

## The Icarus effect

### Overheated construction markets?

In a word, yes. The construction cost increases prevailing across most of the CEE region over the last 4 years and accelerating in 2018 have fed into expectations of higher selling prices. Yet the economic boom has encouraged many developers to activate projects, meaning that office development as a proportion of total stock is at cycle highs, in the 10%-21% range in the CEE-6 capital cities. It is 10%-28% in the Polish regional cities and at a peak in the industrial sector as well. Can the CEE construction sector soar ever upwards or, like Icarus in the Greek myth, will the wax melt on its wings and it crashes to its peril?

### Demand to return to Earth

Customer demand ranks as the most important factor for developers to consider in the opinion of Colliers' Valuation experts in the region. But unfortunately the peak momentum of economic growth in CEE may have occurred already and thus construction new orders sentiment may deteriorate moderately from the present record levels in 2019-20.

### Low labour supply melts the wings

The previous boom & bust cycle in CEE saw wage inflation and labour shortages that grew in 2006-07 derail demand in 2007-08 even before the Global Financial Crisis triggered a collapse.

The end 2018 wage growth and labour shortage situation dwarfs that of 2006-07, both in CEE and in the EU as a whole. Nearly two-thirds of surveyed Hungarian construction companies are facing shortages limiting growth, for example. When wages have risen by a quarter or by up to half in less than 3 years, profitability comes under pressure. And even worse that low unemployment rates mean those wage hikes are not enough to secure workers.

Development costs for typical office projects in the capital city CBDs rose c.5%-17% over the last 12 months. It looks like 2019 is another year of wage hikes in the CEE-6, with our estimates of national wage rises in the 5%-10% year-on-year, cross-sector minimum wages increasing 7%-10% and outliers like Romania's just-announced stunning 58% year-on-year minimum wage hike for construction workers. So, development costs may well go higher, in the face of slowly melting demand.

### Hotspots or havens

Hungary appears to have the most severe labour and materials cost worries presently and we believe general contractors have put their execution prices up substantially. Romania's minimum wage move indicates real strain on construction labour supply. Slovakia's demand may be cooling faster than its peers whilst Czech economic growth peaked earlier, in 2017, than the rest of the region. Bulgaria appears to have the least supply-side worries presently, whilst Poland's larger and more liquid construction market may help it weather any incipient downturn.

# How hot is the sun?

## A strong CEE development boom...

Construction market cycles do not die of old age. They are brought to an end by a surplus of supply of constructed buildings relative to the demand for those assets. And very often, the hikes in development costs and thus the price of those buildings is the thing that chokes off that demand. Where are we in the CEE development cycle? One approach to answer this question is to compare the sqm of buildings under active construction versus the size of the market. We lack in CEE-6, in office or industrial, the benchmark of a previous development cycle with a full stock profile: the 2007-08 cycle peaks in western European capital city office markets were at 4%-5% active construction versus sqm of stock. In the CEE-6, the cycle troughs in 2011-15 were barely below these levels.

The cyclical upswing from these troughs is most evident in Budapest, Bucharest, Sofia and Bratislava. The ratio of active construction to stock has doubled from the cyclical low in all these cities; in Budapest's case, the present ratio of 14% is a multiple of 2011-12's nadir of 1%. The 10% level in Prague is presently close to a cycle high but has followed an erratic path since 2013. Warsaw's office sector, similarly to the regional cities in Poland, has a high and persistent delivery of new stock in this cycle: the Q3 2018 ratio of 14% is within the range of the other 7 largest Polish cities (10%-28%).

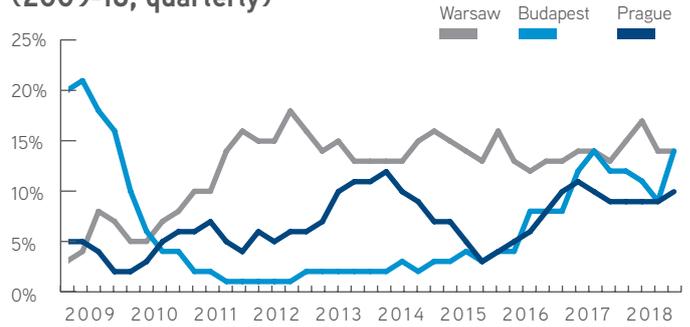
Our own data for active construction and stock in the industrial arena paints a similar picture, with all 6 CEE capital cities rising off lows of 0%-2% in 2013 to 5%-6% in Warsaw, Prague and Budapest in Q2 2018 and much higher in the other capitals. Some of the less liquid 8 major Polish regional markets, especially Katowice and Lodz also exhibit some cyclicity.

## ...reflected in construction optimism

Backing our fundamental data are the EU's ESI data series collected monthly assessing sentiment in the construction (civil, commercial and residential together) industry across Europe. Overall sentiment across the CEE-6 climbed from lows in the 2010-2014 period (Nov 2012 was a particularly dark month) reaching fresh cycle highs in Dec 2018 in Poland, Czech Rep. and Romania.

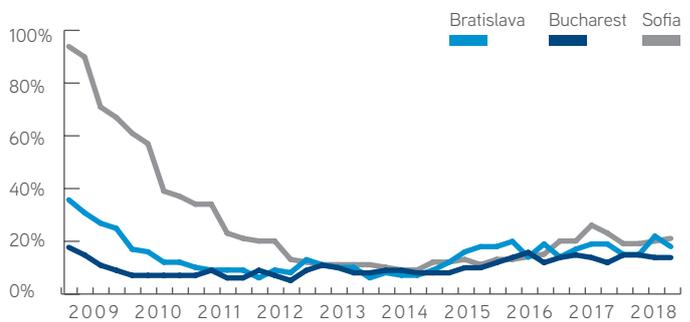
It is possible that the CEE-6 construction markets "do a Germany" and breach these current highs in coming years. Germany's construction industry barely registered the 2008-09 recession phase. Certainly, overall economic sentiment is reasonably solid, still near cycle highs, in the CEE-6 countries presently, suggesting that demand for product in the office and industrial sectors can sustain. We believe weaker demand may by itself likely trigger a mild pullback but it may be supply-side factors that are applying more heat to the construction story right now.

**Fig.1: Office sector space under active construction as % of stock in Warsaw/Prague/Budapest (2009-18, quarterly)**



Source: Colliers International

**Fig.2: Office sector space under active construction as % of stock in Bratislava/Bucharest/Sofia (2009-18, quarterly)**



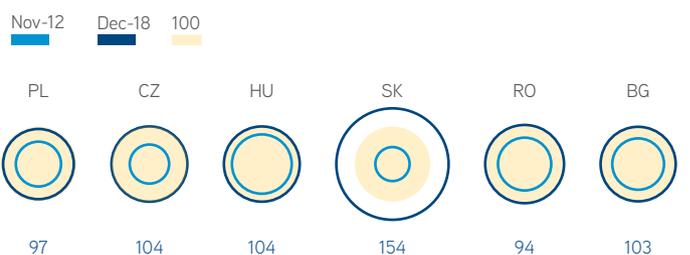
Source: Colliers International

**Fig.3: EU ESI construction sentiment, monthly 2001-18 (rebased to Jan 2001 = 100)**



Source: Eurostat, Colliers International

**Fig.4: EU ESI construction sentiment in the CEE-6 countries, Nov 2012 and Dec 2018 (rebased to Jan 2007 = 100)**



Source: Eurostat, Colliers International

# Judging the flight of Icarus

## Supply or demand most important?

We asked our CEE Valuations experts their opinion on what factors matter to commercial real estate developers right now. These factors should dictate where the region's construction cycle might go in the short to medium term. The ranking results are our own, thus are subjective and might be different from the perceptions of some industry participants. But nevertheless, our experts' rankings, attained independently of each other, suggests the presence of some region-wide patterns. We asked the experts to rank 10 factors in order of importance.

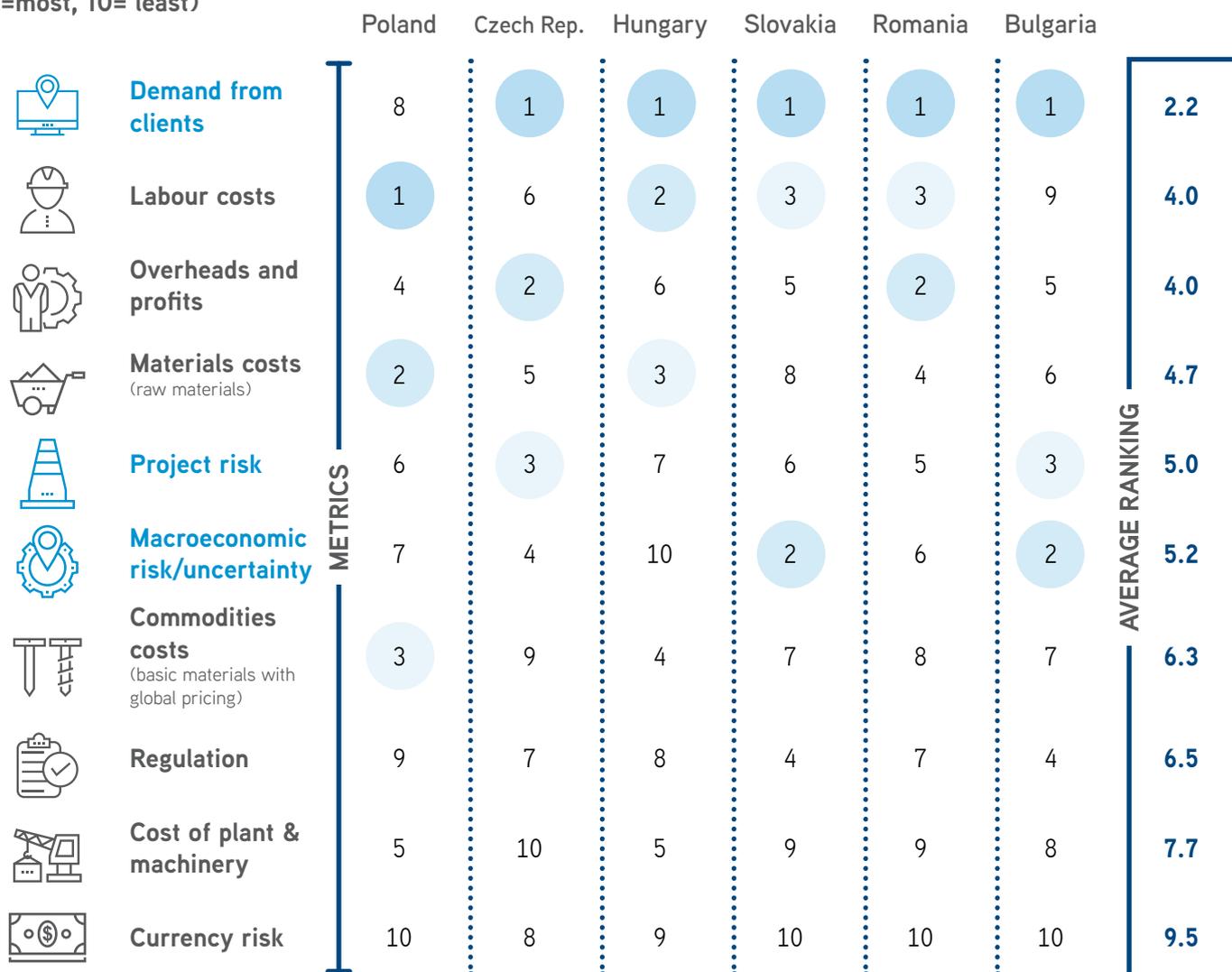
Demand from clients came out on top everywhere except in Poland. Starting projects with the security of potential tenants lined up appears still critical in the other CEE-5, even in this boom phase. Why the Polish exception? One explanation may be

the persistent and steady supply of new development build in the Polish cities we have already referred to. We perceive that developers, in the more liquid office marketplace, may be more confident of building "on spec". Even in the industrial sector, the sqm under active construction as a proportion of industrial stock in Warsaw (6%) and across the 8 Polish regional cities (average of 13%) exceeds that of Prague and Budapest (both 5%) presently. Liquidity may be engendering confidence; or complacency if a downturn strikes.

The other demand-side factors, project risk and macroeconomic risk/uncertainty came out with middling rankings overall. The importance of project risk was most apparent in Bulgaria (rank 3) which also ranked macroeconomic risk/uncertainty in the top 3 places. The Lev peg to the Euro mitigates Bulgaria's currency risk. The ranking of macroeconomic risk was also higher in Slovakia compared to the other countries.

Amongst the supply side factors, it is clear that labour costs matter, ranking in the top 3 in all the markets except for Bulgaria and the Czech Rep. Raw materials costs also rank at 4 or higher in 4 of the 6 CEE countries. Overheads as a factor also had a reasonably high and consistent ranking. Regulation, cost of plant & machinery and most prominently currency risk were deemed less important by our experts.

**Fig.5: Ranking of factors in order of importance to commercial real estate developers (1=most, 10= least)**



Key: blue = demand-side factor, grey= supply side factor  
Source: Colliers International

# The Achilles Heel

## Economic sentiment has turned?

If demand from clients, future tenants, is a key driver for developers to consider across CEE-6 real estate, what might predict it? We observe that the EU ESI total economy sentiment data released monthly across the CEE-6 appears to have good predictive power of CEE-6 EU ESI construction new orders data series with a lead of 6 months. Every downturn of sentiment lasting more than 3 months since 2007 has predicted a softening of construction new orders sentiment 6 months later.

Overall economic sentiment peaked in the CEE-6 in February 2018, coinciding with the recent top in construction new orders sentiment in August 2018. The latter has since stayed close to that top but the overall economic sentiment has tracked downwards every month since February. It is thus pointing to a mild deterioration in construction new orders sentiment in the next 6 months.

Within the CEE-6, whole economy sentiment peaked in Poland and Slovakia also in February 2018. Bulgaria and the Czech Republic saw their tops in April, Romania's was some time before in November 2017 and Slovakia's later, in July 2018. Economic sentiment in the CEE-6, even with the fall since February, remains at historically elevated levels, so not predicting a recession as yet.

But will the falls continue? The deteriorations in sentiment are mostly export-led and correlated to the economic/export slowdown in the Eurozone. January's European latest Purchasing Manager Index data suggest that this slowdown is not abating. And ahead for CEE-6 and Europe in 2019 are Brexit and potential trade issues with the US. Brexit itself may also lead to lower investment in the CEE-6 via the EU's Structural Funds programme from 2020 onwards, affecting civil engineering construction.

More familiar measures of tenant demand are vacancy rates: These remain at or close to cyclical lows across the CEE office and industrial sectors. But these are not necessarily leading indicators, often exhibiting a time-lagged relationship when compared to economic sentiment data series or GDP growth.

**Fig. 6: CEE-6 ESI construction vs. CEE-6 ESI overall economic sentiment (6 mth lag, rhs scale)**



Source: Eurostat, Colliers International

# Soaring too high

## Construction prices have jumped

It is evident to us from many discussions with clients over the past few years that construction prices for commercial real estate in the CEE-6 have jumped. Actual measurement of like-for-like change in development costs over time within the commercial real estate universe is not easy, as every land plot within a city or beside a transport corridor will have different characteristics such as zoning, permitting, clearance, encumbrances and provision of utilities. Indices of changes do not exist.

Purely as examples, the change in GLA development costs for a typical 15,000 sqm office space located in the capital city's CBD is, according to our Valuations experts, ranged between c.5% and c.17% over the past year in the CEE-6 region. Locations in Budapest (10%-15% up) and Bucharest (11%-17% higher) have seen the more significant pricing pressures through 2018.

**Tab. 1: Development costs of GLA for typical capital city CBD 15,000 sqm office space, 1-year growth rate to Q4 2018**

Warsaw	Prague	Budapest *	Bratislava	Bucharest	Sofia
10%	10%	10%-15%	8%	11%-17%	up to 5%

\* Budapest data is for Váci Corridor  
Source: Colliers International

What was interesting is that much of the input land price cost inflation appears, outside of Budapest, to have tailed off in 2018, compared to the strong growth rates we believe have occurred annually over the past few years. The approximate 1-year land price rise in the Váci Corridor in Hungary's capital is between 13%-17% versus almost no increases elsewhere, excepting Sofia. Land prices in the Váci Corridor are probably up in the range of 14%-21% per annum or 50%-75% in absolute terms compared to 3 years ago.

Bucharest (8%-26% annually) and Prague's CBDs (14%-23% annually) saw rises of a similar magnitude over the past 3 years, with the jumps occurring in the 2016-17 period. Might slowing land cost be a leading indicator for development costs eventually topping out?

**Tab. 2: Buildable area land price growth in CBD, [a] 1-yr growth rate and [b] recent years' annual growth rates to Q4 2018**

	Warsaw	Prague	Budapest *	Bratislava	Bucharest	Sofia
[a]	0%	0%	13%-17%	0%	0%	0%-5%
[b]	2%-5%	14%-23%	14%-21%	8%-14%	8%-26%	4%-8%

\* Budapest data is for Váci Corridor  
Source: Colliers International

Returning to the EU ESI data source, the three-month prospective expectation of prices charged for construction services (across the economies, so including infrastructure and residential construction, on top of commercial) provides additional evidence of these costs rising. The Polish, Czech and Hungarian data sets sit at cycle highs, with the data series for all three countries rising from 2013 lows. Pricing expectations in Poland and the Czech Republic have plateaued somewhat in the past few months, interestingly. It is Hungary where pricing is still powering higher. Our Valuations experts in Budapest point out that the proportion of a building's contract value that a general contractor is demanding and receiving as an execution fee for both office and industrial projects has risen to 20% to 30% from around 10% a year ago.

The prospective pricing expectations have ground higher from its 2009 trough only slowly in Bulgaria, correlating with those demand side risks discussed above being more prominent in that marketplace. In Romania and Slovakia, the EU ESI construction pricing data suggest that we are past the peak of pricing expectations in both economies. Expectations of price increases are still present in both countries but amongst less surveyed companies than before.

Factor modelling we conducted suggests fewer companies will see higher pricing over the next 3 months in Slovakia, with the rest of the countries' trends flat-lining to the end of Q1 2019.

## Supply side factors defying gravity

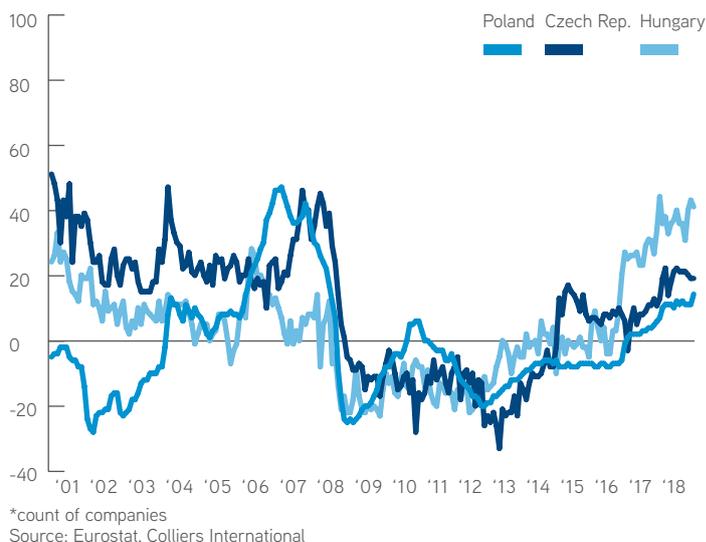
What factors have driven these pricing expectations upwards in the CEE-6? The trends over the last 4 years or so for the CEE-6 in the Eurostat's quarterly ESI surveys of the construction sector are reasonably clear. They also confirm the opinions of our Valuations experts discussed above.

Labour shortage is now the most important single constraint across the region. Financial constraints, which encompasses project risk, currency risk, debt interest costs and wage/margin pressures remains the second-most important constraint but with only moderate cyclical variation in recent years. A more profound variation is the considerable drop-off of the demand constraint score to post new 2001 lows, which is not a surprise at this point in time. The rise in the material & equipment shortages constraint is almost entirely that observed in Hungary, dwarfing a very moderate uptick in Poland.

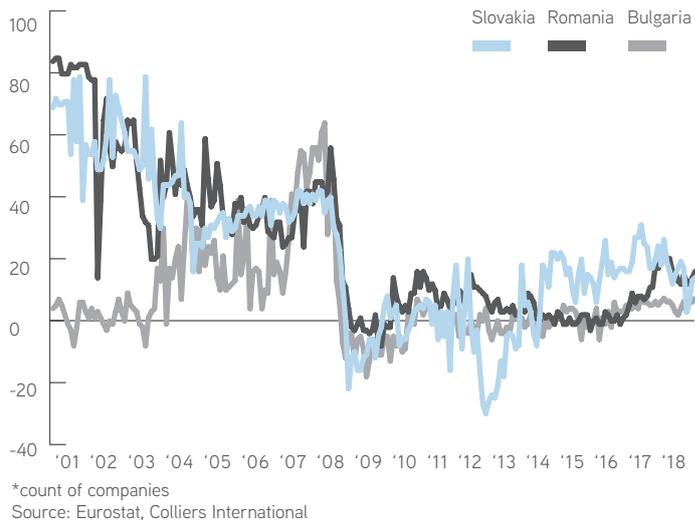
Low unemployment rate levels are a major concurrent signal of the labour shortages. The Czech Republic's 2.2% in October 2018 remains the lowest in the EU. As unemployment rates have compressed (see map and Figure 11), there is an increasing reliance on immigration to fill the gaps on the construction sites. There is certainly a sense that these countries are all competing with each other for labour. The UK's Sky News suggested in April 2018 that Poland's shortfall was 100,000 construction workers and that immigration was the likely method of finding them. We studied these employment issues and possible solutions in more detail in our July 2018 research titled "Labour Force Riddle".

Wages in the construction sector across the region have leapt since 2015, according to Eurostat data. Excluding the tax code-influenced near-doubling of gross wages in Romania, it is Hungary (149 level versus 100 in 2015), Poland (129) and Slovakia (126) which have seen the big jumps.

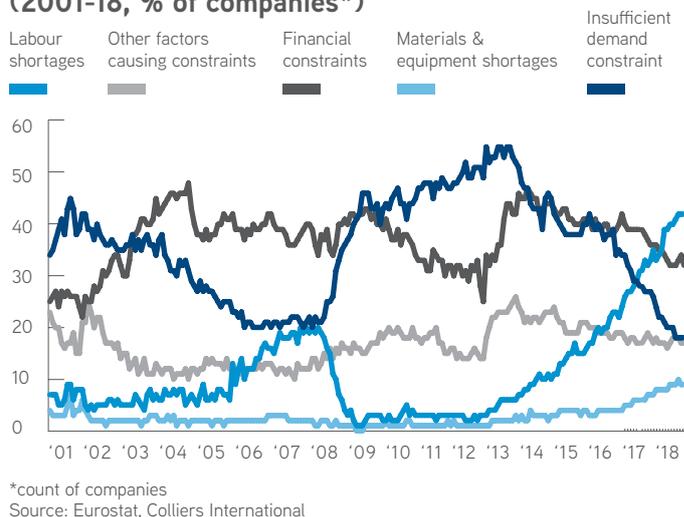
**Fig. 7: Companies' pricing expectations\* (net up/down) over next 3 months in construction sector in PL, CZ, HU (2001-18)**



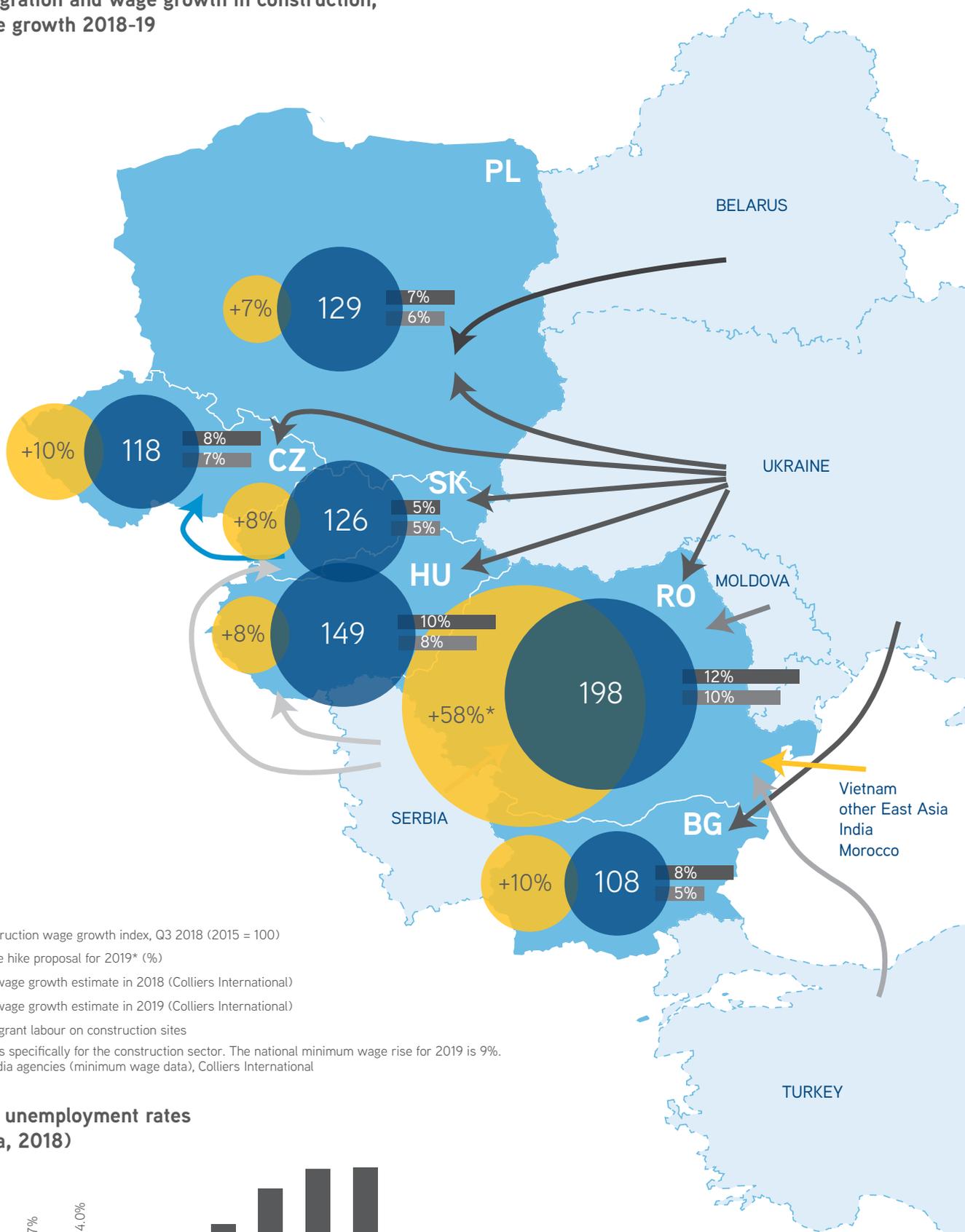
**Fig. 8: Companies' pricing expectations\* (net up/down) over next 3 months in construction sector in SVK, RO, BG (2001-18)**



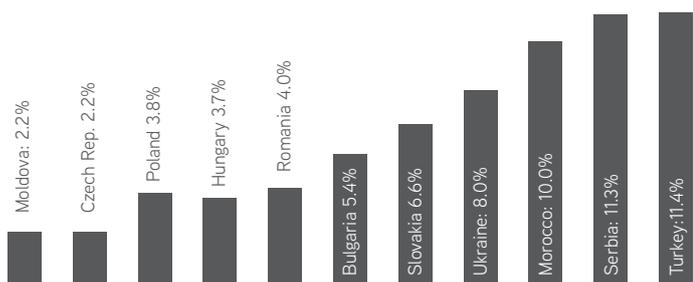
**Fig. 9: CEE-6 average scoring of factors causing constraints on construction sector growth (2001-18, % of companies\*)**



**Fig. 10: Immigration and wage growth in construction, national wage growth 2018-19**



**Fig.11: Latest unemployment rates (monthly data, 2018)**



Source: Eurostat, TradingEconomics.com

# Labour force hubris

## Pay hikes sustaining into 2019

Even given the economic slowdown unfolding across Europe and potentially in the CEE-6, wage pressures look likely to sustain into 2019 in the region. National minimum wage recommendations being enshrined into law now are for hikes of between 7%-10% this year (see map). These levels are an anchor for the expectations of the most unskilled workers on a construction site.

The situation in Romania is much more serious and specific. Construction unions lobbied for a much larger wage rise, to combat what they see as chronic labour shortages in the sector. Construction companies have perhaps felt the pinch, with delays to completions. As a result, the minimum wage for workers on a construction site in Romania has just been hiked from 1 January to RON 3,000/month, from RON 1,900/month, up 58%. The average gross wage on sites was in the RON 3,400 range in November 2018, according to national statistical data but a set floor of RON 3,000 will certainly be inflationary. Romania's developers may well face a test of profitability in 2019 and could reduce activity as a result.

Across the economic spectrum, we see a moderation of national average wage growth rates in 2019 versus 2018's stellar levels, but with the range in the region of 5% (Slovakia/Bulgaria) to 10% (Romania).

## Wage pressures predict a downturn

Can CEE avoid a construction market downturn? Last time around, wage inflation and labour shortages (Figures 7, 8, 9 and 12) in 2006-07 were a harbinger of the construction market pullback in the aftermath of the Great Financial Crisis in both the CEE-6 and the rest of the EU. Figures 3 and 6 show the plunge in overall sentiment and the collapse in new orders in 2008-09. The situation in Germany also illustrates this causality as that construction market saw no labour shortages or wage pressures of note in the 2006-07 period and subsequently evaded a collapse in general sentiment. German current orders sentiment was steady through 2008-09.

The linkage between labour shortages, wage rises and a turndown in the construction cycle, if the conventional economics textbooks are to be believed, is that of strong demand pushing up the cost of labour. That higher cost of labour discourages the marginal developer from executing a project. And so the current order book deteriorates. The peak of the current order book sentiment in the last cycle was in March 2008 in Poland, the Czech Republic and Romania. It was earlier in Slovakia and Bulgaria (August and October 2007) whilst Hungary's peak was much before that, in July 2006. From each of these dates, the current construction order book was deteriorating across these economies. But Q3 2007-Q1 2008 was still a time of economic boom in the CEE-6: but it was the also time of the peaking of the labour shortage and wage pressures. Thus, these supply-side pressures triggered the downturn of activity, even before the full force of the Global Financial Crisis turned that downturn into a collapse.

Today's cycle does not look dissimilar to that 2007-08 period. The EU ESI construction labour force shortage sentiment level dwarfs that of 2008 in the CEE-6, as well as in the EU and Germany. The hubris of the cycle may have taken the flight of Icarus too close to the sun. Within the region, the data are at new cyclical highs in

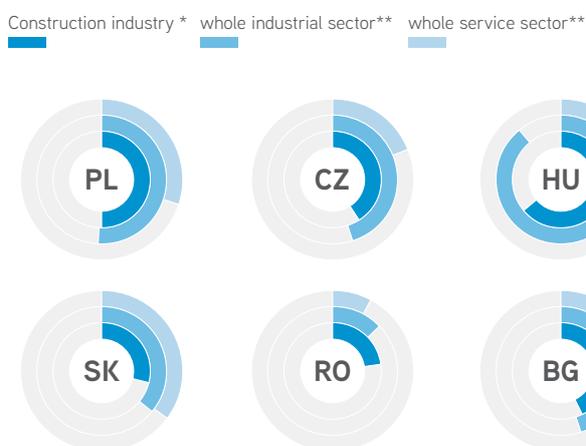
December 2018 in Hungary and the Czech Republic and remain close to highs hit since May 2018 in the other four countries. The CEE-6 construction current orders sentiment is still rising in Bulgaria and the Czech Republic, at highs in December 2018 but has thus far peaked out in Slovakia (clearly in April), Poland (in May), Romania and Hungary (both in November). As illustrated on Figure 6, demand may well turn downwards very soon.

**Fig.12: % of CEE-6, German and EU construction companies with labour force shortages, 2001-18 (monthly, Eurostat)**



Source: Eurostat, Colliers International

**Fig.13: % of companies reporting labour shortages preventing them from expanding operations (Q4 2018)**



\*Dec 2018 data. \*\* Q4 2018 data  
Source: Eurostat, Colliers International

Is the labour shortage situation worse in construction than across the economies in general? Not compared to the industrial sector. So this phenomenon might act to slow the whole industrial sector as well. And drag employees away from construction. Fully 71% of Hungarian construction companies are reporting shortages that are preventing them from increasing their activities. But the ratio for the industrial sector is still higher. Ratios are lower elsewhere versus Hungary's extreme statistics but even the lowest, Romania's, is at 22% double the shortage seen presently in the industrial sector across the economy and virtually triple that of the country's service sector. In summary, the CEE labour shortage issue does not look as if it will go away easily in 2019.

## AUTHOR:

Mark Robinson  
CEE Research Specialist | Research  
+420 226 537 646  
mark.robinson@colliers.com

## BUSINESS CONTACT:

Luke Dawson  
Managing Director & Head of Capital Markets | CEE  
+420 739 571 597  
luke.dawson@colliers.com

## CONTRIBUTOR:

Lucie Hanus Schwabova | Marketing Manager | CEE  
+420 731 576 827  
lucie.schwabova@colliers.com

Juliane Priesemeister  
Information Designer | EMEA  
+31 620 24 17 10  
juliane.priesemeister@colliers.com

Colliers International | Prague  
Slovansky Dum, Building B/C  
Na Prikope 859/22  
110 00 Prague 1 | Czech Republic  
+420 226 537 618

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