Ukraine
Public Finance Review 2

Towards a More Effective and Fiscally Sustainable Public Sector for Ukraine

A World Bank Report

Cofinanced by the European Union Programme for the Reform of Public Administration and Finances (EURoPAF)

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Acknowledgments:

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ABBREVIATIONS AND ACRONYMS

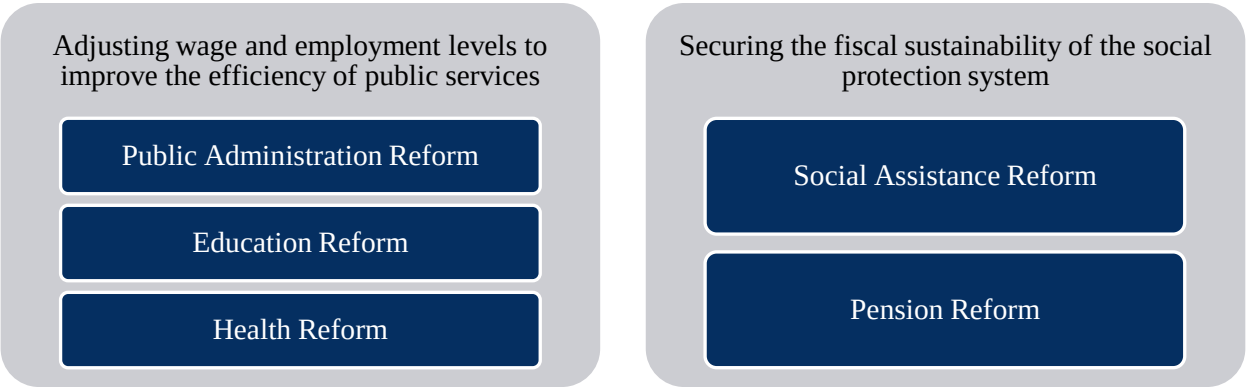
CEE	Central and Eastern Europe
CIT	Corporate income tax
CPI	Consumer price index
DPL	Development policy loan
DSA	Debt sustainability analysis
EU	European Union
EURoPAF	EU Programme for the Reform of Public Administration and Finances
GDP	Gross domestic product
GMI	Guaranteed Minimum Income
GMS	Guaranteed Subsistence Minimum
HDI	Human Development Index
HRMIS	Human Resources Management Information System
HUS	Housing and Utility Subsidy
IMF	International Monetary Fund
IT	Information technology
MOF	Ministry of Finance
MSP	Ministry for Social Policy
NACS	National Agency for the Civil Service
Naftogaz	Ukraine's state-owned gas company
NCSSM	National Securities and Stock Market Commission
NHSU	National Health Service of Ukraine
OECD	Organization for Economic Cooperation and Development
PAR	Public administration reform
PAYG	Pay-as-you-go
PFR	Public Finance Review
PFU	Pension Fund of Ukraine
PHC	Primary healthcare
PPF	Private pension funds
SIGMA	Support for Improvement in Governance and Management (OECD and EU)
SOE	State-owned enterprise
SSC	Social Security contribution
TIMSS	Trends in International Mathematics and Science Study
UAH	Ukrainian Hryvnia
Ukrstat	Ukrainian Statistical Service
WB	World Bank
WDI	World Development Indicator
WHO	World Health Organization
VET	Vocational education and training

EXECUTIVE SUMMARY

This Second Programmatic Public Finance Review (PFR-2) supports Ukraine in implementing its ongoing ambitious structural reform agenda to identify fiscal savings and to increase the effectiveness of public services. Emerging from the severe economic crisis of 2014-2015, Ukraine managed to achieve significant fiscal consolidation. However, this was mostly driven by ad hoc measures rather than sustainable structural-fiscal reforms. Fiscal pressures – notably from public sector wages and social welfare spending – have therefore reemerged in the period from 2016 to 2018. General government expenditure is budgeted to increase from 40.6 percent of gross domestic product (GDP) to 44.2 percent in 2018. Despite growing expenditures of an already large public sector, its performance remains poor, and Ukraine has initiated an ambitious reform agenda to address these challenges. This PFR aims to support Ukraine in implementing this ongoing reform program to increase the effectiveness of the public sector and to strengthen fiscal sustainability.

The first pillar of this report identifies measures to contain wage bill pressures and make public services more efficient, with a focus on public administration and the education and health sectors. The public wage bill is the largest expenditure category of Ukraine's government (by economic classification) as well as the category that has seen the largest growth. Since discussions on staffing levels and the remuneration structure are deeply enmeshed in respective government sector policies, this report focuses policy analysis on three key sectors: the public administration, education and health. While Ukraine's public administration makes up a comparatively small part of the overall wage bill, it plays a vital role in the effective functioning of the public sector. Salary and staffing decisions serve as indicators for all other government employees. The education and health sector are the largest (non-security) government employers. Together, these three sectors make up more than half of Ukraine's government wage bill.

The second pillar of this report assesses the fiscal sustainability of the social protection system and identifies reforms to make expenditure more effective by focusing on social assistance and pensions. Pension spending is Ukraine's second largest government expenditure category (by economic classification) and underwent a landmark reform in 2017. This category of expenditure needs to be closely monitored. Social assistance spending grew significantly in the aftermath of the 2014-2015 crisis, in part because of poor targeting. This report evaluates the cost of these programs and identifies reforms to better support those most in need.

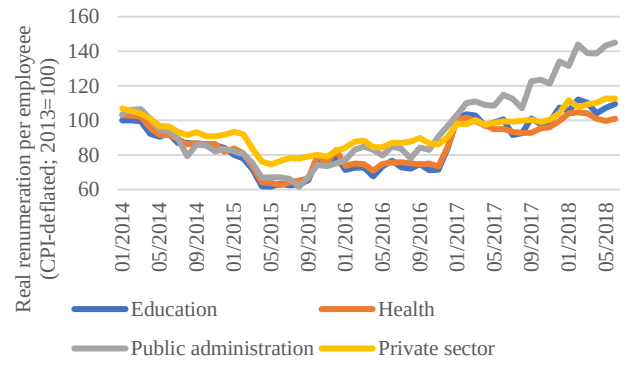


This report builds on the World Bank's and other international partners' ongoing engagement in Ukraine to support macro-fiscal stability. This PFR series aims to support Ukraine in safeguarding the fiscal sustainability that was restored after the deep economic crisis of 2014-2015. This was achieved in part through the Multisector and Financial Sector Development Policy Loans (DPLs) provided through the World Bank, the International Monetary Fund (IMF) Extended Fund Facility (EFF) and European Union (EU) budget assistance. The PFR-2 also builds on a previous analytical report prepared by the World Bank in Ukraine (the PFR-1 (2017)), which analyzed reform options in the areas of (i) social assistance, (ii) pensions, (iii) health, (iv) education and (v) tax policy and administration. The PFR-2 updates and extends this analysis after the significant legislative progress made by Ukraine in 2017.[ii] This report identifies measures to address the short-term pressures and proposes structural measures for ensuring a sustainable fiscal stance in the medium term.

Towards a more sustainable government wage bill

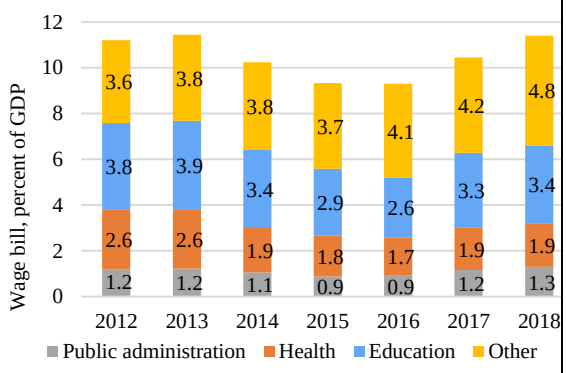
While Ukraine's reforms in public administration, education and health are generally moving in the right direction, further staff remuneration increases pose serious risks for the fiscal sustainability and may not substantially increase the quality of public services. Ukraine's recent reforms in the key social sectors identify key levers to improve the quality of services in each sector. However, the further significant announced increases in remuneration increases risk creating significant pressure on the budget, while any gains in terms of improved staff motivation and the ability to attract higher quality recruits may be limited. This report finds that remuneration packages have already largely caught up with pre-crisis purchasing power and in some cases have reached levels comparable to the private sector (civil service) or to international relative sector wage benchmarks (education). The government wage bill has now returned to levels seen during the period of high government spending before the crisis of 2014-2015.[iii] Any further significant increases in remuneration risk creating significant pressure on the budget and are unlikely to produce significant gains in terms of improved staff motivation and the ability to attract higher quality recruits.

Government employee remuneration packages have already largely caught up with pre-crisis purchasing power…



Source: Ukrainian Statistical Service (Ukrstat); WB calculations

… and total wage bill expenditure has reverted to levels seen at the start of the decade



Source: BOOST 2017 based on State Treasury Service; 2012-17 executed budget and 2018 announced budget

This report recommends that new remuneration increases should be moderate and selective, as well as matched by gradually realizing significant staff rightsizing opportunities:

- **Public administration:** Remuneration of most public administration staff is already at par or above private sector levels, with the exception of top managers, whose remuneration remains significantly below private sector benchmarks. Thus, further salary increases in the sector could be limited and linked to nominal GDP growth. To improve the incentives of top managers and to attract better staff to key positions in the civil service, fiscal space is needed to offer adequate and competitive remuneration. This fiscal space can be achieved through optimization of staffing levels. Ukraine should proceed with rightsizing its public administration through functional reviews that streamline staffing positions, simplifying administrative procedures and amalgamating local administrations. Benchmarking employment across local governments suggests that a reduction of local government staff by 15 percent is feasible. Potential staff rightsizing at the central level is estimated at 8 percent.

- **Education:** The salaries of Ukraine's teachers relative to the private sector have already reached levels comparable to international benchmarks. The link between further teacher salary increases and improvements in the quality of education may therefore be weak or even negative if wage increases divert resources from necessary investments to upgrade school buildings and equipment. This suggests that the implementation of the promise of the Education Reform Law to raise pedagogical worker salaries to at least four times the subsistence minimum by 2023 is highly problematic. To improve fiscal affordability, the government could target bringing total remuneration (instead of the base salary) to four times the subsistence minimum. Staffing levels need to be adjusted to reflect a shrinking school-age population. Using a locational analysis of schools in Ukraine, this report suggests that a gradual optimization of the school network (merging schools that are in close proximity and using school buses to increase catchment areas) could enable a reduction in general secondary school teachers by close to 25 percent.

- **Health:** Despite recent increases, doctors' salaries remain relatively low; they are almost 35 percent below reported salaries for average Ukrainian workers. Such a low official compensation in the sector encourages widespread out-of-pocket payments, lack of transparency and demotivates staff. Going forward, the goals in reforming the health sector are to improve adequacy of remuneration and quality of services while managing growing fiscal pressures. The ongoing first phase of the health reform will strengthen the effectiveness of Ukraine's primary healthcare sector and gradually reduce Ukraine's reliance on hospital care. To unlock the potential for cost savings, Ukraine needs to implement the second phase of the health reform and proceed with optimization of its vast hospital network. If the use of hospitals is brought down to levels found in better performing peer countries, this report estimates that hospital staff could eventually be reduced by close to 18 percent. The resulting fiscal savings can be used to create space for some gradual and selective increases in the salaries of hospital staff. The increase should be focused on key staff, such as the staff in the new acute care clinics formed by the hospital network optimization which will face increased responsibilities after the reorganization of the sector.

Estimated Wage Bill According to Different Scenarios, in Percentage of GDP

	2018	2019	2020	2021	2022	2023
No-Reform scenario total wage bill	**11.5**	**12.2**	**14.7**	**15.1**	**15.5**	**16.1**
Education	3.4	3.5	4.0	4.4	4.9	5.5
Health	1.9	2.5	4.7	4.7	4.6	4.6
Public administration	1.30	1.29	1.24	1.26	1.28	1.29
Other sectors	4.9	4.9	4.8	4.8	4.7	4.7
Reform scenario total wage bill	**11.3**	**11.5**	**11.4**	**11.3**	**11.2**	**11.2**
Education	3.4	3.4	3.3	3.2	3.1	3.2
Health	1.9	2.3	2.3	2.3	2.3	2.3
Public administration	1.10	1.02	1.00	0.99	0.99	0.99
Other sectors	4.9	4.8	4.8	4.8	4.7	4.7
Estimated fiscal savings	***0.2***	***0.7***	***3.3***	***3.8***	***4.4***	***4.9***

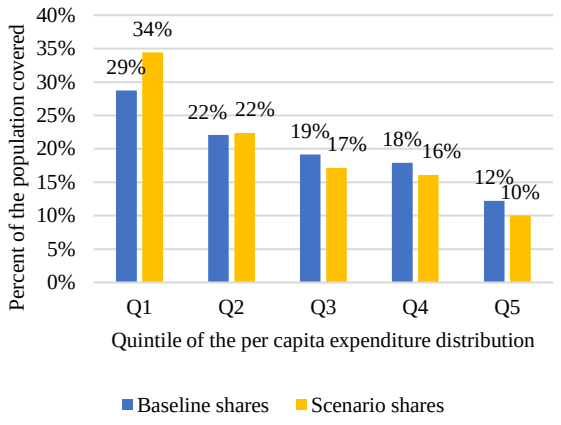
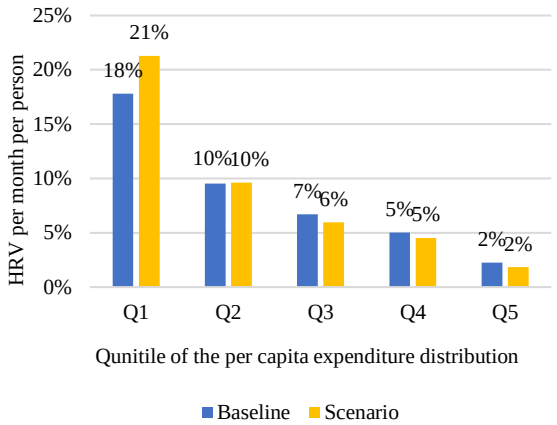
To attract better staff and to increase government accountability, this report recommends making existing remuneration arrangements in all government sectors more transparent to outsiders. Besides adjustments of overall employment and remuneration levels, this report recommends a restructuring of compensation. The share of base salary in total remuneration needs to increase and the reliance on an opaque and arbitrary system of allowances and bonuses needs to be reduced. In practice, the current opaque compensation structure gives management large discretion in the compensation of employees, which, without proper compliance control mechanisms, can lead to abuse. There is anecdotal evidence that within units, bonuses are often shared equally to avoid demotivating the team, which negates the potential performance-enhancing gains from rewarding high performers. New joiners are dissuaded by low basic pay, as the magnitude of supplements and bonuses is difficult to discern for outsiders (the job descriptions usually contain information on the basic salary only). Finally, opaque pay reduces the accountability of Ukraine's government to civil society.

Towards a more effective social welfare system

Ukraine's social assistance requires a fundamental rethink - the 2018 revision of the Housing and Utility Subsidy (HUS) does not fundamentally alter the weaknesses of the existing system. The 2018 parametric adjustments of the HUS will help to control the cost of the scheme. However, this report estimates that the increase in heating and gas tariffs expected later in 2018 will largely offset these savings. Moreover, the fundamental properties of Ukraine's social assistance remain unchanged and the system remains expensive. Evaluating the redistributive performance of the system after the 2018 HUS reparametrization, this report confirms that too few funds reach those most in need. Because social assistance remains dominated by utility-related subsidy payments, pricing signals to move towards greater energy efficiency or to reduce energy consumption are blunted. The cost of Ukraine's social assistance remains highly vulnerable to changes in volatile international energy tariffs. A more fundamental reform of Ukraine's social assistance framework is needed.

This report recommends a structural rebalancing of Ukraine's social assistance system to gradually make the Guaranteed Minimum Income (GMI) scheme the primary safety net for the poor, while the HUS becomes a secondary safety net to protect against excessive utility costs. This report estimates that Ukraine's large HUS scheme channels only 23 percent of its funds to the bottom 20 percent of households in the expenditure distribution. But much stronger targeting performance is possible. Three-quarters of the funds of Ukraine's Guaranteed Minimum Income (GMI) scheme reach the bottom 20 percent of households. One option for reform is therefore to gradually expand the existing and better targeted GMI to

become Ukraine's primary poverty safety net. The HUS would then become a secondary safety net providing additional assistance towards the burden of utility costs. This report demonstrates that a fiscally neutral and gradual reallocation of funds could significantly improve the targeting of Ukraine's social assistance system while reducing the link between poverty assistance and utility subsidies.

Through HUS rebalancing, a greater share of households in the bottom quintile would access social assistance…	**… HUS and GMI transfers to the bottom quintile would increase relative to overall household expenditures of the bottom quintile**
	
Source: State Treasury Service; World Bank calculations for HUS and GMI	Source: State Treasury Service; World Bank calculations for HUS and GMI

While the 2017 pension reform has both (i) contributed to alleviating the plight of Ukraine's elderly and (ii) created a more credible medium-term perspective for the Pension Fund of Ukraine (PFU), its immediate impact has been to increase pension expenditures. Hence, the size of budget transfers needed to cover the pension deficit over the coming years needs to be closely monitored. The upfront increase in pension benefits for existing retirees will significantly increase pension spending in 2018. In contrast, the impact of new incentives for workers to delay retirement and to comply with social security contributions – which in theory will reduce fiscal pressures on the PFU in the medium run – will depend on the behavioral response of Ukrainians. The fiscal performance of the PFU therefore needs to be closely monitored. If the budget transfers to cover the pension fund deficits grow beyond what has been envisaged, then new Social Security Contribution (SSC) rate increases need to be considered.

This PFR recommends fully implementing the 2017 pension reform and moving ahead with the alignment of special provisions for privileged groups; a new defined-contribution scheme (second pillar) should be introduced only very carefully and after all necessary preconditions are met. Ukraine should proceed with scaling back special pension provisions for privileged groups. In particular, the new parameterization of the main pension needs to be transposed to Ukraine's special pensions for the security sector. Introduction of a funded pension system (pillar 2) could help increase benefit adequacy in the longer term, but it should be done cautiously after proper preparatory work. It is imperative that the government not assume any explicit fiscal liabilities associated with implementation of the new scheme and limit all possible implicit liabilities.

Towards strengthening Ukraine's public finances

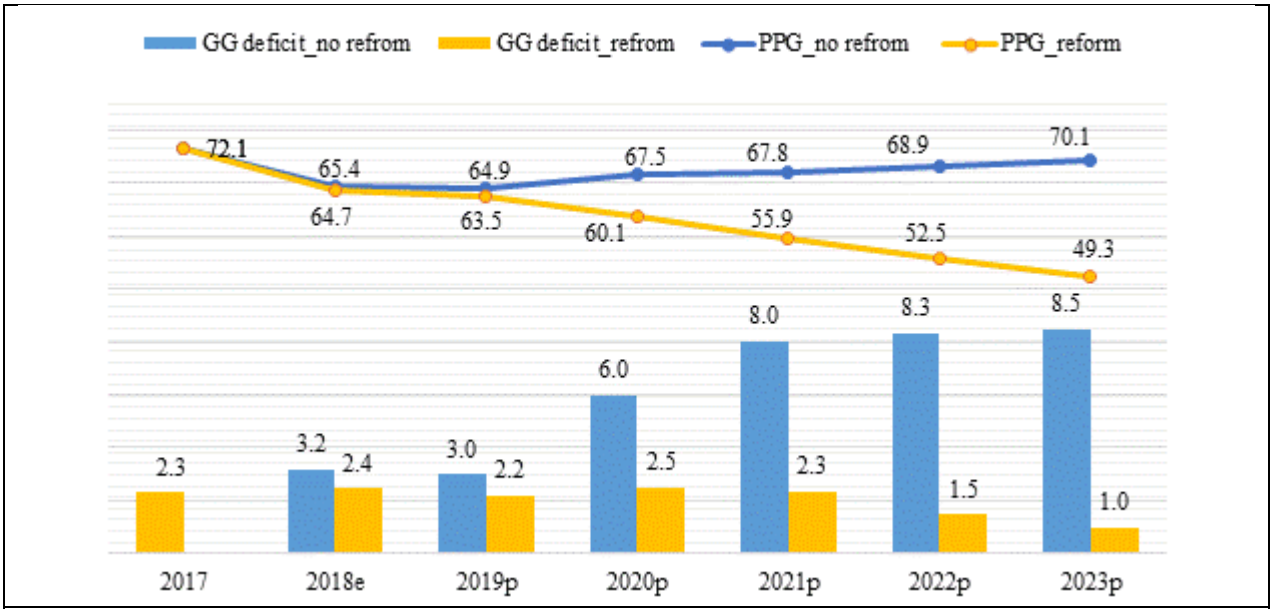
Ukraine faces major financing needs in 2018-2020 that will require mobilizing sizable international financing and meeting the fiscal deficit target of 2.5 percent of GDP to maintain macroeconomic stability. Public debt repayments (to the IMF, Eurobonds, and domestic bonds in foreign exchange and local currency) and financing the fiscal deficit will require 7.7 percent of GDP per year (equivalent to a total of US$21 billion) in 2019 and 2020. Thus, maintaining fiscal discipline is critical to ensure the deficit remains under control and necessary funding is raised in light of the turbulence in the emerging markets.

Measures that undermine revenue performance should be avoided. Ukraine's medium-term financing needs are high and expenditure pressures are considerable. Even if the structural reforms in the key social sectors are implemented, it will take time to realize reductions in underlining fiscal costs. These circumstances require measures to strengthen revenue performance, including broadening the tax base and improving the tax administration. Moreover, in the context of rising fiscal pressures from expenditures, initiatives that could undermine revenue performance, such as the proposed replacement of the corporate profit tax (CPT) with the capital exit tax (CET), should be carefully assessed to guard against fiscal losses in the medium term.

Without greater regard for fiscal sustainability and further decisive policy measures to unlock efficiency gains in public service delivery, Ukraine risks the health of its public finances. Revenue performance gains in the first half of 2018 have been weaker than budgeted. Sharp growth of the government wage bill means that Ukraine will likely need to resort to new ad hoc and painful fiscal measures in the second half of 2018 to reach its annual deficit target of 2.5 percent of GDP. The PFR-2 recommends that the government (i) close unnecessary open public administration vacancies and reduce unit wage bill allocations accordingly and (ii) fully implementing the 2018 HUS reparameterization. For medium-term fiscal sustainability, if the currently announced government salary increases are implemented without additional broader structural-fiscal reforms and compensatory savings, Ukraine will not be able to meet its deficit target of 2.7 percent of GDP. In a No-Reform scenario, the debt sustainability analysis (DSA) carried out as part of this report suggests that Ukraine will further increase the already high public debt burden.

Implementation of the structural reform measures put forward in this report can put Ukraine's debt onto a significantly more sustainable trajectory while increasing the efficiency of public spending. Overall, the PFR-2 identifies fiscal measures that can generate savings of 0.6 percent of GDP in 2018 (from the already mentioned public administration wage moderation and full implementation of the HUS reparameterization) and up to 5.3 percent of GDP in 2025 (largely through containing growth of the education and healthcare wage bills). The DSA suggests that implementation of these recommendations is crucial to ensuring that Ukraine's debt remains on a declining path. By tackling inefficiencies in government, there is significant scope for raising the quality of public services without further burdening the budget. To unlock these gains, Ukraine's reformers need to once again demonstrate the grit needed to push through complex structural reforms. This will require political determination to win over Ukraine's public and to stand against special interest groups.

PFR-2 Recommendations Can Keep Ukraine's Debt on a Downward Trajectory, General Government Deficit and Public Guaranteed Liabilities in Percentage of GDP



Source: BOOST 2017 based on State Treasury Service; World Bank calculations for general government (GG) deficit and public and publicly guaranteed (PPG) liabilities

Matrix of Policy Recommendations

		Identified direct savings in 2018 (% GDP)[iv]	Identified direct savings in 2025 (% GDP)
	Public Administration	**0.2**	**0.3**
1	Rightsizing of staff positions allocation based on functional reviews. (Suggested targets: 8 percent reduction at central government level and 15 percent reduction for decentralized offices)		
2	Moderation of further remuneration increases. (Suggested target: match nominal GDP growth)		
3	Restructuring of public sector compensation, including by (i) increasing the share of basic salary in the total remuneration to 75 percent (while reducing the variable supplements portion), thus making the total compensation structure more transparent and predictable; (ii) reducing the guaranteed supplements portion (lower the maximum seniority supplement from 50 percent to 30 percent of basic salary) and aligning vacation and social aid supplements with basic pay rather than the average monthly salary; and (iii) developing an effective system of bonus allocation based on performance		
4	Implementation of payroll monitoring and control mechanisms		
	Education	**0.0**	**2.3**
5	Moderation of further remuneration increases. (Suggested target: if the promised increases in remuneration to pedagogical workers need to be implemented as outlined in the new education law, the government		

	could target bringing total remuneration (instead of the base salary) to four times the subsistence minimum)		
6	Determined general school network optimization. (Suggested target: reduction of general secondary education staff by 25 percent, to be implemented gradually and leveraging natural staff attrition to limit lay-offs)		
7	Deep-dive analysis of other subsectors of the education sector (incl. preschool, higher education and technical and vocational sector) with the aim to identify the scope for efficiency savings		
	Healthcare	**0.0**	**2.4**
8	Rightsizing of the hospital network, including through concentration of acute care in designated acute care hospitals within each hospital district. (Suggested target: reduction of hospital staff by 18 percent; reduction of acute care personnel by 30 percent)		
9	Linking further health sector worker remuneration increases to progress on staff rightsizing and keeping compensation raises targeted to key staff groups		
	Social Assistance	**0.4**	**0.3**
10	Full implementation of the 2018 HUS reparameterization		
11	Gradual rebalancing of Ukraine's social assistance system, making the Guaranteed Minimum Income scheme the primary safety net for the poor, while making the HUS a secondary safety net to protect against excessive utility costs		
	Pensions	**0.0**	**0.0**
12	Close monitoring of the fiscal performance of the PFU, considering an SSC rate increase if necessary		
13	Extension of the preparation period for the introduction of the funded pension system (pillar 2)		
Total expenditure savings identified by the PFR-2		**0.6**	**5.3**

PART A: MACRO-FISCAL OVERVIEW

This macro-fiscal overview identifies immediate and medium-term fiscal pressures, estimates the fiscal gap, and motivates the selection of the scope of the analyses.

Its key findings are:

(i) The revenue plan in 2018 is ambitious, meeting the government's annual fiscal target may require additional fiscal measures.

(ii) Growing wage bill and social protection expenditures are the key medium-term fiscal pressures, while the quality of public services remains insufficient.

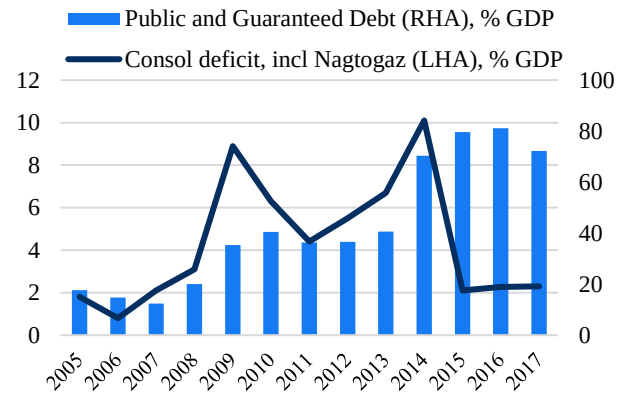
(iii) Fiscal discipline is critical for putting public debt on a sustainable trajectory and ensuring sufficient financing to cover the significant debt repayments ahead.

Fiscal pressures have reemerged due to an unfinished structural reform agenda

Over the last two decades, Ukraine has gone through successive episodes of strong and weak growth that masked significant underlying structural fiscal deficits. Prior to 2014, Ukraine used accommodative fiscal policy to stimulate growth. Combined with a fixed nominal exchange rate regime, this caused sizable current account deficits, inflation, the real appreciation of the exchange rate, growing public debt, and the erosion of investor confidence. The resulting periodic economic volatility was followed by renewed accommodative policy to provide new support to economic growth, which allowed underlying structural fiscal deficits to fester. This culminated in the severe economic and political crisis faced by Ukraine in 2014-2015.

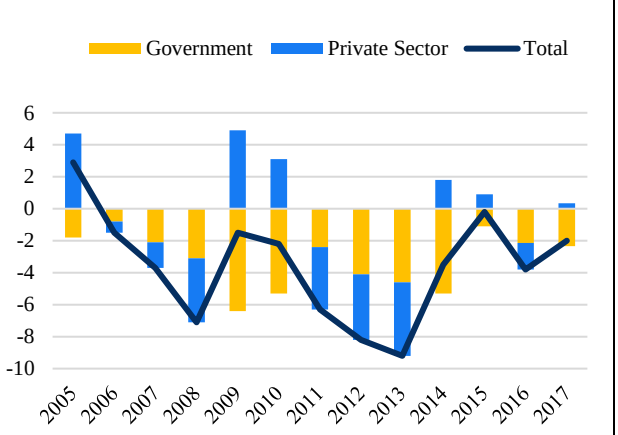
Figure 1. Accommodative fiscal policy caused macroeconomic imbalances

a. Ukraine's long-standing fiscal imbalances put public debt on an unsustainable trajectory over the last decade



Source: BOOST 2017 based on State Treasury Service

b. The public sector has been the key driver of Ukraine's savings-investment gap, % GDP



Source: Ukrstat; World Bank calculations

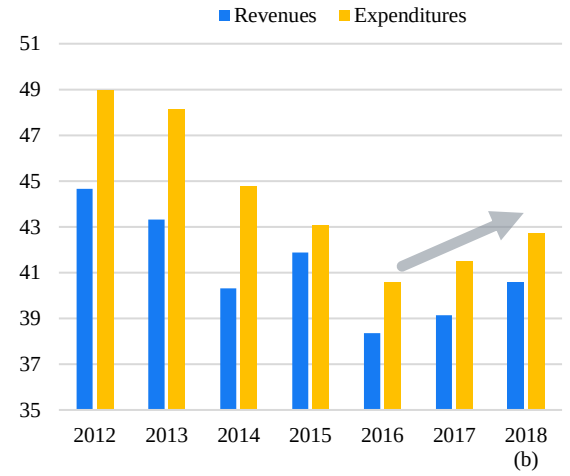
During the economic crisis of 2014-15, Ukraine made significant progress in reducing its fiscal imbalances. Strict spending controls coupled with high inflation significantly reduced the fiscal burden of public expenditures, including public sector wages and pensions. A bold decision to align energy tariffs to the price of imported gas helped to eliminate the deficit of the state-owned gas company, Naftogaz.[v] Overall, the general government fiscal deficit (including Naftogaz) fell from over 10 percent of gross domestic product (GDP) in 2014 to 2.2 percent of GDP in 2016. This fiscal consolidation, together with measures to support the macroeconomic adjustment, such as the introduction of a flexible exchange rate regime, helped to restore confidence and stabilize the economy. After a decline of GDP by 16 percent in 2014-2015, economic growth resumed, rising by 2.3 percent in 2016 and by 2.5 percent in 2017. Nonetheless, at end-2017, public debt remained high at 72.3 percent of GDP, reflecting previous fiscal deficits, the sharp overall drop of GDP during the crisis, currency depreciation and the continued costs of banking support.

However, with economic stabilization in 2016-18, fiscal pressures reemerged; some of the ad hoc fiscal consolidation gains achieved during the crisis proved unsustainable given an unfinished structural reform agenda. Ukraine's pattern of pro-cyclical fiscal policy continued. As the economy stabilized and general government revenues recovered from 38.4 percent of GDP in 2016 to 39.2 percent of GDP in 2017, expenditures jumped from 40.6 percent of GDP in 2016 to 41.5 percent of GDP in 2017. At the start of 2018, Ukraine presented a 2018 budget planning to further increase expenditures to 42.9 percent of GDP.

Figure 2. Fiscal pressures reemerged in 2018

a. Renewed fast growth of government expenditures creates fiscal risks, despite revenue growth…

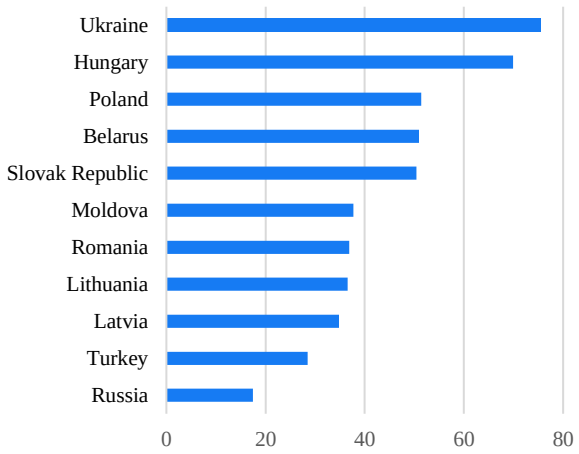
Revenue and Expenditure, % of GDP



Source: BOOST 2017 based on State Treasury Service; 2018 budget data

b. … particularly given Ukraine's still high government debt

General Government Debt, % of GDP, 2017



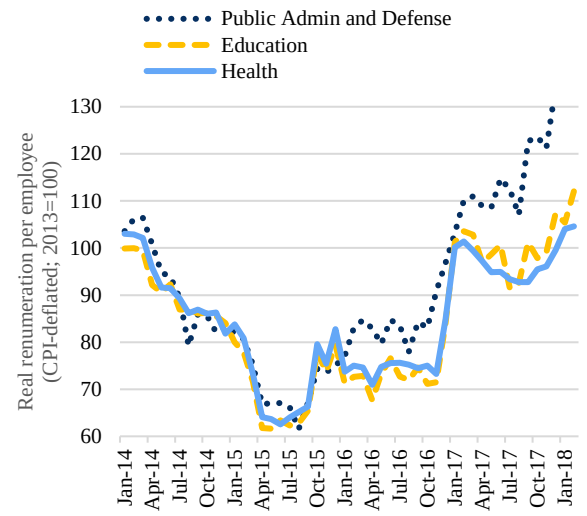
Source: IMF WEO April 2018

Ukraine's wage bill is growing again quickly – reflecting sharp upward pressure on the compensation of public sector employees. Given high inflation and nominal wage freezes, the purchasing power of public sector wages fell sharply during the crisis of 2014-15. With economic stabilization, the government faced significant pressure to increase nominal compensation to motivate and attract staff. Sharp increases in the subsistence minimum and the minimum wage were allowed to feed through to the unified salary grid of government employees. Professions such as teachers saw general reclassification to higher grade levels within the salary grid. The implementation of legislation restricting the size of allowances and bonuses

relative to the base salary was postponed. The special salary grid for civil servants saw particularly rapid growth. In consequence, by some measures, this report finds that the purchasing power of government sector remuneration levels returned to (or overshot) pre-crisis levels by early 2018. Given limited progress on staff rightsizing,[vi] expenditure on the compensation of government employees is budgeted to reach pre-crisis levels above 11 percent of GDP in 2018, up from 9.3 percent of GDP in 2016.[vii] Further significant compensation increases have been announced going forward. While the impact of higher compensation on staff quality and better public service delivery remains highly uncertain, its budgetary impact has become a key concern for fiscal sustainability.

Figure 3. Public sectors wages are higher than pre-crises level, but staff right-sizing is lagging behind

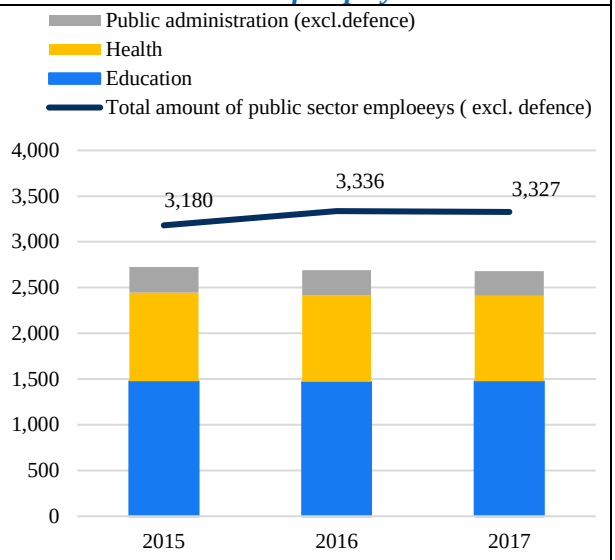
a. The latest wage increases have more than compensated for lost purchasing power during the crisis of 2014-15…



Source: Ukrainian Statistical Service (Ukrstat)

b. … staff right-sizing has made limited progress so far

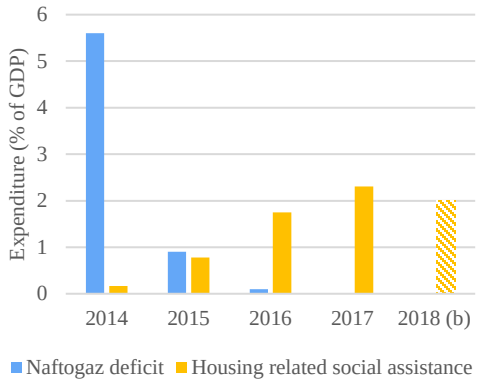
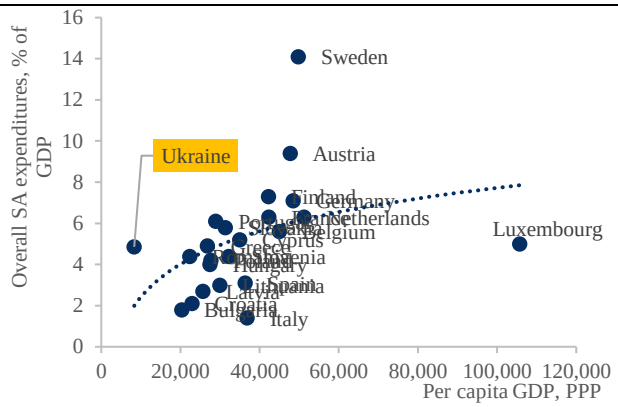
Number of employees



Source: Ministry of Finance

To buffer the impact of the crisis on the poor, Ukraine significantly increased its expenditure on social assistance. Given the sharp alignment of energy tariffs to cost-recovery levels during the crisis, Ukraine strengthened its social assistance programs to mitigate the impact of the adjustment on the poor. In particular, the eligibility criteria for the Housing and Utility Subsidy (HUS) were eased. Expenditure on housing-related social assistance consequently increased from 0.2 percent of GDP in 2014 to 2.3 percent of GDP in 2017, making the HUS Ukraine's largest social assistance program. Ukraine now faces the challenge of reigning in high spending on social assistance (relative to per capita income). Reaching close to half of the country's households (6.5 million), the targeting of the HUS scheme stands out as particularly poor. Misappropriation of HUS funds is a serious concern, as funds are channeled through opaque offset-mechanisms through different layers of Ukraine's public administration. Ukraine's decision to monetize the HUS benefit in 2018 will be a key step towards increasing the transparency and efficiency of the program.

Figure 4. Social assistance expenditures are growing, while targeting remains insufficient

a. To buffer the impact of higher gas tariffs on households during the crisis, Ukraine ramped up its housing-related social assistance…	**b. … contributing to Ukraine's relatively large current social assistance budget**
	
Source: Ukrainian Statistical Service (Ukrstat)	Source: Ministry of Finance; World Bank calculations; 2017 for Ukraine and 2016 for EU-28

Higher energy tariffs will further drive up the cost of utility-related social assistance – likely offsetting the savings generated by the 2018 reparameterization of the Housing and Utility Subsidy (HUS). The 2018 parametric adjustments of the HUS, including the reduction of the social norms for energy consumption which determine the size of HUS payments and the use of imputed incomes for beneficiaries with low or no declared income, will help to control the cost of the scheme. However, the increase in heating and gas tariffs expected for later this year will largely offset these savings. HUS spending to support the utility bills of households is expected to grow in the short run if no further actions are taken.

The 2017 pension reform raised the adequacy of pensions for current retirees. The reform has potential to strengthen fiscal sustainability in the long term. Facing the twin challenges of providing adequate pensions and ensuring fiscal sustainability of Ukraine's pay-as-you-go (PAYG) pension system, Ukraine enacted a complex pension reform in 2017. This reform increased the pension adequacy for 90 percent of existing PAYG retirees and introduced a benefits indexation formula starting in 2019. To contain the cost of the pension system, the reform (i) implemented a more stringent pension eligibility formula to incentivize later retirement; (ii) reduced the rate at which pension rights are accrued for those of working age; and (iii) started the process of phasing out privileged provisions and special pensions. While this complex reform package is likely to increase overall fiscal pressure on the budget in the near term, the long-term fiscal sustainability of these reforms depends crucially on whether the reform can contribute to later retirement and increased compliance with social security contribution (SSC) obligations. The phasing out of privileged provisions and special pensions needs to be fully implemented. The pension reform for the military and security sector needs to be implemented in a fiscally sustainable manner. Given the size of pensions relative to the overall budget and given the interaction between the cost of the pension system and the current fast-growing public sector wage bill (which translates into higher SSC revenues, but also higher pension benefits for retirees), the evolution of pension expenditures and revenues needs to be closely monitored.

Structural reforms are needed to sustainably safeguard Ukraine's public finances

Given growing expenditure pressure, the government's 2018 revenue plan is ambitious. This report's baseline macroeconomic forecast assumes that Ukraine's economic recovery will continue in the medium term with GDP growth of 3.3 percent in 2018 (annex 2). In this environment, some gains in tax compliance are likely to materialize. However, the sharp compliance gains in the original 2018 budget for the payroll tax (social security contributions) – increasing by 1 percentage point of GDP to 7.2 percent of GDP – and for value-added tax (VAT) – increasing by 0.7 percentage points of GDP to 11.2 percent – are unlikely to materialize, as already suggested by Ukraine's revenue performance in the first half of the year.

Ad hoc measures may be needed to ensure meeting the fiscal deficit target of 2.5 percent of GDP for 2018. Without further determined measures to contain spending, expenditures are likely to increase significantly from 41.5 percent of GDP in 2017 to 44.2 percent in 2018. This, together with the expected shortfall in revenue (from 41.7 percent originally budgeted to 41 percent currently estimated) will increase Ukraine's deficit from 2.3 percent of GDP in 2017 to 3.2 percent in 2018. To meet its deficit target of 2.5 percent of GDP for 2018, the government will need to identify additional measures in the second half of 2018. A cut in capital expenditures is a likely scenario as cutting wages and pensions in the second half of the year will be impossible. This report suggests two options to rationalize current expenditure in 2018: (i) closing unnecessary open public administration vacancies and reducing unit wage bill allocations accordingly (potential savings of 0.3 percent of GDP if applied across all local governments); and (ii) fully implementing the 2018 HUS reparameterization (potential savings of 15 percent of total HUS budget or up to 0.4 percent of GDP in 2018).

The draft state budget submitted to parliament suggests that the main wage bill pressures will be maintained in 2019 by limiting an increase of the wages across the board, while the structural reforms are lagging. The announced increase in the minimum wage is 12 percent in 2019, which is line with planned nominal GDP growth. This should help to maintain the consolidated wage bill growth to 12.2 percent of GDP if additional top-ups are not adopted again, as was done in 2017 and 2018. Without structural rightsizing of key social sectors, there is a risk of ad hoc increases to the wage bill. The HUS expenditures are budgeted at UAH 55 billion or 1.4 percent of GDP, which seem to be on the low end of the projections and do not reflect the planned increase in gas and hitting tariffs. There is a high risk that HUS expenditures will remain significant given necessity raises to the gas tariff, and if the targeting measures are not fully implemented. In this case, the HUS expenditures may reach 1.8 percent of GDP.

Without sustainable solutions to contain wage bill and social welfare spending pressures, Ukraine will battle large fiscal deficits for years to come. To quantify the fiscal costs of the identified medium-term pressures, this report models a "No-Reform scenario" for 2019-2023 that includes the following assumptions: (i) the promised remuneration increases are implemented starting from 2020, including increasing pedagogical worker basic pay to four times the subsistence minimum, while staffing levels are left unchanged; (ii) the gas tariffs are increased to the level of import parity, while better HUS targeting is not implemented; (iii) revenue performance follows nominal GDP growth.[viii] In such a no-reform scenario, this report finds that fiscal deficits would balloon to around 6 percent of GDP in 2020 and remain over 8 percent in the medium term.

Figure 5. Fiscal Projections under a No-Reform Scenario, Percentage of GDP

	2017	2018e	2019p	2020p	2021p	2022p	2023p
Revenues	**39.2**	**41.0**	**39.8**	**40.0**	**40.6**	**41.3**	**41.4**
Tax revenues	34.0	35.7	35.6	35.7	36.3	36.8	36.9
Personal Income tax	6.2	6.3	6.5	6.5	6.5	6.5	6.5
Corporate profit tax	2.5	2.8	2.7	2.7	2.7	2.8	2.8
Payroll tax	6.1	7.0	7.0	7.2	7.5	7.8	8.0
Property tax	1.0	0.9	0.8	0.9	1.0	1.0	1.0
VAT	10.5	11.0	11.0	11.0	11.0	11.0	11.0
Excises	4.1	3.6	3.5	4.0	4.1	4.2	4.2
Taxes on international trade	0.8	0.8	0.7	0.8	0.9	0.9	0.9
Other taxes	3.0	3.3	3.1	2.6	2.6	2.6	2.5
Non-tax revenues	5.2	5.2	4.3	4.3	4.3	4.5	4.5
Expenditures	**41.5**	**43.5**	**42.8**	**46.0**	**48.6**	**49.6**	**49.9**
Current expenditures	38.2	39.0	39.0	42.5	44.1	45.1	45.4
Wages and compensation	10.7	11.3	12.2	14.7	15.1	15.5	16.1
Goods and services	6.4	7.0	6.0	5.8	6.0	6.5	6.6
Interest payments	3.7	3.8	3.8	4.2	4.5	4.5	4.5
Subsidies to corporations	1.6	1.4	1.3	1.3	1.3	1.3	1.0
Social benefits	15.9	15.2	15.4	16.2	16.9	17.0	16.9
Pensions	9.8	10.1	10.8	11.3	12.0	12.1	12.2
Unemployment, disability insurance	0.8	0.9	0.9	0.9	0.9	0.9	0.9
Social programs	4.9	4.2	3.8	4.0	4.0	4.0	3.8
Other current expenditures	0.1	0.2	0.3	0.3	0.3	0.3	0.3
Capital expenditures	3.3	4.5	3.8	3.5	4.5	4.5	4.5
Gen Government Balance	**-2.3**	**-2.5**	**-3.0**	**-6.0**	**-8.0**	**-8.3**	**-8.5**

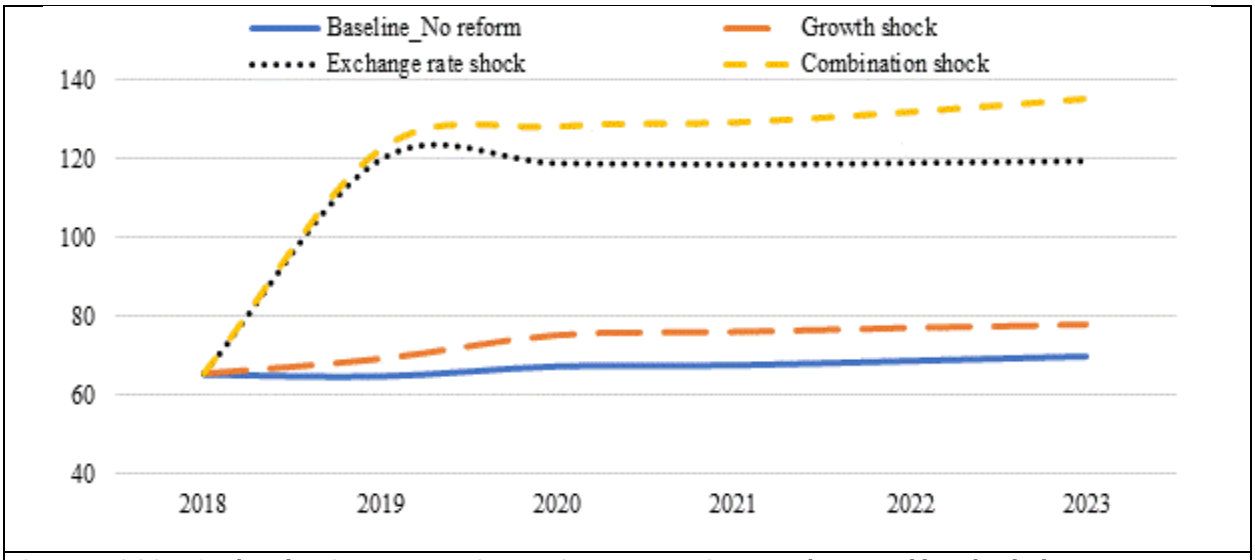
Source: BOOST 2017 based on State Treasury Service; State Treasury Service Website; World Bank calculations

These fiscal pressures make it more difficult for Ukraine to cover its financing needs, estimated at US$20 billion in 2018 and 2019 (8 percent of GDP per year), even assuming Ukraine meets its deficit targets. Ukraine needs US$9.2 billion in 2018 and US$10.5 billion in 2019 to repay public debt and finance the fiscal deficit. To meet these financing needs, Ukraine plans to raise US$3.8 billion in 2018 and US$4.2 billion in 2019 from external sources. In 2018, authorities are planning to raise US$2 billion from Eurobonds, US$800 million from the World Bank Policy-Based Guarantee (PBG), and US$1 billion from the European Union MFA, with the remainder coming from domestic borrowing in local and foreign currencies. Containing further growth of government expenditures is critical to minimizing further pressure on the budget stemming from higher financing needs.

Without tackling these fiscal pressures, a debt sustainability analysis (DSA) shows that Ukraine's public debt levels will remain high, leaving Ukraine vulnerable to a new crisis. Ukraine managed to reduce its public debt to GDP level to 72 percent in 2017. However, if fiscal pressures are not contained, Ukraine may not be able make further progress on this front going forward. High fiscal deficits will maintain debt ratios at elevated levels despite a benign projected GDP recovery. Moreover, downside risks to this baseline scenario are high. If GDP growth is lower than projected (growth shock),[ix] the debt-to-GDP ratio could reach almost 80 percent by 2020 and remain elevated over the medium term. At the same time, given Ukraine's debt structure (68 percent of debt is denominated in foreign currency), debt ratios remain especially sensitive to depreciation of the exchange rate. If an exchange rate shock[x] is applied from 2019 onwards, debt levels could exceed 120 percent of GDP, putting public debt on an unsustainable trajectory.

These simulations show Ukraine's high sensitivity to macroeconomic risks and the critical importance of fiscal discipline.

Figure 6. Medium-Term Debt Sustainability Is Threatened If Announced Government Staff Remuneration Increases Are Fully Implemented Without Compensatory Measures, PPG, Percentage of GDP

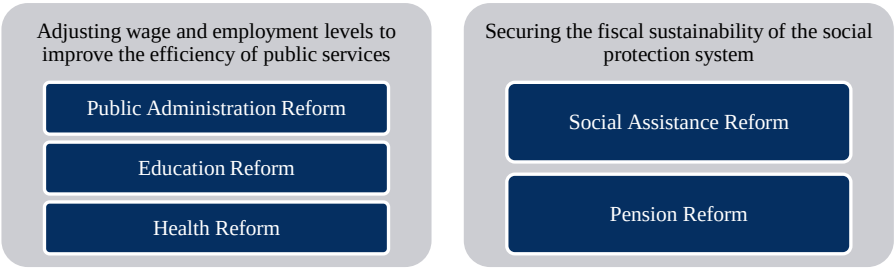


Source: BOOST 2017 based on State Treasury Service; State Treasury Service website; World Bank calculations

In this macrofiscal context, this Second Programmatic Public Finance Review (PFR-2) supports Ukraine in implementing its ongoing ambitious structural reform agenda to identify fiscal savings and to increase government effectiveness.

- The first pillar of this report focuses on containing wage bill pressures and making public services more efficient. with an emphasis on the public administration, education and health sectors. While Ukraine's public administration makes up a comparatively small part of the overall wage bill, it plays a vital role in the effective functioning of government. Salary and staffing decisions play a bellwether function for all other government employees. The education and health sector are the largest (nonsecurity) government employers. Together, these three sectors make up more than half of Ukraine's government wage bill.

- The second pillar of this report assesses the fiscal sustainability of the social protection system and identifies reforms to make expenditure more effective, with a focus on social assistance and pensions. This report evaluates the cost of these programs and identifies reforms to better support the poor.



PART B: ADJUSTING WAGE AND EMPLOYMENT LEVELS TO IMPROVE THE EFFICIENCY OF PUBLIC SERVICES

Reforming the Public Administration

This chapter provides an overview of Ukraine's current challenges in the public administration sector, an assessment of the ongoing reform progress as well as an evaluation of next steps in the reform, particularly related to staffing and remuneration levels. The key challenges of the public administration sector are: (a) an ineffective public administration and fast remuneration growth; (b) a lack of remuneration transparency and predictability that discourages staff; and (c) a lack of coherent and efficient human resource management and reliable payroll control mechanisms.

Key policy recommendations are:

(iv) Rightsizing staff positions by reducing unnecessary vacant positions and streamlining administrative procedures. (Suggested targets: 8 percent reduction at the central government level and 15 percent reduction for decentralized offices of central government bodies and of local administrations.)

(v) Moderation of further remuneration increases. (Suggested target: match nominal GDP growth.)

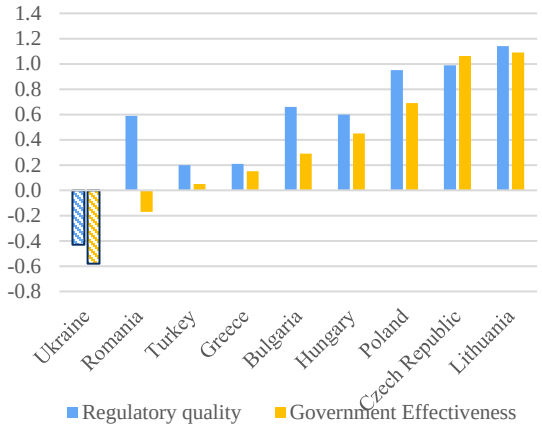
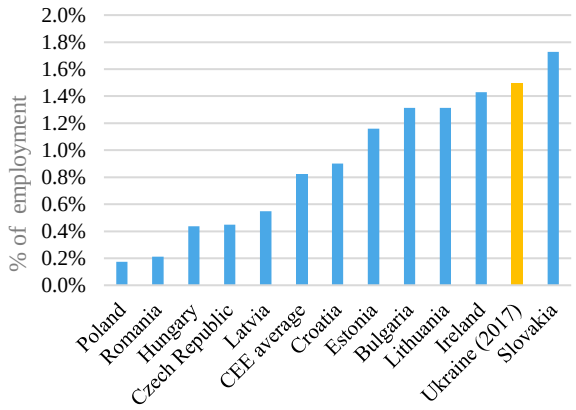
(vi) Restructuring of public administration compensation, including by (a) increasing the share of the guaranteed part of the salary in the total remuneration to 75 percent, thus making the total compensation structure more transparent and predictable; (b) reducing the guaranteed supplements portion (lower the maximum seniority supplement from 50 percent to 30 percent of basic salary) and aligning vacation and social aid supplements with basic pay rather than the average monthly salary; and (c) developing an effective system of bonus allocation based on performance.

(vii) Introduction of an evidence-based payroll monitoring and control mechanisms to ensure fiscally responsible and accurate budgeting of labor costs.

Key sectoral challenges

Ukraine is hampered by an ineffective and cumbersome public administration. Ukraine's 286,000 civilian public administration staff positions[xi] (end-2017), including 234,000 civil servant positions,[xii] are fragmented across multiple entities at the central, regional and local level and do not participate in policy formulation and implementation (such as licensing and quality control) by significant noncore responsibilities including the management of a large state-owned enterprise (SOE) sector. The quality of staff is highly heterogeneous and reports of demotivated staff abound. Given the key role of the public administration in ensuring a functioning government, the effectiveness of Ukraine's public sector is widely perceived as low compared to other countries in the region. Based on recent opinion polls, only 8 percent of Ukrainians trust government employees and 48 percent remain dissatisfied with the suboptimal quality of government services.[xiii]

Figure 7. Ukraine's Bloated Public Administration

a. Ukraine's public administration is widely perceived as ineffective …	b. … and employs a relatively large number of civil servants
	
Source: World Bank Worldwide Governance Indicator (score from -2.5 to 2.5); 2016 data	*Source:* Ukraine NACS, State Statistics Service of Ukraine and Eurostat

In 2015, Ukraine adopted a new law, "On Civil Service," a landmark reform aimed to attract and motivate qualified staff. The law led to a significant increase in remuneration of the civil servants (contributing to wage pressures across the entire public sector). Following the adoption of the new civil service reform law, a separate wage grid for civil servants was introduced that envisaged a base salary equal to the subsistence minimum multiplied by a separately defined coefficient (it amounted to 1.5 as of January 2018 and may be raised to 2 starting from 2019). The compression rate envisaged by the new wage grid was set at 7. This is in line with Organisation for Economic and Cooperation and Development (OECD) countries, but does not consider any adjustment for the cost of living. As a result of these changes, the wage bill devoted to civil services increased by 22.8 percent in 2016 and by 60.1 percent in 2017. For 2018, further base salary increases of 30 percent have been legislated for civil servants and the total public administration wage bill is projected to increase by 21.6 percent. While the size of the wage bill associated with public administration remains small overall (2017: 1.2 percent of GDP), these remuneration increases act as a bellwether for other general government staff and therefore impose fiscal pressure on the general government wage bill. The impact of higher remuneration on the quality and motivation of staff remains highly uncertain. In November 2017, only 13 percent of Ukrainians believed that higher wages to civil servants would help to attract capable people to civil service and to fight corruption in the government.[xiv]

The traditional structure of public administration remuneration is opaque and does not incentivize performance. In 2015, the basic salary comprised only 36 percent of overall civil servant remuneration.[xv] The remaining remuneration consisted of guaranteed supplements, such as seniority, civil servant rank, vacation and social support top-ups, as well as variable supplements for extra workload and performance. In practice, this opaque compensation structure gives management significant discretion in the compensation of employees, which, without proper compliance control mechanisms, can lead to abuse.[xvi] There is anecdotal evidence that bonuses within units are often shared equally to avoid demotivating the team, which negates the potential performance-enhancing gains from rewarding high performers. Meanwhile, new joiners to the civil service are dissuaded by low basic pay, as the magnitude of supplements and bonuses is difficult to discern for outsiders (the job descriptions usually contain information on the basic salary only). Finally, opaque pay reduces the accountability of Ukraine's public administration to civil society.

Lack of a centralized human resources management system hampers monitoring and oversight. Meanwhile, there is great uncertainty regarding the size and distribution of public administration pay and staffing. A weak institutional setting is at the root of these problems. While the Ministry of Social Policy is responsible for remuneration policy, the National Agency of Ukraine on Civil Service (NACS) formulates the general human resource policies for the civil service and the Ministry of Finance makes overall wage bill allocations for the sector.[xvii] These entangled responsibilities make it difficult to develop a coherent management strategy for the public administration wage bill. Prior to 2016, no central system collected actual data on individual staff of the public administration and only survey-based data was reported by the State Statistics Service. To alleviate this data gap, the NACS has been mandated to perform regular surveys of staffing levels across the state budget. However, discrepancies between the NACS survey and data available to the Ministry of Finance suggest weaknesses in the accuracy of this reporting mechanism. The numbers of employees in the public administration (including civil service) reported to the Ministry of Finance are higher than the numbers reported by the NACS. Anecdotical evidence indicates that lack of transparency in the remuneration structure and headcounts creates wrong incentives to government bodies to overreport the number of staff (positions) to obtain higher budget allocations.

Evaluating the progress of the ongoing reform agenda

Recently adopted civil service reform is a good step towards the modernization of Ukraine's public administration. Major steps in the right direction include: (i) merit-based hiring via open competition procedures; (ii) depoliticizing the civil service; (iii) differentiating between the civil service and support staff positions; (iv) streamlining remuneration structures and limiting bonuses to 30 percent of basic staff salary and 20 percent of the unit's wage fund; and (v) the introduction of a cap on the number of management positions within the organizational structure (one-third of total civil servant positions).[xviii]

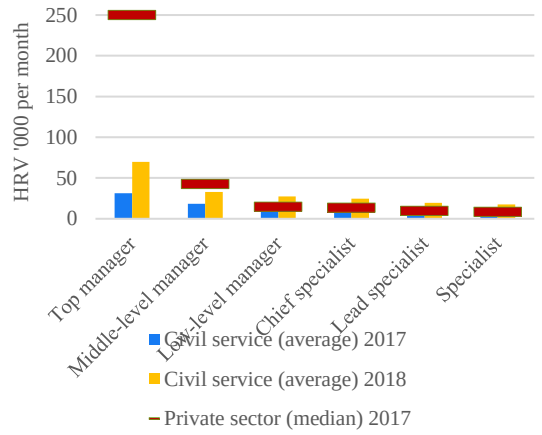
To accompany implementation of this fundamental restructuring of Ukraine's public administration, Ukraine adopted a comprehensive Public Administration Reform Strategy for 2016-2020 (PAR Strategy). This strategy is based on the SIGMA principles of public administration.[xix] Leadership on driving forward with this reform process lies with Ukraine's Reform Office – a recently established unit within the Cabinet of Ministries - and the NACS. Key elements of the reform strategy include the following: (i) creation of higher-paid reform staff positions to attract highly qualified candidates into key positions; (ii) development of a fiscally sustainable and transparent salary scheme that offers better compensation to civil servants; (iii) development and implementation of a staff rightsizing plan; (iv) creation of an integrated information technology (IT) system for human resource management (HRMIS) and strengthening human resource management units; (v) clarification of responsibilities across government bodies; and (vi) reduction of excessive administrative burden and enhancing the accessibility of public services. This strategy has been closely supported by the Programme for the Reform of Public Administration and Finances (EuroPAF), implemented by the European Union (EU) and the World Bank (WB).

Although the announced reform agenda is in line with good international practices, the current sequencing of steps is not aligned: sharp remuneration increases already raised civil servant salaries to levels comparable to those of the private sector, but progress on staff rightsizing and simplifying the remuneration structure has been limited. Civil servants' wages have increased three years in a row and the civil service law prescribes further increases of basic salaries for civil servants, with the minimum civil servant basic salary reaching the equivalent of two subsistence minimums by 2019.[xx] Our analysis, based on the methodology developed by Centre for Economic Strategy,[xxi] suggests that central government civil servant salaries might have reached the levels paid for comparable jobs in the private sector, with the

exception of top management positions. Given significant nonpecuniary benefits from public sector employment, including job security and fulfillment from public service, this suggests that the recent salary increases have already made civil servant positions relatively attractive.[xxii] Meanwhile, progress on making civil servant remuneration more transparent has been limited. While the civil service law and PAR strategy target to raise the guaranteed component of the civil servant remuneration (sum of basic salary and guaranteed supplements) to 70 percent of total pay, the law also provides for a transition period during which performance-based variable supplements are set per decree of the Cabinet of Ministers. Therefore, according to NACS, the 2017 guaranteed salary share for nonmanagerial central government staff and for managerial staff still represented only 45 to 55 percent of total remuneration.[xxiii]

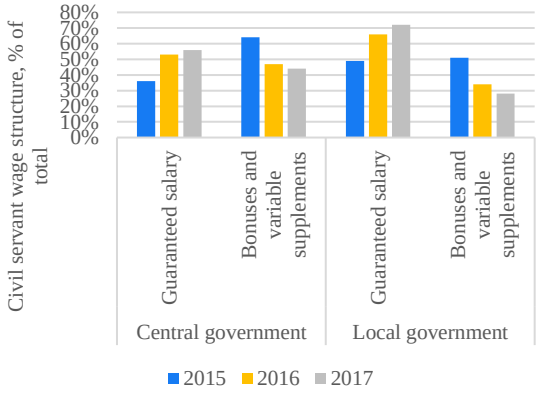
Figure 8. Ukraine's Unbalanced Civil Servant Salaries

a. Ukraine's remuneration of civil servants has reached or exceeded private sector salaries – top management is an exception[xxiv]



Source: CES, World Bank calculations based on 2018 basic salary data

b. While progress has been made, allowances and bonuses remain a large part of civil service remuneration



Source: NACS, World Bank calculations

Box 1: Civil Servants Pay and the Importance of Distinguishing between Base Salary and Total Remuneration Package

Under the new Law on the Civil Service, the remuneration of a civil servant consists of:

1. **A basic salary:** the unified basic salary grid is set annually by a Resolution of the Cabinet of Ministers of Ukraine with a compression ratio between the lowest and the highest basic salary at 1:7 (three levels of government are differentiated - rayon, oblast and central level).[xxv] According to the updated 2018 civil service wage grid, the lowest basic monthly salary at rayon, oblast and central levels of the public administration are UAH2,643 (equivalent to US$102), UAH3,600 (US$139) and UAH5,500 (US$212), respectively; the highest basic monthly salary at the rayon, oblast and central levels are as follows: UAH 7,700 (US$296), UAH 10,400 (US$400) and UAH 18,000 (US$692).
2. **Guaranteed supplements** in the form of (a) a supplement for civil servant rank (a lump sum per month ranging from UAH200 to UAH 1,000; (b) a seniority supplement for the number of years in civil service (3 percent of basic salary per each year in service with the maximum of 50 percent); (c) a vacation supplement (100 percent of average monthly salary is paid at the time of the annual leave); (d) a social aid supplement (up to 100 percent of average monthly salary is paid once a year upon civil servant request and depending on the wage fund availability).

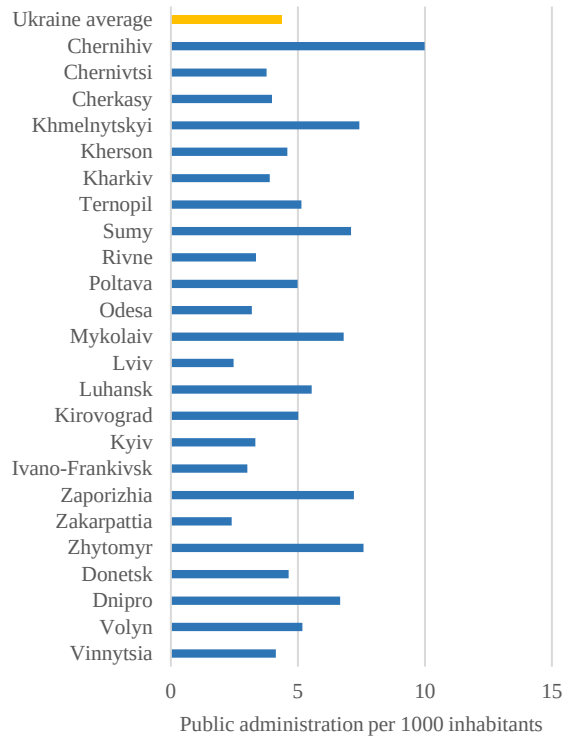
3. **Variable supplements** include (a) a supplement to compensate for extra work load due to temporary vacant positions (50 percent of basic salary); (b) a supplement for an intensive work regime (up to 100 percent of basic salary); (c) a supplement for performing especially important tasks (up to 100 percent of basic salary); (d) a secrecy supplement (from 10 percent to 20 percent of basic salary paid in months in which the civil servant has access to an information classified as a state secret).
4. **Two types of bonuses**: (a) monthly and/or quarterly bonuses (to be capped at 30 percent of annual basic salary of a civil servant starting January 2019 - unless this provision is postponed); (b) annual bonus based on annual appraisal.

Apart from the high-level managers, the newly created reform staff positions are at the top of the salary scale within the civil service. Their average remuneration is about 30-70 percent higher than for the rest of the civil service. In 2018, special top-ups to a basic salary (UAH28,30050,000, equivalent to US$753 to US$1,880) were introduced for the reform specialists.

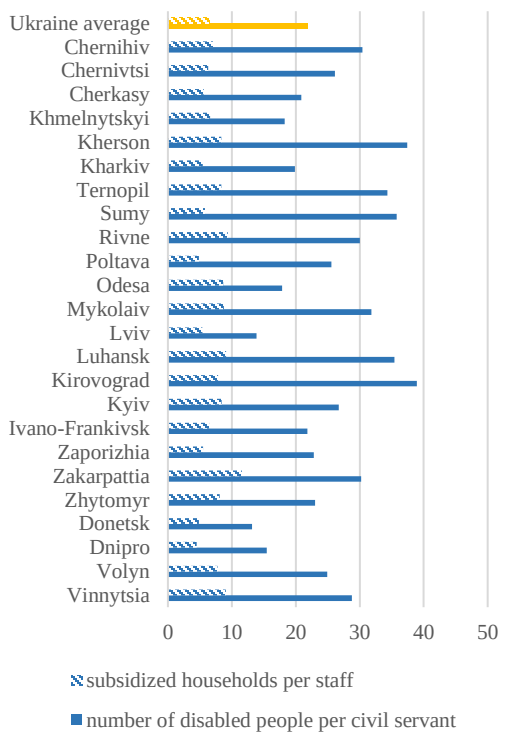
There is evidence of large differences in total remuneration levels within government entities performing similar functions due to differences in variable supplements and bonuses.[xxvi] While de jure basic salary compression ratio within the civil service is set at 1:7, this report estimates that the de facto the ratio between the lowest civil servant's total salary at rayon state administration and the highest salary with all the supplements and bonuses at the central level of the government (for instance, the State Secretary of the Ministry) may be as high as 1:10. According to NACS data, in 2017 average total salary for a rayon and oblast level specialist was at UAH 3,033 (US$114) and UAH3,505 (US$135) per month, respectively, and for top managerial staff at the rayon, oblast and central level of the public administration were at the following levels: UAH14,138 ($544), UAH21,434 ($824) and UAH29,900 ($1,124) per month.

Evidence suggests that transparency of remuneration packages helps to attract better people. According to NACS data, in 2017 only 2 candidates applied per nonmanagerial central government civil service position and 12 candidates applied per managerial position. In contrast, the new reform staff positions that offer higher remuneration levels, greater responsibility, and a transparent and well-communicated recruitment procedure attracted 27 applicants per position in 2017. According to the authorities, about 60 percent of recruited reform specialists came from outside the civil service. This suggests that transparency of remuneration packages matters. The already significant pay package of civil servants needs to be better communicated to potential job applicants, including by increasing the share of base salary. This would also reduce the importance of seniority top-ups, which discourage new joiners by allocating more pay to incumbents – even if both are at the same grade level.

Figure 9: Heterogeneity across Regional State Administrations Suggests Significant Potential for Staff Rightsizing



Source: Ministry of Finance, State Statistics Service, World Bank calculations, 2017 data



Source: Ministry of Finance, State Statistics Service, World Bank calculations, 2017 data

To attract more and better candidates, a sense of pride and achievement in becoming a member of the civil service needs to be restored. Reform posts attract candidates because they offer the potential for recruits to influence how government is run. This carries a lesson for the wider civil service. New recruits need to be empowered and given more responsibility as they prove themselves.[xxvii]

Staff rightsizing is lagging behind, and there remains great potential to streamline the public administration, particularly at the subnational level. Between July 2016 and July 2017, the Ministry of Finance estimates a decline in the number of public administration staff positions by 4.1 percent, although it is suspected that line ministries partially achieved this reduction by reclassifying staff outside the public administration when reporting to the Ministry of Finance. To meet IMF targets on civil service staffing, the government committed to further reducing the number of civil service employees by 10 percent by the end of 2019.[xxviii] Given that 90 percent of the public administration are based in regional branches,[xxix] local offices need to be incentivized to unlock efficiency gains. Large variation across regions in the number of public administration staff relative to inhabitants and to vulnerable groups suggests significant scope for rightsizing, including through the ongoing amalgamation of local self-governments and municipalities.[xxx] While local governments face diverse challenges, which may explain the need for heterogeneity in staffing, lean local offices offer valuable lessons on how to organize the administration of the rest of the country. If all regional state administrations with staffing levels above the country average (relative to inhabitants)

brought staffing down to the country average, then the total headcount in the local administrations could be reduced by 14 percent.

Policy recommendations

Despite progress in the right direction, the public administration reform has to continue towards its goal of providing high-quality government services through a skilled and efficient staff in a fiscally affordable manner. The current public administration pay system needs to be improved to incentivize existing staff and to attract skillful and efficient new people via higher transparency, more fairness and accountability. Employment levels have to be adjusted in order to keep the labor costs for the sector at an affordable level.

To increase the effectiveness of the civil service and to ensure a fiscally affordable public administration wage bill, the following reform steps are recommended:

(1) Pursue the rightsizing of staff positions based on a reduction of vacant positions at regional level of public administration and on streamlining managerial structures at the central level following an analysis of functions and responsibilities of core government bodies. The government needs to implement its 2018-2020 vision to streamline the managerial structures of the ministries, in particular abolishing or downsizing noncore functions such as administrative service delivery, inspections and oversight and SOE management.[xxxi]

(2) Moderate further remuneration increases, linking them to nominal GDP growth.

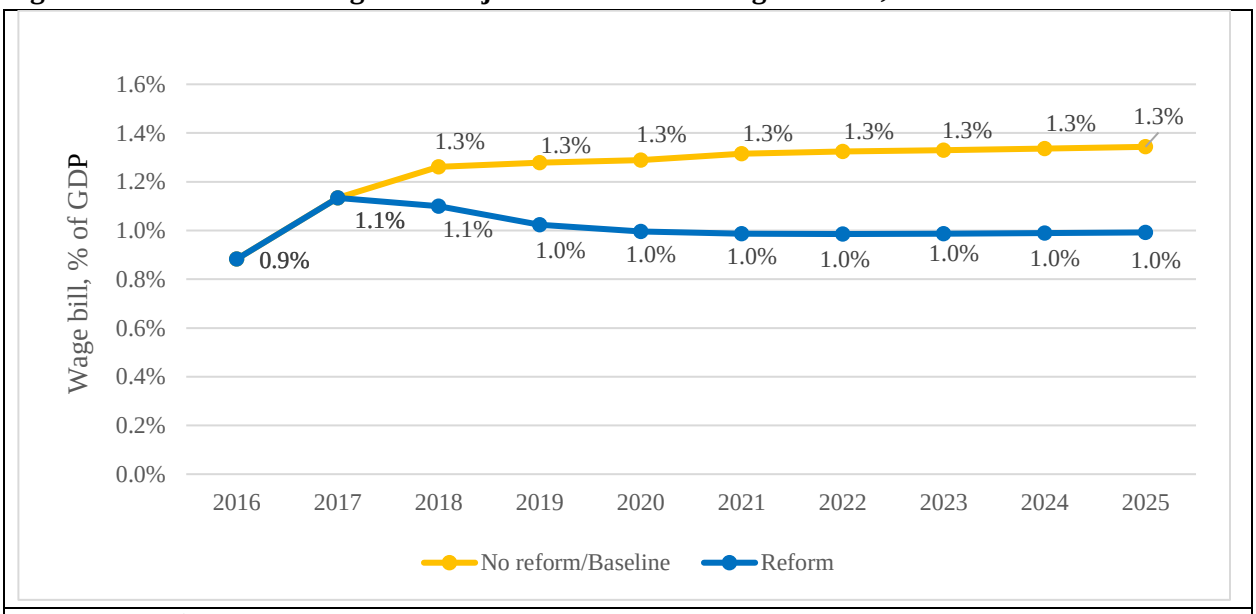
(3) Restructure public administration compensation, including by (a) increasing the share of the guaranteed part of the salary (basic salary plus guaranteed supplements) in the total remuneration to 75 percent[xxxii] (while reducing the highly discretionary variable supplements portion), thus increasing transparency and predictability of the total compensation structure; (b) reducing the guaranteed supplements portion by lowering the maximum seniority supplement from 50 percent to 30 percent of the basic salary, in line with the average service years' supplement levels in EU countries, while aligning vacation and social aid supplements with basic pay rather than average monthly salary; and (c) developing an effective system of bonus allocation based on performance.

(4) Introduce reliable evidence-based payroll monitoring and control mechanisms to ensure more efficient human resources (HR) management and fiscally responsible and accurate budgeting of labor costs in the sector. In addition to establishment of the integrated HR management information system, it is also important to address the current institutional weakness of the public administration system – namely, a lack of clearly assigned responsibilities for the remuneration policy and payroll control between the NACS and Finance Ministry. While NACS must assume full responsibility for HR management, remuneration policy setting and jobs classification within the sector, the Finance Ministry must have access to an integrated payroll information system to be able to perform regular affordability checks as a part of the budgeting process.

Implementation of the abovementioned measures will allow the government to keep the civil servant wage bill at below 1 percent of GDP by 2025 while retaining and attracting qualified staff. In the short term, the fiscal savings on the public administration labor costs may come from moderation of nonguaranteed wage components' growth and partial reduction of vacancies that could bring about a 2.5 percent cut in the number of public administration staff positions (except for the reform specialists positions

and the newly created public administration units, which are still recruiting additional staff). In the medium term, the reform scenario assumes that the government takes decisive action to proceed with gradual rightsizing of regional office public administration positions (with cumulative reduction by 15 percent by 2021) and with about 8 percent reduction in staffing at the central level of the government[xxxiii] as a result of functional reviews and streamlining managerial structures. The abovementioned staff cuts should not be implemented as an across-the-board and one-off measure, but rather as careful, incremental changes to the number of positions to avoid hampering government service delivery. This will allow for still sizeable further annual nominal total remuneration increases of 9-10 percent by 2025 (with reshuffling of the pay components to increase the share of basic salary, alongside the introduction of payroll control mechanisms and fair distribution of bonuses), while maintaining the public administration wage bill at a broadly stable ratio relative to the size of the economy.[xxxiv] The proposed changes to the compensation structure would require amendments to the framework legislation on the civil service to allow for lower guaranteed supplements benchmarks and higher decompression for basic salary grid (to avoid nominal wage reduction upon implementation of the statutory required limits on bonuses and variable supplements). All in all, the reform scenario offers a fiscally prudent way to improve the quality of the public administration. The cost of moderate wage increases is compensated by optimization of staffing. A more transparent pay system could help to attract new and maintain incumbent qualified staff without leading to an explosion of public administration costs.

Figure 10: Civil Servants Wage Bill Projections as a Percentage of GDP, 2018-2025



Source: Ministry of Finance, State Statistics Service, NACS, World Bank estimates

Reforming the Education Sector[xxxv]

This chapter provides an overview of Ukraine's ambitious education reform introduced in 2017 and its impact on sector outcomes and fiscal sustainability. The analysis focuses on the reform's implementation challenges and next steps, with particular emphases on opportunities to optimize the oversized school network to ensure access to better services for students while managing fiscal pressures from the growing wage bill.

Key policy recommendations are:

(i) To moderate further remuneration increases. (Suggested target: if the promised increases in remuneration for pedagogical workers need to be implemented (as outlined in the new education law), the government could aim to bring remuneration, including allowances and bonuses (instead of the base salary), to four times the subsistence minimum.)

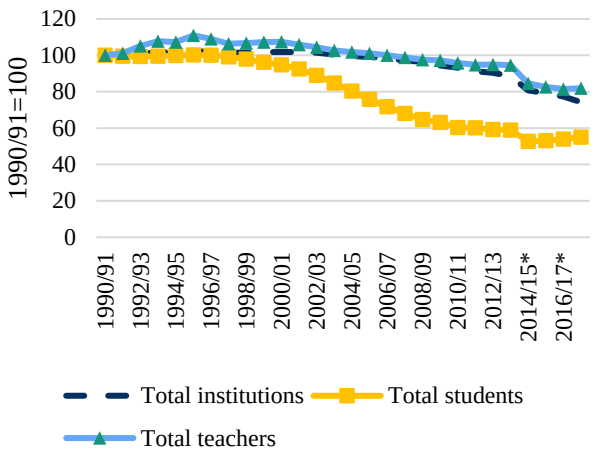
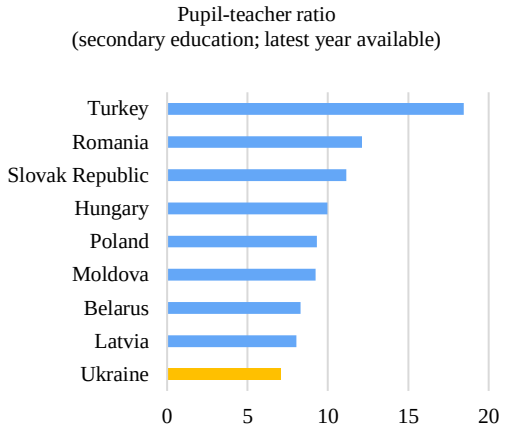
(ii) To determine school network staff optimization. (Suggested target: reduction of general secondary education staff by 25 percent, to be implemented gradually and leveraging natural staff attrition to limit layoffs.)

(iii) To conduct deep-dive analyses of other subsectors of the education sector (including preschool, higher education and technical and vocational sector) with the aim of identifying the scope for efficiency savings.

Key sectoral challenges

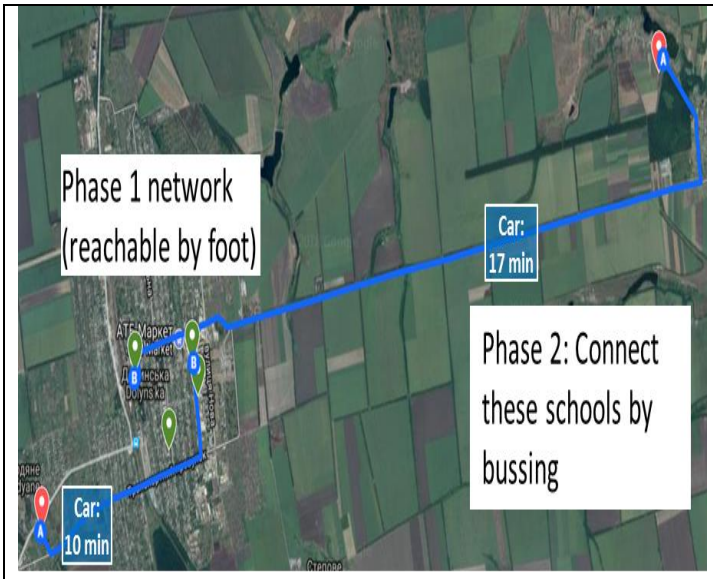
Ukraine's ratio of pupils-per-teacher is among the lowest in the region, but its oversized school network has not adapted to falling birth rates and an aging population. Since 1990, the number of Ukrainian children aged 5 to 19 years declined by 41 percent, from 11 million to 6.5 million in 2014. Over the same period, the number of general education schools declined by only 11 percent and the number of teachers fell by 5 percent.[xxxvi] Failure to downside the school network partly reflects skewed incentives created by outdated subnational financing arrangements.[xxxvii] Since the central government provided input-based financing (based on Soviet-style norms per school, number of classrooms, et cetera), local authorities (rayons) could continue financing their existing school network despite falling enrolment numbers, thereby avoiding politically difficult school closures and education staff downsizing.[xxxviii] As a result, the nationwide average general education school size shrank about one-third, from 327 to 218 students, while the student-teacher ratio dropped about one-eighth, from 13.3 to 8.3.

Figure 11. Ukraine's Declining School-Age Population

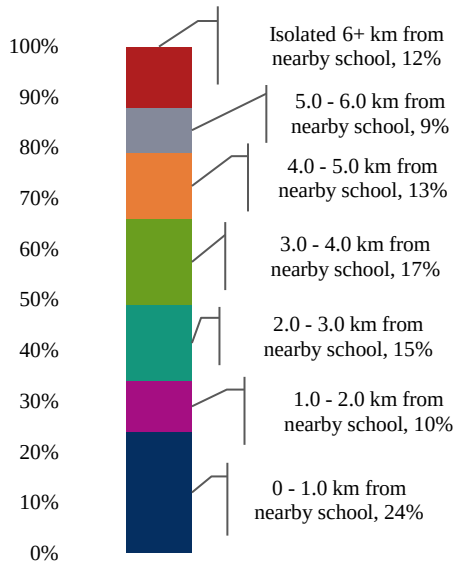
a. Ukraine's school network has not adopted to falling birth rates and an aging population…	b. … today Ukraine has one of the lowest student-to-teacher ratios in the region
	
Source: IDSS (2014) using Ukraine State Statistics Service; General education schools	Source: World Bank WDI 2018 (data latest year available)

This chapter analyzes Ukraine's school network using data obtained from Google Maps and school Global Positioning System (GPS) locations to quantify the potential for general school network optimization. This analysis identifies substantial scope for merging establishments that are in close proximity from one another. Our analysis suggests that 66 percent of Ukraine's 15,000 schools are located within a 4 kilometer (km) distance of another school and 23 percent are located within 1 km (a short walking distance). For schools located within such close proximity to each other, classes could be merged (and staff reduced) without waiting for roads to be improved and busses procured. World Bank analysis suggests that as many as 10 percent of all classes could be eliminated (and 10 percent of the general school teacher workforce reduced) by creating networks of schools located within close proximity (as measured by 30 minutes' walk for primary students and 60 minutes' walk for secondary students).[xxxix] Where the quality of roads is sufficient, the introduction of school busses could allow for even further consolidation (allowing as many as 24 percent of classes and teachers to be reduced).

Figure 12. Google Maps and School GPS Coordinates Indicate Few Isolated Schools



Source: Google Maps



Source: World Bank estimates

At the same time, pedagogical workers have seen significant wage increases in 2017-2018. As with other government sectors, nominal wages in the education sector did not keep up with high inflation during the crisis years of 2014-15. The purchasing power of remuneration fell by close to 40 percent at the trough of the crisis, which was significantly greater losses experienced by the private sector. Since labor costs comprise around half of government education spending, this wage moderation played a key role in bringing down government education expenditures relative to the size of the economy (and relative to revenues). However, it further undermined the morale of education staff. With economic stabilization in 2016-17, the government therefore introduced significant new remuneration increases in 2017 and 2018, unraveling some of the fiscal consolidation gains of the crisis years. Ukraine is now searching for a remuneration system that adequately rewards its staff while keeping the cost of the education sector fiscally sustainable and providing incentives to improve the quality of services.

Box 2: Teacher Pay and the Importance of Distinguishing between Base Salary and Overall Remuneration Package

Remuneration of teachers in general educational institutions includes:

1. **A basic salary** (as determined by a Resolution of the Cabinet of Ministers of Ukraine which specifies a "Uniform Scale of Wages and Salaries of Categories and Coefficients" and equal to 18 hours of teaching per week). A teacher can be paid a fraction of the base salary, depending on hours of teaching
2. **Markup for years in service** (over 3 years of service – 10 percent; over 10 years of service – 20 percent; and over 20 years - 30 percent)
3. **Markup for the occupation prestige** (up 20 percent)
4. **Other pay and markups** (class supervision (in loco parentis), checking of notebooks, supervision and oversight of classrooms/workshops, etc., on average 22 percent)
5. **Remuneration for bona fide work**

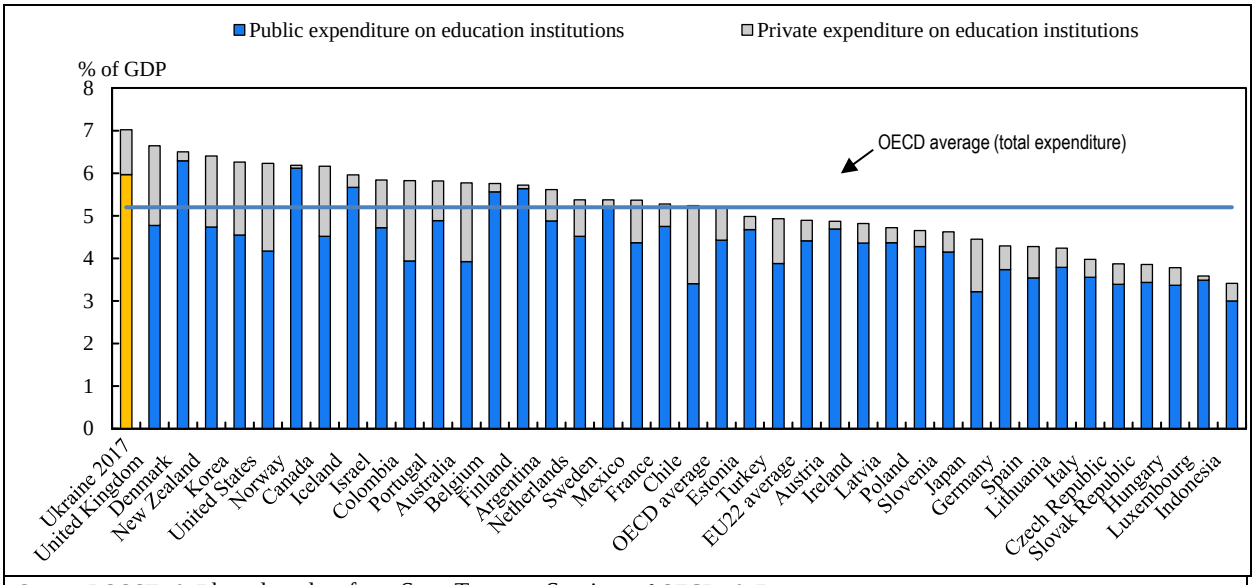
6. **Recovery money during the provision of an annual basic vacation**

Nearly half of a teachers' remuneration package can come from the various top-ups. As of January 2018, new teachers are paid a base salary of UAH3,735 (provided they teach 18 hours per week). However, given the various top-ups above, the average remuneration is UAH6,671, so the base salary is only 56 percent of a young teachers' remuneration. A more senior teacher earning a 30 percent mark-up for years in service receives a base salary that is only 53 percent of remuneration.

Compared to other countries, the salary progression of a teachers' career is relatively small. In particular, teachers of the highest rank who are at the top of the salary scale earn only about 30 percent more than new teachers. Compared to other countries, this is a relatively small premium for years of service and experience, and may not be attractive for experienced teachers. (It also carries the risk that some talented individuals may leave the profession.)

Both the oversized school network and recent pedagogical worker wage increases mean that Ukraine's education system remains more expensive than that of many OECD countries. Sector spending relative to size of the economy remains higher than in much more advanced economies, both in terms of government spending and private out-of-pocket expenditures. This limits the fiscal room for additional compensation increases for teachers. The oversized school network maintains a workforce of 1.5 million education sector staff, including around 0.8 million teaching staff and 0.7 million nonteaching staff, which limits the resources available for programs that could help raise the quality of education provided (for example, better training and mentoring for teachers and school leaders and higher starting salaries to attract higher caliber graduates).

Figure 13. Ukraine's Education Expenditure Exceeds Most OECD Peers



Source: BOOST 2017 based on data from State Treasury Service and OECD 2017.
Note: 1 Pre-primary through tertiary, including expenditures not allocated by level.

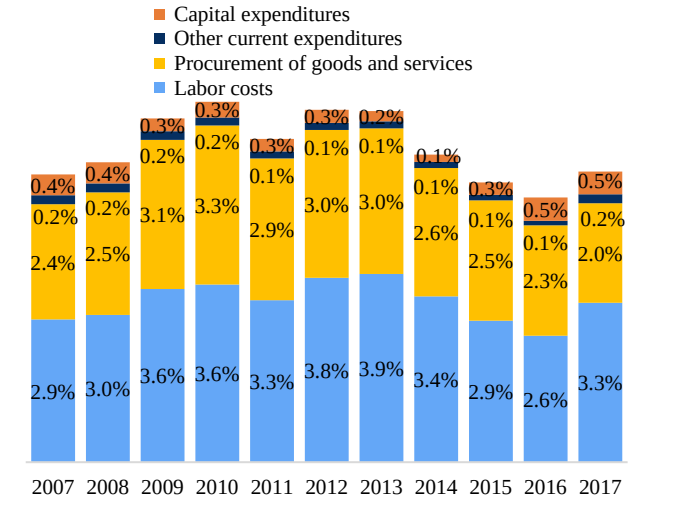
Since public education spending is skewed towards personnel costs, other types of spending such as capital investment are crowded out. In 2017, labor costs comprised 44 percent of all budgeted spending

on education; non-personnel recurrent costs accounted for 43 percent, and capital spending made up only 9 percent.[xl] In terms of functions, the largest part of public spending on education is allocated to the general secondary subsector, followed by higher education and preschool education. Of the 6 percent of GDP spent on education in 2017, 2.8 percent of GDP went to general secondary schools, 1.3 percent to higher education institutions, 0.9 percent to preschools and other preprimary education institutions and 0.3 percent to Vocational Education and Training (VET) schools.

Figure 14. Ukraine Expenditures as Percentage of GDP

a. Large wage bill expenditures squeezed out capital spending for decades

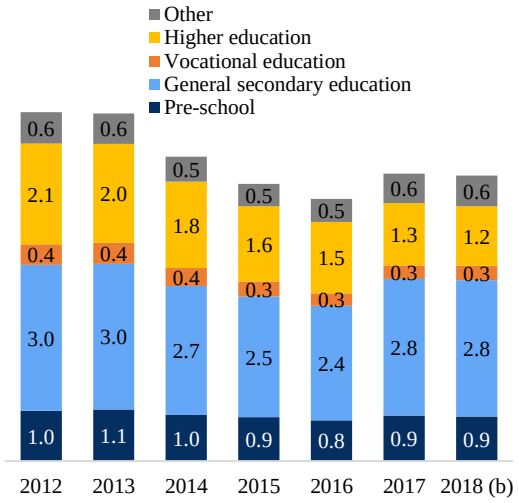
Expenditures, % of GDP



Source: BOOST 2017 based on data from State Treasury Service

b. Ukraine froze education sector salaries despite high inflation during the crisis of 2014-15,

Expenditures, % of GDP

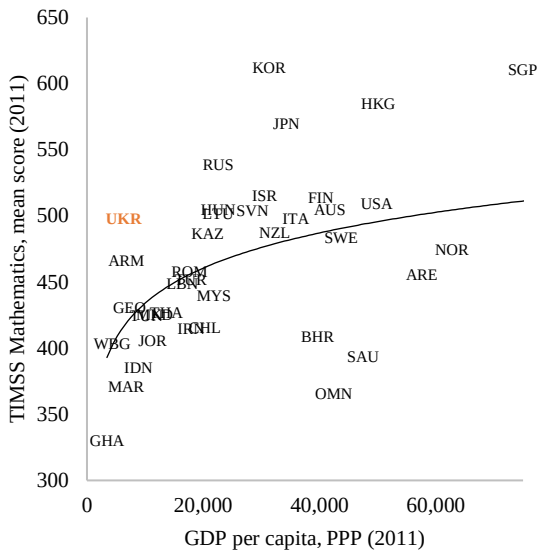


Source: BOOST 2017 based on data from State Treasury Service

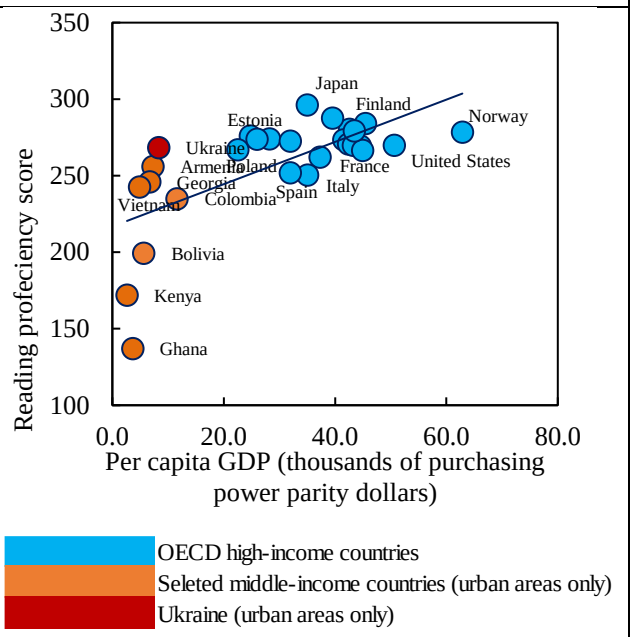
High expenditure does not necessarily translate into positive outcomes - although Ukraine's headline education results are good, firms have difficulty finding workers with the necessary skills. When Ukraine has participated in international assessments[xli] of students' and adults' cognitive skills, it has done relatively well. According to 2011 data from the Trends in International Mathematics and Science Study (TIMSS 2011), Ukrainian grade 8 students performed relatively well given the country's level of economic development and at par with richer countries (including Norway, Sweden, and New Zealand). However, although Ukraine's general education outcomes look good, firms have difficulty finding workers with the necessary skills. This reflects an outdated curriculum, teaching equipment and facilities as well as demotivated and poorly trained teachers. Pupils do not learn independent problem-solving skills and classes are not designed to actively engage students.

Figure 15. TIMSS 2011 Mathematics Performance and GDP Per Capita (a) and Adult Literacy Scores and GDP Per Capita (b)

a. Mathematics Mean Score



b. Adult Literacy Scores[xlii]



Source: World Bank EdStats database (a) and Del Carpio et al (2017) (b), using data from ULMS-STEP Household Survey (2012), STEP Household Surveys (2012-13), OECD's calculation for OECD-23 based on PIAAC data (2011-12)
Notes: [1]Qatar, with GDP per capita at PPP of US$134,000, is not shown on the figures
[2] Panel (b) shows GDP per capita on horizontal axis and adult literacy scores on the vertical axis

Evaluating the progress of the ongoing reform agenda

Ukraine has launched an ambitious series of education reforms culminating in the framework education reform law that was adopted in 2017. Ukraine has passed laws for higher education (in 2014), for research and scientific activity (in 2015), and, in 2017, the framework law for the education sector, Law on Education. Alongside the Budget Decentralization Reform (2014) these laws represent a major shift towards devolving authority from central to local government and education service providers (e.g., universities). While the Law on Education covers the entire education sector, this chapter focuses on the implication of that law on general secondary education for two reasons: First, this subsector consumes the largest proportion of the budget; second, there is more clarity on what changes the Law on Education will entail for that subsector. For other subsectors (such as technical and vocational education), future legislation (for those subsectors) will provide more clarity on the reforms needed, their costs, and the pace with which they will be implemented.

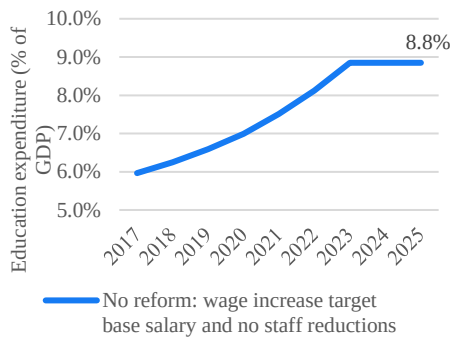
The main changes envisaged by the education reform include: (i) de-bureaucratization of the education sector by granting increased professional autonomy to teachers, schools, and local authorities; (ii) aligning the Ukrainian school system with European norms, including the transition to 12 years of schooling rather than the current 11 years; (iii) modernizing the school curriculum content on the basis of competencies and 21st century skills; (iv) introducing a national system of qualifications, including a National Qualifications Framework; and (v) launching a national agency for educational quality assurance.

Despite the broad ambition of this reform effort, the cost of most of the policy changes is modest in the short run although costs increase further in the future. During the first phase of implementation, annual costs of new reform initiatives are expected at around UAH2 billion, equivalent to less than 0.05 percent of GDP per year. These costs include financing new textbooks, the development and rollout of a new digital e-learning platform, increased spending on teachers' professional development, and new equipment for schools (furniture, learning resources, and computers). In the future, the addition of a 12th year of schooling will increase costs.[xliii] However, the Ministry hopes to find savings by simultaneously reducing the number of years required for a bachelor's education from four to three years and thereby reduce staffing numbers in higher education. Finally, the law also envisions introducing a voluntary mechanism to allow teachers to be certified, with mechanisms still to be established. Upon getting such certification, teachers would receive a 20 percent salary increase.

One key promise of the law is fiscally worrisome: the law aims to raise pedagogical worker salaries to at least four times the subsistence minimum by 2023. This policy move aims to improve the low social status of teachers, increase motivation and attract higher quality teachers. As such, the law promises to increase the starting salary of teachers to four times the subsistence minimum by 2023. Already, starting on January 2018, teacher salaries rose, on average, by nearly 25 percent (relative to 2017). If the base salary of new teachers were increased to four times the subsistence minimum by 2023 (and without a change to the various bonuses and top-ups which teachers receive, which, on average, amount to nearly half of a teacher's remuneration), spending on education would increase from 6 percent in 2017 to 8.8 percent of GDP by 2023.

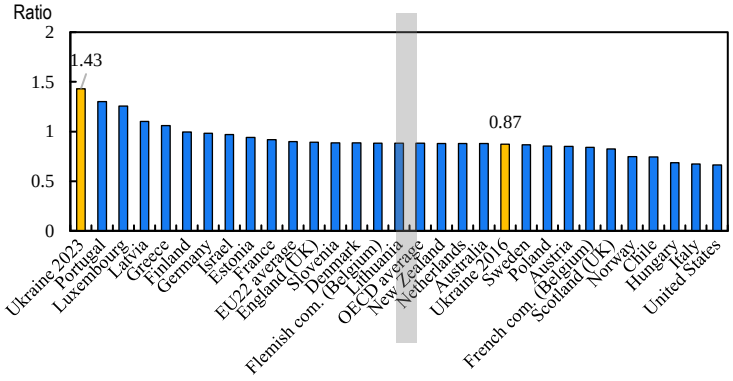
Figure 16. Rising Education Spending and High Teachers' Salaries Relative to Peers

a. Education spending (forecast), percent of GDP



Source: World Bank estimates

b. Teachers' salaries relative to earnings for tertiary-educated workers (2015, except for Ukraine 2016 and 2023 (forecast))



Source: OECD, Education at a Glance 2017, Table D3.2a (www.oecd.org/education/education-at-a-glance-19991487.htm) and World Bank staff calculations for Ukraine using Ukrainian Labor Force Survey and World Bank modelling exercise for 2023

Teacher salaries are already relatively high compare to regional peers, and further announced increases would make Ukraine an international outlier. Teachers in Ukraine are paid less than teachers in Western Europe when comparing salaries in euro terms (even adjusting for purchasing power parity). However, this is not a particularly useful comparison, given that Western European countries have substantially higher overall salaries and higher levels of income that allow them to afford higher public-sector wages. The more meaningful comparison is a comparison of how much teachers in Ukraine are paid relative to individuals in Ukraine with the same level of experience and education. On this dimension,

teachers' salaries in Ukraine already resemble teachers' salaries in most other countries. Teachers, who tend to work fewer hours and enjoy more job security, usually receive 10-30 percent less than peers with similar education and experience. If teachers' base salaries were increased to four times the subsistence minimum, they would be the highest paid relative to OECD countries.

The putative causal link between increasing teachers' salaries and improving education sector outcomes, including learning outcomes of students, is weak. One potential link between the two is that increasing salaries would make the teaching profession more attractive to talented individuals into the profession. There is some international evidence indicating that higher salaries can attract higher quality public servants (for example, see Dal Bó et al. 2013).[xliv] However, in Ukraine's case, as discussed below, the sector needs to downsize the number of teachers by an estimated 20-30 percent, implying that very few new teachers will need to be recruited in the coming years. It would make better sense to raise salaries only after that downsizing had taken place. Another potential link is that higher pay would improve motivation and performance. But, again, international experience does not provide much support for this link (see Evans 2018).[xlv] A separate but related potential link is that higher pay would discourage teachers from searching for additional paid work, such as fee-based private tutoring, which takes time and attention away from a teacher's primary task of classroom teaching. Private supplementary tutoring is common in Ukraine, especially for teachers whose contracted workload is less than a full working week (UNESCO 2015; OECD 2017). Because many teachers do not have full workloads and their nonteaching time is not regulated, they would still be permitted to use nonteaching time for private tutoring, which remains in high demand particularly in upper secondary education (OECD 2017). Therefore, without changing teachers' workloads and the way that teachers are compensated, the incentives to participate in private tutoring would remain strong regardless of the proposed pay increase.

Moreover, a large increase in teacher salaries will have a range of unfortunate spillover effects. First, the growing education sector wage bill may further squeeze out spending in other priority areas, including the resources needed to support the implementation of the Ministry's ambitious reform program called the "New Ukrainian School." Second, the salary increase will make it more attractive for older teachers close to retirement to stay in the system to earn a few more years of salary at the much higher wage. This would lead to a lower rate of natural attrition and make it harder to bring down staffing numbers. Retiring teachers on higher salaries will earn higher pensions. Finally, other public sector workers will start demanding increases in the same magnitude, which could lay the foundations for a broader fiscal crisis.

Policy recommendations

To reduce the fiscal cost of the legislated pedagogical worker remuneration increases, Ukraine can implement them by targeting total remuneration instead of the base salary. The language of the new law leaves room for different ways of implementing the remuneration increase. Simulations conducted for this chapter suggest that, if the wage increase targets to raise the least-paid teachers' total remuneration package (rather than the bases salary) to four times the subsistence minimum, the wage increase could be implemented with education spending rising to 6.2 percent of GDP by 2023 instead of 8.8 percent of GDP if only base salary were targeted.[xlvi]

To make it fiscally sustainable in the medium term, any further remuneration growth should be aligned with progress on school network optimization. As this report's use of Google Maps has shown, as many as 10 percent of all classes could be eliminated and 10 percent of the general school teacher workforce reduced by creating networks of schools located within close proximity (within a 30 minutes' walk for primary students and 60 minutes' walk for secondary students).[xlvii] Where the quality of roads is adequate, busses could be procured to allow for even further consolidation, with as much as 24 percent of

classes (and teachers) reduced. Although school network optimization would entail additional short-run costs, it would help generate substantial long-run savings. Hub (receiving) schools would need to be refurbished and made more attractive for parents to want to send their children to these schools. In addition, busses would need to be procured or transportation costs for students covered in other ways. However, even when accounting for such increased spending, the overall savings would be substantial. In particular, if a bussing solution is implemented, an estimated 100,000 staff could be made redundant (60,000 teachers and 40,000 non-teaching staff).

While school optimization will increase the size of classes, this is expected to improve education outcomes. Analysis of Ukraine's school leaving examination data show that students from smaller schools where classes are smaller underperform their peers from larger schools, even after controlling for other factors that could influence outcomes (Lathapipat, 2018).[xlviii] The analysis suggests that test score results could potentially be increased by consolidating the school network and, in the process, creating larger classes in better resourced schools. Thus, better quality of services is expected from the students will get access to better-resourced hub schools, because currently the quality of services in the small village schools is lagging behind.

Box 3. Leveraging the School Hub Program and the Power of the Purse

Introduced in 2016 to "provide conditions for equal access to quality education," the School Hub Program holds great promise as the main vehicle through which the Ministry of Education can accelerate school optimization in the coming years. This program empowers local authorities to devise their own plans to (a) identify a hub school and at least three schools that will then become hub-affiliated schools; and (b) identify their needs to facilitate this reorganization (such as busses). However, to fully address the problem, the program needs to be increased substantially from 499 hubs (and 966 affiliated schools). This chapter finds that at least 8,100 schools are located within close proximity of one another, presenting opportunities for 2,600 to become hubs and for 5,500 to become affiliated schools. The Ministry's role should be to provide financing to communities and coach them to take action. One strong feature of the program should be kept, which is having communities use their knowledge of local circumstances to make the decisions about how best to organize education in their communities.

School network optimization will require active use of the central government's "power of the purse" to nudge local authorities into action. Creating hubs involves additional costs to refurbish schools, including making them capable of catering to a broader set of learners (including students with disabilities or special educational needs) as well as improving learning environments through investments in libraries, laboratories, and information and communication technologies (ICTs). By mobilizing and making available such resources to local authorities, the Ministry of Education and MOF can send a strong signal that they are expecting action, and that they are willing to help address local constraints. However, for these additional resources to support optimization, the Ministry of Education and MOF need to remain firm on one point: resources will only be released conditional on meeting important milestones along the way towards consolidation.

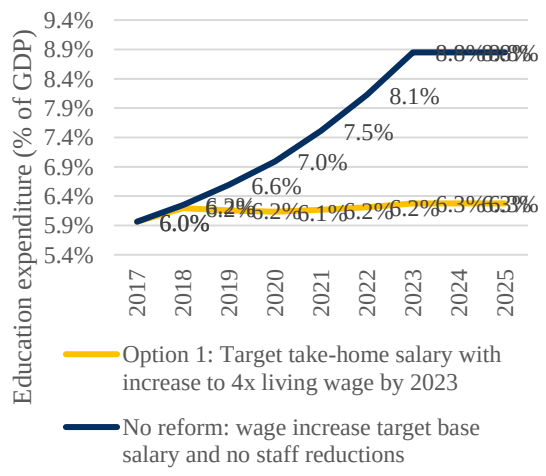
The introduction of a per-student financing formula in 2017 has created incentives for local governments to rightsize their school networks, but Ukraine needs to monitor whether the formula needs further adjusting. With money tied to the number of students enrolled, local authorities will start questioning whether they need all their schools, classes and teachers, or whether education could be organized more efficiently. However, experience from other countries in Europe and Central Asia that have introduced per-student financing suggests that, by itself, this sort of financing is unlikely to be sufficient to drive consolidation. The Ministry of Education and MOF will need to monitor financing on a regular basis, perhaps annually, to determine whether the formula is putting the right amount of financial pressure on the locations where savings can be found. If not, the formula will need to be tweaked to put more pressure on local authorities.

Although local authorities will take the lead on the ground, the Ministry of Education's leadership will be critically important to persuade local actors and to monitor overall implementation progress. For example, the Ministry of Education could use school mapping analysis (such as the one done here) to suggest how local authorities could reconfigure their networks. The Ministry could ask that local authorities prepare hub school plans and engage in critical discussions with them if their proposals fall substantially short of what is suggested by the school mapping exercise. The Ministry also has the power to incentivize local authorities to take action early on by providing additional resources to early movers, and to form a standby taskforce to provide technical assistance to local authorities (for example, by providing coaching on how to organize community discussions, conduct school mapping exercise, etc.). The Ministry could also consider implementing a communication strategy to explain the need to consolidate (see Kotler and Lee, 2018).[xlix] Finally, the Ministry must carefully monitor implementation and the outcomes of the consolidation effort by measuring indicators such as drop-out rates, learning outcomes etc.

The graphs below aim to estimate the impact of implementing these policy recommendations. Since the announced remuneration increases are large and they apply to pedagogical workers throughout the education sector, a conservative interpretation of the announcement is key to ensuring fiscal sustainability of education expenditures. In the case of moderate remuneration increases, optimization of the general secondary school network can save around 0.3 percent of GDP annually by 2023 and ensure that education expenditures do not grow further as a share of GDP, even after taking into account the costs of rightsizing, including refurbishing hub schools, purchasing buses and financing layoffs. A combination of remuneration moderation and staff rightsizing can ensure the fiscal sustainability of the education sector while accommodating improved pay for pedagogical workers and potentially even improve the quality of education.

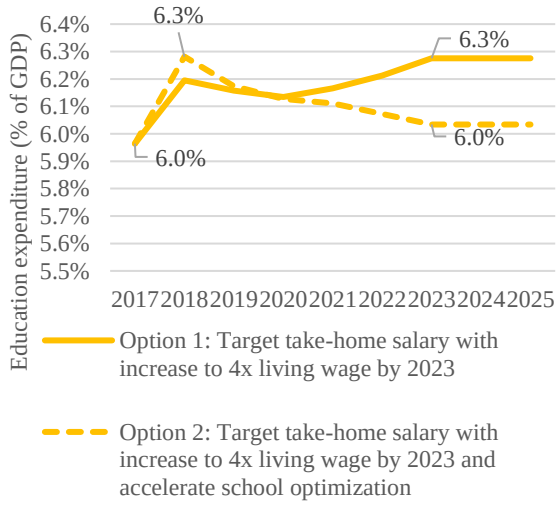
Figure 17. Projected Effects of Moderate Remuneration Increases and School Rightsizing on Expenditures

a. If the legislated remuneration increases for pedagogical workers are implemented conservatively…



Source: World Bank estimates

b. … then downsizing of redundant capacity in general secondary schools can generate the fiscal savings necessary to contain further growth of the education expenditure to GDP ratio



Source: World Bank estimates

Reforming the Healthcare Sector

This chapter provides an overview of the healthcare system challenges facing Ukraine in the context of the critical health reform adopted in 2017. It estimates the fiscal cost of the ongoing reform and suggests options to implement it in a fiscally sustainable manner.

Key policy recommendations are:

(i) To rightsize the hospital network, including through concentration of acute care in designated acute care hospitals within each hospital district. (Suggested target: reduction of hospital staff by 18 percent; reduction of acute care personnel by 30 percent.)

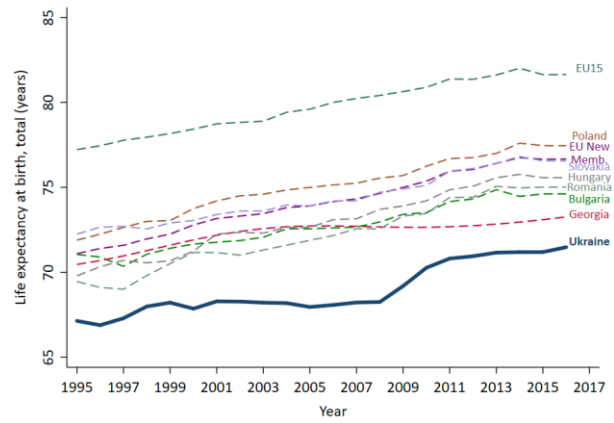
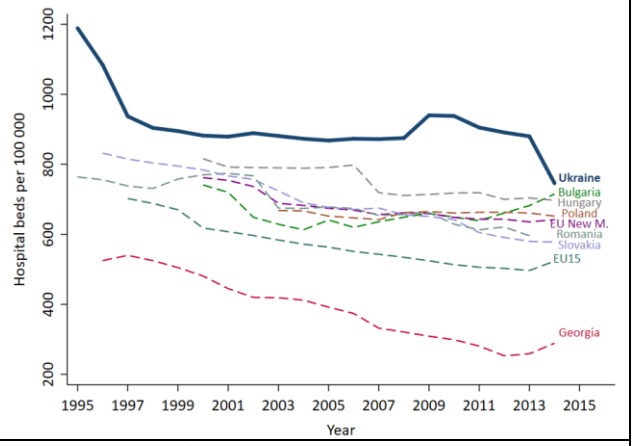
(ii) *To link further health sector worker remuneration increases to progress on staff rightsizing and keeping compensation raises targeted to key staff groups*.

Key sectoral challenges

An outdated health system generates poor health outcomes. Ukraine has not transformed its obsolete health care system since independence: services are skewed towards curative rather than preventive care, primary health care (PHC) is underdeveloped and health infrastructure is outdated (the use of new technologies is limited and mainly placed in hospitals). The immunization rates of children are extremely low. This results in poor healthcare outcomes: the life expectancy at birth in Ukraine was 71.4 years in 2016, which is 10 years less than the EU average. The adult mortality rate is higher than the average for the WHO European region: in 2015 avoidable mortality from cardiovascular disease (CVD), cancer, diabetes or chronic respiratory disease (CRD) between the ages between 30 and 70 was 29 percent, which is more than twice the average of EU countries. In addition, Ukraine has the highest Human Immunodeficiency Virus (HIV) and Tuberculosis (TB) prevalence in Europe.

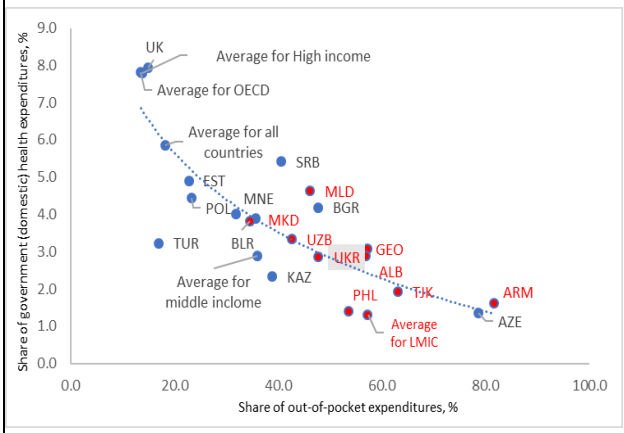
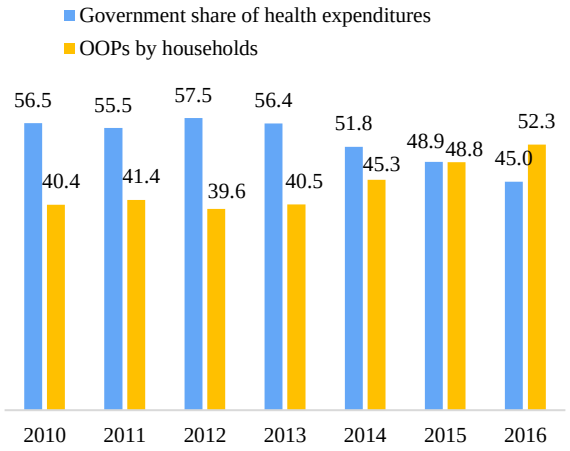
Ukraine stands out in terms of a large hospital network, number of personnel and length of stay in hospitals. The number of hospitals per 100,000 population is twice as high as in benchmark countries: Ukraine 4.14, Poland 2.81, Estonia 2.28, United Kingdom (U.K.) 2.91. As a result, the number of health personnel is also high: Ukraine has 4.4 doctors and 8.7 nurses per 100,000 population, compared to 2.3 and 5.2 in Poland, 3.4 and 6.0 in Estonia, and 2.8 and 7.9 in the U.K. The average length of stay in hospital is also significantly longer: Ukraine 11.2 days, Poland 7.3, Estonia 7.6, and U.K. 7 days. At the same time, the recent study of medical histories of inpatients conducted by the World Bank in two regions of Ukraine reported about 38 percent of hospital admissions may not be justified. For 57 percent of admissions, hospitalizations are extended longer than appropriate.

Figure 18: Life Expectancy and Healthcare Infrastructure in Ukraine Vs. EU Peers

a. **Life expectancy at birth in Ukraine is one of the lowest in Europe (71.4 years) …**	b. **… while health care infrastructure is one of the largest, with the number of hospital beds twice as high as the EU average**
	
Source: World Development Indicators, 2018	Source: WHO Health for all database, 2015

Despite poor outcomes, healthcare expenditures are high. At 7.6 percent of GDP, total health spending is significantly above the global average for Ukraine's income level. Public health spending amount to 4 percent of GDP on average and is on par or above other countries at Ukraine's income level. At the same time, households cofinance health expenditures at the same level as government—the out-of-pocket (OOP) payments were rising over the past few years and in 2016 exceeded the public share in total health expenditures, reaching 52.3 percent, which is the highest level in Europe. Public financing is mostly spent to support a large network of health facilities and staff wages, but the current financing mechanisms are not providing good health outcomes.

Figure 19. Ukraine's High Relative Out-of-Pocket Health Expenditures

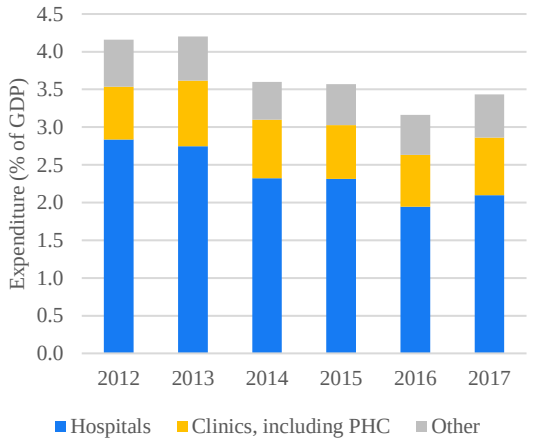
a. Out-of-pocket health expenditures in Ukraine are higher than average for middle income countries…	**b. … and their share has risen over the last five years, %**
	
Source: Authors' calculations using WDI. *Note*: red dots for LMIC	Source: National Health accounts, 2017

The mechanism for allocating resources does not provide incentives for more efficient use of resources or better patient treatment. More than 60 percent of the health budget is spent on an oversized network of health facilities and staff based on inputs instead of quality and quantity of services. This infrastructure is consuming most of the available funding while often providing only very basic services. Such a system also undermines the adequacy of health treatment—to justify the oversized hospital network and not use future budget financing (if the beds are not used, financing could be cut for the next fiscal year) providers keep up unnecessary hospitalization rates and extended length of stays in inpatient facilities. The key challenge facing the health sector in Ukraine includes transforming the current input-based financing model to an output-based one, which would reflect the demand for services, the changes in the health status of the population while providing incentives for efficient spending and improving performance in service delivery.

Current expenditures comprise about 90 percent of the total health budget, squeezing out fiscal space to invest in a modern health care infrastructure. Salaries of the medical personnel represent the largest item of health expenditures, comprising over 50 percent of the health budget in 2017. Public procurement is one of the most visible segments of the health sector because of its inefficiency and major corruption. These issues leave little room for much needed capital investment to replace outdated equipment and improve facilities.

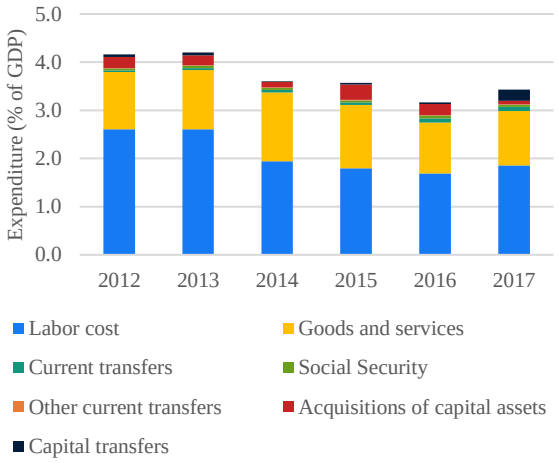
Figure 20. Distorted Public Health and Wage Expenditures

a. Public spending on health is skewed towards financing the oversized hospital network



Source: World Bank BOOST

b. Large wage bill expenditures have squeezed out capital spending for decades



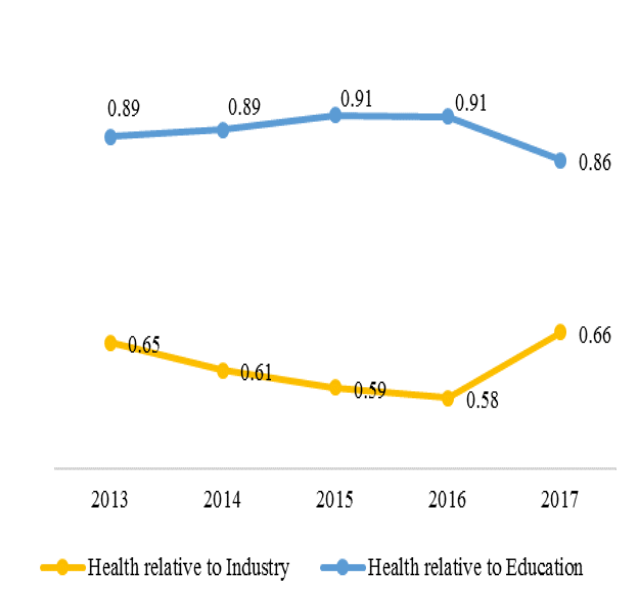
Source: World Bank BOOST

Given significant financing pressure during the crisis of 2014-15, the remuneration of medical staff did not rise in line with price inflation, and sector pay remains relatively low despite recent increases. In line with other government sectors, nominal wages in the health sector did not keep up with high inflation during the crisis years. The purchasing power of remuneration fell by close to 40 percent at the trough of the crisis – significantly more than losses experienced by the private sector. As a result, wages in the sector declined below the expectation of personnel: the recent Public Expenditure Tracking Survey reported that physicians consider their salaries at only 33 percent of the expected levels in the most moderate case.[1] With economic stabilization in 2016-17, the government introduced significant increase remuneration in 2017 and 2018. At the same time, even after this increase, average wages in the sector remain among the lowest in the economy: according to the State Statistic Service, average salary in the health sector is under UAH 6,000 (about US$230), which is almost 35 percent below average official salary. Such a low official

compensation in the sector encourages widespread out-of-pocket payments, lack of transparency and it demotivates staff. According to the open vacancies website, in Kyiv, the salaries of doctors in the private sector start from UAH 10,000, at least two times higher the compensation in the public clinics. Therefore, going forward the goals in reforming the health sector are to improve the adequacy of remuneration and quality of services while managing growing fiscal pressures. Labor costs already comprise over 50 percent of total health expenditure, thus all further increase in wages should be balanced with staff optimization and extracting efficiencies from the oversized healthcare sector.

Figure 21. Health Sector Salaries in Comparison

a. Relative dynamics of health sector employees' salaries, ratio



Source: World Bank calculations based on Ukrstat data

b. Physicians' salaries vs average salaries in select OECD countries (excluding self-employed), ratio

Source: Health at a Glance 2017: OECD indicators - © OECD 2017

Evaluating the progress of the ongoing reform agenda

The government has embarked on a comprehensive health reform, which includes (i) transforming health care financing; (ii) modernizing primary health care; (iii) enhancing the public health system; (iv) addressing non-communicable diseases; and (v) improving access to pharmaceuticals. A key milestone in this process was the enactment of the major health reform bill in later 2017. The adopted legislative package provides for a move towards providing healthcare by contracting services out to autonomous health care providers, establishment of a Strategic Purchasing Agency (National Health Service of Ukraine, (NHSU)) and the transformation of Ukraine's primary health care (officially launched in July 2018) by introducing payment by enrolled patients (capitation) and strengthening rural medicine.

The first stage of the health reform has started reorganizing primary health care (PHC), increasing fiscal resources devoted to the sector and deploying these resources more effectively. The crucial

element of the PHC reform is the introduction of government payment per patient registered with each PHC practice (capitation), instead of a fixed salary per staff of the practice. This move from input-based financing to financing based on the quality and quantity of services is a fundamental change of the system. Introduction of capitation will create competition among doctors, who have to deliver better quality services to attract and keep patients – otherwise patients will reregister with another family doctor. In addition, the capitation payments will increase the resources available to PHC facilities. The base premium for the capitation in 2018 is defined at the level of UAH370 (approximately US$14) per person per year, compared to UAH240 (approximately US$9) average allocation per person currently (through the subvention mechanism) (see box). These additional resources will (i) improve the remuneration of PHC staff and attract more qualified personnel into the sector; (ii) allow PHC practices to upgrade their equipment; and (iii) high-power incentives among PHC facilities to compete for patients.

Box 3: Physicians' Pay and the Introduction of Capitation for PHC

A remuneration of a physician in a public health facility consists of:

1. **A basic salary**, usually between 9 and 14 range in the unified public sector wage grid (determined by a Resolution of the Cabinet of Ministers of Ukraine which specifies a "Uniform Scale of Wages and Salaries of Categories and Coefficients" and equal to 33 hours of labor per week). A category (professional qualification) defines a level of base salary). A physician can be paid a fraction of the basic salary, depending on hours of work
2. **Markup for years in service** (over 3 years – 10 percent; over 10 years – 20 percent; and upward of 20 years – 30 percent)
3. **Markup for harmful working conditions** in **select specialties**, (for example, working with contagious patients) (up to 60 percent)
4. **Markup for taking managerial position** (up to 20 percent)
5. **Other pay and markups** (working night shifts, holidays, etc.)
6. **Recovery money during the provision of an annual basic vacation**

Nearly half of a physicians' remuneration package come from the various top-ups. For example, the most recent available data on salary breakdown from 2015 shows that only 64 percent of physicians' pay, on average, comprised base salary; the remainder constituted a combination of premiums, markups and other additional payments.

Introduction of the capitation will make the remuneration package more transparent. Capitation premiums per PHC facility will be computed based on the number of citizens that have selected a given physician as their family doctor using the electronic declaration platform ("green list of patients"). In addition, a lower capitation rate is imputed for local citizens in the catchment area of the PHC facility that have not yet selected a family doctor using the electronic declaration registration ("red list of patients"). Since the proposed capitation rate for the "green list" is very attractive relative to the average historical budget allocation associated with the "red list," PHC facilities will have strong financial incentives to incite their patients to declare a family doctor in the system and to move into the new mode of PHC provision envisaged by the reform.

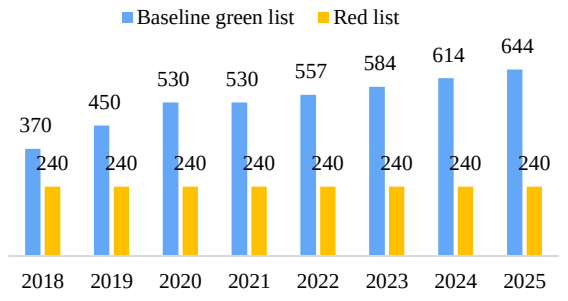
The capitation rate for green list patients follows a transparent formula, using five age groups and applying different coefficient to the capitation premium. For the population living in mountainous areas, an additional coefficient of 1.25 is applied. It is expected that the capitation premium will increase in the first three years of the reform implementation, and later will be adjusted for inflation and GDP growth. Additional coefficients may be considered later in the process of the reform.

a. Capitation payments by age groups in the first year of the reform implementation

Age group, years	Coefficient	Capitation payments in 2018, Hrv
0–5	4.0	1,480
6–17	2.2	814
18–39	1.0	370
40–64	1.2	444
≥65	2.0	740

Source: Ministry of Health order

b. Age-adjusted weighted average capitation rate in Hrv



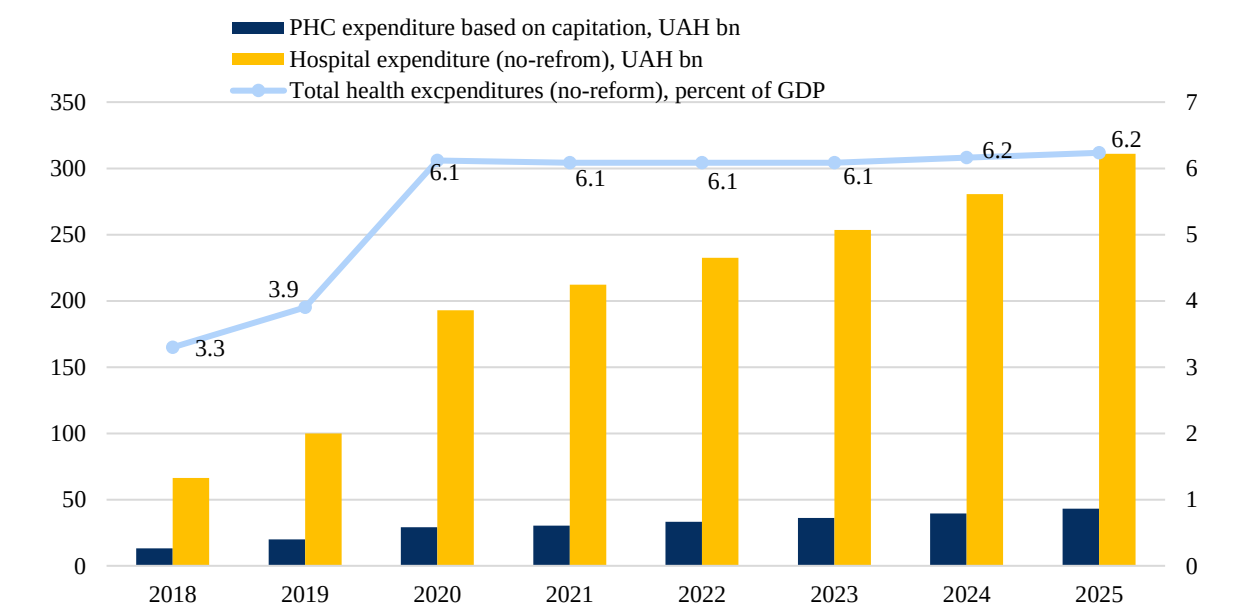
Source: World Bank calculation using Ministry of Health projections and assumptions on macroeconomic growth rates

The second stage of the health reform (starting from 2019) will target the largest component of Ukraine's health system – its bloated hospital network. This second stage of the reform is crucial and encompasses a range of elements. First, it envisages defining the list of hospital services included in the state financial guarantees. This will clarify the rights of patients to access a basic healthcare package, providing basic healthcare for all and protecting patients from excessive out-of-pocket costs. Second, a change of payment method from inputs-based to output-based financing will introduce competition for patients among hospitals and create incentives to downsize excess capacity (excess beddings and excess hospital days per patient). Third, hospital districts will be established and consist of on average 5-9 rayon- and municipal-level hospitals. For each district, on average one to four acute intensive care hospitals will be selected to concentrate these expensive services and reduce costs. Fourth, the autonomization of hospitals into communal non-commercial enterprises will be encouraged, creating more nimble structures that can manage their own budgets to best achieve results.

The health reform envisages the optimization of the oversized hospital network that can gradually generate additional fiscal space to accommodate reasonable salary increases. As a result of PHC reform, the number of hospitalizations should decrease by at least 15 percent over 2019-2025 - gradually reducing the need for hospital care to benchmarks in more advanced health systems in the region. The implementation of case-based payments for the hospitals should help to reduce in-hospital stays from the current 11 days to 7 days in 2025, which will result in a 47 percent decrease of total number of bed-days. This could unlock significant rightsizing of hospital staff. Under the assumptions of changes in the hospital workforce, the number of medical personnel would remain mostly stable over the midterm, with about 2-5 percent decrease annually for the number of hospital employees, mostly affecting auxiliary staff. Implementation of case-based hospital payment mechanisms would likely incentivize the provision of more complex acute care, such as greater use of specialists, as well as better distribution of hospital staff. Reprofiling of multiple acute care hospitals in rural territories to other types of facilities could improve the job security of currently employed staff in such hospitals. In hospitals assigned the role of strategic acute care providers, staffing may increase due to consolidation of acute care. However, reducing unnecessary hospitalizations, which are estimated at 40 percent, and shortening the duration of in-hospital stays in acute care settings should lead to a decrease in staffing needs in acute care facilities, with about a 25 percent decrease in the numbers of acute care physicians and nurses, and a 40-45 percent reduction of support staff compared to the current numbers of employees working in acute care hospitals. These reductions will create space for more sizeable increase in wages of employees in acute care hospitals.

Absent staff rightsizing, the current wage pressures pose a serious fiscal risk for the health sector. The PHC reform substantially increases salaries for PHC staff, this will have a limited direct impact on the overall healthcare budget given the small size of the sector. However, if these salary increases are applied across the entire health sector, then fiscal risks are significant. Already, the health reform law envisages calibrating the hospital payment tariffs that will apply from 2020 onwards to target salaries for medical personnel at the level of 2.5 times the average salary in Ukraine. For the 2018 budget, an increase in doctor salaries by 20 percent has already been approved. These dramatic wage increases can substantially increase the cost of Ukraine's healthcare system if not accompanied by other measures.

Figure 22. Simulations Demonstrate Potentially High Cost of Implementing Health Reform Law



Source: World Bank estimates

Policy recommendations

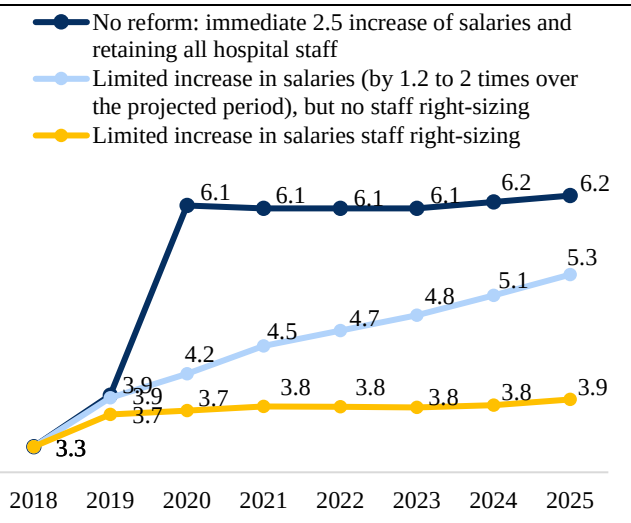
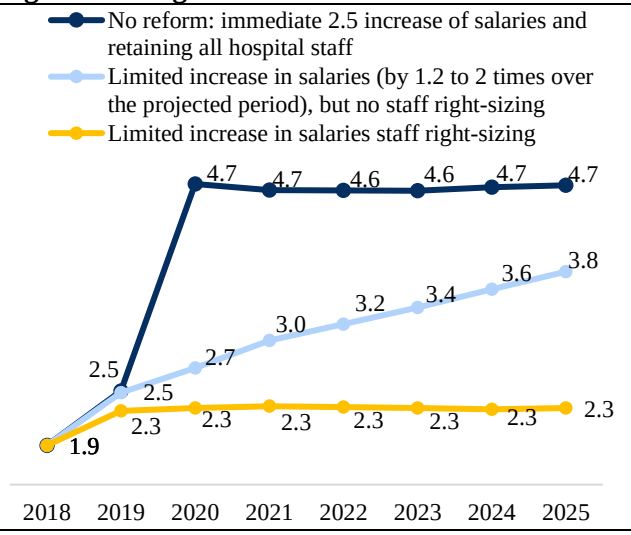
To make the health reform effective and fiscally affordable, increases in wages and capital expenditures should be accompanied by reducing redundant staff and streamlining the hospital network. To achieve this goal, this report provides a list of suggestions for each stage of implementation. These include (i) rightsizing the hospital network, including concentrating acute care in designated acute care hospitals within each hospital district (suggested target: reduction of hospital staff by 18 percent; reduction of acute care personnel by 30 percent); (ii) linking further health sector worker remuneration increases to progress on staff size optimization. Wage increases need to be moderated and fair (linked to performance) to prevent demands for excessive wage increases from the rest of the sector.

To reduce wage bill pressures, the increase in salaries for the hospital staff should be gradual and not applied across the board. Our simulations show that increasing the salaries of hospital staff to 2.5 times the average salary in Ukraine from 2020 onwards is fiscally unaffordable. We therefore suggest a gradual increase in remuneration (by 20 percent in 2020, then gradually rising to twice the average salary by 2025). Moreover, this increase should not be implemented across the board, but rather be focused on key staff,

such as the staff in the new acute care clinics formed by the hospital network optimization who will face increased responsibilities after the reorganization of the sector (see the previous paragraph).

The increase of wages in the hospital sector should be targeted through implementation of case-based payments incentivizing improvements in acute care settings. As projected in the model, implementation of the case-based payments may lead to optimization of hospital admission rates for acute care and lengths of stay in hospitals. Consolidation of acute care facilities would lead to a decrease in total numbers of acute care specialists, including physicians, nurses and auxiliary staff. In the targeted differentiated approach, the wages of employees in nonacute hospitals are expected to increase at the level of inflation and GDP growth, and in acute care hospitals, at the rate of 1.2 to 2 times of the average salaries over the project period.

Figure 23. Potential Savings of Hospital Optimization

a. If hospital optimization is implemented as suggested, the potential fiscal savings can amount 2.3 ppts of GDP vs. controversial scenario	**b. It will proportionally reduce wage bill pressures in the medium term, while the hospital network optimization can bring up to 1.5 ppts of GDP in wage bill savings**
	
Source: World Bank estimates	

PART C: SECURING THE FISCAL SUSTAINABILITY OF THE SOCIAL PROTECTION SYSTEM

Reforming the Social Assistance System

This chapter provides an overview of the current challenges facing Ukraine's social assistance system, an assessment of the ongoing reform progress, and an evaluation of next steps for the sector. Ukraine's social assistance system is expensive and most funds do not reach those most in need. The dominant social assistance program is a housing utility subsidy, which encourages inefficient energy consumption and makes the budgetary cost of social assistance vulnerable to international energy tariff fluctuations.

The key policy recommendations are:

(i) Full implementation of the 2018 Housing and Utility Subsidy (HUS) reparameterization, to contain the cost of the program.

(ii) Gradual and fiscally neutral rebalancing of Ukraine's social assistance system, making the Guaranteed Minimum Income (GMI) scheme the primary safety net for the poor, while making the HUS a secondary safety net to protect against excessive utility costs.

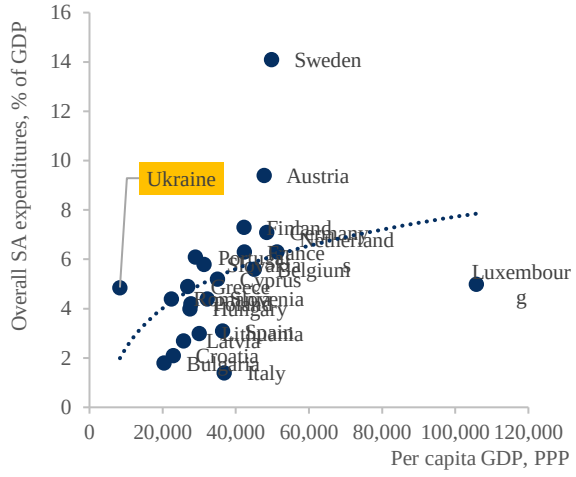
Key sectoral challenges

To buffer the impact of unprecedented utility tariff increases on the poor, Ukraine significantly expanded its housing and utilities related social assistance in 2014-15. Prior to 2014, Ukraine provided universal gas and heating subsidies through subsidized tariffs. This resulted in significant fiscal imbalances in the energy sector, which burdened the budget and mostly benefited the rich. As Ukraine's fiscal crisis escalated in 2014-15, the government radically changed the policy and increased tariffs to close energy-related fiscal imbalances. To ensure that these tariff increases were socially and politically sustainable, the small existing Housing and Utility Subsidy (HUS) program – which contributes to the cost of housing-related utilities of its beneficiaries - was scaled-up and redesigned to become more progressive. Enrollment conditions were relaxed and take-up was encouraged at scale.

This policy has resulted in a large social assistance system dominated by the expanded Housing and Utility Subsidy (HUS) program. By end-2017, Ukraine's social assistance expenditure reached 5.1 percent of GDP[li] – as large as in much richer countries such as Germany and the Netherlands. Housing-related assistance alone increased from 0.2 percent of GDP in 2014 to 2.3 percent of GDP in 2017, making the HUS Ukraine's largest social assistance program reaching close to half of the country's households (6.5 million). The remainder of social assistance expenditure consists of (i) the Childbirth Assistance program, a universal transfer program for families with children; (ii) the Guaranteed Minimum Income (GMI), a tightly targeted cash top-up program for those who live below the Guaranteed Subsistence Minimum (see Box 4); and (iii) a plethora of small legacy programs that significantly increase the administrative complexity of the system, but are generally categorical benefits that contribute little to poverty reduction.

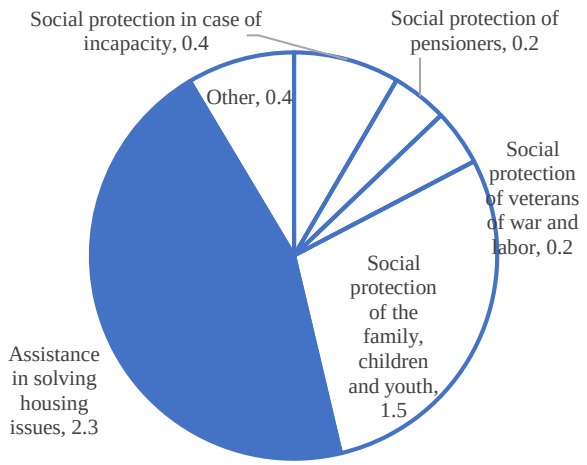
Figure 24. Key Characteristics of Ukraine's Social Assistance Budget

a. Ukraine's social assistance budget is as large as much wealthier EU peers…



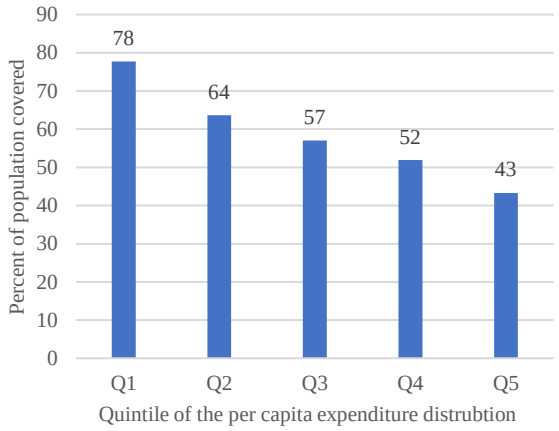
Source: Ministry of Finance; World Bank calculations; 2017 for Ukraine and 2016 for EU-28

b. … and dominated by housing-related social assistance spending, % of total



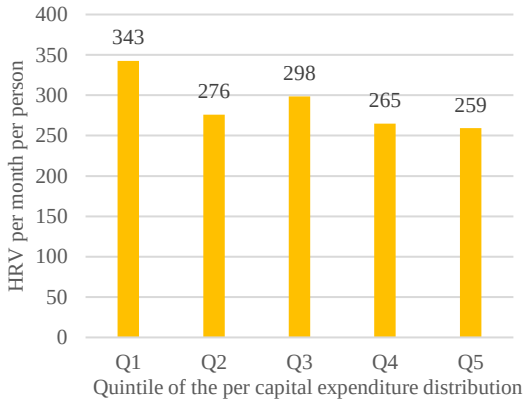
Source: Ukraine State Treasury; 2017 expenditure (percent of GDP)

a. Ukraine's social assistance system is characterized by poor targeting and coverage of the poor…



Source: Household Budget Survey (2016); World Bank calculations based on HUS, GMI and the Child Birth Grant

b. … as well as a low level of payments per beneficiary



Source: Household Budget Survey (2016); World Bank calculations based on HUS and the Child Birth Grant

Box 4. The Guaranteed Minimum Income Program

The GMI program is reserved for extremely poor families that need support to achieve at least the subsistence minimum level of income. It is implemented as a cash payment to households and the benefit is equal to a difference between the guaranteed level of subsistence minimum (21 percent of the subsistence minimum for able-bodied, 85 percent for children and 100 percent for disabled) and household's total income. The benefit is also topped up for families with children (UAH250/month for children aged 0-13 years, and UAH500/month for children aged 13-18 years). The maximum benefit is set at 75 percent of the subsistence minimum for the family.

Note that by artificially lowering the Guaranteed Subsistence Minimum (GMS) threshold, this design limits program coverage and concentrates assistance on families with more children. Top-ups for children are introduced to improve the adequacy of the support provided. Reparameterizing the GMI eligibility formula to increase the GMS offers a technically simple way of expanding program coverage and generosity.

This chapter analyzes the impact of Ukraine's social assistance with the latest household survey data (2016) and confirms that the existing system makes inefficient use of scarce financial resources. It finds that: (i) a large part of expenditures does not reach the poor (poor targeting); (ii) many poor do not receive social assistance (poor coverage); and (iii) benefit payments that do reach the poor are insufficient (poor adequacy of benefits). Only around 30 percent of social assistance reaches the bottom quintile of the expenditure distribution and the top two quintiles receive just as much in terms of total resources. At the same time, social assistance programs only reach 78 percent of the bottom quintile, compared to 43 percent of the richest quintile of the population receiving social assistance. The households in the bottom quintile receive on average only 25 percent of the subsistence minimum as social support or 29 percent of their pretransfer expenditure. This reflects the inadequate poverty-reduction performance of the social assistance system. Redistributing the resources currently reaching the top two quintiles (estimated at UAH33 billion) could lead to a significant reduction in poverty; indeed, that amounts to 76 percent of the UAH44 billion poverty gap in 2016 calculated according to the World Bank poverty measurement methodology.

De facto reliance on the housing and utilities (HUS) subsidy scheme as the dominant vehicle for social assistance weakens price signals that could potentially encourage greater energy conservation and ties the cost of social assistance to fluctuations in energy tariffs. Since HUS payments are linked to utility bills, the scheme lowers the effective cost of energy for beneficiary households. This may encourage households to hold off on energy-saving investments and may encourage energy consumption. At the same time, this link makes the cost of the system volatile and dependent on the evolution of utility costs, thereby placing risks to public finances.

In addition to these challenges, Ukraine's social assistance system is fragmented across disjointed legacy programs that grew organically to deal with various risks facing the poor. A modern social assistance system is ideally one that offers adequate protection from economic shocks to poor and vulnerable groups by relying on an integrated policy, and common delivery mechanisms and information systems. In contrast, Ukraine's system remains fragmented, with different programs addressing different sources of risks. This increases administrative complexity and creates overall poverty reduction efficiency risks due to lack of coordination across programs.

Evaluating the progress of the ongoing reform agenda

Recognizing the need for reform, Ukraine introduced changes to the HUS program since 2017 that aim to contain its costs. For example, the eligibility criteria have been made more responsive to current income by shortening the reference period over which income is assessed from the last year to the last six months, and they were broadened to include criteria based on asset holdings. Further measures to contain the cost of the HUS and improve its targeting were approved in May 2018. Those include modifying the imputation procedures for the income of able-bodied individuals who report no or very low incomes that now entail an imputed income at three times the subsistence minimum. In addition, the social norms which determine the amount of consumption that can be subsidized have been reduced.[lii] Restoring earlier practices, HUS credits can no longer be accumulated to also cover the mandatory share of utility payments that households need to contribute. Finally, new income verification measures through asset testing have been introduced, building on the availability of a new integrated database. The measures introduced in 2018 are currently under implementation and require a large administrative effort.

These measures to control the costs and improve the targeting of the HUS are seen as an important step towards a new phase of reform aimed at transferring the benefit in cash to households, the so-called "household level monetization" currently being planned for 2019. The new phase of reforms aims to change the delivery mode of the subsidy by transferring cash directly to households as opposed to delivering the HUS through a discount in the utility bills. This so-called *household level monetization of the HUS benefit* is expected to strengthen transparency and energy savings incentives by reducing budget losses due to commercial malpractice and other excessive claims by utility companies. The latter currently act as intermediaries in the complex financial system delivering the HUS and are suspected to be inflating the bills that are eventually presented for reimbursement from the state budget. While mandated by law (Law No. 2454 on Housing and Communal Services) starting in 2019, the full implementation of this reform might be challenging in the present context, given the delay in preparing the groundwork for the radically different delivery mechanism and the burden of implementation of the measures adopted in 2018.

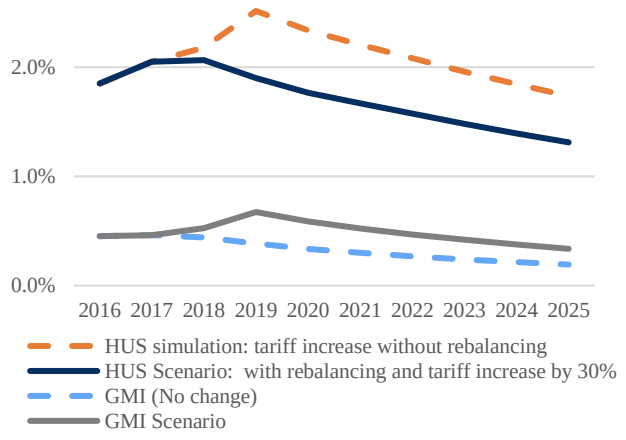
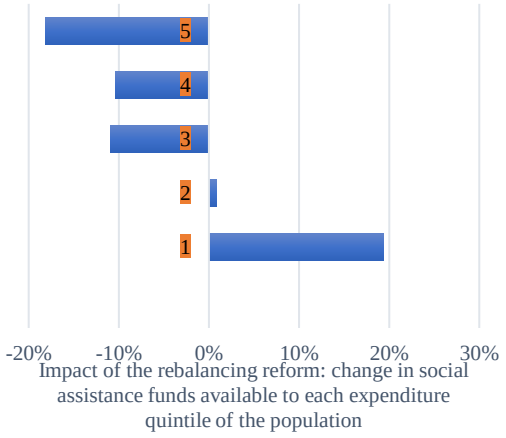
Even if fully implemented, the measures discussed above do not go far enough in improving the effectiveness of the overall welfare system as the HUS will continue to dominate as primary social assistance to the population and the cost of the system will remain highly vulnerable to changes in energy tariffs going forward. Unless redesigned to sufficiently delink assistance from the cost of the energy, household level monetization might even exacerbate the unbalanced nature of the protection afforded by the current social assistance system, with the HUS representing a major source of cash income for beneficiary households.[liii] Further, given that Ukraine is currently discussing additional significant energy tariff increases for households later this year, if implemented, these tariff increases in turn will significantly increase HUS expenditures going forward – adding a key source of pressure to Ukraine's already tight budget. Without a tariff increase later in 2018, the recommended HUS reparameterization is estimated to reduce HUS expenditure as a share of GDP from 2.1 percent in 2017 to 1.9 percent in 2019. If a tariff increase of 30 percent is implemented later this year, then HUS expenditure is expected to increase to 2.5 percent of GDP in 2019 despite the 2018 reparameterization of the program.

Policy recommendations

This report explores a fundamental reform by consolidating resources in better targeted programs to channel more resources to the poor. The proposed approach to rebalance the social assistance system goes beyond current efforts to rein in the fiscal costs and improve targeting. This would involve gradually expanding the GMI to become Ukraine's primary safety net for the poor, while scaling down the HUS to become a secondary support mechanism for households facing high utility costs. Instead of creating a new program to channel funds to the poor and thereby adding to an already complex social assistance system, this reform would leverage the existing good targeting performance of the GMI. While the HUS channels only 23 percent of its resources to the bottom 20 percent, 75 percent of GMI funds reach this group. In addition, this rebalancing would (i) weaken the link between poverty alleviation and energy subsidization; and (ii) encourage system-thinking on social assistance, opening the way to identifying further opportunities for coordination (and eventually consolidation) across major programs. This approach could then be gradually extended to the rest of the social assistance program.

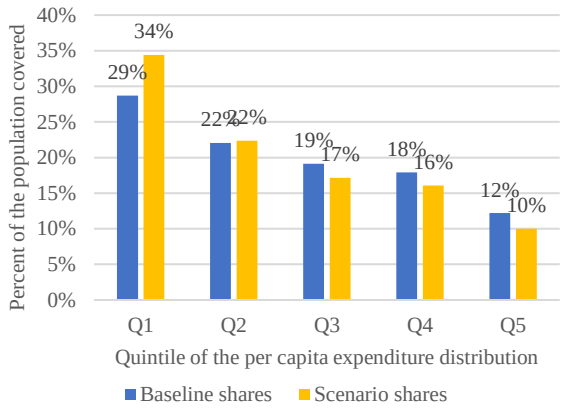
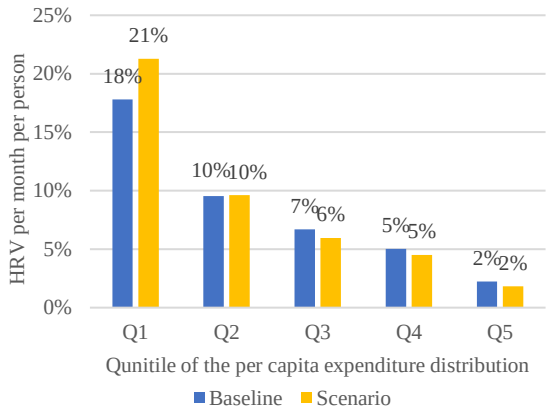
This report estimates that rebalancing resources from the HUS to the GMI could result in fiscal savings in the long run while protecting the most vulnerable groups and relieving fiscal pressures in case of further tariff adjustments by increasing the coverage and generosity of the GMI while reducing the generosity of HUS by increasing the mandatory out-of-pocket payment share for HUS households. This can be achieved by raising the HUS's reference mandatory payment share from 15 percent to 20 percent. The resulting fiscal savings (even after a 30 percent increase in tariffs in 2018) would finance an increase in coverage and generosity of the GMI, including by (i) raising the share of the subsistence minimum guaranteed to children and able-bodied adults (to 100 percent and 37 percent) and by (ii) encouraging higher program take-up among eligible households through outreach efforts.[liv]

Figure 25. Projected Impact of Rebalancing Social Assistance Program towards GMI

a. A reform gradually rebalancing social assistance from the HUS towards the GMI… *Expenditure, % of GDP*	**b. …would increase funds reaching the bottom quintile by close to 20 percent** *Share of total assistance reaching different quintiles of population*
	
Source: State Treasury Service; World Bank calculations for HUS and GMI; the simulations assume a 30 percent increase in household gas and heating tariffs later in 2018; in the outer years, expenditure declines as incomes grow and fewer households are eligible for benefits	Source: State Treasury Service; World Bank calculations for HUS and GMI

Simulations suggest that this rebalancing reform could significantly improve the targeting and benefit adequacy of Ukraine's social assistance system. Out of the combined resources of HUS and GMI, Ukraine's bottom quintile would experience a close to 20 percent increase in support – financed by the lower assistance received by the top three quintiles. The share of bottom quintile households receiving support from HUS or GMI would increase from 29 percent to 34 percent, while the size of benefits for the bottom quintile would increase from 18 percent to 21 percent of per capita expenditure.

Figure 26. Impact of Rebalancing HUS and GMI on Vulnerable Households

a. Rebalancing would enable a greater share of households in the bottom quintile to access social assistance…	**b. … HUS and GMI transfers to the bottom quintile would increase relative to overall household expenditures of the bottom quintile**
	
Source: State Treasury Service; World Bank calculations for HUS and GMI	Source: State Treasury Service; World Bank calculations for HUS and GMI

These simulations confirm that reform can dramatically improve the performance of Ukraine's' social assistance system, and more could be achieved by gradually extending this approach to other forms of social assistance such as categorical benefits and noncontributory old age income support. In the case of the HUS, reallocating resources to the GMI can lead to better targeting of funds while the system is made less distortive and fiscally more predictable as the link between overall spending and energy tariff fluctuations is weakened. But applying similar principles to other elements of the social assistance system could both reinforce the system targeting performance and – possibly more importantly from a medium-term perspective – be a significant step towards an integrated and complete social assistance system, marked by a primary targeted transfer for lower income households, coupled with smaller and "risk specific" forms of compensation, likely to be more temporary in nature.

Reforming the Pension System

This chapter provides an overview of the current challenges facing Ukraine's pension system, an assessment of the ongoing reform progress as well as an evaluation of next steps for the sector. Ukraine has just undertaken a significant pension reform to reestablish a meaningful pension for current retirees, while improving the medium-term fiscal sustainability of the system. This chapter provides an updated impact assessment of the reform and discusses next steps.

Key policy recommendations are:

(i) To avoid ad hoc changes to the current pension system.

(ii) To align the special pension regimes (merging into the main pension when possible).

(iii) To introduce the funded pension system (pillar 2) gradually and only after all preconditions for successful introduction of the system are satisfied.

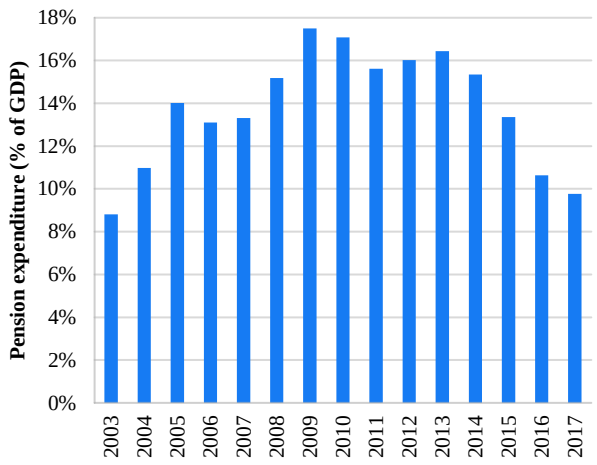
Key sectoral challenges

The Pension Fund of Ukraine (PFU) operates one of the most expensive pay-as-you-go (PAYG) systems in the region. The system has suffered from long-running weaknesses that have limited its effectiveness. From 2005 to 2015, the level of pension expenditures varied between 13 and 17 percent of GDP, which is higher than in most Central and Eastern European (CEE) countries. Pension expenditures have been spread thin due to aging population, low effective retirement age and a complex system of categorical surcharges/bonuses for various groups. At the end of 2017, the pension system had 11.7 million pensioners and 12.9 million contributors, or nine pensioners per 10 contributors. Additional governmental pension programs and privileges constituted UAH64.8 billion, which is 22 percent of total pension expenditures. As a result, the PFU has regularly required state budget transfers to supplement the Social Security Contributions (SSC) and to cover its deficit.

The adequacy of pension benefits has been further undermined by the lack of systematic benefit indexation and the high inflation rates that Ukraine has faced since the economic crisis of 2014-15. The government prolonged the policy of indexing the minimum pension only for existing pensioners. These policies brought pension expenditures down to 10.6 percent of GDP in 2016 and 9.8 percent in 2017. However, this also reduced the purchasing power of pensions by 40 percent. By July 2017, average pensions fell to only around 26 percent of the average wage. Three-quarters of all pensioners received subsistence top-ups, and the top-ups made up 30 percent in the benefit structure. The resulting inadequate level and flattened shape of the pension distribution (largely delinked from previous contribution history) has further undermined incentives for the working-age population to contribute.

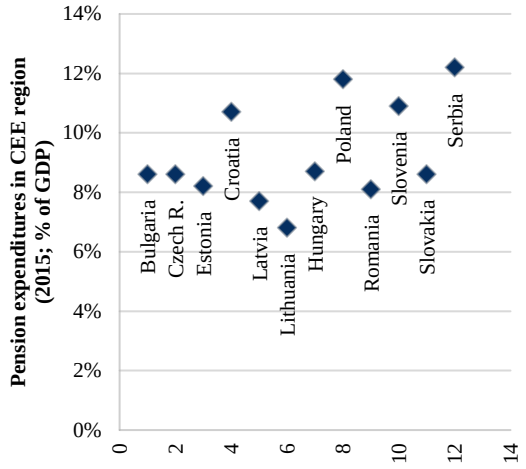
Figure 27. Relative Costs of Ukraine's Pension System

a. While Ukraine's pension expenditures declined in recent years…



Source: World Bank estimates based on the PFU reports

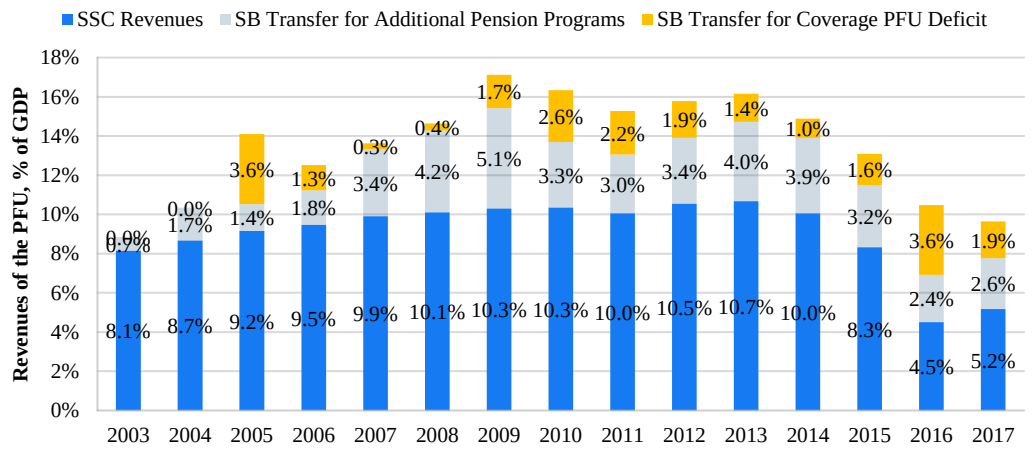
b. … the costs of the system remain high by regional comparison



Source: Eurostat

The 2016 reduction of the Social Security Contribution further weakened the revenue base of the pension system. In 2016, the overall SSC rate was reduced from 42 to 22 percent, lowering pension contributions by almost 50 percent. The authorities anticipated that cutting the SSC rate would contribute to shrinking the informal economy and improving compliance. However, the measure did not produce the anticipated effects given insufficient compensatory measures to broaden the tax base and strengthen tax administration. As a result, the SSC revenues of the PFU declined to 4.5 percent of GDP in 2016, while state budget transfers grew to 6 percent of GDP (56 percent of all pension expenditures), of which 3.6 percent of GDP was spent on covering the deficit of the PAYG system. In 2017, wage growth and some recovery in SSC compliance helped to somewhat reduce the PFU deficit.[lv]

Figure 28. The SSC Rate Cut and the Crisis Widened the PFU Deficit and Increased the Need for Budget Transfers



Source: PFU

Evaluating the progress of the ongoing reform agenda

In October 2017, the government legislated a comprehensive pension reform that reflected some important policy changes. The reform was intended to achieve a number of key objectives: (i) to restore equity and ensure social sustainability; (ii) to stabilize long term expenditures; (iii) to reduce the PFU deficit and minimize subsidies from the central budget; (iv) to improve transparency of the system; and (v) to strengthen incentives to contribute. At the same time, it was important to ensure a political consensus around the reform agenda as well as alignment with the IMF program:

- **The retirement age was linked to the years of contribution to the PFU.** Instead of a direct increase in the statutory retirement age, the Ministry of Social Policy (MSP) introduced an "age corridor." Starting from 2018, with 25 years of service or more, women and men qualify for an old age pension at the regular retirement age of 58.5 and 60 years, respectively. If individuals accrued service between 15 and 24 years, they will be able to receive a pension when they reach 63 years of age or when they accumulate 25 years of service (whichever comes first). Starting from 2028, eligibility for the old age pension at the age of 60 will require at least 35 years of service for both women and men. Those with 25 to 34 years of service can retire at the age of 63, and those with 15 to 24 years of service will be able to retire at the age of 65.

- **The generosity of pension benefits for new retirees was reduced to align with the new lower SSC rate.** The accrual rate in the pension formula was reduced from 1.35 to 1 percent for each year of pensionable service. This implied a drop in the main pension amount by 26 percent for all newly awarded benefits. This step was justified as a response to the 2016 reduction in the SSC rate and seen as a measure primarily intended to reduce the long-term pension liabilities. At the same time, this reduced adequacy of the benefit in the longer run,[lvi] calling for alternative supplementary mechanisms of old age income provision.

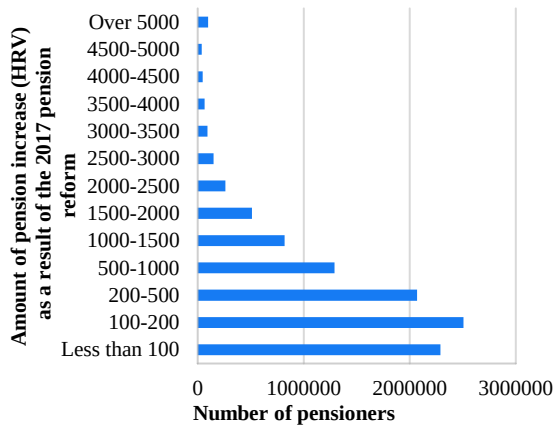
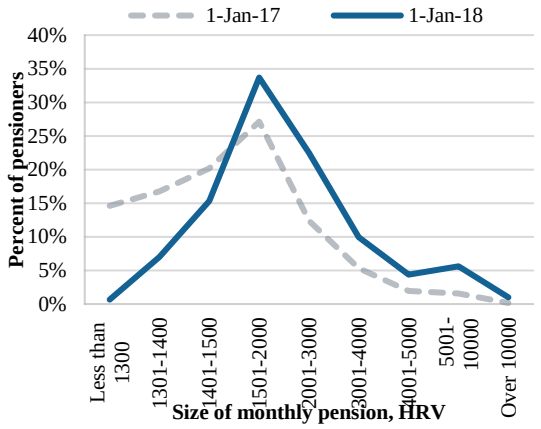
- **The pension benefits of existing retirees were increased to partially restore the purchasing power lost during the crisis and to reestablish a meaningful old age social protection framework.** All pensions were recalculated using the pensionable average wage base of 2017 (UAH3,764). To ensure uniformity between the old and new pensioners, the new formula with the reduced accrual rate was used for the benefit recalculation. As a result, 10.2 million pensioners (90 percent of the total number) received an increase. The additional expenditures for benefit adjustment in the period of October to December 2017 amounted to UAH19.5 billion, or 6.7 percent of all annual pension expenditures. The average monthly pension increased by UAH560, with varying individual increases. Importantly, almost half of the pensioners received only a small benefit increment (up to UAH200 monthly), while 1 percent of the total number of pensioners received an increase greater than UAH5,000 per month. Notably, that group of well-off pensioners received 10 percent of the total allocation to the pension adjustment.

- **The reform strengthened indexation provisions for pensions going forward.** This should be recognized as one of the major achievements of the 2017 reform. Automatic annual benefit indexation (set at 50 percent of nominal wages plus 50 percent of inflation) will start in 2019. It is expected to ensure the social and financial stability of the pension system, reduce scope for political manipulations, promote predictability of pension expenditures, and ultimately strengthen incentives to participate in the PAYG system.

- **The reform eliminated various privileged provisions and unified benefit rules, impacting two areas**: (i) elimination of early retirement, which will affect teachers and healthcare workers; and (ii) elimination of the so-called special pensions. The financial impact of these measures will take effect

gradually, as payments of existing pensions will continue and some transition provisions will apply to those who meet the necessary requirements of the old rules at the time of the legislative changes.

Figure 29. Impact of 2017 Pension Reform on Retirees

a. The pension reform increased the adequacy of pensions for most existing retirees…	**b. … shifting upward the distribution of pension benefits among retirees**
	
Source: PFU	

A greater emphasis on poverty reduction in the 2017 pension reform would have been desirable since high-income existing pensioners benefit the most from the 2017 recalculation of benefits. The pension benefit adjustment was crucial for maintaining social coherence, although the procedure for its implementation emphasized insurance over the social objectives of the pension policy, raising potential concerns about rational distribution of funds to address the complex set of issues and objectives of the pension system, including poverty alleviation. The high-income pensioners benefit the most, while 46 percent of pensioners after the adjustment procedure still require top-ups to maintain the benefit at the minimum subsistence level. This social inequity is likely to exert pressures on the politics in the years to come.

While the 2017 pension reform has both contributed to alleviating the plight of Ukraine's elderly and created a more credible medium-term perspective for the PFU, its immediate impact is to increase pension expenditures. Hence, the size of budget transfers needed to cover the pension deficit over the coming years should be closely monitored. The up-front increase in pension benefits for existing retirees will significantly increase pension spending in 2018. In contrast, other reform factors will only gradually impact the PFU budget. The indexation rule will increase medium-term spending, while the lowered accrual rate in the general pension formula will reduce it. While the introduction of "age corridors" is expected to increase the effective retirement age (lowering pension expenditure and increasing contribution revenues), there are a number of issues that make it difficult to estimate the medium-term impact of this policy change, including certain limitations of the personified recordkeeping system of the PFU and the behavioral impact of the new provisions on retirement decisions. Finally, the fiscal sustainability of the pension system will continue to rely significantly on the performance of SSC revenues and the ability to increase contribution payment compliance. While the pension reform should put the PFU on a more credible and sustainable medium-term path, the PFU's financial performance needs to be closely monitored.

The 2017 reform did not tackle the special pension regime for the military and security sector. Unless it is aligned with the reformed general pension scheme, this special regime will continue adding to

fiscal pressures. The MSP has prepared a draft law introducing changes in the benefit formula and indexation of pensions for the security sector, including military and police, to better coordinate parameters with the general pension system. However, the draft law did not receive approval by all the security sector agencies and did not receive political support. In February 2018, the government adopted a resolution laying out details of gradual adjustments in the existing benefits. There are several practical issues that limit efficiency and predictability of this measure. First, there are differences in the definition of the pensionable base across security agencies (for example, the Police Law treats all components of pay as pensionable, therefore limiting potential savings from this measure). Second, the recalculation will be based on personal certificates of earnings in corresponding reference positions issued by various HR departments of security agencies. This takes a considerable amount of time and makes the outcomes of the process in terms of effect on individual pensions and overall fiscal impact less predictable. The MSP estimates that the total additional costs of this measure would be within UAH10 billion in 2018. However, this estimate accounts for only half of the projected total increase over the period extending to 2020. The overall costs of the benefit adjustment for over half a million security sector retirees is expected to reach around UAH20 billion per year, which is as much as the costs of the October adjustment for 10.2 million pensioners of the general scheme.

This report updates projections for PFU expenditures and revenues, considering (i) the final parameters of the 2017 pension reform, (ii) recent macroeconomic developments, and (iii) current discussions on security pensions. The estimates suggest that the 2018 PFU budget is likely very optimistic by overestimating revenues while underestimating expenditures. In our assessment, the PFU will require permanent transfers to cover its deficit until the end of the forecast horizon in 2025. Unless revenues of the insurance scheme could be increased (for example, through an increased SSC), some further rationalizing of the pension benefit package would be well advised, possibly with introduction of a flat universal component financed from the general budget. Target pension expenditures in the medium run are projected to stay at around 10 percent of GDP. At the same time, the reform will cause an additional expenditure in the social assistance scheme at around 0.1 percent of GDP in the medium term.

There are several caveats for these results. First, the extent to which SSC payment compliance will improve is difficult to forecast. While the reform strengthens the link between pension eligibility and contribution history, and while a policy of increasing minimum wages makes it more difficult to under-declare salaries, a complicated system of minimum guarantees and subsistence top-ups persists, which makes the net behavioral response of SSC compliance difficult to foresee. Second, the still complex benefits structure makes assessment of the reform impact difficult. In particular, forecasting the effect of indexation of the main pension amount on the need for subsistence top-up remains problematic. Third, the reform process is likely to be protracted and uncertainty on eventual policies adopted remains significant. Weak political will to continue with reform of pension entitlements in the security sector may slow the process. Equally, the replacement rates for main pensions will continue to gradually fall, as automatic indexation does not provide for 100 percent match to the wage dynamics, implying high likelihood of additional measures in the medium-term to address benefit adequacy.

Figure 30: Projected Financial Position of the Pension Fund of Ukraine (PFU)

	2018 PFU(*)	2018 WB	Projected						
			2019	2020	2021	2022	2023	2024	2025
Billions UAH									
SSC contributions	208.3	188.8	213.5	239.1	264.6	291.5	319.6	350.4	384.3
Other own revenues	5.2	5.2	6.1	6.6	7.3	7.9	8.7	9.2	9.9
Transfers from Central Budget	139.3	160.0	194.8	212.2	233.2	250.4	268.3	283.6	299.2
incl. coverage of PFU deficit	21.4	37.1	51.9	53.3	60.5	65.0	70.0	72.4	74.4
Total Expenditures	345.8	354.0	414.3	457.9	505.1	549.8	596.5	643.3	693.3

incl. special programs(**)	97.4	105.6	123.3	137.9	149.6	160.0	170.4	180.7	191.4
Social assistance (***)	*n/a*	*0.3*	*1.2*	*2.3*	*2.9*	*3.7*	*4.7*	*5.9*	*6.9*
In % of GDP									
SSC contributions	6.1	5.5	5.5	5.5	5.6	5.6	5.6	5.7	5.7
Other own revenues	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
Transfers from Central Budget	4.1	4.7	5.1	4.9	4.9	4.8	4.7	4.6	4.4
incl. coverage of PFU deficit	0.6	1.1	1.3	1.2	1.3	1.3	1.2	1.2	1.1
Total Expenditures	10.1	10.3	10.8	10.6	10.6	10.6	10.5	10.4	10.3
incl. special programs(**)	2.8	3.1	3.2	3.2	3.2	3.1	3.0	2.9	2.8
Social assistance (***)	*n/a*	*0.01*	*0.03*	*0.05*	*0.06*	*0.07*	*0.08*	*0.10*	*0.10*

(*) – Includes a reserve of UAH7 billion for increases in pensions for the security sector

(**) – Includes special categories, security sector pensions, subsistence top-up, etc.

(***) – Additional expenditures on the social assistance due to pension reform, not part of PFU budget. It is assumed that retirees with insufficient service will receive assistance equal to the subsistence minimum for 3 years on average.

Source: World Bank calculations

Discussions on the launch of a funded pension system (a so-called second pillar) are currently under way. This could help address the issue of pension benefit adequacy in the longer term, but it should be done with caution and proper preparatory work. While the government is planning to launch the complementary funded pillar in January 2019, it remains a controversial initiative. First, the timing is unrealistic, as experience of other countries suggests the need for significant preparatory work. This includes reforming the regulator (National Securities and Stock Market Commission (NCSSM)) to ensure proper supervisory and enforcement capacity. Second, the size of the scheme should be small to avoid distortions in the still-underdeveloped financial markets and in incentives. While the introduction of the complementary funded pillar is not expected to directly affect revenues of the PAYG system or additional central budget commitments, there are concerns that new contributions might be viewed as taxes, especially if at the high rate, which could affect incentives to participate in the formal pension system altogether. Third, the institutional and governance setup should be well thought through. In fact, there are two main alternative proposals for the administrative and governance setup: (i) a fully decentralized management of individual accounts that is based on the current institutional setup of the voluntary Private Pension funds (PPF); and (ii) a mixed model with centralized management of individual accounts to optimize costs and consolidated fiduciary function to address deficiencies of the PPF sector.

Separate professional pension provisions introduce funding of certain professional risks. The MSP prepared a Draft Law on Professional Pensions, which introduces professional schemes within the framework of the funded pension system. In principle, it is a welcome move, as it would help alleviate fiscal burden of the professional schemes on the general pension system. Furthermore, it might be appropriate for the professional schemes to be managed by the PPFs, which would largely resemble the current institutional setup of corporate sponsorship of voluntary pension plans. At the same time, parameters of the new scheme need to be closely analyzed to ensure fair treatment of the employees in special professions and to secure adequate retirement packages for them, which would avoid the need for additional budget subsidies in the future.

Policy recommendations

In the short term, the focus should be on the full rollout of all provisions of the milestone legislation adopted in 2017 and on close monitoring of the fiscal and social implications. This implies:

- **Ensuring both revenues and expenditures are on target:** given ongoing large uncertainties in expenditures and revenues following the significant parametric changes of the PAYG system, the authorities need to closely monitor performance of the PFU. The targets need to be correspondingly adjusted to reflect actual performance in the first year of the reform. If large deviations from the targets materialize, the parameters may need to be fine-tuned to ensure fiscal sustainability and social adequacy. To address the issue of persisting PFU deficit, one option could be an increase in the SSC.

- **Proceed with efforts of alignment of the special pension regimes with the general pension scheme.** This implies coordination in the benefit formula and indexation rules, as well as rationalizing the revenues.

In the medium term, Ukraine's pension system will require further reforms to achieve better benefit adequacy, improved compliance, and sustainable pension liabilities, including:

- **Coordination with the policies and programs of social assistance and simplification of the system of minimum pension guarantees.** Considering the latest changes in the pension system, some of the expenditures will simply migrate from pension to social assistance system, which needs to be adequately monitored and properly accounted. Eventually, some unified approach to the provision of simple minimum income guarantees across all ages and all population groups could be considered, especially in the context of the reforms of social assistance and household utility subsidies. A unified minimum benefit for all retiring individuals funded from the general budget could create a financial cushion for insurance payments and streamline public finances.

- **Introduction of the funded pension system could help address the issue of the benefit adequacy in the longer term, but it should be done with considerable caution and proper preparatory work.** The following key issues should be considered when assessing different options: (i) capacity of the financial sector to safely accommodate additional savings and the projected portfolio structure; (ii) readiness of private sector institutions to efficiently provide quality account management services; (iii) capacity of the regulatory authorities to deliver quality oversight; and (iv) awareness of the population of the general design, individual rights, and proposed benefits of the new system. Hence, it would be prudent to take time to lay a solid institutional and regulatory ground for its implementation. Furthermore, it is imperative that the government should not assume any explicit fiscal liabilities associated with implementation of the new scheme and limit all possible implicit liabilities.

PART D: SUMMARY OF REFORM RECOMMENDATIONS AND IMPACT ON MEDIUM-TERM DEBT SUSTAINABILITY

Key Conclusions of the PFR-2

This chapter summarize the policy recommendations from the report, provides fiscal projections for the scenario if these recommendations are implemented and quantifies the impact of the proposed reforms to the medium-term debt sustainability.

Key conclusions are:

(i) Even in the case of the networks optimization and staff rightsizing, the wage bill will remain above 11 percent of GDP in the next five years.

(ii) Pension expenditures should stabilize at around 10 percent of GDP if wage bill growth is moderated and ad hoc changes to the new system are avoided.

(iii) Improved targeting of social assistance will not provide significant fiscal savings in the medium term but will help to increase adequacy of support to the most vulnerable.

(iv) Maintaining fiscal discipline will help to secure upcoming debt repayment and reduce PPG to 45 percent of GDP in 2025.

Implementation of the reform options put forward in this report will help to meet the fiscal target and place public debt on a downward trajectory. In 2018, a reduction of expenditure pressures can be achieved by full implementation of the HS reparameterization as well as wage moderation and staff rightsizing in the public administration. These measures can generate savings of 0.7 percent of GDP. In the medium run, containing the growth of the wage bill in the education and health sector is key. Annual savings from fully implementing the PFR-2 reform measures could reach up 5.3 percent of GDP as long as the current steep announced government wage increases are moderated and combined with more decisive staff rightsizing. A gradual reduction of the fiscal deficit to 2 percent of GDP by 2023 will reduce public debt to 50 percent of GDP (almost to pre-crisis levels) and make Ukraine more resistant to macroeconomic shocks.

By tackling inefficiencies in government, the scope for raising the quality of public services without further burdening the budget is large. To unlock these gains, Ukraine's governors need to once again demonstrate the grit needed to push through complex structural reforms and the political determination to win over Ukraine's public and to stand against special interest groups. All Ukrainians can take this opportunity to leave to their children a country with lower public debt and better public services.

Figure 31. Fiscal Projections under the Reform Scenario

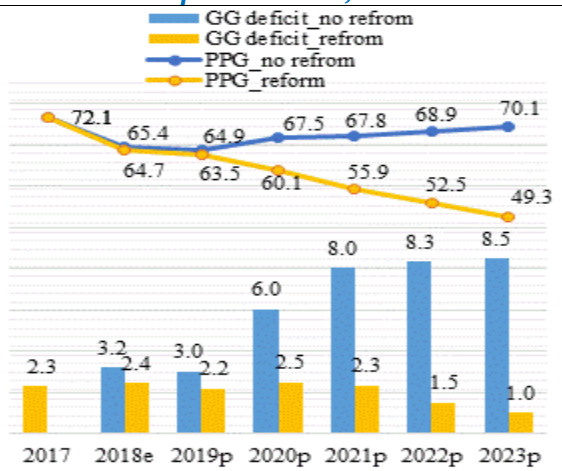
	2017	2018	2019	2020	2021	2022	2023
Revenues	**39.2**	**41.0**	**39.0**	**40.0**	**40.6**	**41.3**	**41.4**
Tax revenues	34.0	35.7	34.7	35.7	36.3	36.836.9	
Personal Income tax	6.2	6.3	6.5	6.5	6.5	6.5	6.5
Corporate profit tax	2.5	2.8	2.6	2.7	2.7	2.8	2.8
Payroll tax	6.1	7.0	7.0	7.2	7.5	7.8	8.0
Property tax	1.0	0.9	0.8	0.9	1.0	1.0	1.0
VAT	10.5	11.0	11.0	11.0	11.0	11.0	11.0
Excises	4.1	3.6	3.5	4.0	4.1	4.2	4.2
Taxes on international trade	0.8	0.8	0.7	0.8	0.9	0.9	0.9
Other taxes	3.0	3.3	2.3	2.6	2.6	2.6	2.5
Non-tax revenues	5.2	5.2	4.3	4.3	4.3	4.5	4.5
Expenditures	**41.5**	**43.4**	**41.2**	**42.5**	**42.9**	**42.8**	**42.4**
Current expenditures	38.2	38.9	37.4	38.0	38.4	38.3	37.9
Wages and compensation	10.7	11.2	11.5	11.4	11.3	11.2	11.2
Goods and services	6.4	7.0	6.0	6.0	6.3	6.5	6.6
Interest payments	3.7	3.8	3.8	4.2	4.2	4.2	4.2
Subsidies to corporations	1.6	1.4	1.3	1.3	1.3	1.3	1.0
Social benefits	15.9	15.2	14.8	14.8	15.0	14.8	14.6
Pensions	9.8	10.1	10.8	10.6	10.6	10.6	10.5
Unemployment, disability insurance	0.8	0.9	0.9	0.9	0.9	0.9	0.9
Social programs	4.9	4.2	3.2	3.3	3.5	3.3	3.2
Other current expenditures	0.1	0.2	0.3	0.3	0.3	0.3	0.3
Capital expenditures	3.3	4.5	3.8	4.5	4.5	4.5	4.5
Gen Government Balance	**-2.3**	**-2.4**	**-2.2**	**-2.5**	**-2.3**	**-1.5**	**-1.0**

Source: BOOST 2017 based on State Treasury Service; WB calculations

Figure 32. PFR-2 Recommendations Impact on Government Debt and Key Public Services

a. The PFR-2 recommendations can help keep Ukraine's debt on a downward trajectory…

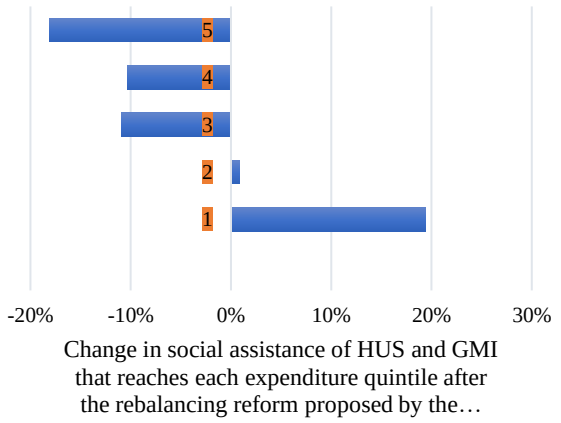
GG deficit and PPG, % GDP



Source: BOOST 2017 based on State Treasury Service; World Bank calculations

b.… while increasing the effectiveness of key public services, such as social assistance

Share of total assistance reaching different quintiles of population



Source: World Bank calculations for HUS and GMI

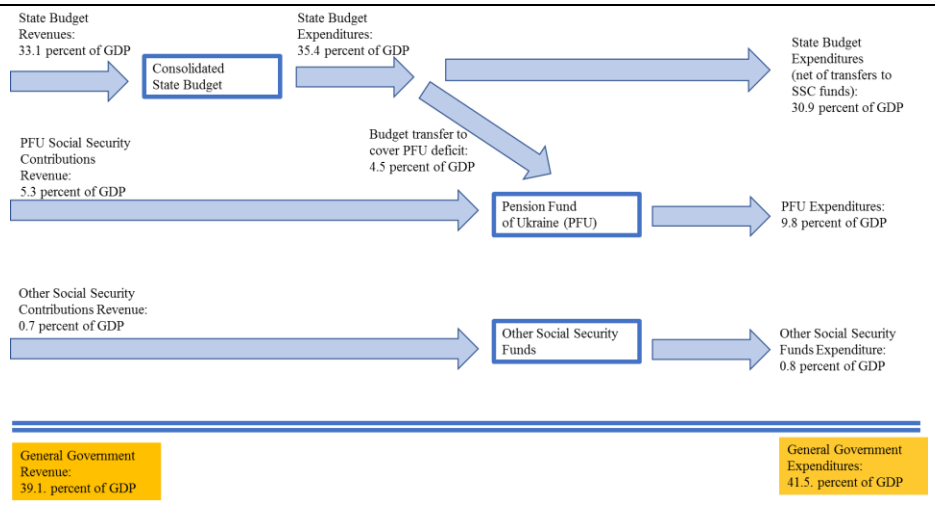
ANNEX

Annex 1: A Short Primer on the Structure of Ukraine's Public Finances

This annex provides a short primer on the structure of Ukraine's public finances, providing additional context for this report.

Ukraine's general government consists of the state budget, the Pension Fund of Ukraine (PFU) as well as two smaller social security funds. The PFU runs a pay-as-you-go (PAYG) main pension scheme, which is the backbone of Ukraine's old age insurance system, as well as a range of smaller other programs, including special pension benefits for privileged occupations and social assistance type spending. The two smaller social security funds are the "Social Insurance Fund" and the "Mandatory Social Insurance against Unemployment" Fund. The majority of general government revenues are collected through the state budget, with a small fraction collected as social security contributions (SSC) dedicated to the social security funds. Since the PFU regularly spends more than its share of SSC revenues, the state budget arranges annual transfers to cover the PFUs sizeable cash shortfalls. General government borrowing takes place at the level of the state budget.[lvii]

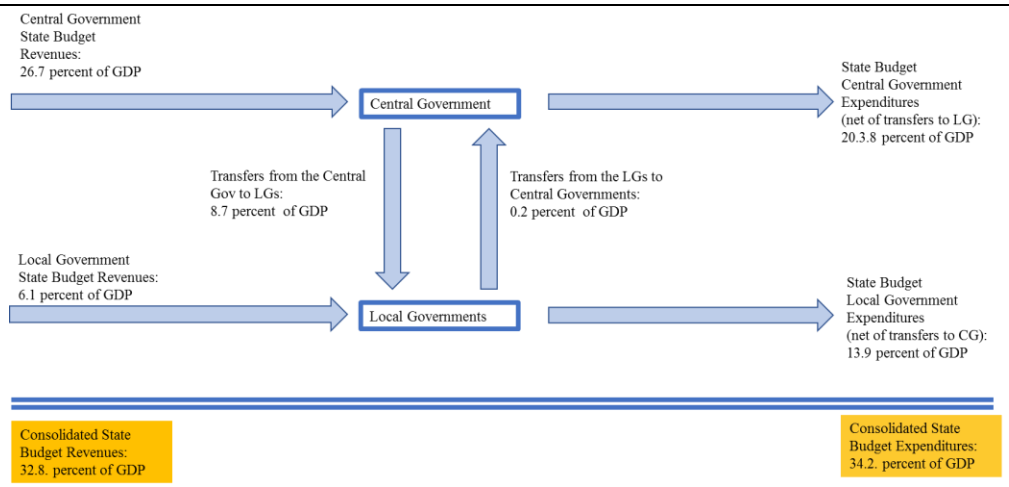
Figure A1. Structure of Ukraine's General Government, 2017 Realized Data)



Source: Ukraine State Treasury and Social Security Funds; 2017 state budget non-tax revenues are adjusted to disregard one-off factors

In turn, the state budget consists of the central and local government budgets. Ukraine's local governments collect around one-fifth of consolidated state budget revenues. However, given significant transfers from the central government, they execute nearly half of total spending. Responsibility for the management of key public services, such as health and education, has been largely delegated and Ukraine is continuing its policy of decentralization, which was adopted following the Revolution of Dignity in 2014.

Figure A2. Structure of Ukraine's State Budget, 2015 Realized Data



Source: Ukraine State Treasury and Social Security Funds

General government expenditures are dominated by social welfare and social assistance spending. In turn, social welfare spending is driven by pensions and social safety net programs for the poor. Compensation of government employees is concentrated in education, health and the security sector.[lviii] Large overall expenditure on national government functions is explained by the classification of government debt service in this category. The share of capital expenditure in total spending is abnormally low in Ukraine, although the government has been gradually increasing activity in this economic expenditure category since the crisis.

Figure A3. Breakdown of General Government Expenditures by Functional and Classification, 2017 Realized Data

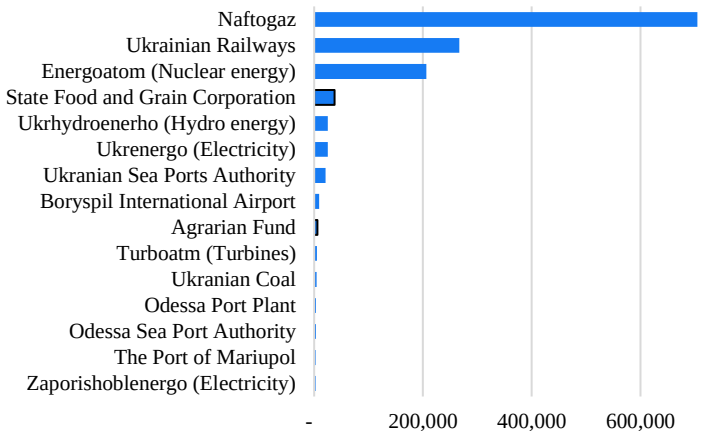
(% of GG expenditure; 2017 data)	National gov. functions	Defence	Public order	Econ Activity	Healthcare	Education	Social protection	Other	Total
Wage bill	2.8	3.0	5.1	0.6	4.5	7.9	0.5	0.8	**25.2**
Goods and services	1.0	2.6	1.4	2.0	2.7	4.9	0.4	1.1	**16.1**
Debt service	8.9	0.0	0.0	0.1	0.0	0.0	0.0	0.0	**9.0**
Other transfers	0.4	0.2	0.1	2.0	0.3	0.4	36.5	1.5	**41.6**
Capital expenditures	0.3	0.3	0.5	3.5	0.7	1.1	0.3	1.4	**8.1**
Total	**13.4**	**6.0**	**7.1**	**8.3**	**8.3**	**14.4**	**37.7**	**4.8**	**100.0**

Source: Ukraine State Treasury and Social Security Funds; GG expenditure consolidates the state budget and the social security funds; the health sector wage bill is adjusted to reverse the reclassification of healthcare workers from wage bill to goods and services in 2017

General government revenues are dominated by VAT and excise taxes. Both direct and indirect taxes saw significant tax compliance gains in 2016-17, reflecting both improved economic conditions as well as the government's decision to double the minimum wage. The latter helped to reduce the scope for under-declaration of wage income. In 2018, the government expects further significant tax compliance gains.

Outside the general government per se, Ukraine's government operates a vast state-owned enterprise (SOE) sector, which ties up significant economic activity and constitutes a key fiscal risk for the government. According to the Ministry of Finance, Ukraine had 3,435 SOEs in 2016, of which 1,770 were active. They generated close to 25 percent of GDP in revenues and 5 percent of GDP in taxes. SOE debt explicitly guaranteed by the State reached 4.6 percent of GDP. According to a 2014 International Monetary Fund report,[lix] the SOE sector employs close to one million people.

Figure A4. Ukraine's Largest SOEs Outside the Budget, by Assets



Source: TOP 100 – Review of the largest SOEs in Ukraine (2016) – Ranking by assets (m UAH)

Annex 2: World Bank Baseline Macroeconomic Projections

	2012	2013	2014	2015	2016	2017	2018p	2019p	2020p	2021p
Nominal GDP, UAH *billion*	1,405	1,465	1,587	1,989	2,385	2,983	3,428	3,854	4,314	4,801
Real GDP, *percent change*	0.2	0.0	-6.6	-9.8	2.3	2.5	3.3	3.8	4.5	4.5
Consumption, *percent change*	7.4	5.2	-6.2	-15.9	1.4	3.3	4.2	4.5	3.7	3.0
Investment, *percent change*	0.9	-8.4	-24.0	-9.2	20.1	18.3	10.2	6.8	6.0	5.0
Exports, *percent change*	-7.7	-8.1	-14.2	-13.2	-1.6	4.8	2.0	4.3	4.5	4.8
Imports, *percent change*	1.9	-3.5	-22.1	-17.9	8.4	8.7	3.6	4.7	4.2	4.5
Monetary and External										
GDP deflator, *percent change*	8.1	3.1	14.8	38.4	17.1	22.0	11.6	8.6	7.4	6.8
CPI (eop), *percent change*	-0.2	0.5	24.9	43.3	12.4	13.7	10.0	7.3	6.5	6.0
Credit to private sector, *percent change*	2.2	9.5	-15.6	-19.4	-3.7	2.1	7.5	8.7	10.5	12.3
Current Account Balance, *percent GDP*	-8.1	-9.2	-4.2	-0.3	-3.8	-1.9	-2.3	-2.8	-2.9	-3.0
Foreign Direct Investment, *percent GDP*	3.8	2.1	0.2	3.6	3.4	2.0	2.0	2.3	2.4	2.5
Gross Reserves, *billion US$, eop*	24.5	20.4	7.5	13.3	15.5	18.8	21.8	24.8	27.8	29.8
In months of next year's imports	*2.9*	*3.5*	*1.8*	*3.1*	*3.4*	*3.2*	*3.5*	*3.7*	*3.9*	*3.2*
External Debt, *percent GDP*	76.6	78.6	97.6	139.7	122.6	110.2	97.9	92.6	87.1	78.5
Exchange Rate, UAH/*US$ (average)*	8.0	8.2	12.1	23.4	25.6	26.6	28.0	29.0	30.0	30.0
Fiscal										
Revenues, *percent GDP*	44.5	43.6	40.3	42.1	38.6	39.2	39.7	40.5	40.3	40.5
Expenditures, *percent GDP*	48.9	48.4	44.8	43.3	40.6	41.5	42.3	43.2	42.7	43.0
Fiscal Balance, *percent GDP*	-4.4	-4.8	-4.5	-1.2	-2.2	-2.3	-2.5	-2.7	-2.4	-2.5
Fiscal Bal. incl. Naftogaz, *percent GDP*	-5.5	-6.7	-10.1	-2.2	-2.3	-2.3	-2.5	-2.7	-2.4	-2.5
PPG debt (eop), *percent GDP*	36.6	40.6	70.3	79.7	81.2	72.3	67.2	64.8	62.4	58.4

The assumptions underlining the baseline scenario are:

- Global conditions are expected to deteriorate slightly starting from 2018 with terms of trade remain negative during the projected period

- The reforms needed for the IMF, WB and the EU programs (creation of the High Anticorruption Court, strengthening corporate governance of state-owned banks, resolution of nonperforming loans, creation of the land marker)

- Cooperation with the IMF will continue after 2019

- Reforms are expected to improve investor's confidence and the economic expansion would be supported by robust investment growth and gradual growth in disposable income on the back of lower unemployment and high remittances.

[i]The BOOST initiative is a World Bank collaborative effort launched in 2010 to facilitate access to budget data and promote effective use for improved decision-making processes, transparency and accountability. Currently deployed in about 40 countries, the appeal of the BOOST approach is that it provides user-friendly platforms where all expenditure data can be easily accessed (often in conjunction with nonfinancial indicators) and used by researchers, government officials and ordinary citizens to examine trends in allocations of public resources, analyze potential sources of inefficiencies, and become better informed about how governments finance the delivery of public services. The 2017 version of the Ukraine BOOST database has been updated as part of the preparation of this PFR report and has been used extensively throughout the analysis.

[ii] This PFR-2 does not cover other important segments of Ukraine's public sector, including large and inefficient state-owned enterprises (SOEs) and a growing but outdated public investment management (PIM) framework. These are natural candidates for the next PFR for Ukraine.

[iii] In 2017, Ukraine changed the economic classification of subsidies for the wage of local government healthcare workers from "compensation of employees" to "goods and services." For comparability of data across years, this PFR-2 reports "compensation of employees" as including subsidies for the wage of local government healthcare workers throughout all years.

[iv] In addition to the direct savings generated by implementing the PFR-2 reforms, the more conservative growth of the government wage bill in public administration, education and health is likely to reduce wage bill pressures for other public sector employees. Equally, more moderate wage growth is likely to reduce both the revenues and the expenditures of the pension fund, likely shrinking its net deficit position. These indirect savings are in addition to the direct savings quantified in this table.

[v] In 2014, residential gas tariffs were increased by 56 percent on average and residential heating tariffs were increased by 40 percent on average. In 2015, residential gas tariffs were further increased by 285 percent on average, while residential heating tariffs increased by a further average 67 percent.

[vi] Under the April 2017 IMF Third Review under the Extended Arrangement, Ukraine pledged to reduce employment in the budgetary sector (excluding the military) by at least 4 percent by end-2017, and by a further 10 percent by end-2019. In the civil service, it pledged to reduce the number of staff by 5 percent by end-2017 and by a further 10 percent by end-2019.

[vii] In 2017, Ukraine changed the economic classification of subsidies for the wage of local government healthcare workers from "compensation of employees" to "goods and services." For comparability of data across years, this PFR-2 reports "compensation of employees" as including subsidies for the wage of local government healthcare workers throughout all years.

[viii] The assumptions regarding revenue dynamics under the "no-reform scenario" do not include implementation of the proposed CET and abolishment of CPT. The respective proposals were submitted to parliament in July 2018 but are not yet included into 2019 budget. CET is a nonstandard type of corporate taxation that is used only in a few countries. International experience indicates that introduction of CET leads to significant revenue losses, especially in the initial years, while the impact on investment and productivity is limited. In Ukraine, proceeds from the new CET can be unpredictable, estimated at 1 percent of GDP in the first year at best. Should the impact of the CET introduction be included in the "no-reform scenario," the potential fiscal deficit would be even higher.

[ix] Standard DSA shock that simulates debt trajectory for the scenario when real GDP growth is reduced by 1 standard deviation for two consecutive years.

[x] Standard DSA shock that simulates debt trajectory for overvaluation or maximum historical movement of the exchange rate.

[xi] Throughout this chapter, public administration will refer to Ukraine's civil servants (governed by the law "On Civil Service") as well as other related civilian public administration staff as monitored by the National Agency of Ukraine on Civil Service (NACS). Given the fact that the share of the non-civil servant staff within the public administration sector is about 10 percent, this report concentrates on the pay system for the civil servants as they represent the overwhelming majority of staff in the sector.

[xii] According to the National Agency of Ukraine on Civil Service (NACS) data, the actual number of employed civil servants in 2017 was 201,000 people.

[xiii] Full survey results can be found at: http://dif.org.ua/article/reformi-v-ukraini-nedoroblene-i-nedovikonane and http://razumkov.org.ua/uploads/socio/Press0417.

[xiv] According to the results of the opinion poll held by Democratic Initiatives Fund in October 23-November 5 2017 on the reform progress in Ukraine. Full survey results can be found at: https://dif.org.ua/article/reformi-v-ukraini-nedoroblene-i-nedovikonane

[xv] Calculated based on the NACS data on wage bill structure and employment levels. For more details see the governmental Report on the PAR Strategy implementation in 2017 available at: https://www.kmu.gov.ua/storage/app/media/uploaded-files/pro-vikonannya-u-2016-2017-rokakh-strategii-reformuvannya-derzhavnogo-upravlinnya-ukraini-na-2016-2020-roki.pdf

[xvi] For instance, government units have an incentive to keep vacancies artificially open to increase their budget allocation (which is based on number of positions) and use the funds to increase the variable supplements and bonus of existing staff to reward for the extra workload of filling in for the vacant positions. Based on the data from the NACS, the average vacancy rate for civil servant positions was 14.4 percent in 2017 (up from 13.2 percent in 2016), varying from a relatively low 5-8 percent to as high as 30-50 percent depending on the entity. In regional state administrations, the vacancy rate was 16.3 percent in 2017 with great regional variations, ranging from 3-6 percent in less industrialized regions to 25-30 percent in more industrialized areas. The higher vacancy rates in industrialized and more urbanized regions may reflect the greater pressure on managers to offer competitive salaries, since staff have better alternative employment opportunities in the private sector.

[xvii] The Ministry of Finance makes annual wage bill allocations for each budgetary entity as part of its budgeting process, using previous wage bill allocations as basis as well as indications on changes in the number of staff positions. Employment and salary payments are then executed by each budgetary entity.

[xviii] While the organizational structures of the ministries comply with the legal requirement on the ratio of the managerial staff to the total number of positions, about a third of the central executive government bodies (state services, state inspections, state agencies) and local administrations exceed the cap on the managerial staff positions.

[xix] http://www.sigmaweb.org/publications/principles-public-administration-eu-enlargement.htm

[xx] In the original reading of the Law on the Civil Service, the minimum wage for the civil servant was linked to the statutory minimum wage. However, following the government decision to double minimum wage starting 2017, the legislation was amended to delink civil servant salaries from the minimum wage replacing this benchmark with the subsistence minimum to comply with budget constraints.

[xxi] Centre for Economic Strategy, 2017,"Civil Servants Remuneration Reform in Ukraine," Analytical Note. http://ces.org.ua/wp-content/uploads/2017/06/public_wages_note_ukr1.pdf

[xxii] This analysis assumes full compliance with the statutory remuneration rules. There is no microdata available on the salaries actually paid to civil servants in each pay group and there are no established payroll compliance mechanisms within the civil service, though this should be a responsibility of the NACS. In theory, the Accounting Chamber of Ukraine may exercise ex-post control over the government payroll, but there is no information on whether this has ever been executed.

[xxiii] According to the NACS, the PAR targets for the guaranteed share of civil servant remuneration have been largely met for non-managerial regional staff.

[xxiv] Private sector wage refers to a median wage for the set of jobs comparable to the civil service jobs in the private sector in Kyiv. Civil servants' wages were calculated for the central level of the government based on legislative norms as an average of the minimum and maximum compensation.

[xxv] Starting in January 2018, multiplier coefficients in the range of 1.20-1.25 and up to 1.45 were applied to basic salaries for civil servants working in specific central level government bodies (Secretariat of the Parliament of Ukraine, Secretariat of the President's Administration, Secretariat of the Cabinet of Ministers, ministries etc.) for managerial staff performing special functions and for information technology (IT)-specialists;

[xxvi] While in some government entities bonuses comprise 70 to 100 percent of the basic salary on top of variable supplements (Ministry of Interior Affairs, Ministry of Finance, Ukravtodor), there are entities with bonuses comprising less than 15 to 20 percent of basic salary (Ministry of Ecology, State Statistics Service). Full analysis based on statistical data on wage funds of central government entities in 2015-17 performed by Financial and Economic Analysis Office in the Parliament of Ukraine (FEAO) can be found at: https://feao.org.ua/?download=&kccpid=5002&kcccount=https://feao.org.ua/wp-content/uploads/2017/10/2017-09-18_Article_Salaries_civil_servants.pdf

[xxvii] To avoid resentment and demotivation of the incumbent civil servants who occupy non-reform positions and receive significantly lower salaries for similar functions, the government should have a clear view on how to integrate the reform specialists into the rest of the civil service, either via gradually bringing aligning salaries for the equivalent jobs of both groups of civil servants or via institutionalizing "reform positions" (which will require corresponding amendments to the legislation).

[xxviii] IMF Ukraine: 2016 Article IV Consultation and Third Review under the Extended Arrangement, April 6, 2017.

[xxix] This includes local government staff and central government staff in regional branch offices.

[xxx] The ongoing decentralization reform envisages amalgamation of the local councils and municipalities into united territorial communities that eventually should replace the rayon level of state administrations. Some reduction in the staff due to this process is expected, though it is difficult to estimate the possible scope.

[xxxi] The concept is approved by the Cabinet of Ministries Order #1013 as of December 21, 2017 and does not contain detailed information on the effects of functional review on employment levels.

[xxxii] According to the OECD Government at A Glance survey on government wages, the fixed part of the civil servant salary is usually around 70 to 80 percent of the total remuneration, the ratio that is deemed in line with SIGMA public administration principles for a fair and transparent remuneration system. http://www.sigmaweb.org/publications/Principles-Public-Administration-Overview-Nov2014.pdf

[xxxiii] The assumption of an 8 percent employment cut at the central level of the government, almost half of the cut rate for the regional staff, is based on the following factors: (1) the central level government bodies were rightsized during the previous iteration of the public administration reform (in 2011-12), during the major functional delineation of the central executive bodies; (2) at the onset of the current PAR, the central level agencies' staff saw higher rates of cut (and there are more reliable data on the employment levels) than the local administrations in 2016.

[xxxiv] Under the no-policy change scenario, this report assumes no rightsizing on the regional level, while the recruitment of reform specialists would increase central government staff by about 1 percent. If the government does not tackle current opaque payroll distribution practices while raising salaries significantly beyond nominal GDP growth rates, the aggregate public administration wage bill could increase to 1.3 percent of GDP by 2025, yet fail to achieve the PAR Strategy goals of attracting qualified staff and increasing public administration effectiveness.

[xxxv] A longer version of this chapter appears in World Bank 2018: Policy Note: Introducing the New Ukrainian School in a fiscally sustainable manner.

[xxxvi] The latest year for which comparable figures are available. After 2014, most data exclude the Autonomous Republic of Crimea, the City of Sevastopol, and parts of the regions of Donetsk and Luhansk.

[xxxvii] See also Herczyński, January 2017, "Education Finance in Ukraine: Select Strategic Issues," Institute of Education Research, Warsaw, Poland.

[xxxviii]Before the decentralization reform, the recurrent financing of schools was delegated to rayon authorities, but the decision to close the schools was a responsibility of the villages. A village could vote to keep a school open without assuming the responsibility to finance it.

[xxxix] Kasper Brandt and Thomas Sohnesen, 2018, "Estimating Teacher Redundancies with Hierarchical Clustering VBased on Travel Distances in Ukraine," World Bank, Policy Note: Introducing the New Ukrainian School in a Fiscally Sustainable Manner, Annex 4.

[xl] Since Ukraine classifies labor remuneration in higher education under "goods and services," actual labor costs of the education sector make up an even larger share of total sector expenditure.

[xli] Ukraine has not yet participated in the OECD's Programme for International Student Assessment (PISA) but is planning on doing so in 2018.

[xlii] Note: Data for middle-income countries (Armenia, Colombia, Georgia, Ukraine, and Vietnam) are only representative of urban areas. Reading proficiency scores range from 0 (lowest) to 500 (highest). The 22 OECD country average is 273. For description of reading scores, see table A.2 in appendix A in Del Carpio et al, 2017.

[xliii] Adding an extra year would add an estimated 180,000 students to the general secondary system (by keeping 11th graders an extra year of schooling), requiring an estimated 11,000 additional classes (a 5 percent increase) and 22,000 additional teachers.

[xliv] Ernesto Dal Bo, Frederico Finan, and Martin A. Rossi, 2013, "Strengthening State Capabilities: the Role of Financial Incentives in the Call to Public Service," The Quarterly Journal of Economics (2013), 1169–1218. doi:10.1093/qje/qjt008

[xlv] David Evans, 2018, "What Do We Learn from Increasing Teacher Salaries in Indonesia? More Than the Students Did," World Bank Blog, https://blogs.worldbank.org/impactevaluations/what-do-we-learn-increasing-teacher-salaries-indonesia-more-students-did

[xlvi] Moreover, if the wage increase were focused on teachers at the lowest grade levels, keeping higher grade salary increases more moderate and allowing for some further remuneration compression across grade levels, overall costs could be contained at 6 percent of GDP in 2023 (the same level as in 2017). However, given that Ukraine already has a relative compressed wage grid relative to other countries, this may not be an advisable course of action.

[xlvii] Kasper Brandt and Thomas Sohnesen, 2018, "Estimating teacher redundancies with hierarchical clustering based on travel distances in Ukraine, World Bank 2018: Policy Note: Introducing the New Ukrainian School in a Fiscally Sustainable Manner, Annex 4.

[xlviii] Dilaka Lathapipat, 2018, "Using School Level Educational Production Function to Determine the Effects of Measured School Characteristics on Average Student Performance for Ukrainian Secondary Schools," World Bank 2018: Policy Note: Introducing the New Ukrainian School in a Fiscally Sustainable Manner, Annex 3.

[xlix] Nancy R. Lee and Philip Kotler, 2018, "Social Marketing: Changing Behaviors for Good," 5th Edition, Sage Publishing.

[l] "Tracking the Health Resources in Ukraine," 2017, World Bank, United Nations Development Plan, and Kyiv School of Economics, 2017.

[li] This reflects on-budget cash and in-kind social assistance expenditure, excluding budget transfers to cover the deficit of the pension fund. This does not include pension fund expenditures or expenditures of the other Social Security Funds, including unemployment benefits, that may be classified as social assistance.

[lii] This chapter estimates that this change leads to a broadly uniform contraction in eligibility across all income groups and does not substantially improve targeting.

[liii] According to administrative data, the average amount of HUS during the 2016 heating season was Hrv 2,000 per month. According to 2016 Household Budget Survey this is roughly 40 percent of monthly total household income in Ukraine. Even allowing for income underreporting in the survey, it seems likely that the HUS in its current form would represent a major source of cash income for many households.

[liv] Note that current scenario does not increase the maximum benefit limit which is currently set at 75 percent of the subsistence minimum and does not change the child top-ups; these are additional parameters that can be used to modify the outcomes depending on government's preferences in the way children, existing beneficiaries and excluded households that are close to the threshold are affected by the changes.

[lv] The landmark pension reform was adopted only at the end of 2017. PFU revenues in 2017 increased mostly due to hike in wages, while the incentive to contribute to the system is expected to increase after the implementation of the reform.

[lvi] With an average career at retirement of around 30 years, the average new pension correspondingly would constitute only around 30 percent of the individual pensionable wage or even lower. The latter would usually be smaller than the last wage, given complex mechanism of accounting for wages earned over the individual's carrier and the fact that the economy-wide wages used in the calculations is a moving average of the last three years. While length of service at retirement for women is on average shorter than for men, producing a lower benefit, there is a temporary compensation for women to reflect the ongoing increase in the retirement age. The fate of that compensation is uncertain after the transition is complete in 2021, which may produce a considerable and abrupt reduction in the pension benefits for the new cohorts of the retiring elderly women.

[lvii] Before 2016, the state-owned gas company Naftogaz ran sizeable fiscal deficits. Under the terms of the IMF adjustment program, these were also counted towards the deficit of the general government. Since 2017, Naftogaz's cash deficit was closed after an increase in gas tariffs.

[lviii] In fact, higher education remuneration is classified under goods and services, reflecting the contracting payment model used by the government. If these payments were included under the wage bill, then general government expenditure on compensation of employees would be even larger.

[lix] IMF Ukraine Technical Assistance Report – Reforming Management and Oversight of State Assets; February 2016; IMF Country Report No. 16/31