PCA
America's Cement Manufacturers™

MARKET INTELLIGENCE

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Commercial Lending Risks: Credit Tightening's Potential Impact on Cement Consumption

Overview

There has been widespread speculation that the confluence of stress in the banking sector and structural adversities in the commercial real estate sector will result in a commercial real estate crisis over the next several years. A series of regional bank failures has materialized since the beginning of March. These banks are disproportionally active in commercial real estate lending. Concurrently, commercial properties like office buildings are hampered by high vacancy rates and declining values.

Maturing commercial real estate loans of $1.4 trillion in 2023-2024 come in the context of higher interest rates and lower commercial valuations. Moreover, bank assets already struggling under the pressure of higher interest rates may face loan defaults. Liquidity concerns on the part of banks may result in lending drying up for commercial real estate markets to a severe degree.

If this does come to fruition, it could have a significant negative impact on commercial and multifamily construction activity and cement consumption. The purpose of this report is to address the downside risk tighter lending standards could pose relative to PCA's latest forecast.

Background: A Higher Interest Rate Environment

The current economic landscape began with the coronavirus pandemic and the government's response to it. A massive infusion of fiscal stimulus by the federal government totaled roughly $5 trillion in a little more than a year. Simultaneous to this, the Federal Reserve lowered interest rates to unprecedented levels. Both fiscal and monetary policy generated demand side inflationary pressures at the same time the effects of covid itself were causing supply side inflationary pressures in the form of logistical disruptions and labor shortages.

Initially viewed by the Federal Reserve as transitory, inflation, measured by the Consumer Price Index (CPI), has been stubbornly higher than the Fed's target rate of 2% since the fall of 2021 and topped 9% in mid-2022. In turn, over the past five quarters, the Federal Reserve has been aggressively raising interest rates in an attempt to cool inflation.

This quick policy shift on the part of the Fed caught the banking sector – which had based their business strategies around a low interest rate environment – off guard to varying degrees. Banks are sitting on a large amount of long-term treasury bonds. There is an inverse relationship between interest rates and bond prices. Investors in the bond market prefer newer, higher yield bonds. With interest rates being raised so vigorously, U.S. banks have roughly $620 billion in unrealized losses on their books associated with their bond holdings. Moreover, higher interest rates stymie demand for residential and commercial loans as borrowing becomes more expensive. Banks must also offer higher interest rates to compete for depositors' funds.

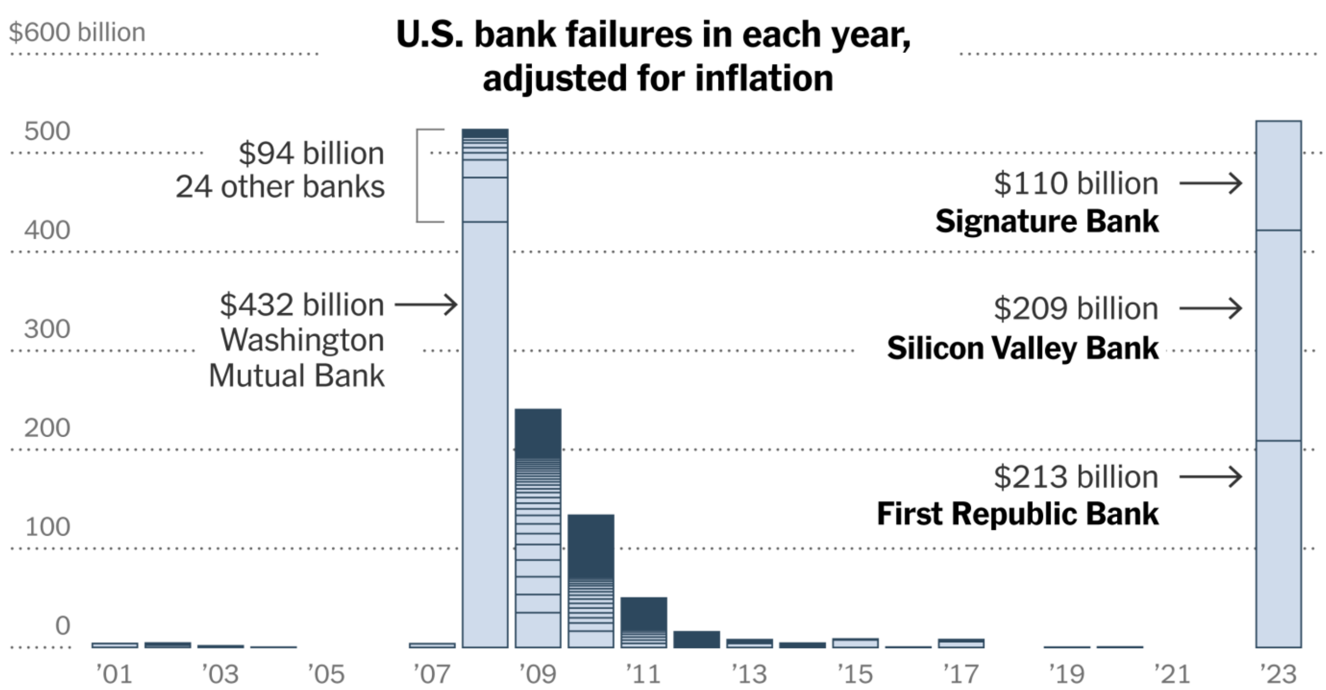
Regional Banking Sector

Regional banks service a particular region of the country and as such, are larger than small community banks but hold less assets than national banks. Regional banks tend to be less diversified and more reliant on certain localized industries than large national banks, making them inherently riskier. Specifically relevant to the construction sector, regional banks are active participants in commercial real estate lending.

Bank Failures: Since early March, four regional bank failures with combined assets of over $532 billion materialized. This represents the highest magnitude of bank failures since the Great Recession.

The first of the banks to fail was Silvergate on March 8th. Its collapse can largely be attributed to the fall of the cryptocurrency exchange, FTX. FTX was one of Silvergate's largest depositors, and the fall of FTX meant that Silvergate experienced a significant decrease in digital asset deposits. This forced Silvergate to restructure its balance sheet in order to avoid a potential bank run from low investor confidence. This restructuring included a 40% reduction in the workforce, an adjustment in its expenses, and a review of its product offerings and customer relationships. Doing so set Silvergate in the position to withstand a 70% reduction in deposits with cash that exceeded its remaining deposits. These measures were not enough as investors withdrew over $8 billion from the bank, which led to a $1 billion loss since Silvergate was forced to sell assets, including bonds, at a lower price than when it bought them to meet withdrawal demands. Silvergate voluntarily liquidated itself and collapsed.

Silicon Valley Bank (SVB) failed two days later on Friday, March 10th, becoming the biggest bank failure since the 2008 financial crisis. SVB was heavily invested in long-term securities. Because of the interest rate hikes, these securities were worth much less at the time of the collapse. SVB's uninsured deposits were primarily from tech firms. When news came out and spread across social media that SVB was primarily invested in long-term securities and would not have the assets to allow the tech firms to withdraw their assets, SVB experienced a bank run. The FDIC insured a maximum of $250,000 for SVB's clients. However, many of these clients held more than this maximum insured amount. Out of fear there could be a crisis of confidence in the banking sector, the Biden Administration approved the Fed and FDIC's recommendation guaranteeing that clients would have access to all their funds the following Monday. The collapse of SVB caused shares of similar regional banks to plummet.



Source: New York Times

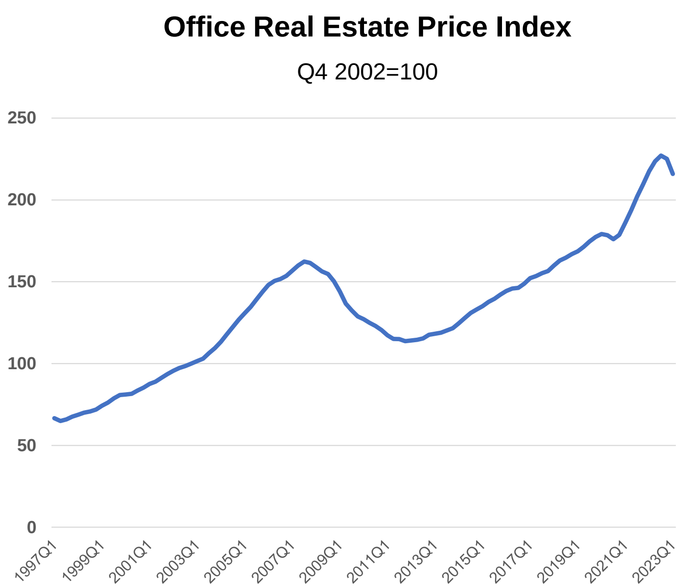
Signature Bank failed another two days after SVB on March 12th. The collapse of SVB caused low consumer confidence which led to investors withdrawing large sums of money from Signature Bank in New York since it also had high amounts of uninsured deposits. Uninsured deposits accounted for 90% of all deposits at Signature Bank at the end of 2022. On top of this, 20% of Signature Bank's portfolio consisted of crypto deposits. The collapse of Silvergate and SVB along with poor management at Signature led to its downfall. In order to prevent further financial contagion, Signature Bank was shut down by regulators.

Less than two months after the first three banks failed, First Republic Bank also failed on May 1st. Like the three banks described before, First Republic Bank also had large amounts of uninsured deposits. While it was able to survive during the period immediately following SVB and Signature Bank's collapse, it was revealed during earnings season that its first quarter deposits fell by 41%. This, coupled with low consumer confidence from the previous bank failures, caused fear among depositors and resulted in another bank run. First Republic was seized by regulators and sold to JP Morgan Chase to insure the deposits from its clients.

The steps taken to backstop deposits and instill confidence in the banking system likely helped to halt a further cascading effect. PCA does not believe the regional bank failures that unfolded in March through May are indicative of an unstable banking sector on whole, especially among larger banks. However, bank failures will likely result in a more conservative lending profile among the banking system. Banks as a whole may interpret the current environment containing more risk than previously thought. The most aggressive tightening may occur at the small and regional bank level, which as mentioned previously, has implications for commercial real estate loan activity.

Commercial Real Estate Market

The covid pandemic accelerated ongoing structural trends such as work-from-home and the shift from brick-and-mortar shopping to e-retail. The commercial real estate (CRE) market most affected by this phenomenon is office space. In some cities, office vacancy rates are now in excess of 50%. This has led to a decline in office property value. Moreover, the rate of return on office properties has been decidedly negative for the past three quarters.



This has also resulted in a bifurcated office market with demand for A class office space remaining relatively high, while vacancy rates among B and C class offices have soured.

With demographic trends of people fleeing cities due to covid and crime and increased work-from-home, some analysts have suggested B and C class office inventory may stagnate for a prolonged period.

There is the potential for spinning off and repurposing office space into multifamily units. While this option remains dubious due to zoning hurdles in many cities, it would take inventory off the office market. However, this would not necessarily be beneficial for cement because it could result in fewer multifamily starts. Rehabilitation to existing structures is also much less cement intensive than new construction.

Less people working in offices has unfavorable secondary effects for the CRE market. Surrounding restaurants and retail space will also see less traffic, dampening their return on investment (ROI). This will further work to depress the retail sector, which has already been in decline from e-retail, the effects of covid, and structural corrosion of shopping malls.

Rapid multifamily construction has materialized during the last two years – adding to overall supply. While vacancy rates are low, they are expected to rise modestly over the next 18 months. With this, rent prices are beginning to slow. At the same time, inflation driven maintenance costs are rising. Net operating costs are expected to ease. These trends are reflected in many multifamily REITs and is expected to lead to less investment. Multifamily real estate prices have also declined sharply over the past two quarters.

With CRE values in decline and banks with heightened liquidity risks, there is the concern that a vicious cycle could unfold. CRE properties depreciate, banks give out less loans, triggering more real estate price declines, and banks tighten credit even more. CRE lending in Q1 2023 has already fallen to its lowest level since 2014. The severity of this will be explored in the following sections.

Lending in the CRE Market

Roughly $1.4 trillion in debt on commercial real estate is coming due in 2023 and 2024. This comes in the context of properties that were originally financed at near-zero rates and have now lost value. Refinancing will now occur in a much higher interest rate environment. Naturally, this reality raises concerns over default risk. Delinquencies are already on the rise in office and retail properties.

The concern is twofold. With the upcoming CRE loan maturities, a string of defaults, concentrated disproportionately among a certain cross-section of the banking sector, could result in more small and regional bank failures. The prospect of this could cause banks to tighten lending standards, which may result in funding for new commercial construction projects to dry up even further.

As a share of total assets, CRE loans represent a significant portion of holdings for regional, community, and small banks. Large banks have much less exposure to CRE loan risk. With the bank failures in recent months concentrated in the regional banking sector, it suggests credit tightening among smaller and regional banks may further hamper the CRE market.

Overall Share of Banks' Assets Exposed to CRE Loans

	Multifamily Loans	Commercial Loans	Construction Loans	Direct CRE Exposure	Indirect CRE Exposure	Net CRE Exposure
Large Banks *(>$160B total assets)*	1.4%	2.2%	0.8%	4.3%	2.5%	6.8%
Regional Banks *($10 - 160B total assets)*	4.7%	8.3%	3.5%	16.5%	9.8%	26.3%
Community Banks *($1-10B total assets)*	5.5%	13.3%	5.4%	24.3%	13.5%	37.7%
Small Banks *($100mm-1B total assets)*	2.9%	10.1%	5.2%	18.3%	12.5%	30.7%
Small Banks *(<$100mm total assets)*	0.9%	3.9%	2.5%	7.2%	5.4%	12.6%
Total *(4,715 banks)*	**2.5%**	**4.9%**	**2.0%**	**9.4%**	**5.5%**	**14.9%**

"Indirect" includes unfunded portion of construction loans and corporate loans on owner-occupied real estate. Unfunded construction loan funding is only guaranteed by the banks contractually if developers hit their funding triggers, indicating some degree of managed future potential CRE risk. Owner-occupied CRE loans are generally C&I loans, which is debt serviced by the borrowing company revenue rather than CRE rent, but the loans are collateralized by the CRE, resulting in indirect CRE exposure in the case of loan default.

It is important to note that the banking sector as a whole is responsible for less than 40% of outstanding commercial real estate debt. Much lending activity in the CRE sector is facilitated by life insurance companies, government-sponsored enterprises, financial portfolios, commercial mortgage-backed securities, asset-backed securities, and collateralized debt obligations. This provides the commercial real estate sector with a non-banking lending cushion, even with a more conservative bank underwriting environment.

Lending Risk Exposure

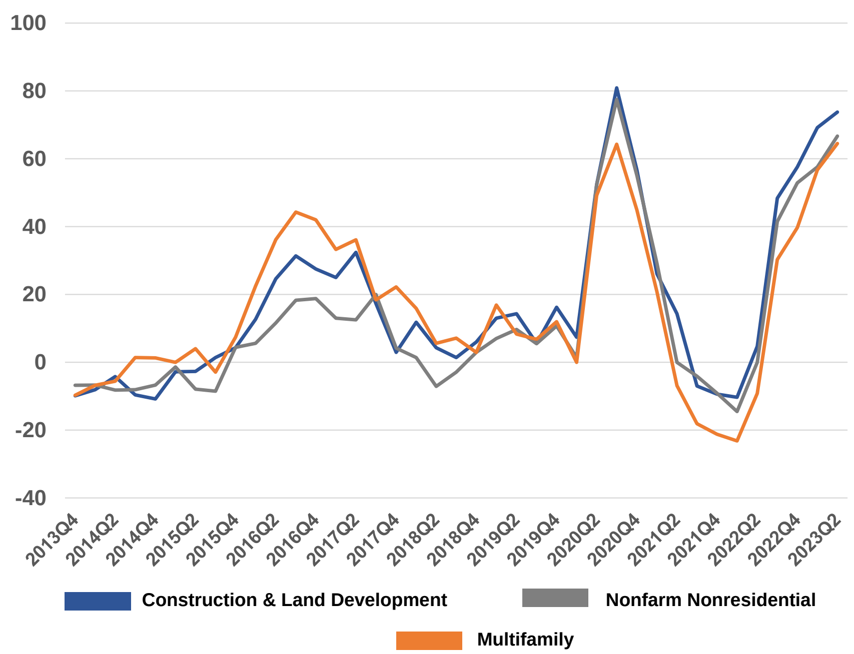
Not all commercial markets face equal levels of lending risk. According to the Federal Reserve's Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS), construction and land development loans have been tightening the most over the past year.

Due to structural reasons, vacancy rates are expected to remain high for a sustained period in the office market. It is nearly universally recognized that office is the highest lending risk among CRE markets. This is followed by the retail sector, in which some retail markets have been a perceived lending risk even before covid.

Banks have already begun to toughen lending standards on multifamily loans, albeit to a slightly lesser extent than the broader nonresidential sector. With the supply of multifamily units rapidly expanding over the past two years, vacancy rates are expected to rise modestly into the end of 2024. Yet, the multifamily market is expected to remain healthy as high mortgage rates will keep more people out of the single-family market. While still an increased risk in the near-term, lending standards in the multifamily are expected be less restrictive than office and retail.

Senior Loan Officer Opinion Survey on Bank Lending Practices

Net Percentage of Banks Tightening Lending Standards



The hotel market has shown widespread recovery since its trough during the covid pandemic. Hotel delinquencies during the nadir of the pandemic exceeded those during the Great Recession but have been in steady decline since. Hotel industry revenue is expected to grow at a healthy pace in 2023. Rates of return on hotel properties are back to pre-pandemic levels, as are passenger enplanements, which now sit at 2017 levels. Hotel real estate prices have outpaced most other commercial markets since the first quarter of 2021.

As such, PCA considers the hotel market to be one of the commercial markets somewhat cushioned by tighter credit conditions. Yet, a softening of the economy and less robust labor market would adversely impact the hotel industry. Travel and leisure-related industries tend to be hit harder than other sectors during times of economic downturn. Because of this, the hotel market may not come out of a greater credit tightening environment unscathed as its perceived lending risk would increase.

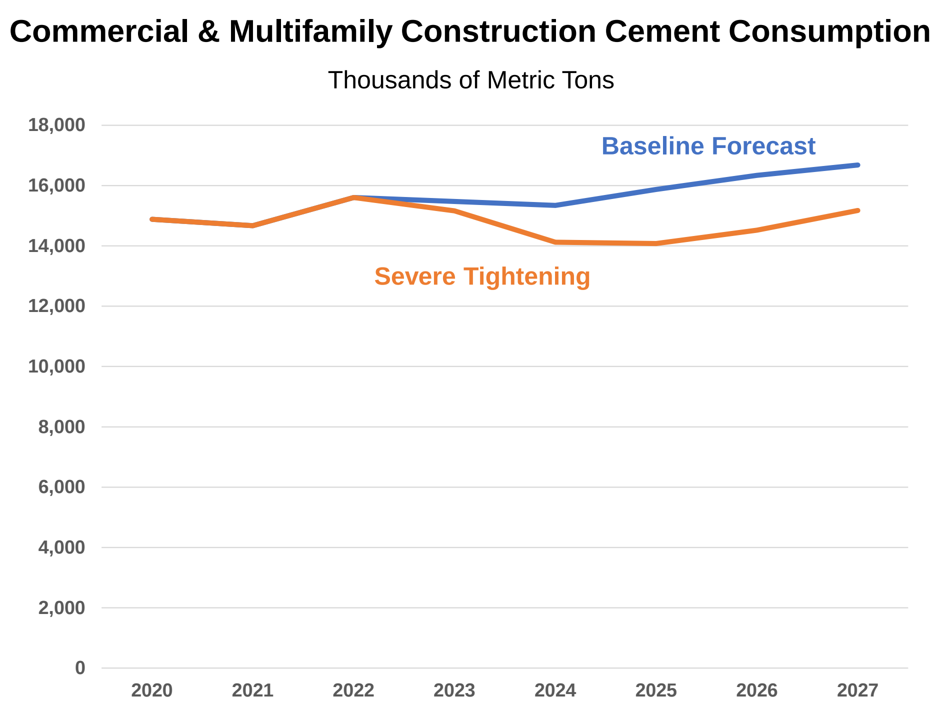
Industrial has been recording tremendous growth that is expected to continue through the forecast horizon (see The Industrial Renaissance: Impact on Cement Consumption). Many of industrial construction's funding mechanisms are unique and related to the CHIPS and Science Act, Inflation Reduction Act, and structural reshowing of U.S. manufacturing. PCA assumes no impact on industrial construction with tighter credit conditions.

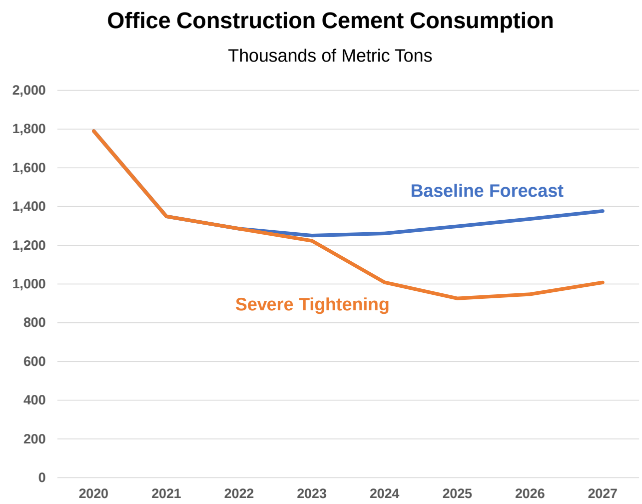
Only small downward lending activity is expected in medical construction in the advent of a credit crunch.

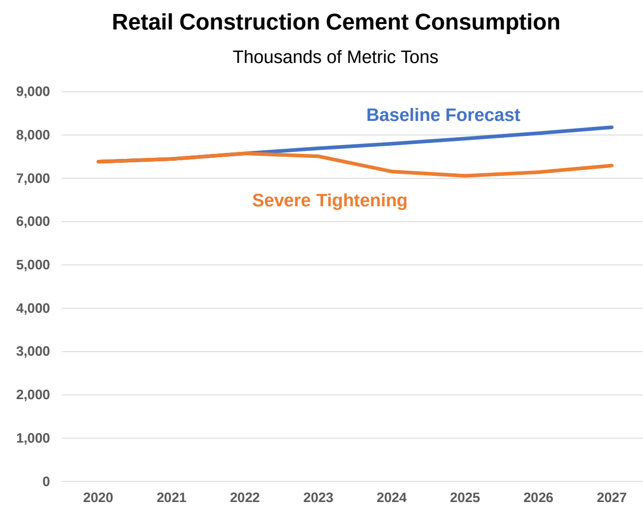
Construction & Cement Impacts

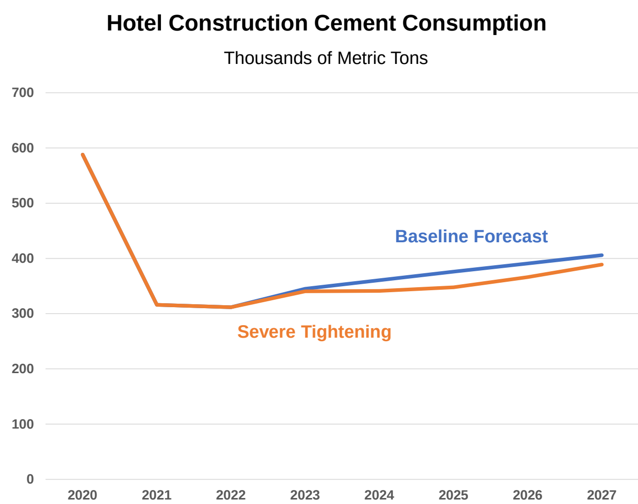
A tightening of lending standards will adversely impact private construction activity. The question at hand is the degree to which access to credit dries up and how much that depresses construction activity and cement consumption. To this end, PCA presents two scenarios. The first is PCA's baseline scenario and reflects the volumes contained in the spring forecast. A severe tightening scenario was also performed. This reflects underwriting standards similar to those experienced during the Great Recession. This represents the worst-case scenario. There is a small probability of this scenario unfolding. Commercial and multifamily volumes will likely fall somewhere between both scenarios.

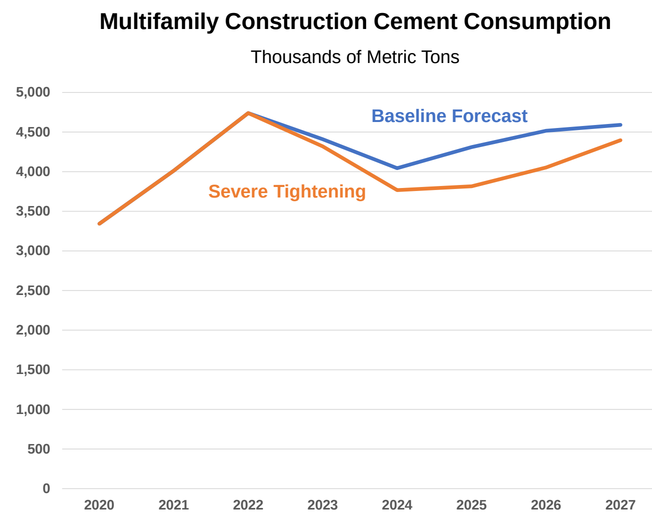
Using historical data on lending activity and real put-in-place spending by construction market, future spending levels for each of the commercial markets and multifamily were estimated. The lending risk profile assumptions outlined above were used to adjust the severity of market lending exposure. These spending levels were then converted into annual cement consumption.











Office construction fared the worst on a growth rate basis under severe credit tightening. On a volume basis, approximately half the difference from the baseline scenario relative to worst-case results from retail, given its size. Overall, commercial and multifamily cement consumption could be approximately 1.2 million metric tons less than PCA's spring forecast suggests in 2024 and roughly 1.7 million metric tons lower in 2025-2027 under severe credit tightening. This would have a meaningful effect on growth rates for the overall cement market.

It is important to note that this analysis does not include potential negative impacts on the single-family housing market emanating from banks' perceived lending risks. This implies there could be downside risk.

Macroeconomic Effects

Not only might there be direct impacts on the real estate market and construction sector, there might also be adverse implications for the entire U.S. macroeconomy. A tightening of lending standards will slow investment spending and thus the rate of economic growth. Shaving off some degree of GDP growth will have indirect impacts for cement consumption as less economic activity translates into lower employment, household formation, retail sales, etc. According to analysis performed by Goldman Sachs, the effects of credit tightening may result in as much as 0.3% lower GDP growth. Using recent historical ratios of cement consumption to GDP, PCA estimates that the macroeconomic impacts of credit tightening could reduce cement consumption by 337 thousand metric tons in 2024. This is in addition to the direct construction impacts of credit tightening.