

2017



CEE INVESTMENT REPORT

From Phenomenon to Fundamentals

Report by:

SKANSKA

大成 DENTONS

JLL®

In partnership with:

ABSL

Fitch Ratings

INTRODUCTION

The CEE Investment Report 2017 From Phenomenon to Fundamentals is a short analysis of the region's potential as an investment location, broken down by chosen countries – Poland, the Czech Republic, Romania, Hungary and Slovakia.

In this report we demonstrate how Central and Eastern Europe (CEE)'s countries are gradually moving closer to being stable, developed economies. This process is especially visible in business services and the office market, which both constitute a virtuous circle of investment and growth. The cycle has moved from the initial stage at the beginning of the 21st century, when modern office space and modern business services were a new phenomenon on the economic landscape, to a stage where they each constitute a fundamental of the region's economies.

This short guide on investing in CEE is presented by Skanska, JLL and Dentons in partnership with the Association of Business Service Leaders (ABSL). The author partners have each brought their knowledge to the joint enterprise of preparing

this report. Skanska, one of the world's leading construction and development companies, is the top constructor and vendor of office buildings in CEE. JLL is the world's leading real estate consulting company. Dentons is the world's largest law firm, with a team of more than 1,300 dedicated real estate lawyers across the globe. ABSL is the biggest organization in the region associating investors from the business services sector – a significant driver of growth in CEE economies.

Special thanks to Fitch Ratings for providing analysis of CEE's opportunities and risks.

PropertyEU is the media partner for the report.

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ABOUT CEE – KEY FACTS

4%
AVERAGE GDP
GROWTH IN 2017
– the fastest in the EU



68%
GDP PER WORKER
as a percentage
of Germany's level



0.5m
PEOPLE WORKING
in modern business
services in 2017



0.7 m
FORECAST FOR
EMPLOYMENT
in modern business
services in 2020



10%
INVESTMENT
GROWTH
in real estate in the
first half of 2017



22 m sqm
MODERN OFFICE
SPACE growing
by ca. 1m per year



PARTNER STATEMENTS

CEE is the fastest growing region in the EU, with the pace of growth double the average for the 28 member countries. Modern office space in CEE is increasing by ca.



1 million sqm per year, with high-quality, sustainable and future-proof buildings. An important driver of office market growth is business services centers, which employ more than 0.5 million people and expand at double-digit rates, having great potential for further development, with over 1.2 million talented graduates entering the market each year. The region is not only dynamic, but also stable, transparent and predictable. It is gradually moving from being an emerging market to a developed one.

Katarzyna Zawodna

PRESIDENT,
SKANSKA CDE

Over the past decade, the CEE region has become a favorite destination for foreign direct investment – particularly in the business services sector. Investment focus has



moved from back-office to middle-office operations centers and on providing complex, value focused work. Poland's stable economy, business friendly environment, strong talent, and organizations like ABSL continue to encourage global corporations to open up their centers in the country, which already is a top player both in Europe and globally for this sector.

Jacek Levernes

PRESIDENT, ABSL

CEE now offers ca. 22 million sqm of high quality office stock, with almost 3.5 million sqm under construction and due for delivery within the next 2-3 years. Most of it is leased at rents much lower than those in Western Europe. The low rental levels combined with yields meaningfully higher than the ones in Western Europe produce truly attractive capital values.

Tomasz Trzósło

MANAGING DIRECTOR,
POLAND, JLL

Furthermore, the product is in a significant proportion leased to international quality corporates. The CEE does therefore offer a depth of available purchase options for truly institutional quality product.



CEE is attracting investment thanks to a unique combination of three factors: qualified employees, cheaper workforce and lower rents (in comparison with Western Europe). This is why large companies from business services sectors are locating more and more of their operations in this region and financial investors push up the demand for real estate. These factors

Paweł Dębowksi

CHAIRMAN, REAL ESTATE
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will continue to attract investments, although their role will change. Due to the increasing advancement of services performed in the region, there will be a stronger demand for a competent workforce.



Fast growth and stability determine the investment climate in CEE

1



SILESIA BUSINESS PARK, KATOWICE, POLAND

A CEE'S ULTRA-COMPETITIVENESS

➤ Three crucial factors

The fundamentals for sustainable growth in CEE are strong. Poland and other countries in the region are ultra-competitive due to a combination of three factors: the high quality of human capital, low labor costs and full openness to trade and investment. Only a very serious shock such as an uncontrolled internal political conflict, unilateral withdrawal from the European Union (EU) or disintegration of the EU could undermine the region's strengths.

➤ Resilience to shocks

One of the key points that I put forward in my forthcoming book is that Poland and CEE's

remarkable economic performance after 1989 has been driven by the emergence of an inclusive society for the first time ever in the region's history. The newly emerged inclusive society based on western institutions, culture and a nascent middle-class is sufficiently deep for countries to be more resilient to shocks than in the past. In particular, the new middle class in the region seems to have come close to the tipping point in terms of its development and impact on the region. Entrepreneurs, managers, specialists, artists and independent professionals etc. constitute a force that has already helped CEE enter its Golden Age.

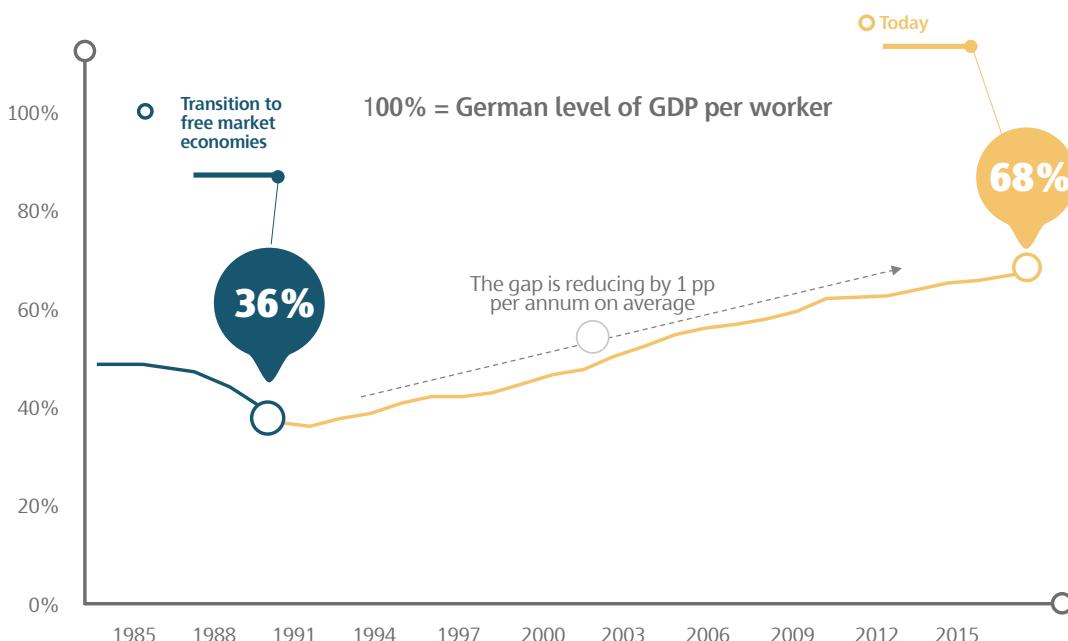


Marcin Piątkowski

VISITING SCHOLAR, HARVARD UNIVERSITY'S
CENTER FOR EUROPEAN STUDIES

FIGURE 1

CEE is gradually closing the productivity gap between it and western economies. As shown below, GDP per worker in CEE as a percentage of the German level is constantly rising. The gap between CEE and Germany has been closing by ca.1 percentage point a year on average. The process will continue.



Source: GGDC database, 2016; calculations are based on GDP data in purchasing power parity terms



► CEE as the fastest growing EU economy

Data and forecasts by major financial institutions indicate that the CEE economies collectively are and will remain the fastest growing region in the European Union. Average GDP growth in the first half of 2017 was above 4%, almost twice as fast as the EU average. The forecast by the International Monetary Fund (IMF)'s World Economic Outlook (April 2017 edition) for 2018 and IMF's long-term projections suggest that this trend will continue, albeit not as dynamically as this year.

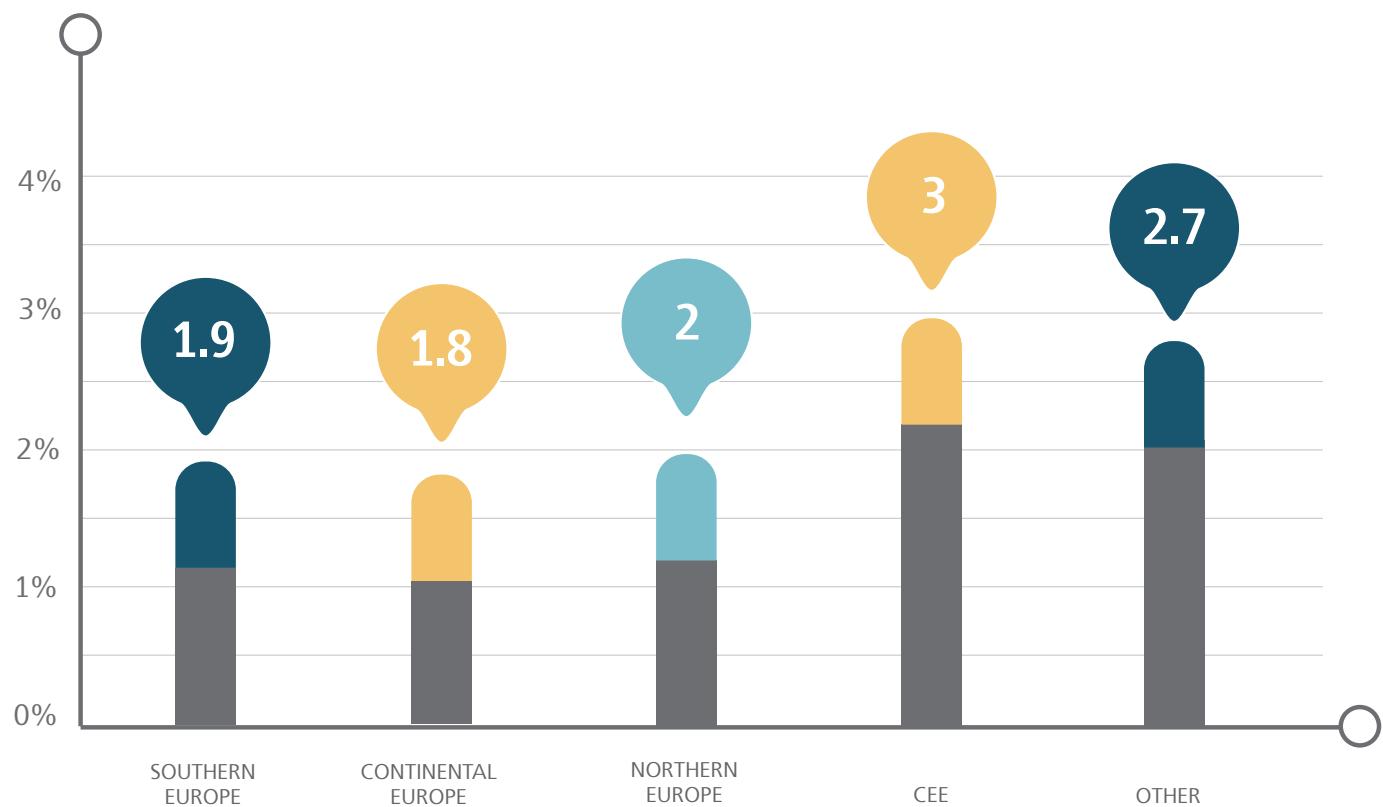
► Emerging or developed?



CEE economies are conventionally described as emerging economies, but this conventional classification conceals the fact that more institutions are ready to classify these countries as "developed". Companies producing financial indices, such as FTSE, Dow Jones and MSCI, treat CEE economies as emerging, mainly due to their relatively low GDP per capita and low liquidity of capital markets. However, some of them have started considering changing their classifications. The International Monetary Fund classifies the Czech Republic and Slovakia as developed economies and Hungary, Poland and Romania as developing. The World Bank, on the other hand, treats the Czech Republic, Hungary, Poland and Slovakia as high-income countries and Romania as an upper-middle income country.

FIGURE 2

CEE economies are projected to grow faster than the average for Western Europe between 2017 and 2022
Forecast of the average GDP growth between 2017 and 2022 by the International Monetary Fund.



Source: International Monetary Fund World Economic Outlook, April 2017



EXPERT VIEW: CEE IN 2025, THE CATCH-UP SHOULD CONTINUE



CEE in 2025 — how do you see the region?

P. H. Living standards in Central and Eastern Europe (CEE) will continue to converge with those in Western Europe, and by 2025 countries such as Poland and the Czech Republic will have GDP per capita levels at, or higher than the EU-27 average. In particular the economies that are part of the EU and receive structural support funds will catch up faster than those that are outside. The largest risk to the positive outlook is a political turn to populism and a departure from growth and investment-enhancing structural reforms.

M. P. Conditions for further catch-up are in place. But the key question is whether CEE can sustain the same pace. The textbook would tell us that the pace of convergence would decline as countries exhaust the easiest ways to boost growth and require more difficult reforms to generate more marginal improvements. We see some of that happening already. But CEE is better placed than other emerging markets (EMs), also facing a structural growth slowdown. The key advantage is CEE's high capital and trade integration with the rest of the EU.

What is the current attitude of financial investors to CEE?

P. H. Corporate investors remain very positive on CEE, expecting strong consumer demand growth in the coming years and strong productivity growth. Financial investors are for the time being a little more wary. Their main concerns are low yields and a rise in populism combined with strident nationalism.

M. P. Those investing in CEE bonds and equities see CEE as less risky than other EMs thanks to low inflation, low private debt, solid banks, and generally stable public finances. This makes CEE assets still attractive, despite rather low yields and already high prices. But financial investors are also sensitive to political developments, in particular any that may weaken fiscal stability or central bank independence.

What is the difference between CEE and other emerging markets?

P. H. CEE benefits tremendously from the proximity and access to the EU. Not only does the EU provide a market for exports, but it also sets a standard in terms of institutional strength. While legal and regulatory risks exist, some of the most egregious risks such as national expropriation are small, supporting investor confidence. The free movement of labor within the EU has drained Central and Eastern Europe of some of its workforce, but as living standards rise, the region will become increasingly attractive as a place to live and work.

M. P. Unlike many other EMs, CEE enjoys much lower levels of private or short term debt and is less sensitive to swings in the US dollar, rates, or risk sentiment. The other positive is CEE's reliance on manufacturing and services, and not commodities. This helps CEE economies avoid swings in growth, currencies, and inflation – so familiar to commodity producers – and offers diversification. It also makes it easier for CEE to shift to higher value-added goods or increase productivity with lower investment, as opposed to building competitive export industry from scratch.



Per Hammarlund

CHIEF EMERGING
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B TRANSPARENCY AND SAFETY IN DOING BUSINESS

► Stellar progress

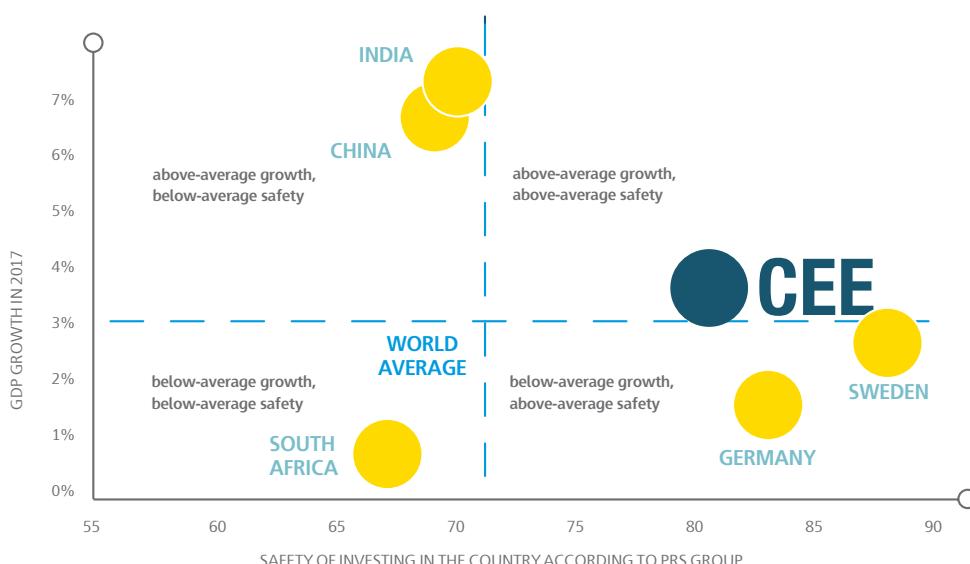
Conditions for doing business in CEE have improved substantially since accession to the EU. For example, in the World Bank's Doing Business report the average score of CEE economies has moved very close to western levels over the last seven years. Regulatory systems in the region have become more transparent and business-friendly.

► Romania as an example of reforms

As recently as 2007, Romania trailed behind China, India and South Africa in terms of perception of corruption, according to Transparency International. Since then, the country has made enormous progress and now it not only leads those three countries, but also has a better score than Italy and Greece.

FIGURE 4

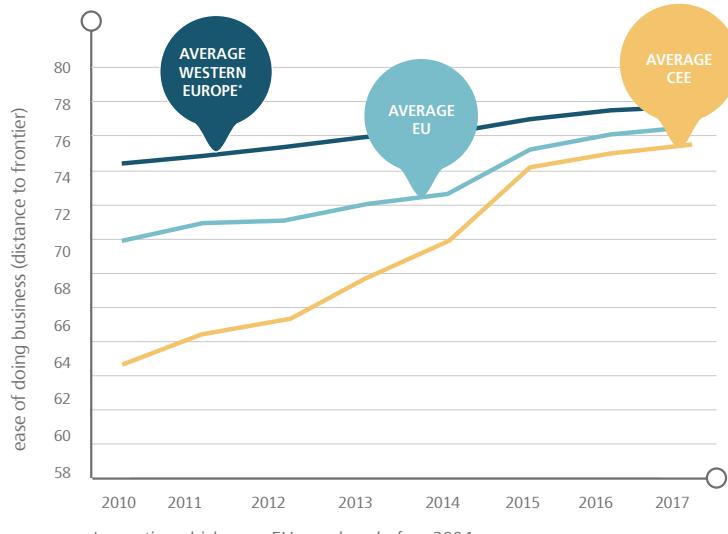
CEE offers a perfect combination of safety and growth. Each dot on the chart represents one country. The horizontal axis demonstrates the safety of investing according to the Regional Political Risk Index, compiled by PRS Group, which captures various kinds of risk in the medium and long term. The vertical axis demonstrates GDP growth forecasts for 2017 by the International Monetary Fund.



Source: IMF, 2017; PRS Group, 2017

FIGURE 3

The business climate in CEE is close to western standards
The World Bank Doing Business score (distance to frontier). CEE countries have made substantial improvements in their regulatory systems.



Source: World Bank Doing Business, 2017

➤ Macroeconomic stability safeguards investors

CEE economies demonstrate high stability. They have, on average, lower inflation, lower unemployment, the lower public and private debt ratios than the EU average.

➤ Lower risk of boom-bust cycles

Private sector debt levels in CEE are much lower than the average for emerging markets. Moreover, current account balances are on average close to zero. Thus, the risk of boom-bust cycles, which are usually the major threat to stability, is very low. This is a clear advantage in times when major central banks, such as the Federal Reserve or European central banks, will tighten monetary policy, making it more difficult for emerging markets to use foreign portfolio capital as a source of funding for investment.

FIGURE 5

Inflation / unemployment in CEE

Inflation in CEE is lower than the EU average and so is the unemployment rate (data for June 2017).

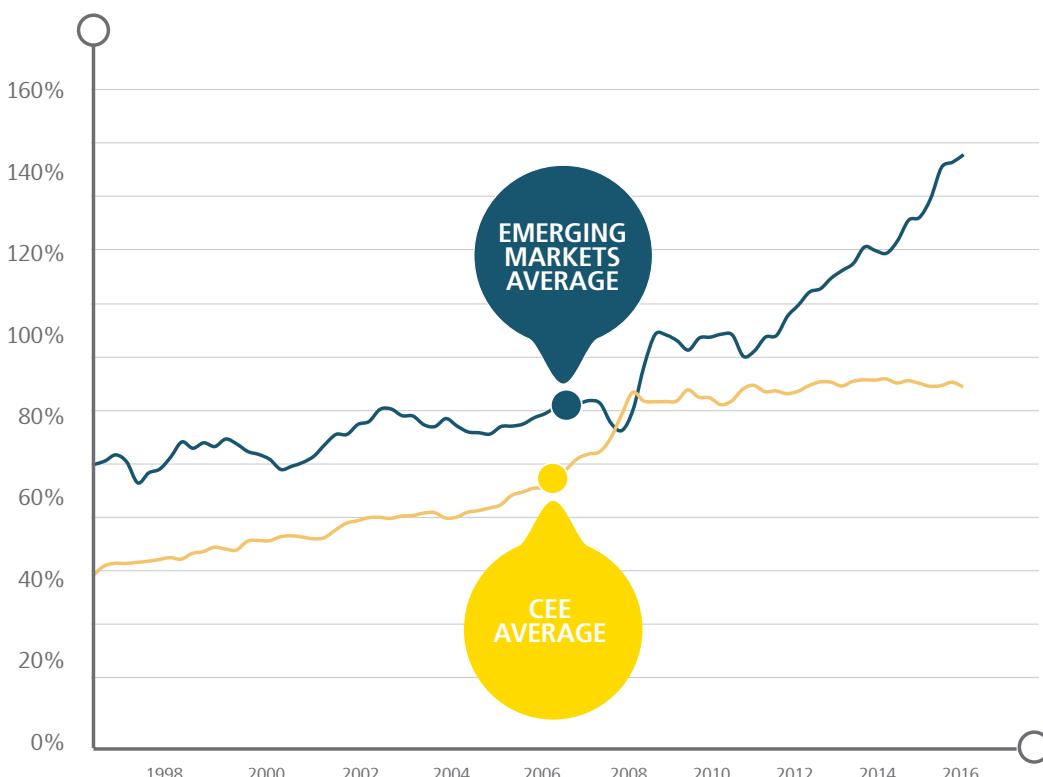


Source: Eurostat, 2017

FIGURE 6

Private non-financial debt relative to GDP in emerging markets

Debt is usually one of the major concerns of foreign investors in emerging markets. The CEE economies have managed to develop without debt bubbles, or at least have learned how to do so.



Source: Bank of International Settlements, 2017, CEE average includes Poland, Czech Republic and Hungary – the only CEE countries for which the BIS data are available



FITCH RATINGS' VIEW: OPPORTUNITIES AND RISKS FOR CEE

In the medium- to long-term, Fitch expects the CEE region to remain the fastest growing region in the EU, with real GDP growth between 2.5% and 3%. This healthy performance should reflect the region's stable macro environment, attractive business climate and economic integration within the EU. However, there are a number of risks that could dampen the outlook for growth.

EU funds

Countries in the CEE region have attracted a large share of EU structural funds to finance various investment projects. The departure of the UK, one of the biggest net contributors to the EU budget, could affect the discussion on the EU budget and reduce the country's allocations for the next EU financial perspective (2021-2027). This would be compounded by a potential move towards faster integration on the part of core members, which could leave behind some non-eurozone members in the CEE.

Some countries in the CEE are using the currently supportive macro conditions to tighten fiscal policy and build savings or reduce debt. This could help them to respond to potential lower EU funds in future, for example via an increase in domestically-funded government capital spending. Lower EU funds would also likely necessitate the use of new financial instruments to fund capital investment in the region.

Labor scarcity

Due to an ageing population, emigration to Western Europe and the current strong performance of the economy, companies in the CEE are increasingly reporting difficulties in hiring suitably skilled workers. This has been partly offset by labour inflows from non-EU neighbouring countries (e.g. Ukraine or Serbia). However, these inflows could dry up in future.

Increased labour force participation rates, which are still relatively low in the region relative to the rest of the EU, could support higher labour supply. The scarcity of labour might support faster growth in wages in the medium- to long-term.

Growth model

The economic model in the CEE has in part relied on attracting foreign investment from elsewhere in the EU. While this underpinned fast growth in the years around EU accession, this model might be reaching some of its limits, as FDI from Western Europe is lower than in the pre-global financial crisis era, while popular appetite for faster income convergence is unsated.

Faster income convergence in the long-term might ultimately rely on achieving higher growth in productivity. This is why policy makers in the region tend to emphasise the importance of education and innovation. This is, for example, one of the main rationales behind the multi-year development plan in Poland. The success of these policies is likely in part to depend on the ability to increase efficiency of government spending, raise domestic savings to provide additional funding and involve the local private sector in various investment projects.

Arnaud Louis | DIRECTOR – SOVEREIGN, FITCH RATINGS

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Warsaw, Poland

A glittering metropolis

Liveliness

According to Harper's Bazaar, in Warsaw "a week doesn't go by without a fashion design festival, an opening of an upscale cocktail bar in a pre-war apartment building or a glittering restaurant popping up to serve a reinterpretation of Polish cuisine". The magazine placed the city on its 2017 list of the best places in the world to travel to (1).

Safety

According to AT Kearney's Global Cities Outlook, Warsaw is a global leader in terms of stability and security (2). The Overseas Security Advisory Council (a US government agency) states on its website that "Polish national police statistics underscore that Poland continues to be one of the safest countries in Europe". Poland is also 130th, i.e. in last place, in the EU's ranking of countries by the risk of terrorism, on par with Singapore, Slovakia, Latvia and Lithuania, according to the Global Terrorism Index 2016 (3).



1. C.Goldberg, "The 17 Best Places To Travel in 2017", Harper's Bazaar, 5 January 2017
2. "Global Cities in 2016", AT Kearney, 2016
3. "Global Terrorism Index 2016", Institute of Economics and Peace, 2016



Source of data: Eurostat, 2016 (or latest data); the city is defined as NUTS3 (Nomenclature of Territorial Units for Statistics) region; students are defined according to ISCED classification; business services are defined broadly, in accordance with Eurostat classification.

Bucharest, Romania

An attractive place to live



Westernization

With the fastest growing economy in CEE, Romania is quickly closing the gap between it and its regional peers in terms of standard of living. Bucharest is becoming a western-style city, with a growing number of malls, restaurants and clubs.



Digitalization

"Today, people living in Bucharest, Romania have access to much faster internet than most of the US". These words of Bernie Sanders where meant to criticize the US's low public investment, but they drew attention to the fact that Bucharest has among the fastest broadband connections in the world and has digital infrastructure for start-ups among the most developed. The city is actively participating in the global digital revolution.



Source of data: Eurostat, 2016 (or latest data); the city is defined as NUTS3 (Nomenclature of Territorial Units for Statistics) region; students are defined according to ISCED classification; business services are defined broadly, in accordance with Eurostat classification.

How business services and office markets grow together

2



CORSO COURT, PRAGUE, CZECH REPUBLIC

A STRONG PILLARS OF OFFICE MARKET GROWTH IN CEE

Growth in the office market in CEE is based on three pillars, which can be demonstrated in the form of a pyramid. It has three elements.

» Fundamental process – economic growth

The most fundamental process is economic growth, which represents the pace at which CEE is converging with Western European standards. Not only does it mean that average incomes are moving closer to western levels, but – more importantly – it means that the structure of the economies in Central and Eastern Europe more closely resemble those in Western Europe.

» Corporate growth drives demand for professional services

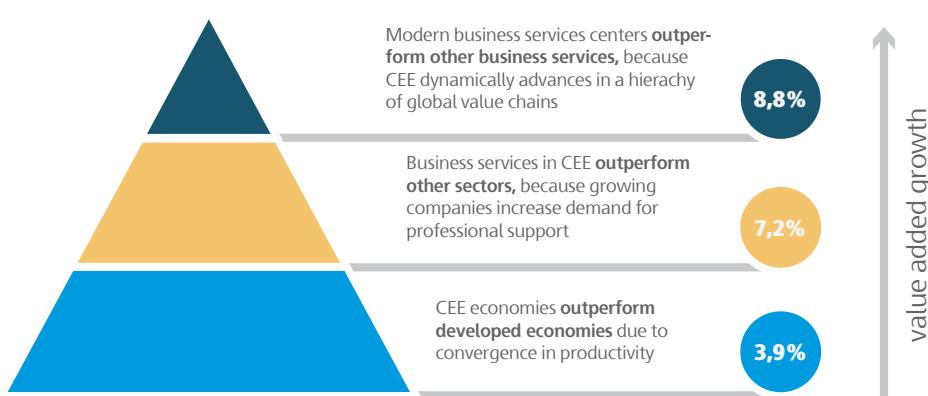
The second process is the increase in business services as a proportion of the economy. When companies grow, they increase their demand for professional services, such as law and tax advisory, consulting, IT systems, employment support and others. In advanced economies the share of such services in gross value added is much higher than in transition economies such as those in CEE. However, relative underdevelopment of the latter means that they experience higher growth rates.

» CEE's rise in global value chains

The third phenomenon which supports demand for office space is the growth in foreign business services centers, mainly business processing operations, shared services centers, IT and R&D centers. This process is driven by two forces: the development of international value chains, which consist of both manufacturing and business services, and the very attractive quality of the CEE workforce relative to its cost.

FIGURE 7

The processes driving office market growth. Each level of the pyramid represents a sector which grows faster than the previous level. Economic growth is a fundamental process. Business services grow faster than the economy, and modern business services grow faster than other business services.



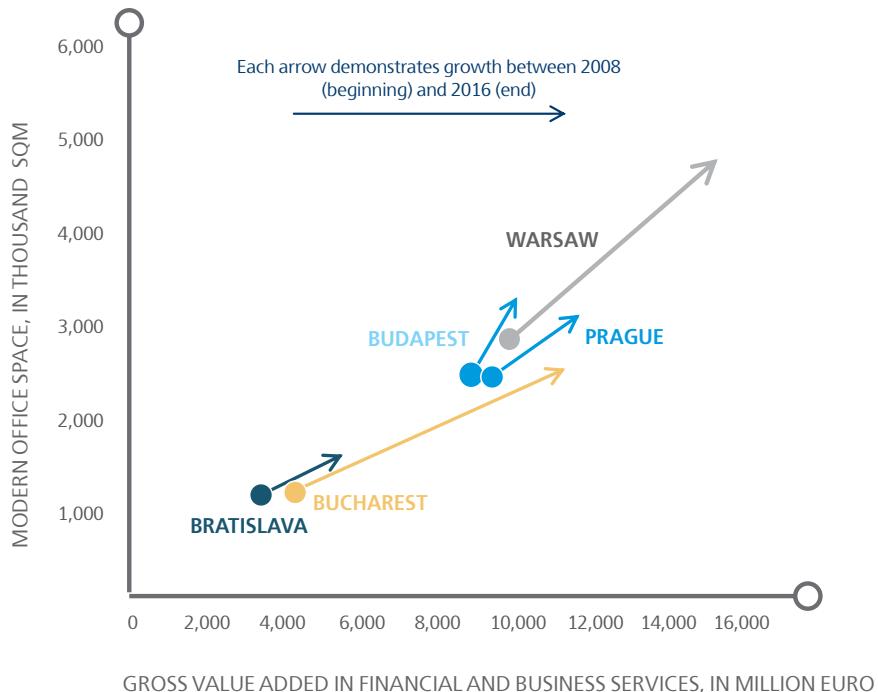
Source: Eurostat, 2015; value added growth calculated as a 5-year average



FIGURE 8

How office space and business services grew in CEE capitals between 2008 and 2016

Each dot represents value added in financial/business services (horizontal axis) and modern office space (vertical axis) for a given city.

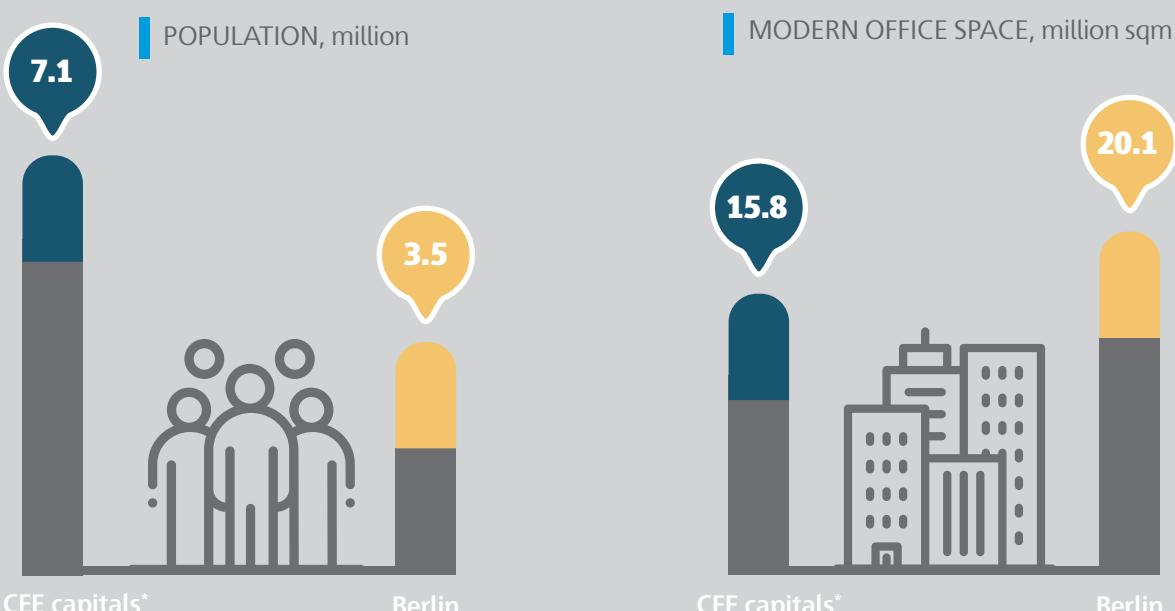


Source: Eurostat, 2016; JLL, 2016

FIGURE 9

CEE office space in perspective – comparison with Berlin

Although the combined population of the CEE capitals is twice that of Berlin, the amount of office space in CEE is much lower. This disparity will be gradually reduced through increased office construction in CEE.



Source: Eurostat, 2016; JLL, 2016

*Warsaw, Prague, Budapest, Bucharest and Bratislava

WHY BUSINESS SERVICES WILL GROW DYNAMICALLY IN CEE

FIGURE 10

The proportion of employment in selected business services sectors (as a percentage of total employment in the economy)

CEE still has room to converge with Western European levels, which it will do gradually. Therefore, these sectors will grow faster than the whole economy on average.

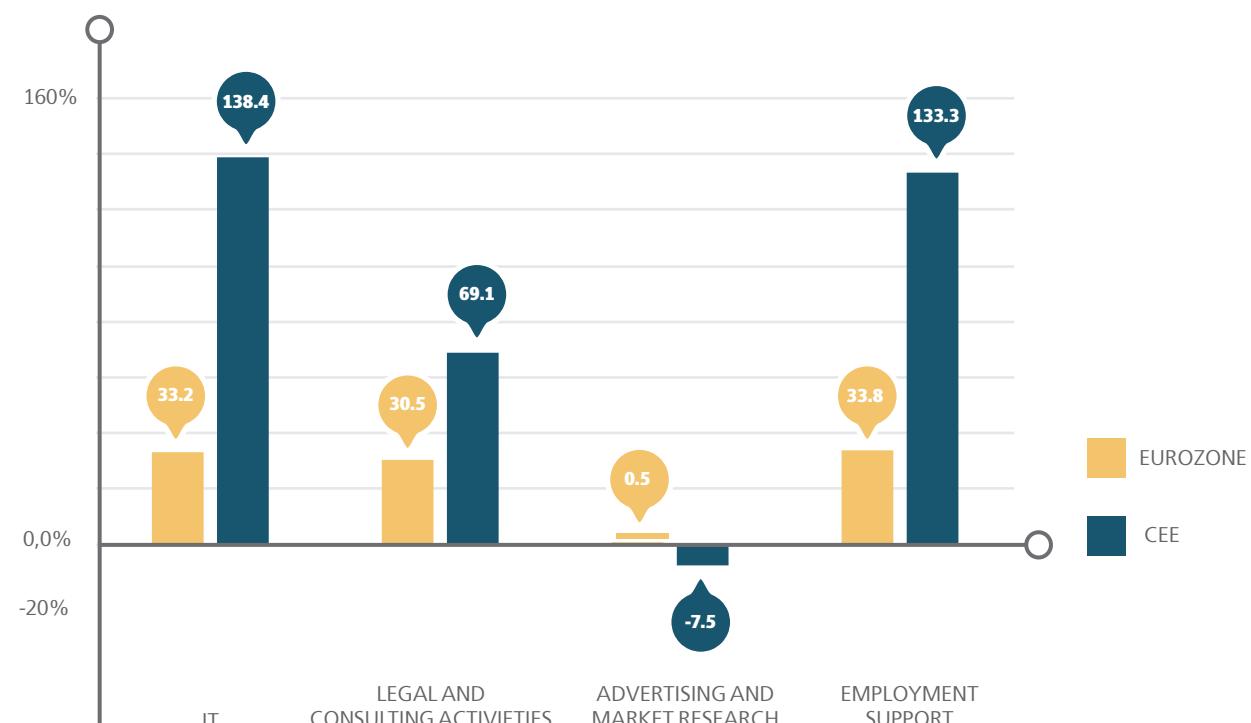
	IT	LEGAL AND CONSULTING ACTIVITIES	ADVERTISING AND MARKET RESEARCH	HR AND EMPLOYMENT SUPPORT
EUROZONE	1.6%	3.1%	0.6%	2.1%
CEE	1.1%	1.6%	0.4%	0.3%

Source: Eurostat, 2015

FIGURE 11

Employment growth over the last ten years in selected business services sectors

Most of these sectors are growing much faster in CEE than in Western Europe.



Source: Eurostat, 2015



➤ CEE is climbing the hierarchy of global value chains

Since the 1980s, global corporations have organized their operations in value chains, spreading production processes across several stages, often in different countries. CEE countries have joined these value chains and have gradually climbed their hierarchies, meaning that they have produced ever more valuable goods and services. For example, in manufacturing a unit value of one kilogram of CEE exports today is worth around 0.8 times that of German exports, whereas in 2004, when most CEE countries joined the EU, it was worth merely 0.4 times as much. The same trend is noticeable in services, although data from this sector are more difficult to track.

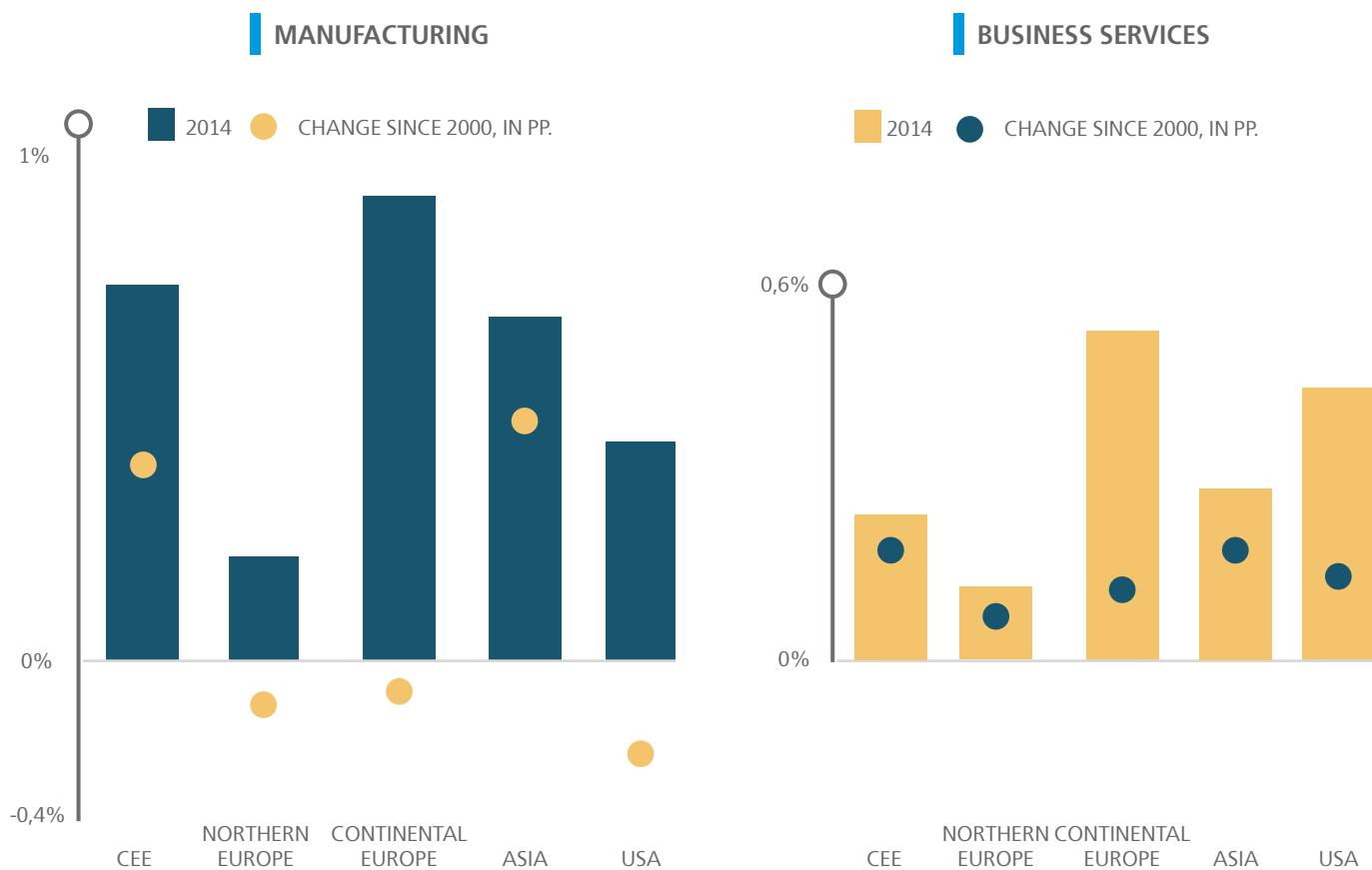
➤ Services are treading the same path as manufacturing

Generally, two sectors in Central and Eastern Europe benefited most from the growth in global value chains – manufacturing and business services. The former is primarily centered around German manufacturers, the latter is more globally oriented. It is worth observing, however, that the role of Central and Eastern Europe in global business services is much lower than in manufacturing, and therefore it is rational to expect that business services will grow faster, converging with the levels in developed markets.

FIGURE 12

Example of how CEE's role in global value chains is increasing

The value of each good or service produced for final sale is composed of value added at each stage of the production process. The columns demonstrate the share of selected regions in generating the total value of final sales of German goods and services. The left chart shows how the manufacturing sector in each region contributes to the value of German final sales, whereas the right chart shows the contribution of business services. Dots represent the pace of change between 2000 and 2014 (latest data). CEE's contribution is still relatively low in business services. However, this latter sector is dynamically gaining importance.



Source: Calculations based on World Input-Output Database, 2016; CEE - Poland, Czech Republic, Slovakia, Hungary and Romania; Continental Europe - France, Italy and Spain; Northern Europe - Finland, Sweden and Norway; Asia - China, India and Turkey.



B TRENDS IN THE OFFICE MARKETS IN CEE

FIGURE 13

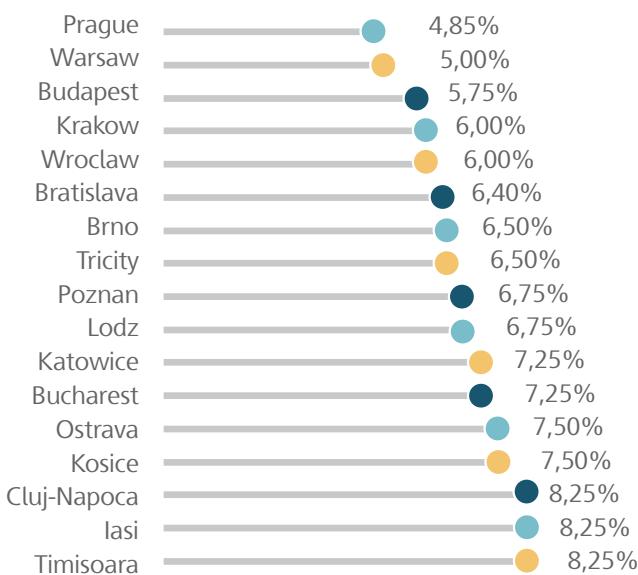
Office stock, vacancy rates and prime headline rents in CEE

LOCATION (CITY)	OFFICE STOCK (THOUSAND SQM)	VACANCY RATE ESTIMATE (%)	PRIME HEADLINE RENT IN EUR/SQM/MONTH			
	H1 2016	H1 2017	H1 2016	H1 2017	H1 2016	H1 2017
Warsaw	4,988	5,160	15.4	13.9	22	20.5-23
Krakow	833	992	6	9.3	13.6-14.5	13.5-14.5
Wroclaw	757	873	10.1	8.5	14-14.5	13.9-14.5
Tricity	629	645	13.5	7.8	12.75-13.5	12.75-14
Katowice	404	459	14.3	12.7	12.4-13.5	11.5-13.5
Poznan	396	443	13.3	12.2	13.9-14.4	13.6-14.1
Lodz	347	500	9.7	6	11.5-12.9	11.5-13.2
Budapest	3,297	3,350	10.3	8.6	22	22
Bucharest	2,456	2,430	12.8	9	18.5	18.5
Bratislava	1,548	1,670	7.4	6.9	15	15.5
Prague	3,225	3,250	12.3	8.6	19.5	19.5
Brno	484	547	11.8	9.7	13	13.5

Source: JLL , 2017

FIGURE 14

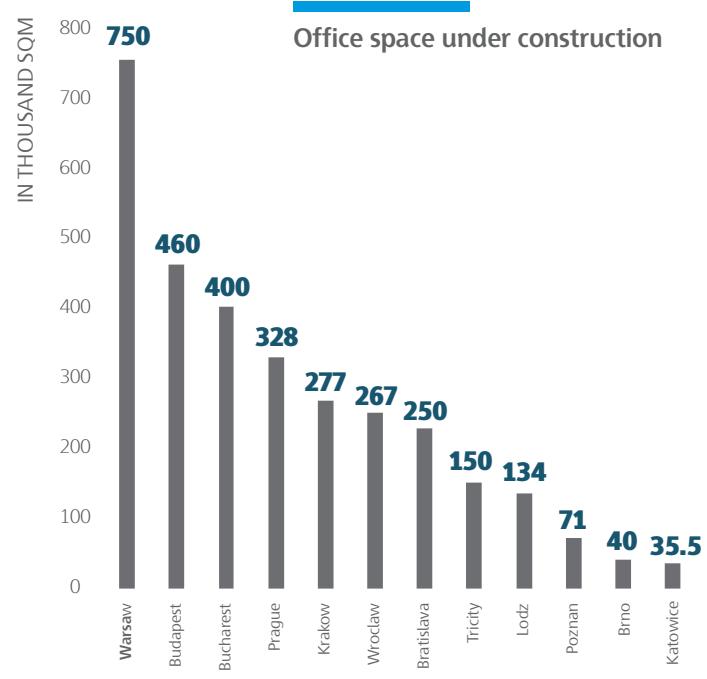
Yield forecasts for 2017



Source: JLL, 2017

FIGURE 15

Office space under construction



Source: JLL, 2017



DEMAND IN THE MAIN CEE CITIES



► Warsaw

Warsaw's office market is developing very rapidly. JLL estimates that total office supply in the capital city will break the 6 million sqm threshold by the end of 2020. Despite the substantial pipeline volume and relatively high level of new completions, the vacancy rate should remain on a slight downward trend over the next 18 months. This is mainly

due to record high take-up volumes (the best H1 result in Warsaw's history in 2017), followed by positive net absorption and an inflow of newcomers. Rents should remain flat as Warsaw, after several years of rental decline, has reached the bottom of the cycle.

► Krakow

Krakow has always been a star among the office markets outside Warsaw. It shows no signs of slowing: this year the amount of space here will cross the million sqm threshold. Moreover, growth here is sustained by strong demand year after year, which has led to the development of numerous office destinations in the city.

► Wroclaw

Developer activity in the city is quite extensive - currently 267,300 sqm is under construction. Additionally, some large-scale developments are to be launched soon. In H1 2017, demand amounted to 91,700 sqm, which increased on the back of several high-profile deals. Wroclaw also boasts the highest share of pre-lets in total demand (44%).

► Tricity

The strong developer confidence in the Tricity area (the Gdanskagglomeration) is constantly proved by the construction activity there. Currently, there is approximately 150,300 sqm of modern office space under development in the agglomeration. We estimate that the level of modern office space may exceed 800,000 sqm by the end of 2018. Demand for offices in the city continues to be on a sound upward trend. After the strong 2016, with a total of 93,200 sqm transacted, demand reached an astonishing 73,800 sqm in H1 2017.

► Lodz

Lodz is the smallest of the major office markets in Poland, however, it is developing at an incredible pace. Last year Lodz had exceptional results in terms of occupier activity and a fall in the vacancy rate: gross demand reached 66,700 sqm while the vacancy rate dropped to 6.2%, the lowest in Poland. In 2018, modern office stock in Lodz is expected to hit 0.5 million sqm.

► Katowice

Katowice is the largest city in and the capital of the Śląskie voivodeship. Total office stock in the city now stands at approximately 458,800 sqm, making Katowice the fifth-largest market in Poland. A further 35,500 sqm is under construction. Demand in 2015 surged to 63,000 sqm, a 31% increase compared with 2014. In 2016 the volume decreased to 40,900 sqm and a large portion of that figure was generated by Silesia Business Park. In H1 2017, take-up reached 17,000 sqm.

► Poznan

Poznan is a dynamic market. There is an established base of landmark office developments that have attracted some prestigious tenants. Currently, Poznan is the sixth-largest office market in Poland, with approximately 443,300 sqm of modern office stock. The market is growing at a steady pace, with 71,000 sqm under construction. 2016 saw some 64,100 sqm of office space leased, confirming the steady confidence of occupiers in the city. H1 2017 was rather slow as only 12,700 sqm was transacted. However, 2017 should close with a decent demand figure for the whole year.



► Prague

At the end of Q2 2017, Prague's office stock reached ca. 3.25 million sqm. Currently, there is approximately 328,000 sqm of office under construction. Following last year's very limited supply, which reached only 36,200 sqm, new supply for 2017 is estimated to reach ca. 155,000 sqm.

► Brno

At the end of H1 2017, Brno office stock reached 547,000 sqm. Modern A-class offices constitute approximately 80% of total stock, while the remaining 20% consists of B-class projects. In H1 2017, three new office projects were completed in Brno. Currently, there is approximately 40,000 sqm of office under construction with completion scheduled for 2018.

► Budapest

Budapest office stock stands at ca. 3.35 million sqm. The vacancy rate is at a record low of just 8.6%, meaning that there is a serious undersupply of high quality, large, immediately available office space for the time being. That said, development activity is picking up, with 460,000 sqm under construction, indicating that the scarcity of supply will start to ease slowly.

► Bucharest

At the end of Q2 2017, Bucharest's modern office stock totaled ca. 2.43 million sqm, divided between 12 office sub-markets. Demand remains strong, driven by both new companies and others expanding in the market. For 2017, we expect total office demand to reach approximately 350,000 sqm. The vacancy rate has decreased to a record low of 9% and is expected to remain stable for the remainder of the year. H1 2017 saw a slowdown in new supply, with only 43,000 sqm delivered. Close to 100,000 sqm has been announced to be completed by the end of 2017, followed by 300,000 sqm in 2018.

► Bratislava

The total stock of A and B-class offices in Bratislava amounted to ca. 1.67 million sqm at the end of H1 2017. The split between A and B-class office has improved in favor of A-class office buildings, with a 58% share. Green certification is starting to play an important role in A-class office buildings, with more than 47% of the A-class stock already certified. This

proportion will continue to grow in the future as every new office development is planned to be green-certified. There is currently ca. 250,000 sqm of office space under construction. Several of these projects are already fully pre-leased, but there are also projects being built on a speculative basis.



INVESTMENT MARKET

The past five years have recorded continued growth in investment volumes across the region and 2017 looks set to maintain this positive momentum. At ca. €5.6 billion, the CEE investment volume for H1 2017 represented an almost 10% increase over the same period of 2016 and is just short of the highest first half year regional investment volume, which was recorded in 2007 (€5.7 billion). The investment volume in the office market reached €1.2 billion in H1 2017.

In terms of buyer origin in 2016, we registered particularly strong activity from non-European capital, in particular from South Africa, Singapore and North America. We have again recorded the continued appetite of investors for product across the entire region, with H1 2017 seeing a very balanced profile of domestic (CEE), European and non-European capital flow.

The first half-year breakdown saw the Czech Republic pull in an impressive H1 volume to bring its share to 37%, followed by Poland (29%), Hungary (13%), SEE (other CEE) markets (9%), Romania (9%) and Slovakia (3%). With a strong H2 pipeline, we expect another record year, particularly in Poland, where the number of transactions at due diligence and advanced marketing stages is exceptionally high, with expectations of all-time record volumes to be eclipsed. Our forecast for the full year could see CEE regional volumes reach ca. €13.0 billion, which would mean a new record over 2016, when a volume of €12.56 billion was recorded.

FIGURE 16

Origin of investment funds, in %

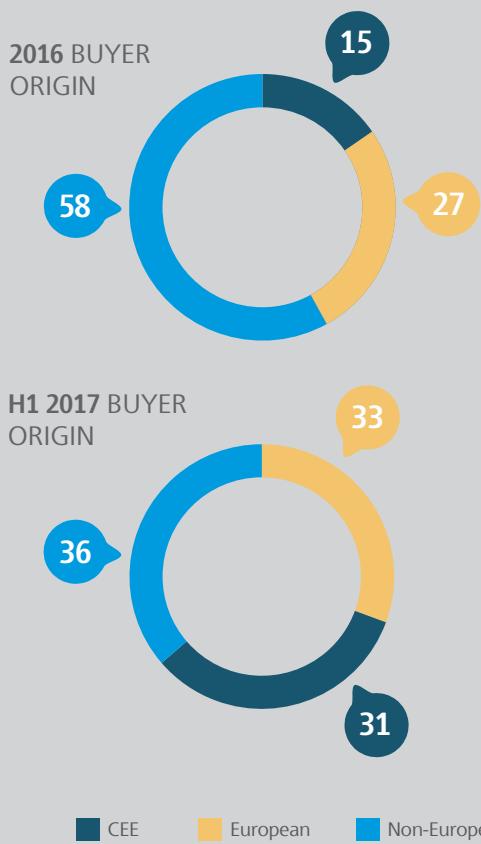
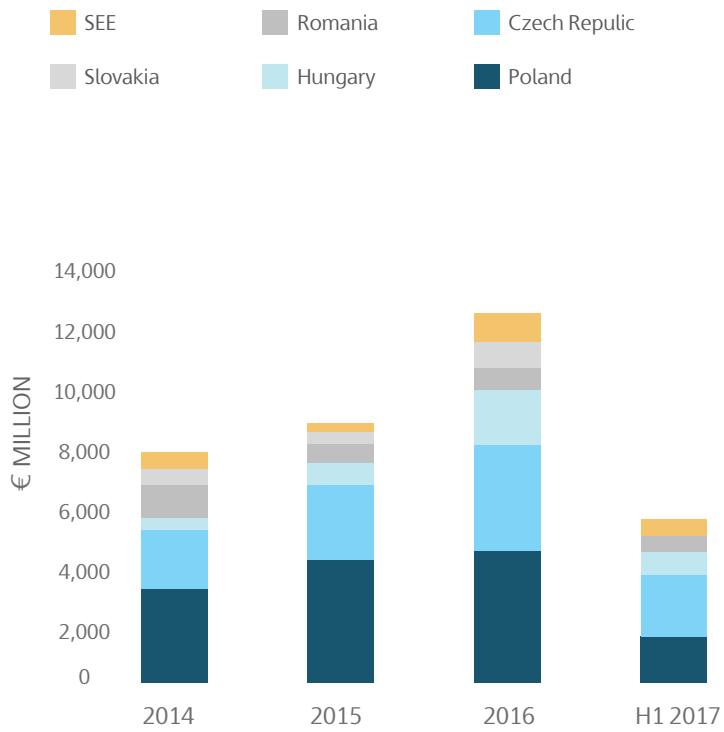


FIGURE 17

CEE investment volumes



Source: JLL, 2017



INSIGHTS FROM INVESTMENT MARKETS

The Hungarian property market continues to attract extended interest from foreign and local investors. The sharp rebound in investment transactions gained further momentum during 2016, with the annual volume reaching €1.7 billion. Based on the high interest in Hungarian real estate, 2017 investment activity is forecast to pass the symbolic record level of €2 billion registered in 2007 and set a new high.

The Polish market saw investment volumes of €1.654 billion in H1 2017. Across all sectors, the H2 pipeline committed, and at due diligence and advanced marketing stages is exceptionally high, with expectations of an all-time record volume to be achieved. Again, the market is witnessing the full spectrum of investor profiles: core through opportunistic, with deals ranging from small single-let assets through to complex platform transactions.

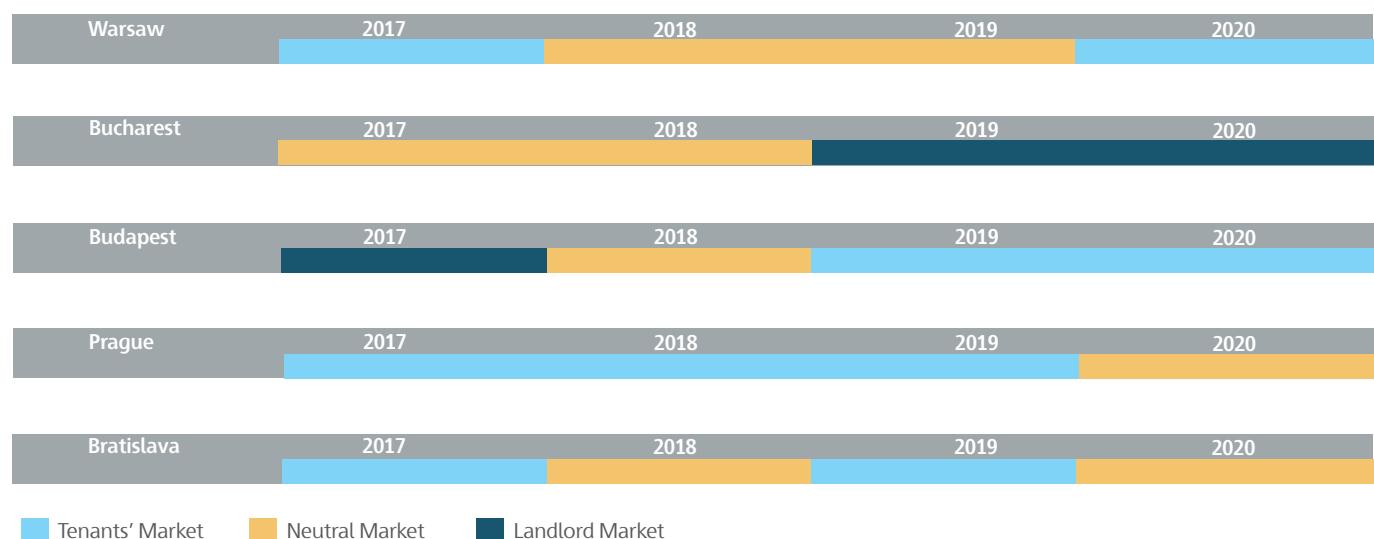
In Slovakia the market is witnessing a rise in both liquidity and transparency and the only drawback for investors remains the smaller size of the market.

In H1 2017, the property investment market in Romania recorded €485 million in transactions, 43% more than in H1 2016. Bucharest accounted for just over 25% of the total volume, showing that liquidity in secondary cities has also improved. Market volumes were dominated by retail transactions (70%), while office accounted for 11%.

In H1 2017, the Czech investment market reported record-breaking activity consisting of nearly 40 concluded transactions with a total investment volume of €2 billion, which represented a twofold increase over H1 2016. Should there be more prime product available in any sector of the market, the volume of transactions would have been much higher.

FIGURE 18

CEE Occupier Conditions 2017-2020



Source: JLL , 2017



HOW CEE OFFICE MARKETS ARE MATURING

➤ From emerging to stable market

Over the last 10 years, Central and Eastern Europe has evolved from being a region that the real estate industry would have classed as an emerging market, i.e. lacking sufficient scale, liquidity and stability, and whose main feature was attractive prices, to being a more mature market characterized by lower rates of return and increased liquidity. The CEE region is certainly not a monolith and considerable differences between countries can still be seen. The Czech property market is closer economically to Germany's – with higher prices and an increasing proportion of local investors. Poland is catching up with the Czech Republic and within the next couple of years is likely to achieve the same level of maturity, although this will be affected by numerous factors, including macroeconomic ones such as the development of domestic capital sources. Poland has a large supply of office space, with more planned in the future, which increases competition and strengthens the position of tenants in the short to medium term. Romania, on the other hand, still bears the features of a developing country. Even there, however, there has been a substantial upturn in property market activity. In 2016, the real estate transaction volume in Romania grew by more than 25% compared to the previous year. Both Hungary and Romania are now more often viewed by foreign investors as attractive countries to do business in.

➤ More complex transactions

Market maturity is not only about size and liquidity, but also the complexity of transactions concluded by entities operating in the market. The projects on which Dentons advises today are far more complex and multidimensional, in comparison to the ones we would work on a decade ago. These include, among others, portfolio transactions involving not only several cities in Poland – which is not surprising any more – but also various locations in Central and Eastern Europe and Western Europe. We also have more real estate joint venture transactions in which investors and developers establish new entities in order to undertake particular investments. Why has there been such growth in complexity? It is because investors look for higher returns, hence they are ready to

approve a higher risk level than before. It used to be enough to go to a country and simply buy a property. Nowadays, it is necessary to make a bigger effort to achieve more attractive rates of return by properly selecting re-zoning, building, leasing, market and other risks.

➤ New players on the market

Today, sale and lease-back transactions allow you to take a real property off the balance sheet and, at the same time, speed up the depreciation by payment of rent. As of 2019, the IFRS 16 will come into force and real estate tenants will be required to book their liabilities under their leases in their balance sheet. Balance sheets will have to reflect both the right to use the asset as well as associated liability for payments for the entire period of the lease. The new accounting standard will affect almost all financial ratios that measure performance of businesses, including gearing, EBITDA, operating profit and net income. All those changes may incentivize potential tenants of tenant/occupier projects to purchase assets, instead of leasing them, to achieve more flexibility and better financial parameters. It will contribute to the increase in potential market investors by adding those who will buy facilities for their own purposes.

➤ Changing demand

Increased demand for A-class office space means that new office buildings in the region quickly find tenants, despite a relatively high average vacancy rate in some CEE countries, e.g. in Poland. In many markets we have noticed increased relocation of the workforce from less attractive to more modern office buildings. Warsaw seems to be the best example where, despite a high average vacancy rate, new premises are being leased quite well. The vacancy rate is higher in the districts located further from the city center, which have no access to the subway, problems with the transport infrastructure and where practically no new space is being built. It is worth noting that just over 50% of office space is described as class-A office space. Under the current market conditions, tenants who now occupy class-B space are willing to move to newly developed space in the CBD.

C SOUND FOUNDATIONS FOR INVESTOR STRATEGIES



We have invested exclusively in Romania from the start, and the country remains our primary focus, since its real estate market continues to provide the right foundations for implementing our strategy. It's important to begin by reminding that Romania is today one of the few economies in Europe that had a consistent expansion over the past 6 years, outpacing EU average growth. All these strengths of the macroeconomic environment are reflected in the performance of Romania's real estate sector, with demand for office and industrial estate space reaching historically high levels and significantly outweighing supply - for example, last year, demand for top-quality offices was almost 40% higher than the level of new supply, driven especially by companies in the IT&C, production/energy and financial sectors, mainly fueled by multinational corporates expanding their operations and consolidating their positions. We are glad to see that class-A energy-efficient office properties are in firm demand, maintain low vacancy rates and stable rents, as it is our mission to offer premium, easily accessible, energy-efficient office spaces.

Dimitris Raptis

DEPUTY CEO AND CHIEF INVESTMENT OFFICER,
GLOBALWORTH

Poland is a highly attractive market for us, with a bright future. But beyond Warsaw as the country's uncontested economic center, other cities in Poland are also of interest to us. This year, for instance, TRIUVA acquired an office property in Wroclaw, a city with a strong outlook. Many international companies from throughout Europe are choosing Wroclaw as a location for outsourcing complex services requiring a high level of knowhow. The city has a student population of some 140,000, almost exactly as many as in entire German capital of Berlin. Wroclaw offers, moreover, an extraordinarily high quality of life. Another place, part of TRIUVA's investment strategy within CEE, is Prague. The capital of the Czech Republic is growing strongly since the opening of the markets in the early 1990s. The combination of a highly competitive industrial base, a favorable geographical location and sound political, fiscal and monetary conditions are supporting strong influx of foreign investment and companies. Our office property "Five" is strategically positioned between two busy transportation hubs – Anděl Metro Station and Smichov Railway Station. This location offers commuting and travel possibilities to domestic and international destinations within walking distance. Being situated near the Vltava River the working environment is quiet. The roof terrace accessible by every tenant offers a stunning view of the historical city center, Prague Castle, and the Vyšehrad Fortress.

DIRECTOR, TEAM MANAGER EUROPE, TRIUVA

Jörg Laue



INVESTORS' KEY TAKEAWAYS

Poland

- It is a relatively mature market, chosen by numerous international corporations as the base for their offices, logistics, outsourcing, accounting and legal centers.
- The property investment market is spreading to regional cities.
- Warsaw CBD continues to be the top spot for new office projects, but demand for new supply and development activity in regional cities is continuously growing, especially in Krakow, Tricity and Lodz.
- Demand for industrial space in Poland is on the increase.
- Multiple large retail projects are currently in the pipeline and retail assets continue to be attractive investment products.
- Residential rentals are slowly becoming an institutional product and attract new investors. The same applies to student housing.
- Institutional investors are increasingly interested in the hotel sector in Poland, which noted a record-breaking transaction volume in the first quarter of 2017.

Romania

- Following a significant jump in property investment volumes in 2016, the Romanian commercial property market stands strong with growing interest from new investors who are currently prospecting the market.
- The industrial sector is now focused primarily on development.
- Office development has expanded beyond Bucharest, for example in Cluj, Brasov, Timisoara, Arad and Iasi.

➤ Residential development in Bucharest and secondary cities continues to attract the interest of local and international players, including several first-time investors.

➤ Several new lenders have begun lending on real estate, with additional banks studying the market. This should ease the cost of development, which has in recent years often proceeded solely with equity or low leverage.



INVESTORS' KEY TAKEAWAYS

The Czech Republic

- The Czech property market saw record investment volumes in 2016, the second largest since the credit crunch. 2017 kicked off with an exceptionally strong first quarter as well, and this trend is forecast to continue.
- The property market is booming, with domestic and international capital being invested. The level of demand is very high, especially for offices in Prague and regional prime shopping centers.
- Office transactions are primarily in the country's capital city and that market has been experiencing one of the strongest years in its history. The Prague market continues to mature with occupier demand.
- The retail sector attracted the highest number of investments in the first quarter of 2017 and is experiencing continued high investor demand, with single and portfolio transactions taking place across the country, including regional cities such as Liberec, Brno and Ostrava.
- The industrial market continues to be driven by the logistics, e-commerce and automotive sectors. The Prague region is the dominant logistics hub.

Hungary

- There has been economic growth in the last 12-18 months and investors are increasingly seeing Hungary as one of the go-to destinations this year.
- Hungary's credit rating is stable/upgrading in 2017, as a series of positive developments have been observed in the Hungarian economy.
- Office take-up increased in 2016; the construction pipeline is limited.
- Office and residential developments are driven by high foreign inflow into regional industrial hotspots and this trend is set to continue.
- Strong consumer demand and turnover rates

suggest upward movement in the Budapest retail sector. Expansion activity from both international and local retailers is underway and demand for new supply continues to strengthen.

- The investor interest in the Hungarian market is expected to increase further throughout the remainder of 2017.

Slovakia

- The Slovak market is becoming more mature, transparent and liquid, and attracts increasing interest from investors.
- In the last 18 months, both the investment volume and the number of property transactions have been growing. Transactions involving office and logistics assets were the most popular in the first half of 2017.
- Office transactions are primarily in Bratislava and the vacancy rate is decreasing. Investors continue to search for both prime shopping centers and smaller regional retail assets.
- There is continued strong demand for leasing industrial space from the automotive sector. Local as well as Austrian and Czech investors and developers are the most active.



The expansion of modern business services is accelerating

3



CAMPUS 6, BUCHAREST, ROMANIA

A DOUBLE-DIGIT EMPLOYMENT GROWTH

According to ABSL estimates, in 2017, the total number of jobs in the business services sector in the CEE region exceeded 0.5 million, of which nearly 50% were created in Poland.

➤ Trend, not phenomenon

The majority of BPO, SSC, IT and R&D center employees work for foreign companies (in Poland the figure is 81%). It should be noted that employment growth in the CEE region should be viewed as a long-term trend (originating in the first half of the previous decade) rather than a fad.

➤ CEE's maturity

The impressive number of newly-created jobs goes hand in hand with an increase in the region's maturity as a place for business services.

This manifests in, among other things, an increase in the share of advanced services in the portfolio of centers, e.g. a wide range of middle-office services for financial institutions, managing specialized processes, advanced IT services and other knowledge-intensive support for business processes. Furthermore, the geographic scope of services delivered by business service centers from the countries under analysis has significantly expanded.

Types of business services centers:

Business Process Outsourcing (BPO)

– entities that provide business services for external customers;

Shared Services Centers – entities that provide business services for parent companies;

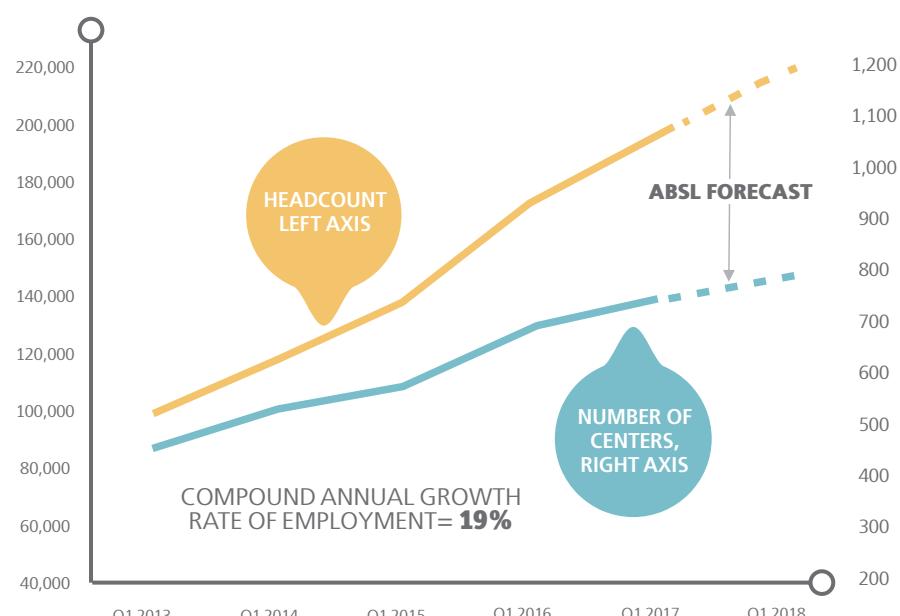
IT – entities that provide IT services (e.g. system, application or infrastructure maintenance, and technical support) and/or develop software for external customers or parent companies;

R&D – specialized entities that conduct research and development activity for external customers or parent companies

FIGURE 19

Employment levels at foreign service centers in Poland

Poland is an example of dynamic expansion of business services centers. Double-digit growth rates have been recorded since the industry started developing in CEE. Recently, the growth rate approached 20%.



Source: Business Services Sector in Poland 2017, ABSL

► Scenario for the future

Assuming that a double-digit employment growth rate is maintained in the sector, we can estimate that in 2020, in Central and Eastern Europe, at least 700,000 people will be employed at BPO, SSC, IT and R&D centers, of whom 300,000 will be in Poland (conservative scenario according to ABSL forecasts). This will reinforce the region's standing on the global market for business services. It is worth noting that specialized service centers in the region have become important elements of the global organizational structures of their parent companies. Importance of the CEE as a hub for business services can be demonstrated by a fact, that more people work in

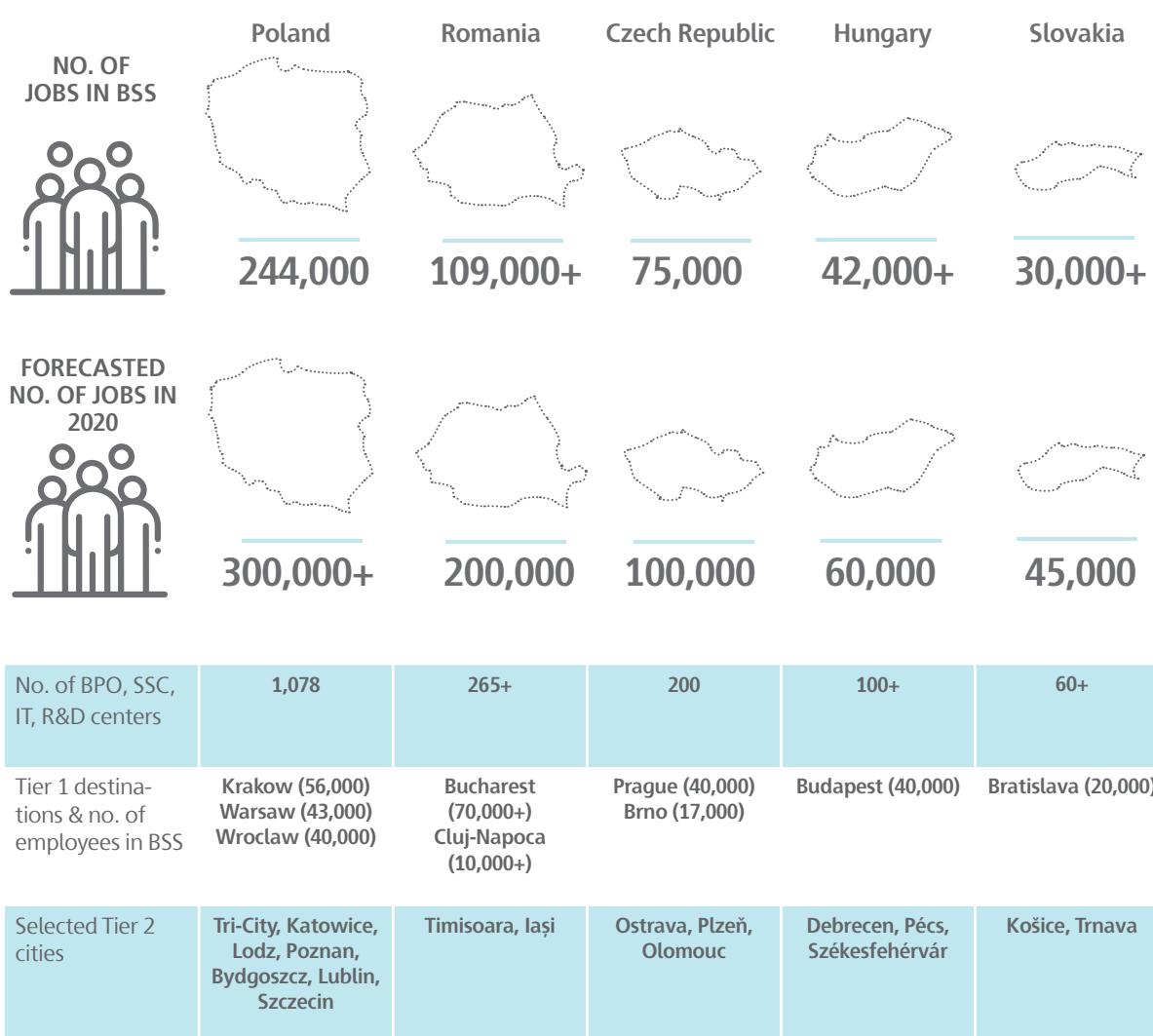
export-oriented business services in this region than in the UK.

► Brexit as an important factor

It is also worth pointing out that in the coming years, Brexit (and the associated transfer of certain specialized jobs from the United Kingdom) will have a visible effect on the sector's growth in CEE. The ability to take full advantage of the region's potential will be made possible thanks to the necessary improvements in various areas concerning the conditions for doing business, as well as the projects that help grow the industry which are being put forth by investors.

FIGURE 20

Business services sector in CEE



Source: ABSL Poland, ABSL Czech Republic, ABSL Romania, Hungarian Investment Promotion Agency (HIPA), Slovak Investment and Trade Development Agency (SARIO)



Considering Poland's current position and status in the business services sector – what are the next areas of development it could pursue?

Poland has tremendous potential for development in several areas – such as advanced processes, legal and accounting outsourcing, and research and development. For example, we can expect that in the next few years, there will surely be significant growth in the latter area. We do not mean the appearance of large-scale laboratories, but rather the emergence of medium-sized facilities alongside present business services and competence centers. Crucial to achieving this goal will be the cooperation with educational and government institutions, which should begin by providing areas for businesses to create and support appropriate programs. Working as a unit, we can promote Poland as an R&D powerhouse.



This issue is tied to the problem of recruitment. How can corporations ensure the flow of new talent into the employee market?

This is certainly not an easy feat. With low unemployment rates and growing demand for skilled employees, the possibility of not filling vacancies is a looming threat. However, business service companies have embraced the necessity for increased spending on creative recruitment and proper employer branding. We have been seeing a plethora of public relations campaigns and events, which may result in enticing potential employees. Recently, we have also seen that a modern office can be a selling point – it is not surprising, but potential employees look for multi-functional spaces and flexible work arrangements. Traditional arguments, while still important, have become commonplace. Finally, if all else proves to be unsuccessful, we can – with proper help from the government – reach out to Poles living abroad or even to other Eastern European countries to seek talent.



How do robots fit into this? There are, after all, plenty of predictions saying that in a decade or so the whole sector will become fully automated.

Yes, analysts and experts compete with one another in their claims regarding how soon

this will happen, all while robotics and process automation have already become standard in many business service centers operational models. And yet, we do not see massive lay-offs and spikes in unemployment. The truth is that we are now working on the implementation of current solutions to the limits of our abilities, while waiting for smarter solutions focused on learning and speech synthesis. But as they arrive, people will move to perform more complex tasks, outside of the scope of robots. Digital natives and tech experts, who flood the market in greater waves with every passing year, will become invaluable to companies, due to the sheer number of programs and software required to fluently operate the robots and oversee process automation.



Where do start-ups fit into this? These are the technology natives the sector wants to employ, but they sometimes choose to work on their own, instead of for "the big guy".

We are quite aware of the gap between corporations and start-ups, and our course of action in addressing this issue is to create pathways for cooperation between them. Many start-ups are unaware that competence centers within global corporations can be a viable solution for marketing new concepts. Business process automation, for example, can be brought to a global scale but would need proper funding and marketing to succeed. Unbound by regulations and procedures, start-ups can often field innovations which may be beyond the reach of the corporate environment. Therefore, many corporations now actively seek them out through events such as the ABSL Start-Up Challenge to discover and provide support for ideas and concepts which may prove to be beneficial for "the big guy", while keeping "the little guy" not only afloat, but on top of the charts.



Wojciech Popławski

VICE-PRESIDENT, ABSL
MANAGING DIRECTOR,
ACCENTURE OPERATIONS

B MODERN BUSINESS SERVICES AS DRIVERS OF DEMAND FOR OFFICES

Skanska specializes in providing space for BSS tenants. The share of business services centers in the developer's office buildings is relatively high.

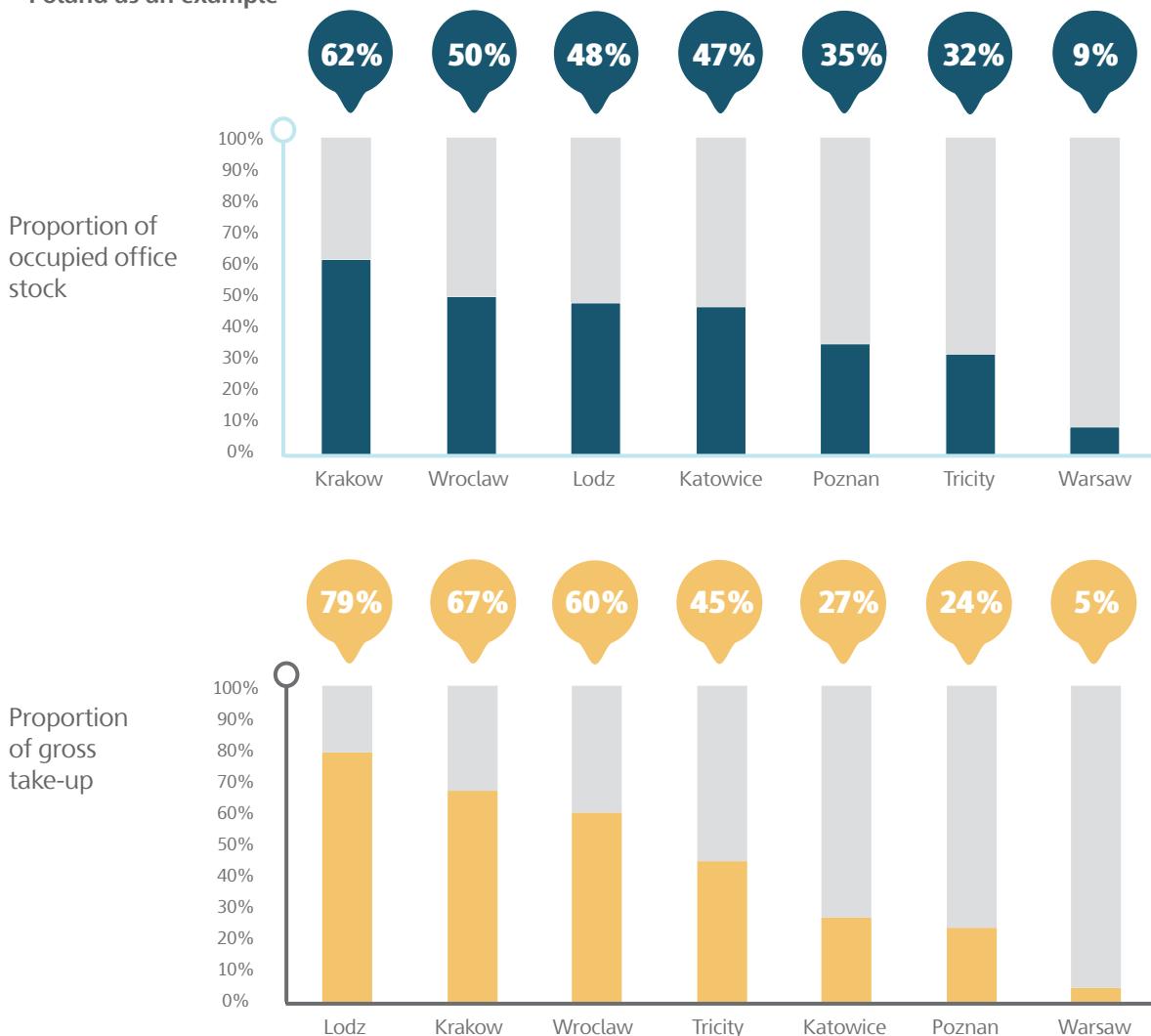
In Polish regional cities, such as Wroclaw, Krakow, Lodz, Poznan and Katowice, the share of business services centers among tenants often ranges from 50% to 100%. In Warsaw, which is a large and established financial center, tenants from other sectors still dominate as occupiers of modern A-class office

space. However, Skanska is observing an increasing proportion of business services centers in the leasing structure in the Polish capital as well.

In other CEE capitals, such as Prague or Budapest, the proportion of modern business centers in offices recently built by Skanska ranges from 40% to 100%. Also, in Romania the demand for office space from business centers is very strong because of the stellar growth of the sector in the country and Bucharest's specialization as CEE's IT hub.

FIGURE 21

Very high proportion of business centers in office stock and gross take-up in the first half of 2017 – Poland as an example



Source: JLL, 2017

► Poland

The modern business services sector (SSC/BPO) is booming in Poland. Companies representing this branch of business are rapidly increasing their headcount and therefore need more and more office space. Currently, the sector employs over 244,000 people and this figure is expected to reach 300,000 by 2020. The modern business services sector is interested in investing in both Warsaw and regional cities. The importance of the capital city has increased recently, with the highest number of new jobs created by companies from this sector during Q1 2016 - Q1 2017. It is also worth mentioning that the sector is responsible for the largest leasing deals across Poland.

► The Czech Republic

Over the last two-and-a-half years, net demand for offices (excluding renegotiations) in Prague has been driven mainly by IT, professional services and pharmaceutical companies. These three business sectors have accounted for ca. 45% of overall net demand for offices in Prague during the period. The business services sector is quickly becoming one of the major players in the job market in the Czech Republic. In 2016, the Czech Republic was home to 200 business services centers, providing 75,000 jobs. The largest proportion of jobs in the sector (41%) is generated by shared services centers (SSC), followed by IT centers (ITO), accounting for 34% of total jobs in business services centers in the Czech Republic.

► Hungary

The SSC sector in Hungary has undergone tremendous growth over the past 10 years. Currently, more than 100 companies operate SSCs in the country, employing approximately 42,000 people, which makes the sector one of the biggest employers in Hungary. The highly educated young labor pool with excellent language skills, the lower wage expectations compared to western Europe and favorable tax environment (a flat corporate tax rate at 9%) make Hungary a very attractive destination.

► Romania

Romania (Bucharest and Cluj especially) has a large, educated labor force with a good

technical background, which combined with the excellent internet infrastructure, has made it a wise destination for IT companies. Names such as Microsoft, IBM, Oracle, Amazon, EA Games and Ubisoft have all chosen to locate their offices in Romania. Companies from the IT sector have been the main drivers of demand in the last five years, followed by the business services (BPO/SSC) and professional services sectors. This trend is also expected to continue over the following two to three years.

► Slovakia

The BPO/SSC sector, along with the automotive sector, are two of the strongest sectors in the Slovakian economy. Over the last 20 years, the SSC sector has undergone tremendous growth, not only in Bratislava but also in Kosice. Currently, more than 60 companies operate SSCs in the country employing approximately 30,000 people. The top reasons why companies are establishing centers in Slovakia are the availability of a highly educated talent pool from 35 universities and relatively low-cost workforce.



Global capital flows into real estate look set to continue to grow and Europe remains high on the wish-list for international investors. Our research, editorial and events continue to reflect the fact that Europe is witnessing a number of structural shifts – both in terms of politics but also occupier demand and the growing impact of technology on real estate markets. The influence of the sharing economy and the concept of the occupier and tenant as the guest are becoming ever more important as cities and companies compete for that vital ingredient for success – human capital. This was highlighted in many of our events across Europe and was a big focus in our CEE Summit in Warsaw. For international investors, being on top of these trends continues to be critical to deliver sustainable investment returns. The search for these returns continues to drive capital towards Europe and, with Brexit discussions creating a focus on continental Europe, the outlook for CEE markets remains very strong across the sectors.

Richard Betts | PROPERTY EU



CUBICLES VS. ALTERNATIVE WORKPLACES

➤ An increased supply of office space in the CEE region will ensue not only from increased employment in the business services sector, but also from a rise in the average surface area per employee. Companies more than ever compete for employees by trying to offer them better employment conditions – chill-out zones, leisure and relaxation spaces, rooms for co-working or even not so obvious attractions like hammocks, PlayStation consoles or billiard tables. We did not have that five years ago. These days, a high salary, medical care and a company laptop are not enough. Employees look for firms with a good atmosphere and employment conditions, so it is necessary to be able to offer something special, something which will positively influence employees' creativity and effectiveness at work.

➤ On the other hand, many companies use the 'hot desking' system and will reduce their need for space, allowing their employees to work from home or at the client's. These solutions are used by real estate consultancy companies e.g. brokers. However, numerous research studies confirm that in a strictly consulting business (such as legal, tax and other similar consultancy activities) where bigger teams are engaged in particular projects, the productivity of home-based work is clearly reduced compared to working in an office, i.e. in a team.



C WHY CEE WILL REMAIN ATTRACTIVE TO INVESTORS

► Four drivers of investment

There are four major factors which determine the attractiveness of a country or a city as a center for international business services: labor costs, the availability of human and physical resources, cultural proximity and the general business environment. In all these areas the CEE region has important comparative advantages.

► Competitive wages and high quality

Nominal wages are less than half of the EU average, but labor quality is relatively high. The combination of low wages and high workforce quality is a particularly important feature of the region.

The abundance of talented people is one of the critical determinants of CEE's attractiveness. However, physical resources, such as infrastructure, matter too. The connectedness of CEE's cities, their office markets and technological development cannot be underestimated.

► Proximity and friendly environment

Cultural proximity is an important factor for companies outsourcing complex tasks. The cost of training and assimilation is lower if workers can communicate efficiently. CEE scores highly in this area.

Business services centers also need a friendly institutional environment. CEE's attractiveness in this respect stems from the fact that it is well-anchored in the EU-wide institutional system.

FIGURE 22

Factors determining the attractiveness of a country as an offshoring center



Source: K. Budzyńska, "Offshoring Sector in Poland", Oeconomia Copernicana, 2016



CEE LIKE LUXEMBOURG OR IRELAND

➤ Possible advance up the value-added ladder

Poland and other countries in CEE have great potential to significantly increase the level of advancement of business services performed by the centers located in the region. The region could become a new Ireland or Luxembourg. Obviously not today, but within five or ten years and with advantageous regulatory changes, such upward mobility on the value-added ladder may be possible. Employees are very competent and being part of the EU guarantees institutional stability. Nevertheless, for the region to attract not only clearing services, but, for instance, to become a seat for pan-European investment funds, it is necessary to allow documentation in English to be presented in dealings with a market regulatory authority.

➤ Brexit as an excuse

Brexit may be a factor which would help in increasing international business services in the region. It should not, however, be overestimated, although it may play a significant role in development of the industry. The most advanced services may be moved from the UK to Frankfurt, Amsterdam or Paris, if only because of the need to maintain the European passport, whereas averagely advanced services may be relocated to Central and Eastern Europe. In some cases Brexit may just be an excuse, while the actual reason for a change may be the seeking of cost optimization. We are already seeing reports about big institutions which are considering opening service centers in our region.

FIGURE 23

From back, through middle to front – how business centers are located within a corporate structure

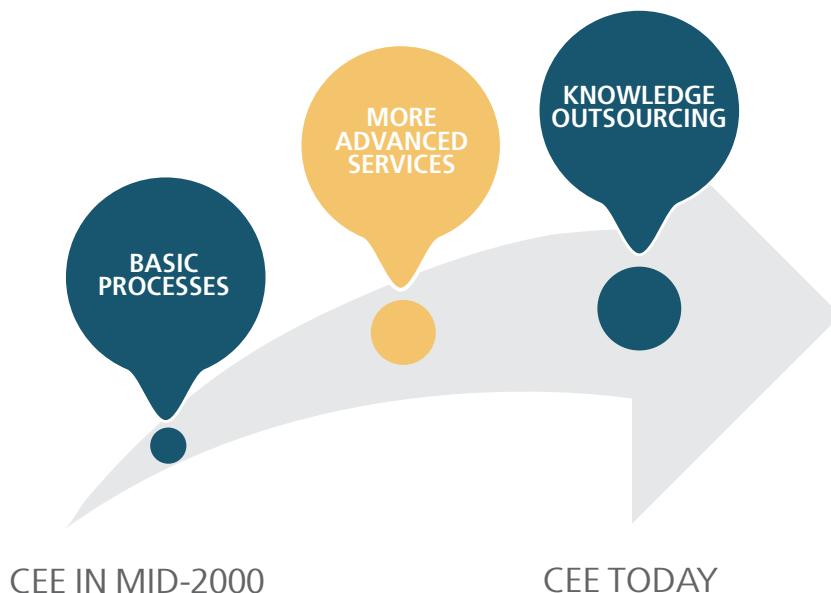
Centers located in CEE dominate back and middle office functions, but they gradually expand also in front office operations.



D HOW MODERN BUSINESS CENTERS ADVANCE IN CEE

FIGURE 24

From simple operations to knowledge-based services – the hierarchy of tasks performed by business centers CEE is gradually climbing the hierarchy in the complexity of tasks performed by business centers.



CASE STUDY – CITI SERVICE CENTER IN POLAND

Diversity at its best

The American bank opened its shared service office in Poland (Citi Service Center Poland) in 2005, employing only 60 people. Today, over 4,100 people work in Citi's offices in Warsaw and Olsztyn, and by the end of 2017 there will be ca. 4,500. Poland is a very attractive place to invest, and its competitiveness is, to a great extent, based on the quality of processes and workers than cost – says Kinga Ostrysz, HR director at CSC Poland. Just like other business services centers, Citi employs in Poland people from all over the world – 10% of its workforce comes from 62 countries. CSC Poland specializes in complex analytical operations, such as domain of anti-money laundering processes and security services operations (SSO). For example, it is responsible for the group's anti-money laundering (AML) operations in North America. To invest in skills, the bank established a partnership with the best private business school in Poland – Kozminski University – to educate specialists in AML. In the field of SSO, Citi in Poland covers all securities account and fund accounting services



Poland is an attractive market for business services sector, thanks to many large cities that can provide proper talent pool and accommodate for centres' growth. The economy also develops rapidly, and, together with Poland's beneficial geopolitical location, these elements caused the sector in Poland to move, over the years, from consolidating simple tasks to overseeing complex global processes.

These were among the key factors behind the success of the Shell Business Operations in Krakow. Over ten years ago, at its beginning, the centre focused on simple financial, accounting and HR operations – and currently, thanks to the availability of world class experts, it employs nearly 3,000 specialists and managers. 2017 alone saw the growth of couple of hundred new employees.

Krakow's SBO employs experts in numerous fields, some of which are exclusive to Poland. Thanks to that, Shell helps create the pool of high-class local specialists by offering them global know-how. Our employees manage not only accounting and financial processes, but also logistics, contracting and procurement, trading and supply, internal communications, customer service, HR and legal affairs, as well as selected global Shell projects worldwide.

I believe that the success of Shell Business Operations and other business services centres operating in Poland will lead to even more workplaces to be located in our country.



Piotr Dzwiwok
COUNTRY CHAIR,
SHELL COMPANIES IN POLAND,
SHELL POLSKA SP. Z O.O.



Roche Global IT Solutions forms a vital part of Roche Group Informatics. It operates from Poland, Malaysia and Canada, with headquarters in Warsaw. We provide application development and maintenance services globally, and we play an important part in the value chain of creating solutions that help develop and bring innovative drugs to patients suffering from some of the most exhausting diseases.

There are two equally important branches to our operations. We act as a Sourcing Hub with focus on software development and maintenance delivery excellence. We partner with a network of Polish and global suppliers and we oversee work of 3,000+ FTEs worldwide that deliver software and operations services to Roche. Our people contract services and set standards while ensuring continuous improvement and efficiency in the process.

Throughout recent years, we have been observing an immense impact of technology in the field of medicine and healthcare. Roche is no exception in this case. Roche Global IT Solutions in Poland has been rapidly evolving to fill the gap and provide all of Roche with sophisticated IT Research and Development services in areas that are becoming crucial for company success. As of today, close to 150 of our software experts already engage in research activities and verification of concepts in the field of advanced analytics, machine learning, natural language processing, blockchain, medical sensors and smart devices, while also evaluating technologies such as quantum computing for applicability in the business.

Thanks to our people's passion and expertise, we, at Roche, are a recognized IT partner. This includes a promptly emerging Innovation Hub that I personally believe places our centre in a world class league for IT R&D.

Marcin Mazurowski
HEAD, ROCHE GLOBAL
IT SOLUTIONS

Prague, Czech Republic

A city with a global perspective



International destination

According to the OECD, the Czech Republic has the largest proportion of international students in CEE and a higher proportion than the average of the Organization's members (1). In the QS Best Student Cities Index, which ranks cities according to their attractiveness to international students, Prague is the 26th best location in the world, leading such renowned spots as San Francisco, Dublin, Madrid, Amsterdam and Brussels (2).



Beauty

International media regularly describe Prague as one of the most beautiful places in Europe. BuzzFeed claimed that Prague is the most beautiful place in the World (3). According to MasterCard, Prague is among the top 20 cities in the world visited by people staying overnight (4).

PRAGUE



1. "Education at a Glance", OECD, 2016

2. QS Best Student Cities, 2017

3. "27 Pictures That Prove The Czech Republic Will Be The Most Beautiful Place You Ever Visit", BuzzFeed, 15. March 2014

4. "Global Destinations Cities Index", MasterCard, 2016



Labor productivity shifts to a higher gear

4



SUNDTKVARTALET, OSLO, NORWAY

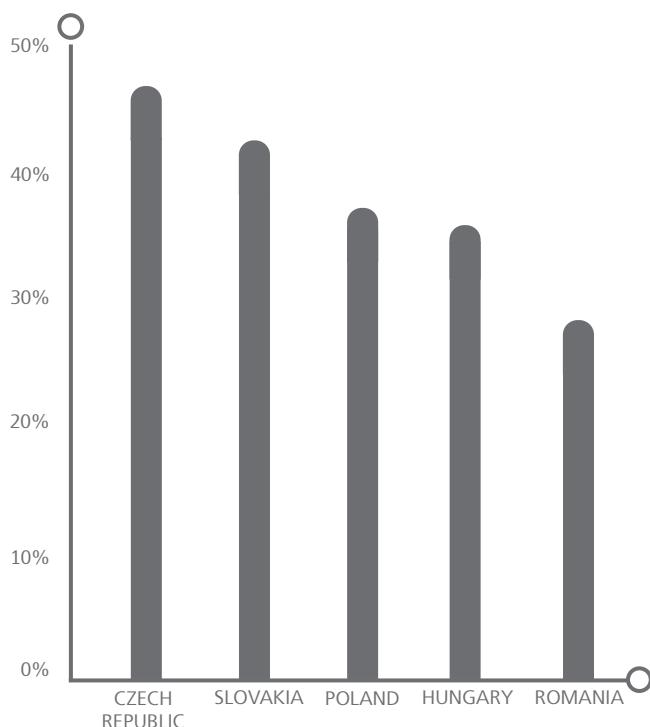
A STILLCHEAP, BUT EVER MORE PRODUCTIVE

► Low wages and high competitiveness

The average worker in CEE earns €8.6 per hour, compared to €29.8 in Eurozone member countries. Wage competitiveness remains one of the key drivers of foreign investment. But what gives CEE a true advantage is the combination of low wages with relatively high productivity.

FIGURE 25

Wages in CEE are lower than in Western Europe
 Average wage in the IT sector in CEE as a percentage of the average level in Germany in the same sector.



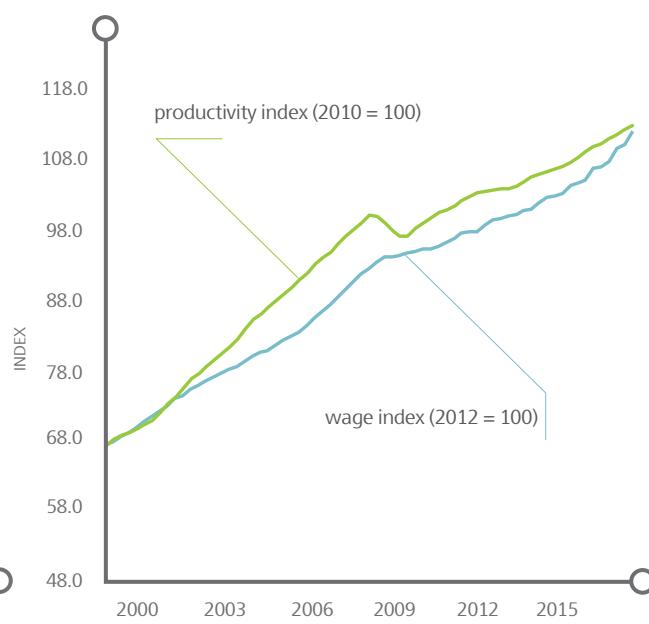
Source: Eurostat, 2015

► Productivity dynamics surpass costs

In the last decade, the average wage in the region has risen by more than 50% without hurting the economy's competitiveness. Why? The reason is very simple – wages rise together with productivity. CEE countries have managed well in keeping wage pressure under control and not allowing wage cost growth to exceed productivity dynamics. There are no signs that this cost discipline is going to change. Moreover, the composition of factors important to investors does not depend on nominal wage dynamics, but on how these dynamics interact with wider changes in the economic environment.

FIGURE 26

Labor productivity rises in line with wages
 Index of productivity (value added per worker) and wages in CEE from Q1 2000 to Q1 2017 (Eurostat).



Source: Eurostat, 2017



The background image shows a man wearing a yellow high-visibility vest and a headset, sitting at a desk and working on a computer. He is positioned on the left side of the slide. The office environment includes a green wall with several framed artworks, a white ceiling with recessed lighting, and other office chairs visible in the background.

SKILLS of CEE employees

Higher productivity than in typical emerging markets

The average worker in CEE produces twice as much in terms of goods and services than the average worker in the Brics countries (1).

Growing demand for skilled workers

The CEE economies are gradually becoming knowledge-intensive. The number of jobs requiring a higher education in CEE has grown by 12% over the last decade, compared with a decline by 0.2% for other occupations (2).

Outstanding computer skills

In a HackerRank study, three countries from CEE (Poland, Hungary and the Czech Republic) were placed among the top 10 countries with the best coders. CEE workers are famous for their programming skills, which are often better than in some countries considered to be IT giants (4).

Above average numeracy

The proportion of low performers in numeracy among workers in CEE is lower than the average for OECD countries, according to the Survey of Adult Skills (3).

1. Calculations based on GGDC database, 2016

2. Calculations based on Eurostat, 2017

3. The Programme for the International Assessment of Adult Competencies, 2016

4. R.Trikha, " Which Country Would Win in the Programming Olympics?", HackerRank, 25 August 2016

► Five ways to deal with demographic recession

One of the main long-term risks to economic growth in the region is the demographic recession. Central and Eastern Europe will face quite a severe population decline. If today's number of people in the region is taken as 100, in three decades it will be only 84 (the labor force will shrink to just 75). By comparison, in Western Europe it will be 102, and the world as a whole – 124, at least according to United Nations projections. No other region in the world faces such dismal demographic prospects.

Is CEE doomed? Absolutely not! There are at least five forces that will fully counterbalance the effect of the population aging within the next 10-15 years, and limit its negative impact after that period.

First is a better age structure – in the next decade the number of people in the most productive age groups (30-55) will increase.

Second is better education – cohorts entering the labor market in the last 10-15 years are much better educated than previous cohorts, therefore their productivity should be higher. Research conducted at the Warsaw School of Economics demonstrates that total human capital, measured by the quantity and quality of the workforce, will increase in Poland by 2030.

Third is immigration, which is described more thoroughly in the next chapter.

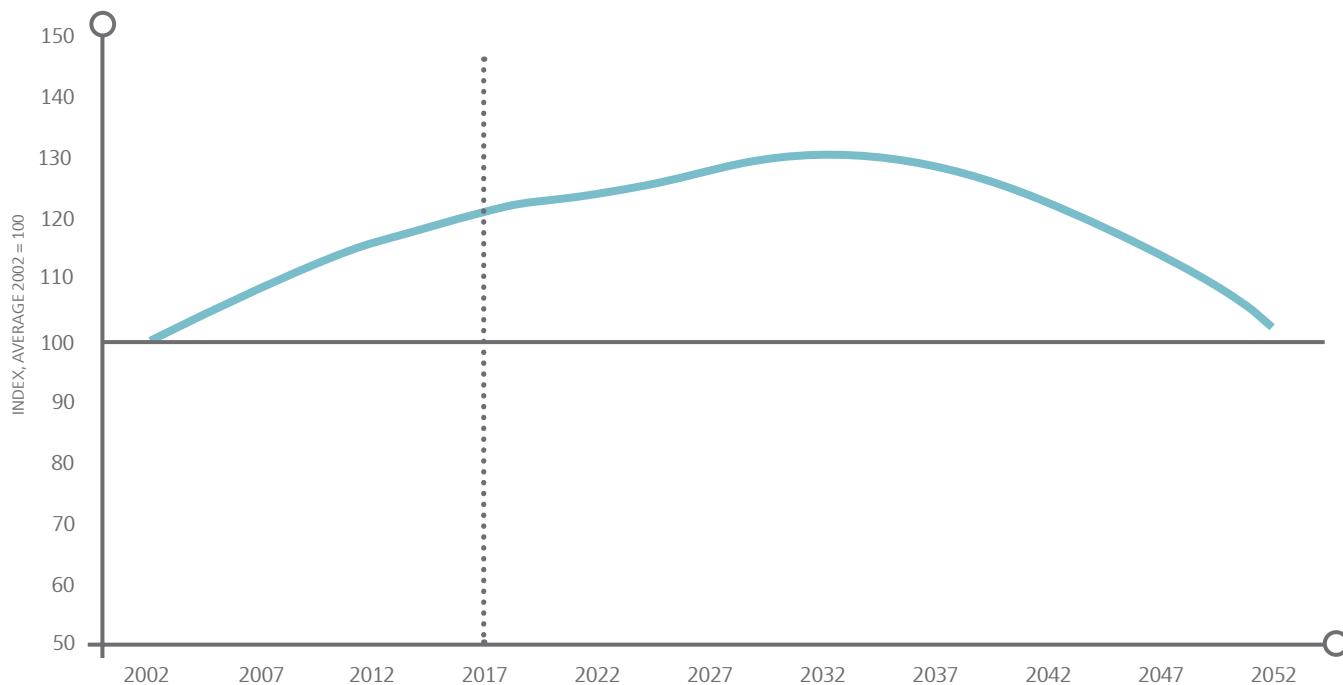
Fourth is the relocation of labor from declining to thriving sectors.

And **fifth** is the relocation of labor from small towns to large cities, where it is used more productively.

FIGURE 27

Human capital in Poland rises despite a declining labor force

The line shows the evolution of human capital in Poland with a starting point in 2002 rebased to 100. Human capital is defined as the quantity of labor multiplied by the quality of labor, determined by education and skills. Although the quantity of labor in Poland declines, the total human capital will increase for the next two decades due to improving skills.



Source: I. Kotowska, A. Chłoni-Domińczak, "O roli wykształcenia wyższego w warunkach nowej demografii Europy", Warsaw School of Economics, 2015



BETTER EDUCATED WORKFORCE TO PERFORM COMPLEX TASKS

➤ Young graduates as CEE's oil

The CEE countries analyzed in this report have more graduates each year than Spain and Italy combined. The availability of young and highly-educated people is the oil of Central and Eastern Europe, the most important resource that draws foreign investment in the business services sector.

➤ The path to higher social status

For citizens in the region education has become the most important investment following the transformations beginning in 1989, and is treated as the best route to higher social status and better earnings. For example, the proportion of 22-year-olds in Poland who are students is the highest in the European Union (45%). The proportion of people born in 1964 who hold a higher education degree is less than 20%, whereas

the proportion among those born in 1984 is almost 45%.

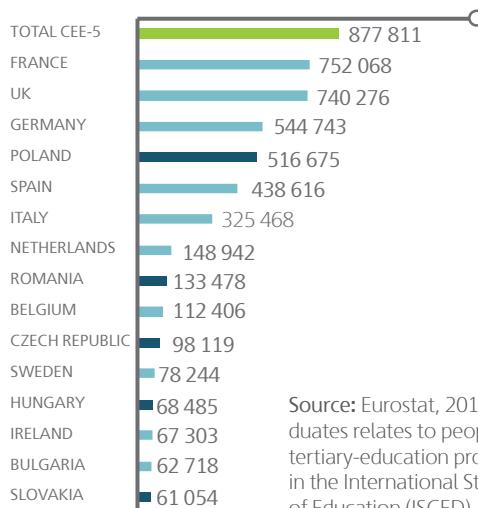
➤ Science and foreign languages as the gateway to a better life

Although most students choose to study social and human sciences, the proportion of people with technical degrees is relatively high in CEE, especially in Poland. Moreover, the educational boom incentivized people to learn foreign languages. Knowledge of a foreign language is treated by young people as the gateway to a better future, which explains the fact that the proportion of people aged 25-34 speaking at least two foreign languages in CEE is higher than the EU average – 27% in CEE vs. 26% in the EU.

FIGURE 28

Number of graduates

CEE has more young people leaving university and other higher education institutions than Italy and Spain combined.

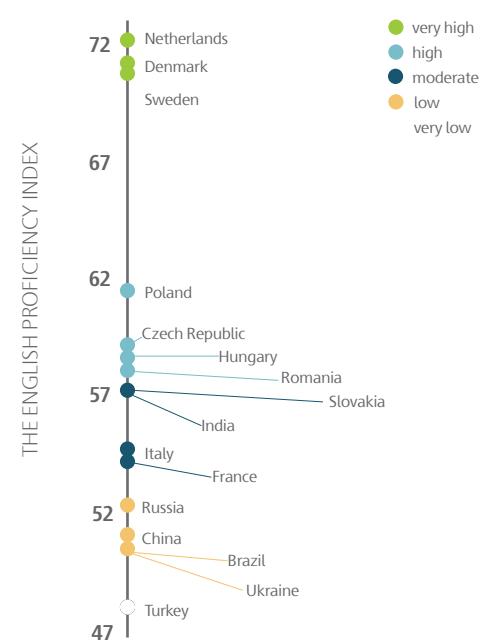


Source: Eurostat, 2015; number of graduates relates to people who graduated tertiary-education programs at levels 5-8 in the International Standard Classification of Education (ISCED)

FIGURE 29

High English proficiency

CEE scores highly – higher than many Western European countries and higher than Brics.



Source: English Proficiency Index, 2016

► The education miracle in Poland

The education boom is most visibly demonstrated by the high number of students, but there have been very important trends in the mid-level of the education system which will lead to long-term consequences for worker productivity. Since early 2000, Poland has made enormous progress in secondary-education outcomes, drawing the attention of education specialists around the world. According to the Programme for International Student Assessment (PISA), which assesses the mathematics, reading and science competencies of 15-year-olds in more than 60 countries every three years, between 2000 and 2015, Poland advanced from below the OECD average to a level comparable with Germany and Finland.

World Bank economists reckon that "Poland serves as an example in Europe and globally of how to modernize education to equip the next generation with good fundamental cognitive skills needed for 21st century jobs".

It is worth noting that pupils who took PISA tests in the last decade have recently entered or will soon enter the labor market. Therefore, the economy is yet to reap the benefits of this mid-level revolution.

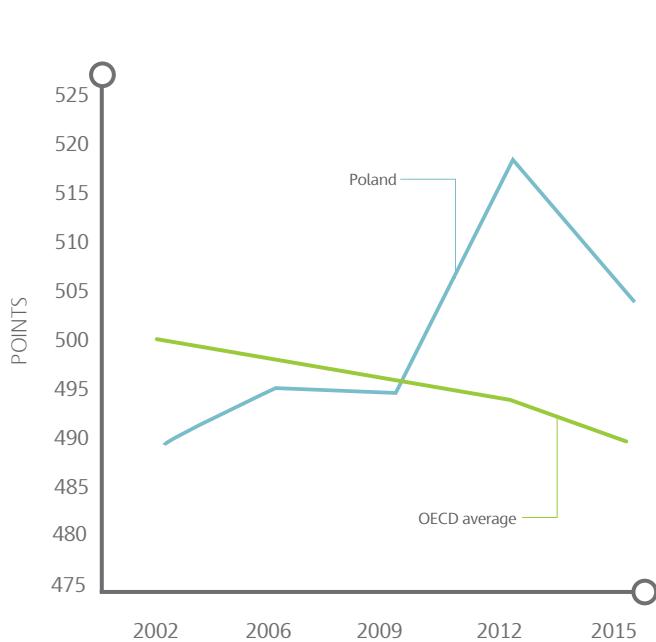
► Highly skilled adults in Czech Republic and Slovakia

Both countries have outstanding results in the OECD survey measuring adult literacy and numeracy. Among developed countries, only Japan, the Netherlands and Norway score higher.

FIGURE 30

Outstanding pupils in Poland

PISA score in math. This is one of the most observed surveys of the educational performance of young people worldwide.

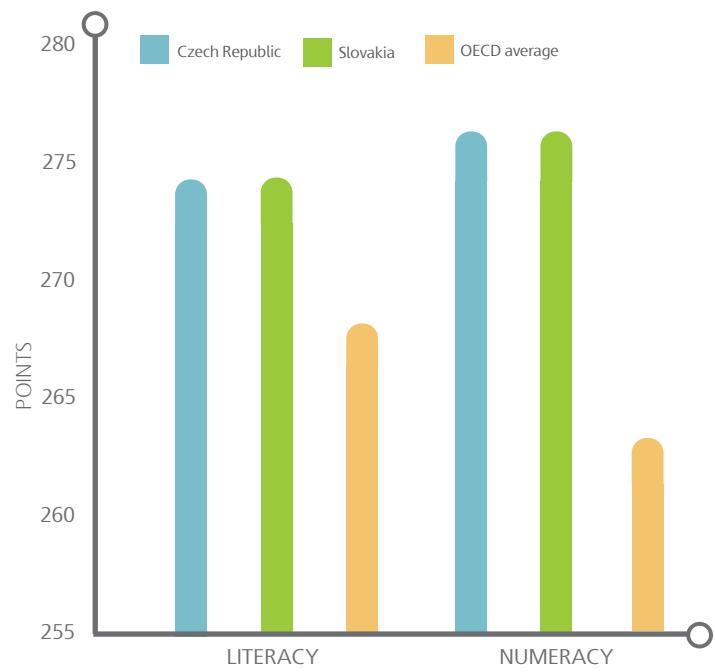


Source: OECD PISA, 2015

FIGURE 31

Outstanding adults in the Czech Republic and Slovakia

Adults' proficiency in key information-processing skills was measured by OECD survey.



Source: OECD Survey of Adult Skills, 2015



C CEE IS ATTRACTING WORKERS FROM EAST AND WEST

➤ Immigration boom

Since 2014, the number foreign workers in Poland has risen sixfold. Most immigrants came from Ukraine, where the war in Donbas pushed the economy into a very deep recession. However, there has been also an evident increase in the inflow of workers from other European countries, both eastern and western. In large cities and foreign companies wages in Poland are often attractive to young people from southern European peripheries, where stricken labor markets make it very difficult to find a job.

➤ Source of highly-educated labor

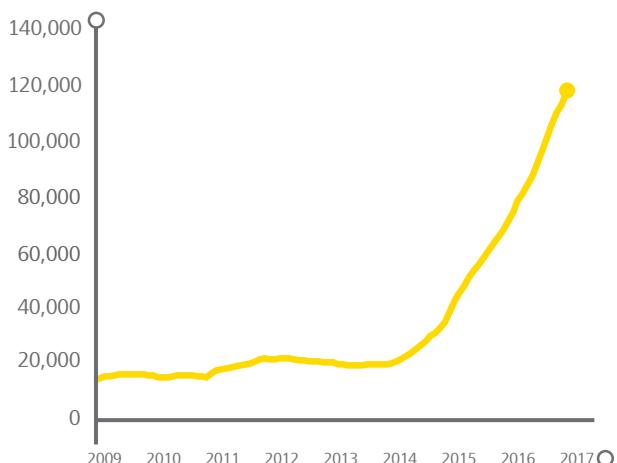
Almost 50,000 Ukrainians work in office jobs in Poland and almost 10,000 work as professionals. These figures challenge the stereotype of immigrants from eastern Europe being employed in only menial, low-paid jobs.

➤ International environment

Most business services centers in CEE employ people from various countries and continents. This is why the sector grows faster in cities which offer a high quality of life. For skilled workers, wages are only one component of job satisfaction – others are the general quality of a workplace and attractiveness of the cultural environment.

FIGURE 32

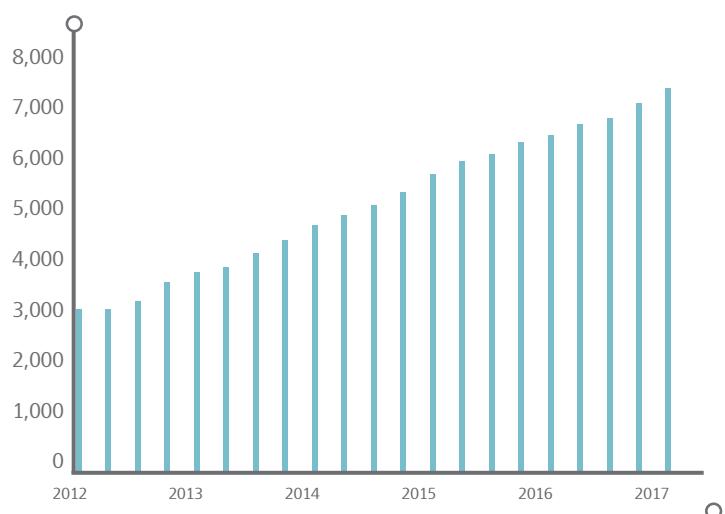
Number of Polish employers' notifications of hiring an employee from Eastern Europe



Source: Ministry of Family, Labor and Social Policy in Poland, 2017; 12-month average

FIGURE 33

Number of people from EU southern peripheries (Italy, Spain, Greece and Portugal) with social insurance in Poland



Source: Social Insurance Company (ZUS), 2017



Bratislava, Slovakia

A city of innovations



Development

Not as glamorous as other CEE cities, Bratislava tops the list when it comes to GDP per capita. Moreover, this is the only capital in the region where the euro is the official currency.



CEE's Silicon Valley

According to The Financial Times, Bratislava has very high technological ambitions and hopes to become the center of a regional start-up hub called The Danube Valey. "The Slovak capital, whose medieval churches and cobbled streets bear scarce resemblance to the sprawl of San Francisco, is part of a network of cities in this region that hope to become central Europe's answer to Silicon Valley" - wrote The Financial Times in June 2017 (1).



BRATISLAVA

1. A.Spisak, "The Danube Valley: central Europe's answer to Silicon Valley", The Financial Times, 6 June 2017



Budapest, Hungary

Paris of the East



Place for creativity

The Hungarian economy is gradually returning to dynamic growth and its capital city manage to build a unique environment for young, skilled and ambitious people. Forbes ranked Budapest as one of the top five start-up hubs in Europe (1). CBRE put the city at the seventh place in Europe for new technology companies and innovations (2).



Animated metropolis

„Post-Iron Curtain Budapest has emerged as an animated metropolis. An appealing, youthful energy increasingly arises in the city” – wrote The New York Times in January 2017, recommending Budapest as one of the best places to visit this year (3). Budapest competes with Prague for the top spot on the list of most attractive tourist destinations in CEE. Its architecture, liveliness and wide variety of cultural and culinary attractions make it a city which is sometimes dubbed “the Paris of the East”.



1. A.Coleman, "Five Entrepreneurial Places In Europe Where Hub Things Are Happening", Forbes, 21 June 2015
2. "Understanding European Technology Clusters", CBRE, 2016
3. "52 Places to Go in 2017", The New York Times, 4 January 2017



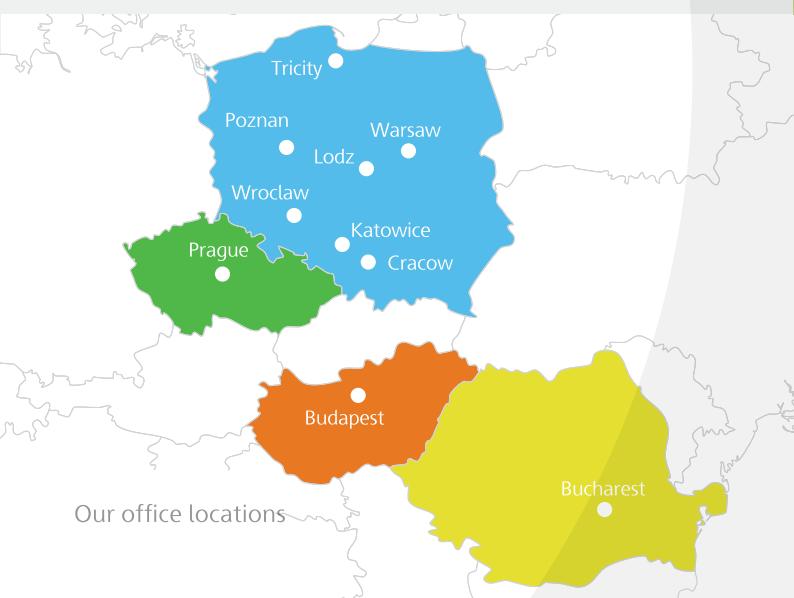


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