



# HOW MUCH DOES THE BUDGET LOSE DUE TO THE LACK OF GOOD GOVERNANCE?

## CASE STUDIES

Authors: Oleksiy Hamaniuk, Dariia Mykhailyshyna Iryna Piontkivska, Bohdan Prokhorov, Maria Repko, Roman Soltysiak, Andrii Tarasenko, Dmytro Yablonovskiy, Oksana Zatvornytska

Project leader: Maria Repko

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Centre for Economic Strategy (CES) — an independent public policy research center. CES task — support for reforms in Ukraine aiming to achieve sustainable economic growth. The Centre contributes to elaboration of economic growth strategy for Ukraine, performs independent analysis of the most important public policy aspects, as well as works on fostering public support for reforms.

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# 1 Executive Summary

Economic literature argues that good governance and the rule of law are vital for the country's success and high income. Good governance and corruption indices are monitored closely by investors, international organizations, rating agencies and partner countries. Ukraine is ranked low in those rankings.

We tried to calculate how much Ukraine loses due to poor governance and law enforcement. We have compared Ukrainian reality to the "blue sky scenario", using Central and Eastern European countries, or average values for the countries with higher rule of law rankings as benchmarks.

We have examined several cases<sup>1</sup> on the bottom-up basis.:

- **Tax evasion in labour taxation** – lack of trust in the state institutions, low quality of government services and low expected pension, combined with the lack of law enforcement leads to widespread grey and black salaries, which in turn leads to undertaxation (\$2.8 bn on single social contribution tax and \$3.2 bn on personal income tax, \$6 bn in total per year);
- **Transparent land market** reform instead of semi-official rent market would bring \$12.4 bn to the budget as a one time gain and would be bringing additional \$52 mln annually if 50% of state-owned land is sold, whereas Verkhovna Rada cannot agree upon market design and the land sale moratorium is continued to being prolonged year after year;
- **Toxic debt** in Deposit Guarantee Fund and state-owned banks could only be recovered partially. Low quality of judiciary and poor resolution framework mean that the expected recovery is low at approx. 8% of face value. In the countries with the rule of law, proper bankruptcy procedures and better resolution framework this figure is equal to 70%. The difference in bad debt recovery under the 'blue sky' scenario vs poor rule of law framework totals \$10 bn for the four state-owned banks and the Deposit Guarantee Fund;
- **Improving governance in infrastructure** could bring additional \$324 mln annually if the road user charges are introduced and \$1 bn if Public Private Partnerships are used effectively;
- **Tax evasion in export and import operations** – Corruption in custom office leads to \$4.05 bn in grey imports and \$4.5 bn in grey exports and as a result – undercollection of \$1 bn in duties. This is a very conservative estimate, since the grey foreign trade is also used to hide profits in low-tax jurisdictions via transfer pricing schemes;
- **Privatisation** of state-owned enterprises could help to bring down corruption in public sector and thus decline the public losses via state-owned enterprises. The weak rule of law is partly the reason why the privatization still sluggish and foreign investors do not pay much attention to it. Our evaluation suggest that selling 53 state-owned companies using the multipliers of countries with better rule of law will bring \$5.9 bn. Privatising those companies under the current level of rule of law would bring only \$1.7 bn.
- **Shadow industries – amber extraction, illegal timber harvesting, gambling business** - could be brought to the daylight, and the government could receive additional revenues. The total amount of fiscal gain could be at ~ \$0.2-0.4 bn on extremely conservative assumptions.

Expected total gain in the "blue sky scenario" if the rule of law in all cases studied is improved is estimated to be at least \$26.6 bn as a one-time gain and additional \$8.6 bn annually.

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<sup>1</sup> We pick the cases where the lack of either law enforcement or control over corruption is obvious, where the amount of the system abuse is substantial and where there is at least some hard data evidence available on which we may base the estimations. We do not claim that these are the areas of bigger priority or importance, neither have we claimed that the list below covers all problematic areas.



Table 1. Public loss in different industries

Case	Public loss ('blue sky' vs reality)	Public loss in UAH (exchange rate as of 26.11.18)
Labour taxes evasion	\$6 bn annually	167 bn UAH annually
Absent land market	\$12.4 bn one-off sum and \$52 mln annually	346 bn UAH one-off sum and 1.5 bn UAH annually
Bad debt undercollection	\$10 bn one-off sum	280 bn UAH one-off sum
Poor governance in infrastructure	\$1.3 bn annually	36 bn UAH annually
Export and import taxes evasion	\$1 bn annually	28 bn UAH annually
Sluggish privatisation	\$4.2 bn one-off sum	121 bn UAH annually
Shadow industries	\$0.2-0.4 bn annually	5.6-11 bn UAH annually

Source: CES estimates

## 2 The good governance, the rule of law: why is it important for the economy?

### 2.1 Governance and rule of law: what is the impact on economy

Institutional economics examines how effective governance influence the economic growth. Acemoglu (2004)<sup>2</sup> states that "Economic institutions encouraging economic growth emerge when political institutions allocate power to groups with interests in broad-based property rights enforcement, when they create effective constraints on power-holders, and when there are relatively few rents to be captured by power-holders," in other words when the rule of law is present.

Nobel Prize winner D. North defines<sup>3</sup> institutions both formal and informal as " the rules of the game". Formal rules define legislation frameworks and informal ones describe how social groups and people are interacting with each other. In modern world institutions sustain the functioning of the market economy, facilitate the decrease of transactional costs. Strong informal institutions increase trust in the society. Social groups together with local authorities can successfully solve basic problems such as distribution of common lands, provision of public services, effective use of budget resources. Moreover, good governance could be regarded as a key indicator of institutional strength.

In 1996, World Bank established so-called **World Governance Indicators**.<sup>4</sup> They include such 6 dimensions of governance, as:

- Voice and Accountability,
- Political Stability and Absence of Violence,
- Government Effectiveness,
- Regulatory Quality,
- Rule of Law and
- Control of Corruption.

Index structure was proposed by researchers D. Kaufmann and A. Kraay. 33 datasets, which include information from surveys of households and firms, commercial business information providers, NGOs and public sector organizations, are used to calculate scores for each of 6 dimensions.

<sup>2</sup> <http://www.nber.org/papers/w10481.pdf>

<sup>3</sup> <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.5.1.97>

<sup>4</sup> <https://datacatalog.worldbank.org/dataset/worldwide-governance-indicators>





One of the most commonly referred to indices is the **Corruption Perception Index**, developed by Transparency International. «Behind these numbers is the daily reality for people living in these countries. The index cannot capture the individual frustration of this reality, but it does capture the informed views of analysts, businesspeople and experts in countries around the world».<sup>7</sup>

There is robust evidence that the higher level of GDP per capita is associated with the better governance, higher rule of law and more effective control of corruption.

For instance, Barro (1996)<sup>8</sup> normalised constructed index of the rule of law on the scale from 0 to 1 and got the result that an increase in rule of law from 0 to 1 increases long-run (for 1965-75, 1975-85, and 1985-90) GDP growth by 2.93 percentage points. Also, the author finds positive impact of the rule of law on investment.

Then, Kaufmann and Kraay created the Worldwide Governance Indicators to supply institutional economics with quantitative data and published several research papers where they found the evidence of strong correlation between the governance level and the GDP per capita<sup>9</sup>. Boettke and Subrick (2003)<sup>10</sup>, Haggard and Tiede (2010)<sup>11</sup>, Fayissa and Nsiah (2013)<sup>12</sup> using different computation procedures find that an increase in the rule of law increases GDP per capita. Also, Feulner (2013)<sup>13</sup> finds strong positive correlation between the rule of law and property rights protection (within the section from the Index of economic freedom) and country prosperity, as measured by GDP per capita. Acemoglu and Robinson (2001) in the article "The colonial origins of comparative development" acknowledge that initial institutional framework imposed exogenously can determine long-run economic growth. They argue that in past adoption of different policies in the colonies around the world was a main reason for different income per capita today.<sup>14</sup>

However, the question of causality and the impact of governance on economic growth remains on the table. Kurtz and Schrank (2007)<sup>15</sup> argue that there is no good governance impact on economic growth. At the same time, Ozpolat et al. (2016)<sup>16</sup> divided the countries into 3 levels of income (high, medium and low) and established that for high income countries an increase in the rule of law by 1% increases GDP per capita by 0.03%. At the same time, for countries with middle and low income, including Ukraine, no significant effect can be observed.

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<sup>7</sup> <https://www.transparency.org/research/cpi/overview>

<sup>8</sup> <http://www.nber.org/papers/w5698.pdf>

<sup>9</sup> 8 editions of "Governance matters" by Kaufmann et al (1999-2008)

<sup>10</sup> <https://www.jstor.org/stable/pdf/1147140.pdf?refreqid=excelsior%3A350bd27ab3c06286290f616a79510fef>

<sup>11</sup>

<https://law.utexas.edu/conferences/measuring/The%20Papers/ruleoflawconference.Haggard&Tiede.Rule%20of%20Law.March13.2010.pdf>

<sup>12</sup> <https://www.jstor.org/stable/pdf/23612261.pdf?refreqid=excelsior%3Ab6884a68d85876a3fcff31ff0f3aca38>

<sup>13</sup> [https://thf\\_media.s3.amazonaws.com/index/pdf/2013/chapter2.pdf](https://thf_media.s3.amazonaws.com/index/pdf/2013/chapter2.pdf)

<sup>14</sup> <https://economics.mit.edu/files/4123>

<sup>15</sup> <https://www.jstor.org/stable/pdf/10.1111/j.1468-2508.2007.00549.x.pdf?refreqid=excelsior%3A033bd4bd1a5657c6da3202aaf1b59e0a>

<sup>16</sup> <http://www.sciedu.ca/journal/index.php/rwe/article/viewFile/9778/5931>



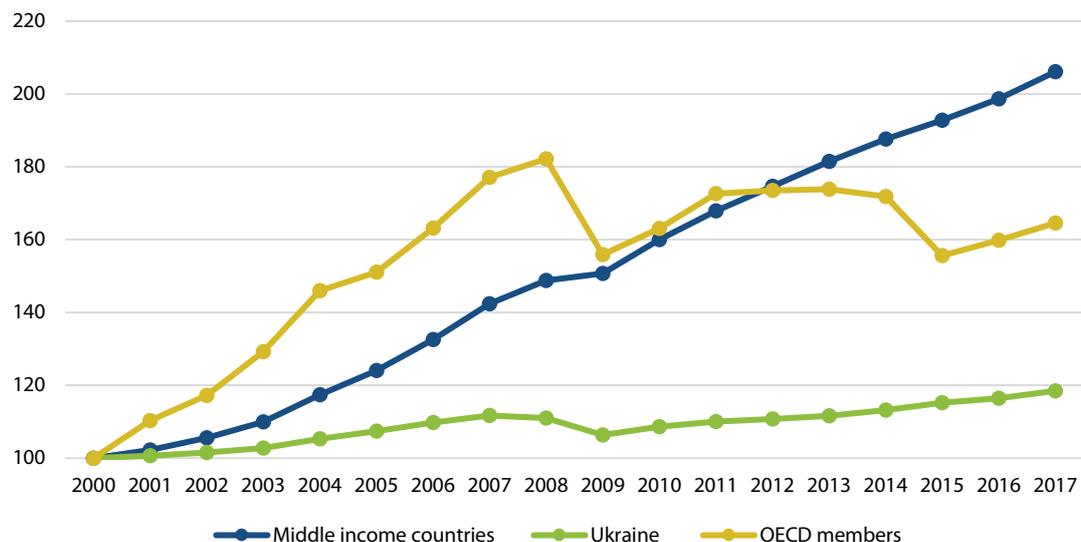
D. Kaufmann and A. Kraay in their papers "Governance without growth"<sup>17</sup>, "Governance and return on investments"<sup>18</sup>, "Worldwide Governance Indicators Project: Answering the Critics" (2007),<sup>19</sup> etc. attempt to describe why is WGI correlated with income per capita and in what direction does the causality go, using data from 200 countries around the world. For instance, the authors found evidence against the general idea of a "virtuous circle", when income growth causes governance improvement, that will then provide sustainable economic growth. In case of Latin American countries that was not happening. In some authoritarian countries, the influence of income per capita on governance was even found to be negative. Often formal democracies show worse performance in providing opportunities for business and state projects, reduction of poverty than authoritarian regimes (for example, in East Asia).

But however complicated the empirical academic research might be, the mainstream economic thought finds the interrelations between the corruption/rule of law and economic growth to be pretty strong. Corruption does have significant negative effects on key growth transmission channels<sup>20</sup>:

- Foreign direct investments are lower in a weak rule of law environment;
- Corruption creates barriers to fair competition and prevents startups and SME development;
- Corruption reduces quality of government spending;
- Decrease in corruption helps to collect more taxes without increasing tax rates;
- Control of corruption mitigates the negative effect of public debt on economic growth and reduces Debt-to-GDP ratio, etc.

## 2.2 Why is the rule of law important for Ukraine?

Figure 2. Growth and investment: GDP per capita growth (2000=100)



Source: World Bank Data

<sup>17</sup><https://openknowledge.worldbank.org/bitstream/handle/10986/19206/multi0page.pdf%3Bjsessionid%3D1CDB7CC78E098131CCE4306EA197B7F8?sequence%3D1>

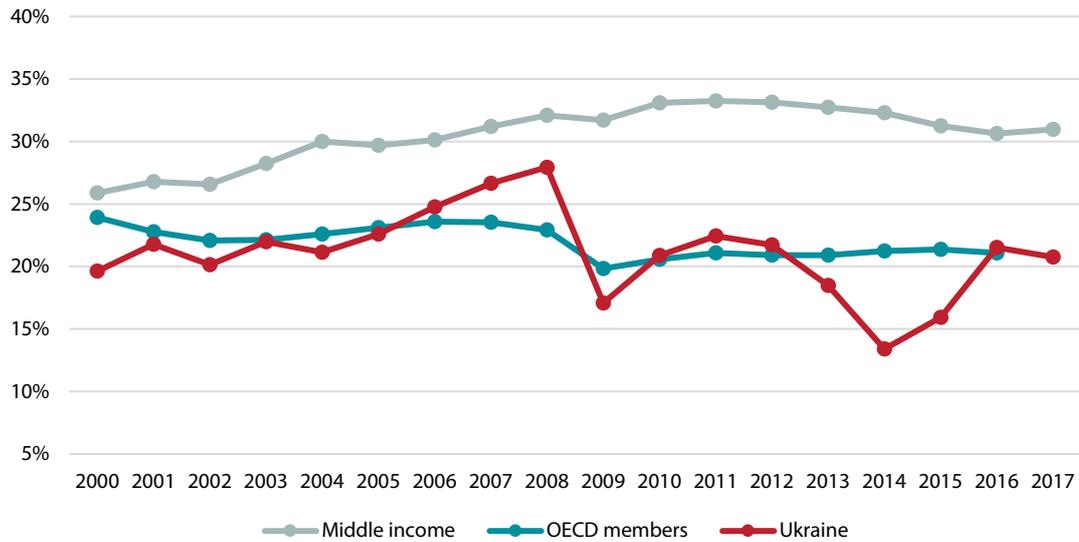
<sup>18</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=615020](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=615020)

<sup>19</sup> [http://siteresources.worldbank.org/INTWBIGOVANTCOR/Resources/1740479-1149112210081/2604389-1167941884942/Answering\\_Critics.pdf](http://siteresources.worldbank.org/INTWBIGOVANTCOR/Resources/1740479-1149112210081/2604389-1167941884942/Answering_Critics.pdf)

<sup>20</sup> OECD, IMF, Alessio Terzi Affiliate Fellow, Hertie School of Governance, Eunji Kim et al 2017, Eisl, 2017



Figure 3. Growth and investment: Gross capital formation (% of GDP)



Source: World Bank Data

Ukraine trails behind the middle income countries and such development gap increases with time. This is due to underinvestment. (Figure 2, 3). Developed countries can afford such low investment level, as GDP per capita is already high, but middle income countries invest more in their economy. Poor governance and lack of rule of law is one of the important reasons for this.

Corruption and lack of trust in the judicial system remain, for the third consecutive year, the principal obstacles deterring **foreign investors**, according to an annual survey of strategic and portfolio investors conducted by Dragon Capital, the European Business Association (EBA) and Centre for Economic Strategy (CES).<sup>21</sup>

The same should be true for **local investors** as well. The competitive and low-corruption business environment promotes growth of small and medium size companies, allows to boost production and exports, pay fair taxes and protect property rights. The investors are cautious when the property rights are not protected and regulations might be misused by vested interests.

The **rating agencies** pay attention to governance indicators since they believe they could mirror the country's creditworthiness<sup>22</sup>. The higher the rating – the lower the interest rate on debt, the lower are the government's debt service expenditures and the bigger the share of taxes could be channelled to education, healthcare etc. For private companies debt also becomes more expensive, limiting investment and growth opportunities.

Numerous **international donors, namely the IMF and the EU**, are focusing on fighting corruption in developing countries, including Ukraine. The donors' agenda is important not only because it paves the way to sizeable and very crucial cheap funding, but because its aim is to create and support sustainable government institutions, which is core for Ukraine's future.

<sup>21</sup> <https://ces.org.ua/en/corruption-and-distrust-in-judiciary-lead-the-rating-of-obstacles-for-investors-for-the-third-year-in-a-row/>

<sup>22</sup> Fitch Sovereign Rating Model



Figure 3. Main obstacles for foreign investors (poll results)



Source: CES, Dragon Capital, EBA – annual online questionnaire

Meanwhile, Ukraine is visibly underperforming on the rule of law and control of corruption, compared to its eastern neighbours:

- **According to WJP Rule of Law index Ukraine holds 77th place out of 113 countries** with the score of 50 points. Poland is a leader among Ukrainian neighbours with 67 points. Russia and Moldova are lagging behind Ukraine with 47 and 49 points respectively.
- **According to Corruption Perception Index (CPI) Ukraine is at 130th place among 180 countries with 30 points.** Amid our neighbours, only Russian Federation has a worse score (29 points). Poland with 60 points is a leader among Ukraine neighbouring countries.
- **According to Rule of Law WGI dimension Ukraine with -0.77 score points holds 160th place among 209 countries.** Amid our neighbors Slovak Republic has the best score – 0.69, while only Russian Federation demonstrates worse performance with -0.8 points.
- **According to Control of Corruption WGI dimension Ukraine with -0.84 points holds 168th place among 209 countries.** Poland with 0.75 score points holds a leading position among Ukrainian neighbors. Moldova and Russia with -0.96 and -0.86 score points accordingly show worse performance than Ukraine.

### 3 Public loss due to the lack of rule of law: case studies

#### 3.1 Labour taxes evasion

##### Key points and summary

Informal economic activity is still common phenomena in Ukraine even though its scope has been gradually diminishing over the recent years. As shown below, about 23% of employed population are informally employed, and 30% receive partially informal wage payments (“grey wages”). In total, wages of about 5-6 mln people in Ukraine were either fully or partially paid as “cash-in-the-envelope” in 2017.

This might have resulted in about **\$6 bn of foregone fiscal revenue** (in the form of both personal income tax and social contributions) in 2017, roughly 45% of actual receipts. In addition to potential losses of revenue and social contributions, in 2017 **about \$0.3 bn was lost to the abuse of the housing subsidies system.**



## Scope and structure of the problem

The size of shadow economy in Ukraine estimations vary from 31% of the official GDP<sup>23</sup>, to 46% of GDP<sup>24</sup>, which is high relative to the average level of 24% in the Central and Eastern European countries (CEE). Informal employment is a part of this problem.

While common phenomenon in Ukraine, there is lack of reliable estimates of the extent of labour informality and the amount of wages paid informally<sup>25</sup>. The main types of labour informality in Ukraine are as follows<sup>26</sup>:

- **informal employment:** unregistered employment in the formal sector **(1)** or employment in the informal sector (work on unregistered enterprises, undeclared work in private households, self-employed without registration) **(2)**;
- **semi-formal employment:** hiding actual work hours and wage levels (so called “grey wages”) **(3)**; substitution of regular labour contracts with civil, commercial and outsourcing contracts (often with the use of simplified taxation system) **(4)**; undeclared secondary employment of workers who have formal labour contracts on their main job **(5)**.

To get an estimate of the amount of informal wage payments, it is important to know the number of workers employed informally as well as the share of informal payments to workers in the formal sector and the extent of manipulations with the simplified taxation system for tax evasion purposes.

Official estimates suggest that about 23% of employed population are informally employed<sup>27</sup>, and another 10-30% have partially informal wage payments (“grey wages”)<sup>28</sup>. In total, by adding potential grey wage earners to the official estimates, it can be estimated that the wages of 6 mln people in Ukraine are either fully or partially paid as “cash-in-the-envelope”.

**Informal employment (1) and (2)** is estimated<sup>29</sup> at 3.7 mln of informally employed workers or 23% of employed population aged 15-70 years. In some sectors and regions, figures are critically high: 80% of workers in agriculture and 70% in construction in Kherson, Rivne, Chernivtsi, Ivano-Frankivsk regions are informally employed.

**Semi-formal employment** estimates (3), (4) and (5) are trickier. Apart from relying on the sociological polls data<sup>30</sup>, which reveals that about 20-30% of staff employees in the formal sector **(3)** are partially paid in cash-in-the-envelope, one can estimate the number of such workers based on the official statistics on hours worked and wage distribution.

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<sup>23</sup> Based on intergral informal economy estimate of the Ministry of Economic Development and Trade, 2017.

<sup>24</sup> ACCA report – Emerging from the shadows – the shadow economy to 2025.

<https://www.accaglobal.com/africa/en/member/discover/cpd-articles/business-management/shadoweconomy-cpd.html>

<sup>25</sup> Polls on the informal wage payments, the State Statistics Service regular surveys of household budget and economic activity, and national accounts data - all have methodological weaknesses of survey data.

<sup>26</sup> ILO.2018. Undeclared work in Ukraine: Nature, Scope and Data Sources. [https://www.ilo.org/wcmsp5/groups/public/---ed\\_dialogue/---lab\\_admin/documents/projectdocumentation/wcms\\_630068.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---lab_admin/documents/projectdocumentation/wcms_630068.pdf)

<sup>27</sup> The State Statistics Service of Ukraine report on economic activity of the population in 2017. [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2018/zb/07/zb\\_EAN\\_2017.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/07/zb_EAN_2017.pdf)

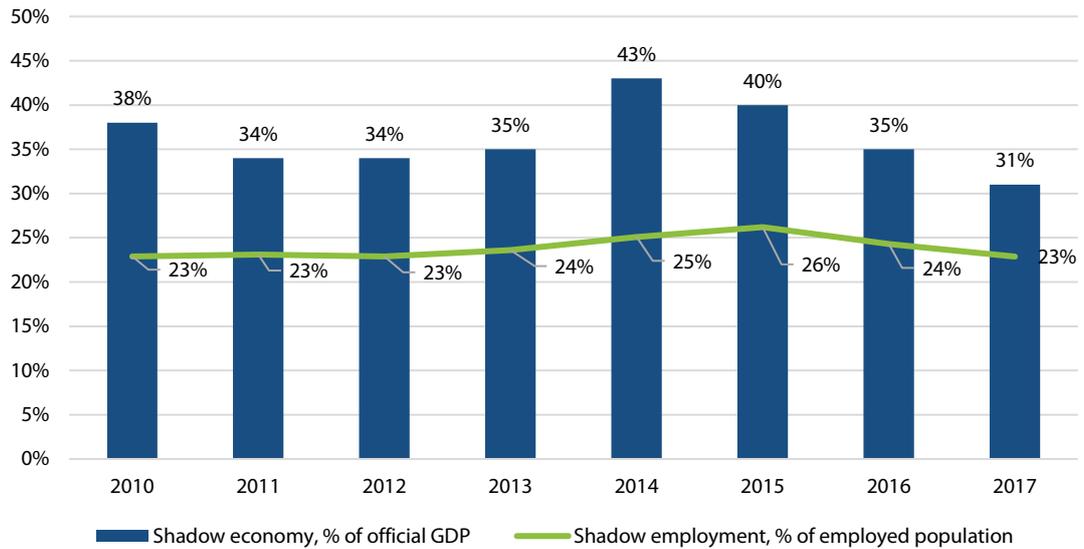
<sup>28</sup> CES estimates based on the State Statistics Service and HH.ua portal polls results.

<sup>29</sup> The State Statistics Service report on economic activity of the population in 2017. [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2018/zb/07/zb\\_EAN\\_2017.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/07/zb_EAN_2017.pdf)

<sup>30</sup> Thematic polls on informal wage payments were conducted by different polling agencies including GfK, HH.ua etc.



Figure 4. Shadow economy and informal employment in Ukraine



Sources: State Statistics Service of Ukraine, Ministry of Economic Development and Trade

Assuming that the true share of low-wage earners<sup>31</sup> in Ukraine is at the average level for CEE countries (22%) and assuming that about 50% of those staff workers who officially worked less than 50% of the regular working hours (except for state-funded sectors) were actually full-time employees, one can conclude that the difference will be the workers with “grey wages”. Based on State Statistics Service of Ukraine data, in 2017 there were about 2.1 mln workers who allegedly hid their true wage level and/or hours worked, which is about 23% of all formally employed staff<sup>32</sup>.

The number of people whose labour contracts were substituted with civil and commercial contracts to minimize tax liabilities (4) is difficult to assess without in-depth analysis of the data on the entrepreneurs’ activity. CASE-Ukraine estimated the number of entrepreneurs who are de-facto hired workers to be at about 0.45 mln with their wage fund at \$0.4 bn.

Anecdotal evidence suggests that undeclared secondary employment in addition to full-time job in the formal sector (5) is quite common in such sectors as education, healthcare, art and leisure, tourism etc. Nonetheless, the scope of the latter is impossible to estimate without surveying the population and conducting specially designed field research.

#### Fiscal effects of informal employment

Labour informality has a number of negative consequences for the economy as a whole and for the public finance in particular. Due to labour informality, the state coffers falls short of income tax receipts, the State Pension Fund has troubles with financing pensions and part of social assistance spending is wasted on persons ineligible for those benefits.

This results in higher budget deficits, inability to raise minimum social standards and limits the room for reducing public debt burden – all of which eventually hinders economic growth. Informal employment distorts competition, making life harder for formal economy. It mutilates official statistics and makes it difficult for the government to follow the smart evidence-based policy and implement tax policy changes because of the ease of ‘going shadow’.

<sup>31</sup> Low-wage earners (EUROSTAT definition) are those earning less than 2/3 of the national average wage.

<sup>32</sup> More detail on the “grey wage” earnings estimates are presented in the Appendix 1.



Based on the estimates of informal employment and average wage levels in each sector of the economy, we estimated the amount of potential fiscal losses due to different types of labour informality to be around \$6.0 bn in 2017 (or 45% of the actual receipts). However, the full elimination of labour informality is impossible, and it would be safe to assume that good governance and law enforcement could realistically bring around 30% of this estimation to the state coffers.

**The positive fiscal externality** from the elimination of informal employment (even if partial) would consist of lowering expenditures for housing and utility subsidies. Informal incomes distort the provision of means-tested social assistance, as the substantial part might have been provided to those who are not eligible to receive it as may be informally employed. According to the Ministry of Social Policy, slightly less than 1 mln of households receiving utilities subsidies (15% of the total number of beneficiaries) in 2017 reported either absence of any income or had luxury properties (apartments, houses etc).

Table 2 Estimated fiscal losses due to different types of labour informality in 2017

Type of informality	Number of employees, mln	Unofficial wage fund, \$ bn	Potential personal income tax losses, \$ bn	Potential universal social contribution losses, \$ bn	Total fiscal losses, \$ bn
Informal employment in the formal economy	1.6	5.1	1.0	1.1	2.1
Employment in the informal economy	2.1	5.6	1.1	1.2	2.3
"Grey" wages (partial cash in envelope wage payouts)	2.1	3.3	0.6	0.7	1.4
Substitution of labour contracts with entrepreneurship on simplified taxation arrangements	0.5	0.4	0.1	0.1	0.2
<b>Total</b>	<b>6.2</b>	<b>14.4</b>	<b>2.8</b>	<b>3.2</b>	<b>6.0</b>

\*estimates based on CASE-Ukraine study<sup>33</sup>

Source: CES calculations based on data from State Statistics Service of Ukraine, ILO, State Fiscal Service, CASE-Ukraine

### Conclusions and recommendations

It is close to impossible to fully eliminate and legalize current informal labour and salaries. The reasons behind this phenomenon are hard to fight: lack of formal workplaces; lack of law enforcement; incentives to minimize taxes under no credible threat of punishment; low trust in the government and public services of poor quality; rigid labour legislation; complicated formal registration and bureaucracy procedures etc<sup>34</sup>. Nonetheless, some steps might be taken to reduce the scale of such activities:

- build trust in the state institutions and increase quality of government services, keep the promise to index pensions to increase trust in Pay As You Go (PAYG) pension system,
- improve the quality of tax service and administration (e.g. to monitor/control the lawful use of the simplified taxation system)
- reform the benefits system such that it would reduce the incentives to hide the true level of income by the workers,

<sup>33</sup> Дубровський В., Черкашин В. 2017. Інструменти ухилення від сплати податків та агресивного податкового планування в Україні: порівняльний аналіз. Інститут соціально-економічної трансформації (CASE-Ukraine). <https://voxukraine.org/uk/rejting-shem-uhilennya-vid-podatkov-ina-chomu-ukrayinskij-byudzheth-vtrachaye-najbilshhe/>

<sup>34</sup> ILO report "Undeclared work in Ukraine: Nature, Scope and Data Sources. (2018)



- employ behavioural methods: inform people using personalized messages that most people pay income taxes, about negative effects of “grey” wages, increase awareness of how the income taxes are spent, communicate the essence of pension reform incentivizing legal work tenure explaining that receiving “white salary” means higher pension in the future, etc.,
- stimulate labour unions and NGOs to execute public control over labour legislation compliance and public spending efficiency,
- implement more shared responsibility for paying taxes and social contributions between employer and employee.

## 3.2 Absent land market

### Key points and summary

The land is the most important and, at the same time, the most underutilized production factor in the Ukrainian agriculture. Starting from the establishment of moratorium on land sales, large agricultural producers started to exploit the lease agreements on undervalued land heavily, skyrocketing operating margins and driving the commodity prices down. After 18 years over 10% of the agricultural land is occupied by 20 largest agriholdings<sup>35</sup>, 10 mln. ha of arable land cannot be used because of erosion, and yields on land, which is already in use are three times lower than in European countries<sup>36</sup>. Although it is not difficult to see that such artificial debasing of the key factor of production does not benefit the society, a large conflict of interest does not allow the process of abrogating this policy to step out of the dead end.

Assuming that government will sell 50% of its land, while keeping price of land as the average between the current level and the one, projected by World Bank (\$2250 per Ha), we’ve calculated one-time revenue gain of \$11.7 bn and annual decrease in lease income of \$48 mln. We estimated the increase of VAT revenue due to increase in consumption owing to sale of part of the private land and lease price increase of \$664 mn (one-time) and \$101 mn (annually). Therefore, the total one-time gain is equal to \$12.4 bn and total annual gain is equal to \$52 mln.

### Scope and structure of the problem

The main reason why the land market is still closed in Ukraine is that it benefits some influential people. Large agricultural producers and inefficient farms flourish at the expense of landowners<sup>37</sup>, continuing to get impoverished by land prices, not reflecting the real value this resource can potentially generate<sup>38</sup>. As a result, landowners do not obtain enough resources to do proper irrigation and quality-enhancing investments, while tenants remorselessly deplete the soil to the point of no recovery. Thus, instead of converting the land into a considerable competitive advantage, moratorium continues to demolish it year by year, while Ukrainians continue to think that the agricultural outputs will remain high forever.

Apart from the above-mentioned degradation of our key resource, the presence of moratorium entails five other important consequences, hampering the growth of the agricultural sector and Ukrainian economy:

- Low cadaster valuations of land decrease tax receipts from land fees and single tax, engendering budget deficit and bringing government into further debts;

<sup>35</sup> <https://latifundist.com/rating/top100#>

<sup>36</sup> [http://www.ier.com.ua/files/publications/Policy\\_papers/Agriculture\\_dialogue/2006/AgPP8\\_eng.pdf](http://www.ier.com.ua/files/publications/Policy_papers/Agriculture_dialogue/2006/AgPP8_eng.pdf)

<sup>37</sup> D. Nizalov Guess, who benefits from the status quo? Source: <https://voxukraine.org/en/land-moratorium-guess-who-benefits-from-the-status-quo/>

<sup>38</sup> O. Nivievsky, D. Nizalov Economic Return to Farmland in Ukraine and its Incidence Source: <https://voxukraine.org/en/economic-return-to-farmland-in-ukraine-and-its-incidence-en/>



- Low land lease rates restrain private consumption and investment opportunities by rural people, thus driving down the aggregate demand and curbing economic growth both in the long and short run;
- Inability to use land as collateral restricts access of agricultural producers to capital, thus confining growth of industry-wide capital intensity, technical efficiency, and labour productivity;
- Unjustifiably low prices keep the supply of arable land down, resulting in almost 5 mln. ha of agricultural land not used profitably<sup>39</sup> and depriving Ukraine of large volumes of agricultural outputs;
- The government cannot fully realize the potential of 10.4 mln. ha under its control. Low rates gained from tenants and complete inability to sell the land will further depress government revenues.

Although one could say that the main reason for not opening land market yet is lobbying by agricultural producers, this is never a complete story. Land reform is probably the least popular reform in Ukraine with risks perceived to be larger than benefits by politicians and the society. This gives a solid ground to populists, who continue to reach public attention with slogans like “all land will be bought out by foreigners” or “opening the market will expand the black market and turn land relations into havoc”<sup>40</sup>. Although in our opinion, most of these statements do not have any economic ground, they continue to undermine public support needed for the successful implementation of land reform.

#### **Fiscal effect from opening a land market**

We expect that apart from increasing market prices for arable land, lifting the moratorium on land sales will bring the following benefits:

- Increase rural consumption out of additional income from land sold and higher lease rates;
- Increase volumes of private landholdings by the amount of privatised land;
- Improve land utilization by attracting landowners who are now at the grey market or just have no incentives to offer their land for lease;
- Increase cadaster valuations and lease payments for privately- and publicly-owned land;
- Increase tax receipts from value-added tax, personal income tax, military fee, and land tax.

Using open data and projections by international economic organizations, we evaluated the size of increased budget revenues Ukrainian government could receive from opening land market. We simplified calculation by enumerating three major revenue flows from land reform:

#### **Receipts from privatizing land in the state ownership:**

Today, Ukrainian government disposes of 10.4 mln ha of agricultural land. 3.2 mln. ha of it is in SOEs’ permanent use, 2.5 mln remain in reserve, while the rest is leased under contracts with agricultural enterprises<sup>41</sup>. According to World Bank projections, the price of land will grow to \$3000-3500<sup>42</sup>. Assuming that government will sell 50% of its land, while keeping price of land as the average between the current level and the one, projected by World Bank (\$2250 per ha), we’ve calculated one-time revenue gain of \$11.7 bn.

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39 [http://search.ligazakon.ua/l\\_doc2.nsf/link1/KP170413.html](http://search.ligazakon.ua/l_doc2.nsf/link1/KP170413.html)

40 Land Has Reached the Constitutional Court: 5 Main Myths about the Moratorium on Land. Source: <https://voxukraine.org/en/zemelnij-moratorij-en/>

41 [http://search.ligazakon.ua/l\\_doc2.nsf/link1/KP170413.html](http://search.ligazakon.ua/l_doc2.nsf/link1/KP170413.html)

42 K. Deininger, D. Nizalov, O. Nivievsky Lifting the moratorium on land sales: Why supply and demand must balance? Source: <https://voxukraine.org/en/lifting-the-moratorium-on-farmland-sales-why-supply-and-demand-must-balance/>



### **Decrease in rent payments for the land remaining in state ownership:**

Using the same set of assumptions as in part one, we expect the area of government-owned land be equal to 5.2 mln. ha after privatisation of state-owned land. Knowing that only 45% of state-owned land is leased<sup>43</sup> and assuming that this ratio will not change after privatising 5.2 mln. ha, we expect the area of state-owned land in lease to be equal to 2.35 mln. ha. Knowing that currently the average annual lease rates for state-owned land are equal to \$103.5 per ha<sup>44</sup> and assuming that they will grow proportionally to market land prices, we expect lease rates after lifting the moratorium to be equal to \$186.2 per ha. Therefore, we expect that lifting the moratorium and selling state-owned land will result in annual decline in land lease receipts of \$48.6 mln.

### **Increase in VAT receipts from boosted consumption of landowners through an increase in lease rates and additional incomes from selling land plots:**

Another source of budget revenue gains are VAT receipts from increased consumption. We expect an increase in consumption due to both increases in the volume of land lease payments and receipts from selling private land. Knowing that according to USAID Project Agroinvest, only 8% of landowners are ready to sell their land in the next 2 years after lifting the moratorium<sup>45</sup>, that the amount of private landholdings is expected to equal to 32.9 mln. ha, and that land prices are expected to increase to \$2 250 per ha, we've estimated additional gain in landowners' income of \$5 bn. Using the same set of assumptions as in part two, we've estimated additional annual income from an increase in land lease rates equal to \$759 mln.

In order to evaluate what share of additional income will be spent on extra consumption, we have estimated an average propensity to consume for land owners, doing this separately for medicines and other goods. According to recent research, over 43% of landowners are of pension age<sup>46</sup>. Knowing that pensioners on average have 56% higher healthcare costs<sup>47</sup> and that by p. 193.1 of TCU, in contrast to other goods taxed at 20% rate, medicines are taxed at the 7% rate, we have identified separate VAT streams from medicines and other goods. Knowing that 44% of households are led by people of pension age, that average monthly expenditures on healthcare by non-pensioners and pensioners are respectively \$4.5 and \$7.02<sup>48</sup>, we've calculated weighted-average consumption of medicines by landowners to be equal to \$5.6. Knowing that according to State Statistics Service of Ukraine average monthly income of rural citizens is equal to \$242, while average expenses are equal to \$196.8<sup>49</sup>, we've calculated average propensity to consume for all goods and specifically for medicines, which are respectively equal to 81% and 2%. Knowing that we evaluated both one-time increase in VAT receipts of \$664 mln, and the expected annual increase in VAT receipts equal to \$101 mln. each year after lifting the moratorium.

### **Conclusions and recommendations**

We believe lifting the moratorium on land sales will be the step which ensures better funding for agroproducers, more effective land usage, gives boost to economic growth and provides additional fiscal gains for the public finance. Thus, we recommend to lift the moratorium simultaneously ensuring effective property rights protection and law enforcement.

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<sup>43</sup> [http://search.ligazakon.ua/l\\_doc2.nsf/link1/KP170413.html](http://search.ligazakon.ua/l_doc2.nsf/link1/KP170413.html)

<sup>44</sup> <http://land.gov.ua/orenda-silskohospodarskykh-zemel-zberihaietsia-dvorazovyi-rozryv-mizh-platoiu-za-derzhavni-ta-pryvatni-zemli/>

<sup>45</sup> K. Deininger, D. Nizalov, O. Nivievsky Lifting the moratorium on land sales: Why supply and demand must balance? Source: <https://voxukraine.org/en/lifting-the-moratorium-on-farmland-sales-why-supply-and-demand-must-balance/>

<sup>46</sup> [https://dt.ua/business/zanuzdannyy-pay-\\_html](https://dt.ua/business/zanuzdannyy-pay-_html)

<sup>47</sup> [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2018/zb/07/zb\\_vrdu2017\\_pdf.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/07/zb_vrdu2017_pdf.pdf)

<sup>48</sup> [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2018/zb/07/zb\\_vrdu2017\\_pdf.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/07/zb_vrdu2017_pdf.pdf)

<sup>49</sup> [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2018/zb/07/zb\\_vrdu2017\\_pdf.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/07/zb_vrdu2017_pdf.pdf)



### 3.3 Bad debt undercollection

#### Key points and summary

If Ukrainian state-owned banks had reasonably conservative lending policy and the country enjoyed higher rule of law and a more effective debt resolution framework, close to that typical high-income countries, bad debt recovery in Deposit Guarantee Fund and state-owned banks would total UAH332 bn (~\$12 bn) compared to estimated recovery of UAH60 bn (\$2 bn) in the current situation. The difference of ~\$10 bn is the price Ukraine pays for the justice sector problems, elements of state capture in state-owned banks, poor supervision in the past and ineffective insolvency framework.

#### Scope and structure of the problem

Ukraine has UAH 368 bn (\$13 bn) in toxic assets of state owned banks and UAH 419 bn (\$15 bn) non-performing loans in Deposits Guarantee Fund after the crises of 2008-2009 and 2014-2015. Since estimated recovery on these assets is currently very low, this figure could be defined as public loss caused by the deep-rooted rule of law problems.

Table 3. State banks loan portfolio quality indicators

	Ukrgazbank	Ukreximbank	Oshchadbank	Privatbank
Gross loan portfolio, UAH bn	42.1	115.9	128.1	237.2
NPL, % of gross loans	19%	59%	65%	86%
Provisions, % of NPLs	105%	71%	70%	98%

Source: Banks' IFRS financial statements for 2017

However, Ukrainian recovery ratio (which was never properly calculated by any authority) is estimated by different actors<sup>50</sup> to be between 1 and 10% for low-regular quality credit buckets and 25-35% for a few cherry-picked non-performing loans backed by valuable and working assets. The implied recovery level estimated by the World Bank's Doing Business project<sup>51</sup> stands at ~9% of par.

We believe the lack of rule of law to be the reason behind the poor performance, either on the initial stage, when the loans from the very beginning were issued to related parties, politically-connected persons and/or with fraudulent purposes, or on the last stages of resolution, where bankruptcy laws and court and levy procedures allow debtors to easily avoid meeting their obligations. This view is supported by statistical evidence.

Simeon Djankov (2008)<sup>52</sup> argues that legal origins and per capita income are the most important cross-country determinants of insolvency resolution efficiency. And indeed, partly the difference in efficiency could be explained by the gap in nations' wealth. Richer countries tend to have higher recovery on defaulted banking credit as the companies may have better economic conditions either for the companies to continue their work on going concern basis or for the collateral price to be higher than in developing countries as the markets are more liquid. But part of the difference is attributable to the court procedures.

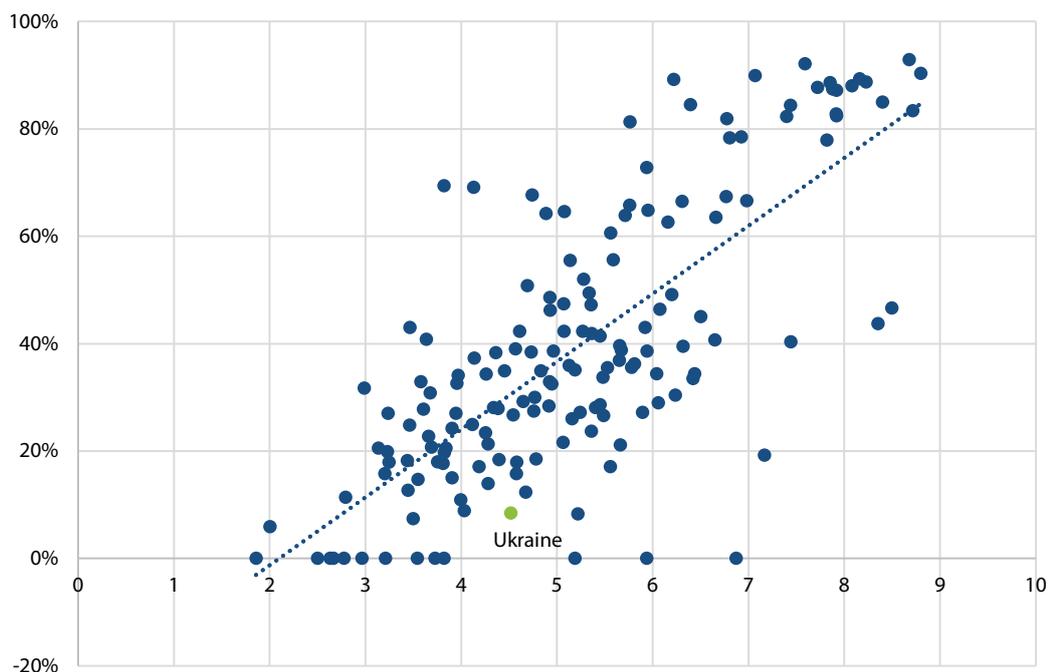
<sup>50</sup> CES in July-August 2018 conducted a series of anonymous deep interviews with bankers and policy makers on bad debt resolution

<sup>51</sup> <http://www.doingbusiness.org/en/data/exploretopics/resolving-insolvency>

<sup>52</sup> Djankov, Simeon, Oliver Hart, Caralee McLiesh, and Andrei Shleifer. 2008. Debt enforcement around the world. *Journal of Political Economy* 116(6): 1105-1149



Figure 5. The recovery rate (cents on the dollar) vs Legal System & Property Rights Index



Sources: Doing Business, Economic Freedom Index by Fraser Institute

In order to find out whether the better rule of law increases the recovery rate we performed a random effect regression using the panel data for 2011-2016 years. As a proxy for the rule of law we used "Legal system & property rights" pillar from Economic Freedom Index by Fraser Institute. We also include GDP per capita in real USD of 2010 in the regression as a control variable, as wealthier countries usually have better property rights protection and rule of law in general. We can see from the regression that increase in "Legal system & property rights" by 1 point (scale from 0 to 10) increases the recovery rate by 0.67 percentage points. In addition, increase in GDP per capita by \$1000 of 2010 increases the recovery rate by 0.74 percentage points (Appendix 2). So, the isolated impact of the rule of law on banking sector debt recovery is significant either following the common logic or using the empirical data.

**Fiscal effects of poor debt resolution framework**

To assess the alternative 'better-world' scenario under the better rule of law framework we estimated potential recovery on Deposit Guarantee Fund and state-owned banks toxic assets. We came up with **UAH 271 bn (~\$10 bn)** more recovery for the state in case if the rule of law in the country was stronger, debt resolution framework better, and lending policies reasonably more conservative.

Table 4. Better world' vs reality debt recovery estimations,

	Non-performing assets, bn UAH *	Estimated recovery bn UAH	'Better World' recovery, bn UAH	Difference, bn UAH
Deposit Guarantee Fund	419	38	199	161
Three SOBs	167	11	80	69
Privatbank	203	11	53	41
<b>Total</b>	<b>787</b>	<b>60</b>	<b>332</b>	<b>271</b>

Source: Banks financial statements, CES estimates

\*including toxic investments and debt



### **State-owned banks (without Privatbank)**

The three state-owned banks - Oschadbank, Ukreximbank and Ukrgazbank – have accumulated significant NPLs and are now struggling with bad debt resolution. On total the amount of public loss in these banks accounts for UAH 167 bn (\$6 bn).

We estimate they may realistically recover approx.. UAH 11 bn (\$0.4 bn). from this amount. To estimate the realistic recovery we assessed the actual toxic portfolios structures and used expert estimates<sup>53</sup> to come up with an expected rate of recovery at a scale ranging from 1% to 33%. We also kept in mind<sup>54</sup> unrecoverable assets, such as loans issued in Crimea and Donbass, FX-denominated mortgages under the moratorium, due from banks (likely liquidated ones).

We took the liberty to assess the 'better-world' recovery assuming the banks' portfolios were more conservative from the beginning and the recovery rates on these loans corresponded to world average. According to Moody's, world average recovery rate for default loans are equal to 70% of 1 lien loans. We think that those numbers can be considered to be a benchmark of effective debt resolution. We also assume that mortgage loans, classified as unrecoverable under the current moratorium, could be recovered under the blue-sky scenario. See Appendix 3 for calculations.

### **Privatbank**

The nationalized bank's NPLs could be divided into those legacy loans which are related to former shareholders and those which are not. We believe recovery on non-related-parties NPLs could be assessed similarly as in the rest of state-owned banks (see above). However, Mr. Kolomoysky's debt recovery under the better-world scenario is limited to the value of his other assets which are estimated<sup>55</sup> to be at \$1.6 bn or UAH 43 bn. The full amount is unlikely to be recovered. Therefore, the realistic estimates of recovery from Privatbank are not overly optimistic – just 11 bn UAH compared to 53 bn UAH in "better world" scenario. See Appendix 3 for calculations.

### **Deposit Guarantee Fund**

Banking crisis of 2015-2016 left the Deposit Guarantee Fund (the DGF) with legacy toxic loans portfolio equal to UAH419 bn. (~\$15 bn), ¾ of which consists of corporate loans. The loans related to the liquidated banks' former owners totaled UAH 89 bn. (\$3 bn) or 28% of gross corporate loans as of 01/07/2018. DGF as of 01/07/2018 evaluated its distressed loans in portfolio to be at 9% of par or UAH38 bn (\$1.4 bn).

We believe the realistic estimates for this portfolio recovery could not be better even if the governance of the DGF or Ukrainian legal system improved in 1-3 years horizon. Unfortunately, after cherry-picking stage where the recovery rate was reportedly at 37%, the recovery on leftovers would be closer to 7-10%, which is the price at which commercial banks are selling their distressed portfolios and every day this indicator decreases. DGF latest report indicate extremely disappointing figures of recovery on sale of pooled assets that was equal to 2%.

Under the well-developed resolution framework and in a country with better governance, the portfolio of loans to non-related customers could bring approx.. 47% recovery which is the median for the countries with over 0.5 Rule of Law index (WB World Governance indicators) as shown in Figure 6. We used this figure as a benchmark to make a better-world scenario estimations for non-related loan portfolio.

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<sup>53</sup> Deep interviews with representatives of Ukrainian state-owned and privately owned banks, DGF, NBU, online expert poll with 32 professionals participating.

<sup>54</sup> Where an information was available in IFRS statements

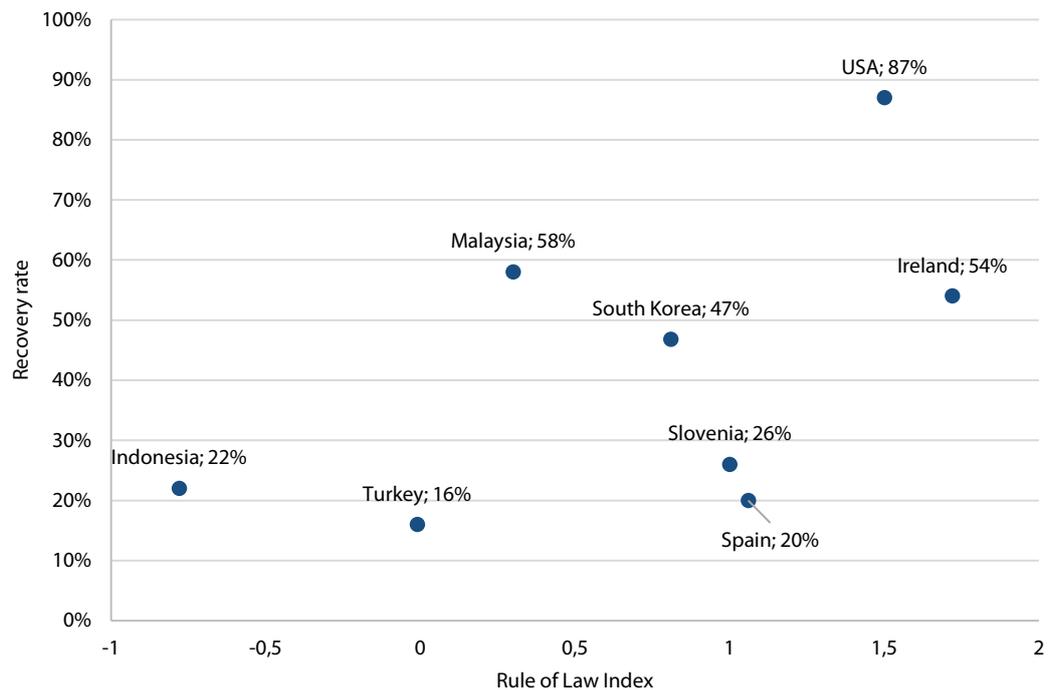
<sup>55</sup> Combined worth of Mr. Kolomoysky and Mr. Bogoluybov <https://magazine.nv.ua/ukr/journal/2767-journal-no-39/top-100-bogatuh.html>



With the lack of evidence and data on the wealth of former shareholders and actual related-party loans in each liquidated bank's portfolio, we assumed that former shareholders' assets, if arrested and sold at maximum value, could cover 50% of related-parties portfolio or UAH 45 bn. It means the implied blue-sky portfolio recovery would bring UAH199 bn or **UAH161 bn (~\$5.75 bn) of additional revenue for the state**. See Appendix 3 for calculations.

Moreover, if Ukraine had the level of rule of law and stronger supervision, which would prevent unlawful and toxic practices of related party lending at the first hand, the total amount of Deposit Guarantee Fund liabilities would be way below its current level, the government's injections to DGF would also be lower and many of liquidated banks may still even be in the market.

Figure 6. World experience of bad debt resolution through asset management companies



Source: World bank<sup>56</sup>

### Conclusions and recommendations

Although Ukrainian reality in existing bad debts resolution is extremely unlikely to be mended, one could think of steps to make future experience much less painful for the country. The key takeaways from the series of expert interviews with banking community suggests that mostly potential improvements lay in the area of rule of law improvement and the abolishment of state capture elements:

- Ensure capable and independent supervision in banking sector to prevent further problems.
- The idea of strengthening the supervision independence by institutionally introducing new officials from the EU into the regulator's supervisory branch is worth being regarded.
- Eliminate unfair court practices, improve levy procedures and bankruptcy legislation with the aim of protecting creditors' rights – this will demand intellectual capacity, integrity and independence of courts.

<sup>56</sup> <http://pubdocs.worldbank.org/en/531571527523031777/NPL-Conference-Day1-8-Caroline-Cerruti.pdf>



- Eliminate the political (and unfair prosecution) risk of not recognizing losses in time and thus preventing the situation where state-owned 'zombie-banks' would be forever kept afloat with recapitalization. This demands intellectual capacity and integrity in prosecution and investigation. The idea of creating a new separate investigation branch for economic and financial crimes seems worth regarding, while the old institutions may be excluded from investigation in the sector.
- Improve state-owned banks' corporate governance via supervisory boards and attraction of IFIs as minority stakeholders into the banks' capital. In the longer run privatise state-owned banks thus eliminating PEP lending in the future and decreasing the risks for public finance stability
- Ensure a credible threat of punishment for corruption, misconduct and fraud.

### 3.4 Poor governance in infrastructure

#### Key points and summary

Public infrastructure includes a wide range of various industries, e.g. transport, energy generation, district heating, water supply and sewage, municipal waste processing, which have a crucial impact on economic development in Ukraine. In 2016 public infrastructure collectively contributed to 11.3%<sup>57</sup> of Ukrainian GDP.

In Ukraine an overwhelming share of legal entities that provide access to public infrastructure and services belong either to state or municipalities<sup>58</sup>. According to CES estimates<sup>59</sup>, the average return on assets obtained by municipal and state companies is negative (from -10% in cargo maritime transport to -31% in district heating) even though these companies are established to satisfy customers' needs in the longer term and shall maintain their assets. At the same time, best practices of managing public infrastructure show that it could be operated with a reasonable level of return: 3% in water supply and sewage, 5% in district heating and up to 10-12% in cargo handling by maritime, river and air transport<sup>60</sup>. These levels of return ensure medium-term stability of tariffs charged by municipal and state companies on their customers, but also renewal and maintenance of public infrastructure that is needed for a sustainable delivery of public services.

This observation leads us to several main conclusions:

1. the central and local governments in Ukraine do not see profit-generation as their major objective in running state and municipal companies;
2. most of state and municipal companies possess enormous assets, which they cannot use effectively;
3. private owner is able to find a more suitable use for idle assets and ensure positive rates of return.

As the result, due to infrastructure degradation<sup>61</sup> the average Ukrainians have a difficulty to access work, education and healthcare services. The recent public opinion poll<sup>62</sup> undertaken by the Center for Insights in Survey Research in 2017 indicates that the inhabitants of different Ukrainian regions in general are not satisfied with the quality of public services (see Figure 7 below): the lowest share of users being critical about the quality of public infrastructure is reported for garbage collection and highest – for roads.

<sup>57</sup> [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2018/zb/05/zb\\_tvvoz2016pdf.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/05/zb_tvvoz2016pdf.pdf)

<sup>58</sup> According to CES estimates, in 2016 their share reached 75% in wastes collection, 84% - water supply, 82% - airport operation. In maritime and rail transport state is a 100% owner of public transport infrastructure.

<sup>59</sup> CES estimates based on anonymized 2016 enterprise data obtained from YouControl.

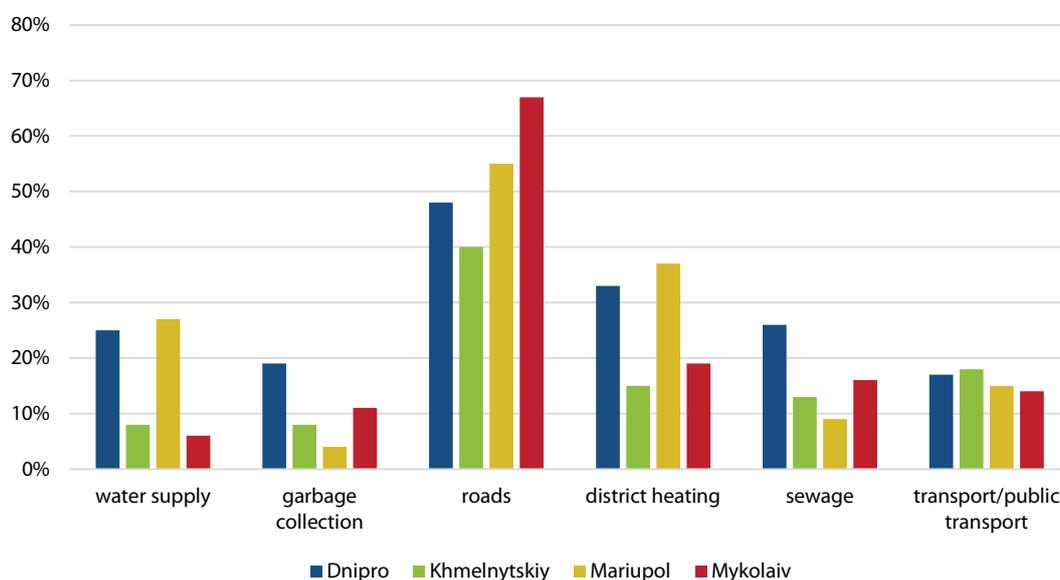
<sup>60</sup> [https://ycharts.com/companies/WM/return\\_on\\_assets](https://ycharts.com/companies/WM/return_on_assets),  
[https://csimarket.com/Industry/industry\\_ManagementEffectiveness.php?ind=1203](https://csimarket.com/Industry/industry_ManagementEffectiveness.php?ind=1203),  
<https://heatinghelp.com/assets/documents/FULLTEXT01.pdf>,  
[https://www2.deloitte.com/content/dam/insights/us/articles/three-rules-upstream-oil-and-gas/DUP\\_522-Three-Rules\\_Oil-Gas\\_MASTER1.pdf](https://www2.deloitte.com/content/dam/insights/us/articles/three-rules-upstream-oil-and-gas/DUP_522-Three-Rules_Oil-Gas_MASTER1.pdf)

<sup>61</sup> According to State Statistics Service of Ukraine, in 2016 the average assets depreciation rate constituted 55%-65%.

<sup>62</sup> [https://www.iri.org/sites/default/files/2017-11-28\\_ukraine\\_poll\\_presentation.pdf](https://www.iri.org/sites/default/files/2017-11-28_ukraine_poll_presentation.pdf)



Figure 7. The share of Ukrainian population that is not satisfied with the quality of public services, 2017



Source: USAID (2017) Public Opinion Survey of Residents of Ukraine

Ukrainian infrastructure fails to perform its social role, namely, being available, accessible, affordable and acceptable. We believe, poor infrastructure performance in Ukraine is directly related to the absence of good governance at state and municipal enterprises, lack of legal and regulatory enforcement, corruption. The most acute problems of good governance in infrastructure relate to:

- **Inadequate road maintenance**, which channels itself via the (a) *prevalence of overweight transport and lack of legal enforcement* to ensure an adequate compensation for the induced road damage and (b) *underfunding* of road maintenance which is, on one hand, due to a lack of public funds and, on another hand, biased prioritization of road expenses. CES considers that the problem of inadequate road maintenance can be addressed via the enforcement of fair road users charging principles. In our opinion, the existing tax and non-tax revenues to State Road Fund of Ukraine (SRFU) put an excessive load on passenger vehicles, while the major damage to roads is imposed by heavy vehicles, which normally travel overweight in Ukraine.

\$324 mln per year can come to the state budget from the implementation of fair road user charges.

- **Poor operation of state and municipal companies** that are not capable of meeting the needs of their customers and maintaining public infrastructure in a good shape. In our opinion, this happens due to the absence of a public service contract (PSC), which under the usual circumstances should be signed between the service provider and the state/municipality. The lack of this basic legal framework does not allow to define a desired level of service, identify infrastructure (assets) needed to do that and establish a tariff on customers. On the contrary, due to the lack of the rule of law that could be enforced by means of PSC, state and municipal companies keep providing services that are irrelevant to their customers' needs. As a result, the frustrated customers tend to find private service providers that replace public/municipal operators. To break this vicious circle, it is necessary to enforce PSC form of contract and ensure a wider penetration of private capital into the management and infrastructure renewal.

\$1 bn could be gained annually by state and local budgets in the form of concession fees and taxes (enterprise profit and value added taxes).

Therefore, shall this realize, the state and local budgets can generate up to \$1.3 bn per year in additional revenues.



### 3.4.1. Introduction of road user charges

Road transport contributes to more than two third of cargo transport in Ukraine<sup>63</sup>, which makes good-quality road networks and safety of a paramount importance. Recent studies by the World Bank Group indicate that the State Road Fund of Ukraine (SRFU) does not have sufficient resources for roads rehabilitation and construction, and in 2025 it is expected to be short of revenues to maintain road network. In our opinion, this situation is considerably related to the lack of law enforcement on overweight transport and highly politicized principle for SRFU funds allocation (elements of state capture). We estimate that the introduction of road user charges would bring \$324 mln per year to compensate for road works.

#### Scope and structure of the problem

According to 2016-2017 WEF Global Competitiveness Index<sup>64</sup>, Ukraine ranks among top-10 countries with the poorest quality of roads. It has two major sources: poor identification and enforcement of overweight transport and poor management of SRFU, which can signal of an ineffective use of public funds<sup>65</sup>.

Most of Ukrainian roads have been built more than 20 years ago and are designed mainly for passenger cars, light trucks and buses. As a result, nowadays only 9% of Ukrainian roads can accommodate 11t axle load (1<sup>st</sup> and 2<sup>nd</sup> road categories) and 80% - 10t (3<sup>rd</sup> and 4<sup>th</sup> road categories). Those roads are not capable of withstanding a load that is imposed by a modern articulated truck of a 50t load capacity<sup>66</sup>. As a result, the Ukrainian roads network is a subject to continuous destruction and repair cycle. Such trucks cause the highest levels of road damage, but they are not charged equally (see Figure 8). This is often used to argue for the imposition of user charges targeted at specific categories of heavy vehicles<sup>67</sup>.

Ukrtransbezpeka (UTB), the transport safety agency operating under the roof of the Ministry of Infrastructure of Ukraine (MIU), controls the overweight/oversize transport. As of 2016 UTB operated 18 mobile weight control stations in 24 regions of Ukraine, out of which only 5 have been operated full-time (24h per 7 days a week)<sup>68</sup>. Using these mobile stations, UTB is capable of checking up to 10-12%<sup>69</sup> of cargo vehicles. The average fine charged by UTB in 2016 was equal to \$240 per vehicle; overall \$2.5 mln (UAH 67 mln) has been paid in fines to budget<sup>70</sup>.

Despite the existing control of overweight transport, more than 40-50% of cargo vehicles still travel overweight<sup>71</sup>. The most evident cases reported in media show that the average bribe paid by drivers to UTB inspectors stands at UAH500-1000<sup>72</sup>. Owing to poor law enforcement, overweight vehicles keep using Ukrainian road network, penalties charged lag behind the road destruction and SRFU has no resources to recover the induced damage.

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<sup>63</sup> [http://www.ukrstat.gov.ua/druk/publicat/kat\\_u/2018/zb/08/zb\\_tr2017pdf.pdf](http://www.ukrstat.gov.ua/druk/publicat/kat_u/2018/zb/08/zb_tr2017pdf.pdf)

<sup>64</sup> [http://reports.weforum.org/pdf/gci-2016-2017-scorecard/WEF\\_GCI\\_2016\\_2017\\_Scorecard\\_EOSQ057.pdf](http://reports.weforum.org/pdf/gci-2016-2017-scorecard/WEF_GCI_2016_2017_Scorecard_EOSQ057.pdf)

<sup>65</sup> [https://ces.org.ua/wp-content/uploads/2018/06/Subvention\\_web.pdf](https://ces.org.ua/wp-content/uploads/2018/06/Subvention_web.pdf)

<sup>66</sup> <https://hmarochos.kiev.ua/2018/06/08/mininfrastrukturi-znyalo-video-pro-te-yak-vantazhivki-nishhat-dorogi/>

<sup>67</sup> Vehicles over 13.5t load capacity are normally subject to additional user charges like time- or distance-based fees.

<sup>68</sup> World Bank Group (2017). Ukraine Main Roads Economic Evaluation.

<sup>69</sup> As confirmed by traffic studies undertaken on M06 road, in 2014 the share of overweight transport constituted up 40% of observed traffic. This means that at present 18 mobile weighting stations capture up to 20-25% of overweight vehicles.

<sup>70</sup> <http://dsbt.gov.ua/storinka/publichnyy-zvit-golovy-derzhavnoyi-sluzhby-ukrayiny-z-bezpeky-na-transporti-myhayla-nonyaka>

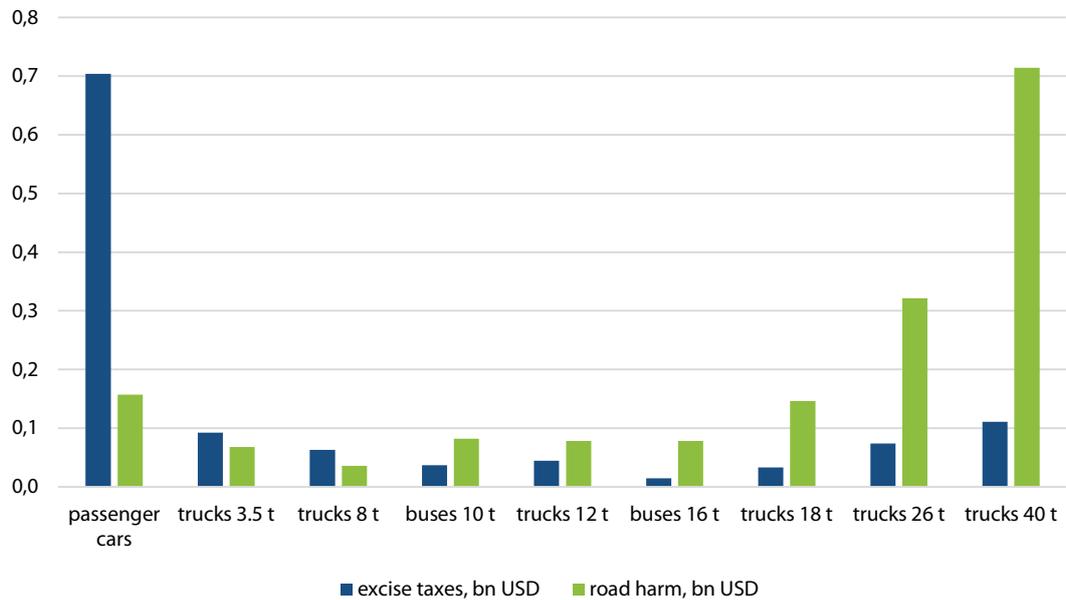
<sup>71</sup>

[https://ua.censor.net.ua/news/3059133/groyisman\\_vymagaye\\_vid\\_ukrtransbezpeky\\_zahystyty\\_dorogy\\_vid\\_perevantajeny\\_h\\_fur](https://ua.censor.net.ua/news/3059133/groyisman_vymagaye_vid_ukrtransbezpeky_zahystyty_dorogy_vid_perevantajeny_h_fur)

<sup>72</sup> <https://mtu.gov.ua/news/30129.html>



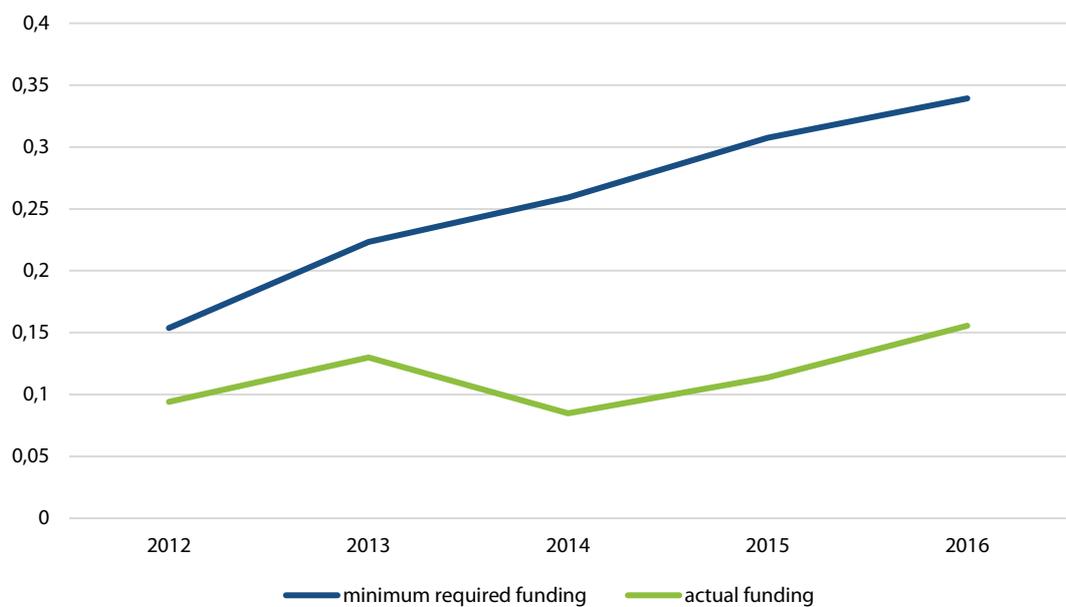
Figure 8. Excise tax generated and road harm imposed by different road vehicles, UAH bn



Source: MyRoad

The situation is aggravated by a shortage of road funds. In 2016 the actual amount of funding for roads operation and maintenance has been equal to less than a half of minimum requirement (see Figure 9 below).

Figure 9. Minimum required road maintenance and operation needs VS actual funds allocation in Ukraine, 2012-2016, BN \$

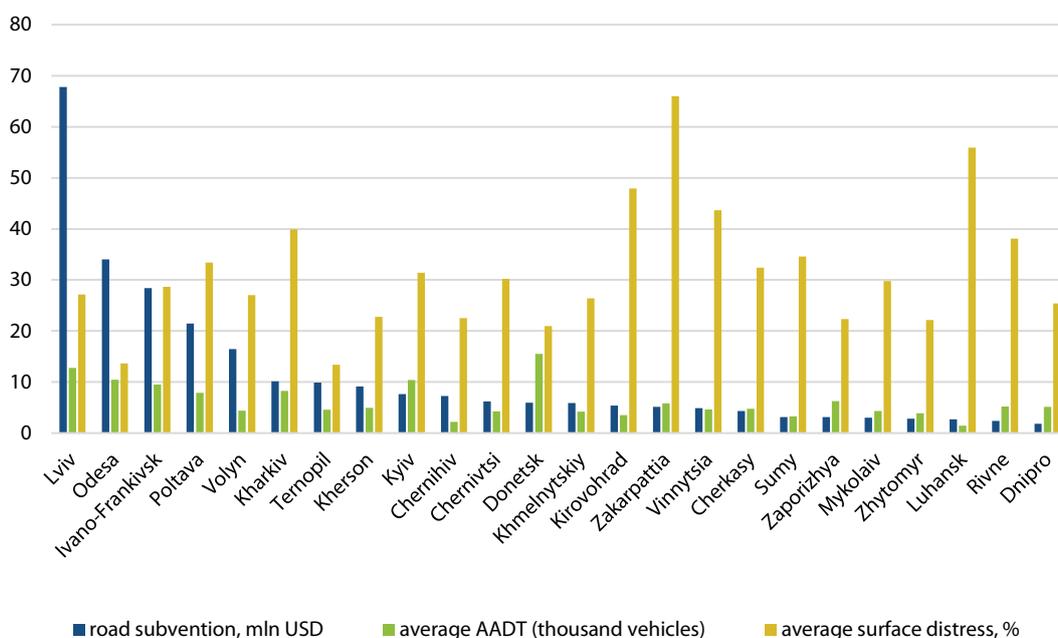


Source: UkrDorNI



In addition, we observe that SRFU allocation does not always meet the actual needs of the regions. In particular, Figure 10 below suggests that in 2016 the amount of road subventions from the state budget exhibited a high positive correlation with the number of vehicles using the roads, but not with the quality of road surface. As a result, traffic avoided poorly maintained roads and road users tended to complain a lot about the quality of the roads in Zakarpattia, Mykolaiv and other regions of Ukraine. This may signal of public funds inefficiency.

Figure 10. Indicators of Ukrainian national road network, 2016



Source: Ukravtodor, <http://uaroads.com/6/49.160154652338015.30.772705078125>

At the same time, in 2017 the penalty charged on overweight/oversize vehicles by the SRFU constituted up to 0.2% of revenue. Provided that the overweight/oversize vehicles constitute up to half of observed traffic, the amount of penalties is understated by almost 4-5 times. Hence, the lack of enforcement on overweight vehicles also has its implication for SRFU and roads maintenance.

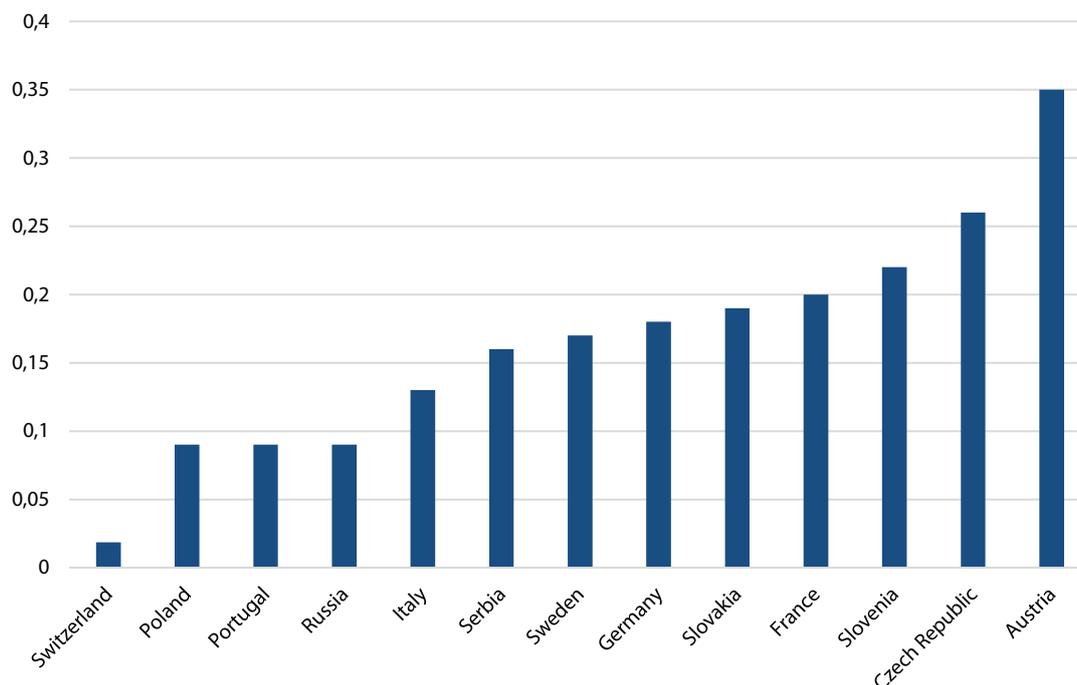
Considering policy alternatives, the following policy options are available for Ukraine:

- **“status quo”** scenario entails maintaining the existing 18 mobile stations with UTB to control overweight transport. This policy option is aimed at preserving the overweight detecting capacity at the same level as it is now;
- **“more mobile stations”** scenario is related to the recently announced tender to purchase 78 additional mobile stations for UTB to control for overweight transport. This policy option is aimed at equipping UTB with more equipment to detect overweight vehicles. It will allow to capture a bigger share of overweight transport;
- **“road user charge”** scenario is related to electronic tolling for cargo vehicles travelling on the national road network of Ukraine. All cargo vehicles will be charged the same user charge. This will reduce their motivation to cheat. In case the share of overweight vehicles will exceed 50%, it will be possible to increase user charge to cover the induced road damage.

We have examined the experience of other countries and have identified that most of them charge cargo vehicles either a distance- or time-based fees and invest in the development of road telecommunication technologies, e.g. weigh-in-motion stations, to identify overloaded vehicles in the overall road traffic. This allows saving costs on equipment maintenance, UTB staff, as well as reducing a risk of bribing road inspectors.



Figure 11. Average distance-based vehicle fees for selected EU countries, 2012, EUR/km



Source: OECD

### Fiscal effects calculation

To calculate potential fiscal effect from different scenarios we assumed that in Ukraine the distance-based fee might constitute 7 USD-cents per km<sup>73</sup>. The system could be implemented in the form of electronic tolling with a flat (as we have assumed for the moment) or a variable (based on the number of axes of cargo vehicles) rate. Applying flat rate to all cargo vehicles travelling on the Ukrainian national road network, road user charges can bring SRFU at least \$324<sup>74</sup> mln per year in additional revenue, which would constitute 15-20% of SRFU revenues. Compared to other policy options “road user charge” scenario allows to considerably minimize the effect of road damage on the society.

### Conclusions and recommendations

We recommend to replace a penalty on overweight / oversize vehicles that serves as one of SRFU revenue sources with a flat cargo vehicle toll. This recommendation shall meet several policy targets:

- **even the fiscal load** of heavy vehicles imposing major damage on road condition. Most of the road damage is imposed by heavy vehicles, while excise taxes put most of load on passenger vehicles, which does not correctly translate “user pays” principle and is difficult to enforce on drivers that do their best to avoid paying extra charges for overweight vehicles;

<sup>73</sup> World Bank (2015). Project appraisal Document for Ukraine Road Sector Development Project.

<sup>74</sup> This amount has been estimated based on the number of cargo vehicles over 3.5 t travelling on Ukrainian state road network per day. For the matter of simplicity we have assumed that instead of on-board equipment all vehicles could be equipped with RFID sticker (e-toll or electronic toll) on the rear window of a vehicle. The assumption is based on the WB appraisal report from 2015.



- **ease toll administration** by introducing electronic charging techniques and reducing toll evasion. The imposition of overweight/oversize penalties creates a favourable environment for corruption and bribery. A universal toll eliminates the interference of human factor (UTB inspectors) and provides an opportunity to implement intelligent transport solutions to control vehicles eligibility to traffic;
- **raise adequate revenues** to SRFU to ensure a proper maintenance of Ukrainian roads.

Table 5. Policy alternatives to enforce control of overweight transport

Policy options:	Remaining 75 road harm, \$ mln	Costs to the government, mln \$		Benefits to the government, \$ mln	Net result (losses) to society, \$ mln
		Operational 76	capital		
“Status quo” scenario	332	0.3	0	2.5	-329.8
“More mobile stations” scenario	328	1.9	3.9	7.5	-326.3
“Road user charge” scenario (electronic tolling)	332	0.9	4.9	32477	-13.5

Source: CES estimates

### 3.4.2. Private-public partnership development

According to World Bank data since 1993 up to 11 660 public-private partnership (PPP) projects worldwide have been registered and still remain active. More than 70% of these projects have been implemented in the fields of telecommunications and electricity. The market of PPP projects is steadily growing. According to EIB, in 2017 the amount of European PPP transactions constituted 14.4 mln EUR (+22% annual growth). Overall in 2017 forty two PPP projects reached financial closure. Besides, at the beginning of 2018, PPP project pipeline included 61 new projects of a total value up to 18 bn EUR.

At the same time, as reported by the Ministry for Economic Development and Trade, as of January 1<sup>st</sup> 2018 there have been 182 PPPs in Ukraine and only 35% of the initiated projects now remain active. We believe, the PPP is underdeveloped because (1) the business community is cautious and considers the rule of law and good governance principles to be poorly enforced in Ukraine<sup>78</sup> (2) there may be a lack of interest in PPPs development from the side of authorities themselves in case of state capture or poor governance. We expect that implementing PPP projects would bring the state budget \$1 bn in concession fees, enterprise income tax and VAT per year.

<sup>75</sup> Remaining road harm stands for the amount of road harm induced by vehicles that remain uncompensated by excise taxes and import duties. The harm is estimated in currency terms by MyRoad, for each separate type of vehicle.

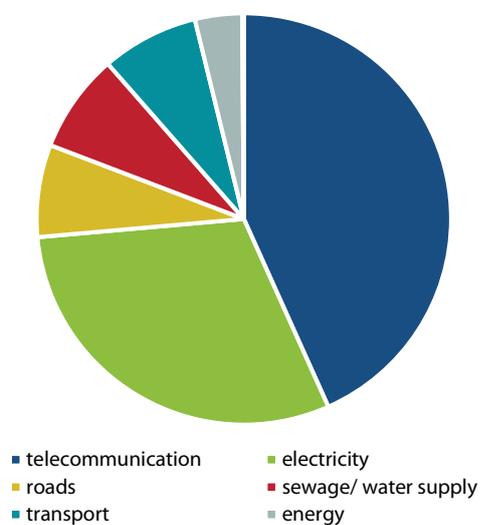
<sup>76</sup> Operational costs cover the cost of equipment maintenance and salaries of employees to operate traffic systems.

<sup>77</sup> The figure has been estimated based on the number of cargo vehicles above 3.5 tones travelling on a national roads network of Ukraine and the assumed distance-based user charge in the amount of 7 USD-cents per km.

<sup>78</sup> [https://ces.org.ua/en/wp-content/uploads/2018/09/2018\\_investorsurveyresults\\_presentation.pdf](https://ces.org.ua/en/wp-content/uploads/2018/09/2018_investorsurveyresults_presentation.pdf)

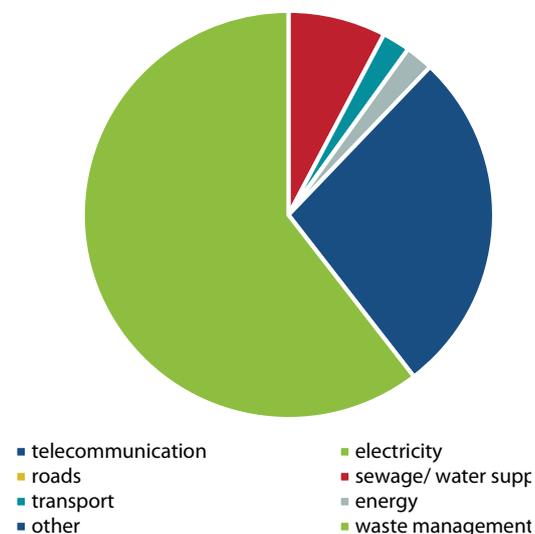


Figure 12. Number of PPP projects in the world, 1993-2017



Source: ppi.worldbank.org

Figure 13. Number of PPP projects in Ukraine as of 01/01/2018



Source: Ministry for Economic Development and Trade of Ukraine

### Scope and structure of the problem

The introduction of corporate governance principles in the state-owned and municipal companies is one of the policy priorities for Ukraine. As of now, most of state and municipal companies operate based on the annual financial plans that are approved by sectoral regulators<sup>79</sup>. Prior to its approval the company must submit its investment program to validate the figures mentioned in a financial plan. Investment program and financial plan are the core documents presenting the mandate of each municipal/state company in Ukraine.

The financial plan is difficult to enforce, since it does not provide for any enforcement measures. First, the document contains only financial indicators. This means that the state/municipality will be interested in its subordinates meeting financial targets and indicators, but will remain indifferent of company's operational efficiency. Second, no penalties are envisaged for companies violating the financial plan. Therefore, the operator has no motivation to hold to it. Third, even the state/municipality prefers the financial plan to remain a weak monitoring tool, since it gives them more flexibility in terms of holding/failing on their public obligations. As a result, neither the operations of a public company, nor the municipality/state fall under the principles of good governance, which creates a ground for public funds embezzlement in Ukraine.

<sup>79</sup> Local authority – for municipal companies; Ministry of Economic Development of Ukraine, Ministry of Infrastructure of Ukraine, Ukrainian Sea Port Authorities, etc.



Since the state/municipality has no interest in controlling the operational efficiency of state/municipal companies, the latter tend to underinvest in public infrastructure maintenance. According to SSCU data, in 2016 the infrastructure assets have been recognized to be worn out by 55-65%. This leads to major operating disruption/inefficiencies of public companies: 50-70% of technical water losses, 35-50% of lost heat in district heating networks, by 10-15% less available public transport services. As a result, the customers opt for other (private) providers<sup>80</sup>, which has significantly narrowed down the market of state/municipal companies and suppressed their capacity to generate revenues. The municipality/state can question the necessity of public companies, since according to their statutory documents, the companies are supposed to serve the needs of population of Ukraine/municipalities. In fact, this does not hold and could be classified as a misuse of public funds.

The experience of other countries showed that the Public Service Contracts (PSC), which are signed between the state/municipalities and operators of public/municipal services, are extremely useful. The document indicates the levels of service, which the state/municipality wants the operator to achieve, and penalties that will be imposed in case of not fulfilling the obligation. The operator defines which assets it will need to reach the target service level and seeks Regulator's approval for service tariff, which it considers necessary to achieve. PSC is integrated into the overall legal and regulatory framework. Since the current legislations and regulations in Ukraine do not allow for a similar instrument, it appears that without this essential element of legislation it will be difficult to enforce state/municipal companies to perform in a necessary way.

Yet, however, the PPP form of contract allows incorporating PSC elements into concession and operation/management contracts. Whichever the form of PPP contract is, it is supposed to be built according to one common principle: managing the output-based performance indicators. To make it work in Ukraine in a feasible and sustainable way, some essential elements that deal with law enforcement are missing:

- clear and enforceable legal and regulatory framework;
- clear definition and protection of property rights;
- the possibility to apply RAB (regulatory asset-based) principles for tariff definition.

Hence, the enforcement of PPP legislation will help Ukraine to manage the state/municipal companies.

### **Fiscal effect**

To keep up with the global PPP development tendencies Ukraine needs to facilitate the adoption of new draft Law of Ukraine #8125 "On concessions". Having reviewed its provisions and getting acquainted with the existing PPP project pipeline, we anticipate the impact of unlocking PPP potential for Ukraine within the next five years will be as follows:

- additional revenue to state and local budgets in the amount of \$4.18 bn (or on average \$835.6 mln per year) to be generated in a form of concession fees. To estimate this amount, we have assumed 4 national projects and 8 municipal projects to be initiated each year and assumed each of them to generate on average \$25-25.7 mln per year in concession fees (based on the World Bank PPI data<sup>81</sup>);
- municipal and state companies instead of making losses will start generating profits (up to \$1.7 bn) and paying taxes to the budget (up to \$662.2 mln), out of which \$304.5 mln will be due to enterprise income taxes and \$357.7 mln – to VAT, assuming that each company will generate per year \$2.1-2.2 mln in additional turnover, since it will be managed by private operator).

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<sup>80</sup> It deals about the installation of in-house boilers to produce heating and hot water, private transport operators of road, rail, air and waterborne transport.

<sup>81</sup> <http://ppi.worldbank.org/>



## Conclusions and recommendations

Despite the obvious benefits associated with PPPs, we argue that only a careful selection and well-grounded elaboration of the projects can help to realize the above mentioned benefits. International experience shows that PPP planning process has a bias towards underestimating project costs (capital and operating) and overestimating demand for produced goods/services. To mitigate these risks, we believe it would be reasonable to:

- establish a pipeline for PPP projects at the level of supervising ministries;
- design clear criteria in order to rank and prioritize them at the level of Ministry of Economic Development and Trade of Ukraine;
- open the access of civil society to PPP project pipelines and ranks, facilitate public involvement at the stage of project selection and promotion from one development stage to another;
- support knowledge transfer to enhance demand forecasting and cost estimation techniques at the level of central and local governments;
- facilitate contacts with potential investors to assess their demands and expectations at the level of project initiators/promoters.

### 3.5 Exports and imports taxes evasion

#### Key points and summary

The existence of grey import and export flows complicates enforcement of government policy, leads to government losing part of its tax and non-tax revenues, distorts competition for law-abiding importing firms and local producers. Grey imports and grey exports are estimated at over \$4.0 bn and \$4.5 bn correspondingly. The direct fiscal loss attributable to them accounts for \$1 bn.

#### Scope and structure of the problem

To estimate the amount of grey imports and exports, we have compared export and import data of State Statistics Service of Ukraine (SSSU) to that of UN Comtrade for all commodity groups at the level of 6 digits. In particular, to catch the discrepancies between two data sources, we have checked data consistency between:

- Ukrainian exports reported by SSSU and imports from Ukraine reported by UN Comtrade;
- Ukrainian imports reported by SSSU and exports to Ukraine reported by UN Comtrade.

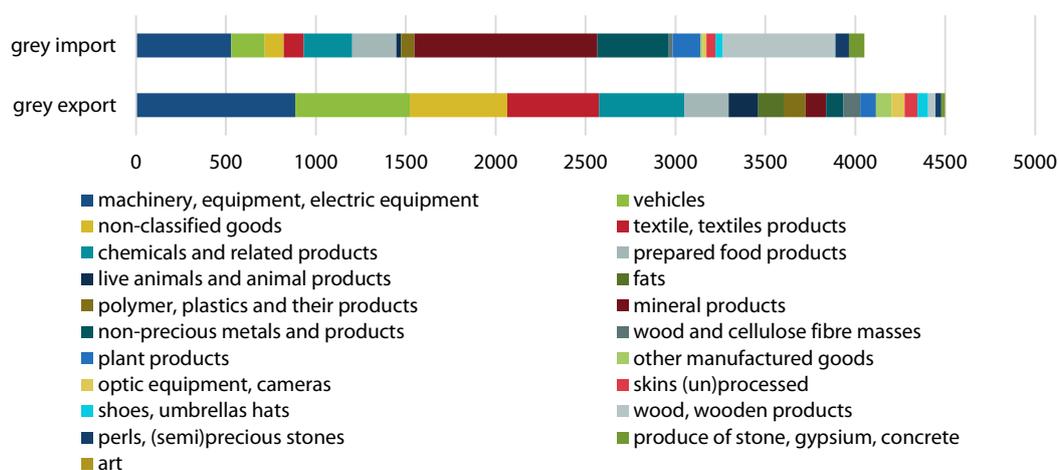
All discrepancies in the excess of SSSU data have been classified as grey imports and exports.

The estimate captures the difference in customs values reported by Ukraine and by other countries and shows that in 2017 the minimum amount of grey imports constituted \$4 bn and that of exports – \$4.5 bn. These figures represent 10% of official exports and 8% in official imports. The effective size of grey imports and exports might be even higher.

Most of grey imports is generated by mineral products, wood, wooden products, machinery and equipment, non-precious metals/products, chemicals. As for grey exports – machinery and equipment, vehicles, textiles and textile products, chemicals.



Figure 14. Structure of Ukrainian grey imports and exports, \$ mln, 2017



Source: Comtrade statistics , CES estimates

### Fiscal effects of grey exports and imports

To measure the amount of potential state budget revenues, we have considered the revenues from import/export duties, VAT and excise taxes. Provided that foreign trade data is available in monetary (USD) and physical values (kg), we have restricted the estimation of potential budget revenues to those commodity groups that indicate excises and import duties per kilo. Therefore, CES estimate should be treated as a minimum budget revenues.

The minimum annual loss to the budget caused by the existence of grey imports and exports is estimated at over \$1 bn:

Table 6. Impact of grey imports and exports on the state budget of Ukraine, \$ mln

Lost revenues of the state budget	Grey imports	Grey exports
VAT	814	0
Duties	80	2
Excise tax	122	0
<b>Total</b>	<b>1 016</b>	<b>2</b>

Source: CES estimates

### Conclusions and recommendations

To decrease the volume of shadow operations, Ukraine has to facilitate electronic exchange of customs data, widen the cooperation between customs authorities and restrict the influence of human factor in the customs clearance procedures in Ukraine.

Enhancing electronic exchange of customs data will require both improving the existing customs clearance procedures with the emphasis on electronic data flow, but also increasing the number of bilateral agreements signed between Ukraine and other countries on exchange of customs data.

Moreover, pre-arrival customs clearance should be simplified by establishing a clear list of supporting documents to be provided by exporters/importers; speeding up feedback (or alternatively, grant a mutual access to customs data) of partner countries needed to approve export/import deals.



Risk-based approach in customs checks also needs to be implemented. The application of risk-based customs checks proved to be effective in other countries and can help Ukrainian customs authorities to gain its efficiency. In our opinion, customs checks should be based on goods origin/destination, integrity of exporting/importing company and its historical records with customs authorities.

Local re-sellers of grey-imported foods must be taken under control namely, installing the devices that issue fiscal receipts and imposing the fiscal service controls over the retail sellers.

### 3.6 Sluggish privatisation

#### Key points and summary

Transparent and effective privatisation could free SOEs from capture by politicians and reduce the level of corruption. That will level the playing field in the economy; reduce political impact on business, hence positively influence the rule of law in the country. The government has declared its intention to privatise 47 of 100 Ukrainian top-100 state-owned enterprises. Our analysis shows that at least 6 additional companies out of the TOP-100 SOEs should be privatised. We estimate the total direct revenue that Ukraine can get from privatisation of 53 out of the top-100 SOEs to be between **48 bn UAH or \$1.7 bn (realistic scenario) and 84 bn UAH or \$5.9 bn (better world).**

#### Scope and structure of the problem

In our policy paper “How to tackle the corruption at the state enterprises?”<sup>82</sup> we conclude that privatisation is the most effective way to overcome corruption at the SOEs (neither the usage of law enforcement agencies, nor corporate governance reform are as effective as privatisation).

86% of Ukrainians believe that selling SOEs should be done not just to maximise government revenues, but also to attract strategic investors<sup>83</sup>. According to the conclusions of the policy brief of the Centre for Economic Strategy “How to increase the investments to the Ukrainian economy by privatisation?”, attracting foreign investors helps to maximize the total positive effect of privatisation on the enterprise.

In the last years, privatisation of SOEs in Ukraine was among the priorities of the Ministry of Economic Development and Trade<sup>84</sup>. The Ministry developed a segmentation of 3444 SOEs called “triage”<sup>85</sup>. According to triage the state will privatise 893 SOEs, 47 of those in the TOP-100 SOEs. We suggest expanding the list for privatisation by at least 6 SOEs, which gives us a list of 53 SOEs in total. Our analysis shows that there are some enterprises, which are in the TOP-100, but not in the “triage” (usually being part of the state holding companies). We analysed and concluded that 5 of them do not serve any special social purpose, so they should be privatised. In addition, there is one more SOE in the TOP-100 that should remain in the state ownership according to the “triage”, but should be privatised according to our analysis, as it does not serve any special social purpose.

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<sup>82</sup> <https://ces.org.ua/wp-content/uploads/2018/07/Corruption-at-SOEs.pdf>

<sup>83</sup> [https://ces.org.ua/wp-content/uploads/2017/11/report\\_critical\\_thinking\\_ukr-FINAL-for-web.pdf](https://ces.org.ua/wp-content/uploads/2017/11/report_critical_thinking_ukr-FINAL-for-web.pdf)

<sup>84</sup> <http://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=e8197289-4ab0-4db0-af87-030e969a4d3c&title=StrategichniZadachi>

<sup>85</sup> <http://me.gov.ua/Documents/Detail?lang=uk-UA&id=f9b47f2c-50ae-41b3-abea-117ff9c4fab8&title=PrezentatsiiniMateriali>



Only 23 companies were planned to be privatised in 2018 in the process of “big privatisation”.<sup>86</sup> 16 of them are in the TOP-100 list, one of which is the SOE that is not included in the “triage” – Dnipro thermal power plant (Dniprovsk`ka TEC). None of them has been privatised yet. The privatisation of other 31 of 47 SOEs according to the “triage” is yet to be approved. However, for 14 out of 31 of them the parliament should pass the law to remove the ban on their privatisation.<sup>87</sup>

### **Fiscal effects expected from privatisation**

We have evaluated the privatisation only of the SOEs from the TOP-100, because their assets constitute 97.5% of total SOEs’ assets in Ukraine. Moreover, there is a lack of data about equity of SOEs that are not in top-100.

We estimated the amount of proceedings from privatisation of 53 SOEs from the TOP100 list. In order to estimate the expected income from privatisation we took a sample of liquid Ukrainian companies that are traded on the Warsaw Stock exchange

Then we took the P/Book ratio of these companies. The mean value of this ratio is 1.01. We multiplied this value by the equity of each of 53 companies of TOP-100 SOEs, which should be privatised according to MEDT and according to our analysis, to derive privatisation the revenue estimates. For companies with negative equity the implied privatisation price is zero. We also took P/Sales ratio of these companies and calculated mean, which was equal to 0.78. We multiplied this value by revenue of these companies.

We then took the average of these values. It was equal to **48 bn UAH (\$1.7 bn)** which corresponds to realistic scenario.

To evaluate the better world scenario – the gains from privatisation under the better governance and rule of law environment we took the average P/Book and P/Sales ratios for Polish companies (removing the outliers) and using the same methodology evaluated the gains from privatizing Ukrainian state-owned enterprises. Our estimate is equal to **169 bn UAH (\$5.9 bn)**, which is 4 times greater than the value estimated under current circumstances.

### **Conclusions and recommendations**

Currently we see an active launch of small scale privatisation via Prozorro.Sales, but it will not produce substantial incomes for the state budget. Large scale privatisation (SOEs with assets > UAH 250 mln) is moving slowly.

As the SOEs are often used for political purposes or personal enrichment of the politicians mass media, activists / NGO and IFIs should put active pressure on speeding up the privatisation.

The main recommendation is to start privatisation of big enterprises as soon as possible in a transparent way to attract strategic investors. Privatisation of 53 out of TOP-100 SOEs will allow using the resources of these enterprises in a way that is more efficient and increase state budget revenue by **48 bn UAH (\$1.7 bn)**. This budget gain could be **169 bn UAH (\$5.9 bn)** which is **121 bn UAH (\$4.2 bn)** more than in the realistic scenario, if we were living in a better world with better governance.

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<sup>86</sup> <https://www.kmu.gov.ua/ua/npas/pro-zatverdzhennya-pereliku-obyektiv-velikoyi-privatizaciyi-derzhavnoyi-vlasnosti-sho-pidlyagayut-privatizaciyi-u-2018-roci>

<sup>87</sup> <http://zakon.rada.gov.ua/laws/show/847-14>



## 3.7 Shadow Industries (forestry, gambling, amber extraction)

### Key points and summary

For the case studies to illustrate the consequences of the lack of law enforcement and state-capture effects we choose three shadow industries, which are discussed in media the most: timber harvesting, amber extraction and illegal gambling activities. All three lack proper legislation base, supervision, enforcement, taxation. All are harmful either to ecology or to the people's lives in one or another way. All three could not exist under the framework of proper law enforcement, no support from corrupted officials and effective work of the police force.

Together law enforcement in these areas (assuming gambling legalization) could bring additional **\$0.2-0.4 bn** to the budget and this is an incredibly conservative estimate. For the local municipal level the effect will be more visible since the timber and amber industries are geographically concentrated.

To address the problem, Ukrainian policy-makers must de-facto rebuild the systems in these industries anew from the scratch, ensure the rule of law and enforce regulatory compliance. While trying to move these shadow industries into the legal existence, the government should understand that in many cases people work in these industries because it is their only way to provide subsistence in the absence of other choices.

### 3.7.1 Illegal timber harvesting

Ukrainian timber along with iron ore, oil, gas and coal are natural resources and a part of public wealth. Annually in Ukraine 19 mln m<sup>3</sup> of merchant timber is harvested. State Forest enterprises (SFEs) control 85% of timber logs produced in Ukraine. Experts assert that illegal forest harvesting can reach another 1.2 mln m<sup>3</sup> per annum which implies more than **UAH1.6 bn or \$ 57 mln** public losses per year.<sup>88</sup>

Addressing problems at every stage of timber production and exports – from licences and properly functioning cadaster to custom procedures - might help to bring the industry out of shadow.

#### Scope and structure of the problem

Ukrainian forest fund composes 10.4 mln ha or 15.9% of Ukrainian territory.<sup>89</sup> Total timber reserves are estimated at 2.1 bn m<sup>3</sup>. The largest forests are situated in the Carpathian mountains (42%) and Polissia region (26%) and are a home to unique flora and fauna – 35% of European species<sup>90</sup>, including endangered species such as lynx, brown bear, black stork, forest cat.

Almost ¾ of forests in Ukraine are state-owned and under control of State Agency of Forestry Resources (SAFR), Ministry of Defense of Ukraine and other public authorities. Communal and private forests compose less than 14%. 7% of Ukrainian forests are undistributed reserves.

In 2017 22 mln m<sup>3</sup> of wood was harvested on 420 thousand ha of forest area. Merchant wood composed 18.9 m<sup>3</sup> (12 mln m<sup>3</sup> of industrial wood and 7 mln m<sup>3</sup> of fuelwood)<sup>91</sup>. SFEs produced 85% of all logs produced in Ukraine.

Sectors associated with forestry can be divided into two categories. First is forestry and logging division (ISIC A02). This is a raw material industry with a low degree of processing. It is 100% small-and-medium enterprises industry which composes only 0.3% of Ukrainian GDP<sup>92</sup> and employs over 62 thousand people.

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<sup>88</sup> <https://www.earthshight.org.uk/complicitincorruption>

<sup>89</sup> [http://dkg.kmu.gov.ua/forest/control/uk/publish/article?art\\_id=62921&cat\\_id=32867](http://dkg.kmu.gov.ua/forest/control/uk/publish/article?art_id=62921&cat_id=32867)

<sup>90</sup> <https://www.earthshight.org.uk/complicitincorruption>

<sup>91</sup> State Statistics Service of Ukraine

<sup>92</sup> <https://regulation.gov.ua/book/17-reguluvanna-rinku-derevini>



Second category is manufacturing of wood, products from wood and cork, manufacturing of straw products and plaiting materials (ISIC C16) and manufacturing of furniture (ISIC 31). It constitutes more than 3% of GDP and employs over 200 thousand workers<sup>93</sup>.

Period of Viktor Yanykovich presidency coincided with the rapid growth of Ukrainian illegal wood exports to EU (from approximately 10% to more than 20% in total amount during 2010-2017)<sup>94</sup>. Detailed ex-post investigations revealed that Viktor Sivets' management of State Forestry Agency (SAFR) during 2011-2014 went along with bribe schemes amounting to millions of dollars. According to MEDT, in 2017 only 26 thousand m<sup>3</sup> of wood was harvested illegally.

Uncontrolled deforestation and million-hryvnia bribes were the main preconditions for the introduction of the 10-year log export ban on the 9<sup>th</sup> of April, 2015.

### **Fiscal effects of illegal activities in forestry and timber exports**

**Illegal felling.** Official estimated of illegal felling seem suspiciously low at 0.17% of total harvest in 2016. The trick is that officials refer only to detected third-party violations in the forests under SAFR management. Any infringements made by SAFR itself are not accounted for. Independent experts suggest a much higher figure: 1.2 mln m<sup>3</sup>.<sup>95</sup> Assuming that the structure of illegal merchant timber market is the same as the structure of legal market, market price<sup>96</sup> of logs made from this illegal felling is over **\$ 57 mln**.

**Moratorium on roundwood export and export rules violation.** Export ban did not prove to be fully effective in terms of eliminating illegal felling. The roundwood is still exported, now being disguised as other export categories, such as charcoal, sawndust, etc.

### **Conclusions and recommendations**

The numerous loopholes in regulations must be addressed and enforcement must be strengthened to avoid both, direct immediate financial public loss and environmental damage, which would be costly for the next generations. Policy improvement is needed in the following areas:

**Transparency and reporting:** Currently the situation in industry is blurred. There is no reliable data on forest areas, age of wood species, timber reserves, owners of forest plots, etc. Only 35% of forests (3.7 mln ha) are certified by Forest Stewardship Council (FSC).<sup>97</sup> Transparency should be increased and forest cadaster should function properly.

**Inspections procedure:** According to NGO "EarthSight" FSC inspectors come to visit logging sites that have been preliminary prepared for the inspection. The inspectors usually only perform superficial inspections, with enterprises just answering "yes or no" questions.

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<sup>93</sup> <https://www.earthsight.org.uk/complicitincorruption>

<sup>94</sup> <https://www.earthsight.org.uk/complicitincorruption>

<sup>95</sup> <https://www.earthsight.org.uk/complicitincorruption>

<sup>96</sup> According to <http://sfs.gov.ua/ms/f11> price last year price of roundwood (HS4403) was 82,6\$ per ton, price fuelwood was 58\$ per ton.

<sup>97</sup> <https://www.earthsight.org.uk/complicitincorruption>



**Logging permits:** Ministry of Ecology and Natural Resources of Ukraine and SAFR define “Annual allowable cut” (AAC) – maximum volume of Ukrainian timber that can be harvested by Ukrainian enterprises in one year. This volume is scientifically justified. AAC is imposed to protect national forests from excessive cut and facilitate reforestation process. However, there is an additional way for Ukrainian SFEs to make harvesting – “sanitary logging”. Under sanitary logging, SFEs can harvest damaged or infected forest resources that can constitute a threat to the environment. During the last 20 years, the volume of “sanitary felling” has increased more than twice – from 5 mln m<sup>3</sup> to 12.4 mln m<sup>3</sup> (1996-2017). If public bodies responsible for environment were governed properly, the share of sanitary logging would be relatively small.

**Auctions vs direct contracts sale procedure:** SFEs have to sell timber through quarterly auctions (9.3 mln m<sup>3</sup> in 2016)<sup>98</sup>. However, if an auction fails, direct contract with a buyer becomes an option. In 2016, almost 40% of wood was sold through direct contracts. Auction design is underdeveloped, there is no future/spot contracts, detailed description of commodities etc. Moreover, in May 2018, auctions were cancelled and there is no transparency in selling procedures.

**Exports:** Certificate of origin, obligatory for border crossing and issued by Regional Forest Management Boards (regional branches of SAFR), shows information about the exporter and proves legality of the timber. RFMBs use state enterprise “Ukrliconsulting” as an intermediary that prepares the certificate on the request. Individual log tags with a barcode have to mark every unit of sawn timber. For the “fuelwood” it is allowed to tag only each consignment.

There is a large discrepancy in the import data from the EU (a major Ukrainian timber exports destination), and export data from Ukrainian statistical services, which may signal the massive system abuse. For example, in 2017 Ukrainian customs export records showed that more than 1/3 of Ukrainian “fuelwood” export (1.4 mln tonnes<sup>99</sup>) are imported by giant EU processing firms such as Egger, Prolisok, Kronospan, Swiss-Krono, International Paper etc. Subsidiaries of five aforementioned companies continued to import wood after criminal cases were opened against Ukrainian SFEs<sup>100</sup>. EU timber legislation (unlike US) punishes only importing enterprises. Companies, that buy illegal wood from intermediaries, are not liable.

### 3.7.2 Gambling legalization

Gambling industry was outlawed in 2009 due to rapid market growth during 2000s and compulsive gambling aggravation. However, people continued to gamble: the entire industry simply moved to the shadow economy. According to Ministry of Finance, market turnover of gambling remains at ~UAH 40 bn.<sup>101</sup>

There are currently no legal players in the Ukrainian gambling market. However, thousands of enterprises are disguised under the signs of state lottery operators UNL and MSL: either using lottery license or illegally using lottery operator’s brand. Anecdotal evidence suggests that thousand franchises of these operators, disguised as instant lotteries provide illegal services online or offline.

The budget loses between UAH4.1 bn to UAH9.6 bn every year from gambling prohibition. Revenues from patents, licenses, lottery permits, and common taxes are not obtained.

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<sup>98</sup> <https://regulation.gov.ua/book/17-reguluvanna-rinku-derevini>

<sup>99</sup> State Statistics Service of Ukraine

<sup>100</sup> <https://www.earthinsight.org.uk/complicityincorruption>

<sup>101</sup> [https://gazeta.ua/articles/economics/\\_legalnij-ale-zhorstko-kontrolovanij-derzhavoyu-gralnij-biznes-prinese-v-byudzhet-milyardi-griven-podatkov-artur-palatnij/801022](https://gazeta.ua/articles/economics/_legalnij-ale-zhorstko-kontrolovanij-derzhavoyu-gralnij-biznes-prinese-v-byudzhet-milyardi-griven-podatkov-artur-palatnij/801022)

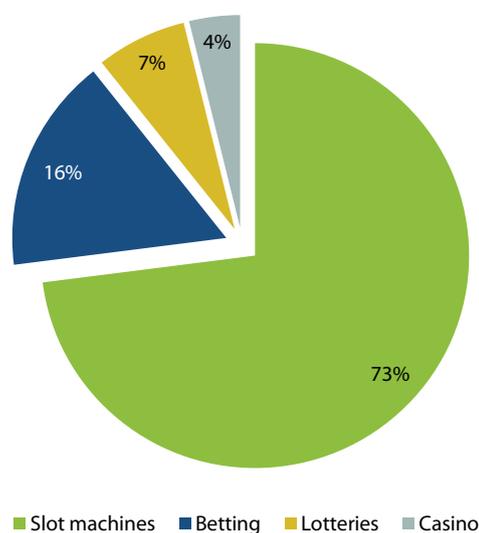


To relaunch the market successfully and in a sustainable least harmful way, Ukrainian government should define who will be responsible for licensing and certification, what legislation framework will provide maximization of tax revenues and minimization of shadow gambling, how to prevent the spread of compulsive gambling, especially among teenagers and youngsters and how to protect players from fraudulence.

### Scope and structure of the problem

Gambling industry marks its history since 1991, when the first casino in a hotel Kyiv was established. During 1990s and 2000s, gambling industry has grown rapidly: new casinos appeared in all big cities throughout the country. Slot machines proliferated in every corner: from small villages to the capital city. In 2008 the gambling market comprised of 4 thousand enterprises with approximately 13 thousand outlets.<sup>102</sup> As of March 2009 on average 50 thousand players visited 45 Ukrainian casinos daily<sup>103</sup>. However, in 2009 parliament issued a ban on a range of the most popular gambling activities: slot clubs, casinos and betting became illegal. Only state lotteries, bingos, plush and other cranes remained legal.

Figure 15. Ukrainian gambling market volume in 2008



Source: [https://feao.org.ua/wp-content/uploads/2016/09/FEAO\\_Gambling\\_A5\\_04\\_print.pdf](https://feao.org.ua/wp-content/uploads/2016/09/FEAO_Gambling_A5_04_print.pdf)

After gambling ban was introduced, the only legal way for the market to function was to disguise its activities under the licences of state lottery operators. However, due to strict requirements only four lottery operators were able to comply: Ukrainian National Lottery (UNL), MSL, "Patriot" and Oshchadbank. The latter has never issued a lottery ticket. In 2015 two lottery operators - MSL and "Patriot" - were subject to sanctions due to alleged funding by Russia. These sanctions were lifted in 2018.<sup>104</sup>

<sup>102</sup> <https://news.finance.ua/ua/news/-/160782/moratorij-na-azart>

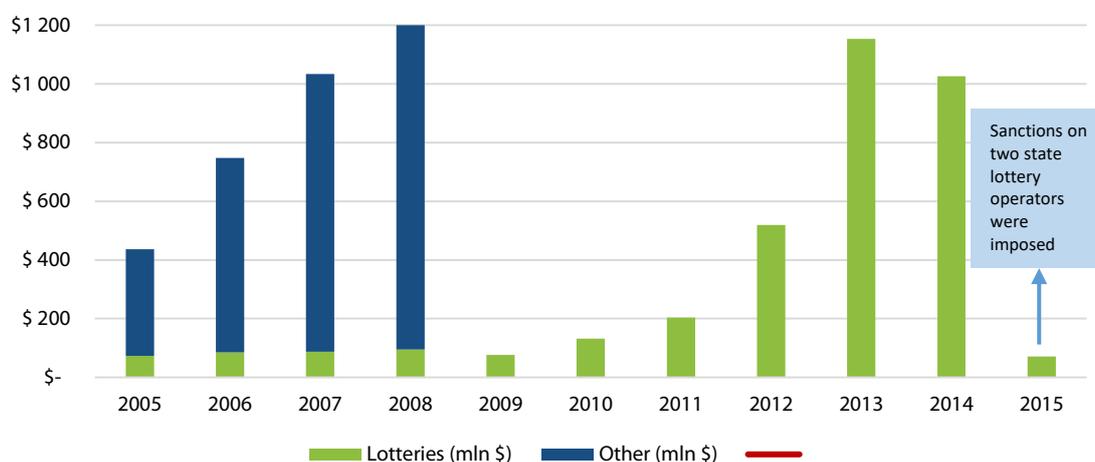
<sup>103</sup> [http://www.sdfm.gov.ua/content/file/Site\\_docs/2009/8.07.09/c.pdf](http://www.sdfm.gov.ua/content/file/Site_docs/2009/8.07.09/c.pdf)

<sup>104</sup> <https://biz.nv.ua/ukr/markets/v-ukrajini-skasovali-sanktsiji-loterej-patriot-i-msl-2471865.html>



Ban of the gambling market created incentives for gambling entities to switch to clandestine activities. Illegal market size estimations reach 40 billion UAH<sup>105</sup>. Situation in legal segment support this fact. After prohibition of gambling, volume of lotteries market during 2009-2014 has increased by more than four times. In 2013, 66.3% of Ukrainian lottery services were disguised as slot machines activities.<sup>106</sup>

Figure 16. Dynamics of legal gambling market size



Source: [https://feao.org.ua/wpcontent/uploads/2016/09/FEAO\\_Gambling\\_A5\\_04\\_print.pdf](https://feao.org.ua/wpcontent/uploads/2016/09/FEAO_Gambling_A5_04_print.pdf)

The changes in tax code in 2015 gave shadow gambling industry additional incentive to develop, as now lottery prizes of all sizes were subject to taxation. Prior to 2015 only prizes greater than 50 thousand UAH were taxed. After 2015 even such small prizes as 10 UAH were subject to 2 UAH tax, which meant that demand of shadow gambling (where there is no taxation) increased.

### Fiscal effects of gambling legalization

To estimate the impact of gambling legalization we tried to simulate what would be the budget revenue in current economic conditions if the gambling legislation was the same as in 2008.

Available fiscal data on gambling industry is scarce. In 2008 revenues from patents composed UAH804 mln.<sup>107</sup> The amount of other budget revenues - income tax, single social contribution etc. – is difficult to estimate, as it is difficult to calculate which percent of these taxes is specifically attributed to gambling. That is why we have to make assumptions on the structure of budget payments, assuming a very wide range of what amount of budget revenue is generated by different tax categories. We assume that in case of legalisation of the gambling industry these other tax categories could generate between 30% and 70% of budget payments from the industry (the rest 70%-30% correspondingly attributed to patents).

Adjusting for macroeconomic data (nominal GDP growth between 2008 and 2018 and changes in consumer spending as a proportion of GDP) we estimate that budget revenues could gain UAH 4 bn – UAH 10 bn in 2018 from gambling industry legalisation. These are conservative estimates, as they do not account for potential increase in market size relative to consumer spending.

<sup>105</sup> [https://gazeta.ua/articles/economics/\\_legalnij-ale-zhorstko-kontrolovanij-derzhavoyu-gralnij-biznes-prinese-v-byudzhet-milyardi-griven-podatkov-artur-palatnij/801022](https://gazeta.ua/articles/economics/_legalnij-ale-zhorstko-kontrolovanij-derzhavoyu-gralnij-biznes-prinese-v-byudzhet-milyardi-griven-podatkov-artur-palatnij/801022)

<sup>106</sup> [http://www.investplan.com.ua/pdf/11\\_2017/13.pdf](http://www.investplan.com.ua/pdf/11_2017/13.pdf)

<sup>107</sup> [https://feao.org.ua/wp-content/uploads/2016/09/FEAO\\_Gambling\\_A5\\_04\\_print.pdf](https://feao.org.ua/wp-content/uploads/2016/09/FEAO_Gambling_A5_04_print.pdf)



Simple forward compounding doesn't account for demographic indicators. Gambling business directly depends on consumer propensity to spend money on recreation and culture. Changes in population reproduction and migration, increase in the internet access (and therefore increase in the online casinos) are also unaccounted for by this model. Moreover, relaunching an industry with turnover of billions UAH will not be a costless process. Therefore, some budget expenses, (such as surveillance expenses and expenses aimed at preventing gambling addiction) should be foreseen.

### **Conclusions and recommendations**

There are three main types of gambling business regulation around the world:

- Complete ban on the gambling business (Turkey, Iran, Ukraine, Syria etc.)  
In these countries absence of legal gambling market is motivated by two reasons: religion or desire to protect citizens from addiction.
- Partially liberalised market (USA, Russia, Kazakhstan, Portugal, China etc.)  
Generally, these countries allow some gambling activities in some areas. State aims to maximize budget revenues from tourists, rich people and reduce participation in gambling by the poor.
- Fully liberalised market under strict government control (European Union)  
Every gambling enterprise needs to comply with strict registrations imposed by the government. Licenses, fees, maximum and minimum quantity of equipment restrictions are all present. Taxation policy can vary depending on the location.

Given the obvious lack of enforcement of gambling ban and the inevitable harm to society's trust, coming from the fact that illegal activities blossom on every corner, we believe the latter – strictly controlled liberalized market – would be the most appropriate policy for Ukraine. To launch a new market successfully Ukrainian authorities should pay attention to the following questions:

**Licensing and patenting:** Lack of conflict of interests must be ensured and independence of the licensing department within Ministry of Economic Development or Ministry of Finance must be guaranteed. Clear and simple rules must be created and obeyed, such as defining classic lotteries, slot machine clubs (banning them from being disguised as 'instant lotteries'), poker clubs, roulette casinos etc.

**Taxation:** Categorisation of gambling into different types implies diversified taxation policy. Depending on type of gambling entity – casino, lottery, betting shop, slot clubs – different fees must be collected (fixed fees, turnover tax on betting, etc).

**Compulsive gambling prevention:** Untying the hands of illegal gambling entities must be accompanied by introduction of the age limits and control over those with gambling addiction. The legal gambling age should be at least 21. Also, we believe that some physical restrictions could be used, e.g. a gambling entity must not be situated in a close proximity to a currency exchange office, retail lending outlet, pawnshop in order to make sure that people do not have an incentive to trade all their money or valuable possessions to continue gambling. This may be done by enacting strict license regulations, refusing to grant licenses to those gambling entities that are located close to such entities.

**Ensure enforcement:** After almost 10 years of ban, gambling legalisation must be accompanied by the strict enforcement of new rules to ensure trust in a new policy. Gambling enterprise must see any illegal activity as disadvantageous because of high risk compared to expected profit. Serving teenagers, tax evasion, usage of non-certified equipment must be severely punished.

**Decentralisation issues:** in several countries gambling activities are legalised in poor or disadvantaged areas. Officials consider this industry to be an additional source of revenue and jobs. Inflow of tourists with money can help to get additional funding for infrastructure and social expenditures. We only partially agree with such policy proposals. Gambling legalisation limited to certain areas may facilitate development of shadow industry in others.

**Online gambling regulation:** Online gambling operators will require a license and would need to ensure strict player identification to comply with the age limits.



### 3.8 Amber extraction

Ukraine has the second largest amber deposit in Europe, but in value terms the market size is not very large. The volume of annual illegal extraction is estimated to be between 70 and 350 tonnes annually (vs 2-5 tonnes officially), and the field correspondents report cases of armed counterstade of local miners to the police and/or security forces. At a price of \$770 per kg of amber the overall size of the market may be estimated at \$112-560 mln, which is very small on the national scale, and the extraction is geographically concentrated.

If all illegal excavation becomes compliant, additional budget revenues could constitute **between \$0.4 - 2.6 mln** per year, which makes bringing the half-militarized local industry under the rule of law framework a costly exercise. Although for the sake of the rule of law health in the region, safer workplaces, ecological protection and additional fiscal revenues, which are negligible for the state but more compelling for the local budget, some very liberal regulations might be introduced and enforced.

#### Scope and structure of the problem

In Europe, amber deposits are found mainly in Russia, Ukraine, Poland and Baltics. Ukrainian amber is cheaper to extract (due to the lower depth) and it is of higher quality (higher share of amber acid).<sup>108</sup> In Ukraine, around 90% of amber deposits are situated under the forest lands, thus ecological consequences of extraction become important.

The area affected by illegal amber extraction is estimated to be between 3 500 ha<sup>109</sup> and 5 500 ha<sup>110</sup>, while currently the special permits for exploration and exploitation are given for the area of 12 878 ha. The official annual extraction volumes fluctuated between 2.5 and 5.0 tonnes for the past four years, while the estimates for illegal extraction varied between 70-100 t/year<sup>111</sup> and 350 t/year<sup>112</sup>. Most of the Ukrainian raw amber is exported through the black market. The current amber royalty payments in Ukraine constitute **25% of extracted amber revenues** (since 2016)<sup>113</sup>. It is obvious that these revenues are underreported by the extraction entities.

The state budget income from royalties on officially extracted amber stood at \$81 409 (UAH2.0 mln) in 2016 and **\$48 870** (UAH1.3 mln) in 2017. It implies that the average price is around **\$78.6/ kg**. The global market price, however, was different. The official price for the most common amber fractions (5-20 g.) is 2.5-3.3 times lower than "black market" price and 5-9 times lower than the price in Poland.<sup>114</sup> The majority of raw amber is being exported illegally.

#### Fiscal effects of amber extraction legalisation

Direct budget revenues from legal amber extraction can be gained from licensing and royalty payments. We evaluate potential budget gain to be around \$0.4-2.6 mln. We do not include tax on corporate profit, VAT, personal income tax and other taxes into our scope – given the small industry size and extreme shadowization, the proceeds are unlikely to be substantial.

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<sup>108</sup> Rudko G. I., "Amber deposits of Ukraine and prospects of their development" [http://ukrdgri.gov.ua/wp-content/uploads/2017/07/mru\\_02\\_2017\\_04.pdf](http://ukrdgri.gov.ua/wp-content/uploads/2017/07/mru_02_2017_04.pdf)

<sup>109</sup> "Бурштинова лихоманка" загрожує Україні екологічною катастрофою ("Amber fever" threatens Ukraine with an ecological catastrophe) <https://p.dw.com/p/112rK>

<sup>110</sup> Leprosy of the land [http://texty.org.ua/d/2018/amber\\_eng/](http://texty.org.ua/d/2018/amber_eng/)

<sup>111</sup> Amber market review as on the beginning of 2018 <http://www.leamber.com/gintaro-rinkos-apzvalga-2018-metu-pradziai/>

<sup>112</sup> As estimated by the Law on State Budget (2017)

<sup>113</sup> Tax Code of Ukraine <http://zakon2.rada.gov.ua/laws/show/2755-17/conv/print1531333819141748>

<sup>114</sup> Unian: Amber prices estimation (image): [https://static.ukrinform.com/photos/2017\\_12/1512737038-3349.jpg?0.9624757103065265](https://static.ukrinform.com/photos/2017_12/1512737038-3349.jpg?0.9624757103065265)



Our main assumption is that state-owned and private companies as well as *artels* (self-organized communities of amber diggers) become legal market players and obtain a special licence. (See Table 7) We suggest the fixed license cost at Poland's current rate for Scenario 2 (around 121 \$/ha), and the same rate weighted by Ukraine/Poland purchasing power conversion ratio (factor of 0.296)<sup>115</sup> for Scenario 1 (around 36 \$/ha)<sup>116</sup>. We assume that the area under licensing covers not only current official **12 878 ha** of exploration and exploitation, but also unofficial areas of **5 500 ha** amber excavation (mostly forests)<sup>117</sup>. The royalty rate on the extraction is low under Scenario 1 (the same as in Poland) but is 10 times greater under Scenario 2.

Table 7. Scenarios for budget revenues from legalized amber extraction

	Scenario 1	Scenario 2	Status-quo, 2017 (UA official/Poland mkt)
Area (legal 2017 + est. illegal), ha	18 378	18 378	12 878
Licence fee, \$/ha	35.93	121.43	n/a*
Total licence revenues, \$	197 615	667 865	n/a
Extraction, kg per annum	70 000	70 000	2 488
Market price, \$/kg	1 600	1 600	78,57 (est)
Royalty type	flat rate	flat rate	25% of revenues
Royalty rate, \$/kg	2.81	28.08	19,64 / 400 ***
<b>Total from royalties, \$</b>	<b>196 700</b>	<b>1 965 600</b>	<b>48 870</b>
<b>Total licences and royalties, \$</b>	<b>394 315</b>	<b>2 633 465</b>	<b>48 870</b>

\* calculated on individual basis

\*\* 25% from est. official price / 25% from est. av. Poland market price

Source: money.pl, Texty.org.ua, State Service for Geodesy, Cartography & Cadastre, Unian, CES estimations

## Conclusions and recommendations

There is no perfect and universally accepted policy on amber deposits' exploitation. No existing policy model yet could eradicate illegal amber digging in European countries. To sum up, we believe that the main purpose of the regulations should be to create a transparent and compliant industry, which brings official jobs to the local communities and does not harm the environment. The products should be sold at market prices, and exports should be official instead of smuggling. The amount of potential budget revenues is small and should not dictate the policy, because the law enforcement proved to be extremely hard.

<sup>115</sup> PPP conversion factor, GDP (LCU per international \$) <https://data.worldbank.org/indicator/PA.NUS.PPP?locations=PL-UA>

<sup>116</sup> *Wydobycie bursztynu będzie koncesjonowane. Branża ostrzega, że przestanie też być opłacalne* <https://www.money.pl/gospodarka/wiadomosci/artykul/wydobycie-bursztynu-bedzie-koncesjonowane.85.0.2400085.html>

<sup>117</sup> *Leprosy of the land* [http://texty.org.ua/d/2018/amber\\_eng/](http://texty.org.ua/d/2018/amber_eng/)



## 4 Conclusions and recommendations

The rule of law and good governance could substantially increase budget revenues. The total expected gain for the budget from rule of law improvements is equal at least \$26.6 bn as a one-off sum and additional \$8.6 bn annually.

The above estimates are only the illustration of the more general problem of trust in the Ukrainian state, lack of rule of law and good governance, which has to be resolved on a higher level rather than on a case-by-case basis.

“Economic agents will not invest if they fear that they will have to spend a lot of time and money to protect their property and oversee the contract enforcement. Their expectations depend on the level of trust in the society and on the capacity of the state institutions to guarantee the basic level of security and property rights protection” states the Global Competitiveness report, which places Ukraine 118<sup>th</sup> out of 137 by the quality of institutions.

Taking into account the quantifiable results we recommend focusing on improving Ukrainian position in rule of law and institution quality indexes. We have selected top-10 categories where Ukraine has the greatest opportunity to improve its position as it lags behind the most.

Table 8. Top-10 categories in which Ukraine must improve its institutions from the institution index from The Global competitiveness Index

	Position of Ukraine
Terrorism	131
Property rights	129
Strength of auditing and accounting standards	120
Judicial independence	117
Future orientation of government	115
Intellectual property protection	114
Business costs of organized crime	111
Corruption (Corruption Perceptions Index)	109
Civic capital (Legatum Prosperity Index™)	107
Efficiency of legal framework in challenging regulations	107
Efficiency of legal framework in settling disputes	103

Source: The Global Competitiveness Report 2017–2018

Table 9. Top-10 categories in which Ukraine must improve its position from the World Justice Project Rule of Law Index

	Ukraine	Leader	Distance to leader
Government officials in the legislative branch do not use public office for private gain	0,16	0,94	0,78
Criminal justice system is free of improper government influence	0,23	0,94	0,70
Criminal justice system is free of corruption	0,31	0,97	0,66
Government officials are sanctioned for misconduct	0,28	0,93	0,65
Government powers are effectively limited by the judiciary	0,30	0,95	0,65



Civil justice is free of corruption	0,36	0,98	0,62
Civil justice is free of improper government influence	0,33	0,93	0,60
Due process is respected in administrative proceedings	0,33	0,91	0,58
Government officials in the executive branch do not use public office for private gain	0,35	0,92	0,57
Government regulations are applied and enforced without improper influence	0,40	0,97	0,57

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Source: The WJP Rule of Law Index 2017-2018

These should be the areas to focus on for the all levels of governments: from national to local. Only then trust in government, investment, economic growth and wellbeing of Ukrainians would improve.



## Appendix 1. “Grey wage” earners and estimates of fiscal losses due to grey wages

While common phenomenon in Ukraine, accurate data on the amount of “grey wages” paid to formally employed employees is lacking. The State Labour Inspection and the State Fiscal Service are supposed to uncover the incidences of hiding true wage levels of formally employed personnel. In January-July 2018 the reported cases of the violations with wage payouts brought UAH 800 mln to the state coffers (in the form of PIT, military levy and USC), thus implying about UAH 3.3 bn of grey wage payments during the period.

In order to estimate the amount of grey wage payments we used the data on wage levels and wage distribution, the number of formally employed staff by sectors of economic activity and hours worked. Table 10 summarizes the calculations of the potential fiscal losses due to “grey” wage payouts. The estimates were based on the assumption that the share of low-wage earners in the total number of formally employed staff, e.g. those who earn less than 2/3 of the average wage in the sector (for most sectors in 2017 it was less than UAH5000 (about \$190) per month) should be in line with the average share of low wage earners in CEE (22%). Of course, the share of low paid jobs is not uniform in different sectors (say, agriculture and hospitality sectors may have higher percentage of less qualified jobs than 22%) but it is difficult to find proper sector-specific benchmarks to improve the accuracy of the estimate, thus we stick to the uniform rate for all sectors. The difference between the reported share of low-wage earners and the CEE benchmark is assumed to be workers that allegedly receive part of their wage as cash-in-the envelope. In addition to that amount, we also assumed that 50% of workers who officially worked less than 50% of the regular working hours (except for public administration, defense and education) were actually full-time employees and received part of their wage in cash. Public administration sector was excluded from the estimation as the one where “grey” wages are not common. We assumed that “grey” wage earners received 70% of average wage in cash in addition to their low official wage. Based on 2017 wage data there were about 2.1 mln workers who allegedly hid their true wage level and/or hours worked, which is about 30% of all formally employed staff. The amount of potential foregone revenue in the form of taxes and social contributions due to “grey” wage payments is estimated at UAH37.5 bn (\$1.4 bn) in 2017.



Table 10. "Grey" wage earners and potential fiscal losses due to "grey" wage payments

	<b>Reported low wage earners (1)</b>	<b>Adjusted level of low wage earners* (2)</b>	<b>Staff employees with less than 50% of paid work time (3)</b>	<b>"Grey" wage earners (4)=(1)-(2)+0.5*(3)</b>	<b>Average wage (5)</b>	<b>"Grey" wage fund estimate (6)</b>	<b>Potential fiscal losses, UAH bn (7)</b>		
	% of total staff employees	% of total staff employees	% of total staff employees	% of total staff employees	UAH thousands per month	UAH bn	PIT+military levy	USC	Total
Agriculture	52%	22%	12%	37%	6.1	8.7	1.7	1.9	3.6
Industry	31%	22%	5%	12%	7.6	14.2	2.8	3.1	5.9
Construction	49%	22%	4%	30%	6.3	2.6	0.5	0.6	1.1
Trade	53%	22%	2%	32%	7.6	14.2	2.8	3.1	5.9
Transportation	32%	22%	6%	13%	7.7	5.5	1.1	1.2	2.3
Hotels and catering	68%	22%	9%	50%	5.0	1.5	0.3	0.3	0.6
IT	60%	22%	5%	41%	12.0	5.0	1.0	1.1	2.1
Financial services	41%	22%	3%	21%	12.9	3.8	0.7	0.8	1.6
Real estate	56%	22%	5%	37%	5.9	1.6	0.3	0.3	0.6
R&D activity	39%	22%	5%	20%	10.0	3.7	0.7	0.8	1.5
Administrative services	62%	22%	6%	43%	5.6	3.5	0.7	0.8	1.5
Education	39%	22%	0%	18%	5.9	12.1	2.4	2.7	5.0
Healthcare	49%	22%	3%	29%	5.0	11.5	2.2	2.5	4.8
Art and leisure	45%	22%	2%	24%	6.6	2.0	0.4	0.4	0.8
Other services	59%	22%	3%	39%	6.5	0.6	0.1	0.1	0.2
<b>Total</b>	<b>49%</b>	<b>22%</b>	<b>5%</b>	<b>30%</b>	<b>7.1</b>	<b>90.4</b>	<b>17.6</b>	<b>19.9</b>	<b>37.5</b>

Notes: \*low-wage earners are defined as full-time employees receiving less than 2/3 of average wage in the sector.

Sources: CES calculations based on State Statistics Service of Ukraine, EUROSTAT, poll results of HH.ua

## Appendix 2. Random Effects Panel Regression

Table 11. Random Effects Panel Regression

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**Coefficients:**

	Estimate	Std. Error	t-value	Pr(> t )	
(Intercept)	24.05600	1.84200	13.05950	< 2.2e-16	***
`Legal System & Property Rights`	0.66522	0.23497	2.83110	0.004739	**
GDP_per_capita2010	0.00074	0.00006	11.89150	< 2.2e-16	***
---					
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1					
R <sup>2</sup>	0.15127				
Unbalanced Panel: n = 164, T = 1-6, N = 941					

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Source: World Bank, Fraser Institute, Doing Business, CES estimates



## Appendix 3. Bad assets recovery calculations

Table 12. Assumptions on the portfolio structure and recovery rates in the blue sky scenario,

	Share in portfolio	Recovery rate	Recovery
1st lien loans	75.0%	69.0%	51.8%
2nd lien loans	20.0%	17.9%	3.6%
Unsecured loans	5.0%	9.0%	0.5%
<b>Blue-sky recovery</b>	<b>100.0%</b>		<b>55.8%</b>

Source: Moody's, CES estimates

Table 13. Assumptions on the recovery rates of the toxic loans in Ukraine (based on the expert interviews)

<b>Low recovery rate</b>	1,0%
<b>Low middle recovery rate</b>	5,5%
<b>Middle recovery rate</b>	10,0%
<b>High middle recovery rate</b>	21,5%
<b>High recovery rate</b>	33,0%

Source: CES (based on the expert interviews, conducted in August-October 2018)

Table 14. State-owned banks toxic assets recovery estimations

	Gross toxic assets UAH bn	Non recoverable assets	Estimated recovery		Better-world recovery		Comments
			Amnt, UAH bn	Recovery rate	Amnt, UAH bn	Recovery rate	
Oschadbank	88.8	23.9	5.9	6.6%	37.1	42%	The bank has sizeable impaired due from banks and assets in Crimea and Donbass regions and large commercial NPLs
Ukreximbank	69.9	1.0	4.1	5.9%	38.5	55%	The bank has substantial impaired due from banks and low-rating commercial loans. The 83% of the NPLs are unsecured. But over half of this portfolio are retail loans, where the recovery rate is likely to be better than on unsecured corporate portfolio.
Ukrgazbank	8.0	0.2	0.9	11.0%	4.5	56%	
<b>Total</b>	<b>166.8</b>	<b>25.0</b>	<b>10.9</b>		<b>80.1</b>		

Source: Banks' IFRS statements, CES estimates

Table 15. Privatbank loan portfolio structure and recovery estimations

Gross loan portfolio	237.2
Gross toxic loans, UAH bn	202.9
NPL, % of gross loans	85.5%
Provisions, % of NPLs	98.0%
Ex-related parties NPLs, UAH bn	185.6
Recovery of related-parties loans, UAH bn	
Estimated (5% recovery <sup>118</sup> ), UAH bn	9.3
Max. possible (full confiscation), UAH bn	43.2
Non-related party NPLs, UAH bn	17.3
Incl. Unrecoverable, UAH bn	8.2
Estimated recovery on other non-related party NPLs, UAH bn	
Estimated	2.1
Better-world	9.7
<b>Estimated realistic recovery, UAH bn</b>	<b>11.4</b>
<i>Recovery rate</i>	5.6%
<b>Estimated better-world recovery, UAH bn</b>	<b>52.9</b>
<i>Recovery rate</i>	26.1%

Source: Privatbank 2017 IFRS report, CES estimates

Table 16. Deposit Guarantee Fund loans recovery estimations

	Amnt	Recovery			
		Base case		Blue-sky	
<b>Corporate loans</b>	<b>318.9</b>				
-to related parties	89.0	0.0%	0.0	50.0%	44.5
- to other corporate borrowers	229.9	8.5%	19.5	47.0%	108.1
<b>Household loans</b>	<b>100.2</b>				
- under the moratorium	21.2	0.0%	0.0	47.0%	10.0
- Other household loans	79.0	8.5%	6.7	47.0%	37.1
<b>Total</b>	<b>419.1</b>		<b>26.3</b>		<b>199.6</b>

Source: Deposit Guarantee Fund, CES estimates

<sup>118</sup> Based on Moldova Expert Group estimations on Moldova banking fraud case, where the court procedures were launched in 2015.

