



ASCER
Spanish Ceramic Tile Manufacturers
Association
US Industry Overview
November 2023



Who is JLC?

- Industry consultant for the past eleven years in the ceramic market for nearly forty years.
- The majority of my expertise in strategic planning, new product development and marketing strategy was developed in my twentyseven-year career at Dal-Tile, a subsidiary of Mohawk Industries.
- I served as VP of Marketing where I was responsible for the DalTile, American Olean branding and products, as well as all Ceramic products for the Mohawk brand.
- In addition, I was responsible for all products sold through the Home Center Channels including Home Depot, Lowes and Menards.
- I directed marketing operations that included new product introduction, product life cycle management, branding strategy, competitive analysis, pricing tools, and international buying policies and strategies.
- I led and authored Dal-Tile's strategic planning that included a product and manufacturing roadmap, sales plans, core competency analysis, and marketing plans. In addition, I led the companies joint ventures in China, Italy and Mexico.

www.josephlundgrenconsulting.com

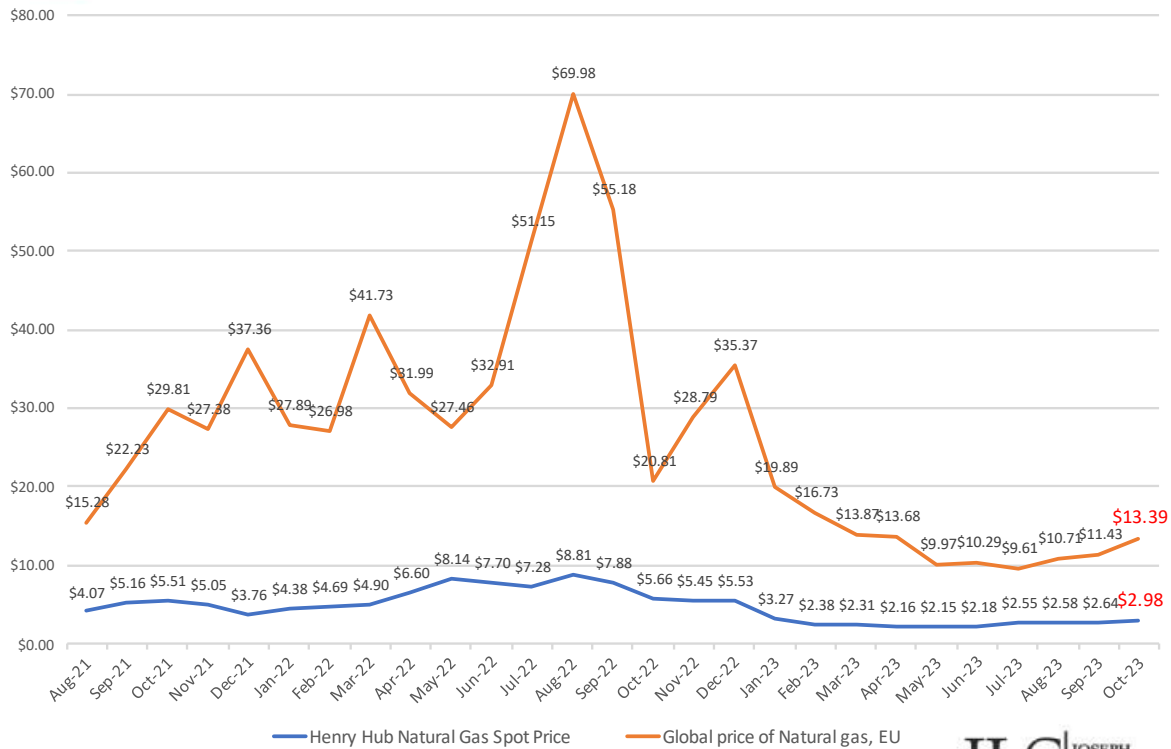
Topics of discussion

- Industry Indicators
- US Floor Covering by Type
- The US Ceramic Tile Market
 - Size
 - Square Meters/Dollars
 - Import vs Domestic
 - Imports by Country
 - Market prices
 - Industry Mix of Products
 - Trends
- Consumption by State
- US Distribution Channel
- Channel Progression
- The Market by Channel and Segment
 - Home Centers
 - Distributors
 - Company Owned Stores
 - Mega Distributors
 - Retail

These are the topics that will be presented within this presentation from the industry indicators specific to the ceramic tile industry, along with the current mix of U.S. Floor Covering by type. In addition, the entire US ceramic tile market, the size of the market, through the trends within the market. Consumption by state as well as the U.S. distribution channels, their progression over time, and its current market share by channel and segment.

Economic Indicators November 2023

European compared to US Natural Gas Price

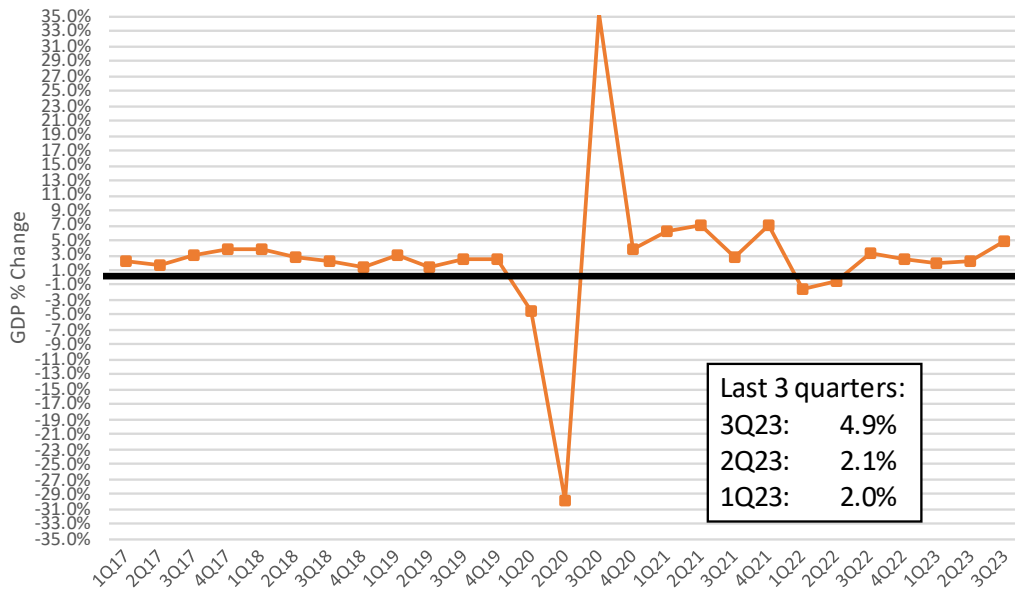


This chart shows the comparison of natural gas prices between the United States and Europe measuring by BTU. The Henry Hub Natural Gas Spot Price is a good gauge for the United States and the Global Price of Natural Gas in the EU is a conversion I was able to locate into the same measurement system as the United States uses, which is the BTU. And you can see the variance there, but obviously we were all experiencing that variance back in August of 2022 when it hit its peak of almost \$70.00 BTU within Europe and that's definitely come down and made product much more affordable.

General Economy

U.S. GDP Growth

Moderate growth continued in the third quarter; consumer spending and corporate profits remain strong. Advanced estimate Q3 2023, final will be November 29th



Source: Bureau of Economic Analysis (Real GDP). Prior quarters subject to revision. Seasonally adjusted annual rate

The GDP in Q3 of 2023 came in at 4.9%. That's the fastest pace in the last two years that we've seen. Obviously, everybody's concerned about a recession, which we'll talk about more later.

GDP Global Comparison

Growth in Asia projected to drive global growth, which will slow overall in 2023

	% GDP Growth						
	2017	2018	2019	2020	2021	2022	2023E
Mexico	2.1	2.2	-0.2	-8.1	4.7	3.1	3.2
Italy	1.7	0.9	0.3	-9.0	7.0	3.7	0.7
Canada	3.0	2.4	1.9	-5.2	5.0	3.4	1.3
China	6.9	6.7	6.0	2.2	8.5	3.0	5.0
Brazil	1.3	1.8	1.4	-3.8	5.0	2.9	3.1
Spain	3.0	2.4	2.1	-10.8	5.5	5.5	2.5
Turkey	7.5	3.0	0.9	1.8	11.4	5.6	4
India	6.8	6.5	3.7	-6.6	9.1	6.8	6.3
Vietnam	6.9	7.2	7.2	2.9	2.6	8.0	4.7
Malaysia	5.8	4.8	4.4	-5.6	3.1	8.7	4.0
United States	2.3	3.0	2.3	-3.4	5.9	2.1	2.1
European Union	3.0	2.3	1.9	-5.9	5.6	3.7	0.7
World	3.8	3.6	2.8	-3.4	6.3	3.4	3.0

Source: IMF World Economic Outlook update as of October 2023 – constant prices % change (updated semi -annually)

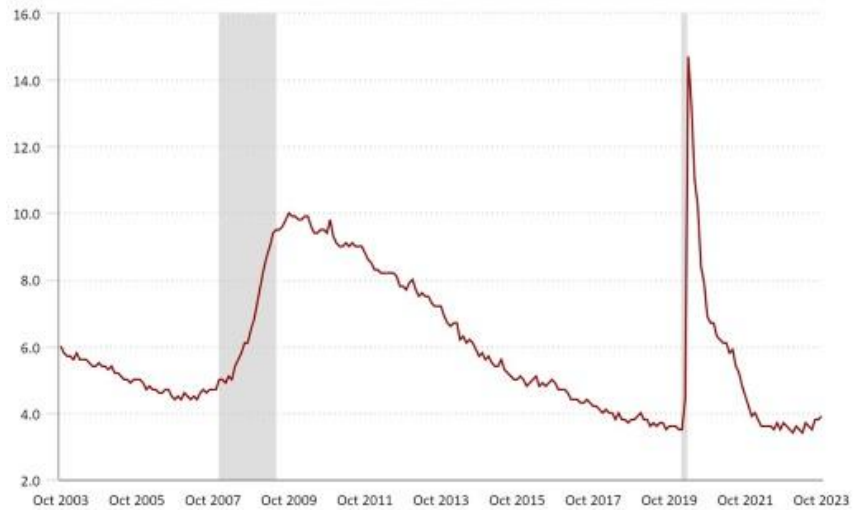
In the United States we are one of the largest importers from around the world and being able to identify those countries that ship to the United States and their own domestic economic situation gives us an idea where we might be more competitive if their own domestic market is not as strong.

US National Unemployment Rate

The unemployment rate rose in October signaling possible labor market cooling in response to interest rate hikes

Civilian unemployment rate, seasonally adjusted

Selected State Data	
<u>Better than average:</u>	
Virginia:	2.5%
Georgia:	2.8%
Florida:	2.8%
Ohio:	3.4%
<u>Worse than average:</u>	
Illinois:	4.4%
California:	4.7%
Texas:	4.1%
<u>Other key states:</u>	
Michigan:	3.9%
New York:	4.0%
Pennsylvania:	2.6%



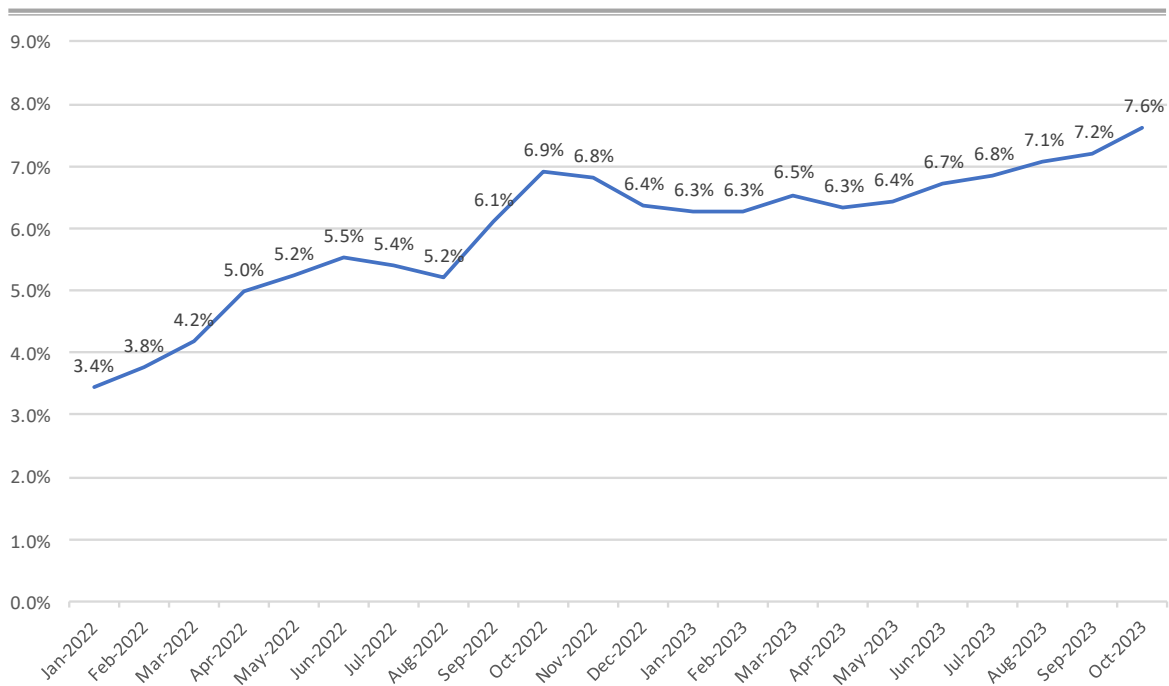
Last 3 months:	
Oct 2023:	3.9%
Sep 2023:	3.6%
Aug 2023:	3.8%

Gray vertical bars represent periods of recession
Source: Bureau of Labor Statistics



As you can see our unemployment is very low across the United States. We saw it do a little bit of an uptick in October which was actually a good sign with cooling of the interest rates.

Fixed 30year U.S. Interest Rate:

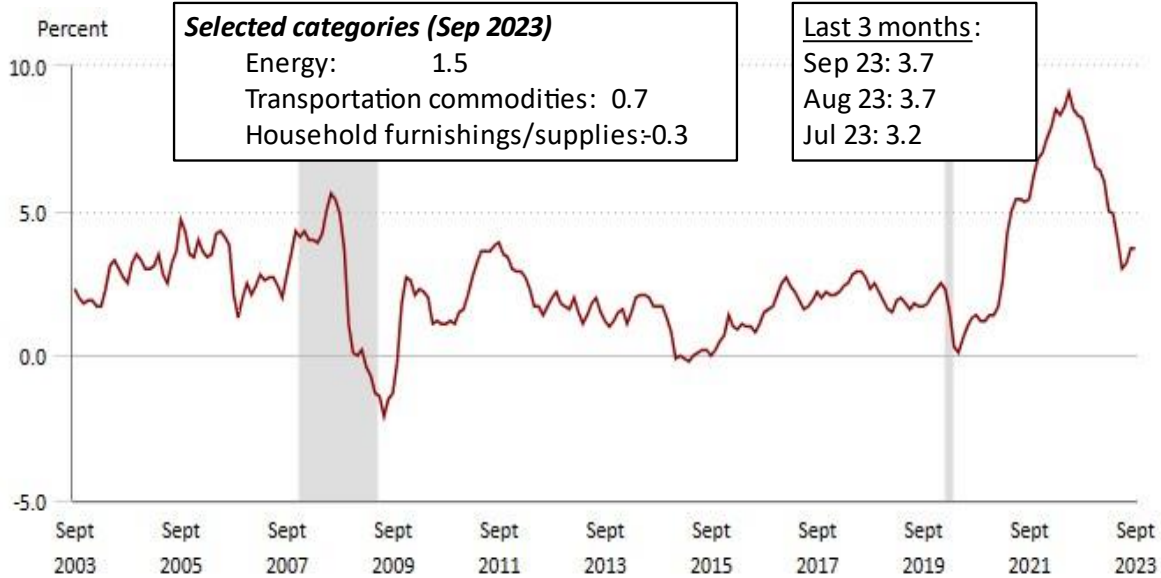


Source: NAHB Housing Statistics

This chart shows the fixed 30-year U.S. interest rate for new home buyers, and this is from the National Association of Home Builders. As you can see there has been a steady increase. There are pockets in the United States where the fed has not raised the rate for the past few times and that is sending good signals to some of the lenders where they're not raising rates anymore and keeping rates constant. In some cases, we see them coming down to try and spurn new home sales.

Inflation

CPI inflation rose in September for the second straight month

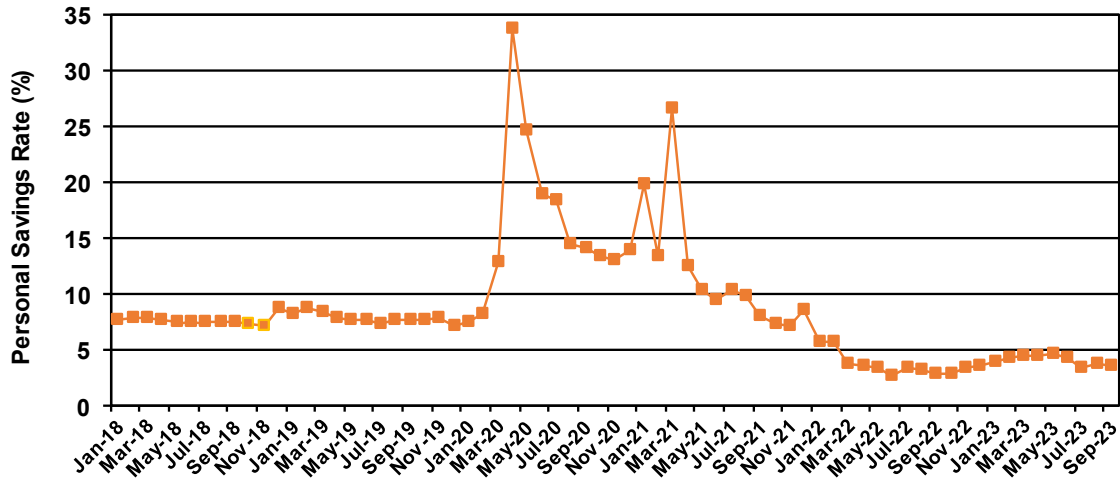


12-month percentage change, Consumer Price Index, not seasonally adjusted. Gray vertical bars represent periods of recession
 Chart/historical source: <https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-categoryline-chart.htm>
 Category source: BLS Economic Releases, CPI, Table 2

Inflation is an issue obviously; we've seen it peak out in late 2021 at almost 9% and come back down to 3.7% in September. These are some of the categories specific in the inflation rate. Energy is still at 1.5, transportation commodities 0.7, and household furnishings are a little bit lower. Now, this is a mix of a lot of different products, but it actually pertains somewhat to the construction supply and so we've seen some decrease. Part of that is because a big weight of that is lumber, which has come down significantly so that one of the things we are seeing in the economy is that we have basically different segments that are being impacted at different times and we'll talk about that.

Personal Savings Rate

Savings rates continue at low levels as Americans have spent most of their excess pandemic savings

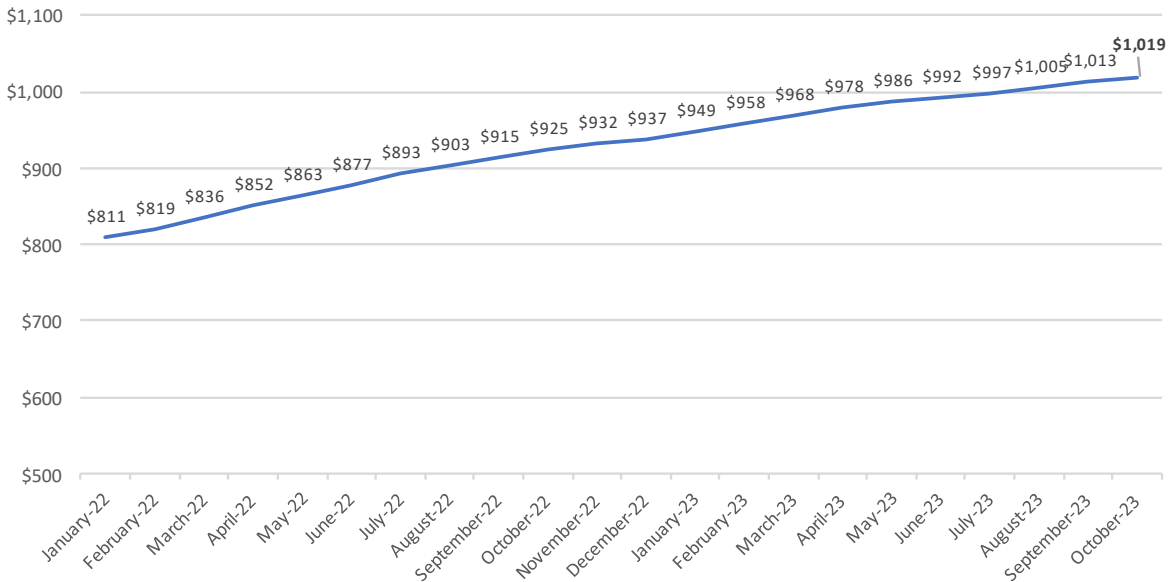


Source: Bureau of Economic Analysis, Monthly Personal Income and Outlays, Table 1: personal savings as a % of disposable personal income. Prior months subject to revision.

Personal savings rate – it’s very simple that most Americans have now spent all the money that they saved or were given during the pandemic, and we are back to some of the lowest levels of savings that we see. Also, we know that a lot of students in the United States have not had to pay back their student loans, but now are starting to pay those back.

US Consumer Credit Card Debt

Steadily, persistently higher prices have caused consumers to spend down their savings and increasingly turn to credit cards to make ends meet.

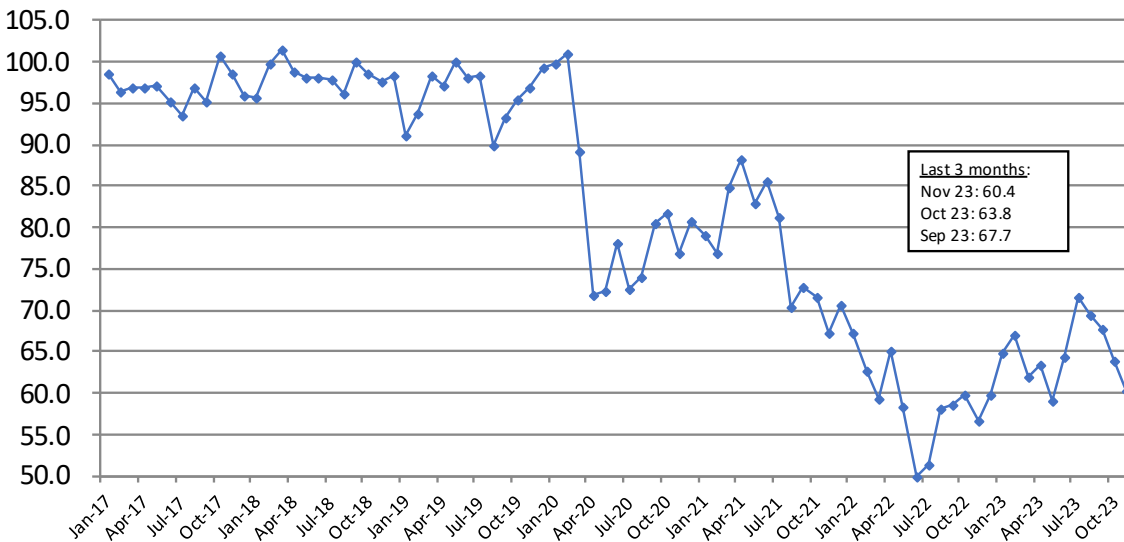


Source: Federal Reserve of St. Louis (fred.stlouisfed.org)

This is a new slide that I've added, this is consumer credit card debt. When we see that all of the savings have been spent by the US consumer and particularly millennials who have school loans to pay we see them turning to credit cards. You can see that we are over a trillion dollars in credit card debt which tells us consumers are still spending and we're trying to curve that spending.

Consumer Sentiment Index

The index slipped in September for the second month after a recent high in July, although inflation expectations are improving



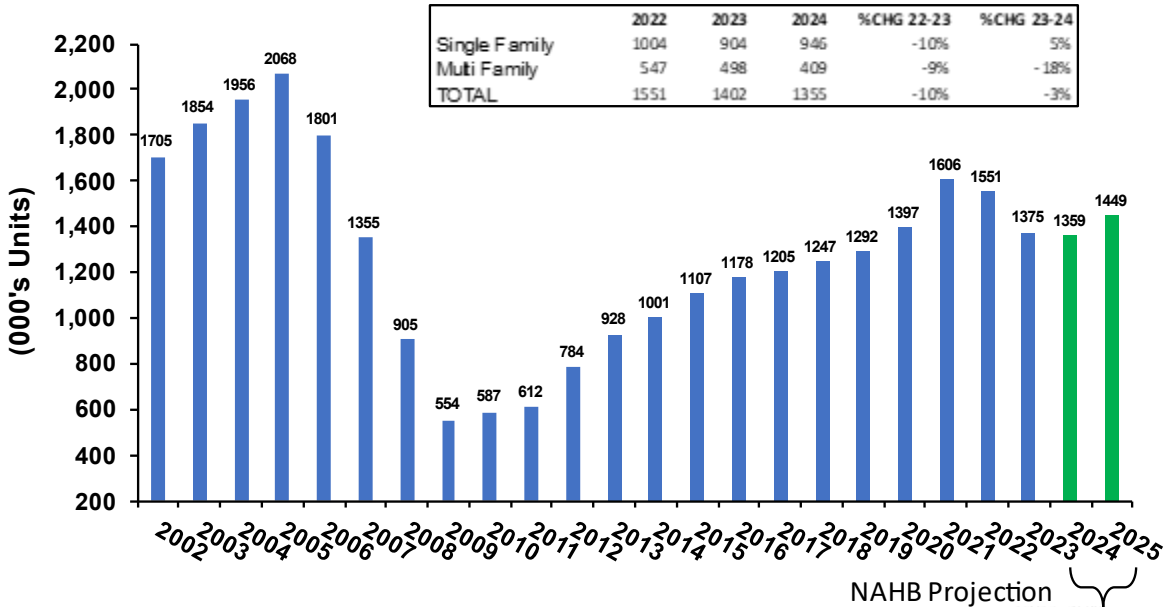
Source: University of Michigan Survey of Consumer Sentiment as reported in www.tradingeconomics.com. Previous months subject to revision

This is where it gets a little bit different because the indicator of consumer sentiment index being as low as it is in November was at 60.4, this really drives the buying decision in the United States, and therefore, it would make sense that we would not see the spending. The problem we are still recovering from like many countries is there are still a lot of what we call stimulus money out in the marketplace moving around from the pandemic and we see different things being able to be going on that don't make sense from the indicators. Well, that's because we had pumped so much into the money supply like many other countries like I've said that the indicators don't always tell the true tale. However, the question always comes up: are we going to see a recession? Well, I don't believe we're going to see a definition recession, meaning two quarters of negative GDP. What we will see is what's called rolling recession, and that means different segments as I said earlier are going to go in a recession at different times, just like housing did last year in the United States. So, the hope is that we're past that and we'll talk a little bit more about that when we get to the new home construction.

Residential Housing Economy / Residential Remodel

Annual Housing Starts

Declines projected for 2023 and 2024, rebounding in 2025. However, decline in 2024 is minimal.
 Applications for mortgages are at a 28 year low, however rates will drop to 6% in 2024



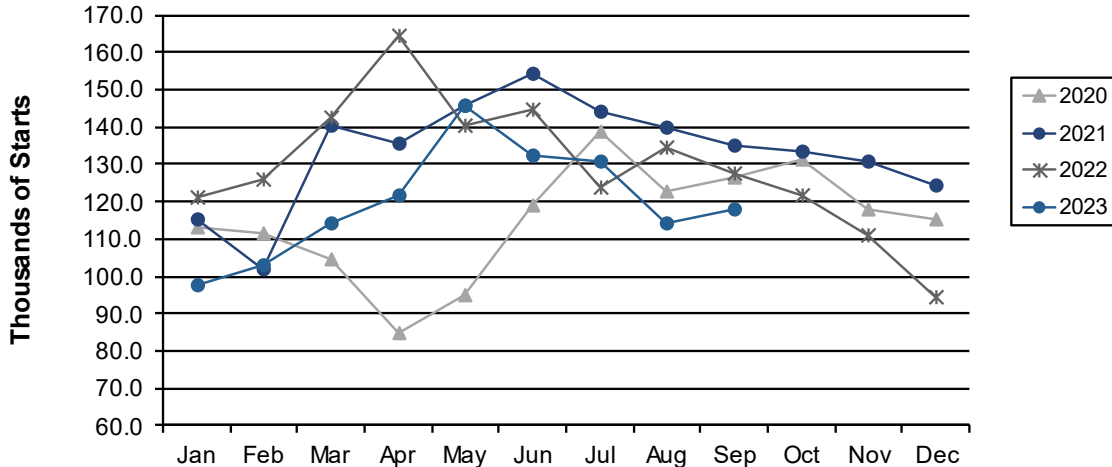
Source: NAHB Housing and Interest Rate Forecast (most recent update as of September 2023)



Annual housing – While we have decline projected for '23 and '24 and it bouncing back in '25, the thing to keep in mind is that we are still at historical high numbers except for in the early 2000's which obviously there were issues with our loan procedures and we saw the drops leading into the recession in 2008 and 2009 and coming back out. But if you look at the green lines, we're still at very high numbers and this is happening in pockets across the United States where builders have land and they're able to what we call buy down interest rates for homebuyers. In other words, they'll pay some points as we call it before the loan is processed so that they can lower the interest rates. So, for instance, in Texas, where I live, home construction is still very strong that you see it going on. Now the multi family, which is apartments and those types of things, which is approximately about 10-11% use of ceramic tile, a lot of carpet and LVT goes into these facilities, we'll see a dip as we've seen a lot of increase in multifamily housing.

Housing Starts Seasonal Trend

The annualized August rate was the lowest since 2020 and was well below expectations



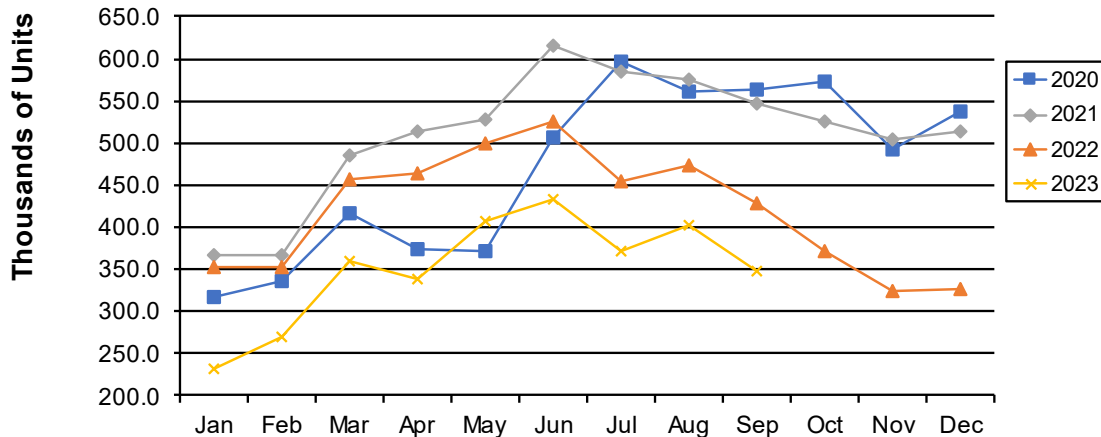
Starts (000's):	1Q	2Q	3Q	4Q	Total
2020	329.2	298.8	387.5	364.1	1379.6
2021	357.9	435.5	419.1	388.6	1601.1
2022	389.7	449.8	385.7	327.4	1552.6
2023	314.5	400.3			

Source: U.S. Census Bureau for historical figures; may differ slightly from other published annual figures

Housing starts – As you can see, this is something we like to keep an eye on, but in September you can see the numbers have dipped significantly below any prior year for the other three years in the chart. So, this is definitely something we’re keeping an eye on with housing, but again, housing is still at high numbers which you see in the previous slide.

Existing Home Sales

Existing home sales down year over year as mortgage rates remain unfavorable



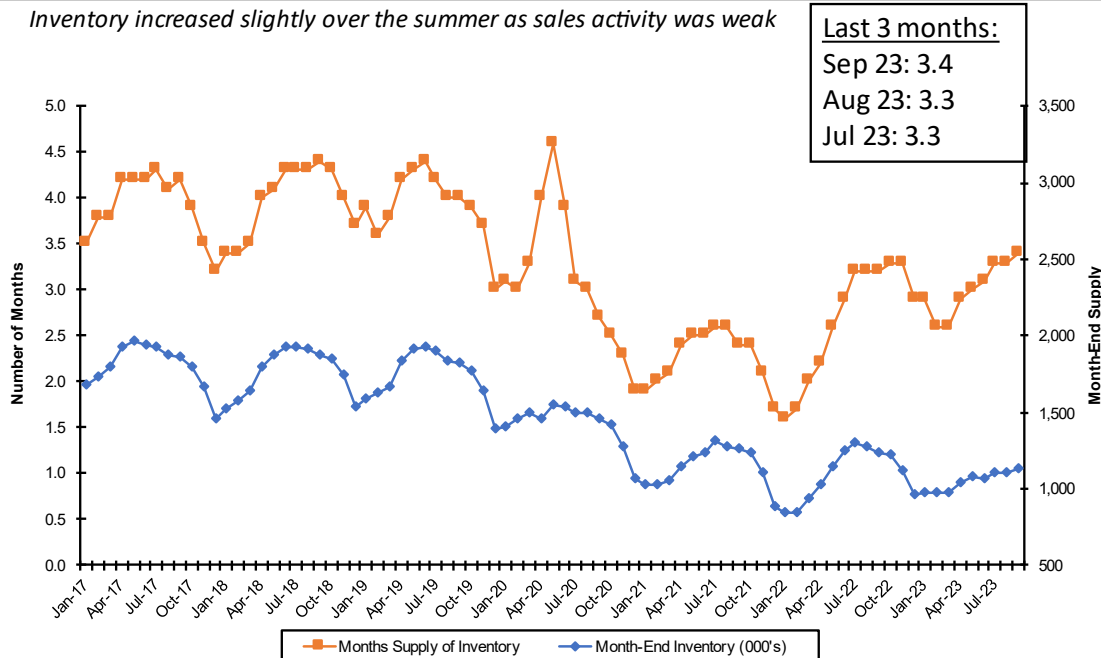
Sales (000's):	1Q	2Q	3Q	4Q	Total
2020	1068	1252	1720	1604	5644
2021	1216	1656	1706	1542	6120
2022	1160	1487	1356	1023	5026
2023	859	1178			

Source: Federal Reserve of St. Louis (fred.stlouisfed.org)

Existing home sales – This is definitely impacted by interest rates, however, this also impacts the remodeling industry in a significant way because when U.S. consumers sell their existing homes and somebody else buys it, they typically remodel and put in the products that they want to have in that home and we don't see that going on right now so we don't see that remodel activity.

Existing Home Supply

Inventory increased slightly over the summer as sales activity was weak



Source: Federal Reserve of St. Louis (fred.stlouisfed.org/series/HOSSUPUSM673N and [HOSINVUSM495N](https://fred.stlouisfed.org/series/HOSINVUSM495N))

Existing home supply – This has been very weak for some time as you can see in this chart. There was a time before 2017 on this chart, that it was a good inventory level of six months that was always the target. Well, we’ve been below six months for quite a long time. There’s still not enough supply out there, the cost to build homes is one of the reasons for that, as prices had gone up, but this still leads to a problem within that, specifically the housing industry, which is one of the biggest GDP contributors in the United States when you account for all the trickle down. And when I say trickle down, when you build a new home what goes into the new home? It’s furniture, towels and bedding and all different types of things so there’s a lot of trickle down effect on the economy when we sell a new home and even when we sell an existing home and that definitely impacted our overall GDP.

LIRA Remodeling Index

Leading Indicator of Remodeling Activity – Third Quarter 2023



Notes: Improvements include remodels, replacements, additions, and structural alterations that increase the value of homes. Routine maintenance and repairs preserve the current quality of homes. Historical estimates since 2021 are produced using the LIRA model until American Housing Survey benchmark data become available.

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Joint Center for Housing Studies of Harvard University JCHS

Factors in Harvard's LIRA Index:

- Pending home sales
- Building material shipments
- Contractor sentiment and hours worked

• Cash out refinancing data

• General economic indicators

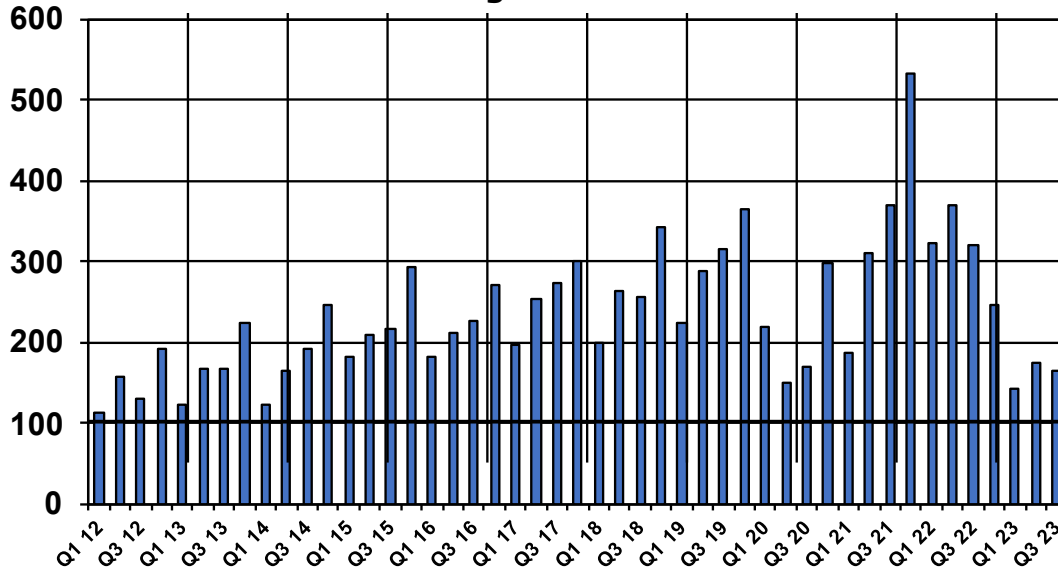
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The Lira, which is the leading indicator of remodeling activity, as you can see, it started to dip down in the latter part of 2022, and we have experienced this decline in remodel the entire year and current forecast show it will be through the third quarter of 2024. The reason for this is that so much remodeling was done during the pandemic. We were sheltered in place, we had a lot of money from the government that they were giving us, we didn't go on vacation, so we saved that money, and it was invested in houses during that period of time. And that's when we saw that spike during the pandemic was a lot of remodeling work was being completed. Some of it was do-it-yourselfers and some of it was using contractors, but it was very, very strong. So, all of that demand for the next two years was pulled forward, we don't know how much was pulled forward, but we've been experiencing a decline in the remodeling activities as you can see here and this significantly impacts home center sales, so Home Depot, Lowe's, Menard's, and even Floor and Décor.

Commercial Lending Marke

Lending dipped in Q3 after rebounding in Q2 following a sharp drop in Q1 but remains significantly lower than prior year

Mortgage Bankers Association commercial loan origination index



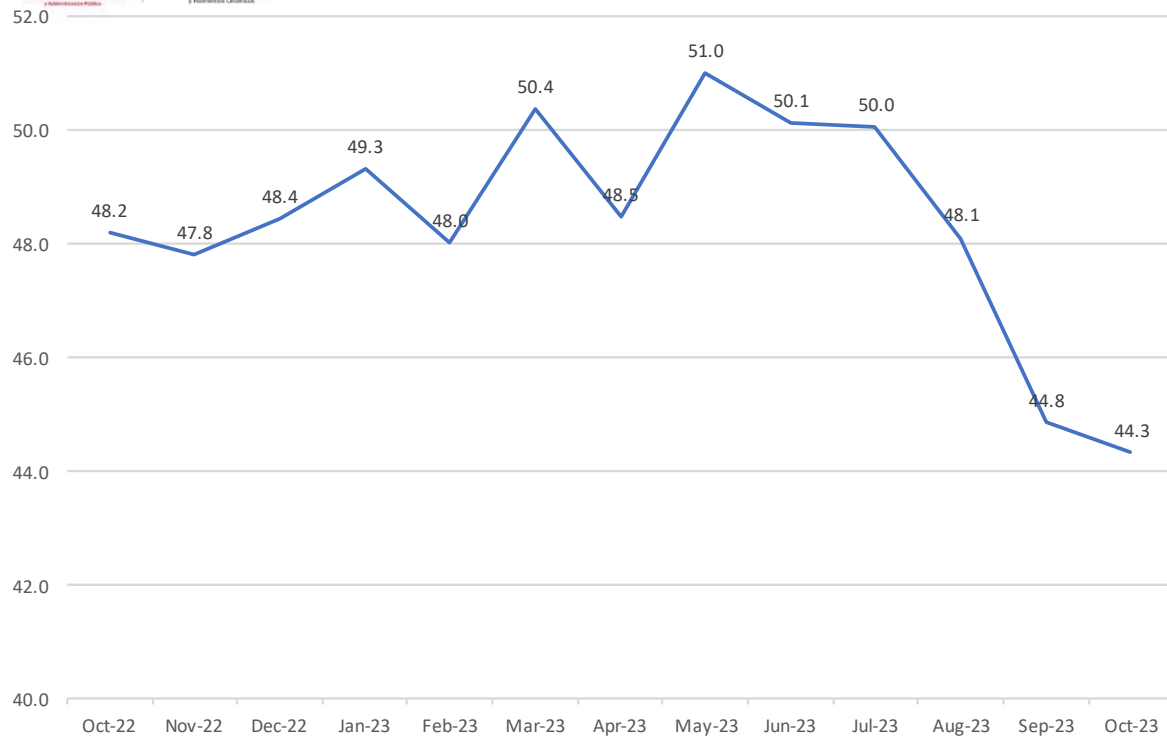
Source: Mortgage Bankers Assoc. (mba.org) Quarterly index: 2001 = 100.

Now the commercial lending market, this is one to keep an eye on because as we are going to look at the next slide, which is the Architectural Billings Index, one of the things are into the commercial realm, that we need to keep in mind that while the architects may be busy, they have to be able to borrow money the owners do for the projects. You can see that during the pandemic there was a lot of money going out back in Q3 2021, but we experienced a significant drop right after that as we started to see interest rates rise.

Commercial Construction Economy

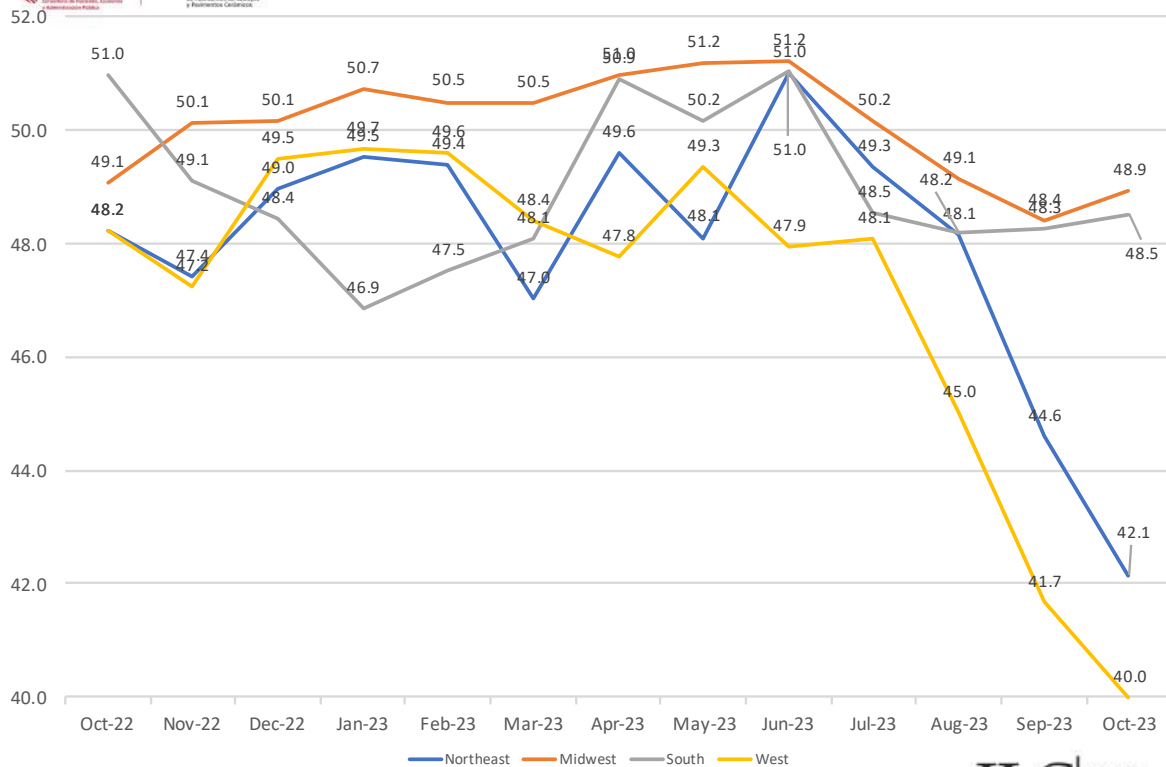
So, moving on into the commercial construction economy...

October ABI National Data



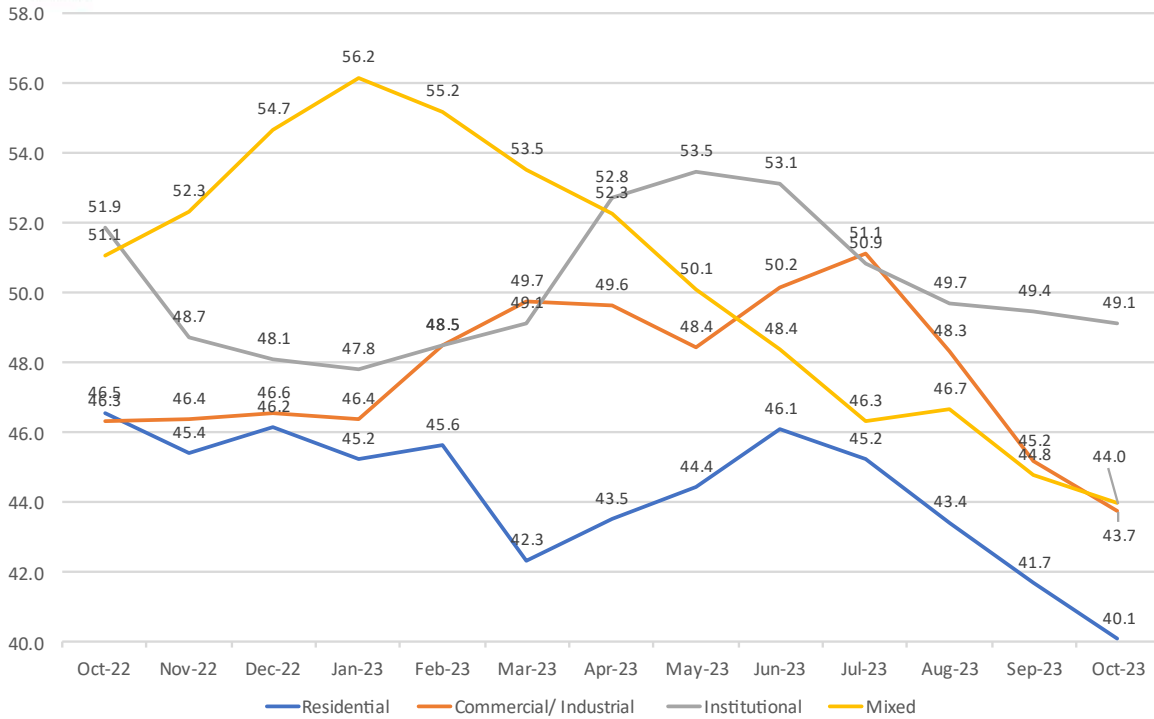
The Architectural Billings Index – As you can see the ABI has dropped the last three months below fifty. And what that means is this is a simple survey done on architects across the United States that asks them the simple question of did you bill more, the same, or less, than the previous month? This is a great indicator to let us know if their billing for plans to develop new projects which we usually see in twelve to eighteen months. But as you can see in the previous slide, it's been a mixed message because money was not being lent, but back in those time frames, the ABI was still high – it stayed up high. What had happened was the architects still were busy and I'll talk more about that in the next slides.

October ABI Regional Data



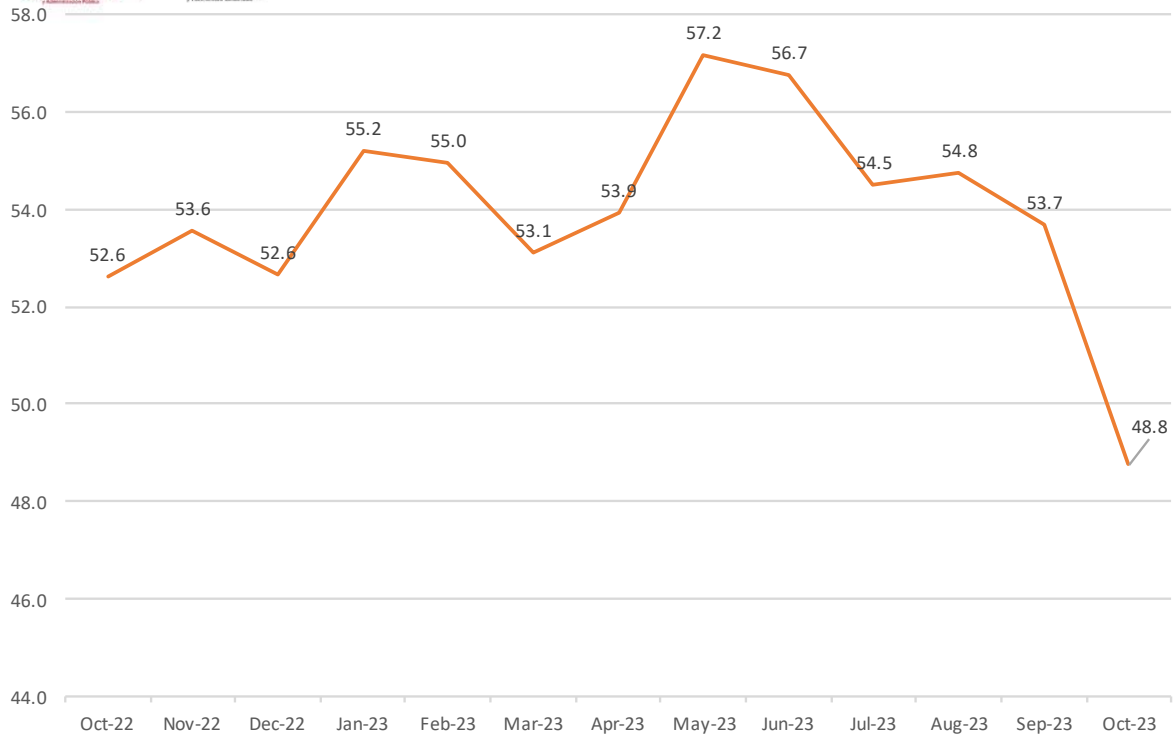
As you can see, the regional data here that breaks it down, the architects across the United States were staying busy, except for, as you can see in the West, it dipped down significantly and also in the Northeast. What had happened was all of the developers understood very well that when the interest rates come down there is going to be a rush on architects for projects, therefore, they spent the money before they started the project to put the plans on the shelf and have those done so that they could be ready to move when interest rates start to drop. Not everyone is going to wait for them to drop down four points, some may make a move at two points, but that's why our architectural billings index stayed high across the country and again, that same line across the fifty, is where you see more, fifty would be the same, below fifty is less than the month before.

October ABI Sectors



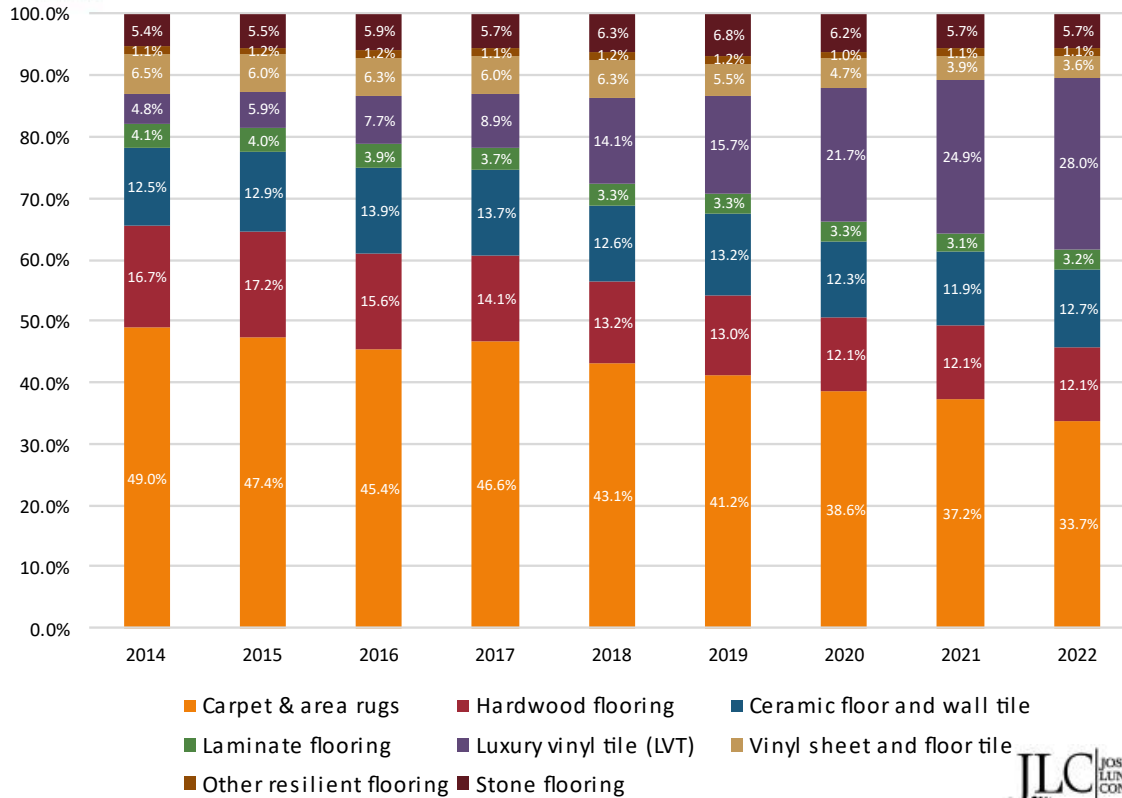
The sectors tell a different story here a little bit more. You can see on the residential side they've been significantly low, which would fall under that multifamily category and the commercial and industrial we've seen bounce around a little bit, but it did get up over the fifty mark for a couple of months where we saw some activity on those types of projects. And then institutional, institutional being hospitals, schools, universities, definitely a target, the universities when we see a recessionary periods coming because these large private institutions have large funds, endowments from donations to do these projects, and not have to seek loans from banks and can typically fund these projects out of those funds that they have. And lastly, the mixed, and you can see that obviously a mixed residential commercial has come down significantly over time. So, we stayed high on the ABI for a lot of months, but projects were not moving forward so we'll probably see the commercial realm start to slow down in mid-2024 because right now commercial's still strong, there's a lot of negotiated work out there, but this is a good indicator that it's going to curtail.

October ABI Inquiries



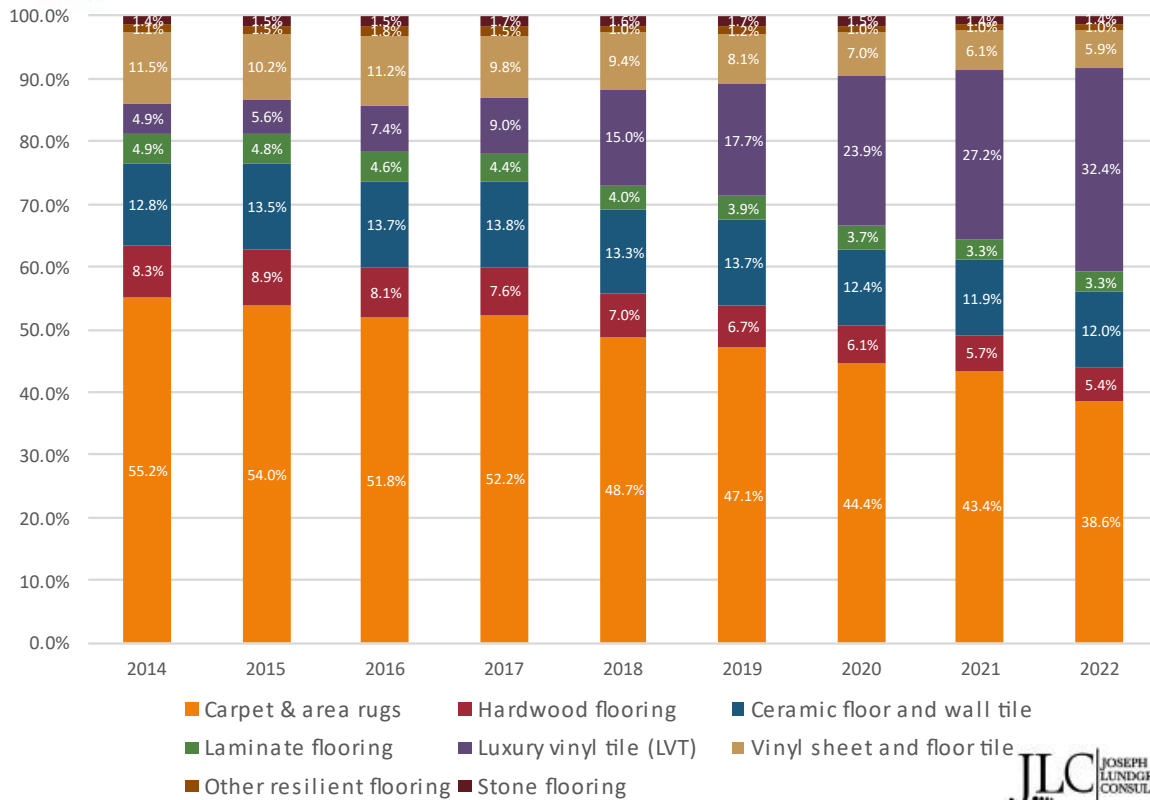
This one also is a good indicator that it's going to curtail when you see the number of inquiries, and that's people calling architects and asking about their project, and what we've seen is a significant drop, specifically in the last month, that they just simply are not getting the inquiries that they have before.

Floor Covering by Type in US \$'s



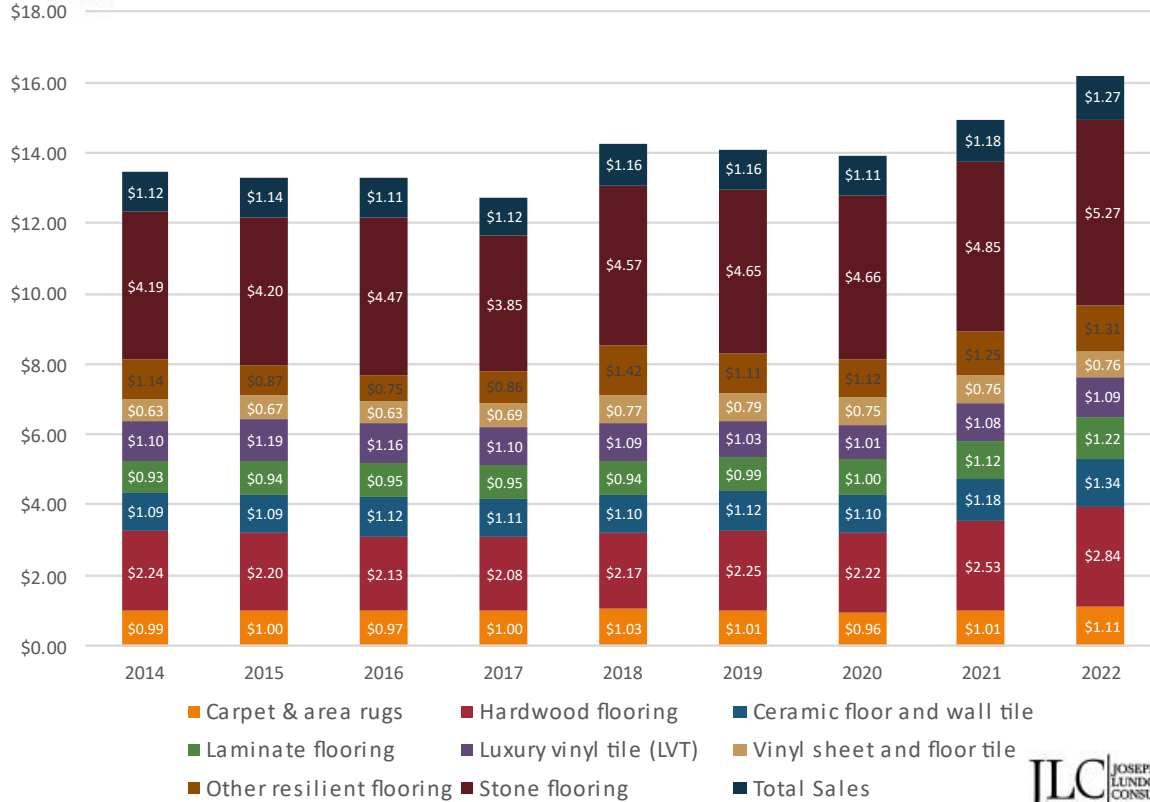
This is floor covering by type in U.S. dollars, just to give you an idea. Keep in mind, look back at 2014 and how much carpet was a percentage of the overall business in the United States and finally the American consumer has figured out that carpet is dirty and therefore hard surface is much better, which is all the other categories. All of you have heard about the luxury vinyl tile, and that's the purple one, taking over market share in the United States and they've done a very good job of growing that to a significant part of the market in dollars. You'll see the same on later slides in volume but I think one of the things to keep in mind here as we look back at ceramic tile, is that back in 2014 at 12.5% of the market, if you go across, we're at 12.7%, so there's a lot of discussion that tile is losing share in the United States when in reality it's not. As the market grows, we're growing a little bit each time and keeping some share. LVT did come in and impact some flooring— they pulled a significant amount from carpet and there's a lot of discussion of it coming out of tile. Well, these numbers show it wasn't as impactful as all of this LVT and it just also spurred the overall growth of flooring in general because it was a median price product, but the installation cost is significantly less than ceramic tile.

Floor Covering by Type in Volume



This is the same, but in volume. So, you can see, again, back in 2014, carpet was 55% of our use in the United States now dipping all the way down to 38%. And again, when you look at the ceramic tile, we've stayed stable over the years from 2014 through 2022 holding at 12% in terms of volume, and of course, we see that LVT has grown significantly in the square footage size in terms of volume, therefore, I truly expect that LVT will surpass carpet, if not in 2023 it will be in 2024, unless there's something else that comes up that would curtail that.

Floor Covering ASP



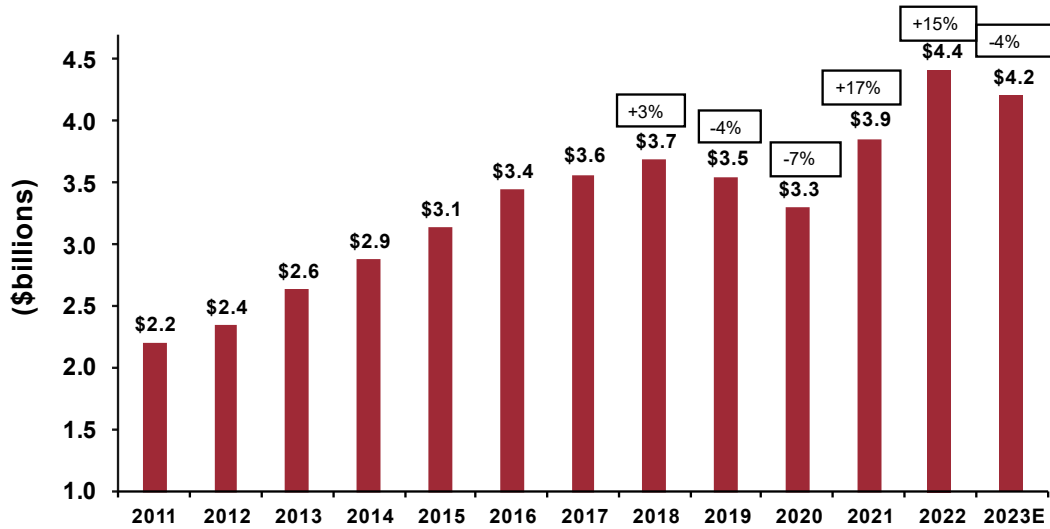
This one shows floor covering average selling price and as you can see carpet is at the very low end of that, raising just up twelve cents since 2014. Hardwood is always a premium type of product and people who like hardwood or real wood – woodies will always be woodies, I say – and so there was a little bit of a chip away with LVT with real wood users, but not that much as you can see on the previous slides. And then you get into the ceramic tile area, and you see a little bit of increase in 2022. That was obviously our freight cost that came into the market and is included in our import cost that drove us a little bit higher. And you can go through – laminate flooring, a little bit higher, a significant one; stone is very simple, it's expensive, but just like woodies will always be woodies, stoners will always be stoners.

US Ceramic Tile Industry

Let's talk about the industry!

U.S. Ceramic Tile Market (\$)

High inflation across the tile industry has caused the market to grow in dollar terms despite a decline in volume

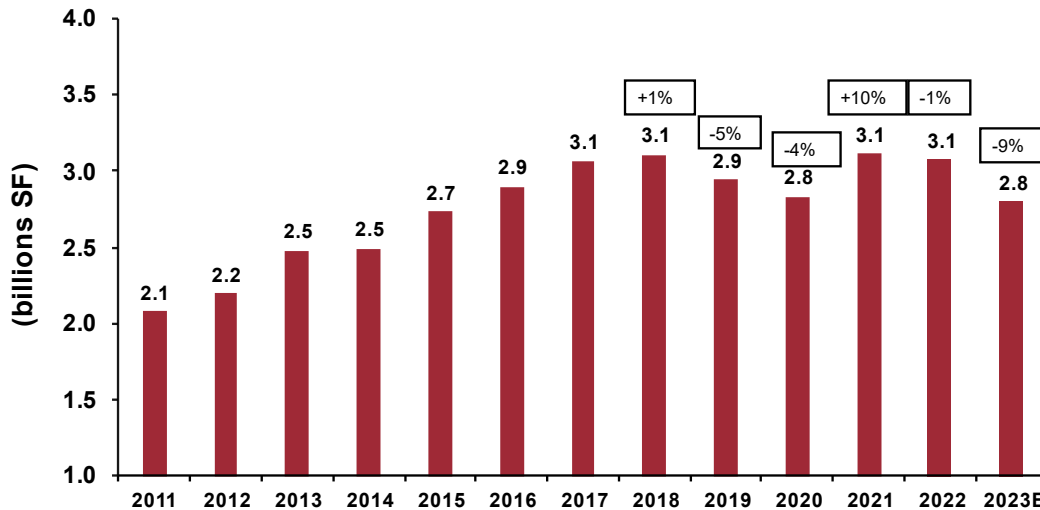


Source: Floor Covering Weekly, TCNA and internal estimates. Prior year data subject to periodic restatement .

As a whole, here's the history in the industry of the United States in dollars and the growth and decline in each and every year. In 2023, I have estimated that we'll only see a 4% decline in the overall dollars, and it is primarily due to as I said in the previous slide, the increase in the import freight rates.

U.S. Ceramic Tile Market (SF)

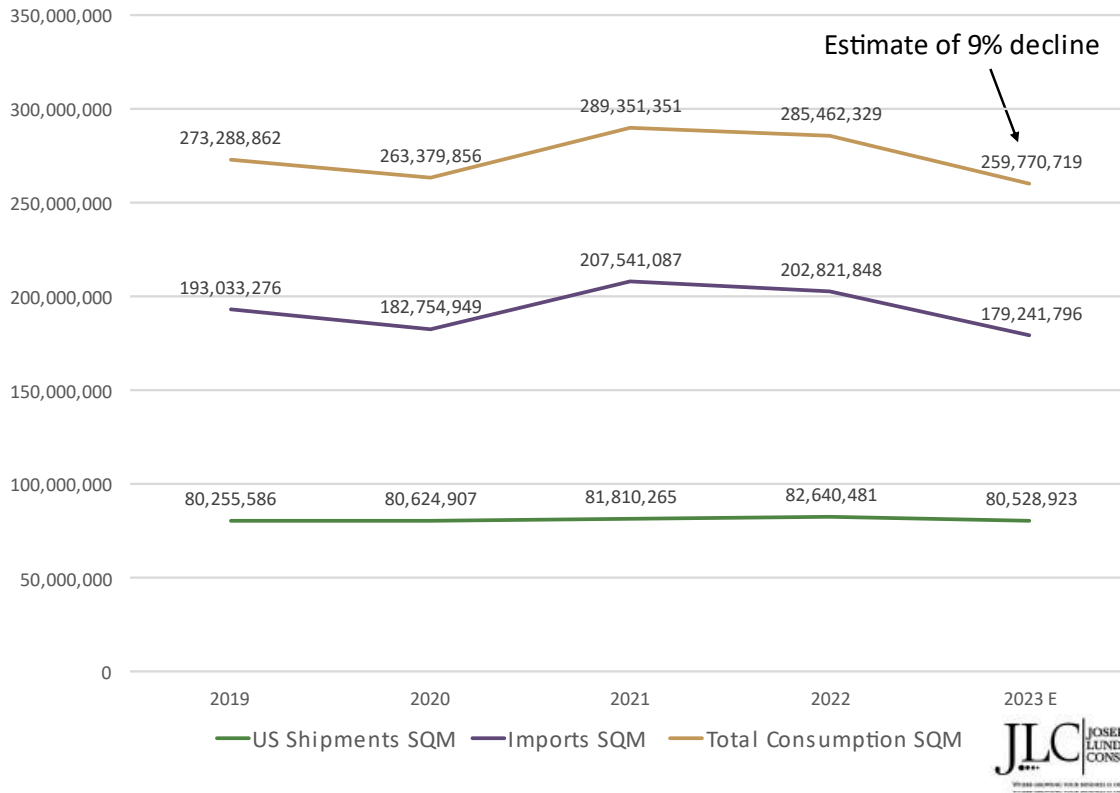
Volume fell in 2022, in contrast to the inflation -fueled dollar growth. Volumes expected to decline further in 2023.



Source: Floor Covering Weekly, TCNA and internal estimates. Prior year data subject to periodic restatement .

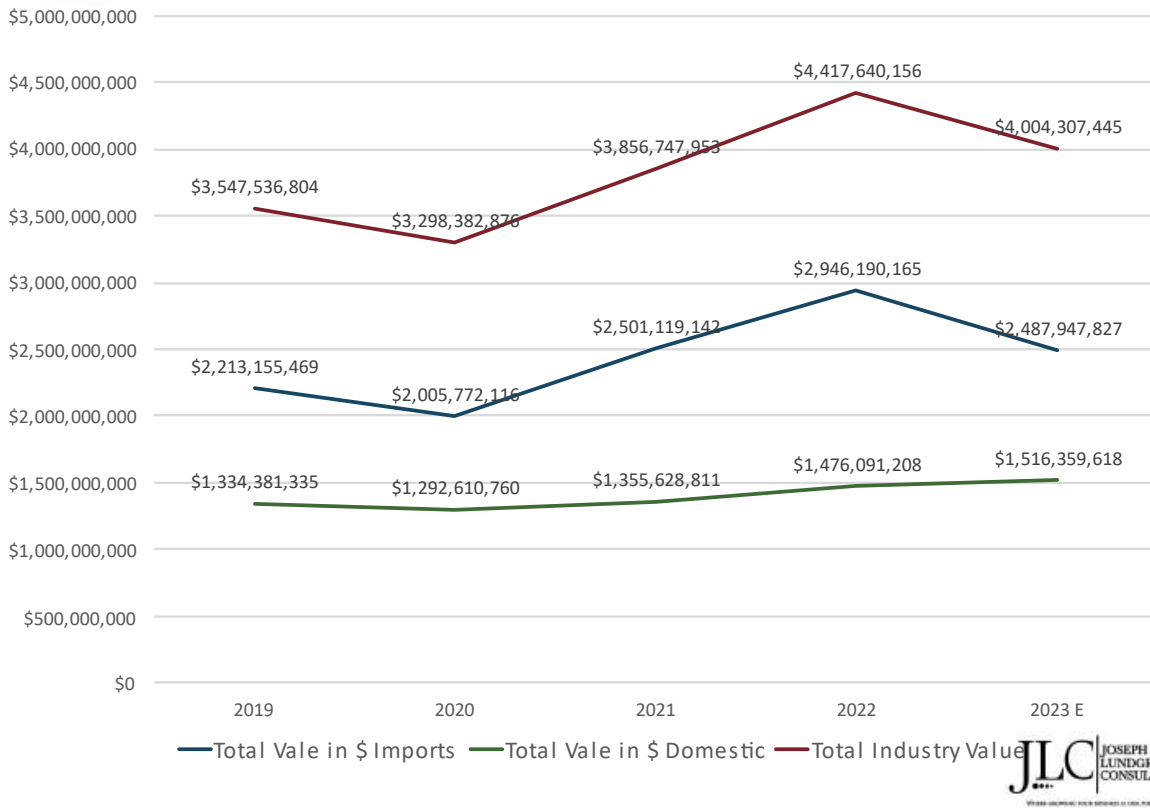
If you look at the volume, you'll see I have a 9% decline and through September we see that imports are down approximately 10% and the domestic market manufacturers, which there are only twelve in the United States, are down approximately 3%. So, when you look at it overall with the mix that we have in imports and domestic products, which I'll talk about in a little bit, I truly expect to see us come in at 9% down. However, it's important to understand how this number is calculated, which is simple: what is imported and what is produced in the United States is what we consider our consumption, and that inventory stays stagnant or *ceteris paribus* – doesn't change. We do know there was a problem over the last two years with inventory where a lot of U.S. distributors over ordered. So, we had a significant amount of tile coming in 2021 and even some in 2022 that overinflated inventories. So, I'd like to say that the market, well, the way we measure it, may be down 9% in 2023. Overall, we haven't really experienced that until the back half of 2023, so I don't think, if you really measure it by actual consumption, it's not 9%, but to keep it consistent, that's what I have in here.

US Market Square Meters



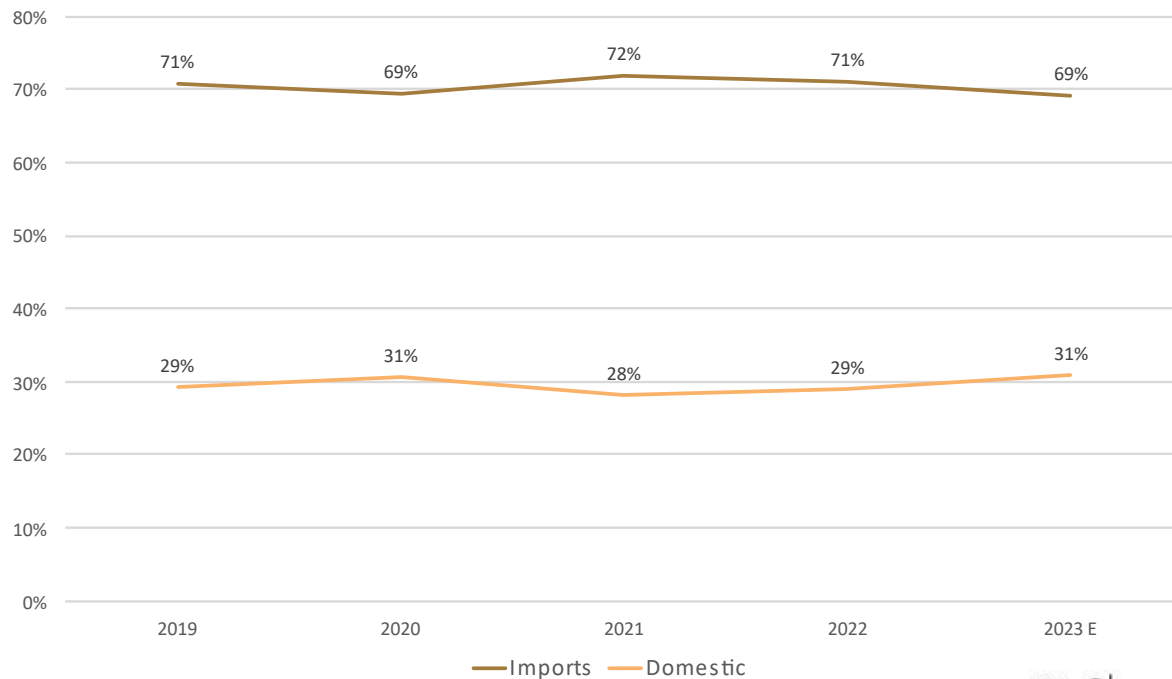
Moving on in terms of the square meters, like I said this is an estimate of mine that will decline 9% you can see in square meters. And this line shows you how much is imports and obviously we get into the U.S. shipments, which you can see are very much consistent across the board, with the minimal capacity that we have in the United States, which with all the plants in the United States, we have about 1 billion square feet of capacity, which leads me into additional information on a later slide.

US Market in Wholesale \$'s



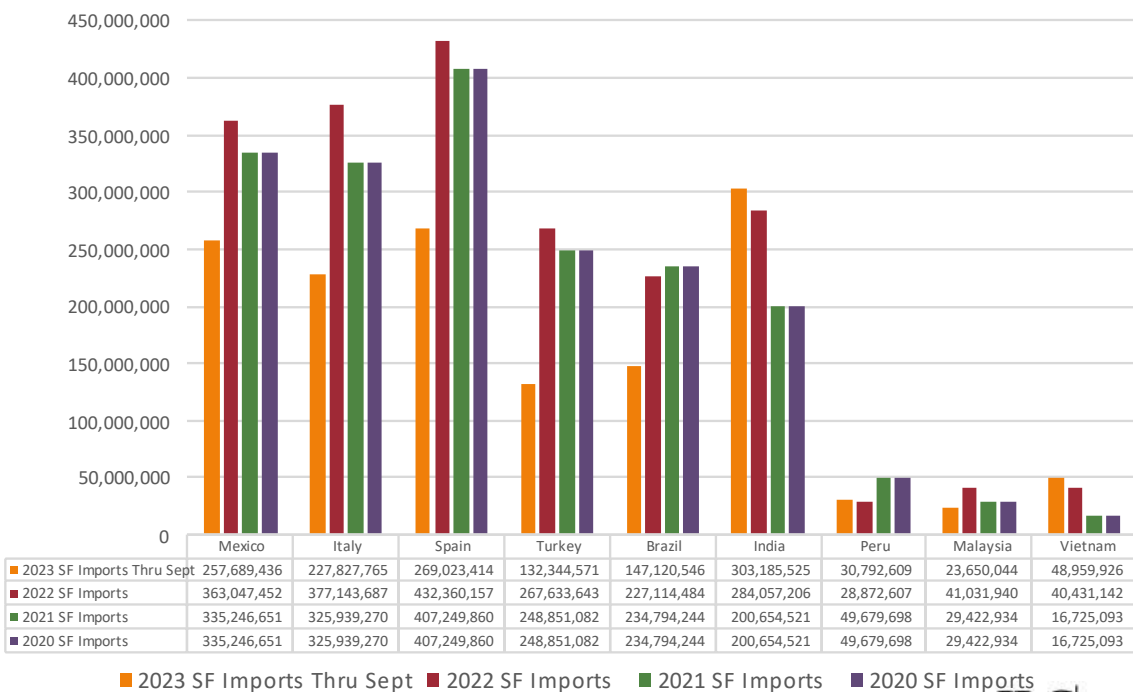
On the U.S. market in wholesale dollars, this is again being driven by that high average selling price, in 2022 we went up to 4.4 billion and we'll be at approximately 4.0 billion in 2023 is an estimate. And each one of these reflects the domestic market and also the imports. And you can see that increase on the imports, driving it up, and that's what drove the overall market higher in 2022.

Imports vs. Domestic



This is what I referred to earlier. Because the United States has minimal capacity, even with an additional plant coming online just this year with Portobello out of Brazil in Tennessee. We still won't see this number change drastically. And it usually hovers right around the 30-70%, 30% being domestic production, 70% being imports. That is held true for a long time, but we'd love to see more manufacturers get established within the United States.

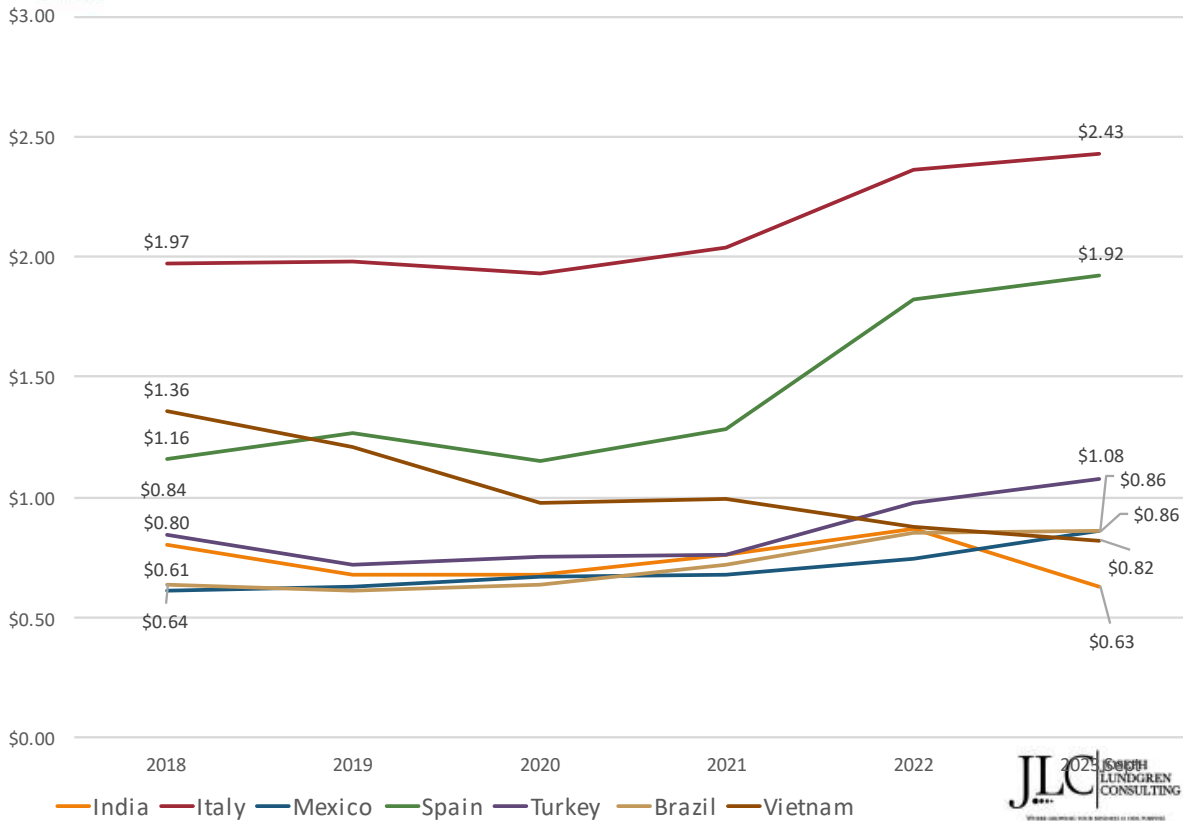
Imports by Country



■ 2023 SF Imports Thru Sept ■ 2022 SF Imports ■ 2021 SF Imports ■ 2020 SF Imports

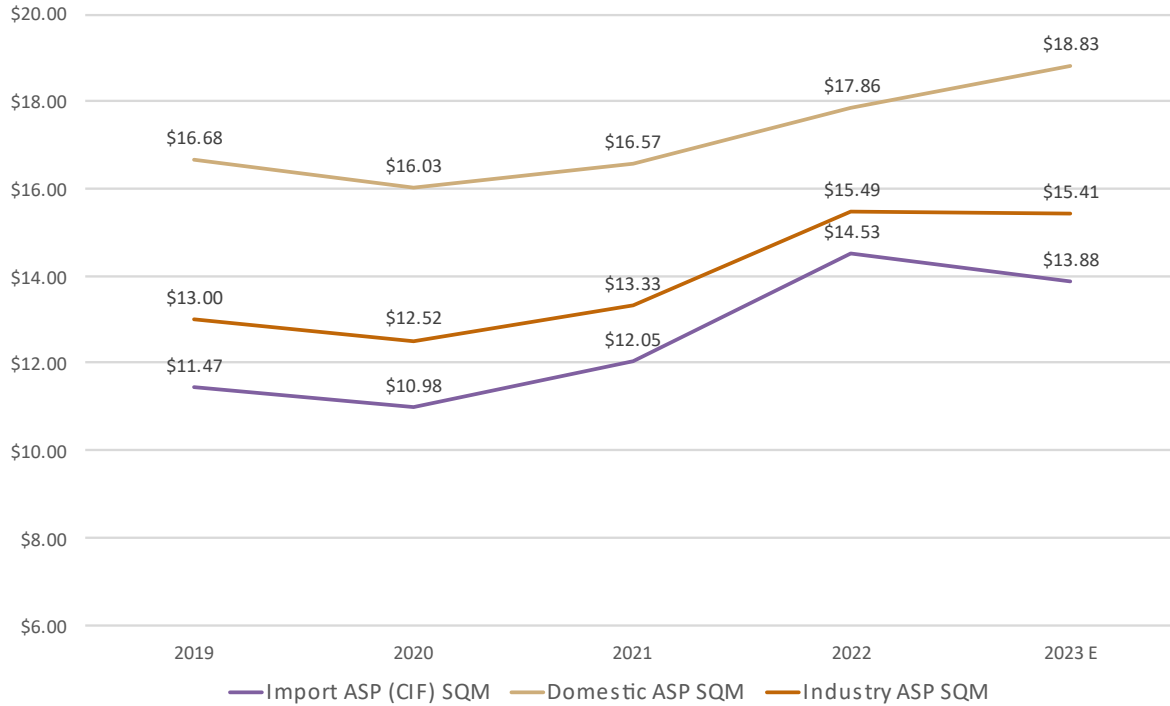
Imports by Country – Now, this one I put the chart in here so that you can look at the actual volume in terms of what’s being imported into the United States – and this is in square feet. So, when you look at this chart, it’s important to understand what we’re experiencing is similar to a lot of other countries, where we see this orange line, India, has become the biggest importer into the United States. And that has definitely impacted Spain, and Italy, Mexico, Turkey – it’s impacted every country. In addition, we also see Vietnam coming on. While they’re small, there is more happening now in Vietnam than I’ve ever seen before. So, I expect Vietnam to continue to grow and India will continue to hold this place with the prices they have out in the marketplace which are significantly lower than a lot of other countries.

Per Square Foot Import Cost



Price per square foot import cost – If you look at it by country, and I tried to make this slide less busy, back in 2018, and this is per square foot, you can see the price in Italy specifically, who has always been on the high end was \$1.97, they’re up at \$2.97 a square foot. Then you go all the way back down to India, which is the lower one here, they were at .61 cents and then coming in at .63, so they haven’t had an increase, especially where they’ve come into the marketplace.

Wholesale Industry ASP SQM



Wholesale industry average sale in price by square meter – Currently, you can see that same phenomenon happening here with our industry average selling price here in the middle going from \$13.00 a square meter in 2019 to \$15.41. That’s being driven by the import ASP because it includes all of the freight and insurance that we’ve talked about earlier. So that’s gone from \$16.68 up to \$18.83. And because we are heavy importers, the lower cost domestically brings us in at an average price of \$15.41 a square meter. And that’s the estimate for 2023.

Size Trends

Residential Ranking	
1	30x60 12"x24"
2	43x43/45x45/50x50* 17"x17"/18"x18"/20"x20"
3	** 15x90/20x120 6"x36"/8"x48"
4	*** 30x30` 12"x12"
5	60x60 24"x24"
6	60x120 24"x48"
*45x45 18"x18" Primarily	
** 20x120 8"x48" Primarily	
*** Still used as a base for builders in red body	

Commercial Ranking	
1	30x60 12"x24"
2	60x120 24"x48"
3	60x60 24"x24"
4	* 15x90/20x120 6"x36"/8"x48"
5	** Larger sizes
* 20x120 8"x48" Primarily	
** Due to the mix of Gauged Porcelain Tile Gauged Porcelain Tile Panels/Slabs	

- India is offering white body ceramic at 3% absorption, but the cost differential is small vs porcelain.



The size trends, 30x60 is the biggest significant size you'll see within the United States, without a doubt. Then there's the mix of popularity on the other sizes, but the 60x120 has become one of the prime sizes, specifically on the commercial side, even though the 30x60 commands the biggest share in that area. One point is that India is now offering white body ceramic at a 3% absorption rate, but the cost differential is small vs. porcelain at this point in time because they're trying to come in and be able to compete with the red body out of Mexico with a white body product.

Trends

- Large Format
 - While the 30x60 is the primary size in the US market for floor tile, the 60x120 is growing fast while the 60x60 is declining.
 - It's important to note the US labor pool does not have enough qualified installers for large format tiles.
 - The focus of associations such as Ascer (Tile of Spain) support our training program Ceramic Tile Education Foundation which ensures we will have qualified installers to continue to grow the marketshare of tile in the US.
 - <https://www.ceramictilefoundation.org/ctefponsors>
- Calibrated (Pressed vs Rectified)
 - A general rule is residentially in the US we will use calibrated product and rectified for commercial.
 - More factories are preferring to sell rectified because of the higher selling price and margin.
- The US market continues to focus on three core visuals for ceramic tile
 - Marble
 - Concrete
 - Wood
- While the US has a vast amount of niche products that are not necessarily a trend, but more of a fad (temporary fashion)

So, trends – large format, while the 30x60, of course, is the primary size in the U.S. for the floor tile market, the 60x120, as I said, is growing. It's important to note that in the United States, our labor pool is lacking qualified installers to install the larger formats. Many of the people who come out of high school go on to college and they do not want to do the labor-intensive jobs and so we have seen fewer and fewer people entering into the market. However, the focus of associations like ASCER, being able to identify this issue and support programs, specifically in the United States, to train installers on how to correctly install large format, goes a long way. If we do not have the associations supporting us in this area, we would not be able to grow the tile business. So, kudos to those at ASCER and your members. Calibrated – pressed vs. rectified – we see the United States continuing to want rectified products. It's a benefit for the factories not having to worry about sizing as much. They also, in most cases, can get a premium for the product so we see that having a lot, unless it's a low end product that they want pressed and then it has to be calibrated so that we don't have a big sizing problem. Definitely more factories are preferring to rectify vs. not rectify. And from a look's standpoint, the United States does not move off its trends very often. And when I say trend, this is volume – so marble, concrete, wood – those categories are the ones primarily sold within the United States and it's a challenge when – take marble, for example, one of our most popular looks, but yet white is one of the most popular colors so you see a lot of Statuario, Calacutta, or Carrera being used over and over again. And that's something the United States still needs to widen its breadth of choices. As many of you know, sometimes I refer to our market as being boring compared to others. While we have a lot of niche products that are featured on different websites, the amount of products that are sold in these niche products is very small. And sometimes

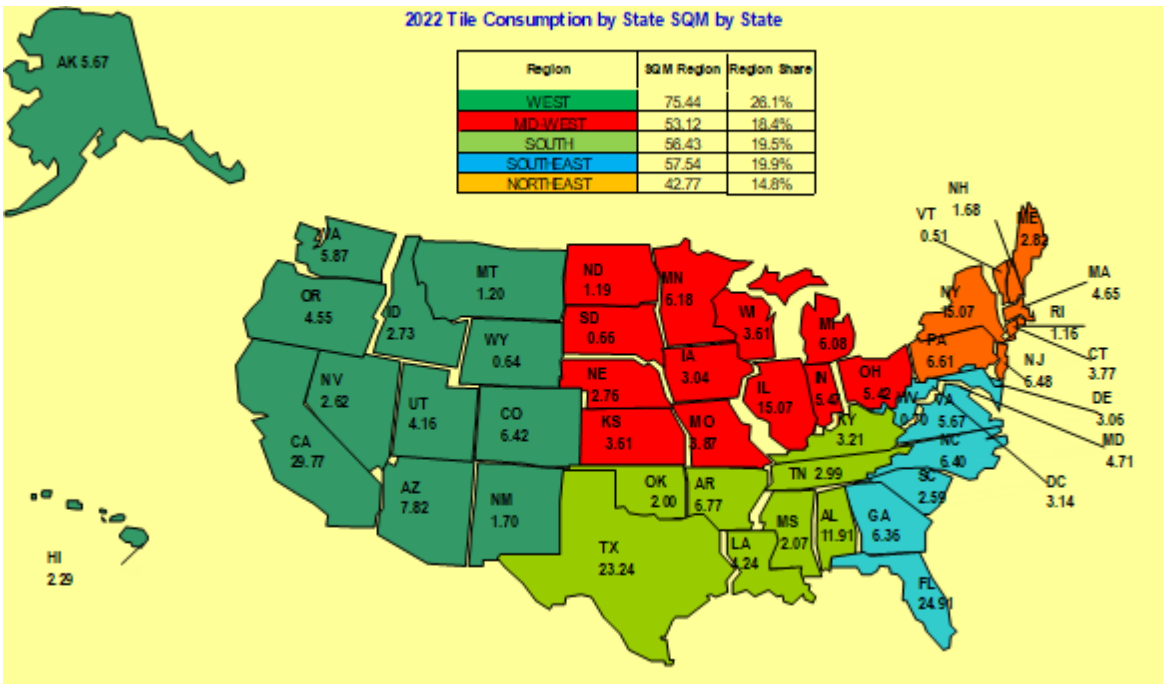
they're niche to the point where they're priced out of the markets for most consumers and we see those ending up in high end distribution like Walker Zanger, Artistic Tile, Anthology, Ann Sacks and Waterworks, which only represents about 5% estimated of our market.

Consumption by State

- The criteria to develop the consumption by state
 - Population
 - Construction forecast
 - New Housing
 - Residential Remodel
 - Commercial
 - Labor
 - State expenditures
 - Value of construction projects

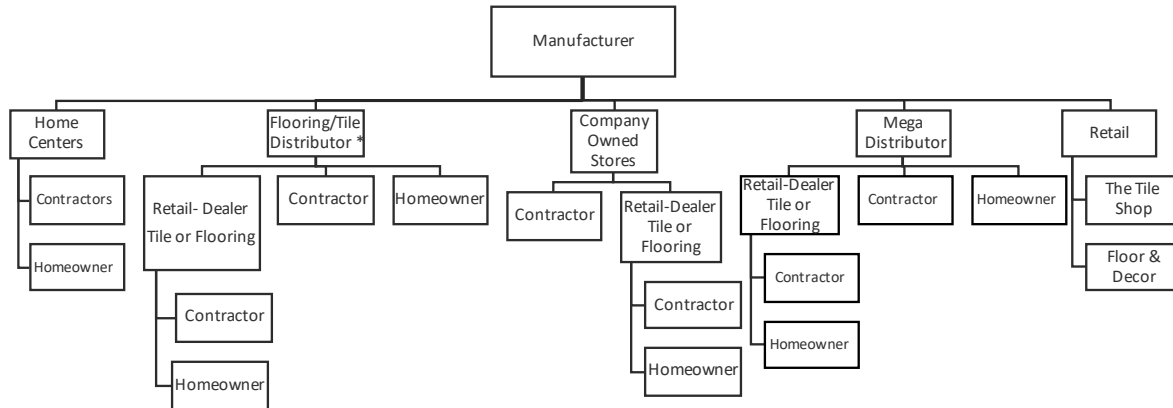
This actually is a measurement of how much tile is estimated to be used by each state in the United States. I take into consideration the population, construction forecast by state for new housing, residential remodel, commercial, labor, state expenditures, all of these things and the value of construction projects and more.

2022 Consumption by State



This will show you the spread and one of the things I like to say when I look at a map of the United States, and particularly here, is if you look at the smile states – and not everyone knows what the smile states are, but if you go up to the top left into Washington and through Oregon, down through California, come across Texas, end up in Florida and go up the eastern seaboard – that is where a lot of tile is sold. Obviously, you look at states like Wyoming and Montana, big states, but not a lot of tile is consumed there. So, the smile states are the biggest focus, specifically California, Texas, and Florida are our biggest consuming states, obviously that has a lot to do with the climate and also the population in those states.

US Tile Distribution Channels



* Includes Specification companies

I've simplified this, and I'll go through the distribution channel, their customers do not vary much on different ones, and I'll touch lightly on that. But from a manufacturer, you have the home centers and when I say home centers, I'm talking about Home Depot, Lowe's, and Menard's, not Floor and Décor, and I'll tell you why in a moment. Also, the flooring tile distributor and I have both in there because there's flooring distributors that carry all flooring from carpet to wood to tile to stone. If they are a tile distributor, they are strictly selling tile and/or stone in some cases. Company owned stores are companies such as Daltile that have factories in the United States that have their own stores. The mega distributors is the larger distributor that we see out in the marketplace vs. the independent distributors of flooring and tile distributors. And lastly, retail – The Tile Shop and Floor and Décor are the only ones I have in this category and it's simply because of how they go to market, and we'll talk more about that.

Definition of US Distributors

- There are five major distribution channels in the US ceramic tile market.
 1. Home centers - this is made up of the Home Depot, Lowe's and Menards. They are also known as big box stores and carry a wide range of products and market to the consumer.
 2. Flooring/Tile distributor- These are distributors that can vary in who they sell to, typically the distributor sells to the dealer and also to the contractor and homeowner (retail). The distinction between flooring and tile is as follows:
 - a. Flooring Distributor – initially carried all or most of other floor coverings except ceramic tile, over the past 25 years they have added ceramic into their mix.
 - b. Tile Distributor – typically carries only tile products and sells dealers, contractors and homeowners in some cases.
 - c. Flooring Dealer – buys from both Flooring Distributor and Tile Distributor. Also, will do installations (turnkey).
 - d. Tile Dealer – buys primarily from Tile Distributor and sells to contractor or homeowner, traditionally does not do installations.

So, the definition is very clear on this. I went through it on the previous slide a little bit, but this will give you a little more detail specifically to what type of customers are within the United States.

Definition of US Distributors

3. Company owned stores-these are manufacturers who have their own stores that typically sell wholesale only and target distributors, contractors, dealers and work with specifiers (architects and designers)in order to specify their tile for commercial and national account projects.
4. Mega distributors - these are typically nationally recognized distributors or have a strong regional footprint. sales are \$50 million plus.
5. Retail-this consists of two different distribution companies currently floor and decor and the tile shop. These are considered retail because they market primarily to the pro who influences the consumer. However, we do see Floor and Decor increasing their focus on advertising to the consumer.

Company owned stores – I have a slide on that coming later that will depict how many of those are in the United States. The mega distributors, which are typically \$50 million plus distributors, but what we see happening is the independent distributors – ones that have one, two, three locations, somewhere like that – we’re starting to see them slow and get bought by other distributors and also private equity groups. It’s becoming very hard for smaller independent distributors to be successful within the United States. Hence, the mega distributors. Mega distributors are the larger group that is acquiring some, such as Virginia Tile, who over the years, has acquired multiple companies to make their footprint much larger, along with Louisville Tile, who just made some moves in Chicago buying a couple of distributors. And then you have the retail and this is just two companies, The Tile Shop and Floor and Décor, only because of how they go to market. Because they go after the pro, the installer, who influences the consumer. Even though they’re starting to do some direct advertising to the consumer, that was the original play and it played out very well for them and it pulled a lot from independent distributors, from other home centers, and also from company owned stores.

Company Owned Stores

Company owned stores these are manufacturers who have their own stores that typically sell wholesale only and target distributors, contractors, dealers and work with specifiers (architects and designers) in order to specify their tile for commercial and national account projects.

	Locations
• Daltile	212 *
• Not included in above number	
• Stone Centers	40
• Design Galleries	19
• Porcelanosa	33 **
• Florida Tile	22
• Crossville Studios	27 ***
• Roca	9 **

* Any existing AO and Marazzi stores are being consolidated into Daltile stores .

** Only foreign manufacturers with company locations

*** Crossville had 36 locations, but has closed some since acquiring DMI, Capco & Contempo

Note: Interceramic closed all locations in 2023

So, company owned stores, you can see here Daltile, has approximately 212, and Porcelanosa and Roca, being the only ones that are not U.S. manufacturers with company owned stores.

Specification Companies

- Platinum Equity
 - Happy Floors
 - Ceramic Techniques
 - <http://ceramictechnics.com/>
 - <https://www.platinumequity.com/paramount-global-surfaces>
 - Stone Source
 - <http://www.stonesource.com/>
 - <https://www.prnewswire.com/news-releases/platinum-equity-portfolio-company-paramount-global-surfaces-acquires-stone-source-301515788.html#:~:text=LOS%20ANGELES%20and%20MIAMI%2C%20April,Finacial%20te rms%20were%20not%20disclosed.>
- Pantheon
 - <http://www.pantheontile.com/>
- Concept Surfaces
 - <http://conceptsurfaces.com/>
- Spec Ceramics
 - <http://specceramics.com/>
- Autostone
 - <http://autostoneusa.com/>
- Creative Materials Corporation
 - <http://creativematerialscorp.com/>
- Nemo Tile
 - <https://www.nemotile.com/>

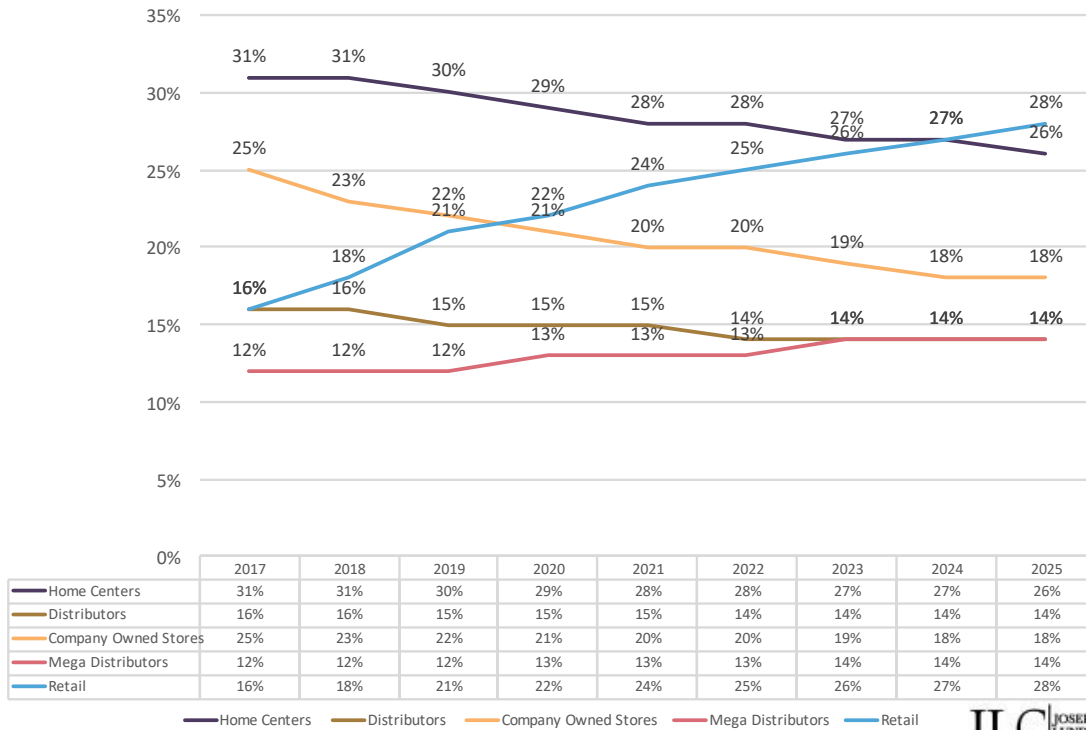
Spec companies are interesting companies because they're direct importers, almost like distributors, but we've seen a consolidation happen, specifically with a couple of the biggest ones, but these are groups that go after specifically commercial projects. I only list Platinum Equity as the owner of Ceramic Techniques and Stone Source, two of the biggest ones that have now converted into the Stone Source name, and Happy Floors being their retail or dealer segment, that's done very well. But these fall under, distributors is how I have them set up because they buy much like a distributor and go after similar projects.

Mega Distributors Examples

- Bedrosian
- Emser Tile
- Longust
- MS International
- Arizona Tile
- Virginia Tile
 - ISC/RBC
- Happy Floors
- Shaw
- East Coast Tile/Bestile
- Anatolia
- JJ Haines
- Conestoga Tile
- Louisville
- Garden State
- D&B

And the mega distributors, as I talked about earlier. These are just some examples of the mega distributors in the marketplace. You can give or take on this, but it's to basically show the mega distributors are growing and independent distributors are not and to have them in the same group it was hard to get the channel progression down, which you'll see in a moment.

Channel Progression



And here's that moment. So, as you see here, over time, this is the mix through each one of the channels. For instance, if we went and fast forward to 2023, approximately 27% of tile in the United States is being sold through the home centers, being Home Depot, Lowe's, and Menard's, 14% through the tile and floor covering distributors, 19% for company owned stores, 14% for mega distributors, and 26% for retail, primarily that being Floor and Décor, who have themselves about a 23% market share in the United States. So, as you see it moving forward, it's a slow progression to those areas that are starting to grow, but one of those areas I think we'll see is the traditional Home Depot, Lowe's, Menard's, unless they change their strategy, we'll see them lose some additional share to the retail side. In addition, you're going to see the distributors not growing, the small independent distributors are going to be very stagnant, whereas as on the company owned stores, they'll also be stagnant in terms of their growth. Where I think we'll see growth is in the mega distributor category as well as the retail segment.

The Market by Channel/Segment

2022 Total Industry SQM
285,462,329

Segments		Segment Share SQM
New Home	37%	105,621,062
Residential Remodel	36%	102,766,438
Commercial	27%	77,074,829
Total	100%	285,462,329

Wholesale ASP SQM	Total Industry \$
\$15.49	\$4,421,811,476

Segments		Segment Share \$
New Home	37%	\$1,636,070,246
Residential Remodel	36%	\$1,591,852,131
Commercial	27%	\$1,193,889,099
Total	100%	\$4,421,811,476

* Assuming ASP is equal in each segment

And this is the market by channel. So, the total market in 2022 was 285M square meters in the United States. And overall, about 37% goes into new homes, 36% residential remodel, and 27% goes into commercial work. And when you take an average wholesale price of the industry of \$15.49, I used the same average selling price in each segment because it's too difficult to break each one out and find a different selling price so just use that as a gauge. The volume kind of tells the same story, but so you can see the opportunity in terms of dollars is why I put that in there.

Home Centers by Channel/Segment

% Channel	HOME CENTERS
28%	79,929,452

Segments	Segment Share SQM	
New Home	10%	7,992,945
Residential Remodel	74%	59,147,795
Commercial	16%	12,788,712
Total	100%	79,929,452

Wholesale ASP SQM	% Channel	HOME CENTERS
\$15.49	28%	\$1,238,107,213

Segments	Segment Share \$	
New Home	10%	\$123,810,721
Residential Remodel	74%	\$916,199,338
Commercial	16%	\$198,097,154
Total	100%	\$1,238,107,213

So, for instance, in the home centers, 10% of their business is in the new home construction, residential remodel being 74% and commercial product being 16%. And there's a standard deviation on each one of these.

Distributors by Channel/Segment

% Channel	DISTRIBUTORS
15%	42,819,349

Segments	Segment Share SQM	
New Home	22%	9,420,257
Residential Remodel	19%	8,135,676
Commercial	59%	25,263,416
Total	100%	42,819,349

Wholesale ASP SQM	% Channel	DISTRIBUTORS
\$15.49	15%	\$663,271,721

Segments	Segment Share \$	
New Home	22%	\$145,919,779
Residential Remodel	19%	\$126,021,627
Commercial	59%	\$391,330,316
Total	100%	\$663,271,721

Distributors by channel – new home 22%, residential remodel about 19%, and commercial 59%. That residential remodel might shock a lot of you, but a lot of that has shifted into the home centers and into the retail category.

Company Owned Stores by Channel/Segment

% Channel	COMPANY OWNED STORES
20%	57,092,466

Segments	Segment Share SQM	
New Home	23%	13,131,267
Residential Remodel	12%	6,851,096
Commercial	65%	37,110,103
Total	100%	57,092,466

Wholesale ASP SQM	% Channel	COMPANY OWNED STORES
\$15.49	20%	\$884,362,295

Segments	Segment Share \$	
New Home	23%	\$203,403,328
Residential Remodel	12%	\$106,123,475
Commercial	65%	\$574,835,492
Total	100%	\$884,362,295

Company owned stores are similar, but yet higher on new home in that obviously Daltile being a big player nationally for new home construction. They are the primary company selling to builders and design centers for new home construction as well as Emser Tile, which falls under the mega distributor category. With only 12% being residential remodel, that's because a lot of their business has shifted out of home centers and that from a service standpoint, the home centers and Floor and Décor are able to service that business better, however, they're very strong – all of these company owned stores on the commercial level as you can see with about 65% being commercial.

Mega Distributors by Channel/Segment

% Channel	MEGA DISTRIBUTORS
13%	37,110,103

Segments	Segment Share SQM	
New Home	29%	10,576,379
Residential Remodel	13%	4,638,763
Commercial	59%	21,894,961
Total	100%	37,110,103

Wholesale ASP SQM	% Channel	MEGA DISTRIBUTORS
\$15.49	13%	\$574,835,492

Segments	Segment Share \$	
New Home	29%	\$163,828,115
Residential Remodel	13%	\$71,854,436
Commercial	59%	\$339,152,940
Total	100%	\$574,835,492

The mega distributors, similar to the distributors, but a little bit higher on new home because as I said earlier, Emser is part of this, with residential remodel being a piece, and also very strong on the commercial side.

Retail by Channel/Segment

% Channel	RETAIL
24%	68,510,959

Segments	Segment Share SQM	
New Home	8%	5,480,877
Residential Remodel	75%	51,383,219
Commercial	17%	11,646,863
Total	100%	68,510,959

Wholesale ASP SQM	% Channel	RETAIL
\$15.49	24%	\$1,061,234,754

Segments	Segment Share \$	
New Home	8%	\$84,898,780
Residential Remodel	75%	\$795,926,066
Commercial	17%	\$180,409,908
Total	100%	\$1,061,234,754

As you can see, the retail segment is continuing to grow with the segment breakdowns as they are stated. Floor and Décor's continuous growth is driving this one to increase its overall share of the channels.

Distributors are asking Who and Where to buy Tile?

- What US customers expect
 - Product
 - Design and Quality
 - Price
 - Terms
- What US customers want
 - US inventory
 - To buy lines not brands

Currently, the U.S. customers have an expectation in product design and quality, which today we see that across the board in factories. They expect their price to be very, very sharp, but then terms, we see terms going anywhere from 90 days to 360 days. Obviously, the longer terms these distributors have the more that they are apt to buy in because then they can sell the product and obviously use your cash for that period of time that they want to go out and do other projects and buy other inventories. So, terms have become a big part of it, but what they want – one of the things that I've found is while the distributors like to be able to buy from factories, there are times they need a small quantity quick and don't want a full container. So, where I've seen distributors get excited, is where I work with clients that want to bring in U.S. inventory, whether they have their own warehouse or whether they do consignment with someone or put it in a 3PL. And then also, distributors, for those that don't know it, buy lines not brands. The days of getting exclusive territory has significantly come down because distributors do not want to invest in all the products from one manufacturer, which then leads them to dual distribution in some markets and where we've got a little bit fragmented from where we used to be, but this is a big thing going forward. They want to buy specific lines, not brands.

What to expect in 2024

- The Fed Interest rate will remain high throughout Q3 2024, however the expectation is rates will begin to drop earlier driving the economy
- New Home Construction as the chart earlier showed will not drop significantly in 2024
- Residential remodel will continue to decline through most of 2024
- Commercial will stay level through Q2 2024, but will drop in the back half of 2024
- In 2025 we expect the “pent up” demand will lead to a significant growth year.



What to expect in 2024? The federal interest rate, obviously it's going to remain high. We expect it to come down sometime in 2024. The new home construction, as the chart showed earlier, will not drop significantly because of this, but obviously residential remodel will continue to decline in 2024 and we will definitely see that put a strain on some of those segments that have high residential remodel mixes. The commercial piece will stay strong, as I've said, throughout probably half of 2024, due to the backlog of work that exists, however, I think once we see that work dry up and until interest rates start to come down, we will see the commercial industry start to slow. But the good news is that in 2025, we expect this pent up demand will lead to a great, significant growth here and that's what we hope to see. And I hope to be talking to you in both 2024 and 2025 telling you that my predictions here were right and if they're not, then I won't be talking to you – maybe.

Thank you very much for your time.