Profit shifting

in Ukraine's





www.guengl.eu

Acknowledgments

This study commissioned by the GUE/NGL (European United Left / Nordic Green Left group of the European Parliament was written by Alexander Antonyuk, Zakhar Popovych, Tommaso Faccio and Graham Stack.

Alexander Antonyuk is a member of the Ukrainian NGO "Social Movement" and holds a DPhil degree in statistics from the University of Oxford.

Tommaso Faccio is the head of secretariat at The Independent Commission for the Reform of International Corporate Taxation (ICRICT) and a lecturer in Accounting at Nottingham University Business School. He is a chartered accountant (ICAS) and a member of the BEPS Monitoring Group (BMG). His research interests include international tax, transfer pricing, tax treaties and tax avoidance. Until July 2014, he was a Transfer Pricing Senior Manager in the Deloitte LLP International Tax team and has significant experience advising multinationals on complex international tax issues, particularly in the area of Transfer Pricing and Permanent Establishment, first at Ernst and Young LLP and then at Deloitte LLP.

Zakhar Popovych is the deputy director of the Centre for Social and Labour Research (Kyiv, Ukraine) and a cofounder of the NGO "Social Movement". His recent publication focused on the effects of the Ukraine-EU Association Agreement on the economic development and social conditions in Ukraine, including consequences for sovereign debt, taxation and transfer pricing. As a civil society and political activist he is involved in solidarity and advocacy campaigns for the rights of unions and individual workers in transportation and metallurgical industries of Ukraine including "right to strike" and "fair wage" campaigns.

Graham Stack is an experienced researcher of offshores tax schemes, is fluent in Russian and Ukrainian, is very familiar with Ukraine's political and economic situation and key players. He is also doing a PhD in international financial geography at the University of Nottingham, UK, examining the offshore economy in connection with Eastern Europe.

1. Introduction

There is high public interest in the topic of "offshores" in both Ukraine and the EU. It is of particular importance for Ukraine which is categorized as an "open economy", meaning a country with a high share of exports and imports relative to GDP. In particular, iron and steel production and exports from Ukraine are very significant even by the scale of the global iron and steel markets. These sectors have also become the single largest source of wealth for the richest Ukrainians. Additionally, trade was one of the main topics in the Association Agreement between Ukraine and the EU signed in 2014, following the dramatic political events in the country.

It is intriguing that even the Ukrainian authorities publicly declare that there is significant profit shifting occurring to avoid corporate taxation. For instance, according to the State Fiscal Service of Ukraine the usage of transfer pricing within all types of operations results in 100 billion hryvnia tax avoidance annually (around 3.3 billion euros), which leads to almost 20-25 billion hryvnia loss of the national state budget (Riabych, Vakulchyk 2015). This budgetary loss is equivalent to 660–750 million euros, which is comparable to the scale of the annual macro-financial assistance received by Ukraine from the European Union in the last several years to fill the budgetary gap.

The head of the National Bank of Ukraine in a public presentation in 2016 stated that USD 2.6 Bn of mining sector exports were predominantly done via traders or subsidiaries located in low tax jurisdictions but which "legally are not considered to be offshores, such as Luxembourg, Netherlands, Switzerland".

Despite the importance of exports for Ukraine's economy and public revenue and high-profile claims of substantial profit shifting away from the country, there is surprisingly very limited quantitative analysis published on the subject of transfer pricing (or profit shifting more generally) of Ukraine's exports. This study aims to start filling this gap in research on the subject by analyzing the potential profit shifting through transfer pricing of Ukraine's iron ore exports. This paper uses more detailed analysis of trade than most studies of profit shifting, by utilizing transaction level datasets and daily market prices.

The structure of the paper is as follows: in section 1 we review the existing methodologies and results related to Ukraine exports; section 2 describes the iron ore mining sector of Ukraine; then in section 3 the recent history and the status of transfer pricing regulation in Ukraine is provided; section 4 gives quantitative estimates of underpricing of iron ore exports; section 5 provides a comparative analysis of profitability of the Ukrainian mining companies in relation to the holding companies or similar miners; the study is closed with conclusions.

¹ Presentation by head of NBU V. Gontareva on 25 Oct 2016 in Kiev, "Introduction of BEPS as a precondition for liberalization of the currency exchange regulations".

Existing literature and methodology

Ukrainian authors have tended to focus on arguments in favour of introduction of transfer pricing (TP) controls in publications before 2013, and then on regulatory aspects of the newly introduced legislation after 2013 (Vakulchyk and Riabych 2014, Ghutovska 2014, Kasperovich 2014, Dessatniuk and Cherevko 2015). Dessatniuk and Cherevko 2015 describe the difficulties in application of the "arm's length principle" by looking at comparable transactions and without using market prices. In the later section on TP rules their evolution in Ukraine is described.

International publications on profit shifting have covered Ukraine at an aggregated level as part of a wider study of a large number of countries. Cobham and Jansky (2018) estimated losses from corporate tax avoidance in 173 countries using modelling results from a large aggregated panel data which included Ukraine, whereas De Mooij and Liu 2012 estimated the effect of TP legislation on investments (again, in a large number of countries including Ukraine).

For studying profit shifting in regions other than Ukraine, various methodologies have been used to estimate financial flows through transfer pricing. Two broad categories of these methodologies are the ones based on estimation of trade mis-pricing and FDI data (Grondona 2015). The trade mis-pricing methods often resort to comparisons of macro data such as total exports and imports of a commodity between two countries. The FDI methods face issues such as lack of financial information for multinational entities.

The "Sixth Method", which was first introduced in Argentina to augment the pre-existing 5 methods recommended by OECD, applies to commodities and compares the transaction price with a market quote (by requiring the MNE to apply the commodity price on the date of shipment by the agent to the end customer (pursuant to 2nd sale) to the sale of the product by the MNE producing or extracting the commodity product to the related agent offshore (1st sale)), rather than comparing it to prices agreed between unrelated parties (Grondona 2018). The comparing of prices between unrelated parties, or the "comparable uncontrolled price" (CUP) method, one of the OECD's recommended methods, has the great disadvantage of the complexity of finding suitable transactions which show similar volume, quality and agreement terms, whereas the Sixth Method provides certainty for tax payers and tax authorities.

The quoted market price provides a clear benchmark for comparison and reduces subjectivity.

Transactions of commodities between related parties often involve a subsidiary located in a low-tax jurisdiction, however exports to non-related parties have also been found to involve intermediaries with no economic substance (Argibay Molina 2013) and thus in this analysis we included sales to seemingly unrelated buyers.

We used a method closest to the Sixth Method for evaluation of export transactions (mis)pricing, by comparing transaction prices to daily market prices.

However, Ukraine customs data for exporters of commodities show that transactions prices are much more correlated with the market prices one month before the transaction date than with the market prices on the date of shipment. This is probably explained by the customary trading arrangements in the iron ore markets where the spot price quotes from the main provider of iron ore market indices. Platts specify that delivery of the commodity is "within 2 to 8 weeks". In this study we used Platts iron ore and transportation market data.

We have therefore adjusted the analysis to this practice and used the market price of the same date of the previous month, since such practice does not appear to allow increased profit shifting, because in the volatile iron ore market the last month prices can be either lower or higher than this month's.

In the Results section we describe a few other methodological adjustments we had to make, specific to iron ore markets and Ukraine.

Ukraine's iron ore sector

It is instructive to consider first Ukraine's iron ore and steel production sectors together. Ukraine has the 3rd largest iron ore resources in the world² and is the 9th largest producer of steel globally³. Possessing such significant deposits of the raw material and steel production capacity, Ukraine has also become a major global exporter of both steel and iron ore. It is the 5th largest exporter of iron ore in the world⁴ and the 6th steel exporter⁵.

Mining and steel production (usually referred to as «metallurgy» in Ukraine) is even more significant by the scale of the country's economy, given the economy's small size⁶, after the economic collapse in 1991 and the anemic growth since gaining independence 27 years ago.

Metallurgy was the first sector to recover after the deep depression of the 1990s when it gradually become the leading sector of Ukrainian industry replacing machine building in terms of production volume and share of GDP. If in the late 1980s metallurgy was responsible for approximately 10% of industrial production and machine building for 30%, then in the early 2000s metallurgy took a 30% share in Ukraine's industrial production⁷.

² [Shatokha 2016]

³ The World Steel Association's Statistical Yearbook 2017

⁴ http://www.worldstopexports.com/iron-ore-exports-country/

⁵ OECD Steel Markets Developments

⁶ Ukraine is 170th in the world by GDP per capita (not PPP adjusted), World Bank Data

⁷ Popovych Z.O, Economic Growth and Perspectives of Innovative Development of Ukraine, Economics of Ukraine, 2004, 12, p.41-47

Metallurgy has remained the primary sector of the Ukrainian economy for 15 years, until the loss of some facilities in the territories which are not under the control of the central government. After the Association Agreement with the EU in 2014 the agricultural production is growing fast, but metallurgy still remains the major sector of the Ukrainian economy and no.1 industry in Ukraine.

When it comes to trade, iron ore and steel cumulatively were as high as 30% of Ukraine's export in 2017. Iron ore by itself constituted 6.3% of total export, or \$2.6bn of value in absolute terms. Main export destinations of iron ore from Ukraine in 2017 were China and Eastern Europe. Geography of exports varies by product though, as is shown in Figures 1 and 2. Non-agglomerated iron ore is much more often sold to the biggest importer China, then agglomerated ore. It is also noteworthy that the mines produce either non-agglomerated or agglomerate ore.

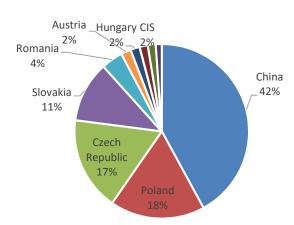


Figure 1. Export destinations of non-agglomerated iron ore in 2017

Source: Ukraine's statistical office Derzhstat

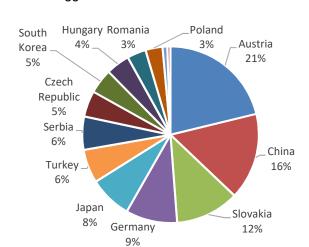


Figure 2. Export destinations of agglomerated iron ore in 2017

The significance of the iron ore sector for Ukraine's economy and society also manifests itself in the asset ownership among Ukraine's "high net worth individuals". According to the magazine Forbes' 2018 world ranking, there are currently 7 Ukrainian US dollar billionaires⁸, and 6 out of the 7 either own or have recently owned iron ore mines. Thus, production and export of iron ore is a major source of wealth in Ukraine and should be a major source of fiscal revenue.

Table 1. Main iron ore producers in Ukraine

Producer	Owner	Location of owners	Production in 2015 (million metric tons)	Market Share
Poltavsky GZK	Ferrexpo AG	Switzerland	38.8	23%
Ingulets GZK	Metinvest	Netherlands ⁹	28.1	17%
Northern GZK	Metinvest	Netherlands	28.0	16%
Southern GZK	Mixed shareholding ¹⁰	Cyprus and Switzerland	24.3	14%
AM Kryvy Rih	ArcelorMittal	Luxembourg	24.1	14%
Central GZK	Metinvest	Netherlands	13.7	8%
KZRK	a group of high net worth individuals from Ukraine"11		5.2	3%
Zaporizhzhia GZK	Mixed shareholding ¹²		4.4	3%
Suha Balka	D H Group	Cyprus ¹³	2.9	2%

Source: EITI, companies' websites, news agencies "GZK" stands for "mining and enrichment plant"

⁸ https://www.forbes.com/billionaires/list/#version:static search:Ukraine country:Ukraine (as of 28 May 2018)

⁹ https://www.metinvestholding.com/en/about/common

¹⁰ Strettonway Traders&Consultants Limited, Acretrend Holdings Limited, Mint Data Holdings Limited (all located in Cyprus), each with 22%, the rest Metinvest? (https://interfax.com.ua/news/economic/451308.html)

¹¹ Ownership of KZRK was recently under dispute in a London court, the results of the out of court settlement were mentioned in the "Paradise Papers"

¹² Minerfin, a.s. (Slovakia) - 51%, ZaporozhStal (steel works, Ukraine) - 29%, KSK Consulting, a.s. (Czech Republic) - 19% (https://interfax.com.ua/news/economic/372266.html)

¹³ http://www.dch.com.ua/en/about/

2. Overview of Transfer Pricing rules in Ukraine

The pricing of transactions ("Transfer Pricing") between connected parties (e.g. sale/purchase of goods, services, funding, licensing of Intellectual Property) can be manipulated for tax avoidance purposes, so to artificially shift profits to low or no-tax jurisdictions.

With respect to the sale of iron ore between related parties, this can be done by paying an intercompany price for the commodities that is lower than the price that would have been agreed between unrelated parties. Transfer Pricing rules (which are set by reference to guidelines produced by the Organisation for Economic Co-operation and Development "OECD" and the United Nations) detail how transactions between connected parties should be priced for tax purposes and are based on the 'arm's length principle', so that such transactions are treated by reference to the profit that would have arisen if the transactions had been carried out under comparable conditions by independent parties.

As most of Ukraine's iron ore is exported between related parties, it was critical that transfer pricing rules were introduced to minimise the risk of tax avoidance through transfer pricing between related parties.

Ukraine's experience with Transfer Pricing rules is fairly recent, having introduced them only in 2013. Significant revisions to the rules have occurred since 2013, as outlined in the next sections. The revisions have increased the guidance available to taxpayers and tax authorities to be able to better apply Transfer Pricing rules.

Ukraine's introduction of Transfer Pricing rules in 2013

Ukraine issued new Transfer Pricing regulations in January 2013¹⁴ and further amended them during the year when new legislation introduced the arm's length principle as well as five standard OECD transfer pricing methods. The transfer pricing rules initially applied to all related-party transactions (including domestic) and all cross-border transactions (including transactions with independent parties).

The prior Ukrainian tax law contained definitions of terms such as "arm's-length price" and "related parties." The new legislation expanded the definitions of those terms. On the

¹⁴ The new law was implemented in the Ukrainian Tax Code as a new section (Tax Code of Ukraine, Article 39) and subsequently amended in The Resolution of the Cabinet of Ministers of Ukraine (CMU) on 04.07.2013 No 408-VII "On Amendments to the Tax Code of Ukraine on transfer pricing" and on 02.10.2013 No.749 "On approval of the percentage price range for certain commodity items under Ukrainian classification of import-export goods for transfer pricing purposes"; The Order of CMU dated 23.10.2013 No.865-p "On the list of specialized commercial publications for transfer pricing purposes"; The Order of CMU dated 23.10.2013 No.866-p "On approval of the list of information sources about market prices for transfer pricing purposes"; The Order of the Ministry of Revenues and Duties dated 11.11.2013 No.669 "On approval of the form and the Order for the controlled operations statement"

definition of related parties, the new legislation stipulated that interdependence between parties (individuals or organizations) is formed via capital participation or contractual or other relationships that allow one party to influence decisions of the other party, either directly or through other dependent parties. The regulations listed the following circumstances that gave rise to such interdependent relationships:

- The proportion of participation in the capital of a legal entity by another legal entity or an
 individual is 20 percent or more. The participation may be either direct or indirect (i.e.
 through other related parties).
- An individual or a legal entity can control appointment or election of a chief executive or at least 50 percent of the members of the board of directors or trustees in another company.
- A company's chief executives have been appointed by the same individual or by the same legal entity acting on behalf of an individual.
- At least 50 percent of a company's board of directors or trustees have been elected or appointed by the same individual or by the same legal entity acting on behalf of an individual.
- Companies share more than 50 percent of the board of directors' personnel or the same chief executive.
- An individual is acting in a capacity of a chief executive of a legal entity.
- Individuals are classified as related parties among themselves when the nature of their influence on the same legal entity forms a controlled relationship.
- Individuals are immediate family members.

The types of transactions that can be considered controlled, subject to a materiality threshold, included transactions of the Ukrainian taxpayers with related parties registered in foreign countries, transactions with domestic related parties under certain conditions, and transactions with entities registered in "low-tax jurisdictions".

The materiality threshold above which these types of transactions were deemed to be controlled was initially set at 50 million hryvnia. Low-tax jurisdictions were defined as countries or territories that impose corporate income tax rates lower than the corresponding Ukrainian tax rate¹⁵ by 5 or more percentage points (treatment as a low-tax jurisdiction also applied to a foreign legal entity whose effective tax rate is lower than the corresponding Ukrainian tax rate by 5 or more percentage points).

The new transfer pricing rules did not allow for a 20% deviation from market prices, which was permitted under the preceding rules. The new rules (which were initially valid for an initial period of 5 years, until January 1, 2018) required that for import and export of certain goods to or from the entities registered in "low-tax jurisdictions," the "baseline" prices for such transactions should be set either using prices realized at commodity exchanges or the pricing intervals established by the Ukrainian government based on prices quoted in market-surveying publications. These new rules are in line with what is generally referred to as the so-called "sixth method" or "commodity rule", although the name of the rule or the method

¹⁵ The corporate tax rate in Ukraine in 2018 is 18% (21% in 2012, 19% in 2013, 18% from 2014 onwards)

applied may differ from country to country. The common feature of these rules is that they rely on the quoted prices of the commodities market to price commodity transactions between associated enterprises, and the application of the sixth method may resemble the Comparable Uncontrolled Price (CUP) method. Whilst Ukraine transfer pricing rules refer to the CUP method, this should be interpreted as a variation of the "sixth method".

A small deviation from market prices was allowed, as exporters could set prices in such transactions up to 5 percent below the minimum of the baseline pricing interval, and importers could set prices up to 5 percent above the maximum of the baseline interval.

The goods subject to these special pricing rules included certain agricultural commodities (grains, oils, and fats of animal or vegetable origin), mineral commodities (coal, crude oil and its products, and mineral ores), organic chemical compounds, products of inorganic chemistry, including compounds of precious and rare earth metals or radioactive elements, ferrous metals, and items made of ferrous metals.

2015 update to transfer pricing rules

New rules were introduced in 2015¹⁶ which set out the criteria for taxpayers to choose the method for establishing compliance of the price of a transaction with the arm's length principle. The general rule was that a taxpayer could choose any transfer pricing method that it deemed appropriate with due regard to the criteria (Article 39, subparagraph 39.3.2.1, Tax Code of Ukraine). However, the Comparable Uncontrolled Price ("CUP¹⁷") method was set as the "basic" method (that is, the primary method to substantiate the price). Where it was possible to use the CUP and any other method, a taxpayer should have applied the CUP method.

The rules to determine whether two entities are "related parties" were also extended to cover both legal entities and individuals who are in specific relationships that may influence the conditions or results of their business activities.

Namely, under the following circumstances parties are recognized as related:

- If one of the parties (legal entity or individual) owns (directly or indirectly) 20% or more of the shares in the other party (legal entity);
- If a legal entity (through related parties) owns (directly or indirectly) 20% or more of the shares of other legal entity;

¹⁶ The Parliament adopted Law No. 72-VIII of 28 December 2014, which introduces major amendments to the transfer pricing rules that had been introduced by the previous government in 2013. The transfer pricing control rules were subsequently amended by Law No. 609-VIII of 13 August 2015.

¹⁷ The Comparable Uncontrolled Price ("CUP") method compares the price charged for property or services transferred in a controlled transaction to the price charged for property or services transferred in a comparable uncontrolled transaction incomparable circumstances.

- If a legal entity or individual has the authority to assign the sole executive body of the legal entity; or at least 50% of the executive board of the legal entity; or at least 50% of the legal entity's supervisory board;
- In legal entities where at least 50% of the executive board and/or supervisory board is represented by the same individuals;
- In legal entities whose sole executive body is assigned by the same legal entity or individual (by the owner or by a supervisory board authorized by the owner);
- If an individual is considered to be closely related to another party, such persons are considered to be related (spouses, parents, children, brothers and sisters, etc.);
- If the overall amount of all loans / non-refundable financial assistance offered by a legal entity / individual to the other legal entity and / or all loans/non-refundable financial assistance offered by third parties exceeds the equity capital of the borrower by more than 3.5 times (10 or more times for financial institutions conducting leasing activities).

Controlled Transactions

The revised rules did not apply to transactions between Ukrainian related parties, as the new rules applied only to cross-border transactions.

Transactions with non-resident related parties as well as with non-related parties registered in certain jurisdictions, as listed by the Cabinet of Ministers of Ukraine, are deemed controlled if the following criteria are satisfied:

- a taxpayer's and/or the related parties' joint annual revenue exceeds 20 million Ukrainian Hryvnia (UAH); and
- the transaction volume exceeds the lesser of UAH1 million or three percent of the taxpayer's annual revenue.

Controlled transactions with non-residents include the following transactions:

- Transactions with non-resident related parties;
- Transactions with foreign companies involving the sale of goods through non-resident commission agents;
- Transactions with non-residents registered in low-tax jurisdictions according to the list adopted by the Cabinet of Ministers of Ukraine. Under the new rules, the list of these jurisdictions will serve as the definitive source of what are deemed to be low-tax jurisdictions.
- Transactions between related parties with the involvement (as intermediaries) of the independent persons provided that such a person does not perform any significant functions and does not use significant assets and/or does not bear significant risks in transactions between related parties.

For the purposes of Transfer Pricing, transactions can be defined as follows:

- Operations with goods, such as raw materials, finished products, etc.;
- Provision of services;

- Operations with intangible assets, including royalties, licenses, payments for patents, trademarks, knowhow, other intellectual properties;
- Financial operations, including leasing, investments, loans, commissions, guarantees, etc.
- Operations with capital, including sale / purchase of shares or other investments, sale / purchase of long-term tangible and intangible assets.

Special Transfer Pricing rules for commodities trading

The 2015 rules included special rules for commodities trading with companies registered in "low-tax" jurisdictions.

These special rules¹⁸ are applicable to both transactions with non-residents registered in the states included in the "low-tax" states list adopted by the Cabinet of Ministers of Ukraine and for transactions involving the exportation or importation of commodities with quoted prices.

The CUP method must be used to determine whether the conditions of such transactions comply with the arm's length principle. When applying the CUP method, the taxpayer must calculate the arms' length price range based on prices of the respective commodities on exchange quotations for 10 days prior to the controlled transaction.

Taxpayers are allowed to use other transfer pricing methods, but in such a case the taxpayer must submit to the fiscal authority information on profits realised by each related party that participated in the supply chain of the respective commodities, up to the first non-affiliated entity.

List of traded commodities

On 8th of September 2016, the Cabinet of Ministers of Ukraine by Resolution No 616 approved the list of traded commodities for transfer pricing purposes. The arm's length pricing must now be examined on the basis of the comparable uncontrolled price (CUP) method.

The commodities covered by the CMU Resolution No 616 include:

- agricultural goods (livestock, meat, grains, food, seeds, palm and soybean oil etc.),
- energy commodities (coal, crude oil, natural gas, gasoline etc.),
- industrial and precious metals, cotton, rubber and
- other commodities.

¹⁸ Article 39, subparagraph 39.2.1.3, Tax Code of Ukraine

For each commodity group, the CMU Resolution No 616 provides an approved commodity exchange as an information source for arm's length testing. The approved commodity exchanges are:

Agricultural goods:

Chicago Mercantile Exchange (CME), Euronext, Intercontinental Exchange (), New York Mercantile Exchange (NYMEX), National Commodity and Derivatives Exchange (NCDEX), and others;

Energy commodities:

Intercontinental Exchange (), European Energy Exchange (EEX), Chicago Mercantile Exchange (CME), Tokyo Commodity Exchange (TOCOM), European gas hubs (NCG, CEGH, GASPOOL) and others;

• Industrial and precious metals:

Intercontinental Exchange (), London Metal Exchange (LME), Dubai Gold and Commodities Exchange (DGCX), Chicago Mercantile Exchange (CME) and others;

• Cotton and rubber:

Chicago Mercantile Exchange (CME), Intercontinental Exchange (), Multi Commodity Exchange of India Limited (MCX), Singapore Exchange (SGX), Shanghai Futures Exchange (SHFE) and others.

Reporting requirements and tax adjustments

The deadline for submitting the report of controlled transactions is October 1 of the year following the reporting year (Until 1 January 2017, the deadline was May 1 of the year following the reporting year). A taxpayer can adjust the taxable profit for transfer pricing purposes. Starting from January 1, 2017, there is no penalty for such adjustment if it is made via amendment to the corporation tax return until May 1 of the year following the reporting year (in previous period a penalty in the amount of 3% was applied).

2018 revision of transfer pricing rules

Ukraine's transfer pricing rules were further revised in 2018¹⁹ to expand and amend some of the previous rules, as outlined in the next sections.

Permanent establishment and threshold for TP purposes

Business transactions between a non-resident and its Ukrainian permanent establishment qualify as controlled transactions when the annual volume of such transactions exceeds UAH10 million. For this type of controlled transactions, there is no annual income criterion (i.e., the permanent establishment does not need to earn income beyond a specific level). In

¹⁹ Ukraine's Law No. 2245-VIII "On Introduction of Changes to the Tax Code of Ukraine and Some Legislative Acts of Ukraine on Ensuring the Balance of Budget Revenues in 2018," effective from January 1, 2018

contrast, for other controlled transactions to be subject to transfer pricing rules in Ukraine, the resident would need to have earned an annual income of UAH150 million or above and the annual volume of transactions between the resident and non-resident entity would have to be UAH10 million or above.

The volume of transactions amount must be calculated based on arm's length pricing. In the past, this threshold was calculated based on contractual prices.

Non-residents: low-tax jurisdictions and legal forms

Transactions of Ukrainian entities with entities located in low-tax jurisdictions as well as with entities of special legal forms may be subject to transfer pricing control, even if the parties are not related. The list of low-tax jurisdictions is approved by the Cabinet of Ministers and includes states and territories (a) with a corporate tax rate lower than the tax rate in Ukraine by 5 percent or more; (b) which do not have double tax treaties with Ukraine; and (c) which do not provide tax information upon the request of Ukrainian tax authorities in full and in a timely manner.

Related Parties

The list of related parties is supplemented by:

- For legal entities if the ultimate beneficial owner (controller) of such legal entities is the same individual or the powers of the individual executive body of such legal entities are exercised by the same person;
- For an individual and a legal entity if the individual is the ultimate beneficial owner (controller) of the legal entity;
- For individuals if an individual is determined as a related party to other persons, such persons are recognized as related parties.

3. Calculations of under-pricing

We have reviewed transaction level customs data and compared it to available market data, in order to identify any significant misalignment between the transaction price adopted by the main iron ore exporters for transactions with related parties and the market price for the same product. However exports to non-related parties have also been found to involve intermediaries with no economic substance (Argibay Molina 2013) and thus in this analysis we also included sales to seemingly unrelated buyers.

For the analysis of export prices we used a database of exports from Ukraine acquired from a commercial vendor based in the USA. The database contains the following details of the transactions: date, weight of the commodity batch, monetary value in Ukrainian hryvnyas,

incoterm, shipper, consignee²⁰, destination country, HS code (harmonized commodity code), detailed commodity description (including Ukrainian commodity code, content of iron and moisture), delivery location on Ukraine's border.

For market quotes we used Platts daily iron ore spot price index downloaded from Bloomberg, which is "62% import fines ore CFR Qingdao" (iron ore with the content of iron 62%, deliverable to the Chinese city of Qingdao on CFR incoterm). Since the CFR incoterm includes freight cost and many transactions in the customs database have different incoterms, often FOB in the Ukraine's Black Sea port of Yuzhny, we have also acquired Platts daily shipment prices between the two ports, Yuzhny in Ukraine and Qingdao in China²¹. By subtracting the shipment price from the CFR price we calculated the market price for transactions with delivery to the Black Sea. This is for the simplest iron ore product, non-agglomerated fines, for other products additional market indices were required but could not be obtained.

The prices of iron ore vary significantly by the content of iron in fines, and pellets are substantially more expensive than fines since they are the most efficient source of iron ore for steel furnaces. Thus, we split the calculations by 3 products: non-agglomerated ore with Fe content ~65%, "concentrate" with Fe above 65%, and pellets. The iron ore data supply is dominated by Platts and the fees are very high, all the necessary data for all 3 types of products was too costly to obtain. For non-agglomerate ore the spot price and transportation price were sufficient (see description above); however, for concentrate the whole time series of Fe 65% was not available so we had to use a conservative estimate of the price differential between Fe 62% and Fe 65%; for iron ore pellets, only prices with delivery to China were available whereas the majority of exports are to Europe.

We had to limit the analysis to the 3 years of 2015-2017 due to the lack of data in 2014, presumably due to the political turmoil and the start of violence in the country that year.

In the exports database we used, transaction values are provided in Ukrainian hryvnyas, so we converted the values to US dollars using the National Bank of Ukraine's daily exchange rates.

Results for non-agglomerated ore (~62% of Fe)

This product was the least problematic is terms of data availability and the authors consider the results to be reliable. The main export destinations of non-agglomerated fines (HS code 2601110090) from Ukraine are EU countries and the majority of the trading is done via intermediaries located in low tax jurisdictions, for all the 3 companies exporting the commodity. Although the delivery of this product is via railway to the EU countries, its price is still comparable to the derived FOB Black sea port, since the border points for railway

²⁰ The consignee is often a subsidiary of the group which owns the shipper, and is located in a low tax jurisdiction; while the destination country is usually different from the location of the consignee.

²¹ The Platts index is "Iron Ore Yuzhny Ukraine-Qingdao N China 160kt \$/Mt Capesize"

exports are roughly at the same distance from the production sites as the Black Sea port of Yuzhny (the derivation of the FOB Black Sea is described above).

Total under-invoicing for non-agglomerated fines for the 3 years period was \$220 million, or 29% of the total declared value of \$760 million. As can be seen in Table 2, the biggest profit shifting is done via a Slovak intermediary, although other exporters do not use intermediaries.

Table 2. Under-invoicing of non-agglomerated iron ore exports by company, 2015-2017

Company	Transactions mainly via low tax jurisdictions	Main destinations	under-invoiced, mln USD
Company 1	No	EU	61
Company 2	No	EU and Turkey	24
Company 3	Intermediary in Slovakia	EU	135

Results for concentrate (~65% of Fe)

The difficulty we encountered with this type of ore is that lack of data for the ores or higher content of iron. An estimate of the price differential between 62% and 65% Fe ores was applied in order to calculate the prices of 65% Fe. Platts occasionally makes historical price reports available for free, and based on several of those reports, the differential fluctuated between 10% and 20% during the period; therefore the mid-point of 15% for the differential was applied to the whole period. Similarly to the lower grade ores, 1 month lag in prices was used.

Based on these real and conservatively estimated prices, under-invoicing was \$427 million, or 27% of the total declared value of \$1.6 billion. Under-pricing in exports of concentrate is dominated by exports to China, disproportionally to its share in export destinations. This might be explained by the fact that market data for deliveries to China was used and thus the calculations for exports to China are more precise.

Table 3. Under-invoicing of concentrate exports, 2015-2017

Company	Transactions mainly via low tax jurisdictions	Main destinations	under-invoiced, mln USD
Company 4	Yes	China	214
Company 5	Yes	China	90
Company 6	Yes	China	66
Company 7	No	EU	55

Results for iron ore pellets

Dynamics of the iron ore pellets prices are very different in the Chinese and the "Atlantic basin" (incl Europe) markets due to overcapacity of pellets production in China. The major Ukrainian exporters predominantly target the European pellets markets. However, it was possible to acquire only the Chinese prices time series. It was decided to still calculate the amount or under-invoicing using China market data, while realising that such calculation underestimates profit-shifting. Another data issue was availability of only two years of transactions, 2016 and 2017. For pellets the prices did not appear to be shifted by one month compared to the transactions so no lag was used in the calculations.

The total under-invoicing was ~\$450 million for the two years, constituting 21% of the total declared \$2.1 billion of exported value.

Table 4. Under-invoicing of pellets exports, 2016-2017

Company	Transactions mainly via low tax jurisdictions	Main destinations	under-invoiced, mln USD			
Company 8	No	EU and South East Asia	310			
Company 9	Yes	China	66			
Company 10	Yes	South East Asia	61			
Company 11	No	EU	11			

Summary of calculations

Our calculations resulted in a total figure of around \$1.1 bn of under-invoicing, over 3 years for two products and over 2 years for the other product. The percentage of under-invoicing varied between 21% and 29% between the products.

However, the total value of exports downloaded from the database and analysed for this 2 to 3 years period was only \$4.5 billion, compared to the official statistics of \$2.6 billion exports per year.

4. Profitability misalignment between local iron ore exporters and overall groups' profitability

A review of the Ukrainian iron ore exporters' financial statements was carried out to compare their profitability to their overall groups' profitability.

A significant misalignment between the profitability of a local entity in Ukraine and the overall group profitability would be a strong indicator of the potential existence of a profit shifting structure in place aimed to avoid corporate taxation in Ukraine.

Details of the activities for each of the local entities in Ukraine and overseas, where available, are provided below in Table 5.

Table 5. Ownership, activities and availability of financial information of the mining companies

Entity	Group	Activities in Ukraine	Activities overseas
Poltavsky GZK	Ferrexpo AG	Mining	Sales activities
Ingulets GZK	Metinvest	Mining and steel	Mining and steel
Northern GZK	Metinvest	Mining and steel	Mining and steel
Southern GZK	Metinvest and others	Mining and steel	Consolidated financial statements not available
AM Kryvy Rih	ArcelorMittal	Mining and steel	Mining and steel
Central GZK	Metinvest	Mining and steel	Mining and steel
KZRK	Mixed ownership	Mining	Consolidated financial statements not available
Zaporizhzhia GZK	Mixed	Mining	Consolidated financial statements not available
Suha Balka	DCH Group/EVRAZ	Mining and steel	Mining and steel

A summary of these entities financial results for the last 5 years is provided in Appendix A

If the price of products sold by the Ukrainian exporter to a foreign affiliate is lower than market prices, this will result in increased profits in the jurisdiction where the foreign affiliate resides and lower profits in the jurisdiction of the exporter, i.e. Ukraine.

In order to identify profit shifting risks associated with the exporting of iron ore based on a review of the financial statements, it is necessary to identify the profitability associated with the mining and exporting of iron activities in Ukraine. If the profitability of the local affiliate in Ukraine is significantly lower than the group's overall profitability, then this means than other entities in the group have a significantly higher profitability.

If the group operates in low or no tax jurisdictions, then profit shifting from high tax jurisdictions (e.g. Ukraine) to low tax jurisdictions (e.g. Switzerland) will result in increased profits in low or no tax jurisdictions and decreased profits in high tax jurisdictions. As the profit shifted are subject to low or no taxation, then this effectively results in corporate tax avoidance.

This analysis can only be made for those entities in Ukraine that perform only mining and export activities, as it can then be assumed that the profit margin in their financial statements is a good proxy for the profitability of these activities.

Furthermore, comparing the local profitability to the group profitability is appropriate if the group only operates one business segment as it can then be assumed that the profit margin in the consolidated financial statements is comparable to that of the local entity.

Almost all of the above groups have both mining and exporting and metallurgical operations in Ukraine and overseas, rather than only mining and exporting. This means that the local profitability is affected by both activities and it is therefore not possible to compare the local profitability with that of the overall group.

This does not imply that these entities are not involved in profit shifting activities. It simply means that based on a review of the financial statements it is not possible to determine whether the risk of profit shifting by these entities is high.

However, this analysis can be performed for one of the companies, Company 8, part of Group6. A summary of the financial statements of the main iron ore exporters in Ukraine and the consolidated financial statements of the groups to which the iron exporters belong are included in Appendix A.

Company 8 only performs mining activities so for this entity it is possible to compare the local profitability to the overall profitability. Group 6 is an iron ore exporter headquartered in a low tax jurisdiction whose main activity is iron ore mining in Ukraine.

Company 8

The profitability (calculated as profit before tax/turnover) of Company 8 over the last 5 years is significantly lower than the overall Group 6 and in only 1 out of the 5 years for which data

is available the profitability is higher than the average profitability of the above local Ukrainian entities.

The high-level profitability of Group 8 during the above period is further confirmed by the following data on profits provided on its website.



This indicates that the risk of a profit shifting resulting from the corporate structure adopted by Group 6 is high. If Company 8 sales to its related parties in low tax jurisdiction are at a price which is below market price, this will result in lower profits in Ukraine and higher profits in those low tax jurisdiction. As these jurisdictions offer low or limited taxation of corporate profits (Ukraine's corporation tax rate is currently 18% and was 19% in 2013), any profit shifted from Ukraine to these low tax jurisdiction will result in tax savings for Group 6.

Whilst this analysis does not confirm that Group 6 is involved in profit shifting activities, the misalignment between the local profitability and the group profitability is high and this suggests that the risk of a potential existence of a profit shifting structure in place aimed to avoid corporate taxation in Ukraine is high.

In order to determine whether Group 6 is involved in profit shifting activities, a review of the financial statements for those group entities will be required. This is outside the scope of this study.

Conclusions

The motivation for this publication partially stems from the public perception in Ukraine that the exporting companies shift significant profits to "offshores". The risk of tax avoidance is also supported by the fact Ukrainian authorities have publicly stated that there is significant profit shifting carried out by iron ore exporters.

In order to investigate if there is indeed significant profit shifting occurring, we have reviewed transaction level customs data and compared it to available market data, in order to identify any significant misalignment between the transactions prices recorded at Ukraine's border by the main iron ore exporters and the market prices for the same products.

According to Ukrainian transfer pricing rules, the transfer pricing adopted by the iron ore exporters for transaction should be in line with the market price, as is explained in this report.

The results of our analysis indicate that in the last 3 years (between 2015-2017), iron ore exports from Ukraine were on average under-invoiced at least by 20% which is equivalent to \$ 520 million of profits potentially shifted out of Ukraine to low tax jurisdictions through transfer pricing.

Under-invoicing reduces the profitability of the iron ore exporters in Ukraine and increases the profitability of related (openly or via complex ownership structures) located in low taxation jurisdiction, a common tax avoidance strategy.

The tax returns of iron ore exporters in Ukraine are not publicly available, and therefore we are unable to prove that the above iron ore exports are involved in profit shifting aimed at avoiding taxation. However, the identified misalignment strongly points to a high risk of profit shifting in relation to the export of iron ore from Ukraine.

Our analysis only focuses on iron ore exports, which are a relatively small part of Ukraine's total exports. If one assumes that other commodities exporters (for example, steel producers, where owners are often the same as of the iron ore mines) may apply similar transfer pricing techniques resulting in similar percentage of under-pricing, then the magnitude of potentially shifted profits could be very significant.

Research conducted in the years 2015-2016 by the Centre for Social and Labour Research (Kyiv, Ukraine) indicates that that transfer pricing tax avoidance is likely to be very high in Ukraine agriculture exports (Kravchuk 2016). The study shows that 43% of Ukrainian agricultural exports during the period was conducted via Swiss intermediaries, and significant flows also took place through the Virgin Islands (8%), Great Britain (8%), Cyprus (4%), Panama and Hong Kong (2%).

Thus, if one applies 20% under-invoicing, which we calculated for iron ore, to the whole of agricultural, iron ore and steel exports (~\$14 billion), profit shifting of Ukraine's commodities could be \$3 billion per year. If this estimate is close to reality, retaining and taxing these profits in Ukraine could replace the macro-financial assistance which Ukraine is receiving from the EU at the expense of EU tax payers.

The results point to the need for tighter control of export transactions by the Ukrainian tax authorities and government. There are two possible reasons for the significant profit shifting

to keep occurring despite the introduction of quite modern legislation several years ago. Either the transactions are not properly controlled and the exporters shift the profits against the rules without being caught; or the legislation needs to be further tightened.

Resolving these issues would significantly increase fiscal payments to the state of Ukraine and would make profitability of the Ukrainian mining companies higher. This in turn would allow to increase very low wages of Ukrainian miners which are currently the lowest among all iron ore producers globally.

Appendix A

		20	2017				2015			2014				2013							
Turnov		Turnover (in thousand																			
Entity	Group	hryvnyas (UAH)	EPM	GPM	D	Turnover	EPM	GPM	D	Turnover	EPM	GPM	D	Turnover	EPM	GPM	D	Turnover	EPM	GPM	D
Company 1	Group 1	3,949,978	-8%			2,725,031	-4%			2,275,484	14%			2,630,682	52%			2,385,038	33%		
Company 2	Group 2	4,383,582	-32%			3,423,389	-5%			7,478,729	-10%			6,375,756	16%			3,150,414	16%		
Company 3	Group 3	10,727,577	31%	9%	21%	7,102,181	38%	3%	36%												
Company 4	Group 3	15,711,286	44%	9%	35%	11,306,531	-1%	3%	-3%	9,489,519	-45%	-17%	-28%	11,341,151	12%	4%	8%	10,352,257	56%	6%	50%
Company 5	Group 4	5,436,220	42%			4,453,106	25%			2,948,788	39%			3,691,909	41%			3,035,186	39%		
Company 6	Group 3	23,282,274	41%	9%	31%	15,106,505	29%	3%	27%	13,329,415	-11%	-17%	6%	12,570,735	14%	4%	11%	13,345,344	41%	6%	35%
Company 7	Group 5					14,605,309	49%			10,566,993	41%			9,836,471	83%			9,203,258	45%		
Company 8	Group 6	20,378,679	30%	38%	-8%	16,946,256	2%	19%	-17%	14,969,052	-47%	3%	-50%	11,788,011	-16%	18%	-35%	8,420,273	7%	19%	-12%
Company 9	Group 7	66,185,876	10%	7%	2%	52,961,756	6%	5%	1%	46,261,289	4%	-11%	15%	36,740,613	4%	-3%	7%	28,251,196	-5%	-1%	-4%
	D=EPM-GPM	Average Profit Margin	20%	15%			16%	6%			-2%	-11%			26%	6%			29%	8%	

EPM: Entity profit margin (Profit before tax/turnover)

GPM: Group profit margin (Profit before tax/turnover)

References

Argibay Molina, J. A., (2013), "The Phenomenon of Trade Mispricing: Untying the Knot for a Legal Analysis". Montre-al: McGill University, Faculty of Law,

Cobham A., Jansky P., (2018), "Global distribution of revenue loss from corporate tax avoidance: re-estimation and country results", Journal of International Development 30, 206–232,

Dessatniuk O., Cherevko O., (2015), "Practical application of the methodology for calculating the arm's length range of prices/profitability for transfer pricing purposes," European journal of economics and management sciences, issue 4, pages 30-33,

De Mooij R, Liu L., (2012), "At a Cost: The Real Effect of Transfer Pricing Regulations on Multinational Investment", IMF Working Paper, IMF,

Ghutovska O., (2014), "The law complicates preparation of the quality report on controlled operations". - [Elektronnyjresurs] / // Visnyk DFS,

Grondona, V., (2015), "Transfer pricing manipulation and capital flight". VI Congreso 2015 "El futuro del desarrollo argentino". Fernando Peirano (comp.). Asociación de Economía para el Desarrollo de la Argentina (AEDA). May, 2015. URL: http://www.aeda.org.ar/

Grondona, V., (2018), "Transfer Pricing: Concepts and Practices of the Sixth Method in Transfer Pricing". The South Centre,

Kasperovich, Y., (2014), "The development of the system of regulation and control of transfer pricing in Ukraine", Efektyvna ekonomika, [Online], vol. 6,

Kravchuk, O. (editor), (2016), "Alternative Mechanisms for the Socio-Economic Development of Ukraine", Center for Social and Labor Research, Kyiv,

Riabych O., Vakulchyk O., (2015), "The transfer pricing control mechanism and reporting system implementation challenges: Ukrainian experience", The Customs Journal,

Shatokha, V., (2016), "The Sustainability of the Iron and Steel Industries in Ukraine: Challenges and Opportunities", Journal of Sustainable Metallurgy, 2:106–115,

Shay, S., (2016), "An Overview of Transfer Pricing In Extractive Industries", chapter 3 in "International Taxation and the Extractive Industries", Routledge,

Vakulchyk O. M., Riabych O. V., (2014), "The problems and peculiarities of introduction in Ukraine of transfer pricing monitoring mechanism". - [Elektronnyj resurs] / // Visnyk Akademiji mytnoji sluzhby Ukrajiny. – Serija «Ekonomika». – 2014. – No 1(51),

Remarks / Comments / Notes									



