Sunday Wrap

Happy Sunday,

On Thursday and Friday, European leaders will meet in Brussels to discuss the single market, industrial policy and digital transformation, as well as a host of foreign-policy issues, including relations with China and tensions with Turkey, Russia and Belarus. The summit should have taken place this past week, but was postponed after Council President Charles Michel had to go into quarantine after having been exposed to someone who later tested positive for COVID-19.

I'll focus today on the part of the discussion that touches on the two big pan-European policy initiatives embedded in the massive – and hopefully game-changing – Next Generation EU plan, namely a serious upgrade of European digitalization and an accelerated agenda for climate-change policies. Both will be partly financed by the commonly borrowed EUR 750bn and disbursed on the back of pretty specific national policy commitments in these two areas. Several countries, including Germany, France and Italy, have already published draft plans.

The challenge posed by these two policy priorities differs in one distinct way: In digitalization, while Europe is no different to other big economies in terms of the application of technology, we are hopelessly behind in the development of the technology and are therefore at the mercy of US and Chinese companies (and their states) in cutting-edge areas and their application, as well as the control of the information that flows with it. This raises huge security issues for individuals, corporations and states in Europe. In contrast, in climate change, Europe is already a global leader, but as the urgency of more-effective measures to turn the global economy onto a sustainable path increases, the need for a leap forward has become obvious.

To achieve such a leap forward in climate change, we'll need more advanced and widespread use of technology and digitalization. As Dean Martin and Frank Sinatra pointed out already some 65 years ago: "You can't have one without the other" (although I believe they may have been referring to something else).

Here's my agenda:

- **I'll first summarize how Europe fell so drastically behind the US (and now China) in the development of digital technologies, which – of course - sets the stage for how to fix it.**

- **I suggest a four-pronged approach to catching up: 1. create a level playing field for the technology sector, including between foreign companies operating in Europe and European ones; 2. Develop a clear-eyed industrial policy with public financing (we are almost there), 3. Make the necessary adjustments to financial markets to encourage private financing of the sector, and 4. strengthen Europe's educational programs to generate and attract the necessary talent.**

- **On climate change, where Europe is already a leader, it will be primarily a matter of relative priorities that will create winners and losers. Long-term objectives have been articulated, but the means by which to get there also need to be articulated as long-term policy commitments, so that the private sector, companies, households and capital markets alike can adjust.**

1. How Europe ended up with such a big gap in IT developments.

The US government's role in the development of computer technology during the Cold War, and how it fueled Silicon Valley, is well documented. Meanwhile, of course, for several years, Europe was at the forefront in other tech areas, including mobile telephony. But no more. During the last 10-15 years, US firms have come to completely dominate digital developments, with a few Chinese companies providing the only real – if still marginal - competition. Most European start-ups in the tech arena now get scooped up by the US giants before they establish anything beyond a marginal competence.

The key drivers of this stunning development can be summarized as follows – and I forewarn you: In my assessment, it's as much a story of misguided European policies as it is about US genius.

First, recall the roughly ten years leading up to the great financial crisis in 2008, when global interest rates kept falling, driving investors towards riskier assets. US and European equities performed well, and broadly similarly, but the real story was China and the rest of the emerging-markets universe, which were enjoying the vast outperformance of the EM equity indices. By 2015, Ben Bernanke explained this global phenomenon with the "Global Savings Glut", pointing to the huge savings surpluses in particularly China and Germany. As he argued, the "excess saving" was the key driver of lower global interest rates and the equity rally.

I'll argue that the past 10-15 years' US equity outperformance relative to both Europe and EM – and particularly for IT – is based on the same phenomenon, namely a global savings glut. However, while China (and Germany) was the key source of Bernanke's Savings Glut, the past ten years' market developments have been driven largely by the shift to fiscal austerity in the eurozone – which, as you know, was a key response to the eurozone sovereign crisis.

In a nutshell, while the eurozone ran a broadly balanced current account during the decade leading up to the sovereign debt crisis (although with huge differences between big surpluses in Germany and the Netherlands and huge deficits in e.g, Spain, Portugal and Ireland), the European sovereign crisis led to massive fiscal tightening in the eurozone periphery, which – along with a substantial weakening of the euro – turned every single eurozone country, with the exception of France, into a current account surplus country (while the already large surpluses in Germany and the Netherlands became astronomical). As a result, with a current account that went from being broadly balanced to a sizable surplus, the eurozone became – by definition – a major capital exporter, and has remained so for the past ten years.

And where did the eurozone capital export go? Well, money is fungible, but with global interest rates continuously compressed by central bank purchases of safe assets, and the shine having gone off EM, the US corporate sector became the natural beneficiaries (where else could it go?) – some in terms of equity investments, some as debt financing to typically lower rated companies, providing liquidity, which the US corporates then used to an impressive extent to buy back shares and for M&A, both fueling US stock markets.

In my opinion, this is the macro underpinning of the past ten years' relative equity performances, but it does not explain the sector allocation, of course. And the tech sector has certainly been exciting. My colleague Michael Rottmann never tires of showing me his wonderful charts of market performance with important events marking the turning points. One of his favorites is the S&P500 index over the FTSE All World excluding the US, with small arrows indicating the date of the sale of the first iPhone in June 2007 and the opening of the first Apple store a year later. And yes, those are clear turning points for this relative stock market index when US shares began their run of global outperformance.

During the eleven years from the beginning of 2009 until the end of last year (before COVID-19 turned the world upside down), the S&P 500 rose 263% while the STOXX Europe 600 increased by a modest 81%. And most of the US outperformance was indeed driven by the Information Technology sector. Excluding the so-called FANGs and other dedicated tech companies, the S&P 500 gain was a more moderate 179%, but still much better than the broader European indices.

Of course, as my colleague Christian Stocker argues, the underperformance across European companies is broader than the tech story. Beyond tech, the US outperformance was centered around the health care and consumer discretionary sectors (the latter includes Amazon!), as well as – to a lesser extent – financials.

But the European role in fueling the American tech industry goes further. A small number of eurozone members – particularly the Netherlands, Ireland and Luxembourg – supported the sector by offering foreign companies absurdly advantageous tax deals; tax avoidance schemes picked up by US tech companies like no other. In 2019 alone, according to BEA research (hat-tip to Brad Setser), profits in US companies' FDI in the Netherlands amounted to USD 85bn, in Ireland to USD 63bn and in Luxembourg to USD 40bn. In comparison, US companies' FDI in Germany, France and Italy combined, reported profits of only some USD 10bn. It really does not take a genius to figure out what's happening here. To put it bluntly, why are these three small European countries subsidizing American tech? And how can this be acceptable to anyone else in Europe?

2. How to catch up: Europe needs a multi-pronged approach to digitalization:

Let me now turn from the problem to the solution – and I have good news. Precisely because so much of the technology gap is rooted in misguided European policies, the solution can be found "at home".

I first go back to my point that a lot of the financing of US corporates these past ten years came – directly or indirectly – from eurozone fiscal austerity. Not only did the fiscal tightening in Europe lead to the big savings surplus that was (again, by definition) exported rather than invested in Europe, the austerity was generated by deeply troublesome policy choices to achieve the fiscal tightening, namely primarily by cutting public investment and refraining from allocating additional resources to education.

Consider this: As a share of total investment, public investment in the eurozone has been declining every year since peaking at almost 18% in 2009 (admittedly, that year was boosted due to a big chunk of the denominator, namely private investment, suffering after the crisis), down through the longer run average of around 15% to less than 13% last year. At the extreme, in Germany (under self-imposed fiscal austerity), the ratio fell from just 12% in 2009 to barely more than 10% in 2014, but has since edged up to a still dismal 11.5%. For more than ten years, net public investment in Germany has been negative, i.e. the public sector did not even replenish the country's public sector capital stock in spite of population growth and globalization – and despite negative nominal funding costs in recent years!

In addition, public spending on education in the eurozone has remained broadly unchanged as a share of GDP in spite of the obvious need to prepare the entire population for a globalized and digitalized world. According to OECD data, public spending on primary through tertiary education has remained virtually unchanged at around 3.5% in Germany, Italy and Spain, and 4.5% in France and the Netherlands, compared with Sweden, for example, where it has increased to 5%. The US and the UK each spend about 4.1% of GDP, but in both of these countries, private spending on education adds roughly 1.5% of GDP to total spending on education, compared with typically no more than 0.2-0.4% of GDP in continental Europe.

A U-turn in European fiscal policy is therefore critically important – and it seems to be under way, generated by the massive "Next Generation EU plan". But as I'll argue below, in addition to the EU-financed priorities, further national fiscal efforts are needed. And yes, it's not only affordable, but a remedy for the underlying problem. While fiscal austerity possibly could be defended in the past of dual deficits (fiscal and current account), that is no long the case. Today, with massive current account surpluses (reflecting huge private savings surpluses) it is indeed the role of public policy to counter with equally substantial savings deficits to bring the current account (and hence the capital export) back towards balance.

So, on that note, here is my four-pronged suggestion. Without a doubt, the road is long, but that only emphasizes the need to act now!

First, a level playing field for responsible companies needs to be established. This needs to include a proper single market for services, and it needs to include fair taxation and accountability among all companies for their impacts on society. On taxation, the EU tax havens need to be addressed. Urgently!

And, as I have also written before, a minimum degree of accountability also needs to apply to social platforms. In this respect, this past Wednesday brought good news when the US Department of Justice – finally – sent draft legislation to Congress to (partly) address this issue. The draft aims to hold social media platforms, including the likes of Facebook, legally accountable if they facilitate the circulation of material that may lead to harmful activity. The draft legislation does not go nearly far enough for my taste, but it's a start. Europe needs to take this further.

Likewise, Europe should demand that foreign companies operating in Europe must do so independently of their state's security services in a way that can be verified. German newspaper reported this past week that a change in German policy is on its way to provide the German security services with a de facto veto over the use of technology that may pose a risk to the state. I buy the general interpretation that this is a convenient way of blocking Huawei from the 5G rollout in Germany without – officially – making it a political issue. If true, smart move…

Second, Europe needs a well-formulated, clear-eyed policy to encourage and facilitate the development of private businesses in digitalization. Next Generation EU is a great framework and, judged by the policies being articulated in Germany, France and Italy (to tap into the EU money), there is a very good chance that this will be working. In France, for example, the plan is to allocate EUR 11bn to key technologies through support to start-ups and to bridge the gap between the tech sector and the general economy. In all, France is set to increase its annual public support to start-ups by 60%. The Italian plan is broadly similar, but also includes a number of incentives for green investments.

Third, to help finance it all, on top of the EUR 750bn EU money, a small step was taken this past week when European Commissioner Valdis Dombrovskis announced a (sort of) relaunch of the Capital Markets Union. Lots of details are still missing, but common supervision for all market participants is a cornerstone. This would be one major step in the right direction to unleash risk-willing capital across the EU to finance, e.g. start-ups. Related to this, in a piece in Handelsblatt this past week, Bundesbank board member Sabine Mauderer called for a proper capital-markets union to facilitate a move towards more risk-willing capital and (relatively speaking) away from bank loans. As I have argued before, Europe needs to change the relative tax and regulatory incentive structures away from favoring debt over equity to encourage private risk-taking in financial markets.

As I have discussed before, Europe desperately needs a private equity culture to foster the start-ups. Another of my colleague Michael Rottmann's great charts is one on unicorns (i.e. privately held start-ups valued at over USD 1 billion). At the latest count, there were 491 unicorns in the world with a total estimated (and whisper) valuation of about USD 1.5tn. More than half of them (235) are based in the US, with a combined valuation of USD 681bn, followed by 119 in China with a valuation of USD 505bn. In Europe we presently have only 61 unicorns with a combined valuation of USD 133bn, and (noteworthy in this time of Brexit) half of them – and the most valuable – are based outside the eurozone. Within the eurozone, there are just 28 unicorns with a total valuation of USD 45bn. Even if we subtract the USD 46bn for Elon Musk's SpaceX adventure and the USD 140bn for China's Bytedance, Europe remains a dwarf in this game.

Finally, as I have also discussed before, finance ministries across Europe should agree to boost their spending on education by 1-2% of GDP over, say, three years, and on a pan-European level. Why not commit, for example, 0.1% of eurozone GDP (some EUR 12bn) to develop 3-4 world-class European universities dedicated to the interface of digitalization and climate change?

It's time to think big when the hole is easily identifiable, funding costs are low (even negative) and inflation is nowhere to be seen…

3. Climate change: Time to translate targets into policies.

In terms of climate change, European Commission President Ursula von der Leyen raised the level of ambition the week before last when she announced a 55% emissions reduction target by 2030 in order to get to climate neutrality by 2050. And to prepare for the decision of what share of the EUR 750bn will be issued as green bonds (to follow the lead by the German finance ministry), this past week, the ECB announced that they will accept sustainability-linked bonds as collateral for credit operations from the beginning of next year. The Swedish Riksbank announced a broadly similar change.

By setting the pace and attacking on other fronts, the pressure is paying off. Not to be outdone, on Tuesday, Chinese president Xi Jinping pledged that China, currently accountable for 28% of global emissions, will become climate neutral by 2060, after a peak in emissions in 2030.) Needless to say, no details yet.

Given all the grand visions and targets, it's now time to translate them into long-term policy directions. To achieve the targeted reduction in emissions, there will be no way around the need for a carbon tax. A good starting point is the IMF's 2019 Fiscal Monitor, which dedicated the entire volume to this critical need (Fiscal Monitor, October 2019 : How to Mitigate Climate Change).

In my opinion, we need a pan-European carbon tax now, and – to guide the private sector – a firm commitment to raise it gradually, but continuously, for the next ten years to provide the key incentive to switch to alternative and sustainable energy sources. Some of the revenue should be allocated to the alternative sources, some to the most vulnerable parts of society being hurt financially by a carbon tax.

As actual polices are implemented and announced for the future to turn the climate story onto a sustainable path, there will be clear winners and losers. To get a taste of what is likely to be coming, consider this. Following the Fukuyama disaster in 2011 and the subsequent announcement of the German “Energie Wende”, European electricity companies have seen a significant loss of market capitalization. German E.ON and RWE have seen a decline of about two thirds and Electricité de France (impacted by the expected switch away from nuclear power) suffered even more.

In sharp contrast, in the US, where there has been no such political game changer (yet…), American Electric Power gained 70% and Southern Company 40%. But even more impressively, and providing hope, the biggest listed US utility company by market cap, Nextera Energy, which provides sustainable energy generation through wind, solar, and natural gas, has gained a whopping 300% since 2008.

For a deeper discussion of winners and losers of the forthcoming policies aimed at climate change, I have an outstanding team of research analysts at your disposal. A good place to start is this piece by two of them, Julian Kreipl and Matias Dax, this past week: “Green bond and sustainability-linked-bond issuance to accelerate amid stricter EU climate targets”. Here is a link in case of interest: Sector Flash - 23 SEP 2020

I have so much more to say on this, but I’ll leave it as this today. It’s time to move on for my other Sunday dutuies…

Best

Erik

Erik F. Nielsen, Global Head of CIB Research, Group Chief Economist (UniCredit Bank, London)

+44 207 826-1765

erik.nielsen@unicredit.eu

Legal Notices

Glossary

A comprehensive glossary for many of the terms used in the report is available on our website: https://www.unicreditresearch.eu/index.php?id=glossary

Disclaimer

Our recommendations are based on information obtained from or are based upon public information sources that we consider to be reliable, but for the completeness and accuracy of which we assume no liability. All information, estimates, opinions, projections and forecasts included in this report represent the independent judgment of the analysts as of the date of the issue unless stated otherwise. We reserve the right to modify the views expressed herein at any time without notice. Moreover, we reserve the right not to update this information or to discontinue it altogether without notice. This report may contain links to websites of third parties, the content of which is not controlled by UniCredit Bank. No liability is assumed for the content of these third-party websites.

This report is for information purposes only and (i) does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for any financial, money market or investment instrument or any security, (ii) is neither intended as such an offer for sale or subscription of or solicitation of an offer to buy or subscribe for any financial, money market or investment instrument or any security nor (iii) as marketing material within the meaning of applicable prospectus law . The investment possibilities discussed in this report may not be suitable for certain investors depending on their specific investment objectives and time horizon or in the context of their overall financial situation. The investments discussed may fluctuate in price or value. Investors may get back less than they invested. Fluctuations in exchange rates may have an adverse effect on the value of investments. Furthermore, past performance is not necessarily indicative of future results. In particular, the risks associated with an investment in the financial, money market or investment instrument or security under discussion are not explained in their entirety.

This information is given without any warranty on an "as is" basis and should not be regarded as a substitute for obtaining individual advice. Investors must make their own determination of the appropriateness of an investment in any instruments referred to herein based on the merits and risks involved, their own investment strategy and their legal, fiscal and financial position. As this document does not qualify as an investment recommendation or as a direct investment recommendation, neither this document nor any part of it shall form the basis of, or be relied on in connection with or act as an inducement to enter into, any contract or commitment whatsoever. Investors are urged to contact their bank's investment advisor for individual explanations and advice.

Neither UniCredit Bank AG, UniCredit Bank AG London Branch, UniCredit Bank AG Milan Branch, UniCredit Bank AG Vienna Branch, UniCredit Bank Austria AG, UniCredit Bulbank, Zagrebačka banka d.d., UniCredit Bank Czech Republic and Slovakia, ZAO UniCredit Bank Russia, UniCredit Bank Czech Republic and Slovakia Slovakia Branch, UniCredit Bank Romania, UniCredit Bank AG New York Branch nor any of their respective directors, officers or employees nor any other person accepts any liability whatsoever (in negligence or otherwise) for any loss howsoever arising from any use of this document or its contents or otherwise arising in connection therewith.

This report is being distributed by electronic and ordinary mail to professional investors, who are expected to make their own investment decisions without undue reliance on this publication, and may not be redistributed, reproduced or published in whole or in part for any purpose.

This report was completed and first published on 27 September 2020 at 15:49.

Responsibility for the content of this publication lies with:

UniCredit Group and its subsidiaries are subject to regulation by the European Central Bank

a) UniCredit Bank AG (UniCredit Bank, Munich or Frankfurt), Arabellastraße 12, 81925 Munich, Germany, (also responsible for the distribution pursuant to §85 WpHG).
Regulatory authority: “BaFin“ – Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany.

b) UniCredit Bank AG London Branch (UniCredit Bank, London), Moor House, 120 London Wall, London EC2Y 5ET, United Kingdom. Regulatory authority: “BaFin“ – Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany and subject to limited regulation by the Financial Conduct Authority, 12 Endeavour Square, London E20 1JN, United Kingdom and Prudential Regulation Authority 20 Moorgate, London, EC2R 6DA, United Kingdom. Further details regarding our regulatory status are available on request.

c) UniCredit Bank AG Milan Branch (UniCredit Bank, Milan), Piazza Gae Aulenti, 4 - Torre C, 20154 Milan, Italy, duly authorized by the Bank of Italy to provide investment services.

Regulatory authority: “Bank of Italy”, Via Nazionale 91, 00184 Roma, Italy and Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany.

d) UniCredit Bank AG Vienna Branch (UniCredit Bank, Vienna), Rothschildplatz 1, 1020 Vienna, Austria. Regulatory authority: Finanzmarktaufsichtsbehörde (FMA), Otto-Wagner-Platz 5, 1090 Vienna, Austria and subject to limited regulation by the “BaFin“ – Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany. Details about the extent of our regulation by the Bundesanstalt für Finanzdienstleistungsaufsicht are available from us on request.

e) UniCredit Bank Austria AG (Bank Austria), Rothschildplatz 1, 1020 Vienna, Austria. Regulatory authority: Finanzmarktaufsichtsbehörde (FMA), Otto-Wagner-Platz 5, 1090 Vienna, Austria

f) UniCredit Bulbank, Sveta Nedelya Sq. 7, BG-1000 Sofia, Bulgaria. Regulatory authority: Financial Supervision Commission (FSC), 16 Budapeshta str., 1000 Sofia, Bulgaria

g) Zagrebačka banka d.d., Trg bana Josipa Jelačića 10, HR-10000 Zagreb, Croatia. Regulatory authority: Croatian Agency for Supervision of Financial Services, Franje Račkoga 6, 10000 Zagreb, Croatia

h) UniCredit Bank Czech Republic and Slovakia, Želetavská 1525/1, 140 92 Praga 4, Czech Republic. Regulatory authority: CNB Czech National Bank, Na Příkopě 28, 115 03 Praga 1, Czech Republic

i) ZAO UniCredit Bank Russia (UniCredit Russia), Prechistenskaya nab. 9, RF-119034 Moscow, Russia. Regulatory authority: Federal Service on Financial Markets, 9 Leninsky prospekt, Moscow 119991, Russia

j) UniCredit Bank Czech Republic and Slovakia, Slovakia Branch, Šancova 1/A, SK-813 33 Bratislava, Slovakia. Regulatory authority: CNB Czech National Bank, Na Příkopě 28, 115 03 Praha 1, Czech Republic and subject to limited regulation by the National Bank of Slovakia, Imricha Karvaša 1, 813 25 Bratislava, Slovakia. Regulatory authority: National Bank of Slovakia, Imricha Karvaša 1, 813 25 Bratislava, Slovakia

k) UniCredit Bank Romania, Bucharest 1F Expozitiei Boulevard, 012101 Bucharest 1, Romania. Regulatory authority: National Bank of Romania, 25 Lipscani Street, 030031, 3rd District, Bucharest, Romania

l) UniCredit Bank AG New York Branch (UniCredit Bank, New York), 150 East 42nd Street, New York, NY 10017. Regulatory authority: “BaFin“ – Bundesanstalt für Finanzdienstleistungsaufsicht, Marie-Curie-Str. 24-28, 60439 Frankfurt, Germany and New York State Department of Financial Services, One State Street, New York, NY 10004-1511

Further details regarding our regulatory status are available on request.

ANALYST DECLARATION

The analyst’s remuneration has not been, and will not be, geared to the recommendations or views expressed in this report, neither directly nor indirectly.

All of the views expressed accurately reflect the analyst’s views, which have not been influenced by considerations of UniCredit Bank’s business or client relationships.

POTENTIAL CONFLICTS OF INTERESTS

You will find a list of keys for company specific regulatory disclosures on our website https://www.unicreditresearch.eu/index.php?id=disclaimer.

RECOMMENDATIONS, RATINGS AND EVALUATION METHODOLOGY

You will find the history of rating regarding recommendation changes as well as an overview of the breakdown in absolute and relative terms of our investment ratings, and a note on the evaluation basis for interest-bearing securities on our website https://www.unicreditresearch.eu/index.php?id=disclaimer and https://www.unicreditresearch.eu/index.php?id=legalnotices.

ADDITIONAL REQUIRED DISCLOSURES UNDER THE LAWS AND REGULATIONS OF JURISDICTIONS INDICATED

You will find a list of further additional required disclosures under the laws and regulations of the jurisdictions indicated on our website https://www.unicreditresearch.eu/index.php?id=disclaimer.

E 20/1

UniCredit Research* | Macro Research

Erik F. Nielsen
Group Chief Economist
Global Head of CIB Research
+44 207 826-1765
erik.nielsen@unicredit.eu

Dr. Ingo Heimig
Head of Research Operations
& Regulatory Controls
+49 89 378-13952
ingo.heimig@unicredit.de

Head of Macro Research

Marco Valli
Head of Macro Research
Chief European Economist
+39 02 8862-0537
marco.valli@unicredit.eu

European Economics Research

Dr. Andreas Rees
Chief German Economist
+49 69 2717-2074
andreas.rees@unicredit.de

Dr. Loredana Federico
Chief Italian Economist
+39 02 8862-0534
loredanamaria.federico@unicredit.eu

Stefan Bruckbauer
Chief Austrian Economist
+43 50505-41951
stefan.bruckbauer@unicreditgroup.at

Tullia Bucco
Economist
+39 02 8862-0532
tullia.bucco@unicredit.eu

Edoardo Campanella
Economist
+39 02 8862-0522
edoardo.campanella@unicredit.eu

Walter Pudschedl
Economist
+43 50505-41957
walter.pudschedl@unicreditgroup.at

Chiara Silvestre
Economist
chiara.silvestre@unicredit.eu

Dr. Thomas Strobel
Economist
+49 89 378-13013
thomas.strobel@unicredit.de

International Economics Research

Daniel Vernazza, Ph.D.
Chief International Economist
+44 207 826-7805
daniel.vernazza@unicredit.eu

EEMEA Economics Research

Dan Bucşa
Chief CEE Economist
+44 207 826-7954
dan.bucsa@unicredit.eu

Gökçe Çelik
Senior CEE Economist
+44 207 826-6077
gokce.celik@unicredit.eu

Mauro Giorgio Marrano
Senior CEE Economist
+43 50505-82712
mauro.giorgiomarrano@unicredit.de

Artem Arkhipov
Head, Macroeconomic Analysis
and Research, Russia
+7 495 258-7258
artem.arkhipov@unicredit.ru

Hrvoje Dolenec
Chief Economist, Croatia
+385 1 6006-678
hrvoje.dolenec@unicreditgroup.zaba.hr

Dr. Ágnes Halász
Chief Economist, Head, Economics and
Strategic Analysis, Hungary
+36 1 301-1907
agnes.halasz@unicreditgroup.hu

Ľubomír Koršňák
Chief Economist, Slovakia
+421 2 4950 2427
lubomir.korsnak@unicreditgroup.sk

Anca Maria Negrescu
Senior Economist, Romania
+40 21 200-1377
anca.negrescu@unicredit.ro

Kristofor Pavlov
Chief Economist, Bulgaria
+359 2 923-2192
kristofor.pavlov@unicreditgroup.bg

Pavel Sobíšek
Chief Economist, Czech Republic
+420 955 960-716
pavel.sobisek@unicreditgroup.cz

UniCredit Research, Corporate & Investment Banking, UniCredit Bank AG, Am Eisbach 4, D-80538 Munich, globalresearch@unicredit.de
Bloomberg: UCCR, Internet: **www.unicreditresearch.eu**

MR 20/2

*UniCredit Research is the joint research department of UniCredit Bank AG (UniCredit Bank, Munich or Frankfurt), UniCredit Bank AG London Branch (UniCredit Bank, London), UniCredit Bank AG Milan Branch (UniCredit Bank, Milan), UniCredit Bank AG Vienna Branch (UniCredit Bank, Vienna), UniCredit Bank Austria AG (Bank Austria), UniCredit Bulbank, Zagrebačka banka d.d., UniCredit Bank Czech Republic and Slovakia, ZAO UniCredit Bank Russia (UniCredit Russia), UniCredit Bank Romania.