INTERNATIONAL MONETARY FUND

ROMANIA

SELECTED ISSUES

September 2022

This Selected Issues paper on Romania was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on August 31, 2022.

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International Monetary Fund
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SELECTED ISSUES

August 31, 2022

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ROMANIA'S CURRENT ACCOUNT IMBALANCE[1]

A. Introduction

1. Romania's current account has steadily deteriorated over the past decade, although the deficit has been largely financed via FDI and capital transfers. After reaching balance in 2014, Romania's current account fell to -7.0 percent of GDP in 2021, a deficit that is set to remain similarly elevated in 2022. While a large part of the widening in 2021 was due to supply-chain bottlenecks, Romania's current account deficit has been among the largest in the EU in recent years. Nonetheless, imbalances remain significantly smaller than before the financial crisis. The vulnerabilities created by this large external deficit are mitigated by the fact that they have largely been financed through FDI and capital transfers from the EU.

2. A widening fiscal deficit and a rising household share of national income are key drivers of the current account imbalance. The structural fiscal and current account balances have steadily deteriorated in tandem since 2014, consistent with the substantial literature on "twin deficits." The rising share of households in national income is another driver of the current account widening, given the high marginal propensity of households to consume. Meanwhile, cost-based measures point to an appreciating real exchange rate, suggesting an erosion of Romania's external competitiveness.

3. This paper will argue that Romania's external position is weaker than the level implied by fundamentals and desirable policies, but that IMF's standard current account models do not fully capture fiscal policy as a driver. Romania is included this year in the IMF's standard External Balance Assessment (EBA) model for the first time, which finds that the current account in 2021 was about 5 percent of GDP weaker than the level implied by macroeconomic fundamentals and desirable policies. However, EBA and similar current account models do not closely predict Romania's actual current account in twin deficit years, and do not generally find fiscal policy to be a key driver of the current account. To reduce the large share of the current account deficit unexplained by the model (*i.e.*, the residual), this paper will propose an alternative specification for the pass-through of the fiscal balance and argue that increased fiscal deficits may have had a larger impact on the current account deficit than assumed by the standard model. The remaining residual could be largely attributable to Romania's higher household income share, large levels of EU capital transfers and stable long-term financing, along with temporary factors related to the COVID-19 pandemic.

4. The policy priority should therefore be on fiscal consolidation, which should be designed to maximize its impact on the current account. Containing growth in the public sector wage bill, moderating pension increases, and tax reform would reduce demand for imported
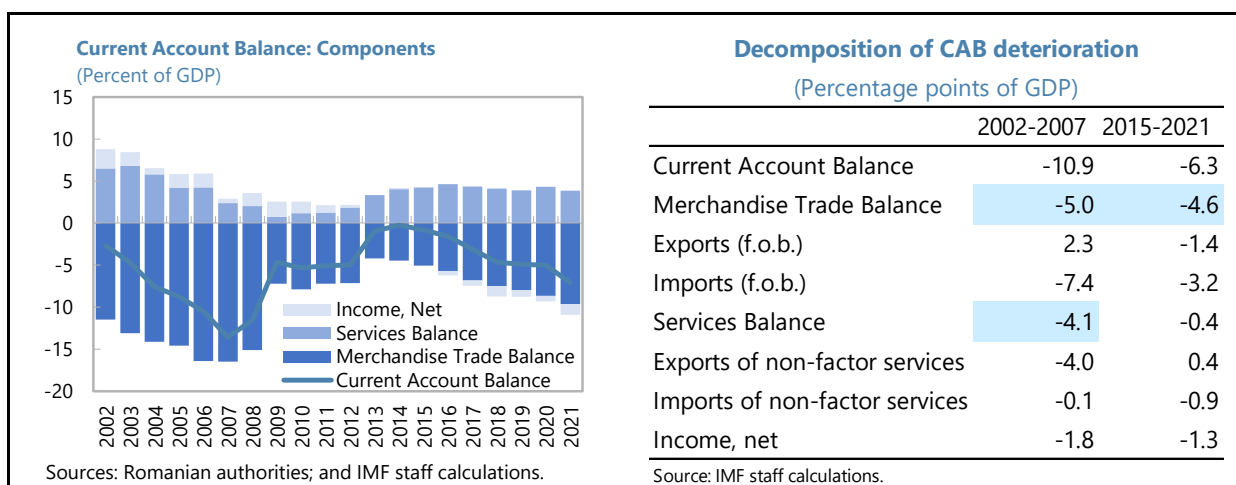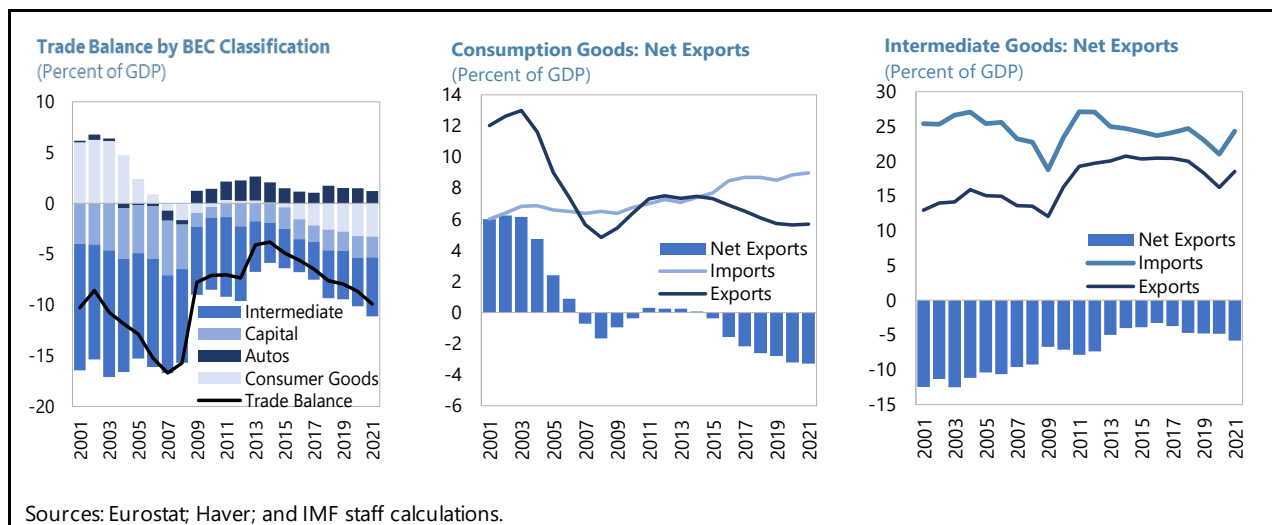
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consumer goods, while maintaining fiscal space for investments to boost Romania's potential growth and international competitiveness. These efforts should be complemented by structural reforms and by greater exchange rate flexibility.

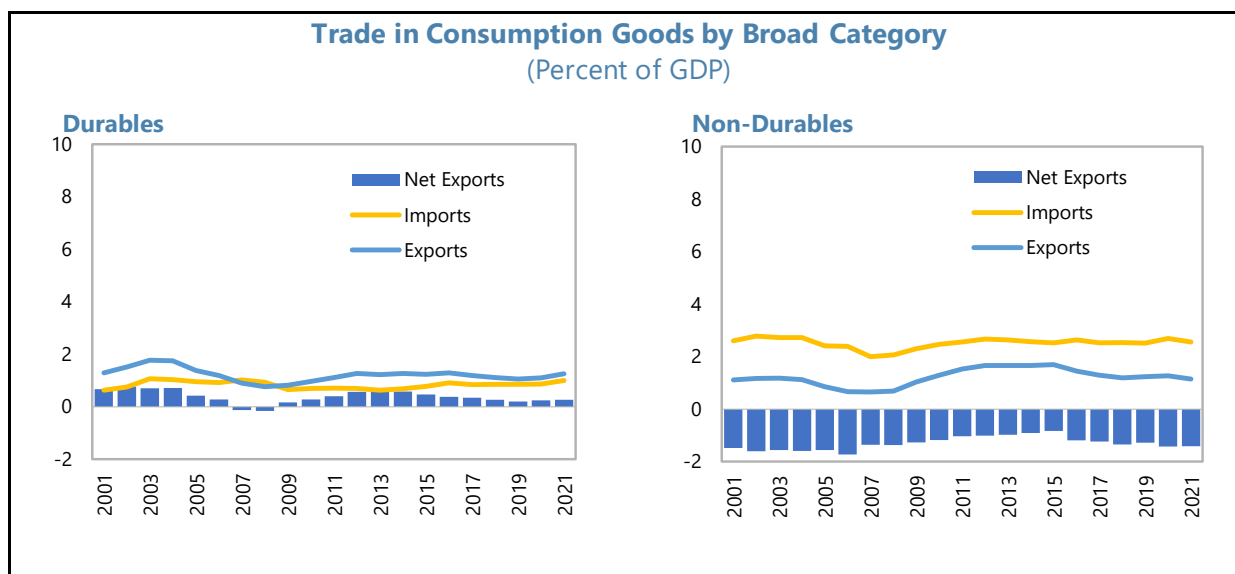## B. Increased Consumer Goods Imports, Loss of EU Market Share

5.   The current account deficit has steadily widened over the past several years, although it remains well below the 2000s peak. After reaching near balance in 2014, the external deficit has progressively widened to 7 percent of GDP (Figure 1). Romania's external deficit is now at the highest level since before the financial crisis, although the central bank estimates that about half of the decline of the merchandise trade balance in 2021 was due to the price effects resulting from supply-chain bottlenecks (NBR 2022). This decline in the trade balance long predates the present crisis, however, and the fall since 2015 has been driven mostly by an increase in imports but also a fall in exports as a share in GDP. Unlike in the 2000s boom, however, the services balance has declined only slightly, and both periods saw a marginal negative impact on the current account from the income balance. Romania's external deficit in recent years has also been substantially larger than regional peers, unlike in the 2000s, when most CEE countries ran substantial deficits.

Current Account Balance: Components
(Percent of GDP)

Sources: Romanian authorities; and IMF staff calculations.

Decomposition of CAB deterioration
(Percentage points of GDP)

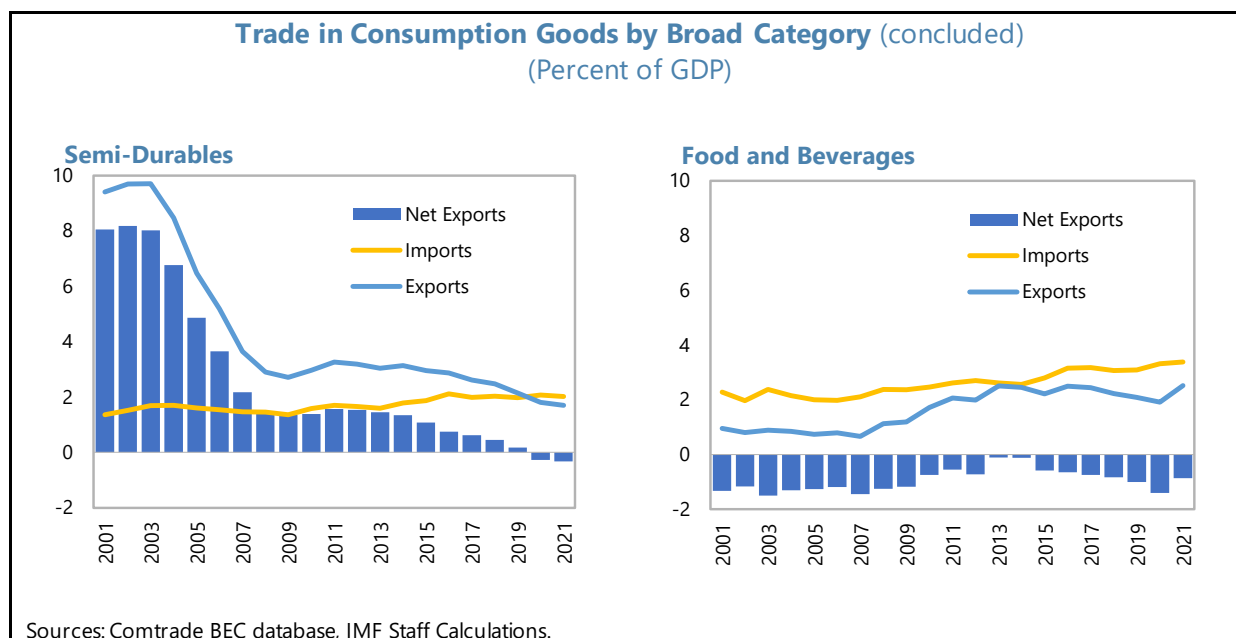|	2002-2007	2015-2021
Current Account Balance	-10.9	-6.3
Merchandise Trade Balance	-5.0	-4.6
Exports (f.o.b.)	2.3	-1.4
Imports (f.o.b.)	-7.4	-3.2
Services Balance	-4.1	-0.4
Exports of non-factor services	-4.0	0.4
Imports of non-factor services	-0.1	-0.9
Income, net	-1.8	-1.3

Source: IMF staff calculations.

6.   The decline in the merchandise balance reflects increased net imports of consumer and intermediate goods, a shift from the 2000s trade deficits. Romania was still a net exporter of consumer goods during most of the previous external deficit increase, and net imports of capital goods were large. Since 2014, however, about half of the change in the merchandise trade balance since 2014 has been driven by net imports of consumption goods excluding autos and gas. Most of the rest has been accounted for by increased imports of intermediate goods, which in Romania's case is mostly made of industrial inputs and parts. Meanwhile, imports of capital equipment have remained virtually unchanged as a share of GDP over the past decade, and well below the peaks seen in the 2000s. In the latter period, capital equipment investments helped establish Romania as a significant exporter of automobiles, and the sector still draws a significant share of inward investment (Scutaru, 2016). The shift in the composition of imports towards consumption goods may have implications for the sustainability of the import surge.

Trade Balance by BEC Classification
(Percent of GDP)

Consumption Goods: Net Exports
(Percent of GDP)

Intermediate Goods: Net Exports
(Percent of GDP)

Sources: Eurostat; Haver; and IMF staff calculations.

7.   The increase in net imports of consumption goods is spread across major categories and reflects a decline in exports as well as an increase in imports. The largest change over the past decade has been in semi-durables, a category that includes most household items. Clothing has seen the largest swing of any product category over the 2015–2021 period with a 2 billion euro decline in the trade balance on a doubling of imports and a fall in exports over this period. Romania has also become a strong net importer of food and beverages. While Romania has the largest agricultural sector as a share of GDP in the EU and receives significant EU subsidies under the Common Agricultural Policy, neighboring countries have a less fragmented agricultural sector and larger food processing capacity (NBR 2018). Durables, particularly automobiles and automotive parts, are now the only major goods category within consumption goods where Romania remains a net exporter.

Trade in Consumption Goods by Broad Category
(Percent of GDP)

Durables

Non-Durables

Trade in Consumption Goods by Broad Category (concluded)
(Percent of GDP)

Semi-Durables

Food and Beverages

Sources: Comtrade BEC database, IMF Staff Calculations.

8.   The decline in the trade balance was driven by a decline in exports, and an increase in imports from outside the EU. Romanian merchandise exports fell by about 4 percentage points of GDP over 2014–2021, mostly on exports outside the EU, with exports of all major categories declining as a share of GDP. Exports to the EU declined only slightly over this period, as a drop in consumer goods exports as a share of GDP was offset in part by increases in automobiles and automotive parts. Imports from the EU were broadly steady over this time, but imports from outside the EU rose by about 2 percentage points of GDP, mostly intermediate goods.
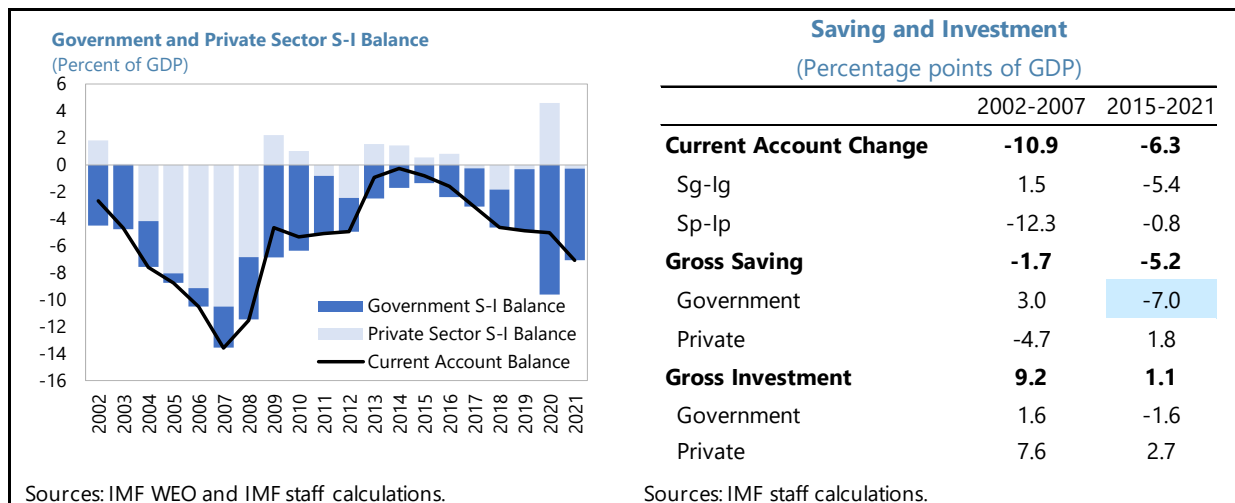
Intra-and Extra-EU Trade Balance
(Percent of GDP)
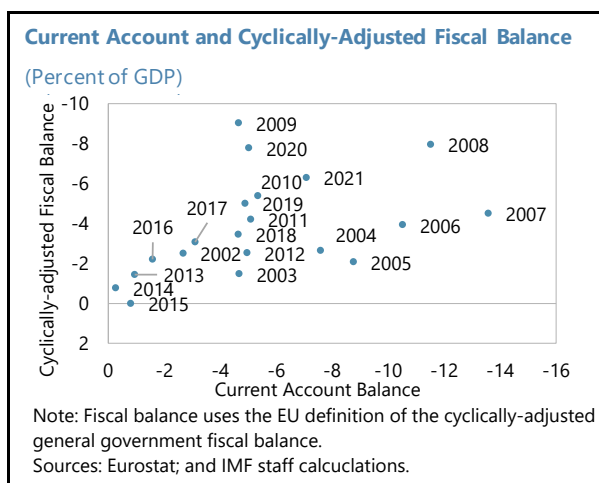
Sources: Eurostat; and IMF staff calculations.

C. Dissaving by Government and Households

9.   A sharp fall in government saving accounts for most of the increase in Romania's current account deficit, while investment remains well below previous peaks. A decline in the government savings-investment balance of 5.4 percent of GDP over the 2015–2021 period, compared with an overall decline in the current account balance of 6.3 percent of GDP. Government savings fell by 7 percent of GDP in this timeframe, and government investment also fell, by 1.6 percent of GDP. Private sector savings and investment both increased (with private sector savings surging during the pandemic), to minimal net effect. This dominance of public sector dissaving contrasts with the 2000s episode of external deficit widening, when a jump in private

investment and fall in savings drove the deterioration in the savings-investment balance amidst a positive output gap.

Government and Private Sector S-I Balance
(Percent of GDP)

Government S-I Balance
Private Sector S-I Balance
Current Account Balance

Sources: IMF WEO and IMF staff calculations.

Saving and Investment
(Percentage points of GDP)

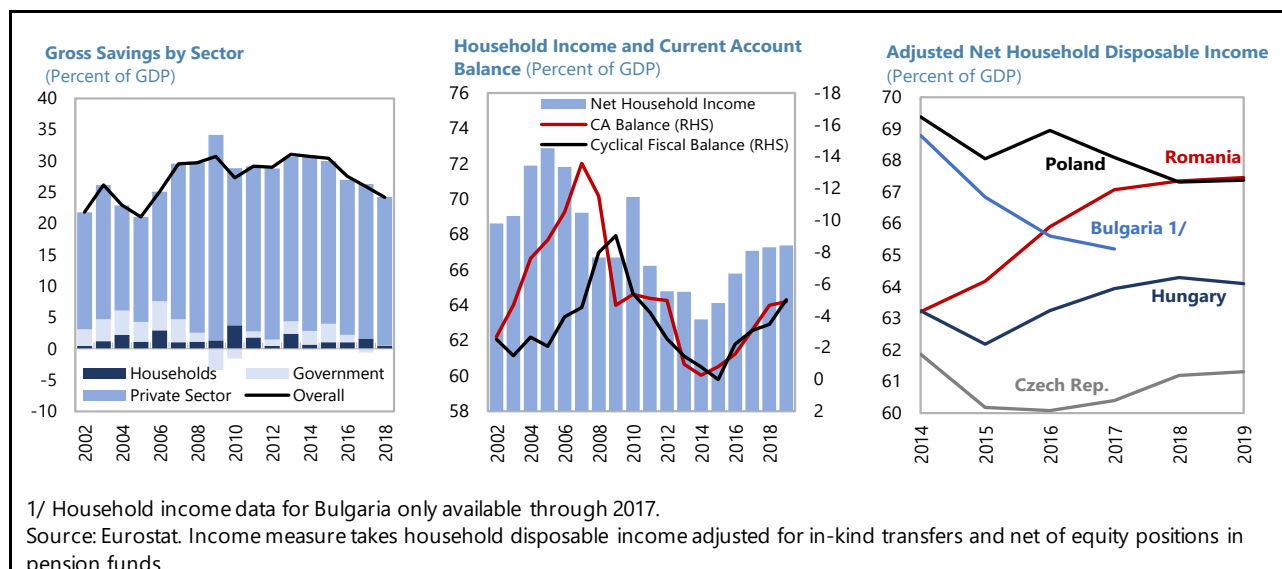|	2002-2007	2015-2021
Current Account Change	**-10.9**	**-6.3**
Sg-Ig	1.5	-5.4
Sp-Ip	-12.3	-0.8
Gross Saving	**-1.7**	**-5.2**
Government	3.0	-7.0
Private	-4.7	1.8
Gross Investment	**9.2**	**1.1**
Government	1.6	-1.6
Private	7.6	2.7

Sources: IMF staff calculations.

10.   Romania has seen a clear pattern of twin current account and fiscal deficits. Romania has seen a close relationship between the size of the cyclically-adjusted fiscal deficit and the external imbalance over the past two decades. Romania's most recent fiscal expansion has been associated with an almost one-to-relationship between the structural fiscal and current account balances: both steadily declined from near balance in 2014–2015 to 6.4 and 7 percent of GDP deficits in 2021, respectively. This "twin deficit" phenomenon is extensively documented in the literature.[2] A fiscal expansion will tend to increase demand, including for (net) imports, unless agents are fully Ricardian, and may have impacts on the real exchange rate, interest rates, or country risk premia. Using a synthetic control method to construct a counterfactual scenario where various budget policy changes since 2015 had not been adopted (including lowering social security contributions and VAT reductions), the National Bank of Romania (NBR) assessed that the fiscal expansion led to a decline of 3.9 percent of GDP decline in the trade balance (NBR, 2019).

Current Account and Cyclically-Adjusted Fiscal Balance
(Percent of GDP)

Note: Fiscal balance uses the EU definition of the cyclically-adjusted general government fiscal balance.
Sources: Eurostat; and IMF staff calcuclations.

11.   The recent fiscal expansion also coincided with an increased share of national income accruing to households. Households in Romania have a much lower propensity to save than the corporate sector (European Commission, 2015), and changes in the household share of income have

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[2] See IMF 2021 External Sector Report, Chapter 2. See also Abbas et al 2011, which finds a range of 0.2 to 0.7 percentage points of GDP pass through to the current account for every 1 percent of GDP increase in the fiscal deficit, and the most current External Balance Assessment specification uses a coefficient of 0.31.
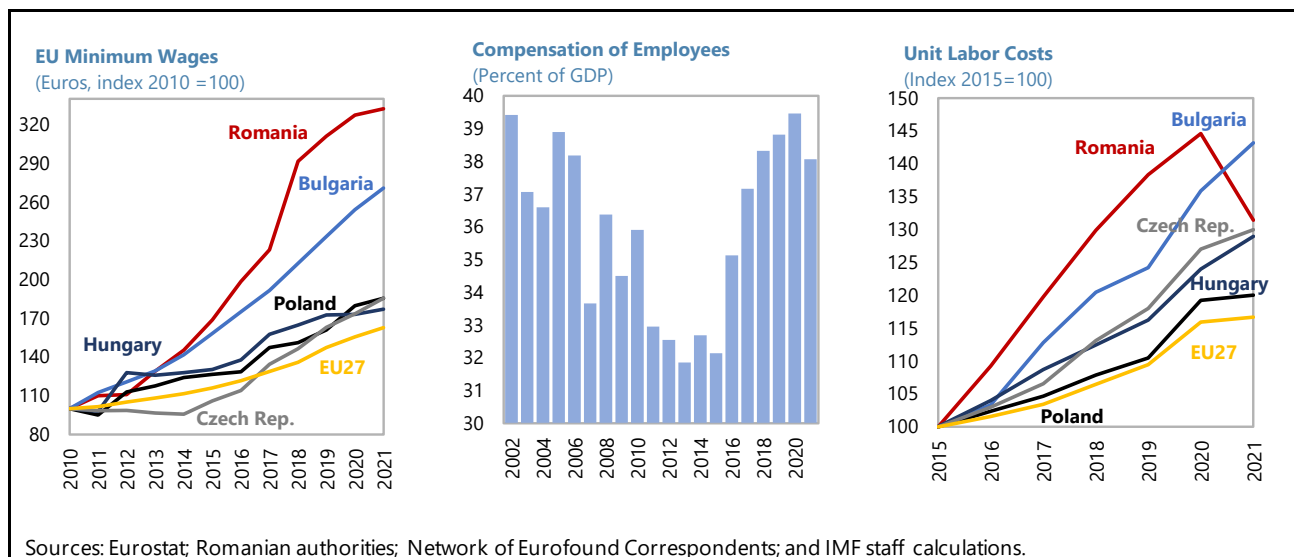
been shown by Pettis (2013) and others to impact the current account. In Romania, after reaching a peak of almost 73 percent of GDP in the mid-2000s, net household income (adjusted for in-kind transfers) gradually fell to about 63 percent of GDP by 2014, closely tracking the narrowing of the current account. Since then, the current account deficit has increased together with the share of household disposable income. Over this period, household income in Romania rose to the largest in the region as a share of GDP, edging out Poland in 2019. This change in the composition of national income was likely a key driver in the fall in national savings, and thus in the increase in the current account deficit.

Gross Savings by Sector (Percent of GDP)

Household Income and Current Account Balance (Percent of GDP)

Adjusted Net Household Disposable Income (Percent of GDP)

1/ Household income data for Bulgaria only available through 2017.
Source: Eurostat. Income measure takes household disposable income adjusted for in-kind transfers and net of equity positions in pension funds.
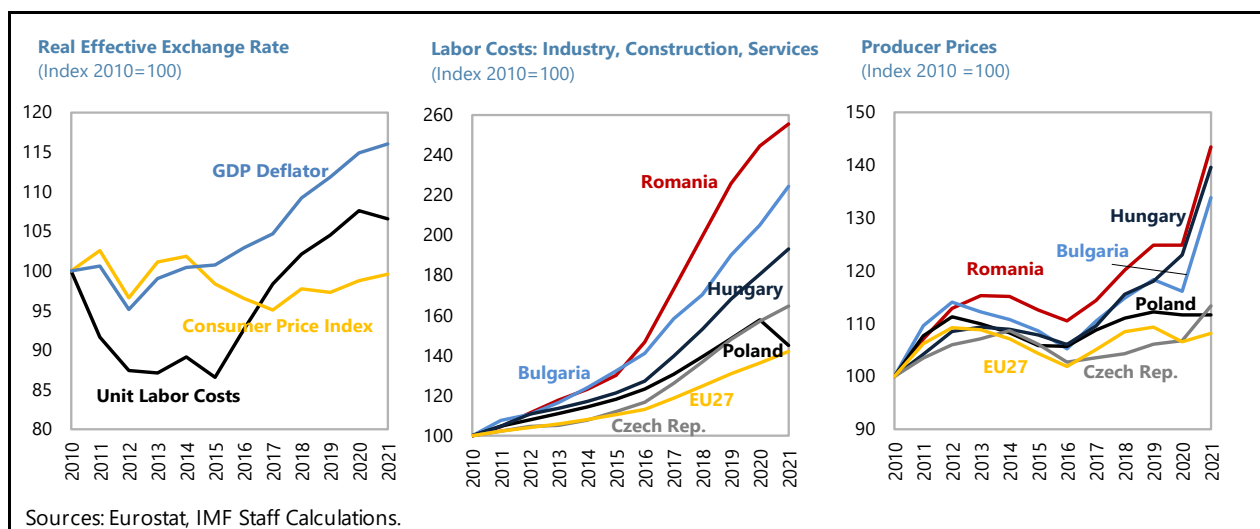
12.   The increased household share of national income may have been driven in part by government policies and contributed to a loss in competitiveness. The years before the pandemic saw wage increases significantly outpace productivity growth, leading to rapid increases in unit labor costs.[3] Successive budgets from 2016 through 2020 significantly increased public wages, which along with several minimum wage increases likely contributed to strong private sector wage growth in the context of a tight labor market. Meanwhile, Romania raised pensions and lowered taxes, notably a VAT reduction in 2015 and lowering the flat income tax from 16 percent to 10 percent in 2018.

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[3] The sharp drop in unit labor costs seen in Romania in 2021 reflects a reclassification of some agricultural labor, but the underlying trend was still that of wage moderation following strong increases through 2020.

EU Minimum Wages
(Euros, index 2010 =100)

Compensation of Employees
(Percent of GDP)

Unit Labor Costs
(Index 2015=100)

Sources: Eurostat; Romanian authorities; Network of Eurofound Correspondents; and IMF staff calculations.
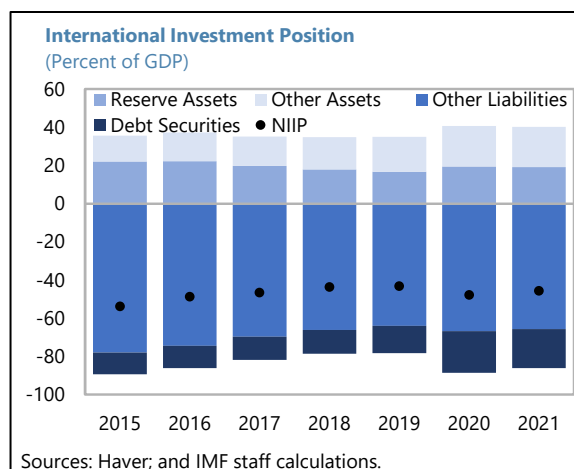
13.   While real exchange rate measures give conflicting signals, measures deflated by domestic cost point to real currency appreciation. The standard CPI-based measure depreciated for several years after 2014 the authorities implemented their fiscal expansion, and tax cuts helped to hold down consumer prices relative to Romania's trading partners. Meanwhile, unit labor costs, after falling early last decade, surged after 2015. The real exchange rate based on the GDP deflator shows a sharp appreciation, with a cumulative 15 percent appreciation since 2010. This measure, based on changes in relative costs on all domestic production, suggests that Romania has lost competitiveness of the past several years. This is confirmed by the producer price index, which shows that Romanian prices rising faster than regional peers. In principle, the real appreciation helped switch expenditures towards imports (tradables) and production from exports to nontradables as domestic demand expanded.

Real Effective Exchange Rate
(Index 2010=100)

Labor Costs: Industry, Construction, Services
(Index 2010=100)

Producer Prices
(Index 2010 =100)

Sources: Eurostat, IMF Staff Calculations.

14.   However, the external balance sheet does not appear to be a major source of risk for Romania's external sustainability. As discussed in Annex IV of the staff report, external liabilities
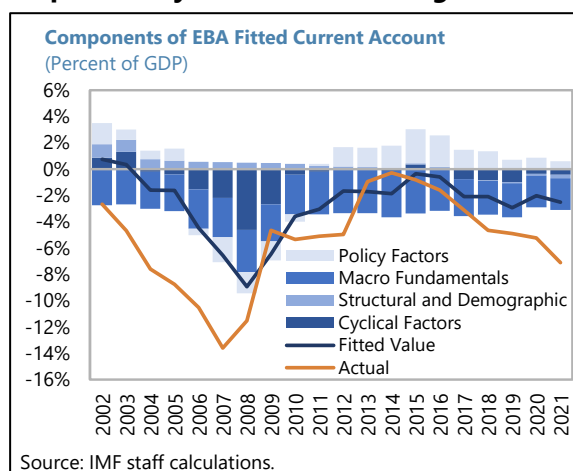
are concentrated in direct and other investment, reducing rollover risk. Moreover, due to the strong growth Romania has seen over the past decade, the international investment position has actually improved since the beginning of the current account widening cycle. While external debt securities (mostly sovereign debt) have doubled as a share of GDP to almost 20 percent, they remain a relatively small but growing share of external liabilities. FDI did drop precipitously during the COVID-19 pandemic, and a large share of foreign investment is structured as intra-company debt

International Investment Position
(Percent of GDP)

Reserve Assets Other Assets Other Liabilities
Debt Securities ● NIIP

Sources: Haver; and IMF staff calculations.

that could be withdrawn in the event of a global shock to the corporate parent.

D. Assessment of the Size of the External Imbalance

15.   Current account models have generally found a significant negative gap between Romania's observed current account and the level implied by fundamentals and desirable policies. The latest External Balance Assessment (EBA) model, applied to Romania for the first time in 2022, finds a cyclically-adjusted current account norm of about -2 percent of GDP for Romania in 2021. The EBA "norm" concept is the estimate of a country's current account absent policy distortions, and is similar to the results of the previous EBA Lite model, which was used in previous external assessments and found a norm of -1.5 percent of GDP for 2020. Box 1 below provides more details on the EBA current account model. A similar methodology used by the European Commission assesses the current account norm to be close to balance. While these models apply somewhat different coefficients and adjustments for cyclical factors and multilateral consistency, they all generate a current account norm that is much closer to balance than seen in Romania over the past few years.

16.   Most of the increased external deficit is unexplained by the model, although the results for 2020 and 2021 are likely impacted by the series of shocks since the pandemic. The EBA "fit" measures how well the model predicts the actual current account based on a country's economic fundamentals and actual policies. The fiscal balance is one policy predictor of the current account, but in Romania's case the effect is small and policy settings overall raise the fitted current account. [4] This creates an imperfect fit between the modeled and actual results during Romania's twin deficit periods. Macroeconomic fundamentals more intuitively lower the fitted

Components of EBA Fitted Current Account
(Percent of GDP)

Policy Factors
Macro Fundamentals
Structural and Demographic
Cyclical Factors
Fitted Value
Actual

Source: IMF staff calculations.

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[4] The fitted current account is based on actual policies in a given country compared to the global sample (see below).

Box 1. Romania and the External Balance Assessment

The EBA model is based on documented drivers of the current account balance, expressed in relation to the world average. The current account model of the EBA builds on the extensive literature on the macroeconomic determinants of saving and investment decisions, and thus to predict what a country's current account balance might be given its macroeconomic fundamentals and desirable policies. Key to the approach is that most regressors are expressed as deviations from the GDP-weighted global average. This implies that, for example, a country's fiscal deficit would only weaken a country's current account to the extent that it is larger or smaller than the world average. This approach ensures multilateral consistency and allows for a decomposition of the effect of a certain policy variable on a given country's current account into its domestic and foreign component.

The latest version of the current account model is estimated for a sample of 52 countries using annual data for the 1986–2019 period. In 2022 Romania and two other countries were added, based on data through 2021. The current account model is estimated using a pooled Generalized Least Squares (GLS) method with a panel-wide AR(1) correction due to the autocorrelation of the current account data. Country fixed effects are not included since they do not provide an economic explanation of observed current account balances and may simply pick up policy distortions that have persistent effects. Similarly, the model does not include the lagged current account, despite its statistical significance, because the goal is to provide an assessment of the desirability of a given current account balance.

Current account determinants are grouped into cyclical factors, macroeconomic and structural fundamentals, and policy variables. The dependent variable is the CA-to-GDP ratio. Together, these variables help "explain" a country's current account position, and isolate policy distortions. Whereas the "fitted" current account reflects the model's prediction of a country's external position given its macroeconomic fundamentals and actual policies, the current account norm is the estimate of what the current account might be under ideal medium-term policies. Because temporary and cyclical factors can substantially impact current account fluctuations, the model accounts for output gaps and commodity terms of trade. Most of the variables described below are lagged, instrumented, and/or are interacted with capital account openness, for more detail see the online annex to the 2022 External Sector Report.

Macroeconomic fundamentals include net foreign assets, output per worker, and expected GDP growth. Countries with negative net foreign asset positions tend to have a weaker current account position, which in Romania's case is an important driver of the predicted current account. The output per worker variable captures the expectation that wealthier countries would export capital to poorer countries by running higher-than-otherwise current account balances. Expected GDP growth, defined as five years ahead, is a measure of expected inward investment, as high-growth countries would generate higher returns to capital. Romania's relatively high expected growth is also a factor in Romania's predicted current account deficit.

Structural fundamentals include demographics, institutional quality, and exhaustible oil and natural gas resources. The age composition of a given country, and the expected need to save for retirement, are key drivers of the current account. Generally, countries with a relatively high share of young or a high share of elderly tend to dissave, while countries with a higher proportion of prime-

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Box 1. Romania and the External Balance Assessment (continued)

aged savers will tend to save more. Moreover, countries save more when prime-aged savers expect to live longer (or have longer retirement periods), and more so when they cannot rely on future generations for old-age support. The net impact of the demographic variables on Romania is small, but over the past twenty years has shifted about 1.5 percent of GDP to a small net negative on the predicted current account, suggesting that an aging society will continue to dissave. The institutional quality variable captures the expectation that countries will stronger institutions are better able to finance current account deficits. This variable, along with exhaustible oil and case resources, are minor in the case of Romania.

Policy variables are the only current account drivers under the direct public control and are key to the normative aspect of the assessment. These variables include fiscal policy, health spending, foreign exchange intervention, and financial excesses. Together, they are used to calculate the "policy gap," which is the estimate of how much a country's deviations from desirable medium-term policies impacts the current account. The fiscal balance is a well-documented driver of the current account, as fiscal deficits promote demand, including demand for imports. In Romania's case, however, the fiscal balance is a net positive to the current account—as the rest of the world was even farther away from its desirable balance in 2021 than Romania was. Health spending is a proxy for the generosity of a country's social safety net, which is an important current account driver because social support reduces the incentives for precautionary savings. Romania's relatively low level of health care spending means that this variable too is a positive contribution to the current account norm. Foreign exchange intervention is not a domestic driver of the current account in Romania, but the country is estimated to have a slightly weaker current account because of the interventions of other countries in the sample. Similarly, the excessive credit variable is a slight drag on the current account not because of domestic policies, but rather reflects the impact of policies of other countries in the sample.

These sets of variables are used to establish EBA norms, which form the main basis for IMF staff external sector assessments. The exchange rate is not included as an explanatory variable, and is implicitly assumed to adjust endogenously to the above-mentioned drivers of the current account. Such norms (and the corresponding gaps) are not necessarily the fitted values of the estimated models: a normative view on the current account or REER requires taking a view on the appropriate (or desirable) level for policy variables. This process is summarized in the accompanying table. First, the predicted or fitted current account of 2.5 percent of GDP is calculated based on Romania's fundamentals and actual policies. From this, the initial EBA norm is calculated, based on the difference between the estimated policy contribution to the current account under actual and desirable policies. Following adjustments for multilateral consistency and cyclical factors, the revised EBA Norm is estimated at -1.9 percent.

The current account gap is then calculated as the difference between this norm and the actual, cyclically-adjusted current account. Romania's actual 2021 current account deficit was - 7 percent of GDP, or -6.7 percent of GDP after cyclical adjustments. The gap between the actual cyclically-adjusted current account and the multilaterally consistency, cyclically-adjusted current account norm of -1.9 percent of GDP is thus -4.8 percent of GDP. The current account gap is then

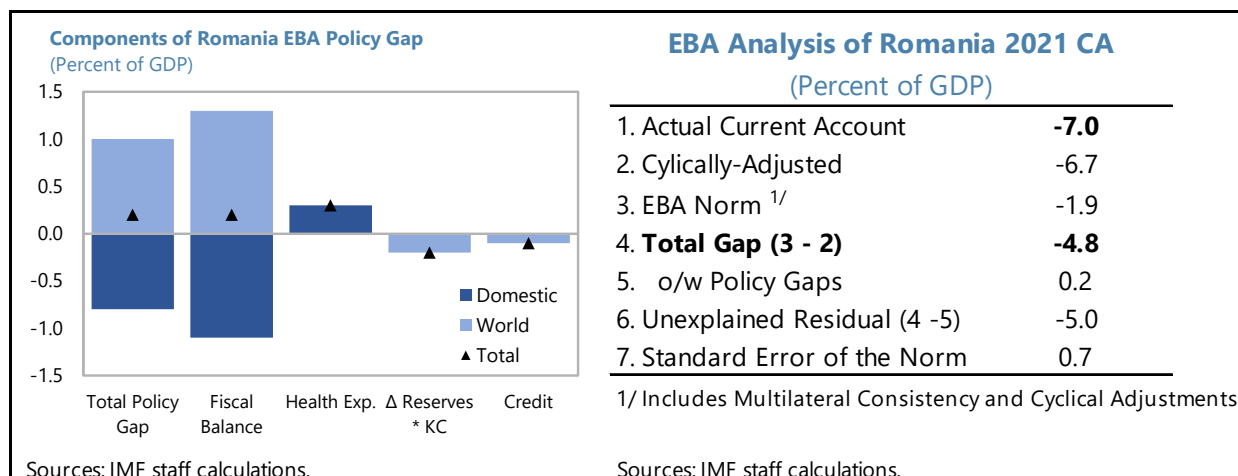**Box 1. Romania and the External Balance Assessment** (concluded)

divided into the portion explained by policy distortions and the unexplained residual. This policy gap is slightly positive for Romania in 2021, which implies that if both Romania and the rest of the world pursued desirable medium-term policies, Romania would have a 0.2 percent of GDP weaker current account than actually observed. This thus increases the unexplained residual to 5 percent of GDP, and is due mostly to the fact that the rest of the world was even farther away from desirable medium-term policies than Romania. A possible reassessment of the policy gaps calculation for Romania is discussed in the main text.

Decomposition of Romania's 2021 EBA CA Norm (percent of GDP)	
Fitted CA:	**-2.5**
o/w:	
NFA	-1.6
Policy Factors	0.6
Demographics	-0.5
Constant	-0.5
Cyclical Factors	-0.4
Institutional Quality	0.3
Expected GDP Growth	-0.3
Others	-0.1
Contribution of Policies at Desirable Levels	0.4
EBA Norm (Fitted - Δ actual and desirable policies)	**-2.7**
Mulitateral Consistency (MC) Adjustment	-2.4
MC Cylically Adjusted Norm	**-1.9**

Source: IMF staff calculations. Preliminary Results.

current account, driven by the negative net foreign asset position. Structural and demographic factors have been marginal but trending towards a lower fitted current account, as an aging population predicted by the model to shift into dissaving is partially offset by a relatively strong institution quality associated with a stronger current account. The gap between the actual and "fitted" account grew wider over 2020–2021, likely to the difficulty in modeling the series of shocks since the COVID-19 pandemic began.

17.   The large residual observed in 2021, and the implication that explicitly modeled factors had no role in generating the large current account deficit, suggest that these results be treated with caution. The EBA concept of "policy gaps" estimates the extent to which the gap between the actual current account and the current account norm implied by fundamentals and desirable policies can be explained by policy distortions. The calculation for Romania is positive, suggesting that if Romania and the global sample had both maintained desirable medium-term policies, Romania's current account would have been 0.2 percent of GDP weaker than actually observed in 2021. This result is driven in part by a positive fiscal policy gap, because while Romania needed a substantial fiscal consolidation, the rest of the world was even farther from desirable fiscal policies. Concretely, Romania's cyclically-adjusted fiscal deficit was 6.7 percent of GDP, compared to a desirable medium-balance of 3 percent of GDP, whereas the global sample stood at 5.7 and 1.6 percent of GDP, respectively. Similarly, in the model, Romania's relatively low health care expenditures suggest an incomplete social safety net that, if bolstered, would reduce the need for

precautionary savings and reduce the current account balance. This result drives the residual to be even larger than the measured current account gap.

Components of Romania EBA Policy Gap
(Percent of GDP)

Sources: IMF staff calculations.

EBA Analysis of Romania 2021 CA
(Percent of GDP)

1. Actual Current Account	**-7.0**
2. Cylically-Adjusted	-6.7
3. EBA Norm [1/]	-1.9
4. **Total Gap (3 - 2)**	**-4.8**
5. o/w Policy Gaps	0.2
6. Unexplained Residual (4 -5)	-5.0
7. Standard Error of the Norm	0.7

1/ Includes Multilateral Consistency and Cyclical Adjustments.

Sources: IMF staff calculations.

18.   The large residuals suggest that there may be current account drivers that are not explicitly modeled, or errors in how the included variables impact Romania. The EBA model uses a coefficient of 0.31 for changes in the fiscal deficit, so that a 1 percent of GDP larger fiscal deficit could be expected to the reduce the current about by 0.31 percent of GDP. This may be too low for Romania for several reasons. First, as Gagnon (2017, 2021) and others have argued, highly open countries and those without capital account restrictions may see larger impacts on the current account from the fiscal balance.[5] Second, Romania's EU membership may have further reduced the dependence of private investment on domestic financial intermediation and encouraged continued inflows by effecting risks perceptions even as public sector financing needs increased. Third, Romania's particular fiscal expansion has served to transfer a significant share of household income from corporates to households with a low propensity to save.

19.   An alternative coefficient of 0.66 for the fiscal deficit and a desirable medium-term deficit of 1.6 percent of GDP could help improve model fit and reduce the residual. Consistent with Gagnon (2017), the charts below assume a coefficient of 0.66 for the impact of the fiscal balance on the current account. These results also set the "desirable" fiscal balance at the world sample level of 1.6 percent of GDP (instead of 3 percent of GDP), to avoid understating the amount of fiscal consolidation needed by Romania compared to the world average. Generating an alternative current account norm ex post is necessarily a simplified exercise, as no adjustment for multilateral consistency is made and other policy variables are held constant. Nevertheless, this adjustment may illustrate the scope for improving the model fit, as the increase in Romania's current account deficit is now explained in part by its growing fiscal imbalance. It therefore also shows the expected sign on the fiscal policy gap over 2019–2021, and generally reduces the residual. Under this alternative specification, most of the current account widening since 2015 is explained by the

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[5] Fiscal policy tends to have a greater impact on the current account under open capital markets (Gagnon 2017). Large fiscal deficits raise domestic interest rates, attracting more private foreign capital and reduce the trade balance when financial markets are open.

increased fiscal deficit, except in 2021 when about half the current account gap remains unexplained—possibly due to COVID-19 factors and supply chain disruptions.

Note: Excludes multilateral consistency adjustments.
Source: IMF staff calculations.
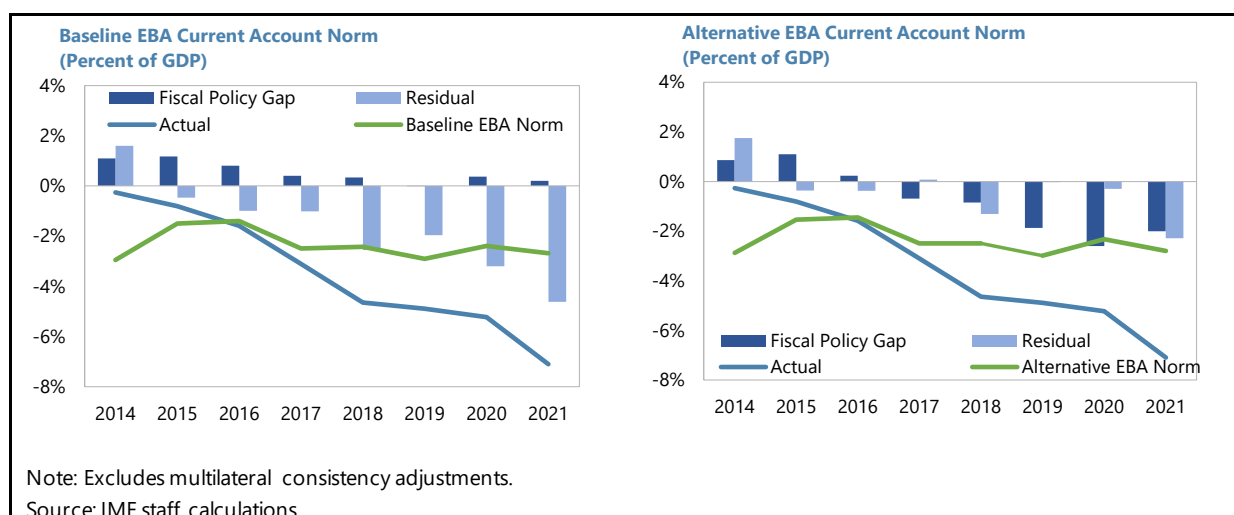
20.   The composition of Romania's current account deficit financing may also impact the size of the current account gap. As discussed above, the financial and capital accounts are dominated by long-term investment, with a concentration in the automotive sector. Capital transfers are also large, and European financing under the Recovery and Resilience Facility stands to raise transfers to Romania to about 2 percent of GDP annually into the medium term. The availability of such unique sources of financing is arguably not fully accounted for in the model.

E. Conclusions and Policy Recommendations

21.   Romania's current account is substantially weaker than explained by fundamentals and desirable policies. Despite accounting for temporary factors related to COVID-19 and supply chain disruptions that contributed to a further widening of the deficit in 2020–2021, several current account models find Romania's external position to be weaker than structural and macroeconomic factors would suggest under desirable policies. Romania's consistently large current account deficits also set it apart from most CEE peer countries, unlike in the previous 2000s period of external deficits.

22.   The EBA current account model however may not capture the full impact of the fiscal deficit on the widening current account imbalance. The increase in the current account deficit in recent years has closely tracked the structural fiscal deficit, both of which moved from near-balance in 2014–2015 to steadily widening deficits through 2021. The relatively low pass-through of fiscal deficits to the current account assumed by the standard models may not be appropriate for Romania given its openness and close integration in the EU. The particular nature of Romania's fiscal loosening over the past several years may have increased the pass-through to the current account further by increasing the household share of national income. An alternative specification of this pass-through reduces the residual in the model and suggests that desirable fiscal policies could eliminate about half of Romania's external imbalance in 2021, with the other half possibly due to temporary COVID-19 related factors, supply chain disruptions, and EU transfers.

23.   The policy priority should therefore be on fiscal consolidation, which could be designed to maximize its impact on the current account. Deficit reduction would reduce demand, including for imports. An accompanying real exchange rate depreciation would help maintain internal equilibrium by switching domestic demand from imports towards nontradables and switching supply towards exports. Containing the public sector wage bill, moderating pension increases, and a broader tax base would likely have the highest pass-through to the current account. These and similar measures proposed by the Romania Fiscal Council could help reduce demand for imported consumer goods, while maintaining fiscal space for investments to boost Romania's potential growth and international competitiveness.

24.   These efforts should be complemented by structural reforms to raise labor productivity and accompanied by greater exchange rate flexibility. Strengthened public investment management would help Romania absorb more EU funding and use both EU and domestic investment funds more efficiently. This, in turn, would raise the quantity and quality of infrastructure, boosting Romania's growth potential. There is also scope for increase productivity via digitalization, strengthening the anti-corruption framework, improving the health and education systems, and reforming SOEs. Reforms in these areas would help ensure that further wage growth does not erode Romania's international competitiveness. Greater exchange rate flexibility over the medium term would complement these efforts.

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REGIONAL DISPARITIES AND CONVERGENCE[1]

A. Introduction

1.   Despite significant convergence to its richer peers, Romania has the second lowest GDP per capita in the European Union (EU), and poverty and inequality remain relatively high. At the same time, since its accession to the EU in 2007, absolute poverty has declined significantly, and relative poverty and the Gini coefficient have also been reduced—unlike in many of its peers in Central, Southeastern, and Eastern Europe in the EU (CESEE-EU) and EU14 countries.

2.   While convergence at the national level has been impressive, the economic development of regions has been uneven. Like in many of its CESEE-EU peers, economic progress has been most rapid in the capital, while other regions have tended to lose ground relative to the economic and commercial center. Moreover, demographic developments—amid an ageing population and at times high levels of net emigration—have also been uneven across regions.

3.   This paper analyzes economic developments in Romania's regions over the last two decades. It takes stock of the convergence process in a number of dimensions, including GDP, broader measures of well-being, and demographics. It then discusses factors that may contribute to economic convergence both within the country and vis-à-vis Western Europe. In doing so, it also provides examples of regional development. The remainder of this paper is organized as follows: Section B summarizes Romania's convergence with the EU14, and Section C outlines regional convergence within Romania. Section D then discusses factors explaining regional convergence, and Section E concludes and offers policy recommendations.

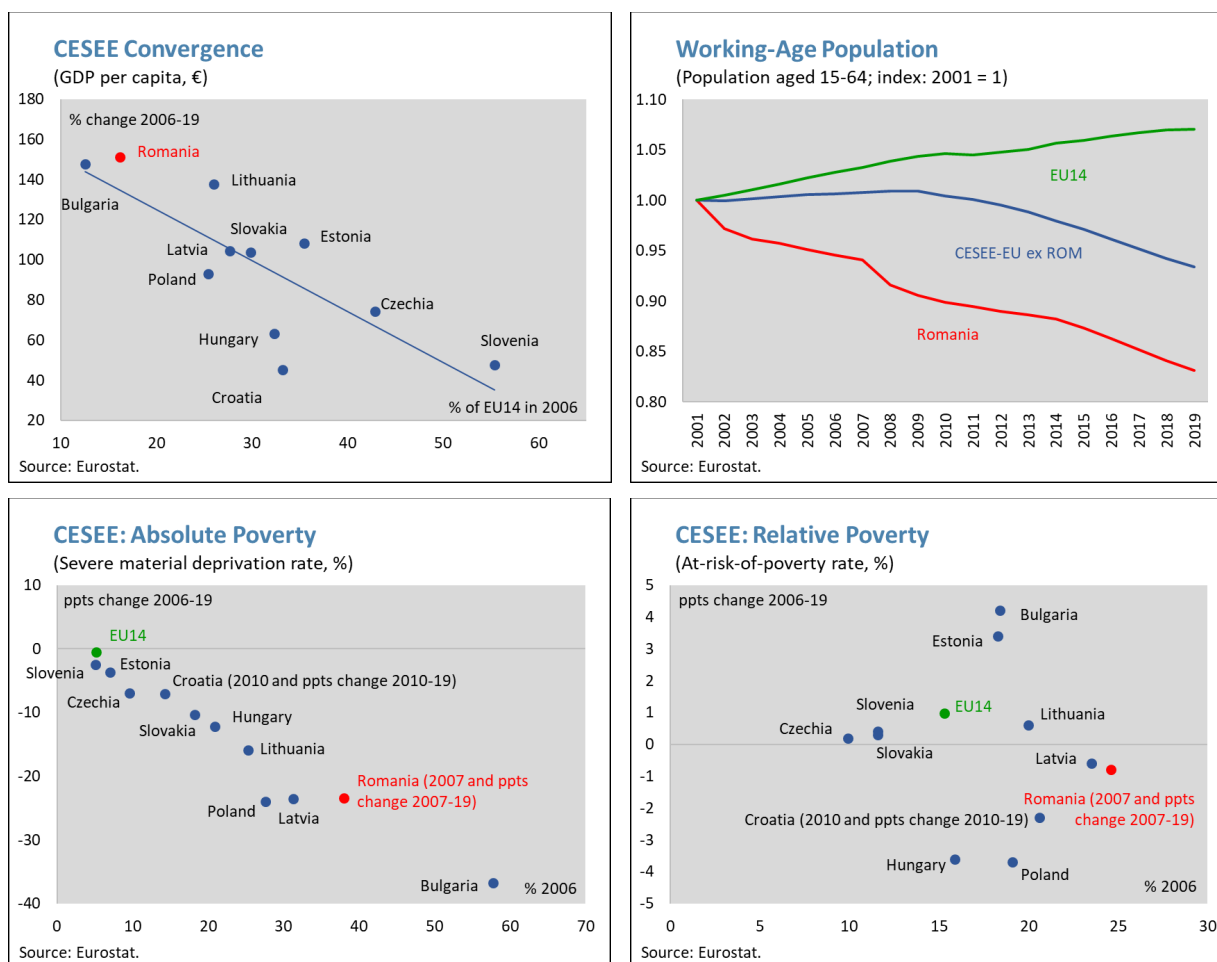## B. Background: Convergence at the National Level

4.   Romania has made impressive gains in converging with Western Europe, but much remains to be done. With per capita GDP at only 16 percent of the EU14 in 2006 (in euro terms), GDP has since grown rapidly, at an average annual rate of 3.6 percent, resulting in GDP per capita of 32 percent of the EU14 average by 2019.[2] This achievement is broadly in line with the experience of Romania's CESEE-EU peers, and all the more remarkable as the working-age population has declined more sharply than in these peers, by 12 percent over the same period.

5.   At the same time, both absolute and relative poverty have declined. While the reduction of absolute poverty is to be expected as GDP and income per capita increase, Romania has also managed to reduce relative poverty, if only by a small amount, and its level remains the second

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[1] Prepared by Alexander Pitt and Wei Zhao.

[2] EU14 are EU member states in 1995, excluding the United Kingdom. Data for 2020 are available for many indicators used in this paper, but given the impact of the Covid-19 pandemic, 2019 is used here to illustrate undistorted longer-term trends.

highest in the EU. Nonetheless, this reduction was achieved at a time when in the EU14 and several of Romania's CESEE-EU peers relative poverty has increased.
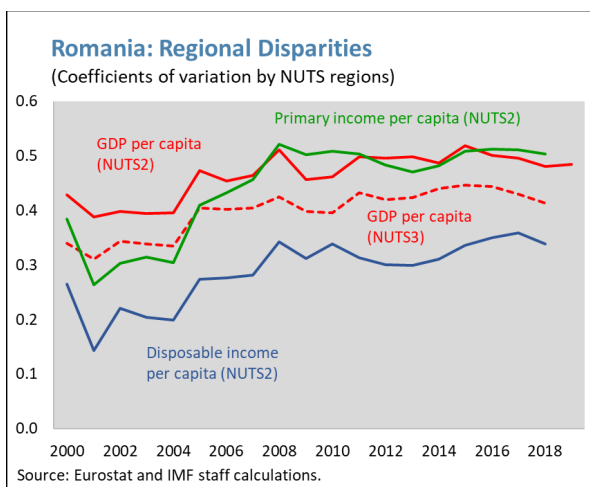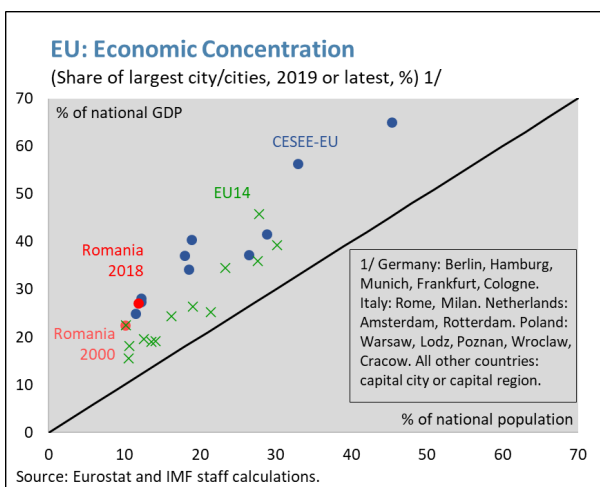

CESEE Convergence
(GDP per capita, €)

Working-Age Population
(Population aged 15-64; index: 2001 = 1)

CESEE: Absolute Poverty
(Severe material deprivation rate, %)

CESEE: Relative Poverty
(At-risk-of-poverty rate, %)

6.   Inequality has also been reduced since EU accession, but remains high. Relative to 2000, when the Gini coefficient was 29, inequality in Romania is significantly higher now. In 2019, the Gini coefficient stood at 35, and remains in the upper range of EU countries. However, it has declined relative to 2007. Since 2007, the redistributive power of the tax and transfer system has not changed significantly overall—it reduces the Gini coefficient from a level of 52 before taxes and transfers to 35 after taxes and transfers. However, redistribution is now relying more heavily on pensions, which in 2019 provided 86 percent of the reduction in the Gini coefficient from before taxes and transfers, compared to 74 percent in 2007. The increase in inequality since 2000 is likely to a significant extent because of the introduction of a flat income tax in 2005 (Mihaescu and Voinea, 2009), which has reduced the redistributive impact of taxation. The shift in the contributing factors may be attributed partly to a reduction of the flat income tax rate in 2018, combined with successive increases of pensions, albeit from a low base.

Inequality
(Gini coefficient in Romania)

Source: Eurostat.

EU: Inequality
(Gini coefficient, 2019)

Source: Eurostat.
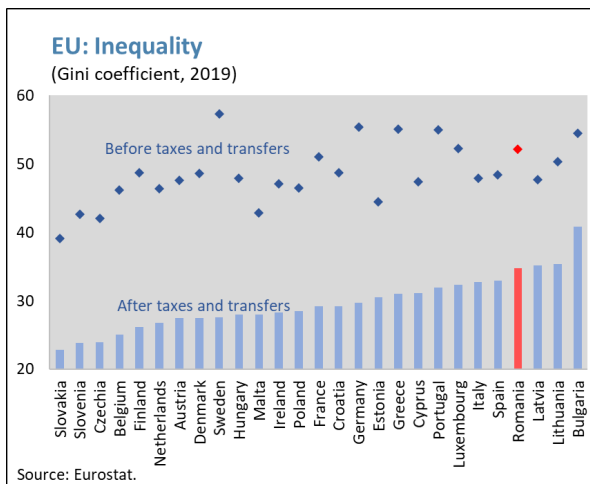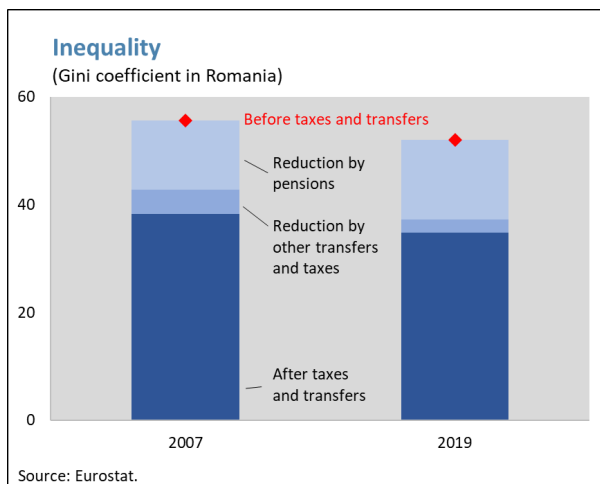
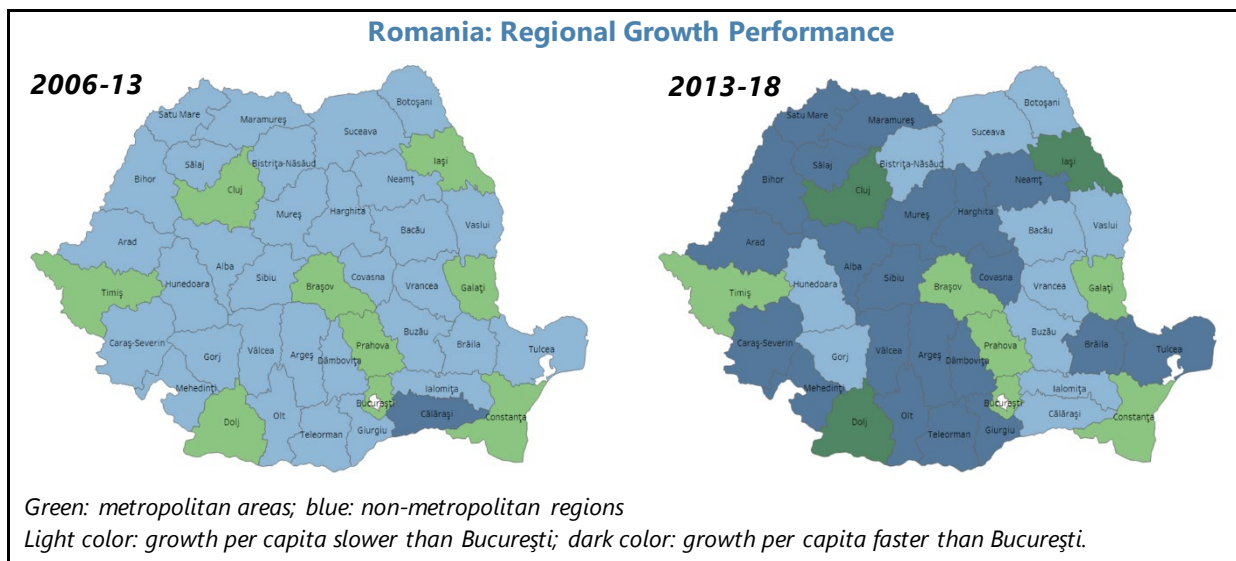## C. Regional Disparities and Convergence

7.   While Romania as a whole is converging gradually toward Western European income levels, regional disparities have widened since the early 2000s. In particular, the capital region around Bucharest has pulled ahead of the rest of the country (Fina et al, 2021), similar to other CESEE-EU countries (and in some EU14 countries as well; Ilahi et al, forthcoming; IMF 2016a).[3] However, the dynamic has changed over time: prior to EU accession, the regional disparities of GDP per capita, primary income per capita and disposable income per capita rose significantly, while after EU entry, these measures have flattened out, though they remain elevated, and regional disparities remain among the highest in the EU (European Commission, 2020).

EU: Economic Concentration
(Share of largest city/cities, 2019 or latest, %) 1/

1/ Germany: Berlin, Hamburg, Munich, Frankfurt, Cologne. Italy: Rome, Milan. Netherlands: Amsterdam, Rotterdam. Poland: Warsaw, Lodz, Poznan, Wroclaw, Cracow. All other countries: capital city or capital region.

Source: Eurostat and IMF staff calculations.

Romania: Regional Disparities
(Coefficients of variation by NUTS regions)

Source: Eurostat and IMF staff calculations.

8.   More recently, regions outside Bucharest have begun to catch up with the capital. Prior to 2013, GDP per capita in all but one NUTS3-level regions grew more slowly than in Bucharest, but during 2013–18, most regions grew faster than Bucharest, notwithstanding continued population declines in many of them. As a result, the disparity in GDP and income levels remains high, but

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[3] The capital region (or Greater Bucharest) around Bucharest comprises Bucharest and Ilfov.
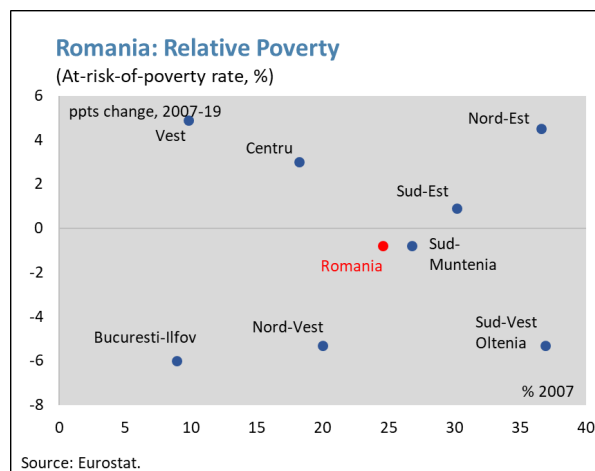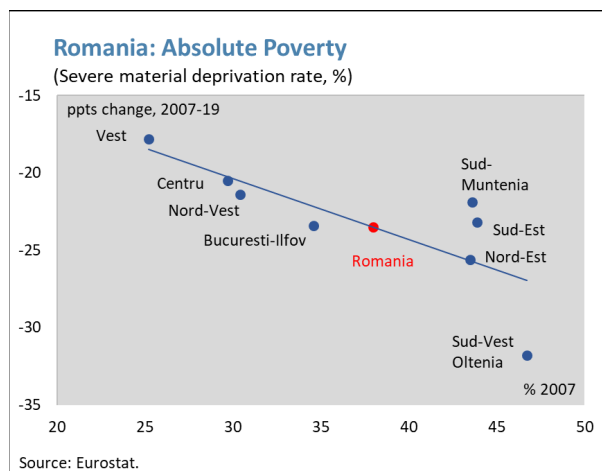
appears to have started to narrow gradually, at least in the majority of regions. However, the pace is slow—in 2018, the poorest region still had a per-capita GDP of only 47 percent of Romania's average (only 2 percent higher than in 2006), while Bucharest has improved further from 231 to 262 percent of the Romanian average over the same period.

Romania: Regional Growth Performance

2006-13

2013-18

Green: metropolitan areas; blue: non-metropolitan regions
Light color: growth per capita slower than Bucureşti; dark color: growth per capita faster than Bucureşti.

9.   Regional convergence of poverty levels mirrors that at the national level with European peers. While there has been some convergence of absolute poverty across regions—the severe material deprivation rate fell most in those regions where it was highest in 2007—relative poverty did not systematically change in relation to the initial rate. This is similar to developments across countries in Europe.

## D. Factors Affecting Regional Growth

10.   Regional growth is likely to be influenced by factors similar to those applying to countries. The standard growth literature emphasizes factors such as investment, human capital (as captured by health and education levels), and institutions in driving growth (e.g., Romer 1989; Levine and Renelt 1992; Owen, Videras, and Davis 2009). However, the differences in factors such as health and education

Romania: Absolute Poverty
(Severe material deprivation rate, %)
Source: Eurostat.

Romania: Relative Poverty
(At-risk-of-poverty rate, %)
Source: Eurostat.

are likely smaller across regions in Romania than internationally, and institutional arrangements more similar. We have therefore concentrated on investment and the impact of migration.

11.   Investment is a key variable in the cross-country growth literature, and is also critical for regional growth performance. The cross-regional picture of investment *levels* against growth since EU accession is somewhat skewed by the large investments and high growth in Greater Bucharest, but the correlation strengthens in the more recent period 2013–18. However, investment of EU cohesion funds does not appear to have a clear impact on growth, possibly because some of the investments are not economic but social or environmental, where the immediate impact on economic growth may be less (though they may have a positive effect in the longer term, e.g., by raising health or education levels, or increase sustainability).

12.   Specific types of investment may have an additional effect. Investment in ICT, though small overall, may also boost growth. This link is reinforced by the strong correlation between employment in science and technology (S&T) sectors—which tend to be IT-intensive—and growth.
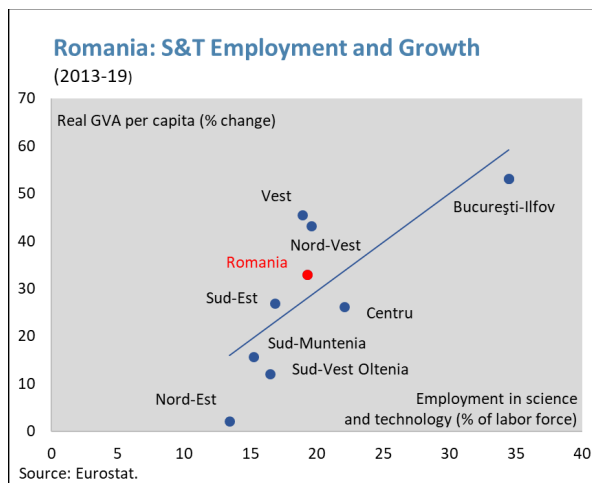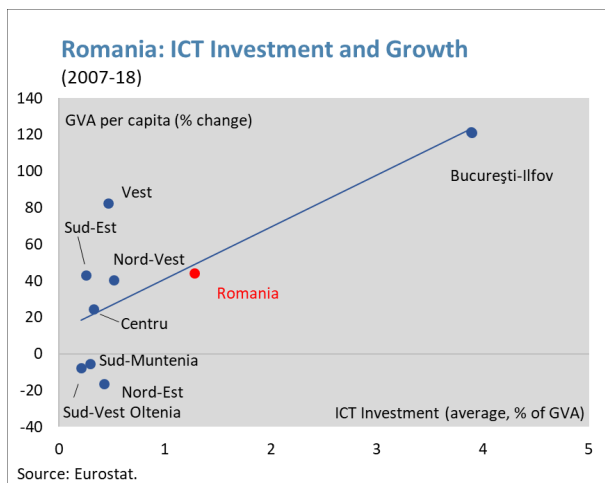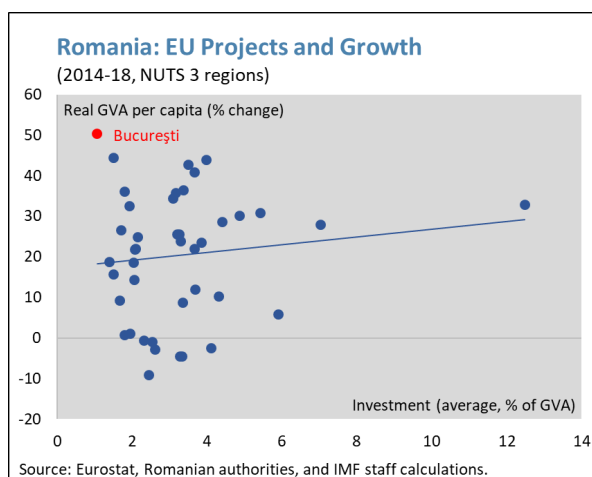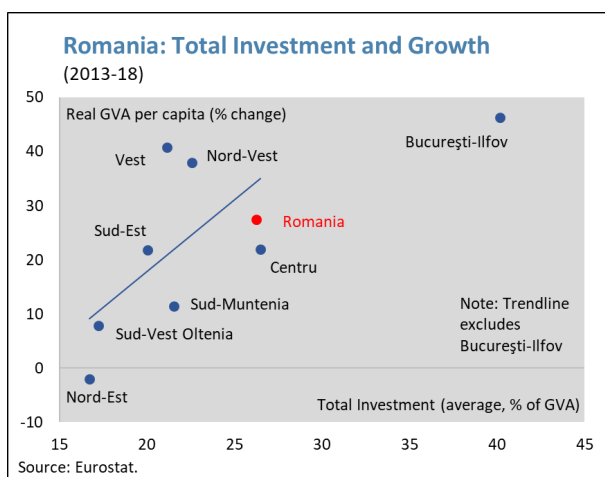
13.   Migration is also related to economic performance (Box 1). Emigrants tend to be of working age, and their departure leaves behind a population with a higher dependency ratio,

Box 1. Demography and Migration

Demographic developments—arising both from changes in fertility and mortality as well as migration patterns—can have a profound effect on the economy and welfare. An ageing and shrinking population is generally associated with lower growth (European Commission 2018, IMF 2019)[1], while remittances of emigrants help reduce poverty and inequality (Ciupureanu and Roman 2016; Pal et al 2021), and boost investment (Léon-Ledesma and Piracha 2004, Mereuta 2006).

Romania's population is shrinking and getting older overall, but demographics are differentiated across regions. The decline of Romania's population is the result of a fertility rate below replacement level and rising life expectancy, and continued net emigration (Box Figure 1). However, while prior to EU accession the population in all regions declined, in recent years some regions—mainly metropolitan areas including, but not only, Greater Bucharest—have begun to experience increases in their populations, mainly through net immigration from other parts of Romania. This suggests that economic catch-up in regions may go hand in hand with more favorable population dynamics.

Migration is linked to economic performance. Migration patterns suggest that relative poverty is related to subsequent net outward migration (Box Figure 2). Higher outward migration in turn is correlated with a lower working-age population (Box Figure 3)—though the causality could run both ways: if regions with lower working-age population are more deprived, emigration could be higher, or higher emigration could result in a lower working-age population. And lastly, higher gross value added per capita is associated with a smaller decline in the working-age population (Box Figure 4). This can lead to a downward spiral, where limited economic perspectives lead to outward migration, which tends to reduce the working-age population and in turn reduces the economic potential and growth *per capita* of a region.
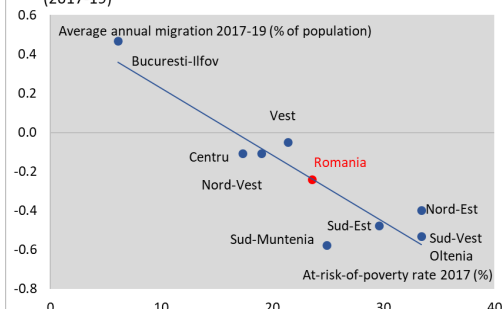
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[1] Bloom et al (2008) argue that this is compensated for as youth dependency falls and female labor force participation rises.
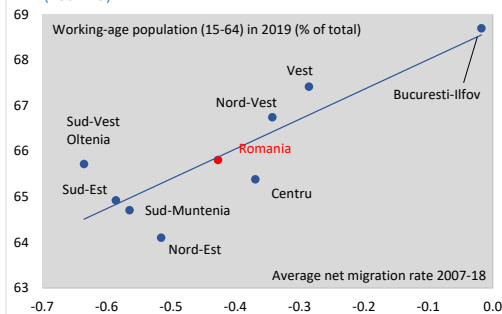

Box Figure 1: Demographic Factors
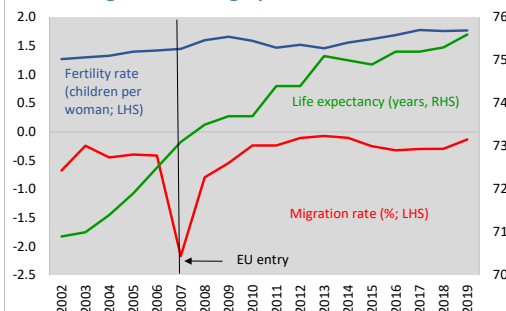
Source: Eurostat.

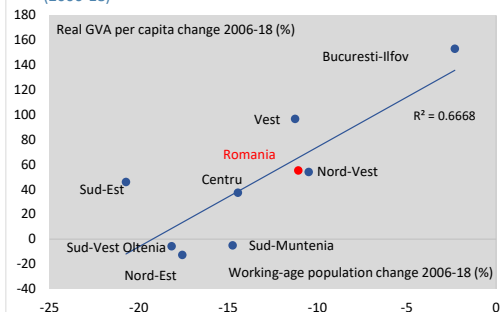**Box Figure 2: Poverty and Migration** (2017-19)

Source: Eurostat and IMF staff calculations.

Box Figure 3: Working-Age Population (2007-19)

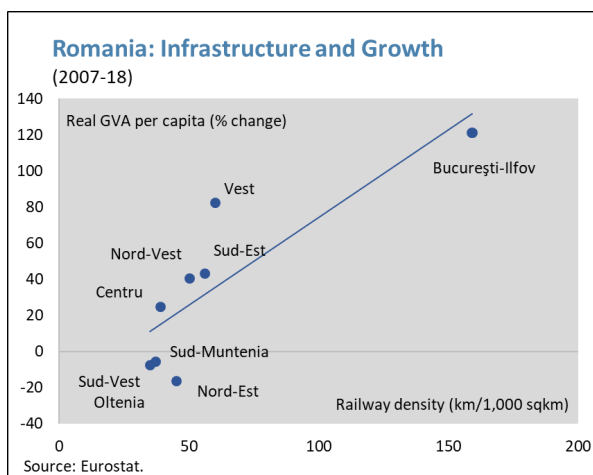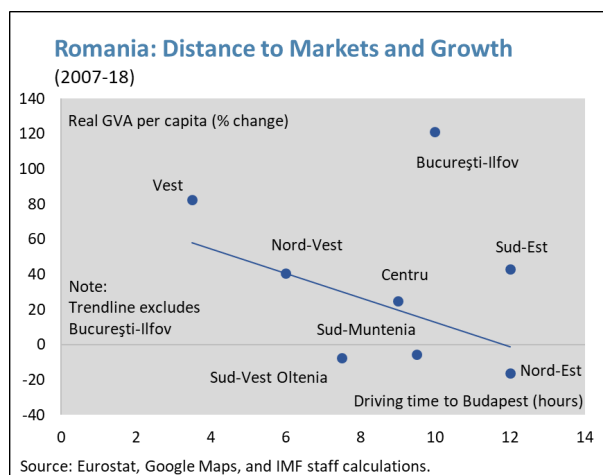**Box Figure 4: Population and GVA** (2006-18)

reducing per-capita output. Moreover, to the extent that emigrants are more skilled that the average population, productivity may also be lowered (IMF 2016b). On the other hand, remittances could boost investment and returning migrants could raise productivity (World Bank 2018).

14.   In addition, spatial variables also likely affect regional growth.[4]

- **Proximity to markets.** In 2020, 57 percent of Romanian goods exports went to Western European markets (and a further 14 percent to the Central European Visegrad countries), and while service exports play an increasing role, the ease of shipping goods and the time it takes them to reach their markets should affect investment and growth. At least for regions other than Greater Bucharest, the effective distance (driving time to Budapest, from where the distance to markets further afield is the same for all vehicles) appears related to growth performance.[5, 6]

- **Infrastructure more broadly.** The density of the intra-regional rail network serves as a proxy for broader infrastructure availability, as well as an indicator for transport connectivity—with rail connections feeding into wider transport networks and markets. Regions with higher railway density (measured as kilometers of rail lines per 1,000 square kilometers of area) have tended to grow faster than those with looser rail networks.

Romania: Distance to Markets and Growth
(2007-18)
Source: Eurostat, Google Maps, and IMF staff calculations.

Romania: Infrastructure and Growth
(2007-18)
Source: Eurostat.

15.   A case study illustrates the interplay between the growth factors outlined above (Box 2). Cluj-Napoca has over the past 18 years developed into 'Romania's Silicon Valley'. Its success stems from a combination of factors, including a long tradition of higher education, good connectivity, active policies to attract investment and promote innovation, and 'soft' factors, such as culture.

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[4] For a study including spatial variables, see also Sandu (2022).
[5] Some exports are shipped by sea; hence proximity to Constanta, Romania's main port, could be an alternative.
[6] The effective distance can be shortened by improved and hence faster connections, e.g., highways. In recent years, Romania has added 677 km of new highways, more than tripling the length of the network, mainly in the Western and Central regions, and between Bucharest ad the Black Sea.

Box 2. Cluj-Napoca

Cluj-Napoca is the largest city in the Nord-Vest region (and the 2nd largest in Romania), with about 425,000 inhabitants (17 percent of the region's total inhabitants, and 59 percent of the county's), including 100,000 students.[1] The population has been increasing in recent years, including due to immigrants from EU14 countries, and the economy of Cluj County has grown faster than any other in Romania since 2007 (Box Figure 1). It is Romania's foremost IT hub, with over 800 IT companies and 16,000 software engineers, and supplies 78 percent of Romania's IT exports.

Box Figure 1: Nominal GVA
(Index: 2006 = 1)

Source: Eurostat.
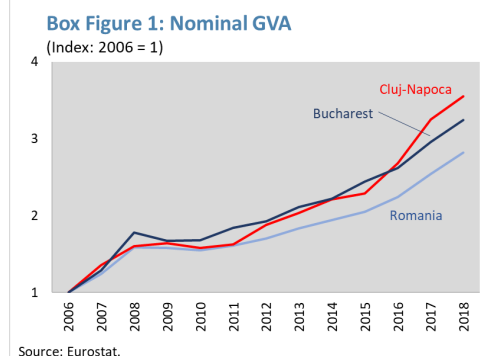
Several interlocking factors have contributed to driving Cluj's growth:

- *Education:* The city has a longstanding education tradition, with its first university founded in 1581. Today, Cluj-Napoca has 11 universities and colleges, from which about 1,000 IT students graduate every year. It also has 200 research units and laboratories, concentrated in the ICT and high-tech manufacturing sectors.
- *Investment:* The local authorities have made significant efforts to attract private investment. To this end, they have provided public infrastructure and developed technology and innovation parks, both with own resources as well as EU funds. The authorities have also not only focused on one sector—ICT—but also sought to promote investments in manufacturing, as well as medical technology.
- *Partnerships:* There is a large start-up scene, developed through partnerships between the city, universities and private enterprises.
- *Governance and Innovation:* While there have been corruption scandals involving high-ranking city officials, the administration is promoting innovative approaches to governance, including through raising citizen participation. In 2020, Cluj-Napoca was a runner-up to receive the European Capital of Innovation Award 2020, which is awarded to the European cities that best promote innovation in their communities.
- *Connectivity:* Cluj-Napoca has an international airport, and is well-connected to Central Europe and Bucharest by road and rail (though a highway shortcut to Hungary is not yet completed, and there is no through highway to Bucharest yet).
- *Culture and quality of life:* Cluj-Napoca has a multicultural and multilingual community, and a diverse and growing cultural scene, supported by universities specialized in art, design, and music, as well as several festivals, which, together with employment opportunities, attracts immigrants, both from within and outside Romania.

The strong performance of Cluj-Napoca is likely the result of a combination of these factors, and a self-reinforcing positive economic, demographic, and cultural dynamic that has developed over time.

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[1] "Region" denotes Eurostat's NUTS 2 level, "county" the NUTS 3 level.

E.   Conclusions and Policy Recommendations

16.   Romania has made great strides in converging toward more advanced EU member states, but progress has been uneven. While per capita GDP in Greater Bucharest approaches that

of advanced EU countries, many regions, especially rural areas, have been unable to catch up, and in many instances have fallen further behind Bucharest. Only in recent years has growth in the majority of regions begun to outpace that of Bucharest, but the process of intra-Romanian convergence remains slow. Moreover, regional catch-up is strongest in secondary cities and bypasses many rural areas (Surd et al, 2011).

17.   The obstacles to regional growth are numerous, and many of them also act on the national level. These include policy instability, administrative shortcomings including corruption, inadequate infrastructure, low or mismatched education levels, a welfare and tax system and labor market that discourage labor force participation, especially of women, and unproductive state-owned enterprises (De Rosa and Kim, 2018; Belinga et al, 2020, IMF 2017). Addressing these at the national level is critical to continue the catch-up process of Romania as a whole with Western Europe, and would also promote regional growth. For example, improving education across the country, but especially in poorer regions, would provide a more productive labor force that would also encourage investment outside of Bucharest and other cities (IMF 2016c).

18.   The operation of transfers to regions could also be strengthened to support greater equality. Equalization transfers are formula-based and inversely proportional to income, but some investment allocations (including through the National Program for Local Development—PNDL) are discretionary and subject to political influence. Greater transparency in this area—combined with administrative support for less developed regions—would likely increase the efficiency of investment.

19.   At the same time, some national-level policies are more directly linked to regional development, especially public administration and provision of infrastructure (IMF 2016d). Strengthening public administration, especially at the local level, would also support the ability of sub-national authorities to promote investment, and more broadly respond to idiosyncratic regional needs (Ibinceanu et al, 2021). This could also include further steps toward decentralization to create administrative units at the NUTS2 level, as an administrative layer between the central government and county-level administration.[7] Improving the ability of regional and local authorities to access EU funds, perhaps with central-government support, could also unlock significant resources—and help raise Romania's absorption of EU funds. With regard to infrastructure, while national-level transport axes (such as highways or improved international railway links) are important, it is also critical to ensure that more remote local areas are plugged into those networks. Geography cannot be changed, but better links both within regions and of regions with national and international networks would reduce effective distances, enlarge markets, and improve productivity.

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[7] A corresponding law in 2013 proved controversial and was eventually declared unconstitutional (Sandu 2022).

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