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## COINS OF KINGS ZYGMUNT III AND WŁADYSŁAW IV STATE OF INVESTIGATIONS AND PERSPECTIVES

Times of Zygmunt III Waza and Władysław IV Waza lasted from the end of the 16<sup>th</sup> century to the first half of the 17<sup>th</sup> century, precisely it is the period from 1587 to 1632 (Zygmunt III's reign) and from 1632 to 1648 (Władysław IV's). In both periods of reigning the coin striking differed in many aspects. In the first period monetary units were struck in large quantities, whereas in the second period only coins of high grade were produced.

The author would like to remind that in times of Zygmunt III Waza 7 gold monetary units of values 20, 10, 5, 4, 3, 2 and 1 ducat were struck and 12 silver coins such as talers, half-talers, quarter-talers, ors, 6 grossi, 3 grossi, *krucierze*, one-and-half grossi, grossi solidi, ternari and denari. Coins were produced in the Crown mints in Olkusz, Poznań, Wschowa, Bydgoszcz, Malbork, Lublin, Cracow, Łobżenica, in Lithuanian mint in Vilna where double-denarius was struck and in municipal mints of Gdańsk, Toruń, Elbląg, Riga and Poznań. There was an especially large production of small and mean coin units i.e. 6 grossi, 3 grossi, one-and-half grossi, grossi, solidi, denari, which is manifested by numerous hoards from that period discovered among others in Lublin provinces. Andrzej Mikołajczyk has calculated that in 1623–1627 about 763 million of one-and-half grossi were produced in Bydgoszcz, not taking into consideration other mint-editions but whether coins were produced only in that mint or in other subsidiary workshops so far unknown, we still do not know.

Under the reign of Zygmunt III Waza many regulations and minting orders were announced. Regulation from 1580 proclaimed by Stefan Batory was still obligatory during the first years of King Zygmunt III. In 1601–1619 some instructions controlling, first of all, the situation on monetary market were issued. In 1601 the majority of the Crown mints were closed, in 1608 the regulation concerning the emission of half-talers was proclaimed, in 1614 the regulation concerning one-and-half grossi ediction, in 1619 the regula-

tion about the devaluation of one-and-half grossi off 48% in relation to the previous value of the grossus etc. and finally in January 1627 the order to close all the mints was issued. Some researches, as for example Edward Sońnica Wild, claim that: "regulations and orders of Zygmunt III did not stem out of rational basis, therefore they were unable to prevent the monetary crisis. Their purpose was, first of all, to modernize norms of production of the given types, to correct the mintfoot and silver fineness through adjusting them to factual state".

As it is well-known, besides Polish coins struck in the country also foreign monetary units came to Poland in large quantities. They were not always of "worse" fineness but since they appeared in a great number, which can be proved by the analysis of the 17<sup>th</sup> century monetary hoards, so they outnumbered our own monetary market.

Independently of the local legal mint-editions, there is some information from written sources about coins struck in forged mints. This information is confirmed by monetary finds. For example, we know that in Żywiec Mikołaj Komorowski struck copper and silver-plaited grossi in 1610–1621; among others such coins in number of 20 specimens have been discovered lately in the Old Town in Lublin during archeological excavations.

As a result of constant reduction of mintfoot of mean and low value coins, the prices of ducats and talers were increasing. The following table illustrates this.

The price increase of high value in grossi

Year	Taler	Ducat
1587	35	56
1600	37	60
1616	42	70
1623	80	180
1627	90	160
1632	90	165
1648	90	180

For the sake of comparison the devaluation of ducat and taler in other countries (in grossi)

Year	Coin Type	Bohemia	Silesia
1578	ducat	108 – 113	54 – 58
	taler	68	36
1600	ducat	113	59 – 62
	taler	70 – 73	38
1616	ducat	140	72 – 78
	taler	90	45 – 46
1620	ducat	150	90 – 100
	taler	90	54 – 75
1623	ducat	to 1200	900 – 1200
	taler	675	444 – 720
1648	ducat	–	–
	taler	–	–

In Germany in the thirties of the 17<sup>th</sup> century the price of one taler was as much as 720 grossi.

Under the reign of Zygmunt III Waza a deep economic and monetary crisis was observed. Both phenomena were of different character and evoked by different causes and each of them resulted in various effects though there were some mutual relations between them.

Economic factors were of great significance. Antoni Szelaḡowski<sup>1</sup> and an economist Zdzisław Sadowski<sup>2</sup> devoted their papers to them. These authors paid attention to gradual deterioration of money, the increase of prices and export of silver from Poland due to the difference in silver prices in the country and abroad where silver was more expensive. Antoni Szelaḡowski claims, among others, that "the monetary crisis was not caused by tendentious, conscious deterioration of money but its low rate of exchange in Poland in comparison with the high rate abroad which caused the egress of good currency and made mints reduce mintfoot". Zdzisław Sadowski remarks that real causes of the lack of silver were of different nature being connected with economic relations inside the country. Deterioration of money at the beginning of the 17<sup>th</sup> century was not an independent phenomenon but a derivative one. It was not it that brought about the worsening of the internal economic situation but, on the contrary, it was evoked by worsening of this situation which led to the development of foreign and local speculations. The essence in disturbances in money – goods economy of that period in Poland did not depend upon the deterioration of currency but upon the rise in prices and changes of price ratio, mostly between export and import prices.

<sup>1</sup>A. Szelaḡowski, *Pieniądz i przewrót cen w XVI i XVII wieku w Polsce*, Lwów 1902.

<sup>2</sup>Z. Sadowski, *Pieniądz a początki upadku Rzeczypospolitej w XVII wieku*, Warszawa 1964.

Polish monetary policy in the eighties and nineties of the 16<sup>th</sup> century aimed at filling the Polish monetary market with our own small money, while striking ducats and talers at the same time. This fact and the gradual worsening of good coins produced from good metal caused high prices which were especially drastic in the 17<sup>th</sup> century. The importunate increase of prices was related to monetary chaos evoked, on one hand, by the influx of foreign money, on the other by the devaluation of the Polish grossus system. The expenses and goods were paid for with bigger and bigger amount of deteriorating grossi.

In the 17<sup>th</sup> century in Poland monetary relations were formed both by internal and external factors. One of them was, first of all, an inadequate ratio of gold price to silver price, in disfavour of silver. Therefore, speculators made money on exporting silver from the country, since abroad, especially in western Europe, they received more gold for it. One of the internal factors was an unprofitable relation of value of Polish balance of trade and payments. Unfriendly monetary policy of neighbouring states in relation to Poland made the crisis sharpen during the period of Thirty Year War, 1618 – 1648.

Summing up the characteristics of the first period the following phenomena should be stressed: 1) ample activity of national mints and constant and gradual decrease of value of Polish money on monetary market, especially of mean and low units, so called "small change", at the same time with quite plentiful illegal forgery of money, mainly grossi; 2) invasion of small silver coin produced in the country, the export of Polish silver abroad and the influx of great number of small coins of foreign origin, mainly from Sweden, Germany, Austria and from Silesia; 3) high prices for goods and drop in prices of Polish export at the same time; 4) the lack of proper attitude of authorities in face of the circumstances: the King, the Sejm and the Committee for Monetary Affairs, since the rules and regulations issued by them confirmed the status quo rather than tried to re-arrange it.

Together with increasing prices the need for greater monetary mass was rising. Although the Crown mints in Cracow and Bydgoszcz worked almost continually but still the population lacked their own small coin.

In spite of this, in 1627 all mints producing small change were closed. Władysław IV obeyed the law throughout the whole period of his reign, striking only talers and ducats. The act forbidding to export gold and silver under severe penalty was issued but in practice that act was not respected. The price of ducats and talers counted by means of small change i.e. grossi was increasing. Foreign coins, willingly accepted by the Polish population because of the lack of native small change, were imported in large number to Poland. The

proposal to strike coins in decimal system was not validated by the Sejm.

The state of investigations of the examined period is not satisfactory. The bibliography composed of works of different types and kinds comprises 78 positions, of which 59 positions deal with the times of Zygmunt III Waza, 12 with the epoch of both rulers and only 7 papers devoted to the times of Władysław IV.

Works by the count Stanisław Walewski<sup>3</sup> and Mieczysław Morzycki<sup>4</sup> should be mentioned here as the oldest research papers devoted to this subject, accompanied by few smaller articles by Jałowiecki, Kurnatowski, Pochwalski, Bartynowski and others from the end of the 19<sup>th</sup> century.

The study of Seweryn Tymieniecki<sup>5</sup> and numerous works of Marian Gumowski published since the I World War till the end of sixties of our century draw a special attention as research works reflecting the mintage of both rulers with special regard to Zygmunt III Waza. Some of them are up to date even nowadays.<sup>6</sup>

Two excellent papers devoted to the mintage of the discussed period have been published recently: the first one by Janusz Reyman about the mint in Olkusz<sup>7</sup> and the second by Teofila Opozda treating about the mint in Łobżenica.<sup>8</sup> The authors of both works, independently of the description of coin production and problems related to it, critically viewed the time limits, accepted so far, in which the above mentioned mints were to function.

In the recent period some other precious articles and papers devoted to the reign of Zygmunt III Waza printed in "Wiadomości Numizmatyczne" have been presented to the reader. There are among others: an article by Zbigniew Żabiński about monetary crisis in times of Zygmunt III<sup>9</sup> and an interesting debate by Edward Sośnica-Wild dealing with the same subject<sup>10</sup>.

<sup>3</sup>S. Walewski, *Trojaki koronne Zygmunta II od 1588 do 1624*, Kraków 1884.

<sup>4</sup>M. Morzycki, *O trojakach koronnych Zygmunta III*, Warszawa 1883.

<sup>5</sup>S. Tymieniecki, *Zarys do dziejów mennic koronnych Zygmunta III w XVI wieku*, "Wiadomości Numizmatyczno-Archeologiczne" 1891, 1-2, 1910, 1-4, 1913, 3-9, 1916, 1-3 i 5-8.

<sup>6</sup>M. Gumowski, *Dzieje mennicy krakowskiej*, Warszawa 1927; *idem*, *Mennica wileńska w XVI i XVII wieku*, Warszawa 1931; *idem*, *Mennica bydgoska*, Toruń 1955; *idem*, *Mennica lubelska w latach 1595-1601*, "Roczniki Humanistyczne", KUL 1958, 8, 2, pp. 227-271.

<sup>7</sup>J. Reyman, *Mennica olkuska 1579-1601*, Wrocław 1975.

<sup>8</sup>T. Opozda, *Mennica łobżenicka*, Wrocław 1975.

<sup>9</sup>Z. Żabiński, *Kryzys monetarny w czasach Zygmunta III*, "Wiadomości Numizmatyczne" 1976, 20, 1, pp. 1-13.

<sup>10</sup>E. Sośnica-Wild, *W sprawie kryzysu monetarnego w*

The author who presented a great deal of valuable and innovatory works devoted, among others, to the period of Zygmunt III Waza is Andrzej Mikołajczyk. Let me quote as an example: *Rozmiary produkcji menniczej w Polsce za Stefana Batorego i Zygmunta III Wazy. Pytania bez odpowiedzi*, and *Węgierskie srebro w Polsce - zabezpieczenie kruszcowe gwałtownego rozwoju produkcji menniczej w końcu XVI i na początku XVII wieku*.<sup>11</sup> In the former work, the author used known and rich numismatic material in form of published hoards from Poland and Ukraina (he applied a comparative method here). The source basis consisted of 5271 solidi, 835 grossi, 15693 one-and-half grossi, 1708 three grossi, 983 six grossi and 504 orts struck between 1577-1627. In general, 24 994 specimens of coins were analysed, which is undoubtedly an adequate material for statistical studies. Moreover, for the sake of comparison the author used 20 193 Polish coins found in hoards from Ukraina. In this interesting and innovatory paper Mikołajczyk analysed the whole material in order to evaluate a relative scale of minting production of particular types of coins struck according to the given minting rules and later, having based upon calculus of probability, he established presumed and probable limits of the volume of minting production.

In the latter paper Mikołajczyk refers to a very significant problem of importing metal to Poland i.e. gold and mainly silver. That import was of crucial significance for a real minting explosion during the reign of Zygmunt III Waza on the turn of the 16<sup>th</sup> and 17<sup>th</sup> centuries. This problem has been marginally treated so far. The studies concentrated, first of all, upon elaborations of coins and hoards, defining many types and variants of particular coins and their correspondence to given mints. Notes devoted to metal supplies for mints were so far not very precise and random. Therefore, Mikołajczyk's work constitutes a serious progress in getting knowledge about Polish mintage in the discussed period.

A very little attention was paid to the reign of Władysław IV Waza in numismatic investigations devoted to modern times in Poland. Only few articles can be cited here<sup>12</sup>.

*czasach Zygmunta III Wazy*, "Wiadomości Numizmatyczne" 1977, 21, 1, pp. 24-33.

<sup>11</sup>A. Mikołajczyk, *Rozmiary produkcji menniczej w Polsce za Stefana Batorego i Zygmunta III Wazy. Pytania bez odpowiedzi*. "Wiadomości Numizmatyczne" 1981, 2, (96); *idem*, *Węgierskie srebro w Polsce - zabezpieczenie kruszcowe gwałtownego rozwoju polskiej produkcji menniczej w końcu XVI i na początku XVII wieku* (in the press).

<sup>12</sup>W. Bartynowski, *Dukat toruński Władysława IV*, "Wiadomości Numizmatyczno-Archeologiczne" 1893, columns 69-70; J. Tałko, *Kopiejski Władysława IV*, "Wiadomości Nu-

The issue of economic and monetary turning-point in the 16<sup>th</sup> and 17<sup>th</sup> centuries in Poland apart from numismatists was studied by many historians and economists. The works of Szel gowski and Sadowski have already been quoted. The latter discussed and commented on the whole Polish economic literature dealing with monetary problems of the studied period. In general, Sadowski's works are a valuable contribution to economic history and monetary history in the first half of the 17<sup>th</sup> century.<sup>13</sup>

While discussing perspectives and investigation tasks one should take into account many problems which ought to be partially or even again re-examined from the very beginning. Perhaps the problem of metal importing to Poland necessary for coin production takes the lead. Multilateral applications of numismatic material preserved in original, especially in forms of hoards, seems to be of great importance as well. Finally, much more attention should be paid to the epoch of Władysław IV, as it was mentioned before, so far treated marginally. At the same time studies on monetary crisis under the reign of King Zygmunt III Waza should be continued since opinions and views about them differ.

Iconographic values of coins, mainly bigger units i.e. ducats, talers and orts, await to be used for research work. Moreover, the investigations led in this direction could help to define authors of mint stamps who also created medallions of baroque epoch. Donative from Toruń and Gdańsk struck in the discussed period lack a proper elaboration as well.

It is not clear what consequences were evoked by the influx of great amount of foreign currency to Poland, mostly from the western Europe, resulting from the need for „small change” while mints in the country suspended striking small coins for 23 years i.e. from 1627 till 1650. We also do not know what were the results (we know causes) of egress of Polish silver abroad, for example to Bohemia and Moravia. The question arises why we possess so few coin hoards from the period of Władysław IV's reign. What happened to Polish and foreign small change, of course struck

before 1627, circulating in times of reign of this monarch?

The discussion about the weight of mark is still continued. Which weight was used, 197,685 g or 201,802 g, or whether both were used dependently of the certain groups of coins?

Nothing is known about likely production of mints in Urzędów, Ólkiew and Warsaw and perhaps others in the period of reign of both monarchs from Waza dynasty. The question is whether those 763 000 000 one-and-half grossi (not considering other types of coins struck in large quantities in a mint of Bydgoszcz) came only from Bydgoszcz mint or from other mint workshops. Our knowledge about the method of coin striking at the turn of the 16<sup>th</sup> and the 17<sup>th</sup> centuries and in the first half of the 17<sup>th</sup> century could be supplemented. A fairly rich publicistic material in the form of treatises and other articles about currency dating back to the first half of the 17<sup>th</sup> century and partially published by Zdzisław Sadowski has not been used so far by numismatics, historians and economists.

Numismatic studies with special regard to statistical methods proposed by Zbigniew Abiński and successfully applied by Andrzej Mikołajczyk<sup>14</sup> should be continued in relation to the whole discussed epoch. They may give answers to the following questions:

— what was the mean weight of coins of examined type group?

— what was the scale of inaccuracy in observance of mean weight i.e. what were the departures of real weight from mean weight of coins?

— what was the mean mint fineness of examined group of coins?

— what was the level of inaccuracy in observance of this fineness?

— to what degree of probability the studied group of coins represents the whole mint-edition unknown to us as regards its size?

— does the obtained information about the size and fineness of the given coins not contain evident miscalculations?

— what was the purchasing power of particular types of coins in the studied epoch?

Finally, it should be mentioned that the research programme proposed here would be worth expanding to the times of king Jan Kazimierz because the period of reigns of all three monarchs from the Waza dynasty constitutes undoubtedly an organic unity.

*Translated by  
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mizmatyczno-Archeologiczne” 1893, J. Tyłner, *Opracowanie dokumentów menniczych z 1636 roku* (Ed. by A. Wolański), “Wiadomości Numizmatyczno-Archeologiczne”, 1911; M. Gumowski, *Popiersie Władysława IV na dwutalarze lennym pruskim*, “Wiadomości Numizmatyczno-Archeologiczne” 1913; S. Giełgowski, *O dwóch rzadkich półtalarach Władysława IV*, “Biuletyn Numizmatyczny” 1970, 7, pp. 115-117; A. Gupieniec, *Kopiejski Władysława Zygmunto-wicza*, “Biuletyn Numizmatyczny” 1970, 4, pp. 62-64; H. Wojtulewicz, *Monety Władysława IV*, “Biblioteczka numizmatyczna”, Warszawa (in typescript).

<sup>13</sup>A. Szelgowski, *Summariusz umiarkowania monety starej z dzisiejszej*, [in:] *Rozprawy o pieniądzu w Polsce pierwszej połowy XVII wieku* (Ed. Z. Sadowski), Warszawa 1959.

<sup>14</sup>See: A. Mikołajczyk, “Biuletyn Numizmatyczny” 1981, 6, p. 109 and *passim*.