 \$1.12 \$1.12 1.10 \$1.09 \$1.09 1.05 1.00 2013 2014 2015 2016^R 2017^F R = Revised

P = Preliminary based on number of shipments Source: Catalina Research

And the increase in home construction is directly correlated to tile's steady growth, as both tile and stone add appreciative value to a home. "We are seeing the overall residential market very strong whether that is replacement or new build," said MSI's Shah.

"While ceramic and porcelain may not be keeping pace with LVT, we know the industry investment in educating the consumer on the benefits of tile will pay dividends," said Doug Hayes, vice president of sales, Florida Tile Inc.

As well as the healthy economic climate, tile boasts the aesthetics, durability and price point other categories do not.

"Tile is an aspirational product. We strive to reduce our costs so we can make it more affordable," said Dal-Tile's Mattioli. "This, plus the improvement in the aesthetics and quality of tile, have had a positive impact on sales."

\$2,098

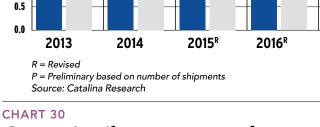
2016

,988

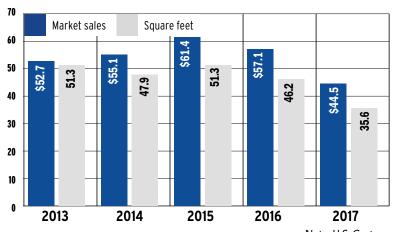
\$2,218

2017

2,097



Ceramic tile exports value and volume (IN MILLIONS)



Note: U.S. Customs revised historical data Source: U.S. Department of Commerce; Catalina Research

Ceramic tile imports value and volume (IN MILLIONS) 2, 500 2,000

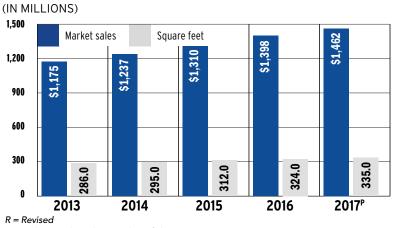
STONE STANDS STRONG

Stone continues to grow in sales and square feet, but has not kept pace with ceramic tile due to its price.

Despite the lack of sharp gains, the housing and builder markets have positively affected the stone sector. "Although new multi-family home builds have a level of seasonality, we continue to see a strong housing market overall, which supports increasing residential tile and stone sales," said Barbara Haaksma, vice president of marketing, Emser.

While technology has continued to

CHART 33 Stone market value and volume



P = Preliminary based on number of shipments

Note: Natural stone excludes stone flooring made from manufactured and engineered stone Source: Catalina Research

MARKETPLACE

positively affect tile, it has adversely affected stone, because digital printing can put realistic stone looks on less expensive ceramic tile. However, stone flooring sales are estimated to have increased by 4.6 percent, while square foot sales increased by an estimated 3.4 percent, coming in at \$3.35 billion, according to Catalina Research. The average manufacturer stone floor tile prices could have been \$4.36 billion in 2017.

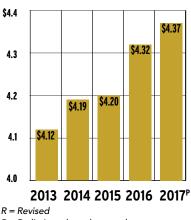
The installation crisis continues to negatively affect both the tile and stone sectors — although the past year saw some progress. According to Catalina Research, employment at tile and stone contractors increased by 4.5 percent and average hourly wages at ceramic tile and stone contractors soared by 13 percent.

"We've long been aware of the increasing need for qualified labor, and that need is only growing," said Lindsey Waldrep, vice president of marketing for Crossville. "That's why we prioritize installer training and education ... to help more members of the installation community be equipped with the know-how to answer demand."

Overall, 2017 was a prosperous year for tile and stone, and industry profes-

CHART 34

Stone average value per square foot



P = Preliminary based on number of shipments *Natural stone excludes stone flooring made from manufactured and engineered stone. Source: Catalina Research

sionals believe this will continue.

"Growth is from all sectors for us," said Doug Hayes, vice president of sales, Florida Tile. "It's residential and commercial replacement and new commercial construction. Factors are full employment, continued economic growth and reasonable interest rates."

