

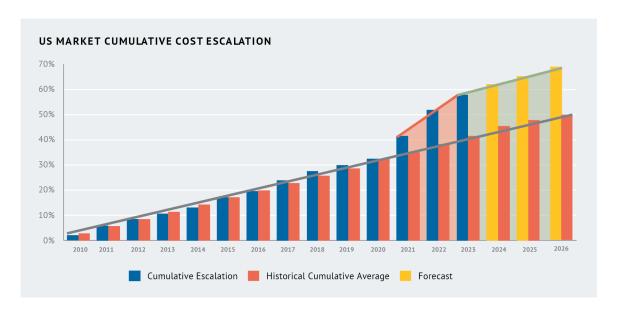


INTRODUCTION

THE NOTABLE EASING OF CONSTRUCTION COST ESCALATION IN 2023 WAS NOT A SURPRISE. SIGNS OF THE END TO SUPPLY CHAIN DISRUPTION WERE EVIDENT WHILE THE SUPPLY RESPONSE TO RECORD ESCALATION LEVELS OF 2021 AND 2022 WERE BOTH IN LINE WITH TRADITIONAL MARKET BEHAVIOR AND PART OF THE POST-PANDEMIC RECOVERY.

However, that the North American economies successfully avoided recession during 2023 was unexpected, as was the path of construction activity: strong growth (albeit powered only by a few sectors) in the US, declining activity in Canada and more strength displayed in a buoyant Mexican economy.

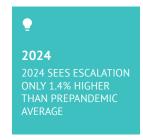
If 2023 had its aspects that were tough to predict, what does this mean for 2024? And beyond? This short paper aims to answer these questions via a complete construction sector overview of each of the North American economies.

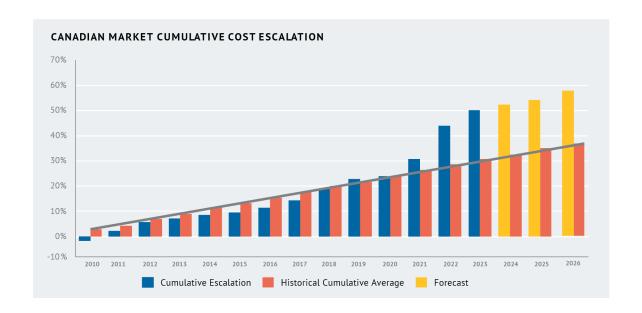




















KEY POINTS TO ESCALATION OUTLOOK: OVERVIEW

2023

- With supply chains now largely repaired, construction cost escalation fell markedly from the record highs of 2022 in both the US and Canada.
- However, with the fears of a predicted recession diminishing, conditions remained buoyant. Escalation averaged almost 6% across our key markets, almost half of the 2022 pace.

2024 & 2025

- Despite increasing signs of economic weakness looming, construction activity is set for a generally robust year in 2024, albeit one where strength is confined to relatively few sectors.
- Our outlook for 2025 is one where Canada remains in a modest recession but also where the recently strong momentum of US construction activity is expected to slow. Our view does not include a recession, but this slower momentum should take some heat out of escalation.
- In all, escalation should average 4-4.5% across our key markets in 2024 before slowing to an average of 3% in these markets in 2025.

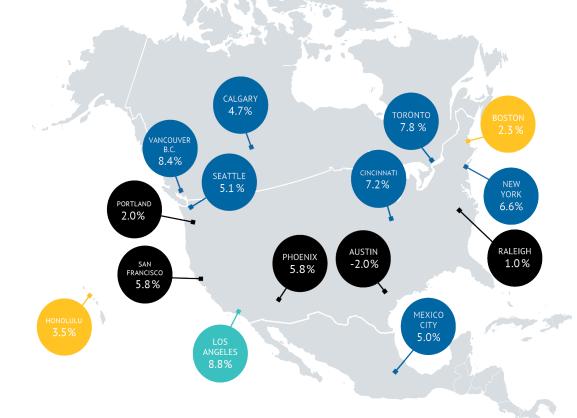
2026 and Beyond (medium/long-term)

- Improved economic and construction sector conditions should be seen from 2026. This should see more elevated escalation with an average of almost 4% across our key markets.
- From a medium-term perspective, labor capability in the US was severely impacted by the Great Recession, only really recovering in 2023. This recovery should continue, boosting workforce numbers and hence putting some downward pressure on escalation, but the strength of this recovery will be dependent upon the persistence of major public construction initiatives and of the economy to avoid a (significant) recession.
- In contrast, Canadian labor capability was far less impacted by the Great Recession and has improved steadily ever since. However, signs of skills shortages have emerged of late, given elevated wage pressures despite falling construction activity. With a (modest) recession forecast, this points to ongoing capability concerns and the potential for recurring skills shortages later in the decade once activity has recovered.

LAX MSC Terminal, Los Angeles, CA



WT VIEW ON CURRENT MARKET COST ESCALATION - BUILDING



				A CONTRACTOR OF THE PARTY OF TH
CITY	2024	2025	2026	3 YEAR AVG (2024- 2026)
AUSTIN				2.4%
BOSTON				4.0%
CINCINNATI				3.7%
HONOLULU				4.4%
LOS ANGELES				4.4%
NEW YORK				4.0%
PHOENIX				4.1%
PORTLAND				2.6%
RALEIGH				4.1%
SAN FRANCISCO				2.7%
SEATTLE				3.0%
CALGARY				2.4%
TORONTO				3.5%
VANCOUVER				2.1%
MEXICO CITY				4.2%
+/- HISTORICAL AVERAGE	SIGNIFICANT PRICE INFLATION	PRICE INFLATION	MARKET ESCALATION DIMINI	SHING MARKET STABLE

KEY POINTS TO ESCALATION OUTLOOK: BY MARKET

Austin

■ Heightened escalation faded quickly as post-COVID workforce relocation receded. Potential jump in costs should this influx return by 2026.

Boston

As an important construction market and industry bellwether, with more reliance on less volatile social sectors, Boston should see costs steadily increase at a pace similar to long-term averages.

Cincinnati

Elevated cost pressures to persist through 2024 before returning to more normal levels, in part due to demand pressures from nearby major manufacturing investment easing.

Honolulu

• Ongoing wildfire rebuild efforts, tourism & entertainment-related spend and defense infrastructure to play crucial roles in the Honolulu outlook.

Los Angeles

Resolution of entertainment sector industrial action to support economy, construction and escalation staying elevated through 2024, before reverting towards longer-term averages.

New York

■ Healthy construction levels across commercial and multifamily likely to persist and keep escalation at 3-4% over the period to 2026.

Phoenix

Massive semiconductor, electric vehicle plant projects now main impetus. Demand here to ease by 2025 but strong population growth to keep escalation elevated thereafter.

Portland

■ Escalation retraced considerably in 2023 given patchy construction and economic climate. Outlook forecast to be more of the same with no obvious economic/construction catalyst.

Raleigh

Combination of nearby major manufacturing plant projects and ongoing educational works to see cost pressures at moderate levels through 2026.

San Francisco

Ongoing Big Tech malaise to ultimately drive sustained weakness and lower escalation values. Softness in nearby San Jose could add downward pressure to costs.

Seattle

Big Tech also a factor in Seattle but broader economic and construction drivers expected to lead to robust outlook.

Calgary

Risk that hub city for major oil spend is hit harder than most in expected recession. However, strong population growth should provide significant support.

Toronto

■ Trend from approvals points to further construction recovery in 2024. Diversity of economic drivers should see Toronto fare better than most, with escalation around historic averages.

Vancouver

■ While strong population growth will help, sector overly reliant on demand from weaker multifamily sector could see activity and escalation fall back to 2025 before recovering.

Mexico City

■ Well-placed to continue to see healthy levels of building construction activity persist, despite likely weaker economic growth, with escalation remaining somewhat elevated to 2026.

Calgary Event Centre, Alberta, Canada



ECONOMIC OUTLOOK, IMPLICATIONS FOR CONSTRUCTION AND COST ESCALATION

THE STATE OF PLAY IN THE ECONOMY AND BROADER CONSTRUCTION SECTOR CAN PROVIDE ESSENTIAL INSIGHTS INTO RECENT DEVELOPMENTS AND THE OUTLOOK FOR ESCALATION.

Economic Outlook

The North American economies' resilience over the last year has seen them continue to record growth (of Gross National Expenditure (GNE) – i.e., economic growth ex trade) amidst some difficult circumstances. However, it is more so that this growth encompassed construction-related initiatives which has been important in supporting construction activity and overall economic output.

By and large, these initiatives should continue for some time yet, providing ongoing economic and construction support. However, rising weakness in broader economic conditions and/or increased risks that some of these initiatives are diluted or scrapped point to a more modest outlook.

This resilience and contribution from initiatives has been especially important for the United States. For a country known as the home of capitalism and free markets, that Congress legislated a series of policies between 2020 and 2022 which provided broad economic support but most importantly then laid the platform for significant public-led construction bucked the conventional wisdom.

It was this broad economic support – largely, the major assistance of the CARES Act and the American Rescue Plan but also rock-bottom interest rates and the opportunity for households and business to lock these in for prolonged periods – which has been pivotal in the US economy's resilience versus widespread expectation of a recession during 2022 or 2023.

While the public initiatives will continue to be rolled out, or even ramped up (in the case of the Infrastructure Investment and Jobs Act spending), cooling conditions with several other drivers is likely to see US economic growth soften in 2024. These include household/consumer spending/sentiment, financial conditions / lending standards, the housing sector and labor market.

However, our base case view is for no US recession in 2024. We do not expect a recession in 2025 either, but risks lie largely to the downside (of a similarly moderate outlook for 2024) due mostly to political impacts. Specifically, the likely probability of either a Republican victory in the 2024 Presidential Election, a Republican majority in the Senate following the 2024 Election or both could see the successful construction-related initiatives of the Biden Administration curtailed or scrapped.

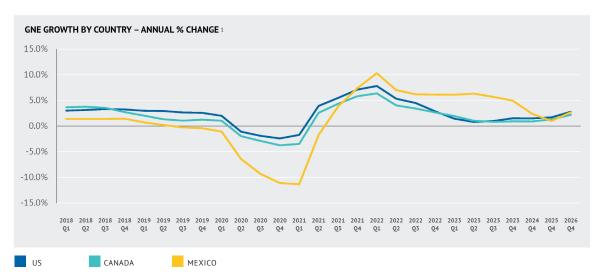
While some scenarios of the 2024 Election could see lower or narrower tax settings (instead of major public spending) to boost economic growth, other scenarios may see Biden Administration initiatives curtailed with no immediate replacement. However, generally robust economic health – as well as the now-significant arsenal of the Federal Reserve to heavily reduce interest rates if need be, should ensure recession is avoided in 2025 before signs of improvement appear in 2026.

Elsewhere, it is commonplace for Canadian and Mexican economies to be influenced, perhaps markedly, by the performance of the US economy. This has been seen in recent years, due to the surprisingly solid US economic performance but also their initiatives (or their underlying motives).

It has been the Mexican economy which has benefited most from the US this time around. This has been largely because of the US desire for 'onshoring' (or 'friend-shoring') i.e., overturning what became overwhelming reliance on China for manufactured inputs to minimize supply chain as well as geopolitical risk. While economic growth in Mexico has slowed from the pandemic led-bounce of 2021 and 2022, it remains robust and continues to outperform expectations. Even with an expected weakening for the US economy in coming years, this should not impact Mexico too heavily.

The Canadian economy too has benefited from a healthy United States. However, it is less well-placed to benefit from 'onshoring' while the US Government's Inflation Reduction Act – designed to supercharge renewable energy development – has attracted capital away from Canada (although it did incentivize the Canadian Government to come up with a similar, albeit much smaller, initiative).

More importantly, the Canadian economy is now in a period of weaker economic growth. This is due largely to various shortcomings – such as high public, household and private debt, less significant pandemic stimulus and less opportunity to lock in low interest rates (that are now much higher) than the US. Lastly, more moderate US economic growth should see Canada enter recession over 2024 and 2025. However, strong population growth in many Canadian cities and some initiatives announced recently as part of the Fall Economic Statement should ensure it is no more than a modest recession.



Implications

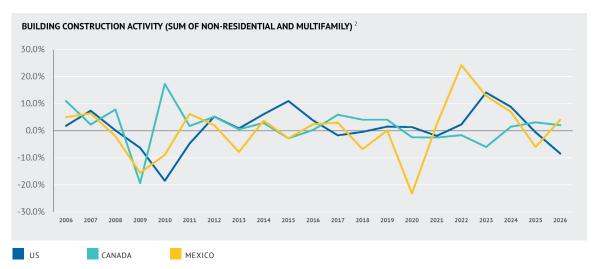
While economic growth and building construction (non-residential and multifamily) often move with a degree of similarity in direction and/or magnitude (given the pro-cyclical nature of many of the drivers of building construction), this relationship can separate for prolonged periods. The post-pandemic world, where disruption persists and significant construction-related public initiatives are well in play, is most certainly a period of separation.

Not just that however, but there remains a significant difference of the strength of key drivers of sectors of building construction.

This is best illustrated in the US with the comparison between Manufacturing and Office construction. For Manufacturing, inflation-adjusted construction spending in 2023 is estimated to be 58% above that seen in 2022 via the US Government's CHIPS Act which has led to a boom in battery and electric vehicle plant construction. For Office, inflation-adjusted construction spending in 2023 is estimated to be 3% up on 2022 but Office includes the relatively small but fast-growing Data Centers sub-sector. Subtracting this is estimated to see pure Office construction fall in 2023, given prolonged weakness and uncertainty in the sector as the remote work revolution continues to wreak havoc on the path forward for CRE.

Similarly, inflation-adjusted Education construction spend is likely to be 9% up on 2022, in part due to the major positive impact of the American Rescue Plan on State and Local Government Budgets (in addition to the swift return of foreign students to US colleges). In contrast, inflation-adjusted spend for Amusement and Recreation is set to be flat, 15% below pre-COVID highs and below annual spending levels seen during the 2000s.

In all for the US, building construction spend (non-residential plus multifamily) in aggregate appears stellar; up an estimated 14% in 2023, with a further 9% forecast for 2024 before easing in 2025. However, this overall view masks a wide range of outcomes by sector.



For Canada, despite many similar drivers of building construction to the US, different circumstances and economic characteristics have led to a quite different path for inflation-adjusted construction spend over recent years.

While the pre-COVID peak in inflation-adjusted construction spend in the US was surpassed in 2022, Canada has seen subsequent falls in activity each year since the pre-COVID high of 2019. The likely outcome for 2023 is set to be 12% below the 2019 high and the lowest level of inflation-adjusted construction spend since 2016 (when Canada was in an economic slowdown due to weak oil prices).

Multifamily construction is a much more significant feature of Canadian building construction than it is in the US (~50% of building construction in Canada vs. ~15% in the US). This elevated significance, plus stimulus measures which pulled construction forward into 2021, meant Multifamily has been the major contributor to the decline in building construction.

However, weakness in Commercial construction closely mirrors that seen in the US. After peaking in 2014, inflation-adjusted construction spend in sectors such as Office and Retail has trended downward steadily for reasons similar to those seen in the US.

Elsewhere, Industrial and Social / Institutional inflation-adjusted construction spend has inched higher since 2019. Approvals data suggests these categories should see increased growth in 2024 on the back of increased demand for these sectors (including from strong population growth) but also, in some cases, as these sectors are well-placed to benefit from disruption (especially Industrial).

In all for Canada, our outlook for inflation-adjusted construction spend is for steady growth over the period to 2026 but for activity to remain well below 2019 peaks in the absence of a significant catalyst, such as a major new public policy initiative.

From an escalation perspective, however, there is perhaps no disruption greater. Despite these many and varied differences between the US, Canadian and Mexican economic and construction markets, the escalation profiles in each country have been quite similar.

In addition, the US construction sector continued to suffer from the detrimental impact of the Great Recession, perhaps up until recent years. Such was the huge impact on (labor) capability and on extended delays to new investment in building materials of an economic shock which almost literally decimated single-family house building and also impacted non-residential and multifamily too.

These features, combined with the strength of US Government initiatives between 2020 and 2022, should have seen construction cost escalation in the US markedly outpacing that of its North American neighbors.

That this was not the case points to the importance of supply chain disruption and other regional or global trends (e.g., the impact of super-charged demand for major household goods during the pandemic) as drivers of peak escalation levels over 2021 and 2022.

But such unusual circumstances and market conditions cannot prevail indefinitely. How soon will the status quo return, and more local factors once again become crucial in explaining escalation trends? How will these timings differ by country and by major city?

Our detailed analysis below of contributors to escalation by construction component provides insight on the outlook to 2026.

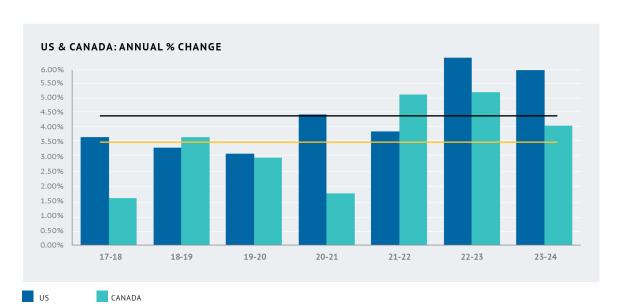
New Aloha Stadium Entertainment District, Honolulu, HI

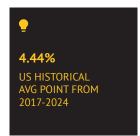


ESCALATION COMPONENT ANALYSIS

LABOR³









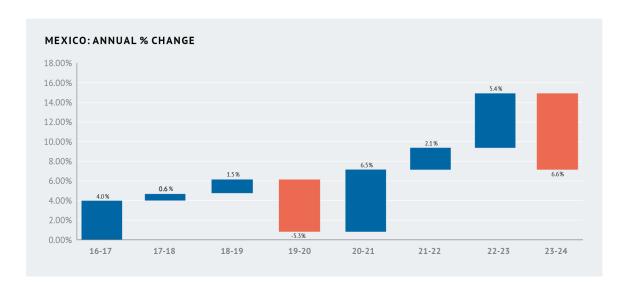




UC Santa Cruz Student Housing West, CA



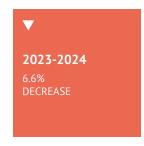












Recent Trends

Wage escalation rose to medium to long term highs during 2023. In the US and Mexico, record construction activity combined with some skilled labor shortages (partly due to less labor supply as a result of the pandemic) were key factors.

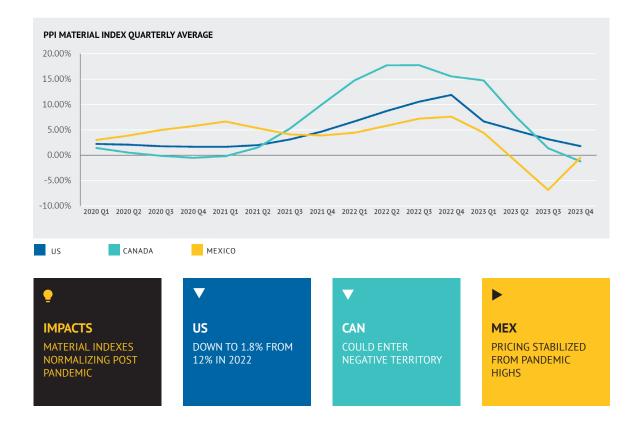
For Canada however, skills shortages / capability concerns were more important, given construction activity is likely to have seen a moderate decline in 2023.

Looking Forward

While record wage growth and a robust outlook for construction activity should continue to encourage new entrants into the workforce in the US and Mexico, this is unlikely to happen at a pace which will put any significant downward pressure on wages. Wage escalation should remain elevated in these countries until at least 2025.

For Canada, moderation in wage escalation is more likely to be seen, albeit we still expect growth above 4% during 2024. This is likely to fall further in 2025 before initial signs of construction activity returning towards more normal levels in 2026 support stronger wages growth.





Recent Trends

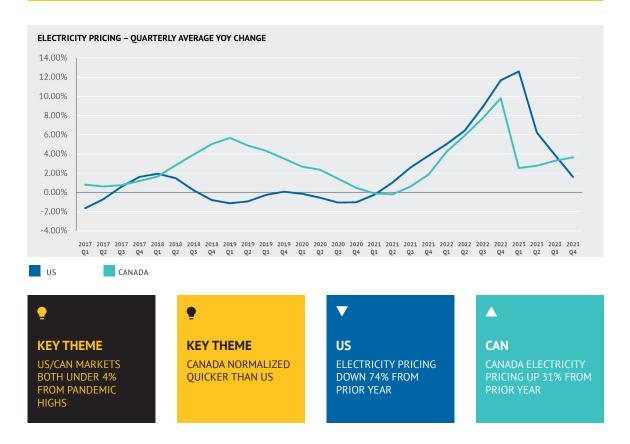
After two years of largely supply chain disruption-led surges, materials cost escalation retraced considerably during 2023, falling back below long-term averages in all markets.

Looking Forward

That the US and Canada saw similarly strong falls in materials escalation during 2023 highlights the importance of disrupted supply chains in explaining the record escalation of 2021 and 2022 but also the regional/global nature of much of the materials landscape. For those materials not considered regional or global, these are often heavily reliant on electricity costs, which have moved quite closely in recent years due to geopolitical concerns.

However, factors unique to local markets can also be important for materials costs. In the US, investment in new capacity for non-metallic mineral products (a key materials sub-sector) has been languishing by and large for several decades. This is likely a key reason why US materials escalation is typically somewhat higher than seen in Canada.





Recent Trends

A combination of pandemic-led elevated demand but more so the War in Ukraine and its impact on global markets saw energy costs move toward long term highs in recent years. This was especially so in the US, but was also seen at times in Canada, despite its energy abundance. The importance of energy costs at every stage of construction projects meant this has become an area of increased interest when it comes to escalation.

Looking Forward

By and large, the energy escalation pressures have now either receded or are showing signs of doing so. Wholesale energy cost pressures have now also weakened, although that these were elevated early in 2023 may yet translate into higher consumer energy prices.

Of more potential significance is the risk of any further energy price shocks from either of the two wars currently underway or from escalation of any other sources of tension. This remains a key risk to our forecasts.



NATIONAL TRUCKING RECESSION? LABOR SUPPLY WOES LINGER FROM Q4 2022

FREIGHT (TRUCKING COSTS) USA
ANNUAL CHANGE FROM Q4 2022 to Q4 2023

FREIGHT (TRUCKING COSTS) CANADA
ANNUAL CHANGE FROM Q4 2022 TO Q4 2023

US RETAIL OUTLOOK

ELEVATED DEMAND
LEVELS POST
PANDEMIC REMAIN

Recent Trends

While considerable attention was given to shipping costs during and after the pandemic (as they climbed stratospheric heights before plunging), trucking costs are a more relevant indicator of freight escalation in North America.

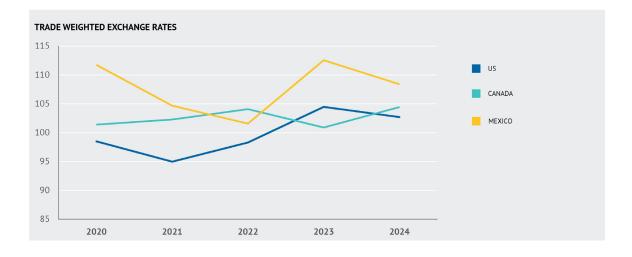
For similar reasons to many other inputs, but also due to prolonged issues with the supply of labor in the aftermath of the pandemic, trucking costs hit long-term highs during 2022. While not quite the dizzying fall of costs seen with their shipping cousins, trucking costs retraced sharply during 2023, as the combination of weaker goods demand and delayed increases to labor supply were crucial.

Looking Forward

The trucking 'recession', as the current dire situation is referred (especially in the US), looks set to continue through 2024. While goods demand has fallen off, it remains at quite elevated levels, so has further to fall, especially given increasing weakness of households. Beyond 2024, as goods demand and labor supply normalize, conditions should gradually return to more normal levels, with escalation following suit.

EXCHANGE RATES7





Recent Trends

Given that US imports play a key role in their construction economies, exchange rates are generally of greater importance for the Canadian and Mexican markets, given smaller local industries respectively.

Recent trends here align closely with those seen at a wider economic level as well as in construction activity. For the US and Mexico, who both saw economic performance gains and elevated levels of construction activity, exchange rates moved higher in recent years, especially so in Mexico (i.e., the Peso-Dollar exchange rate). This played a key role in keeping a lid somewhat on Mexican escalation.

For the US (and the DXY i.e., US Dollar Index, a function of exchange rates with the US among major global currencies), the main (escalation-dampening) strength was seen in 2022. In 2023, escalation stabilized and may remain this way for some time yet, given a likely end to the Federal Reserve's phase of interest rate increases.

For Canada, a combination of weaker economic performance (which meant the expected end of the Bank of Canada's interest rate increases came earlier than for many peers) and poor performance of key commodity prices saw the Loonie come under increasing pressure during 2023. The final exchange rate escalation figure is likely to be 7%, the greatest (escalation-boosting) fall since the economic downturn of 2015.

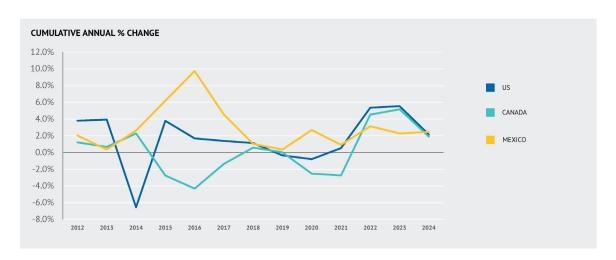
Looking Forward

For Canada and Mexico, it appears as though 2024 will see more of the same: further weakness of the Loonie and more strength of the Peso (albeit at a slower pace than 2023). For the US, while the prospect of increased interest rates now appears increasingly unlikely (with the small but increasing likelihood of interest rate cuts now entering the discussion), the prospect of economic weakness or recession across much of the developed world should support demand for the US Dollar. Our view is for a small (escalation-softening) increase.

Exchange rate prognostication can be a fool's errand the best of times, so any view beyond 2024 is highly unlikely to materialize. With that said, over the long term, the US typically sees its exchange rate move higher in a given year, while the Loonie and Peso typically see declines.

PLANT & EQUIPMENT⁸





Recent Trends

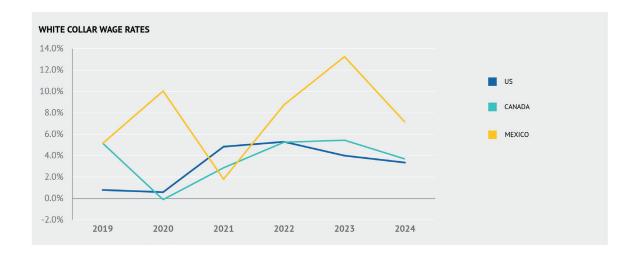
Plant and equipment hire costs also rose to medium to long-term highs (in the US and Canada) during 2022 and 2023. Once again regional and global factors, such as supply chain disruption and high electricity costs (notably in major plant and equipment producer Europe), played a key role here.

Looking Forward

The outlook is for plant and equipment hire costs to moderate during 2024, on the back of improved supply chains and prospects for electricity costs, as well as downward pressure on costs to come from increased supply from China. Risks lie to the upside here, especially in the near-term, but plant and equipment hire escalation should return towards long-term averages by 2025.

INDIRECT COSTS9





Recent Trends

While not typically a major source of escalation, indirect costs (overheads) have become increasingly significant in recent years.

In addition to higher cost pressures generally via long-term highs in the Consumer Price Index across all North American markets, wages of white-collar labor followed their construction labor counterparts in hitting medium to long-term highs during 2022 or 2023.

Note that for the US and Canada, our analysis here is of wages in architectural, engineering and related industries. For Mexico however, this is instead for professional services labor as a whole.

Looking Forward

White-collar labor escalation should remain at quite elevated levels, certainly through 2024 but perhaps into 2025. In contrast to the construction workforce at large, white-collar workers have seen increasing risk of having their roles outsourced to cheaper countries. Improvements in technology and aforementioned higher costs have seen these efforts increase.

For general (CPI) costs, these have now largely begun to moderate and should return towards the 2-3% target of most central banks during 2024. There is the prospect however of some costs, with insurance being a relevant one, continuing to see elevated escalation for some time. Increasing natural disaster prevalence is a key driver here.



IMPLICATIONS & RISKS

THE FOLLOWING IS A COLLECTION OF HIGHLIGHTED IMPORTANT FACTORS TO CONSIDER WHEN ANALYZING IMPACTS TO THE WIDER ECONOMY AND CONSTRUCTION INDUSTRY MOVING FORWARD.

Implications

Labor (Capability)

- While the escalation contribution from wages is at medium to long-term highs, this short-term pain should lead to longer-term gain in the form of a larger construction workforce.
- This is especially important for the US, where the Great Recession hit the construction workforce hard. The peak (August 2007) was not exceeded until February 2023. Our outlook for the US to avoid a recession should support further construction workforce development.
- For Canada however, the construction workforce has grown steadily over time despite underwhelming construction activity of late. This suggests potential medium-term capability concerns, putting upward pressure on escalation.

Importance of Public Spending

- Somewhat in contrast to the conventional wisdom that the US economy/construction sector has seen a robust recovery since the pandemic, deeper inspection points to a significant contribution from the Federal Government. This has been powered by the major initiatives legislated during and in the aftermath of the pandemic.
- While some may argue that public spending should stand aside and let private money take over, the comparison with Canada is of relevance. Canada, like many countries, had pandemic stimulus which boosted construction, but since then, activity has fallen to medium-term lows. A stark contrast to the strength of the US.

Transition To Greener Materials

- Materials cost escalation typically moves in cycles linked to highs and lows in construction activity. However, the shift towards use of more environmentally friendly ('greener') materials and/or more environmentally friendly means of producing materials could see a prolonged period of higher escalation in materials than would otherwise have been seen.
- Time and periodic escalation data releases will tell as to exactly how quickly the pace of change of demand for greener materials is taking place. However, it is quite likely that this pace is faster for major projects (reliant on finance with ESG KPIs mandating use of greener materials) versus smaller projects (able to access less restrictive finance).

Risks

Economic / Political

The economic outlook remains finely poised, with scenarios of stronger or weaker economic growth than those as part of the underlying assumptions of this report quite possible. On balance, risks for the US and Mexico appear somewhat more weighted to the downside but are likely to the upside for Canada. The economic outlook remains a key building block to the construction and cost escalation state of play.

The economic outlook is also important for its impact on the political side, especially given national elections in each market by 2025. The political impact figures to be most important in the US, where there appears to be a wide discrepancy of views as to the role of Federal Government in driving construction. However, how Government in Canada responds to further economic weakness could be crucial to their path forward.

Geopolitics

- With two major wars currently being fought and the possibility of more to come given ongoing tensions, the potential for geopolitics to throw a spanner into the works of escalation some time in the period to 2026 remains elevated.
- Such a scenario would see the US respond swiftly but increased defense spending as part
 of a war effort, combined with persistent concern over budget deficits could see
 major construction initiatives come under pressure.
- Another outcome of increased geopolitical conflict may be even greater momentum towards onshoring ('friend-shoring'). This could benefit the Mexican economy (and hence construction sector) even further but lead to a higher-cost environment generally. This may be especially so if a Trump Election win sees his pledge of increased tariffs instigated.

China

- That the Chinese economy has underperformed since foregoing its COVID Zero policy in late 2022 is now widely known. Less well known, however, is the pivot which has taken place through 2023 by the Chinese Government; away from real estate development and towards renewable energy investment.
- This has seen costs of renewable energy equipment and inputs fall considerably, providing a reminder of the strength of Chinese industry in its ability to export lower costs for building materials and equipment.

Ontario Line, Ontario Canada



METHODOLOGY

CONSTRUCTION COST ESCALATION IN THIS DOCUMENT IS BASED UPON THE INPUT (TENDER) COST APPROACH BY CITY FROM A VARIETY OF TRUSTED SOURCES

While our view is based on a variety of sources (including 'on-the-ground' insight from all WT offices), the approach used in this document draws upon the best escalation data sources for each city covered. For most US cities, this is the Building Cost Index (BCI) by Engineering News Record (ENR) but also contractor Mortenson's Construction Cost Index, the Hawaii Department of Business, Economic Development and Tourism. We also refer to the timeliest and most frequently updated public data series: construction employment (from the Bureau of Labor Statistics) and new building permits (from the US Census Bureau).

For Canada and Mexico, the main data source is the lead Government statistical body (Statistics Canada and INEGI respectively).

All data sources are based on the input (tender) cost approach, so as to align with the traditional QS approach. The construction cost escalation considered in this document is for building sectors (in this case, a combination of multifamily (residential) and non-residential construction). However, the impact of significant developments in adjacent construction sectors (single family residential and civil infrastructure) has been considered where relevant.

Points to note:

- All escalation shown is on a calendar year basis and is the % change between the full-year average vs. the previous year's full-year average.
- Escalation contribution by input is on a general, country-wide basis, while city figures are general across sub-sectors, project types and project value ranges (which typically align with tiers of contractors).
- In addition, escalation contribution by input assumes no other major drivers of escalation (e.g., large productivity increases, significant regulation changes re: approvals ('red tape')).

For more information on escalation relative to your project or sub-sector, please discuss with your usual contact or call your local WT office.

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Footnote References

- 1 Bureau of Economic Analysis, Statistics Canada, Instituto Nacional de
 Estadistica, Geografia and Informática (INEGI), International Monetary Fund,
 Department of Finance Canada, Federal Reserve Economic Data (FRED) and WT.
 2 US Census Bureau, Turner Construction, Statistics Canada, INEGI and WT.
 3 and 9 Bureau of Labor Statistics, Statistics Canada, International Labor
 Organisation and WT.
- 4,5,6 and 7 Bureau of Labor Statistics, Statistics Canada, INEGI and WT. 8 – New York Stock Exchange, Bank of Canada, Bank of Mexico, Reserve Bank of Australia and WT.

WT IS AN AWARD-WINNING INTERNATIONAL CONSULTANCY FIRM WHO SUPPORTS CLIENTS ACROSS THE INFRASTRUCTURE INVESTMENT, BUILDING, CONSTRUCTION AND ASSET MANAGEMENT SECTORS.

WT was founded in Australia back in 1949 and has been a force in North America since 2010. A trusted advisor to Owners, Developers, Government and Private sector clients, WT currently manages billions of dollars of active mega projects across North America.

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