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# CENTRAL SECURITIES DEPOSITORIES OF THE VISEGRAD GROUP COUNTRIES COMPARED<sup>1</sup>

**Summary:** The aim of the paper is to highlight the role of Central Securities Depositories in the world economy and to analyse the CSDs in Visegrad Treaty countries. General trends of CSD and development of CSDs regulation are examined. Visegrad countries CSDs are compared and analysed. Results: 1. Securities markets in Visegrad countries and their FMIs lag behind the development on the developed markets of the EU-15. The total share of CSDs of the Visegrad countries in the performance of the ECSDA members is marginal. 2. CSD in Poland and in Hungary show better results than the Czech and Slovakian CSDs.

**Keywords:** Central Securities Depositories (CSDs), CSD role in the world economy, CSD functions in Visegrad Treaty countries.

## Introduction

Most parts of the financial market infrastructure have undergone a revolution in the past thirty years or so. Very important institutions included in the financial market infrastructure mainly comprise payment systems, central securities depositories, and various settlement systems for securities transactions. The objective of the paper is to compare securities depository systems (CSDs) of the Visegrad Group countries, i.e. Poland, Czech, Slovakia, and Hungary, using selected indicators. With regard to the extensive literature available in this area, we only use some sources selected for this paper, as required to fulfill the objec-

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<sup>1</sup> The paper has been prepared as part of a project on Financial Market Infrastructures' Institutions financed by VSFS Prague (University of Finance and Administration). Project number: 7760.

tive hereof. It is worthwhile to remember some of the older sources on deregulation [Minsky, 1986], on market fragmentation [Krugman, 1994] etc.

The two comprehensive reports on securities settlement prepared by Giovannini Group are a unique source with a list of the well-known list of 15 barriers („Removal of the 15 barriers is essential to deliver efficient and integrated EU clearing and settlement arrangements“) [Giovannini, 2003]. Selected results of academic research, such as, on harmonization of securities settlement [Lappeteläinen, 2015], on economies of scale and technological development in securities depository and settlement system [Schmiedel, 2004; Seddon 2010; Wyman, 2015] etc. were taken into consideration as well.

Facts provided here mainly rely on documents of central securities depositories of the compared Visegrad Group countries with each CSDs and they are also completed with information from documents of other international organizations operating in the financial market infrastructure. Statistical analysis is the predominant method used here. Statistical data analyzed in this paper are prepared in compliance with the ECSDA (European Central Securities Depositories Association) methodology [ECSDA, 2013a]. However, the data are not directly comparable with the data published worldwide, i.e. included in the statistics of the IMF or the IOSCO.

## **1. Significance of the CDSs for FM and FMIs**

There are many central securities depositories' (CSDs) definitions. At present, the definition published by ECSDA (2011) belongs to the recognized definitions: “CSDs perform a fundamental role in their respective markets for the issuance, settlement and safekeeping of financial instruments” [ECSDA, 2011]. As a part of financial markets infrastructures, CSDs directly contribute to reduce risks and to increase effectiveness of financial markets. European Commission gives a similar definition: “CSDs are systemically important infrastructures in modern securities markets. They perform crucial services that allow at a minimum the registration, safekeeping, settlement of securities in exchange for cash and efficient processing of securities transactions in financial markets” [EC, 2016]. Another definition refers to the actual CSDs: “Central Securities Depositories (CSDs) are institutions which hold securities in ‘dematerialised’ form, so that trades between securities holders can be made by ‘book entries’ thereby eliminating the need to issue physical certificates of ownership. CSDs provide both clearing services (the procedure by which a CSD assumes the role of a buyer and seller for

transactions to reconcile orders between parties and reduce the risk of a party being unable to complete a trade) and settlement services (the transfer of assets)” [Norton Rose Fulbright, 2016].

From the territorial perspective, i.e. based on the territory, where a CSD operates, it is possible to distinguish national or domestic CSD and international CSD. This is the most important criterion here. CSD may also be classified based on a number of other criteria, e.g. based on the CSD ownership, type of services CSDs provided to their clients, type of securities, etc. With the development of the market economy in Europe, it was necessary to set down certain rules for the securities trading, particularly in terms of their settlement – i.e. in terms of the payment methods with regard to purchased securities and in terms of the methods of their delivery to new owners, during the Middle Ages already. Furthermore, it was also necessary to store securities in a safe place. Since stock exchanges were the center of securities transactions, they also ensured some of the functions associated with the securities settlement and custody. With the continued development of the securities markets, specialized institutions would gradually emerge and deal with such functions. First, these institutions were local, only operating on local and/or national markets. With progressing internationalization of the economy, securities started to trade internationally as well. The process of internationalization can be considered an important driver on the road from national deconcentrated depositories systems to national systems [Giovannini, 2002].

Virtually from the second half of the 1980s, there was a growing need to overcome the fragmentation of the financial services market in arranging securities issues (particularly bonds and shares), settlement of securities transactions in line with the DVP principle (delivery versus payment), i.e. delivery of securities against the payment thereof, with subsequent deposition of securities in a safe location – in depositories. As long as most securities were in paper form, depositories were often unable to cope with the transactions related to the settlement; moreover, depositing paper-form of securities for high volumes of transactions was particularly demanding in terms of the required space and the provision of high-quality services. Radical changes did not occur until the extensive advances in information technology, particularly the rapid development of the Internet during the 1990s. This marked the start of the transformation process from the traditionally higher number of local or national depositories, as appropriate, to their concentration within a single central securities depository at a national level. In parallel to the centralization process, changes were also taking place within the depositories of countries featuring developed financial markets, where

international-type depositories had operated for decades. In such depositories, it was possible to deposit securities traded on international markets. In terms of Europe, CEDEL had been one of the international depositories since the 1971 which was owned by 92 banks. Since July 2002 it is a division of Deutsche Borse, and known as Clearstream in France, an international CSD – SICOVAM – was founded in 1941 [Chabrolles, Juvin, 1992]. In 1970 Swiss banks established SEGA (Schweizerische Effekten-Giro AG) for the centralized safekeeping of securities. Similarly, in Italy (1978) a central securities depository MONTE TITOLI was created. The CSD transformation process from separate domestic securities depositories into the central securities depository systems was gradual.

## **2. The CSDs of the Visegrad Group countries**

This section characterizes CSD within individual Visegrad Group countries. The main facts are based on Statutes and Annual Reports of the relevant CSDs.

### **2.1. The CSD in Poland**

The central securities depository (CSD) in Poland was established in 1991, as one of the parts of the Warsaw Stock Exchange. Three years later (on 7 November 1994), it was detached from the Warsaw Stock Exchange and transformed into an independent joint-stock company. In this joint-stock company, the Polish state, represented by the Minister of Finance, owns one-third of all shares, with the Polish National Bank (Narodowy Bank Polski) and the Warsaw Stock Exchange each holding one-third of shares. The Polish CSD is a non-profit organization. The Polish central depository manages 39 203 securities accounts. Overall, it has 62 participants – of which 60 from Poland and 2 international participants. It has 189 employees (2013 data). It provides services with regard to the following financial instruments: equities, ETFs, government bonds, corporate bonds, commercial papers, investment funds, rights and warrants. In addition to these instruments (the group “Other“): investment certificates, allotment certificates, IFIs bonds, central bank bonds, municipal bonds, mortgage bonds as well. The Polish CSD acts as a local operating unit (LOU), assigning legal entity identifiers (LEI) to individual legal entities. Moreover, it assigns the international identification number ISIN to investment instruments. KDPW is a designated SSS (SFD) as well [KDPW S.A.].

## **2.2. CSD in Hungary**

Hungaria Central Depository is called KELER Ltd. Hungarian Central Bank owns 43%, and the trade-venue, i.e. The Budapest Stock Exchange, 53% of its shares. KELER is a for-profit organization. KELER keeps 4,530 securities accounts: 4,530. It has 69 total participants, 90% domestic and 10% non-domestic. Keler employs 133 employees (2013). KELER disposes of a banking license and is a designated SSS.

Financial instruments accepted for deposit and/or settlement are the following: equities, ETFs, government bonds, corporate bonds, treasury bills, commercial papers, investment funds, warrants and rights [KELER Ltd.]

## **2.3. CSD in the Czech Republic**

The Exchange Register of Securities was the predecessor of the present Central Securities Depository. After three years, it was transformed into a joint-stock company UNIVYC, a.s. in 1996. In 2005, UNIVYC, a.s. agreed on cooperation in preparing and providing selected IT for the purpose of forming a central depository. In 2006, UNIVYC, a.s. applied for a license to act as a central securities depository. Once it received the given license, it took over the records of the Securities Center in 2010, launching the central depository operations under a new name – Central Securities Depository Prague (Centrální depozitář cenných papírů, a.s.) CSD Prague is a fully owned subsidiary of the Prague Stock Exchange. As a subsidiary of the Prague Stock Exchange, it is also a member of the CEESEG group. The CSD Prague works on a membership principle, with the services of the CSD Prague associated with the securities records and transaction settlement only being provided via its members/participants. It manages 1,639,948 accounts (in 2013). Of the 27 participants, 85% of them are Czech, with the remaining 15% being foreign. The CSD Prague has 40 employees. It assigns international identification numbers ISIN to investment instruments. It acts as a local operating unit (LOU), assigning LEIs to individual legal entities.

Financial instruments accepted for deposit and/or settlement are equities, government bonds, corporate bonds, warrants and rights [Centrální depozitář ČR].

## **2.4. CSD in the Slovak Republic**

The Central Securities Depository of the Slovak Republic is a joint-stock company established in the Slovak Republic. In terms of its activities, it followed up on operations of the former Securities Center of the Slovak Republic (Stredisko cenných papierov SR, a.s.). It has carried out its operations pursuant

to Act No. 566/2001 Coll., on Securities and Investment Services, as amended, since 19 March 2004. With effect from 16 March 2006, the Bratislava Stock Exchange (Burza cenných papierov v Bratislave, a.s.) became a 100% shareholder of the central depository, as a result of contributing the government's ownership interest in the central depository to the benefit of the registered capital of the Bratislava Stock Exchange. In 2013, the central depository has 70 employees. It manages about 500 thousand accounts for 20 users. 86% of all users are Slovak. The central depository provides deposit services as well as services in settlement for equities, ETFs, government bonds, corporate bonds, treasury bills, commercial papers and investment funds [Centrálny depositár, 2016].

### **3. The four CSDs compared**

The subsequent comparison of the four CSDs is carried out on the basis of selected parameters in line with the ECSDA methodology [ECSDA, 2013b]. Our analysis relies on three findings. Firstly, both the FM and the FMIs in the Visegrad Group countries are less developed compared to individual developed countries of Western Europe. Secondly, significant differences (market volume, structure, etc.) exist for the FT as well as FMIs of individual Visegrad Group countries that materially affect the overall specialization of the CSDs, their service structure, etc. Thirdly, these differences significantly result from the different transformation route taken by these countries during the 1990s.

The comparison is mainly based on Statistical data of the ECSDA (European Central Securities Depositories Association) database. The ECSDA data on securities settlements systems are based on the same methodology as the ECB statistics [ECB, Foreign rates Statistics] and ECSDA Factbook 2013 Methodology [ECSDA, 2013b]. ECSDA relying on the ECB Blue Book methodology converts non-EUR amounts into EUR based on bilateral annual exchange rate published by the ECB.

It was necessary to reduce the number of compared parameters; the author tried to select the most important ones to be able to demonstrate the difference between the compared Visegrad Group countries CSDs. It has to be stressed that all CSDs are developing their services and technologies; nevertheless, their results only can reflect the changing trading results.

Table 1 demonstrates the ownership differences, participants and employees numbers, and the number of accounts kept with CSDs.

**Table 1.** Basic Data

	Poland	Hungary	Czech Rep.	Slovak Rep.
<i>Shareholders:</i>				
State	33,3%	-	-	-
Central Bank	33,3%	53,3%	-	-
Stock Exchange	33,3%	46,7%	100%	100%
<i>Profit/non-profit</i>	NP	FP	FP	FP
<i>Participants</i>	62	154	26	20
– domestic	60	136	22	16
– non-domestic	2	18	4	4
<i>Employees</i>	169	121	46	72
<i>Number of Accounts</i>	39203	4530	1618598	361954

Source: www.kdpw.pl, www.keler.eu, www.centralnidepozitar.cz, www.cdcp.sk (accessed: 8.04.2016).

Central depositories in the Czech Republic and Slovakia are controlled by respective stock exchanges. In this regard, the effect of the private property ideology is apparent (which was characterized by the voucher privatization, among others). On the other hand, the government has majority in Poland and Hungary (2/3 in Poland and absolute majority in Hungary). Only the Polish CSD is in the form of a public service (non-profit); CSDs in the remaining three countries are operated as for-profit organizations. All the CSDs under review operate on the basis of a membership principle; the CSD in Hungary has the highest number of participants (members), followed by Poland. Higher competition among participants is likely to exist here. On the other hand, the CSDs in the Czech Republic and Slovakia feature a relatively low number of participants; therefore, oligopolistic practices are possible here. Since this fact has not been examined in more detail, no definite conclusion can be drawn. The share of non-domestic participants is very low in all four countries. However, a detailed analysis would be required to assess their true power. The following two indicators are rather shown as an illustration; the comparison of the number of employees would only make sense if we break down the structure of provided services (based on the results shown in annual reports); information about the number of managed accounts cannot be compared at all, because the CSDs under review have a varying structure of services and different systems.

Table 2 gives a comparison of financial instruments subject to services of each CSDs. The scope of the services provided by CSD is the narrowest in the Czech Republic. The provided services do not cover issue rights in either the Czech Republic or Slovakia.

**Table 2.** Financial instruments accepted for deposit and/or settlement

Instruments	Poland	Hungary	Czech Rep.	Slovak Rep.
Equities	x	x	x	x
ETFs	x	x		x
Government bonds	x	x	x	x
Corporate bonds	x	x	x	x
Treasury bills		x		x
Commercial papers	x	x		x
Investment funds	x	x		x
Warrants and rights	x		x	
Emission rights		x		
Other	x	x		x

Source: www.kdpw.pl, www.keler.eu, www.centralnidepozitar.cz, www.cdcp.sk (accessed: 8.04.2016).

When breaking down the “Other” item, it is clear that the CSDs in Hungary and Poland can ensure the widest range of instruments.

Table 3 compares the volumes of transactions executed in 2014. Individual items are comparable. Some of the identified results for each items and their comparison for individual countries may be considered to be rather surprising, such as the low volume of redemptions in the Czech Republic (even lower than in the Slovak Republic).

**Table 3.** Securities transactions in 2013

	Poland	Hungary	Czech Rep.	Slovak Rep.
New issues (EUR million)	50,722	449,392	8,577	9,946
Redemptions (EUR million)	33,855	436,404	1,215	9,583
Value of securities held on accounts (EUR million)	303,495	132,765	111,259	40,315
Value of deliveries (EUR million)	10,782,960	1,689,323	136,694	37,709
Number of deliveries (thousands)	14,869	541	737	147

Source: www.kdpw.pl, www.keler.eu, www.centralnidepozitar.cz, www.cdcp.sk (accessed: 8.04.2016).

In terms of the value of securities within individual accounts as well as the value of supplied securities, Poland is in the lead. Overall, both the Czech Republic and Slovakia significantly lag behind the results of CSD operations in Poland and Hungary. The unfavourable situation on the securities markets in the Czech Republic and Slovakia is also documented by the numbers regarding new issues in these countries are very low.

**Table 4.** Selected indicators

	Poland	Hungary	Czech Rep.	Slovak Rep.
1	2	3	4	5
Banking licence		x		
Designated SSS	x	x	x	x
Eurosystem eligible SSS				x



**Table 4 cont.**

1	2	3	4	5
National Numbering Agencies	x	x	x	x
Legal Entities Identification	x		x	x
T2S participation		x		x
T2S currency		EUR		EUR
BIS model	1	1 ; 3	1; 3	1; 2

Source: [www.kdpw.pl](http://www.kdpw.pl), [www.keler.eu](http://www.keler.eu), [www.centralnidepozitar.cz](http://www.centralnidepozitar.cz), [www.cdcp.sk](http://www.cdcp.sk) (accessed: 8.04.2016).

Central depositories of the Visegrad Group countries are not considered to be financial institutions, with the exception of the CSD in Hungary, the only CSD to hold a banking license. According to the EU Settlement Finality Directive, all CSDs are recognized as securities settlement systems (SSS) [EC – Directive 2009/44/EC].

Only the Slovak central depository complies with the user standards of the EU and may thus take part in the collateralization of credit transactions of the Euro system. All depositories have the right to assign ISIN numbers to securities – as the so-called national numbering agencies (ISIN system).

Solely the central depositories in Hungary and Slovakia are members of the Target 2 agreement (Securities Framework Agreement) [ECB, 2016].

Therefore, the two depositories may use the single European currency (EUR) for settlements pursuant to the Target 2 agreement. With regard to the settlement type according to the Bank for International Settlements, the central depositories in Hungary and the Czech Republic may use two models, whereas the Polish depository may only use model no. 1 and the Slovak depository may only use model no. 2. These models differ from one another in their settlement method. For the first model, settlements are carried out on a simultaneous, irrevocable and real-time gross settlement (RTGS) basis; in applying the second model, the settlement process varies for securities and cash payments: securities are settled on a gross basis and cash is settled on a net basis; the third settlement model is characterized by the fact that both securities and cash are exchanged simultaneously on a net basis once a day. The third model is the most technically challenging one, since settlements take place in a single day. It should be noted that in many countries with less developed systems in financial market infrastructure, securities transactions are still settled under the Delivery versus Payment system (DVP) with 1 + 5 regime (i.e. the settlement process must be completed within 5 days); in a number of European countries, settlements still take place within the 1 + 3 regime – this is in line with applicable international settlement standards.

## Conclusions

The results of the elementary comparative analysis of selected parameters of CSDs in the Visegrad Group countries corroborate the fact that securities markets in these countries as well as their FMIs lag behind the development on the developed markets of the EU-15. This is also associated with the relatively low volume of securities transactions carried out by the CSDs of the countries under review. Compared to the volume of transactions by CSDs that are members of the ECSDA, the total share of CSDs of the Visegrad Pact countries in the performance of the ECSDA members is only marginal. However, smooth functioning of the CDS is necessary for functioning of the FMIs. The overall comparison of the CSDs in the Visegrad Group countries suggests that the best situation exists in Poland and Hungary.

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## PORÓWNANIE KRAJOWYCH DEPOZYTÓW PAPIERÓW WARTOŚCIOWYCH W KRAJACH GRUPY WYSZEHRADZKIEJ

**Streszczenie:** Celem artykułu jest zwrócenie uwagi na rolę centralnych depozytów papierów wartościowych (KDPW) w gospodarce światowej oraz analiza ich zadań w krajach Grupy Wyszehradzkiej. W tekście zaprezentowano i oceniono ogólne trendy rozwoju KDPW oraz ich regulacje, a także porównano ich działanie w poszczególnych państwach. Przeprowadzona analiza pozwala sformułować poniższe wnioski. Po pierwsze, rozwój rynków papierów wartościowych i infrastruktury rynków finansowych w krajach Grupy Wyszehradzkiej jest opóźniony w stosunku do rozwiniętych państw UE-15. Całkowity udział KDPW państw Grupy Wyszehradzkiej w ogólnym wolumenie obsługi w Europejskim Stowarzyszeniu Centralnych Depozytów Papierów Wartościowych jest niewielki. Po drugie, w Polsce i na Węgrzech krajowe depozyty papierów wartościowych uzyskują lepsze wyniki niż w Czechach i na Słowacji

**Słowa kluczowe:** krajowe depozyty papierów wartościowych (KDPW), rola KDPW w światowej gospodarce, zadania KDPW w krajach Grupy Wyszehradzkiej.