Pázmány Péter Catholic University
Faculty of Humanities and Social Sciences
Doctoral School of History

PhD Dissertation

Islamic coins in the Carpathian basin:

The Máramaros "Huszt" Hoard of the Hungarian national museum.

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A Note on Transcription

أ	a	ط	T
ب	b	ظ	Û
ت	t	ع	Ý
ث	th	غ	gh
ج	j	ف	f
ح	Î	ق	q
خ	kh	ك	k
د	d	ل	l
ذ	dz	م	m
ر	r	ن	n
ز	z	ه	h
س	s	و	w
ش	sh	ي	y
ص	Ò	ء	’
ض	Ã	ة	A

Long vowels are indicated with dash line

I. Introduction

The Carpathian Basin, situated in Central Europe, has a rich history of cultural and economic exchanges with various civilizations throughout the centuries. One intriguing aspect of this region's history is the presence of Islamic coins, particularly in Hungary, during the medieval period. These coins provide valuable insights into the archaeological, historical, economic, and cultural connections between the Islamic world and the Carpathian Basin.[1] Islamic coins have a long and diverse history that dates back to the 7th century during the reign of the Umayyad Caliphate.[2] These early Islamic coins were influenced by the Byzantine and Sassanian coins that were in circulation at the time.[3] They were typically made of gold dinar[4] or silver dirham[5] and featured inscriptions in Arabic.[6] The design of Islamic coins evolved over time to reflect the artistic and cultural traditions of the regions where they were produced.[7] For example, coins from North Africa often featured depictions of animals and plants, while coins from Persia were known for their intricate calligraphy.[8] The widespread use of Islamic coins can be attributed to the extensive trade networks that connected different regions of the Islamic world. Islamic merchants and traders carried these coins with them as they traveled, making them a common form of currency in many parts of the world.[9] During the Middle Ages, an enormous quantity of Islamic silver dirhams were exported from the Muslim world to Northern and Eastern Europe.[10] Starting from the beginning of the ninth century. [11] It is well known that in that period the intensification of the trade between the Near-Eastern and Middle-Asian Islamic countries with Vikings and Eastern Europe reached its apogee. Millions of dirhams were carried from Islamic dynasties to Eastern Europe and the Baltic region, over the course of the ninth and eleventh centuries, by far the most common coin types were Abbasid called Kufic coins, These coins are characterized by their distinctive Kufic script, an angular and ornate style of Arabic calligraphy, which typically appears on the obverse (front) side of the dirham. The reverse side often features decorative motifs or Islamic symbols., struck across the lands of the

[1] Polgár 2009: 228-231.
[2] Mitchiner 1977: 27-44.
[3] Wilkes 2005: 1-18.
[4] Miles 1991: 297- 299.
[5] Miles 1991: 319-320.
[6] Plant 1973: 7-13. Bacharach 2006: 1-19.
[7] Grierson 1975: 123.
[8] Broome 1985: 43.
[9] Eshragh 2010: 155-199.
[10] Noonan 1998:151.
[11] Kovalev 2001: 245.

Caliphate. [12] Between the beginning of the tenth century and the early of the eleventh century, It was carried there mainly from Samanid Central Asia,[13] via the southern Ural steppe and Volga Bulgaria.[14] The Carpathian Basin, with its strategic location and connections to the Silk Roads, played a crucial role in this trade and cultural exchange. The presence of Islamic coins in the region, especially in Hungary, is evidence of the Carpathian Basin's involvement in these networks. These coins provide valuable insights into the trade routes, economic interactions, and cultural connections between the Islamic world and the Carpathian Basin during the medieval period.

The Hungarians museums have a collection of Kufic coins, which were discovered in the Carpathian Basin. These coins provide valuable evidence of the presence of Islamic coins in the region during the tenth century. Additionally, archaeological excavations in the Carpathian basin have also discovered Kufic coins form the ninth-tenth centuries, including those from the Samanid and Volga Bulgar regions, further confirming the historical and economical connections between the Islamic world the Volga Bulgar and the Carpathian Basin. One significant collection of Kufic dirham coins found in the Carpathian Basin is the Máramaros "Huszt" Hoard, discovered in 1904 in Máramaros county, in the north-eastern part of historic Hungary. The hoard consists of Samanid silver dirhams dating to the tenth century, as well as limitations dirhams from the Volga Bulgar. The hoard also includes rare types among these imitations, making it a valuable source of information for understanding the trade and economic connections of the time.[15] The Máramaros "Huszt" hoard is an important collection, even when compared to the large quantities of Islamic silver coin hoards found in Northern and Eastern Europe.[16] The dirhams in the hoard provide insights into the economic and cultural exchanges between the Islamic world and the Carpathian Basin during the ninth-tenth centuries.

This doctoral dissertation explores the significance of the Máramaros "Huszt" hoard in understanding the presence of Kufic coins in the Carpathian Basin, particularly in Hungary. The research involves a detailed analysis of the Kufic dirhams and imitations found in the hoard, focusing on their inscriptions and designs. Each coin in the hoard is examined with

[12] Noonan 1985: 179- 204.
[13] Frye, 1975: 132- 161.
[14] Noonan 1997: 142.
[15] Kovács & Fomin 1987: 7.
[16] Kovács, 2011: 83.

particular attention to its mint of origin, and the year of mint, which includes al-Shash, Samarqand, AndarÁbah, Balkh, MaÝdan, Nishapur and the imitation from the Volga Bulgars.

A significant component of this research is the archaeometric analysis of the Máramaros "Huszt" hoard, which includes measuring the silver content of the coins. This data is compared with the silver content of dirhams from other European hoards. This research also addresses the Islamic dirhams discovered in the Carpathian Basin during the ninth and tenth centuries, the archaeological interpretation of the Máramaros "Huszt" hoard, and includes a comprehensive analysis of the concentration of grave findings of Kufic coins in the Carpathian Basin, particularly in the Upper Tisza region, and examines their relation to other dirham discoveries in the area. By conducting this research, we aim to contribute to a deeper understanding of the connections between the Islamic world and the Carpathian Basin during the ninth-tenth centuries in medieval period. The study includes a comprehensive analysis of the coins, their inscriptions, and their artistic features, as well as an examination of the historical context of the hoard. This context considers the trade routes, economic, and cultural interactions that facilitated the presence of Islamic coins in the Carpathian Basin. Moreover, this research contributes to the broader field of numismatics by providing new insights into the circulation and use of Islamic coins in the Carpathian Basin. The analysis of the Máramaros "Huszt" hoard and the Islamic dirhams discovered in the Carpathian Basin during the ninth-tenth centuries sheds light on patterns of coinage, influences on design and inscriptions, and the cultural significance of these coins in the region. This research also enhances our understanding of the archaeological, historical and economical connections between the Islamic world and Central Europe during the ninth-tenth centuries. Overall, the presence of Islamic coins in the Carpathian Basin, as exemplified by the Máramaros "Huszt" hoard, provides a unique window into the region's history and its participation in the broader networks of trade and cultural exchange along the Silk Roads. Through this research, we aim to illuminate the archaeological, historical, economic, and cultural connections that shaped the medieval Carpathian Basin and its interactions with the Islamic world. The findings of this study will also contribute to the historiography of medieval Central Europe by examining Islamic coins and highlighting the region's role in the extensive trade networks of the time. Additionally, this research underscores the importance of numismatic studies in uncovering previously overlooked historical narratives and connections. Through the interdisciplinary approach employed, this dissertation will serve as a valuable resource for scholars interested in the complex interplay of archaeology, history, economics, and culture in medieval Eur

II. Methodology

This doctoral dissertation covers a topic related to Islamic coins from the ninth-tenth centuries in the Carpathian Basin, specifically focusing on the Máramaros "Huszt" hoard of the Hungarian national museum and the Kufic dirhams found in the Carpathian Basin. The methodology used in this research aims to provide a comprehensive understanding of the historical context, sources, trade routes, and archaeological examination of the hoard. The methodology employed in this study involves a multi-disciplinary approach, combining historical research, analysis of primary sources, examination of dirhams, and scientific techniques. The following sections outline the key components of the methodology:

Historical Background: The research begins with an exploration of the historical background of the Islamic coins in the Carpathian Basin. This includes an in-depth study of the Samanids, the Volga Bulgar, the Khazars, the Vikings, the Rus, and the Hungarians. The study examines the political, economic, and cultural interactions between these groups and their influence on the circulation of Islamic coins in the region. Arabic and Persian sources: The analysis of Arabic sources such as Ibn KhurdÁdzbih, al-YaÝqÙbĐ, Ibn RustÁ, al-BakrĐ, HudÙd al-Ālam, al-IÒÔakhrĐ, Ibn Hawqal, al-MuqaddasĐ, al-MasuÝdĐ, al-ÍimyarĐ, and YÁqÙt provides valuable insights into the historical context of the Islamic coins in the region. These sources contain information about the political, economic, and cultural developments of the time, as well as descriptions of trade routes and the circulation of coins. Travellers: The next step involves studying the accounts of travelers who described the Carpathian Basin during the tenth and eleventh centuries. This includes analyzing the writings of Ibn Faḍlān, IbrÁhĐm Ibn YaÝqÙb, and AbÙ ÍÁmid al-GharnÔĐ, who provide firsthand observations and descriptions of the region. These accounts offer valuable insights into the trade networks, cultural exchanges, and the presence of Islamic coins in the Carpathian Basin.

Trade Routes and Middlemen: : The research then focuses on understanding how the dirhams arrived in the Carpathian Basin and the importance of trade in facilitating their circulation. This includes examining the role of various middlemen, including Khazar merchants, Rus merchants, Bulgar merchants, Magyar merchants, and Muslim merchants. The study also explores the commercial exchange and trading of commodities, such as slaves, furs, silk, and other goods, between Muslim countries and Europe during this period. By mapping out the trade routes and identifying the key players involved, the research sheds light on the routes and mechanisms through which Islamic coins reached the Carpathian Basin. Currency and Weight Systems: The study of currency and weight systems within various historical contexts offers

invaluable insights into the economic structures, trade practices, and cultural interactions of past civilizations. In this chapter, we delve into the currency and weight systems of the Rus, the Vikings, the Khazars, the Volga Bulgars, the Muslims, and the Magyars, exploring their complexities and implications for understanding medieval economies. While each of these societies employed unique systems tailored to their specific needs and contexts, they were interconnected through trade networks and shared economic influences, as evidenced by the circulation of coins and the adoption of standardized weights. Through a comparative analysis of these diverse systems, we aim to elucidate the broader economic milieu of the Máramaros "Huszt" hoard and shed light on the interconnectedness of various societies through trade and commerce. An examination of the currency and weight systems of the Rus, Vikings, Khazars, Volga Bulgars, Muslims, and Magyars is conducted to understand the economic structures, trade practices, and cultural interactions of these societies. This comparative analysis sheds light on the interconnectedness of these civilizations through trade and commerce, with specific reference to the circulation of coins and standardized weights.

Analysis of the Máramaros "Huszt" Hoard: The centerpiece of this study is the analysis of the Máramaros "Huszt" hoard itself. Each coin in the hoard is studied, focusing on the mint of origin, including al-Shash, Samarqand, AndarÁbah, Balkh, MaÝdan, Nishapur, and the imitation coins of the Volga Bulgar. The research also examines the inscriptions and content of the coins, providing a detailed description of each. By analyzing the coins in the hoard, the study aims to determine their authenticity, origin, and significance within the broader context of Islamic coinage in Europe. The study also investigates the names of the Samanid AmÐrs on the dirhams: IsmÁÝÐl ibn AÎmad (279-295 AH, 892-907 AD), AÎmad Ibn IsmÁÝÐl (295-301 AH, 907-914 AD), NaÒr Ibn AÎmad (301-331 AH, 914-943 AD), and the names of the Abbasid Caliphs: Caliph al-MuÝtaÃid Billah (279-289 AH, 892-902 AD), Caliph MuktaffÐ Billah (289-295 AH, 902-908 AD), al-Muqtadir Billah (295-320 AH, 908-932 AD), Caliph al-QÁhir Billah (320-322 AH, 932-934 AD). The study includes the date, weight, and diameter of each coin, as well as a description of the inscriptions and content.

The archaeological interpretation of the Máramaros "Huszt" hoard explores the significance of Kufic dirhams found in graves, particularly in the Upper Tisza region. This study considers various hypotheses regarding the high concentration of dirham-containing graves and examines notable burial sites such as the Karos-Eperjesszög cemeteries. Additionally, recent discoveries and results pertaining to Islamic coins in the Carpathian Basin are presented. These findings enhance our understanding of the socio-economic interactions and cultural exchanges during

the period of the Hungarian conquest, highlighting the role of dirhams as indicators of status and wealth.

Archaeometry Examination: A significant aspect of this research is the archaeometry examination of the Máramaros "Huszt" hoard. The dirhams in the hoard are analyzed using the X-Ray Fluorescence (XRF) technique in The Laboratory for Heritage Science MTA Atomki, Debrecen, Hungary. The analysis includes the measurement of the percentage of silver in the hoard, providing valuable insights into the composition and authenticity of the coins. This scientific analysis complements the numismatic examination and helps to validate the findings.

International Perspective: The study also considers the international view of the Máramaros "Huszt" hoard, examining its significance in the broader context of Islamic coinage and trade during the ninth and tenth centuries. A comparison is made between the percentage of silver in the hoard dirhams and the dirhams analyzed from other hoards found in Europe, as documented in the book "Dirham Und Rappenpfennig Mittelalterliche" published in 2003 in Bonn, Germany. This comparison provides insights into the regional variations in the composition of Islamic coins and their circulation patterns.

3D Measurements: Additionally, 3D measurements of the hoard dirhams are conducted, utilizing advanced technology to capture detailed and accurate representations of the coins. This allows for a more comprehensive analysis of the physical characteristics of the coins, such as their weight, diameter, and shape.

Conclusion: The study concludes with a summary of the findings and their implications for understanding the Islamic coins in the Carpathian Basin during the ninth and tenth centuries.

Catalogue: The research concludes with a comprehensive catalogue of the coins in the Máramaros "Huszt" hoard. This includes detailed information on each coin, such as the mint of origin, the names of Samanid AmĐrs, the date, weight, diameter, and a description of inscriptions and content. The catalogue serves as a valuable resource for future research and provides a detailed record of the hoard. This methodological framework, which integrates direct examination, advanced scientific analysis, and historical research, facilitated a comprehensive and multi-dimensional study of the Máramaros "Huszt" hoard and the Kufic dirhams found in the Carpathian Basin during the ninth and tenth centuries. This approach provided an in-depth understanding of the hoard's significance within the broader context of contemporary events in Eastern Europe.

III. Historical Frame

In the study of medieval trade networks and economic interactions, the Islamic silver coins found in the Máramaros "Huszt" hoard provide a unique and valuable insight into the interconnected relationships between various cultures and civilizations. This chapter aims to explore the historical context in which these coins were circulated, shedding light on the trade routes that connected the Samanids, Volga Bulgars, Khazars, Vikings, Rus, and Hungarians. By examining the economic exchanges and commercial activities of these diverse groups, we can gain a deeper understanding of the dynamic and complex network of trade that flourished during this period. Through a comprehensive analysis of the historical framework in which these transactions took place, we can uncover the economic significance of these coins and their role in shaping the medieval economy.

III . I. The Samanids

The Samanid dynasty, founded by Saman Khuda in the late 9th century AD, played a significant role in both the history of Central Asia and Greater Iran, as well as in trade and commerce.[17] The dynasty's strategic location along major trade routes, such as the Silk Road, allowed the Samanids to control and benefit from the lucrative trade that passed through their territories.[18]

Map 1. The Samanid Dynasty (Foltz 2019)

Under the leadership of its notable Amīrs, the Samanid dynasty flourished economically and culturally. One of the key al-Amīrs was Ismāʿil ibn AÎmad, who ascended to the throne in 278AH/ 892 AD.[19] Ismāʿil was known for his military prowess and diplomatic skills.

[17] Manṣūr 1989: 133. Brackelmann 1949: 165. Defremery 1845: 2.
[18] Ibn al-AthÐr, *al-KÁmil fi'ltÁrÐkh,* VII/281. al-Nrshkhī, *Tārīk Bukhāraa,* 113.
[19] NīÛām al-Malik al-Óūsī, *Sīar al-Mulūk ʾAū Siāst Nāmaa,* 55.
Ibn Khaldūn, *al-ʿAbr wa Dīwan al-Mubtadʾ wa al-Khabar,* 774.

He successfully defended the dynasty against external threats, including the Abbasid Caliphate and the Saffarid dynasty.[20] Ismāʿil also fostered a period of cultural and intellectual growth, patronizing scholars, poets, and artists.[21] Ismāʿil's reign saw a significant expansion of trade and commerce within the Samanid dynasty. The dynasty's control over major trade routes, combined with Ismāʿil's efforts to promote economic growth, led to increased trade with neighboring regions. The Samanids established trade agreements and alliances with the Abbasid Caliphate, the Byzantine Empire, and the Tang Dynasty of China. These connections allowed for the exchange of goods, ideas, and technologies, further enriching the trade networks of the Samanid dynasty. After Ismāʿil's death of natural causes in 295 AH/ 907 AD,[22] his son AÎmad (295- 301 AH/ 907-914 AD) became al-Amīr, and the Abbasid appointed governor, in Khurāsān, Tukharistān, and Transoxiana, as well as Óabaristān.[23] However, under AÎmad, the system was made to follow that of the Caliphate and thus function in Arabic, creating much discontent among the local administrative elite. AÎmad was killed in 301 AH/ 914 AD, and was succeeded by his eight year old son, Naṣr.[24]

NaÒr ibn AÎmad, who ruled from 301 AH- 914 AD to 331 AH-943 AD. NaÒr II faced internal conflicts and external threats from the Buyid dynasty, but he managed to maintain the integrity of the dynasty and preserve its cultural heritage. NaÒr II was a patron of the arts and sciences, and his court in Bukhara attracted scholars and intellectuals from across the Islamic world.[25] NaÒr II also played a significant role in trade and commerce.[26] He continued the policies of his predecessors in promoting economic growth and facilitating trade within the dynasty. Under his rule, the Samanid dynasty further expanded its trade networks and established new commercial routes. NaÒr II encouraged the development of market towns and commercial centers, which became important hubs of economic activity. The dynasty's control over trade routes and its favorable business environment attracted merchants and traders from distant lands, contributing to the prosperity of the Samanid dynasty. During his reign, Samanid coins became the most reliable currency among the Bulgar, Khazar, Byzantine, and Arab traders who were active in the Pontic Steppe, as well as the Norse raiders who were attracted by the

[20] Treadwell 1991: 91 . Kennedy 2004: 183.
[21] Ibn KhallikÁn, *WafayÁt al-aÝyÁn wa-anbÁÞ abnÁÞ al-zamÁn* 428. al-Samarqandī, *Kitab al-Furūq*, 8.
[22] Ibn KathÐr, *al-BidÁya wa'l-nihÁya fÐ al-taÞrÐkh,* XIV/ 746.
[23] al-ÓabarÐ, *TaÞrÐkh al-rusul wa'l-mulÙk, 137.*
[24] al-Nrshkhī, *Tārīk Bukhāraa*, 131- 132.
[25] Kamoliddin 2011: 210. Frye 1965: 57.
[26] Kovalev 2001: 247. Kilger 2008: 207.

incredible wealth generated in the region.[27] NaÒr died shortly afterwards before reaching the age 40.[28]

Other notable Amīrs of the Samanid dynasty include NÙh I ibn NaÒr, who ruled from 331 AH-943AD/ to 343 AH-954 AD,[29] and Manṣūr I ibn NÙh, who ruled from 350 AH- 961 AD/ to 366 AH-976 AD.[30] These rulers faced challenges from rival dynasties and internal power struggles but managed to maintain the stability of the dynasty for some time.[31]

NÙh I ibn NaÒr continued the Samanids' policies of promoting trade and commerce. He further expanded the dynasty's trade networks and strengthened its economic ties with neighboring regions. NÙh I's reign saw increased trade with the Abbasid Caliphate, the Byzantine Empire, and the Khwarazmian. The Samanid dynasty became a major center of commerce, attracting merchants and traders from different parts of the world.[32]

Manṣūr I ibn NÙh also played a significant role in trade and commerce during his reign. He continued the policies of his predecessors in promoting economic growth and facilitating trade within the dynasty. Mansur I encouraged the development of market towns and commercial centers, which further stimulated economic activity. The Samanid dynasty continued to prosper as a result of its favorable business environment and its control over major trade routes.[33]

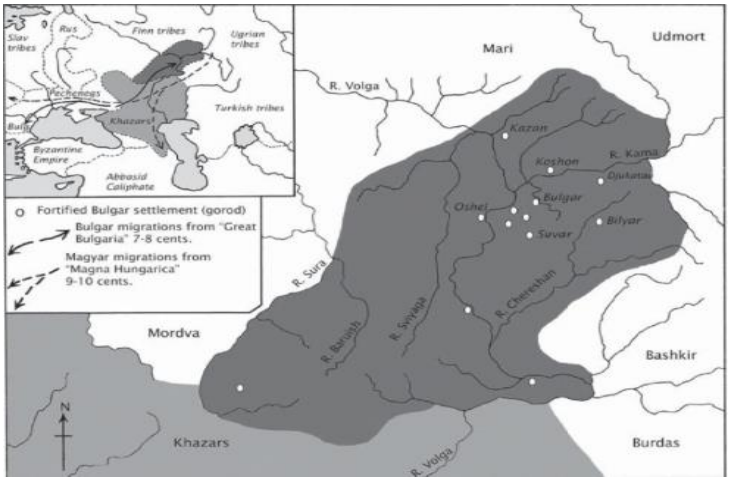
In conclusion, the Samanid dynasty made significant contributions to trade and commerce during its reign. The dynasty's strategic location along major trade routes, such as the Silk Road, allowed the Samanids to control and benefit from the lucrative trade that passed through their territories. Through trade agreements and alliances with neighboring regions and dynasty, the Samanids facilitated the exchange of goods, ideas, and technologies, enriching the trade networks of the dynasty. The Samanids also played a crucial role in the development of a standardized coinage system. The introduction of the Samanid coins, known as "dirhams," provided a common currency that was widely accepted and circulated throughout the dynasty and beyond. This standardized currency facilitated trade and made transactions more efficient, contributing to the economic growth and prosperity of the Samanid dynasty. Furthermore, the

[27] Manṣūr 1989: 145.
[28] al-MuqaddasÐ, *AÎsan al-taqÁsÐm fÐ maÝrifat al-aqÁlÐm.* 330.
[29] Treadwell 1991: 211- 212. al- Jardīzī, *Zaīn al-ʾAkhbār*, 223- 224.
[30] al-Nrshkhī, *Tārīk Bukhāraa*, 139.
[31] Kamoliddin 2011: 71.
[32] Abu'l-FidÁÞ, *al-mukhtaÒar fÐ akhbÁr al-bashar, II*/ 134
[33] . al- Jardīzī, *Zaīn al-ʾAkhbār*, 223- 224. al-Nrshkhī, *Tārīk Bukhāraa*, 141.

Samanids engaged in trade with Eastern Europe, maintaining trade relations with states such as the Vikings, the Kievan Rus, Volga Bulgar, and the Byzantine Empire. This trade with Eastern Europe allowed the Samanids to export valuable goods and import commodities that were in demand within their dynasty. The economic activities with Eastern Europe further strengthened the position of the Samanid dynasty as a major trading power in the region. Overall, the Samanid dynasty's control over trade routes, the introduction of a standardized coinage system, and trade relations with neighboring regions and dynasty played a crucial role in fostering economic growth and prosperity. The dynasty's contributions to trade and commerce left a lasting impact on the region, facilitating cultural exchange and contributing to the overall development of Central Asia and Greater Iran.

III . II. The Volga Bulgar

The Volga Bulgars were a state that existed between the 7th to the 13th AD centuries in what is now European Russia.[34] The origins of the Bulgars are difficult to pinpoint accurately. The first reliable mention of the Bulgars comes from the Greek author Ioannes Antiochenus in the form of "Βούλγάροι." According to him, the Bulgars were asked to confederate with the Byzantines around 480 AD.[35]



Map 2. The Volga Bulgar (Nicolle & Viacheslav, 2013: 4)

The Volga Bulgar tribal confederation consisted of five tribes: apart from the Bulgars the Suwars, the Askals, Balanjars, and Barsulas (and the neighbor forest peoples paying tax to them). Traditionally in the historiography, the beginning of the Volga Bulgars is in connection with the fall of Kuvrat Khan's Bulgaria (665–670 AD). According to the traditional theory, a part of this Bulgars migrated into the Middle Volga region at the beginning of the eighth

[34] Nicolle & Viacheslav 2013: 14.
[35] Moravcsik 1958: 313-315. Fayaz 2015: 69. Besevliev 1970: 46-51. Czeglédy 1970: 137- 147.

century. But the first reports on the Volga Bulgars are known only from the ninth century (apart from a single mention of the ethnonym, from the thirties years of the ninth century). István Zimonyi has suggested that in the sources all the five above-mentioned tribes in the sixth – seventh centuries were mentioned in the Azov Sea and Lower Volga region or the North Caucasus.[36] The tribes in the Volga and Caucasus regions could migrate northward due to the permanent wars between the Arabs and Khazars in the first half of the seventh century. That is the tribes of the Volga Bulgars came from different regions and times.[37]

In the 10th century AD, Khan Almas of Volga Bulgaria invited the Baghdad caliph to send an ambassador to Bulgar. The Abbasid caliph, al-Muqtadir Billah, received the ambassador and was asked for instructions on religion and Islamic laws.[38] The ambassador also requested the construction of a mosque and a fortress for defence. The caliph understood the importance of Islamic penetration into Eastern Europe and sent an embassy from Baghdad in 309 AH / 921 AD. The embassy reached the Samanid court in Transoxania and traveled through Bukhara and Khwarazm before reaching the Volga-Kama region in 310 AH / 922 AD.[39] One of the members of the embassy, AÎmad Ibn Faḍlān, wrote about his journey, providing valuable information on the ethnography and history of the people in the region.[40]

The Baghdad delegation, sent by the Abbasid caliph, arrived in Volga Bulgaria in 310 AH / 922 AD. They presented a letter of recognition to Khan Almas, who changed his name to al-Amīr JaÝfar Ibn ÝAbd Allah.[41] The Volga Bulgars adopted the Hanafi school of Sunni Islam, as practiced in Khwarazm. This was in contrast to the ShafiÝĐ school followed by the caliph.

The Hanafi school was more liberal, and its adoption by the Turkic peoples of Central Asia, including the Volga Bulgars, was influenced by the impact of Khwarazm and the support of the Samanids.[42]

In 353 AH / 965 AD, after the fall of the Khazar, Volga Bulgaria emerged as one of the strongest and wealthiest states in Eastern Europe. [43] The Volga Bulgarian coins, were minted in two large and well-known cities: Bulgar and Suwar. These coins served as a medium of exchange and

[36] Polgár 2019: 125-126. Mako 2011: 13.
[37] Nedashkovsky 2023: 279.
[38] Kennedy, 2023: 121.
[39] Ibn Fadlān 2005:44.
[40] Bukharaev 2000: 21.
[41] Ibn Fadlān 2005: 80-98. Smirnov 1940: 80
[42] Togan 1939: 80. Kennedy 2023: 121-132.
[43] Al Halabi 2022: 445.

facilitated trade within the state. The minting of their own coins was a significant development for Volga Bulgaria, as it allowed them to have greater control over their currency and economic transactions. The introduction of the Volga Bulgarian coins replaced the use of leather money that had been circulating within the state. Leather money, made from animal hides, had been used as a form of currency among the Volga Bulgarians before the introduction of the coins. However, the minting of coins provided a more standardized and widely accepted medium of exchange, which further enhanced the economic activities of Volga Bulgaria. The Volga Bulgarian coins were typically made of silver and featured various designs and inscriptions. These coins not only served as a means of trade but also reflected the cultural and artistic achievements of the Volga Bulgarians. The minting of coins also symbolized the growing economic and political power of Volga Bulgaria during this period.[44] The Mongol invasion in 627 AH / 1230 AD posed a significant threat, and although Volga Bulgaria initially resisted, it eventually fell to the Mongols in 633 AH / 1236 AD.[45]

In closing, Volga Bulgaria was a powerful state that played a significant role in the trade networks of Eurasia. Its strategic location along the Volga River made it a hub for trade between the East and the West.[46] The state engaged in extensive trade with neighboring states, such as the Samanids in Central Asia, the Khazars, Rus, and Byzantines, exchanging goods such as silk, spices, precious metals, furs, and slaves. The trade routes that passed through Volga Bulgaria brought wealth and prosperity to the state. The state's economy thrived on agriculture, trade, and crafts, with trade playing a crucial role in its economic development. Volga Bulgaria's participation in trade not only brought economic benefits but also facilitated cultural exchange and the spread of ideas. The Volga Bulgar's diverse population, consisting of Bulgars, Slavs, and other ethnic groups, contributed to the cultural richness and tolerance of the state. Different religions, including Islam, Christianity, and paganism, coexisted in Volga Bulgaria, further enhancing the cultural diversity of the Volga Bulgar.

III . III. The Khazars

The Khazars were the eastern neighbors of the eastern Slavic tribes and then of Kievan Rus. They claimed to be related to the Volga Bulgars, Oghuz, and Avars; there are numerous theories on their origins.[47] They initially inhabited the region that included the steppes of the Caspian

[44] Zimonyi 1990: 81-83.
[45] Kotkin 1996: 5. Duczko 2004: 7. Martin 1980: 95. Urbańczyk 2014: 230- 231. Yemelianova 2002: 16.
[46] Kazakov 2023: 299.
[47] Dunlop 1954: 3.

Sea between the Sulak River and the lower Don River. The Khazars were initially nomads and herders, but some of them gradually began to engage in farming and especially trading.[48] From the second half of the 6th century AD, the Khazars were ruled by the western Turkic kaganate. Following the kaganate's breakup in the middle of the 7th century AD, the Khazars conquered a number of Bulgar, Caucasian (such as the Alans), and Slavic tribes to form the Khazar kaganate, the region's first state.[49] The vicegerent, or assistant kagan, was in charge rather than the kagan, the supreme king. Semender (Samandar), in northern Daghestan, served as the first capital of the kaganate.[50] In the mid-8th century AD, under pressure from the Arabs to the south, the capital was transferred to Itil on the Volga River, near present-day Astrakhan. Itil became an important trade center between East and West. In 835 AD, the fortified city of Sarkil was built on the Don River with the help of Byzantine craftsmen. Among its inhabitants were many Rus, Greek, Iranian, and Central Asian merchants.[51]

Map 3 of Khazaria and Neighboring Empires in the Ninth and Tenth Centuries (Brook, 2018: 42)

When the Khazar kaganate seized control over Subcaucasia, the steppe surrounding the Sea of Azov, and the majority of eastern Europe up to the Dnipro River in the late 8th century, it was at its height. The Khazars received tribute from the proto-Ukrainian Siverianians and Polianians. The trading routes between the Far East and Byzantium, as well as between the Muslim word and the northern Slavic lands and Scandinavia, were dominated by the kaganate.

[48] Koestler 1976: 1-8.
[49] Arzhantseva 2007: 59-74.
[50] Brook 2018: 31-31.
[51] Dunlop 1990: 72.

Only sporadic wars between these same powers prevented Khazar trade with these centers until the middle of the 10th century.[52] Jews from Iran and Byzantium settled among the Khazars in northern Daghestan during the beginning of the eighth century. Even though some Khazars rapidly converted to Judaism, Kagan Obadiah did not establish non-Talmudic Judaism as the official religion until the beginning of the ninth century.[53] Al-MasÝÙdĐ dated the conversion of the Khazar king to Judaism to the time of the reign of the Abbasid caliph HÁrÙn ar-RashĐd (786-809 AD/ 170- 193 AH).[54] Before that, around 735 AD, the Arabs occupied the Kaganate and coerced some members of the ruling elite into converting to Islam. While this was going on, Byzantium made an effort to convert the Khazars to Christianity. Saint Cyril led a mission among them in 860–861 AD, and a metropoly with seven eparchies was established. Even before Volodymyr the Great officially converted Kievan Rus to Christianity, the Khazars contributed to its expansion.[55]

The Pechenegs invaded the Black Sea steppes (southern Ukraine), which were under Khazar dominion, in the late 9th century.[56] The Khazar state was greatly weakened by the Pechenegs' relentless attacks into the Kaganate. From the latter part of the ninth century, Kievan Rus also became a significant foe.[57] According to the chronicles, Prince Oleh rescued the Polianians and Siverianians from Khazar control in 883-5 AD while Askold and Dyr's Varangian forces liberated Kiev from the Khazars in 862.[58] Twice (913–14 AD and 943–4 AD), Prince Ihor's army traveled across Khazarian territory to the Caspian Sea and returned with valuable loot. However, Ihor obtained assistance from the Kaganate and had Christian Khazars among his soldiers in his 941 assault against Byzantium. In 964–5 AD/ 365-6 AH, Prince Sviatoslav I Ihorovych inflicted the final blow to the Khazar state: he destroyed Itil and Semender and annexed Sarkil and the northwestern part of Khazar territory to Kievan Rus. This action proved to be detrimental to Rus, which became vulnerable to constant nomadic invasions from the east.[59] In 985 AD/ 374 AH, Volodymyr the Great defeated the Volga Bulgars and Khazars and forced them to pay tribute. The Khazars are last mentioned in the chronicles under the year 1079 AD/ 471 AD when they conspired to seize Prince Oleh (Mykhailo) Sviatoslav in

[52] Noonan 2007: 207-240.
[53] Golden 2007: 123- 160.
[54] al-MasuÝdĐ, *MurÙg aÃ-Âahab wa maÝadin al-gawhar,* vol. 1. 263.
[55] Dunlop 1990: 122.
[56] Zhivkov 2015: 127-146.
[57] Rybakov 1953: 23-104.
[58] Dolukhanov 2014: 182, 194.
[59] Howorth 1870: 182-192.

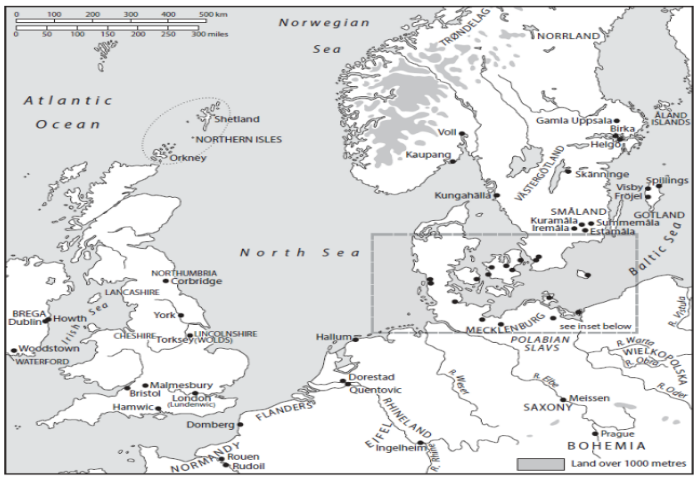
Tmutorokan and hand him over to the Byzantine emperor. After the fall of the kaganate, the Khazars gradually intermixed with the Turkic and Cuman populations and eventually disappeared as a distinct people.[60]

In conclusion, the history of the Khazars is a fascinating tale of a nomadic tribe that rose to power and established the Khazar kaganate, the region's first state. They were skilled traders and diplomats, dominating the trade routes between the Far East, Byzantium, and the northern Slavic lands. The Khazars played a significant role in the expansion of Christianity and Judaism in the region, with conversions to both religions taking place at different points in their history.

However, the Khazar kaganate faced numerous challenges, including invasions from the Pechenegs and conflicts with Kievan Rus. These external pressures, combined with internal divisions, eventually led to the downfall of the Khazar state. After the fall of the kaganate, the Khazars gradually assimilated into other Turkic and Cuman populations, eventually fading away as a distinct people.

III . IV. The Vikings and The Rus

The Vikings were seafaring people from the late 8th to early 11th centuries who originated from the Scandinavian region of Northern Europe.[61] They were known for their exploration, trade, and raiding activities across vast areas of Europe, Asia, and even North America. The history of the Vikings is a fascinating tale of adventure, conquest, and cultural exchange.[62]



Map 4. Scandinavians (Gruszczyński, Jankowiak, & Shepard, 2021: 14.)

[60] Petrukhin 2007: 262.
[61] Sawyer 2003:105.
[62] Wilson 1970: 25. Hedeager 2008: 11.

The Viking Age began with the raid on the Lindisfarne monastery in England in 793 AD. [63]This event marked the start of Viking raids on coastal communities throughout Europe. The Vikings, skilled sailors and navigators, used their longships to travel swiftly and launch surprise attacks on unsuspecting settlements. They targeted monasteries, towns, and wealthy trading centers, plundering treasures and taking captives.[64] The Vikings were not just raiders, but also traders and explorers. They established trade route and settlements in various parts of Europe, including Ireland, Scotland, England, France, and Russia. They traded goods such as furs, timber, iron, and slaves. Their trading activities helped to establish connections between different regions and cultures, contributing to the development of a vibrant and interconnected medieval world.[65] The Vikings also played a significant role in shaping the political landscape of Europe during the Viking Age. They established several powerful kingdoms, such as the kingdom of Denmark, the kingdom of Norway, and the kingdom of Sweden. These kingdoms were ruled by powerful Viking chieftains and kings who sought to expand their territories and influence.[66] In addition to their military and trading activities, the Vikings had a rich and vibrant culture. They had their own mythology, gods, and rituals, which were reflected in their art, literature, and craftsmanship. The Vikings were skilled metalworkers, creating intricate jewelry, weapons, and tools. They also had a strong oral tradition, with stories and sagas passed down through generations.[67] The Viking Age eventually came to an end with the Christianization of Scandinavia and the centralization of power in the region. The Vikings gradually transitioned from raiders to settlers, and their influence waned as the kingdoms of Europe became more organized and unified. [68] Despite their reputation as fierce warriors and raiders, the Vikings left a lasting impact on the regions they encountered. They contributed to the development of trade networks, influenced local cultures and languages, and played a role in shaping the political and social structures of medieval Europe. [69] Today, the legacy of the Vikings can still be seen in the cultural traditions, place names, and archaeological remains found throughout Northern Europe.[70]

[63] Nardo 2011: 17.
[64] Jones 1968: 204-206. Nelson 1997: 19.
[65] Molyneaux 2015: 76. Keynes 1997: 48-82.
[66] Larsen 2001: 37. Sawyer 1997: 17-18.
[67] Richards 2005: 39-46. Símun 2014: 1-17.
[68] Winroth 2014: 36.
[69] Нунан & Роман 2003: 149.
[70] Lund 1997: 181.

In conclusion of the Vikings history, they left a lasting impact on the history of Europe and beyond. They were skilled traders, explorers, and warriors who established extensive trade networks, explored new lands, and conducted raids on coastal communities. The Vikings played a significant role in shaping the political, economic, and cultural landscape of medieval Europe. Their seafaring abilities, trading activities, and cultural exchanges contributed to their expansion and influence, leaving a rich legacy that can still be seen today in the regions they once inhabited.

The Rus

The Rus were a group of East Slavic tribes who inhabited the region that is now modern-day Russia, Ukraine, and Belarus. The history of the Rus spans from the 9th century until the devastating Mongol invasion in the 13th century.[71]

Map 5. The Rus land (Gruszczyński, Jankowiak, & Shepard, 2021: Map II.3)

The origins of the Rus can be traced back to the 9th century when Viking traders and warriors from Scandinavia ventured into the lands of the Slavic tribes. These Vikings, known as the Varangians, established trade routes along the rivers of Eastern Europe, including the Dnieper River. They formed alliances with the local Slavic tribes and gradually assimilated into their culture.[72] In the mid-9th century, the Varangian chieftain Rurik established the first known Rus state in Novgorod. Rurik's successors, known as the Rurik Dynasty, expanded their rule southward and established the city of Kiev as their capital. This marked the beginning of the Kievan Rus, a loose federation of city-states ruled by the descendants of Rurik.[73]

[71] Hellquist 1922: 668. Franklin & Shepard 1996: 91.
[72] Nasonov 1950: 337-340. Channon & Hudson 1995: 14-16.
[73] Martin 1993: 40-47. Bushkovitch 2011: 31.

Under the rule of the Rurik Dynasty, the Kievan Rus experienced a period of significant growth and cultural development. The city of Kiev became a major center of trade and commerce, attracting merchants from all over Europe and the Middle East. The Rus people adopted Christianity in the 10th century, further integrating themselves into the broader European cultural sphere.[74] The 10th and 11th centuries saw the Kievan Rus reach its zenith of power and influence. The rulers of Kiev, known as Grand Princes, extended their control over vast territories, including parts of present-day Russia, Ukraine, and Belarus. They established a complex system of governance, with the Grand Prince at the top and local princes ruling over individual cities and regions.[75] During this period, the Kievan Rus also experienced a flourishing of arts, literature, and architecture. The Byzantine Empire, with its rich cultural heritage, served as a major source of inspiration for the Rus. Byzantine influence can be seen in the architecture of the churches and monasteries built in Kiev and other Rus cities.[76]

However, the unity and stability of the Kievan Rus began to decline in the 12th century. Internal power struggles and conflicts between rival princes weakened the federation. Additionally, external threats, such as raids by nomadic Turkic tribes, posed a constant challenge to the Rus.[77] The most devastating blow to the Kievan Rus came in the 13th century with the Mongol invasion. In 1240 AD, the Mongol armies, led by Batu Khan, swept through the Rus lands, sacking and destroying cities along their path. The Mongols established the Golden Horde, a Mongol state that ruled over the Rus territories for several centuries.[78]

In conclusion, the history of the Rus is a complex and fascinating tale of political consolidation, trade exchange, and external invasions. The Kievan Rus, with its capital in Kiev, emerged as a powerful state in Eastern Europe, establishing trade connections with the Byzantine Empire, other European powers, and Muslim Abbasid Caliphate.

III . V. The Hungarian

Hungarian history is a rich tapestry that stretches back over a millennium. The origins of the Hungarian people can be traced to the Ural Mountains region, where they belonged to the

[74] Thompson & Christopher 2018: 20. Golden 1992: 259.
[75] Duczko 2004: 19. Halperin 2022: 10.
[76] Петрухин 2014: 36.
[77] Shepard 2006: 47.
[78] Пашуто 1973: 103-114.

Finno-Ugric linguistic group.[79] In the late 9th century, under the leadership of their legendary ruler, Árpád, the Hungarian tribes migrated westward into the Carpathian Basin.[80]

Based on written sources, the history of the Hungarians in this region began in the first decades of the ninth century. The Hungarians migrated from the Middle Volga region and a part of them remained in their original homeland. In the tenth century, this Hungarian diaspora came under Volga Bulgar rule. This is an important fact from the view of the Hungarian–Volga Bulgar contacts. In the tenth century after the Hungarian conquest in the Carpathian basin, there were direct contacts between them, which is attested unanimously by written sources and Volga Bulgar dirhams.[81]

The early history of the Hungarians in the Carpathian Basin was marked by their fierce and nomadic lifestyle.[82] They engaged in constant warfare with neighboring tribes and empires, such as the Byzantine Empire and the Bulgarian. Despite these challenges, the Hungarians managed to establish a cohesive and powerful state.[83]

One of the most significant events in Hungarian history occurred in the late 10th century when their ruler, Prince Géza, recognized the potential benefits of adopting Christianity. Géza's son, Vajk, who later became known as King Stephen I, played a pivotal role in the Christianization of Hungary. In the year 1000, Stephen I was crowned the first Christian king of Hungary, marking a turning point in the country's history.[84]

The adoption of Christianity brought about profound changes in Hungarian society. It introduced a new system of governance and administration, as well as a cultural and intellectual revolution. Hungarian nobles and clergy embraced the Christian faith, which led to the construction of numerous churches and monasteries throughout the land.

Under Stephen I's rule, Hungary began to flourish politically and economically. He implemented a series of reforms, such as establishing a centralized administration, promoting trade, and introducing a legal system based on Roman law. Stephen I's reign laid the foundation for a strong and stable Hungarian state.[85]

[79] Ligeti 1986: 400. Kvitnyickij, Tyelnov, Szinyika, & Türk 2022: 586. Herczegh 2003: 5.
[80] Cartledge 2011: 5. Bóna 2000: 63.
[81] Polgár2019: 119-121.
[82] Kristó & Makk 1988: 13. Lázár 1989: 8.
[83] Blazovich 2022: 47-66. Mihály 1871: 41. Köváry 1907: 19-24.
[84] Karácsonyi 1904: 9. Kristó 1988: 24. Lendvai 2002: 33. Kálmán 1994: 113.
[85] Györffy 1994: 83-84.

In conclusion, Hungarian history until the adoption of Christianity is a tale of migration, conquest, and the establishment of a powerful state. The decision to embrace Christianity brought about significant changes in Hungarian society and set the stage for future developments. The adoption of Christianity remains a defining moment in Hungarian history, marking the beginning of a new era of cultural, political, and intellectual growth.

III . VI. Closing

In closing, the historical framer of this first chapter has provided a comprehensive understanding of the various peoples who had a relationship with the Máramaros "Huszt" hoard. The Samanids, with their powerful dynasty in Central Asia, played a significant role in the trade and cultural exchange along the Silk Road. Their patronage of the arts and their promotion of Islamic culture left a lasting impact on the region.

The Volga Bulgars, a Turkic-speaking people, established a prosperous and cosmopolitan state along the Volga River. Their strategic location allowed them to engage in trade with both the Islamic world and the Norse Vikings, facilitating the exchange of goods and coins.

The Khazars, a semi-nomadic Turkic people, created a multi-ethnic and multi-religious kaganate in the Eurasian steppe. Their strategic position at the crossroads of major trade routes made them a crucial intermediary between the Islamic Caliphate, the Byzantine Empire, and the Viking traders.

The Vikings, known for their seafaring skills and adventurous spirit, established trade routes and settlements throughout Europe, including the lands of the Slavic tribes. Their interactions with the Slavic tribes, known as the Rus, led to the formation of the Kievan Rus state, which played a crucial role in the development of Eastern Europe.

Lastly, the Hungarians, led by Árpád and his descendants, migrated from the Eurasian steppe and settled in the Carpathian Basin. The Hungarians, with their strategic location in the heart of Europe, played a crucial role in the trade networks of the medieval period. Situated at the crossroads of major trade routes, Hungary became a hub for the exchange of goods between the East and the West.

By examining the historical framer of the Samanids, Volga Bulgars, Khazars, Vikings and Rus, and the Hungarians, this chapter has laid the foundation for further exploration of the Máramaros "Huszt" hoard and its significance in the broader historical context.

IV. Sources and Travellers

In this chapter, we delve into a variety of Arabic and Persian sources to gain a better understanding of the historical context surrounding the Máramaros "Huszt" hoard. These sources include geographical and historical accounts that offer valuable insights into the subject matter. While many of these sources have already undergone extensive analysis, commentary, and translation into various European languages, it is important to note that their originality has not been exhausted, and there is still potential for further investigation and evaluation.

The availability and accessibility of these sources have allowed scholars from different disciplines to utilize them in their research. However, recent scholarly studies have shown that there is still much to be discovered and understood from these sources, which may provide valuable insights and contribute to a more comprehensive understanding of the Máramaros "Huszt" hoard.

The primary focus of this study lies in the examination of geographical and historical materials, primarily relying on Arabic and Persian sources that offer accounts and descriptions related to the topic. These sources have been categorized into various works, including those by Ibn KhurdÁdzbih, al-YaÝqÙbĐ, Ibn RustÁ, al-BakrĐ, HudÙd al-Ālam, al-IÒÔakhrĐ, Ibn Hawqal, al-MuqaddasĐ, al-MasuÝdĐ, al-ÍimyarĐ, and YÁqÙt.

Additionally, this chapter also focuses on the accounts and writings of notable travelers who embarked on journeys during different periods of history. These travelers, such as Ibn Faḍlān, IbrÁhĐm Ibn YaÝqÙb al-ÓarÔsÙhĐ, and AbÙ ÍÁmid al-GharnÁÔĐ, provide invaluable insights into the cultures, societies, and trade routes of their respective times. Their detailed observations and vivid descriptions transport us back in time and offer glimpses into the lives of the people they encountered and the places they visited.

By utilizing these diverse sources, and travelers' accounts our study aims to provide a comprehensive analysis that considers multiple perspectives and sources of information. Through this approach, we hope to contribute to a deeper understanding of the Máramaros "Huszt" hoard and provide new insights that may have been overlooked or underappreciated in previous studies.

IV. I. Arab and Persian Sources

IV.I. I. Ibn KhurdÁdzbih, 300 AH/ 912 AD.

Abū al-Qāsim ʿUbayd Allah Ibn ʿAbd Allah, the author of Kitāb al-masālik wa al-mamālik, is one of the earliest Muslim geographers. His book is an official itinerary that provides accurate information and useful statistics about the world in his day, including information about non-Muslim nations and other areas in addition to the caliphate.[86] He included a chapter on Byzantium and the trade networks that connected it to Muslim territories. His work also contains sporadic material on Slavs, Bulgars, Burgens, Romans, Khazars, and other European peoples. The two chapters in his book that feature specific references to Jewish merchants and Rus traders are undoubtedly its most notable quirks. [87]

These accounts most likely did not appear in any earlier sources. These two reports are regarded by orientalists as some of the most significant documentation containing references to international trade during the Middle Ages. It is believed that Ibn Khurdādzbih's geography, which took the form of roadbooks with itineraries, prominently featured economics and commerce, making it the first independent geographical treatise in Arabic. [88]

IV.I. II. al-YaÝqÙbĐ, 284-292 AH/ 897-905 AD.

Ahmad Ibn Yaʿqub Ibn Wathih al-Katib, also known by the kunya al-YaÝqÙbĐ, was a Muslim.[89] He wrote in the field of geography but was primarily recognized as a historian. An incomplete copy of his work, Kitab al-Buldan (The Book of Countries), has been transmitted. The author mainly focused on Baghdad and the region of Mesopotamia, Persia, and the holy territories, with his main geographical observations limited to the Muslim world. He also provided detailed information about Al-Andalus and North Africa. There is a significant amount of information about Europe scattered throughout the text. [90]

IV.I. III. Ibn RustÁ, 310-337 AH/ 922-948 AD.

AbĐ ÝAlĐ AÎmad Ibn ʿUmar Ibn Rustā, compiled an elaborate work entitled al-Ṭawārīkh al-Nafīsā. He wrote his work at the beginning of the 4th AH/10th AD century. Ibn Rustā's work is probably one of the first studies dealing with peoples from outside of the Islamic countries in such an intense manner. His information on the Slavs, Bulgars, Rus, and Magyars stands out

[86] ÍamĐdah 1995: 106.
[87] Ibn KhurdÁdzbih, *KitÁb al-masÁlik wa al-mamÁlik.* 153-155.
[88] Lewis 1982: 137.
[89] Brockelmann 1937: 405.
[90] al-YaÝqÙbĐ, *Kitāb al-BuldÁn.* 232.

as original and valuable data. He describes how the Rus, which at this stage means Scandinavians settled in Eastern Europe, were making profits on the Slavic – in Arabic Saqāliba – slaves: "The Rus raid the Saqaliba, sailing in their ships until they come upon them, take them captive, and sell them in Khazaria and in Bulgar. They have no cultivated fields and they live by pillaging the land of the Saqaliba. They have no dwellings, villages, or cultivated fields. They earn their living by trading in sable, grey squirrel, and other furs. They sell them for silver coins which they set in belts and wear round their waists. They treat their slaves well and dress them suitably because for them they are an article of trade." [91]

Ibn Rustā also mentioned that Muslim merchants from the caliphate sailed to Bulgar for trade. Ibn Rustā refers that many people living in the Volga basin did not have money and used fur skins instead of money in their internal trade. [92]

IV.I. IV.al-BakrĐ, 478 AH/ 1085 AD.

Abū ʿUbayd ʿAbdallāh ibn ʿAbdalazīz Muḥammad al-Bakrī al-Qurṭubī is one of the most well-known Muslim Andalusian geographers of the eleventh century. The author never ventured outside of Muslim Spain and did not travel. It appears likely that his book, al-Masālik wa-al-Mamālik (The Book of Highways and Kingdoms), which follows a long tradition, is a part of the corpus of administrative geographical works prepared for official purposes. His study is significant since he preserved many accounts from earlier travelers, including those of al-Ghazālī and Ibrāhīm Ibn Yaʿqūb.[93]

IV.I. V. HudÙd al-Ālam

The Hudūd al-Ālam (The Regions of the World) is one of the most important geographical works produced by an unidentified author around the end of the tenth century. Although we have no information about the author, it is believed that the work was produced in the year 372 AH/982 AD and dedicated to a specific Al-Amīr, Abū al-Ḥarth Muḥammad Ibn Aḥmad, of the local Farghānid dynasty ruling over remote areas of modern-day Afghanistan. The author gives more attention to territories outside of Muslim lands than any other Muslim author, dedicating entire chapters to the Slavs, Rus, Bulgars, Inner Bulgars, Magyars, Burtas, and Khazars. [94]

Regarding the Magyars, the author states, "The Majghari are a class of Turks, and their leader, called kanda, commands 20,000 horsemen. They possess a vast grass-covered plain, measuring 100 farsakhs

[91] Ibn RustÁ *al-ÞAÝlÁq al-NafÐsÁ,* 141.
[92] Ibn RustÁ *al-ÞAÝlÁq al-NafÐsÁ,* 142.
[93] al-BakrĐ, *al-MasÁlik wa'l-mamÁlik.*8.
[94] *HudÙd al-Ālam,* 10.

by 100 farsakhs. Their country is adjacent to the Rum Sea, with two large rivers flowing into it. They reside between these two rivers, and during winter, those who have moved far from the river come closer to it and stay there. They rely on fishing for sustenance. The land of the Majghari is filled with trees and marshes, with damp soil. They consistently defeat the Saqlab and impose tribute on them, treating them as slaves. The Majghari are fire-worshippers and raid the Saqlab and Rus, capturing captives whom they sell in Rum. The Majghari are known for their handsome appearance and pleasant demeanor. They dress in satin and adorn their weapons with silver and gold. They frequently raid the Saqlab, and the distance between the Majghari and the Saqlab is ten days." [95]

IV.I. VI. al-IÒÔakhrÐ

Abū Isḥāq Ibrāhīm ibn Muḥammad al-Fārisī al-Karkhī, also known as al-Maqrīzi, was an important Muslim geographer who wrote al-Masālik wa'l-Mamālik (The Book of Highways and Kingdoms) in the first half of the tenth century AD. [96] His writings are valuable due to the time period in which they were written. The geographic names mentioned in his work were the first to be used on maps and provide crucial details for this investigation.

The author dedicated classification chapters to the Slavs, Rus, Bulgars, Khazars, and other peoples who lived in southeastern Europe. Additionally, scattered throughout the other chapters, one can find many interesting facts about Europe in general and trade in particular. [97]

IV.I. VII. Ibn Hawqal

Abu'l-QÁsim Ibn Íawqal al-NaÒÐbÐ, who wrote the book of *KitÁb ÒÙrat al-arÃ.* Ibn Hawqal visited many countries including Armenia, AḍarbaygÁn, HuwÁrizm, Transoxania, Muslim Spain, Palermo and Napoli. He was also interested in trade and gives us many details about different products in various regions, prices and economy in general. Ibn Hawqal's accounts seem to indicate that he actually visited most of the places which he described.

Ibn Hawqal implies the existence of two separate trade systems. the eastern one, where the Rus were selling Slavic slaves for Samanid dirhams at the markets of Bulgar and of Itil. As for the other one, sources suggest that the Spanish market was supplied by Jewish merchants who were buying Slavic slaves at the market of Prague:

"One of the famous items of their merchandise are slaves (raqīq), handsome girls and boys, captured in the land of the Franks and in Galicia, as well as Ṣaqāliba eunuchs (khadam). All the Ṣaqāliba eunuchs on the surface of the earth are imported from al-Andalus, because they are castrated near that country,

[95] *HudÙd al-Ālam,* 320-321.
[96] Krackowskij 1957: 197.
[97] al-IÒÔakhrÐ, *al- MasÁlik wa'l-mamÁlik: 9.*

and this is done by Jewish merchants. The Slavs are a tribe descending from Japhet, and their country is long and broad. Raiders from KhurasÁn get to them from the side of the Bulgars, and when they are led into captivity there they are left unemasculated and their bodies remain unimpaired. The sea arm stretching from the Surrounding Sea in the area of Gog and Magog traverses their country and extends westwards to the area of Trebizond and then to Constantinople and cuts it into two halves. Thus half of their country, along its whole length, is raided by the KhurasÁnis who border on it, while the northern half is raided by the Andalusians from the side of Galicia, France, Lombardia and Calabria. In these areas, many captives can still be obtained"[98]

IV.I. VIII. al-MuqaddasÐ

al-Muqaddasī Shams al-Dīn Abū ʿAbdallāh Muḥammad ibn Aḥmad ibn Abī Bakr al-Bannā al-Baṣrī was a renowned geographer and historian born in Jerusalem in the year 335 AH/946-947 AD. [99] His work Aḥsan al-taqāsīm fī maʿrifat al-aqālīm (The Best Division for the Knowledge of Climates) is considered one of the most exceptional geographical works written by an Arabic author. It is highly regarded for its comprehensive coverage of various geographical topics.

For the study of economic history during that period, al-Muqaddasī's book Aḥsan al-taqāsīm is particularly significant. It provides detailed and reliable information about the geographic locations, peoples, goods, commerce, monetary systems, itineraries, and distances of the regions he describes in each chapter. In each region, he offers an overview and lists the items imported and exported to and from the Muslim world.

In his report on the Bulgar country, al-Muqaddasī mentions various goods imported from Bulgar, including furs such as sable, grey squirrel, ermine, mink, weasel, and fox, as well as hides of beaver, mottled-colored hare, and wild goat. Other imports from Bulgar included iron, arrows, birch bark, fur caps, fish glue, fish, teeth, castoreum, amber, tanned hides, honey, hazelnuts, falcons, swords, cuirasses, maple wood, Saqalib slaves, sheep, and cattle. In return, the region of Khwarazm exported agricultural and manufactured products, such as grapes, raisins, confectionery, sesame, cloaks, carpets, coarse cloth, satin, high-quality brocades suitable for gifts, cloth woven with silk, wraps, locks, colored garments, bows that only the strongest could bend, cheese, yeast, fish, and boats. In the middle and lower Volga regions, al-Muqaddasī was one of the first to report on the conflicts between the Rus, the Khazar Kingdom,

[98] Ibn Íawqal, *KitÁb ÒÙrat al-arÃ,* 106.
[99] Blachère & Henri 1957: 150.

and the state of the Bulgars, following in the footsteps of Ibn Ḥawqal. His accounts provide valuable insights into the historical dynamics of these regions during that time. [100]

IV.I. IX. al-MasuÝdĐ, 346 AH/ 957-8 AD.

Abū al-Ḥasan ʿAlī Ibn al-Ḥusayn Ibn ʿAlī al-Masʿūdī is well-known among academics as a historian, but his broad knowledge also placed him among the geographers of the tenth century.[101] He wrote two books, the first being Murūj al-Dhahab wa Maʿādin al-Jawhar (The Meadows of Gold and Mines of Gems), and the second being At-Tanbīh wa al-Ishrāf (Admonition and Supervision). [102] The first book, Murūj al-Dhahab, primarily focuses on historical issues, while the second book is considered an abbreviated version of the first and contains more geographic information. Al-Masʿūdī provides descriptions of many European nations and areas. While some of the additional details were based on his own observations or information he obtained during his travels, the majority of these descriptions are likely derived directly or indirectly from Byzantine sources. [103]

His geographic information about the Bulgars, Slavs, Magyars, Rus, and other inhabitants of the Transcaucasian lands is extremely important. The section on the Slavic peoples is particularly interesting for Slavic studies and the history of Eastern Europe in general. Al-Masʿūdī includes numerous Slavic tribe names, along with information about their monarchs and native countries. Many scattered pieces of information throughout his works are of great importance and helpful in determining the location of the Slavic world. In one paragraph, the writer confirms the existence of the Slavic people not only in the Danube basin but also refers to the Slavs who inhabited the river banks of the Dnieper and other great rivers that flow from sources located in the north into the Black Sea. Al-Masʿūdī mentions that Muslim merchants visited the lands of the Slavonic kingdom of Ad-Dār, bringing various commodities with them.[104]

IV.I. X. al-ÍimyarĐ

MuÎammad Ibn ÝAbd al-MunÝm Ibn ÝAbd al-NÙr AbÙ ÝAbd Allah al-ÍumyrĐ. He wrote *al-RÙÃ al-MuÝaÔÁra.* al-ÍumyrĐ did not cite his sources, but it appears that he mostly drew on Andalusian sources. Evidently, its composition was not significantly influenced by the

[100] al-MuqaddasĐ, *AÎsan al-taqÁsĐm fĐ maÝrifat al-aqÁlĐm.* 323-324.
[101] YÁqÙt, *MuÝjam al-buldÁn,* vol. 17, 12.
[102] al-MasuÝdĐ, *KitÁb At-TanbĐh wa al-IsrÁf,* 1.
[103] al-MasuÝdĐ, *MurÙg aÃ-Ãahab wa maÝadin al-gawhar,* vol. 1. 155-156.
[104] al-MasuÝdĐ, *MurÙg aÃ-Ãahab wa maÝadin al-gawhar,* vol. 1. 347.

geographical writings of the Eastern Muslims. After a brief introduction outlining the objectives of the work and the editing process he used, he jumps right into his alphabetical listing of location names. The author mostly quotes from Ibrahim Ibn YaÝqÙb's account when discussing the geographical and historical details of Europe, as seen in the entries on the Slavs, Rus, Cracow (Kraków), Kiev, Misqu (Miesko), Maganga (Mainz), and many other locations and names.[105]

III.I. XI. YÁqÙt

ShihÁb al-DÐn AbÙ ÝAbdallÁh YÁqÙt ibn ÝAbdallÁh al-ÍamawÐ al-RÙmÐ. Greek parents brought Yaqut into the world in Asia Minor. He was purchased in Badad when he was a little child by a trader from Ama. His owner provided him with a quality education, allowing him to work as a traveling clerk.[106]

YÁqÙt is known as the author of two voluminous works *MuÝjam al-ÞUdabaÞ* (Dictionary of knowledgeable men), which is regarded as one of the key bibliographies of Medieval Arabic literature, and *MuÝjam al-buldÁn* (Dictionary of countries), which is helpful for this study. *MuÝjam al-buldÁn* has a wealth of useful information, particularly with regard to geography, history, ethnography, astronomy, and many different literary areas. YÁqÙt arranges his resources with a scholastic manner. He arranges the place, region, people, and country names alphabetically, which increases the use and accessibility of his data.[107]

Although Yaqut's material is mostly based on the writings of past geographers, his experiences gained throughout his extensive journeys surely add to it. Yaqut's geographic data appears to be essential for our research because it is more complete and accurate on Eastern Europe than his data on Western Europe. His writings include articles on the Khazars, Slavs, Bulgars, Rus, and other nations and peoples. As a result, his material on the Rus, Slavs, and Bulgars serves as an emblematic example of the careless synthesis of data from many sources and eras.[108]

IV.II. Travellers

IV.II. I. Ibn Faḍlān

AÎmad Ibn al-ʿAbās Ibn Rāshid Ibn Ímmād Ibn Faḍlān.[109] The author was a representative and diplomat dispatched by the caliph Al-Muqtadir on a diplomatic mission to the Volga River court

[105] al-ÍumyrÐ, *al-RÙÃ al-MuÝaÔÁra.*
[106] Krackowskij 1957: 334-335.
[107] Rosenthal 1968: 106.
[108] YÁqÙt, *MuÝjam al-buldÁn*, vol. I, 7.
[109] Ibn Faḍlān, *Risālat Ibn Faḍlān,* 196.

of the Bulgar ruler. Its direct impact on the geography, history, economy, ethnography, and culture of the numerous peoples who lived in the far northeastern region of Europe during the first half of the tenth century is what gives Ibn Faḍlān's description of this mission its significance.[110] Ibn Faḍlān provides details about the inhabitants of the areas along the route to the city of Bulgar. He names the Khazars, Rus, Burtas, Bulgars, and other people groups among these. The geography and history of the areas and individuals covered in this text are primarily based on his work. [111]

For this study, the section devoted to the Bulgar and Russian contributions to world trade during this time is especially fascinating. Ibn Faḍlān's depiction of the route connecting present-day Russia's interior with the Muslim caliphate is where we get the majority of the information regarding that route.

Map 6. Ibn Faḍlān Journey to the Volga Bulgar (Ibn Faḍlān 2014: 200)

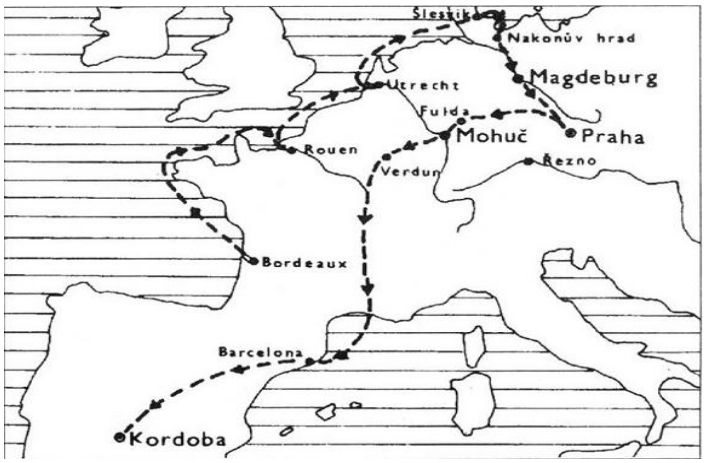
IV. II. II. IbrÁhĐm Ibn YaÝqÙb

IbrÁhĐm Ibn YaÝqÙb al-ÓarÔsÙhĐ. he has a missing book from which only what was reported in Arabic by other authors such as al-BakrĐ in al-MasÁlik wa'l-mamÁlik, and al-ÍumyrĐ in al-RÙÃ al-MuÝaÔÁra. The writer was an Andalusian traveler who was most likely a Muslim of Jewish ancestry. In the tenth century, he traveled throughout Northern and Central Europe as a messenger.[112] Ibn YaÝqÙb gave detailed descriptions of the nations he had visited in his reports, mentioning their inhabitants and giving crucial details about the traders, trade

[110] YÁqÙt, *MuÝjam al-buldÁn*, vol. I, 485-488.
[111] ÍamĐdah 1995: 245.
[112] al-BakrĐ, *al-MasÁlik wa'l-mamÁlik, I* / 253.

routes, and goods. His description of the western Slavs in Central and Eastern Europe is particularly significant for the Slavic nations. [113]

From Almeria or another eastern Andalusian port to Marseille, Genoa, Rome, the Slavic lands (through the Adriatic or the northern route by Venice), Hungary, and Prague make up Ibn YaÝqÙb 's path, according to a new study. He first traveled to Schwerin and Schleswig in Germany before continuing on to Magdeburg, Paderborn, Fulda, Frankfurt, and Mainz. He traveled through France (Verdun, Rouen), northern Spain, and finally landed at Cordoba in 356 AH/967 AD on his way back to his native country. [114]



Map 7: IbrÁhÐm Ibn YaÝqÙb journey (https://upload.wikimedia.org/wikipedia/commons/0/07/Ibrahim_ibn_Jakub.jpg)

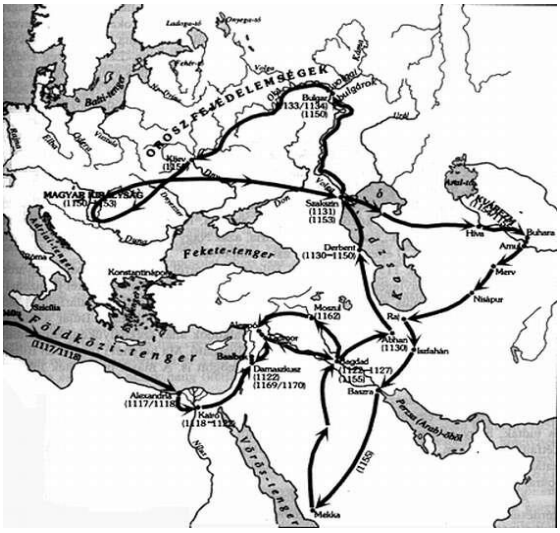
IV.II. III. AbÙ ÍÁmid al-GharnÔÐ

AbÙ ÍÁmid ÝAbd al-RaÎÐm Ibn SulaymÁn Ibn RabiÝ al-QysÐ al- ÀndÁlusÐ al-GharnÁÔÐ, he started to write his book *TuÎfat al-ÞalbÁb wa Nukhbat al-ÞaÝjab*, in the year 5571/1162 in the city of al-Mawṣil in Iraq. The fact that Abū Ḥāmid was almost certainly the only Muslim author to spend a significant amount of time in Hungary is crucial for our study. He arrived to Hungary in the year 545 AH/1150-1 AD, and stayed for three years. He also traveled to the nation of Bulgaria. He recorded his observations and accounts of the Bulgarians, Hungarians, and other peoples residing in these regions.[115] From AbÙ ÍÁmid, who was also a merchant from Muslim Spain we have information about trade and the Muslim traders that lived in Hungary. Despite the fact that the writer's descriptions date from the twelfth century, the

[113] al-ÍumyrÐ, *al-RÙÃ al-MuÝaÔÁra, 86*..
[114] El-Hajji 1970: 229-230.
[115] AbÙ ÍÁmid al-GharnÁÔÐ. *TuÎfat al-ÞalbÁb wa Nukhbat al-ÞaÝjab:* 194-195.

information he provides throws light on the area's commercial activities and its beginnings in the tenth century.[116]

He has a lot of information about the commercial routes that connect the Muslim world and Central and Eastern Europe. He also provides unique information regarding the Muslim community in Hungary, which he claims is divided into two main groups: the *awlÁd al-Khuwarizmiyya*, whose origins in Eastern Europe or Central Asia cannot be disputed, and the *awlad al-maghÁriba,* who are of Andalusian and North African descent.[117]



Map 8. The journey of AbÙ ÍÁmid al-GharnÔÐ (Róna-Tas, 1996: 62)

IV. III. Closing

In conclusion, the examination of various Arabic and Persian sources, including works by Ibn KhurdÁdzbih, al-YaÝqÙbÐ, Ibn RustÁ, al-BakrÐ, HudÙd al-Ālam, al-IÒÔakhrÐ, Ibn Hawqal, al-MuqaddasÐ, al-MasuÝdÐ, al-ÍimyarÐ, and YÁqÙt, as well as the accounts and writings of notable travelers such as Ibn Faḍlān, IbrÁhÐm Ibn YaÝqÙb al-ÓarÔsÙhÐ, and AbÙ ÍÁmid al-GharnÁÔÐ, has provided valuable insights into the historical context surrounding the Máramaros "Huszt" hoard. These sources offer a wealth of information about the peoples, regions, and trade routes of Europe during the medieval period. Through the writings of these geographers, historians, and travelers, we have gained knowledge about various European peoples, such as the Slavs, Rus, Bulgars, Magyars, and Khazars. These accounts, although sometimes limited in accuracy or based on second-hand information, provide valuable details about the political, social, and economic dynamics of the time. They

[116] Norris 1993: 28-29.
[117] ÍamÐdah 1995: 274.

offer insights into the goods traded, the routes taken, and the interactions between different cultures and civilizations.

While it is important to acknowledge that these sources have already undergone extensive scholarly analysis and translation, there is still potential for further investigation and exploration. Recent studies and interdisciplinary approaches may provide new perspectives and shed light on previously overlooked aspects of the Máramaros "Huszt" hoard and its historical significance. By delving deeper into these Arabic and Persian sources and incorporating new perspectives, we can continue to expand our understanding of the hoard and its connections to the broader historical and cultural context of medieval Europe.

V. How the dirhams arrive and the importance of the trade

During the Middle Ages, an enormous quantity of Islamic silver dirhams was exported from the Muslim world to Northern and Eastern Europe, starting from the beginning of the ninth century.[118] This trade was a result of the increasing connections between the Near-Eastern and Middle-Asian Islamic countries with Vikings and Eastern Europe, which reached its peak during this period. Millions of Kufic dirhams were transported from Islamic dynasties to Eastern Europe and the Baltic region between the ninth and eleventh centuries.[119]

The Vikings, known for their extensive voyages across the seas, were skilled traders and navigators. They established trade routes that connected Northern Europe with the Islamic world. These trade routes allowed for the exchange of goods and coins between the two regions.[120] The most common coin types during this time were the Abbasid dirhams, which were minted across the lands of the Caliphate. These coins were widely circulated and used for trade in the regions they reached. However, the source of these dirhams changed over time. [121]

Initially, the import of dirhams into the Northern lands began in 138 AH/800 AD, and they were brought from Iraq and Iran through the southern Caucasus or the Caspian Sea and the Khazar. This trade route allowed for the flow of coins into the region. However, this flow of coins ended in 261-266 AH (875-880 AD), resulting in what is known as the "First Silver Crisis" in the

[118] Noonan 1998:151. Kovalev 2001: 245.
[119] Noonan 1985: 179- 204.
[120] Sawyer 2003: 105.
[121] Noonan 1985: 179- 204.

Northern lands. This crisis lasted until 286 AH/900 AD when dirhams reappeared in large numbers, but from a different source – central Asia.[122]

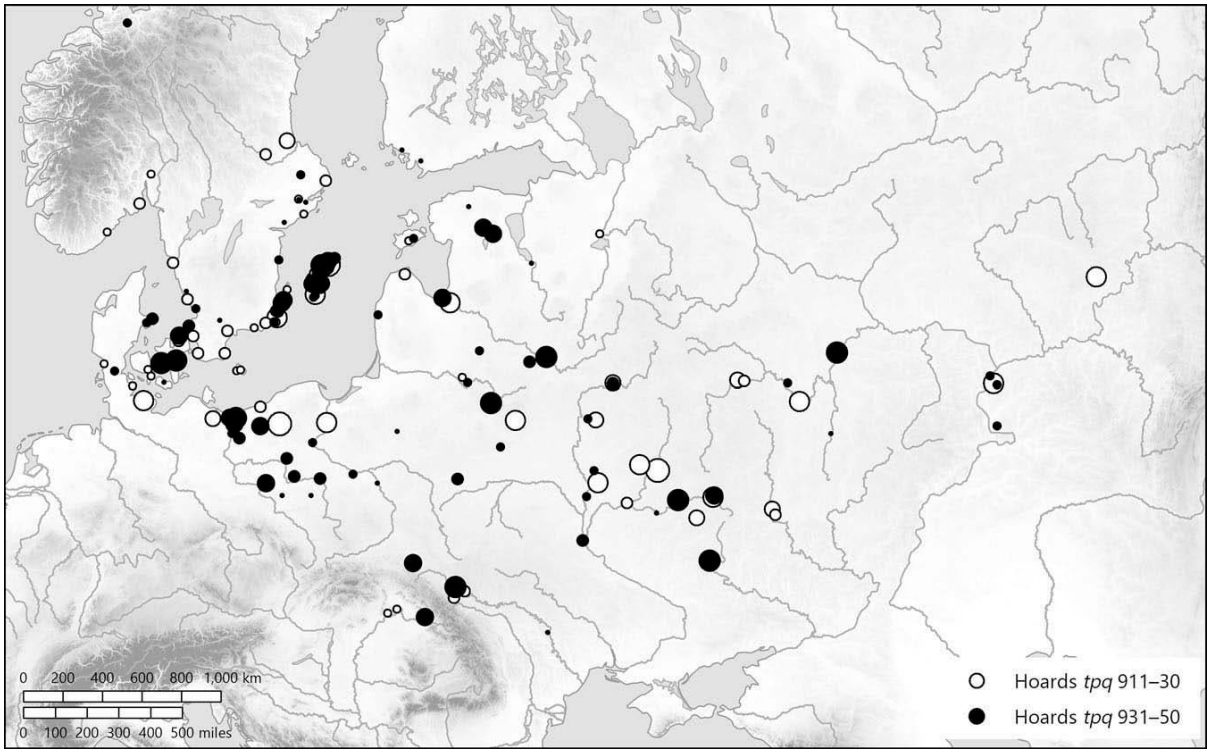
The Vikings brought a variety of goods with them on their journeys southwards.[123] These goods included slaves, furs, honey, leather, ivory, fish, and other commodities. Furs, in particular, were highly valued abroad due to the cold climate of Scandinavia, which resulted in local mammals having thick and luxurious pelts.[124] Between 286 AH/900 AD and the early 5th AH/11th AD century, the dirhams were mainly carried from Samanid Central Asia through the southern Ural steppe and Volga Bulgaria. This trade route became the primary means of bringing Islamic silver to Eastern Europe during this period. The tenth-century trade route went from Central Asia to the Volga and then spread to all parts of Eastern and Northern Europe.[125]

One of the main trade routes used by the Vikings was the Volga trade route. The Vikings traveled southwards along the Volga River, reaching areas such as present-day Russia, Ukraine, and the Caspian Sea. They would exchange their goods, such as furs, honey, leather, and fish, with oriental merchants. In return, they acquired valuable commodities, including Islamic dirhams.[126] However, this flow of central Asian dirhams also came to an end in the second decade of the 5th AH/11th AD century, leading to the "Second Silver Crisis." This marked the end of the significant import of Islamic silver dirhams into Northern and Eastern Europe during the Middle Ages.[127]

Map 9 The major trade routes in the tenth century.
(https://en.wikipedia.org/wiki/Route_from_the_Varangians_to_the_Greeks#/media/File:Varangian_routes.png)

[122] Noonan 1985: 41- 50.
[123] Noonan 1986: 343.
[124] Noonan 1985: 179- 204.
[125] Noonan 1997: 142. Noonan 1987: 221.
[126] Mitchiner 1987: 141.
[127] Noonan 1985: 41- 50.

The Islamic dirhams, mainly in silver, were highly sought after by the Vikings.[128] These coins were used as a medium of exchange and were buried by the Vikings for safekeeping or future use. The dirhams were often of the "Kufic" type, referring to the script inscribed on them. The Vikings accumulated a significant number of these coins, leading to the discovery of numerous hoards in Scandinavia, the Baltic Sea area, and Eastern Europe.[129]



Map 10. Northern and eastern European dirham hoards with *tpq* between 911 and 950 AD. (Jankowiak 2021: 119)

The discovery of the Máramaros "Huszt" hoard and the Islamic coins in the Carpathian Basin, suggests the active participation of different intermediaries in facilitating the exchange of goods and currencies between the Vikings, the Khazar, the Rus, the Volga Bulgar, and the Hungarians with the Islamic world. The Hungarians and the Volga Bulgars played important roles in the movement of goods and the exchange of currencies, including the Islamic dirhams.

The Carpathian Basin, with its strategic location and extensive trade routes, served as a crucial hub for trade during the Middle Ages. The Hungarians controlled key routes that connected the Viking territories with the Byzantine Empire and the Islamic lands, while the Volga Bulgars had a significant presence along the Volga River, connecting the Viking territories with Central Asia and the Islamic lands.

[128] Grierson & Mark 1986: 316.
[129] Linder-Welin 1974: 24-29.

The involvement of the Hungarians and the Volga Bulgars in the trade of Kufic dirhams is evident in the discovery of the Máramaros "Huszt" hoard, which contains both genuine Islamic dirhams and imitations. This hoard provides tangible evidence of the economic and cultural connections between these regions and highlights the active participation of various groups in the trade of Kufic coins.

In this chapter, we will explore the intricate world of trade between Eastern Europe and the Islamic world in the tenth century. We will investigate the pivotal role played by various intermediaries in facilitating this trade, including Khazar merchants, Rus merchants, Bulgar merchants, Magyar merchants, and Muslim merchants. These intermediaries were essential in connecting the two regions and ensuring the efficient flow of goods and coins.

Additionally, we will examine the nature of commercial exchange during this period. This includes an analysis of the various commodities traded, such as slaves, furs, silk, and other valuable goods. By uncovering the significance of these commodities within the trade network, we aim to illuminate their impact on the economies of both regions.

Furthermore, this chapter will delve into the currency and weight systems of the Rus, Vikings, Khazars, Volga Bulgars, Muslims, and Magyars. We will explore the complexities of these systems and their implications for understanding medieval economies. By analyzing these diverse economic frameworks, we will gain insights into the broader economic milieu and the interconnectedness of these societies through trade and commerce. Through this comprehensive approach, we aim to provide a detailed understanding of the historical context and economic dynamics that facilitated the circulation of Islamic coins across these diverse regions.

V. I. The Middlemen of the trade

V. I. I. The Khazar Merchants

The Khazar was a powerful nation that exerted commercial dominance over a vast area of land.[130] Khazar rule over the only feasible trade route connecting the East and West was common, as other alternate routes were governed by Muslims. From the seventh century to the end of the tenth AD, the Khazars built a state structure that played a significant role not only in political affairs but also in the trade activities of the region.

[130] Dunlop 1954: 3.

The Khazar state's territory covered a large area, extending from the north as far as the Bulgarian territory of the Volga to the southern boundary of the Muslim caliphate, and from the west as far as Kiev to Turkestan across the Ural Mountains.[131] According to accounts by al-IÒÔakhrÐ and Ibn Íawqal, which are regarded as the two most important Muslim sources for Khazar studies, the Khazar's revenue came from border taxes, tithes, and customs duties on all goods that arrived by land, sea, and river channels. Other texts make explicit references to the state's practice of centralization and control over its citizens and neighbors on the political and economic fronts. According to both sources, the Khazars had representatives ruling over the citizens of the districts and territories.[132] The majority of Arabic sources agree that the primary requirement imposed upon subordinated peoples was the payment of tribute to the Khazars.[133] It is likely that the Khazars charged foreign traders a customs duty equal to 10% of the value of the items they carried or imported, as was the case in Muslim nations.[134] However, there is no proof that the Khazar merchants engaged in direct trade with the Muslims. When the Rus was mentioned in Arabic literature as traders who formerly traveled to Baghdad for trade, no similar information is provided about the Khazar merchants.[135]

The presence of Islamic silver found in hoards north of the Khazar khaganate has provided evidence of trade passing through Khazaria. Discoveries of coins with Khazar markings, as well as Khazar imitation coins from 830 AD, in northern hoards have further supported the accounts in written sources regarding the Khazar involvement in trade between the Islamic world and the northern regions during the ninth century. The influx of coins from Abbasid mints began in the early ninth century, reached its peak in the 860 AD, and gradually declined after approximately 875 AD, although not to the extent that was previously believed.[136]

Khazar trade was active in Eastern and Central Europe, and numerous facts regarding this topic can be deduced from the Arabic materials. To reach Bulgar, the Khazar traders sailed upstream on the Volga River. Ibn RustÁ's work provides some information about the trading relations between the two states. There is very little information in the Muslim sources about Khazar trade with Slavic peoples.[137] al-IÒÔakhrÐ informed us that various items were sent to the

[131] Ashtor 1976: 106.
[132] al-IÒÔakhrÐ, *al- MasÁlik wa'l-mamÁlik:* 129-130. Ibn Íawqal, *KitÁb ÒÙrat al-arÃ,* 394.
[133] Dvornik 1949: 311.
[134] Ibn Íawqal, *KitÁb ÒÙrat al-arÃ,* 392.
[135] Polgár 2019: 121.
[136] Evans 2023: 139.
[137] Ibn RustÁ *al-ÞAÝlÁq al-NafÐsÁ,* 141.

Khazar from the country of the Rus, the Bulgars, and Kiev.[138] The Khazar undoubtedly played a role in the trading system that connected Northeastern Europe to the Slavs and the Rus.[139] It is important to stress that the Slavs, Rus, and other European and non-European peoples used to travel to the Khazar city for trade. The defining quality of the Khazar state is that it is a state with many different peoples, races, and religions.[140] Itil, the Khazar's capital city, was believed to be divided into three parts, one of which served as the primary settlement for merchants (Jews, Christians, Muslims, and pagans).[141]

As a result of its ascent to power, the Khazar state became the most important middleman in trade between Eastern Europe and the caliphate. It drew interest from various peoples, including the Rus, who were among the principal participants in this commerce and aimed to control trade not only with Byzantium but also with the Muslim world.

Regarding the Máramaros "Huszt" hoard and the ninth-tenth centuries Islamic coins in the Carpathian basin, this passage provides valuable insights into the Khazar's role within the trading system that connected Northeastern Europe to the Slavs, noting that the Bulgars were not the sole entities attempting dirham imitation. It underscores the Khazars' dominance over the sole feasible trade route between the East and West and their collection of revenue from border taxes, tithes, and customs duties within this commercial network. The Khazars aimed to control trade not only with Byzantium but also with the Muslim world, thereby asserting their influence over regional commerce.

V.I. II. The Rus Merchants

Arabic sources include many paragraphs referring to the Rus, sometimes as traders and sometimes as pirates. The Rus engaged in trade piracy that extended as far west as Central Europe and as far east as Bulgar and KhawÁrizm.[142] Most Muslim geographical and historical materials indicate that the Rus were not producers and did not have plantations. Al-BakrĐ, the Andalusian geographer, relates in the chapter on Europe that the Rus had no plantations and their livelihood was gained through their swords. He also mentioned that they raided the Slavs on ships.[143] IbrÁhĐm Ibn YaÝqÙb informs us that Rus merchants used to come to Prague, which was described as the richest town in merchandise. He states that the Rus merchants

[138] al-IÒÔakhrĐ, *al- MasÁlik wa'l-mamÁlik:* 132.
[139] Dunlop 1954: 120.
[140] Polányi 1976: 339-371.
[141] al-MasuÝdĐ, *MurÙg aÃ-Ãahab wa maÝadin al-gawhar,* vol. 1. 152-153.
[142] Polgár 2019: 113.
[143] al-BakrĐ, *al-MasÁlik wa'l-mamÁlik.* 152.

brought goods from Cracow.[144] During Ibn Faḍlān's journey in 310 AH / 922 AD, he encountered the Rus acting as traders in the Bulgar capital.[145] The first mention of the Rus comes towards the end of the description of the Bulgars. Ibn Faḍlān's text reveals that the main reason the Rus came to Bulgar was to meet Muslim traders, especially those who had a significant amount of dirhams.[146]

Ibn RustÁ, who may have written his book about ten years prior to Ibn Faḍlān's mission, states the following: "The Rus usually come to the Bulgārs of the Volga with their goods and trade with them..."[147] According to Ibn RustÁ, "The Rus go out to raid the Slavs and take them as prisoners in order to sell them to the Khazars and Bulgars." We know from the text of Ibn Ibn KhurdÁdzbih on the Rus, which is one of our earliest sources, that the Rus sailed the River Itil and passed by ÍamlÐh, the town of Khazars.[148]

Regarding the role of the Rus as middlemen related to the Máramaros "Huszt" hoard and Islamic coins in the Carpathian Basin, this passage provides information about the Rus as traders and their engagement in trade.

V.I. III. The Bulgar Merchants

The Bulgars played a noteworthy role in the economic development and trade in Eastern Europe during the medieval period.[149] The geographical location of the Bulgars in the northeastern regions of Europe gave them considerable importance as a center of communication between the north and the south, the east and the west.

The Bulgars may have started engaging in international trade by the end of the ninth century, in addition to local trading.[150] According to Ibn Faḍlān, the Volga Bulgars were required to pay tribute to the Khazar king. The Khazars taxed the Bulgars by taking one sable skin from each house in the Bulgar state. [151]

An important fact is that the Bulgars rarely established a direct relationship with the caliphate in Baghdad due to the distance between the two states. The Khazar land geographically separated the two countries. However, the Bulgars succeeded in maintaining stronger contact

[144] al-ÍumyrÐ, *al-RÙÃ al-MuÝaÔÁra.* 86.
[145] Kazakov 2023: 304.
[146] Ibn Faḍlān, *Risālat Ibn Faḍlān,* 149-154.
[147] Ibn RustÁ *al-ÞAÝlÁq al-NafÐsÁ,* 145.
[148] Ibn KhurdÁdzbih, *KitÁb al-masÁlik wa al-mamÁlik.* 270-271.
[149] Zimonyi 1990: 81-83.
[150] Kazakov 2023: 302.
[151] Golden 1990: 237.

with the Muslims of the eastern caliphate, particularly with the Samanids, through the nomadic Turkish lands. The Bulgars were known for their openness to outside commerce, more so than any other steppe people in Eastern Europe.[152]

The town of Bulgar is described in geographical literature from the first part of the tenth century and beyond as a meeting location where traders from Muslim nations, Slavic regions, the Rus, and the Khazar would gather.[153] Ibn Faḍlān's report also mentions the Rus traders who traveled to Bulgar to meet Muslim dealers.[154]

Ibn RustÁ testified that the Rus and Khazars traveled to the city of Bulgar to engage in trade. According to the author, Muslim traders reportedly traveled by ship to Bulgar, with the goal of conducting commercial exchanges by bringing dirhams to the city.[155]Al-MasÝudĐ, who wrote around the middle of the tenth century, reported that caravans used to come to the town of Bulgar from Khwarazm and Khurasan, and vice versa.[156]

Regarding the role of the Volga Bulgars related to the Máramaros "Huszt" hoard and Islamic coins in the Carpathian Basin, it is worth noting that there are Volga Bulgar imitation coins found in the Carpathian Basin and in the hoard. The Bulgars' involvement in trade and their connections with various regions and traders make it plausible that they played a role in the circulation and distribution of Kufic coins in the Carpathian Basin.

V.I. IV. The Magyar Merchants

Little is known about the trade of the Hungarians in the ninth century. Indirect references to the relationship between Muslim traders and Hungarians can be found in historical Arab and Persian sources.[157] One such source is the account of al-Jayhānī, the wazir of the Samanid dynasty, who described how the Magyars enslaved their Slavic and Rus neighbors and sold them to the Byzantines. This indicates that the Magyars were involved in the slave trade, which persisted even after the Conquest of the Carpathian Basin.[158]

Most of the surviving Arabic sources that mention the Hungarian's role in international trade were written by Arab and Persian writers. These sources provide valuable insights into the

[152] Koestler 1976: 256.
[153] Ibn Faḍlān, *Risālat Ibn Faḍlān,* 210.
[154] Polgár 2019: 125.
[155] Ibn RustÁ *al-ÞAÝlÁq al-NafÐsÁ,* 141-145.
[156] al-MasÝudĐ, *MurÙg aÃ-Ãahab wa maÝadin al-gawhar,* vol. 1. 154.
[157] Kovács 2011: 11.
[158] Zimonyi 1990: 20-21.

interactions between Muslim traders and the Hungarian people. Additionally, some Arab and Persian writers drew from travelogues or general compendiums to explain the customs and practices of the Hungarians. [159]

In addition to written sources, numismatic evidence and certain archaeological objects also contribute to our understanding of the relationship between Muslim traders and Hungarians. These artifacts provide tangible evidence of trade and cultural exchange between them.[160]

The Arabs considered the Hungarians to be a Turkish race. Ibn Rustā, who wrote around the beginning of the 10th century, was the first Muslim author to mention them in his work under the name al-Maggariyya. He provided a lot of information about them, their way of life, their relations with other neighboring peoples, and considered them as one of the nations neighboring the Slavs. "The Maggariyya have dominated all the Slavs bordering with them, they have forced the Slavs to supply them with a lot of provisions, and the Slavs are considered as their captives. The Maggariyya have invaded the Slavs and taken them prisoners, then carried them away along the sea coast to a Byzantine port."[161] The same information is also quoted by al-Marwazī, who reports that "The Maggariyya overcome those of the Slavs and Rus who are their neighbors, carrying off captives whom they sell in Rūm." [162]

Most Hungarian archaeologists accept the idea that lively commercial contacts existed between the Rus and the Magyars during the ninth-tenth centuries.[163] The textual and material evidence for connections during the tenth century is far more conclusive. The Magyars, based in the Carpathian Basin, continued to conduct incursions against Western Europe and the Byzantine Empire until the third quarter of the century.[164] The market of Pereyaslavets on the Danube is the first to be reported, where Prince Sviatoslav intended to transfer his seat, saying that is the center of my realm, where all riches are concentrated: gold, silks, wine, and various fruits from Greece, silver and horses from Hungary and Bohemia, and from Rus furs, wax, honey, and slaves. This occurred in 969 AD, precisely around the moment that the Pechenegs began to significantly threaten the Dnieper river, according to the Russian Primary Chronicle.[165]

[159] Zimonyi 2004: 22.
[160] Kovács 2005: 51. Štulrajterová 2013: 176.
[161] Ibn RustÁ, *al-ÞAÝlÁq al-NafÐsÁ,* 142- 143.
[162] al-MarwazÐ, *ÓabÁÞiÝ al-ÍayawÁn*, 35-36.
[163] Vörös 1996: 177.
[164] Fettich 1931: 60-72.
[165] Kendrick 2004: 158.

The indirect ways in which the Rus and the Magyars met in foreign markets in the 10th century can be used to characterize the trade between them.[166] However, it can also be argued that direct trade, particularly in the first half of the century, flourished between Kiev and Hungary. There were commercial interactions between the two peoples throughout that time. Rus merchants also frequented both markets connected to the Magyars after the middle of the 10th century.[167]

In the distinctive historical narrative, IbrÁhĐm Ibn YaÝqÙb al-ÓarÔsÙhĐ, interwove the identities of Carpathian Muslim and Jewish merchants within his contentious chronicles. Notably, Ibn YaÝqÙb's accounts, dated to either 961/962 AD or 965/966 AD, shed light on a notable incident at the Prague market, recognized as one of medieval Europe's principal slave trading hubs. During this event, Hungarian Muslim, Jewish, and Turkic (Hungarian) traders converged, accompanied by their unspecified merchandise and evidently carrying a substantial quantity of contested *al-mithqā* "commercial weight measures" in their possessions. The precise nature of this merchandise remains ambiguous, as does the intent behind the Hungarian traders' participation in the slave trade. It is uncertain whether they procured slaves for domestic servitude, facilitated their sale at markets like Pereyaslavets, or potentially transported them further to Muslim territories.[168]

The written sources emphasize the outstanding position of the market of Prague, repeatedly referring to the trade route that connected it with Kraków and Kiev, and mentioning Hungarian and Jewish merchants active in the dirham-less zone. Exports from Prague to the 'Muslim Country' and to Hungary consisted mainly of Slavic slaves.[169] Muslim merchants reached Prague in their dealings with other merchants such as the Rus and the Jews. It is a well-established fact that the trade in slaves with either Hungary or Prague was an important motive behind the commercial activity in this area during the 10th century.[170] From 970 AD, when the Hungarians adopted Christianity through Géza and his son Sanit Stephen I (1000-1038 AD), the Carpathian Basin became an more important area in the trade routes.[171]

The most valuable source of information comes from Abū Ḥāmid Muḥammad al-Gharnāṭī,[172] who lived in Hungary for three years. Abū Ḥāmid, who was also a merchant from Muslim

[166] Kovács 1997: 37-51.
[167] Polgár 2002: 217-232.
[168] al-ÍumyrĐ, *al-RÙÃ al-MuÝaÔÁra, 86*. al-BakrĐ, *al-MasÁlik wa'l-mamÁlik, I* / 253.
[169] Žemlička 1995: 267-278.
[170] Nazmi 1998:177.
[171] Cartledge 2011: 13.
[172] ÍamĐda 1995: 368.

Spain, provides information about trade and the Muslim traders residing in Hungarian lands.[173] Although his accounts date from the 12th century, they shed light on the commercial life of the region and its roots going back to the 10th century. His data on the trade routes linking Central and Eastern Europe with the Muslim world is quite considerable.[174] He described how he purchased two slave girls while in Hungary. Abū Ḥāmid also mentioned that during one of the Hungarian wars with the Greeks, the price of slaves dropped dramatically, and we see that the eight-year-old was half the price of the fifteen-year-old. Abū Ḥāmid commented that he left his older son, Ḥāmid, in Hungary. His son, Ḥāmid, was precisely thirty years old when Abū Ḥāmid left Hungary and was married to two Muslim women, daughters of two wealthy Hungarian Muslims, who both gave him sons.[175] Abū Ḥāmid al-Gharnāṭī's travelogue is very important for its testimony on the practice of slavery in Central and Eastern Europe. The first excerpt demonstrates one reason why some people might have ended up in slavery, the second gives us an idea of the prices for slaves, and the third shows that Abū Ḥāmid adhered to the Islamic practice of releasing a slave who had borne her owner a son. Despite the fact that the writer's descriptions date from the 12th century, the information he provides sheds light on the area's commercial activities and their beginnings in the 10th century.[176]

In closing, before the conquest of the Carpathian Basin, the Hungarians participated in international trade and sold slave captives in the Crimean Peninsula. There were foreign traders among the Hungarians. After the conquest, the Hungarians reorganized the commercial connections of the Carpathian Basin. In the 10th century, this area was incorporated into international trade, particularly in the Eastern European trade.

The Máramaros "Huszt" hoard and the prevalence of Islamic coins within the Carpathian Basin serve as compelling historical evidence, shedding light on the depth of Hungarian trade and their integration into international commerce during the 10th century. The presence of Islamic coins within the Carpathian Basin not only signifies the utilization of tenth-century dirhams by Hungarian traders but also underscores the extensive commercial connections established by the Hungarian people. These coins, sourced from regions with which the Hungarians maintained trade relations, showcase their active involvement in a broad network of economic and cultural exchange. These findings underscore the pivotal role of the Carpathian Basin

[173] Norris 1993: 28-29.
[174] Nazmi 1998: 41.
[175] AbÙ ÍÁmid al-GharnÁÔÐ. *TuÎfat al-ÞalbÁb wa Nukhbat al-ÞaÝjab*, 1993: 69.
[176] Norris 1993: 28-29.

within the broader framework of Eastern European trade during the 10th century, emphasizing the significance of Hungarian engagement in regional and international commerce.

V. I. V. The Muslim Merchants

The Muslim trade during the period of the Abbasids reached its height after the establishment of Baghdad as the capital of the Muslim caliphate. It has long been known that during the ninth and tenth centuries, a very lively trade existed between the Islamic world and Eastern Europe.[177] The Islamic geographical and historical literature from the time frame of this study provides examples of significant business ventures undertaken by Muslim traders in Eastern Europe. These sources indicate that there were numerous Muslim trade communities present in various locations throughout these regions.[178] Itil, the capital of the Khazar, was most likely one of the major cities in Europe with a significant concentration of Muslim craftsmen from various locations throughout the Muslim caliphate. Itil was the main station from which Muslim merchants could venture to other northern districts, especially to Bulgar or to Kiev and even as far as Prague.[179]

The second most important location for Muslim traders was the town of Bulgar. There were two main ways for them to get there: either by land from Itil or by direct river travel from Khwarazm and Transoxania. Ibn Faḍlān's account informs us about the Muslim traders who visited the capital city of the Bulgars for commercial purposes, not only with the Bulgars but also with other peoples like the Rus.[180] Ibn RustÁ reported that Muslim traders traveled to Bulgar for commerce a few years before Ibn Faḍlān's mission.[181] This confirms that these merchants came to Bulgar from Itil via the Volga river. The information provided by both al-al-IÒÔakhrÐ and Ibn al-Hawqal about the road leading to Kiev seems to be of equal importance. Both sources report that the distance from Bulgar to Kiev is about twenty legs.[182]

There are very few sources that have been passed down to us that contain information regarding Muslim merchants in Prague. Most cite IbrÁhÐm Ibn YaÝqÙb's report as their primary source. He describes Prague as a main town in central Europe, with a commercial center visited by many merchants, including Muslims. "The city of Farāgha is built of stone and lime on the bank of a river. It is smaller than a city and bigger than a village. It has a market with everything

[177] Noonan 1992: 237.
[178] Polgár 2019: 108-109.
[179] Lewis 1982: 91.
[180] Ibn Faḍlān, *Risālat Ibn Faḍlān,* 210.
[181] Ibn RustÁ, *al-ÞAÝlÁq al-NafÐsÁ,* 141.
[182] Ibn Íawqal, *KitÁb ÒÙrat al-arÃ,* 398. al-IÒÔakhrÐ, *al- MasÁlik wa'l-mamÁlik:* 132.

needed for the travelers and the inhabitants. It is their principal trading city. The Rūs and the Ṣaqāliba go there from Karākū with commodities, while from the country of the Turks and of the Muslims come to them Jews and Turks with commodities and mathāqī al-marqaṭiyya and carry away slaves, tin, and various kinds of wool." [183]

The fact that the author says these traders are from the land of the Turks may draw attention to the Hungarians, who were considered by the Arabs to be Turks, and whose land was referred to as the land of the Turks. Ibn RustÁ, who wrote around the beginning of the tenth century, pointed out that the Magyars - "Al-Maggariya were nomads and fire-worshipers". In relation to trade, the author noted that they traded with the Byzantium, but he said nothing about trade with the Muslims in his times.[184]

Around the middle of the tenth century, al-MasÝudĐ gives us an account of the Muslim merchants belonging to the Pechenegs. The theory of some researchers about the existence of Muslims in general and Muslim merchants in particular among the Magyars may be based on the statement of al-MasÝudĐ. From al-MasÝudĐ's information, we know that most of the Muslim merchants who came to Prague via the Hungarian land arrived directly from inside the domains of the Muslim caliphate, while others crossed the land of Alans from Khazaria.[185] YÁqÙt located the Hungarian country in the middle of Europe, which he called the country of Christianity. He demarcates their country thus: north of them is the land of the Slavs, in the south is the land of the Pope, in the west is the land of al-Andalus, and from the east, there is Byzantium and its territories.[186] The Muslim merchants reached Prague in their dealings with other merchants such as the Rus and the Jews. It is a well-established fact that trade in slaves, either with Hungary or with Prague, was an important motive behind the commercial activity in this area during the tenth century.[187] Muslim traders had established trade networks and communities during the 9th and 10th centuries, in various locations throughout Eastern Europe, including the Carpathian Basin, Itil, and Bulgar. These traders would travel to these regions for commercial purposes, engaging in trade with local populations.

[183] al-ÍumyrĐ, *al-RÙÃ al-MuÝaÔÁra,* 86.
[184] Ibn RustÁ, *al-ÞAÝlÁq al-NafĐsÁ,* 142- 143.
[185] al-MasÝudĐ, *MurÙg aÃ-Ãahab wa maÝadin al-gawhar,* vol. 1. 181.
[186] YÁqÙt, *MuÝjam al-buldÁn,* vol. I, 322-323. al-GardĐzĐ, *Zeyn al-ÀkhbÁr*. 392.
[187] Mez 1922: 444.

V. I. VII. Closing

The commercial dynamics of Eastern Europe during the ninth and tenth centuries were significantly shaped by the activities of various middlemen Khazar, Rus, Bulgar, Magyar, and Muslim merchants. Each group played a crucial role in connecting diverse regions through trade routes that facilitated not only economic exchange but also cultural interactions.

The Khazar merchants, leveraging their strategic geographical position, established themselves as dominant players in the trade routes linking the East and West. Their control over key trade corridors and their sophisticated system of border taxes, tithes, and customs duties underscored their importance in the economic landscape of the region.

Similarly, the Rus merchants, while often noted for their dual role as traders and raiders, significantly influenced trade networks, especially through their interactions with the Bulgars and the Khazars. Their presence in markets from Prague to Bulgar highlighted their integral role in the exchange of goods and slaves, furthering economic ties across vast distances.

The Bulgars, positioned at a critical crossroads in Northeastern Europe, acted as a vital conduit between the north and the south, as well as the east and the west. Their openness to commerce and strategic location enabled them to facilitate extensive trade networks that reached as far as the Muslim caliphate and other neighboring regions.

The Magyars, while initially more elusive in their trading activities, gradually emerged as key players in the international trade of the Carpathian Basin. Their involvement in the slave trade and interactions with both Eastern and Western markets highlighted their integration into broader economic systems. The presence of Islamic coins in the Carpathian Basin serves as a testament to their extensive trade connections and the region's significance in medieval commerce. The Máramaros "Huszt" hoard, alongside the prevalence of Islamic coins within the Carpathian Basin, offers compelling historical evidence illuminating the extent of Hungarian trade and their integration into international commerce during the 10th century. The presence of these Islamic coins not only indicates the utilization of tenth-century dirhams by Hungarian traders but also underscores the extensive commercial connections established by the Hungarian populace. These coins, sourced from various regions with which the Hungarians maintained trade relations, demonstrate their active involvement in a vast network of economic and cultural exchange. Consequently, these findings highlight the pivotal role of the Carpathian Basin within the broader context of Eastern European trade during the 10th century,

emphasizing the critical significance of Hungarian engagement in both regional and international commerce.

Lastly, the Muslim merchants, with their far-reaching trade networks, established communities in various Eastern European locales, from Itil to Bulgar and beyond. Their engagement in trade with local populations and other merchant groups facilitated the circulation of dirhams and fostered cultural exchanges that enriched the region's economic and social fabric.

Collectively, these middlemen created a vibrant and interconnected trade network that not only enhanced the flow of goods and wealth but also promoted cultural and technological exchanges. The circulation of dirhams throughout the Carpathian Basin and beyond is a tangible testament to the robust economic activities and the intricate web of trade routes that defined the medieval period in Eastern Europe.

The multifaceted roles of these merchant groups underscore the complexity and dynamism of medieval trade systems. Their contributions were instrumental in shaping the economic landscape of the time, laying the groundwork for the continued development and prosperity of the regions they connected. As we reflect on their legacy, it becomes evident that the middlemen of medieval trade were pivotal in forging a network of economic and cultural exchanges that had lasting impacts on the history of Eastern Europe.

V.II. Commercial exchange and trading commodities

The tenth century marked a pivotal period in history, characterized by vibrant commercial exchanges and the trading of diverse commodities between Eastern Europe and the Muslim world. At the heart of this bustling trade network lay the Carpathian Basin, strategically positioned as a crossroads of cultures and civilizations. Here, the Hungarians emerged as key intermediaries, leveraging their geographic advantage and skilled artisans to facilitate the flow of goods and foster economic and cultural exchanges. Among the myriad commodities traded during this era, slaves, furs, silk, and an array of other goods played significant roles, enriching the exchange between Eastern Europe and the Muslim world. In this chapter, we explore the intricate dynamics of commercial exchange and trading commodities in the tenth century, shedding light on the pivotal role played by the Hungarians and their counterparts in shaping the economic landscape of the time.

In the tenth century, the Hungarians played a crucial role in the commercial exchange and trading of various commodities between Eastern Europe and the Muslim world. This period witnessed a vibrant and dynamic trade network that connected these regions through the

famous Silk Roads. The Hungarians, with their strategic location and skilled artisans, became key intermediaries in this trade, facilitating the flow of goods and fostering cultural and economic exchanges. One of the significant commodities traded during this time was slaves. The Carpathian Basin, with its strategic position at the crossroads of Europe, served as a transit point for the slave trade. Slaves from Eastern Europe were captured and transported to the Muslim world, where they were traded for coins and various goods. Furs were another important commodity traded in the tenth century. the furs were highly valued in the Muslim world for their warmth and luxury. Silk, known for its exquisite beauty and fine craftsmanship, was a highly sought-after commodity in the tenth century. The Hungarians played a crucial role as a middleman in the silk trade. Silk from the East was transported through the Carpathian Basin, where it was traded with the Muslim merchants. Hungarian traders capitalized on their strategic location to profit from this lucrative trade. In addition to slaves, furs, and silk, the Hungarians were involved in the trade of various other goods. These included textile goods, fabrics, clothes, jewelry, ornaments, weapons, glass beads, carnelian, precious stones, spices, food, and drink.

V.II. I. Slaves

The first important commodity in the trade between the Muslim world and Europe was slaves. Slaves played an important role in the economy of medieval Europe. Various local wars in Europe resulting from tribal migrations of the Magyars, Slavs, Rus, and Bulgars brought captive slaves to the European markets in great numbers. Many Europeans were involved in capturing and exporting slaves to the Muslim world. Subsequently, the majority of these slaves were dispatched by slave exporters outside the European continent to the Muslim and Byzantine markets.[188] In the 4th AH/10th AD century, the slave trade flourished between Central Asia and Northern and Eastern Europe. Slaves were sent from Scandinavia, Russia, and Eastern Europe in exchange for silver, which was mined in the realm of the Samanids in Central Asia. Tens of thousands of Slavic slaves were sold to the eastern part of the Islamic world.[189] The Slav slaves, known as "Saqaliba" in medieval Arabic literature, denoted the Slavic populations of central and eastern Europe and possibly some of their neighbors. They were taken to Khawrazm via Bulgaria and after passing through Bulgar city and desert.

[188] Lewis 1992: 9.
[189] Michailidis 2012: 315.

Khawrazm was under the rule of the Samanids, and the city called Gorganj was one of the greatest slave markets in Transoxiana.[190]

The Hungarians played a significant role in the slave trade between the Muslim world and Europe during the medieval period. As mentioned earlier, various local wars and tribal migrations in Europe resulted in the capture and enslavement of individuals, who were then brought to European markets in large numbers. The Hungarians were involved in capturing and exporting slaves to the Muslim world. The Hungarians, who were considered Turks by the Arabs, were active participants in the slave trade. They captured slaves from their raids and sold them to Muslim and Byzantine markets. These slaves were often sent outside of Europe to the Islamic world. [191]

In the courts of the Samanid princes and even the caliphs, slaves and slave girls, were highly valued for their skills in playing musical instruments or singing. It was common for these precious slave girls to be used in the courts and even married to the rulers and commanders. Some of the future princes were even descendants of these slave girls. [192] The price of slaves varied depending on their characteristics. White-skinned or aristocratic slaves were considered more valuable and expensive. A white slave girl who was merely pretty and had no particular skill could cost 1000 Dinars or more. Turkish slaves, who entered Transoxiana and Khorasan from the surrounding regions, were even more expensive and highly prized. [193] Ibn Hawqal, a medieval geographer, noted that Turkish slaves were the most expensive and unique in the world. He mentioned that he had seen Turkish slaves being sold for 3000 Dinars in Khorasan. The price of a Turkish slave girl could reach up to 3000 Dinars, which was significantly higher than the price of a Roman slave girl or a slave girl from any other region. The Turkish slaves were highly sought after, especially if they were skilled in playing musical instruments. The transmission of slaves from the territory of the Samanids followed certain regulations. In Transoxiana, the passage of slaves across the Oxus River was forbidden without state permission. Transit fees were imposed, ranging from 70 to 100 Dirhams for each slave, and even higher for Turkish slave girls. Non-Turkish slave girls had lower transit fees, typically around 20-30 Dirhams.[194]

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[190] Ostad 2013: 174.
[191] Zimonyi 1990: 20-21. Ibn RustÁ, *al-ÞAÝlÁq al-NafÐsÁ,* 142- 143.
[192] Ibn Íawqal, *KitÁb ÒÙrat al-arÃ,* 377.
[193] al-IÒÔakhrÐ, *al-MasÁlik wa'l-mamÁlik,* 305.
[194] al-Maqdisī, *ʾAÎsan al-Taqāsīm fī Maʾrafat al-ʾAqālīm,* 325.

In summary, the Hungarians played a significant role in the slave trade between the Muslim world and Europe. They were involved in capturing and exporting slaves, particularly to the eastern part of the Islamic world. The slaves captured by the Hungarians, along with other slaves from different regions, were highly valued for their skills and were traded at high prices in the slave markets of the Muslim world.

V.II. II. Furs

The second important commodity in the trade between the Muslim world and Europe was certainly furs. The most expensive, highest-quality furs that were imported into Muslim marketplaces came from northern and eastern Europe.[195] According to sources, the Bulgars and Khazars were the ones who used to collect furs. For instance, regardless of whether the products were imported or obtained in the Bulgar or Khazar domains, the Bulgars collected one sable skin from each hearth, and the customs charges collected from merchants were at the rate of 10% of the items.[196] Generally, it seems that the main entrepots of the fur trade were situated in the northeastern section of Europe, which includes the major Russian rivers and their tributaries. The outermost regions of the Russian land and Kiev were one of the main regions where furs were produced.[197] MustawfĐ al-Qazwīnī, using earlier sources, maintained that in Kiev, Russian furs were found in great quantities. The Arabic sources also placed particular attention on the fact that the Rus merchants traveled from the most distant parts of the land of the Saqaliba in order to carry on trade with furs. [198]

The Hungarians, being located in the Carpathian Basin, which was a crucial region in the trade network, had access to the fur-producing areas in northeastern Europe. They likely participated in the collection and transportation of furs to the Muslim markets.

V.II. III. Silk

Silk was not only valued for its luxurious and exotic nature but also for its practical uses. It was a highly sought-after fabric due to its durability, vibrant colours, and soft texture. Silk garments were considered a symbol of wealth, status, and prestige.[199] The Silk Roads encompassed a vast network of routes that stretched from China to the Mediterranean, passing through Central Asia, the Middle East, and Eastern Europe. These routes were crucial for the

[195] Noonan 1992: 237-253.
[196] Ibn Faḍlān, *Risālat Ibn Faḍlān,* 206.
[197] Kovalev 2000-2001: 30.
[198] Martin 2004: 35-36.
[199] Scott 1993: 240.

trade of silk, spices, precious metals, and other luxury goods.[200] The silk trade between Eastern Europe and the Muslim world in the tenth century was a significant economic and cultural exchange. This trade route connected the prosperous regions of the Byzantine Empire and the Islamic Caliphate with the territories of Northern and Eastern Europe.[201] The middlemen played a crucial role in facilitating this trade and ensuring the smooth flow of goods and ideas.[202]

The Hungarians played a significant role in controlling the western branches of the Silk Roads. Their strategic location in the Carpathian Basin allowed them to exert control over key trade routes that passed through their territory.[203] The Hungarians, being skilled horsemen and warriors, were able to conduct military campaigns that allowed them to acquire silk and other valuable goods through raiding and plundering.[204] These military expeditions provided them with access to regions where silk production or trade was prominent, such as Italy, Byzantium, and the Balkans.[205] Recent archaeological findings in the Dniester region suggest that the Hungarians tightly held control over the western branches of the Silk Roads until the mid-tenth century. These findings indicate the presence of Hungarian traders and their influence in the region. [206] The Hungarian control over the western branches of the Silk Roads had economic and political implications. It allowed them to regulate the flow of goods, including silk, between the Byzantine Empire and the Muslim territories. The Hungarians acted as intermediaries, facilitating trade and benefiting from the wealth and prosperity brought by the silk trade.[207]

V.II. IV. Other goods

In the tenth century, the trade between Eastern Europe and the Muslim world also involved a wide range of goods that were imported to Eastern and Northern Europe, and into the Carpathian Basin, with the Hungarians playing a significant role as intermediaries. The Carpathian Basin served as a hub for the trade of these goods, which included textile goods, fabrics, clothes, jewelry, ornaments, weapons, glass beads, carnelian, precious stones, spices,

[200] Frankopan 2015: 3.
[201] Kovalev 2005: 56
[202] Polgár 2019: 53.
[203] Flórián 2023: 367–432.
[204] Bloch 1989: 8- 14.
[205] Türk, Flórián , & Nagy 2020: 142 – 148.
[206] Türk & Flórián 2023: 1-17.
[207] E. Nagy 2009: 21–49.

food, and drink.[208] Textile goods, fabrics, and clothes were highly sought after in both Eastern Europe and the Muslim world. These textile goods were traded along the Silk Roads, with the Carpathian Basin serving as a crucial trading hub.[209] Jewelry and ornaments were also important trade items. These jewelry and ornaments were traded with Muslim merchants, who appreciated the craftsmanship and unique designs. Weapons were another significant trade item between Eastern Europe and the Muslim world. Swords, spears, and other weapons were highly regarded for their quality and craftsmanship. These weapons were traded with the Muslim merchants, who valued them for their effectiveness in warfare. Glass beads were a popular trade item, They were traded along the Silk Roads. Carnelian and other precious stones were also traded between Eastern Europe and the Muslim world. These precious stones were highly valued and traded with the Muslim merchants.[210]

The Arab and Persian geographers explicitly state that dirhams were primarily used to purchase slaves and furs. Ibn Faḍlān, who visited Bulgar in 309 AH / 922 AD, provides a firsthand account that emphasizes the central importance of the slave trade. According to Ibn Faḍlān, the Vikings traveled down the Volga River and engaged in the trade of Slavic slaves.[211] Ibn RustÁ, writing at the beginning of the tenth century, explains how the Rus profited from the trade of Slavic slaves and furs.[212] Ibn Hawqal suggests the presence of two distinct trading networks. The eastern network involved the Rus selling Slavic slaves at the Bulgar and Itil markets in exchange for Samanid dirhams. On the other hand, sources indicate that the Spanish market was supplied by Jewish traders who purchased Slavic slaves from the Prague market.[213]

Muslim sources also mention other goods from northern and eastern Europe. Fish, dried fish, and fish glue (isinglass) were brought from this region.[214] Honey and wax were also highly regarded products from the steppes and beyond.[215] The Slavs were described as a people without vineyards but with an abundance of honey, which they used to make wine and other products. The Bulgar and Khazar reportedly reexported wax and honey to the Muslim world.[216] There is limited information about raw materials from the northern regions of Europe. Iron and

[208] Nazmi 1998: 203- 210.
[209] Türk & Flórián 2023: 1-17.
[210] Polgár 2019: 53- 63.
[211] Ibn Faḍlān, *Risālat Ibn Faḍlān*, 134.
[212] Ibn Faḍlān, 2012: 126.
[213] Ibn Íawqal *KitÁb ÒÙrat al-arÃ,* 106.
[214] al-MuqaddasÐ, *AÎsan al-taqÁsÐm fÐ maÝrifat al-aqÁlÐm.* 325.
[215] al-IÒÔakhrÐ, *al-MasÁlik wa'l-mamÁlik,* 130-131.
[216] Polgár 2019: 25.

tin are among the minerals that were exported to Muslim nations. The information about these products is based on writings by al-Muqaddasī and al-Bakrī.[217] Russian swords are also mentioned by Ibn Faḍlān. The term "Russian swords" most likely refers to high-quality swords that were comparable to Frankish swords. Many other Muslim sources use the same term to describe Russian swords and their distinctive features.[218]

V.III. Closing

In closing, the discovery of Islamic dirhams and the Máramaros "Huszt" hoard within the Carpathian Basin serves as a tangible testament to the extensive networks of trade that once thrived across continents. I believe that these coins did not simply arrive by chance; they were the currency of complex economic exchanges, evidence of the deep-seated interconnectivity of the medieval world. The presence of the dirhams is a silent yet eloquent witness to the bustling trade activities that took place in the Carpathian Basin. These activities were underpinned by the merchants of the era, including the Khazar, Rus, Magyar, and Muslim merchants, who served as the vital middlemen of their time. Through their hands, goods and coins moved, weaving together the diverse cultural and economic tapestries of their societies.

The trade conducted by these middlemen was not limited to a single commodity. Slaves, furs, silk, and various other goods were exchanged, enriching and fostering cultural exchanges between Eastern Europe and the Muslim world. The trade network was a dynamic and multifaceted exchange of goods and ideas, leaving a lasting impact on the history and development of the region. The discovery of the Islamic dirhams and the Máramaros "Huszt" hoard provides a glimpse into the vibrant trade networks that once thrived in the Carpathian Basin. These coins serve as a reminder of the interconnectedness of the medieval world and the important role played by the merchants in facilitating trade and cultural exchange.

V.III. Currency and weight system

The study of currency and weight systems within various historical contexts offers invaluable insights into the economic structures, trade practices, and cultural interactions of past civilizations. In this chapter, we delve into the currency and weight systems of the Khazars, the Rus, the Vikings, the Volga Bulgars, the Muslims, the Magyars, and exploring their complexities and implications for understanding medieval economies. While each of these societies employed unique systems tailored to their specific needs and contexts, they were

[217] al-BakrÐ *al-MasÁlik wa'l*-mamÁlik: 161.
[218] Ibn Faḍlān, *Risālat Ibn Faḍlān,* 208.

interconnected through trade networks and shared economic influences, as evidenced by the circulation of coins and the adoption of standardized weights. Through a comparative analysis of these diverse systems, we aim to elucidate the broader economic milieu of the Máramaros "Huszt" hoard, the Islamic coins in the Carpathian basin in the ninth-tenth centuries, and shed light on the interconnectedness of various societies through trade and commerce.

V.III.I. The Khazar

The Khazar Khaganate, engaged in various numismatic practices, reflected in the diversity of coinage used within its dominion. The Khazar economy was complex, involving interactions with multiple political entities and cultural groups, leading to a variety of currencies in circulation.[219] Initially, the Khazars relied heavily on foreign coinage, particularly Islamic dirhams, which were a staple in international trade and highly valued for their silver content. These dirhams were indispensable for commerce, especially in dealings with the Rus merchants and other regional traders. However, as the inflow of these coins from Arab lands began to dwindle around 825 AD, the Khazars embarked on their own minting initiatives to supplement the depleting stock of dirhams.[220]

Khazar coinage experiments began with the imitation of Islamic dirhams, which made sense given their wide acceptance in Eurasian trade networks. Early imitations were faithful to the original Arab dirhams, bearing no distinct Khazar insignia or state messages. These imitations were strategic, ensuring continued trade with partners accustomed to the dirham's form and purity. The Bulgars, another Turkic group, were also known for their dirham imitations, indicating a broader regional practice among states engaging with Islamic trade routes.[221]

In a significant shift, the year 223 AH/837-838 AD marked the issuance of special issue Khazar coins that diverged from previous practices. These coins bore inscriptions highlighting Khazar state identity—such as "ArÃ al-Khazar" (Land of the Khazars), "MÙsÁ rasÙl Allah" (Moses is the apostle/messenger of God), and the Turkic tamgha symbol—cementing their unique status as official state coinage. This initiative was part of a larger political and religious transformation within the Khaganate, which included the adoption of Judaism as the state religion and constitutional reforms that redefined the roles of the Khazar leadership.[222]

[219] Noonan 1994: 331.
[220] Noonan 1983: 270.
[221] Noonan 1982: 220.
[222] Kovalev 2005: 227.

However, the ambitious project of establishing a distinct Khazar currency through these special issue coins was short-lived. The coins did not effectively disseminate the intended ideological messages, as they were quickly funneled through trade routes to hoards in northern Russia, beyond the reach of the Khaganate's populace and Muslim merchants. The failure of these coins to circulate as intended led to their discontinuation after just one year, and the Khazars reverted to minting dirham imitations devoid of state or religious symbols.[223]

The numismatic history of the Khazars, particularly the special issue dirhams of 223 AH/837-838 AD, offers a unique window into the monetary and ideological strategies of the Khaganate. It reflects the challenges of establishing and maintaining a state identity through coinage in the face of established commercial practices and regional trade dynamics. The Khazar experiments with coinage, as discussed by scholars like Roman K. Kovalev, underscore the complexities of early medieval monetary systems and the efforts of emerging states like the Khazars to navigate and assert themselves within these systems.[224]

The issuance of coins by a state, such as the Khazar Khaganate, carries significance far beyond mere economic utility. Coinage is a powerful instrument of statecraft, serving multiple functions that are both practical and symbolic. Economically, having a standardized currency simplifies trade, allows for the easier assessment of taxes and tributes, and facilitates the storage of wealth. For the Khazars, who were deeply embedded in the trade networks that crisscrossed Eurasia, the ability to issue their own coins was crucial to maintaining economic stability, particularly when the inflow of foreign dirhams was not sufficient. By minting their own dirhams, the Khazars could ensure a steady supply of currency to support their trade and economic infrastructure.[225]

However, the significance of coinage extends into the realms of politics, culture, and ideology. Coins are a means of communication, carrying messages about the authority, legitimacy, and identity of the issuing power. They can reinforce the sovereignty of a state and project its values and beliefs. The special issue coins of 223 AH/837-838 AD, with their distinct inscriptions and symbols, were a clear attempt by the Khazar leadership to assert a new state-religious identity following their conversion to Judaism and to unify their diverse subjects under this identity.[226]

[223] Kovalev 2004: 107-110.
[224] Kovalev 2005: 221-242.
[225] Golden 2007: 125.
[226] Kovalev 2005: 230.

The issuance of coins can also be an assertion of independence from neighboring powers. By creating coins that differed from the Islamic dirhams, the Khazars were not only marking their religious and cultural distinction from the Muslim caliphates but also their political autonomy from other regional powers such as Byzantium. Furthermore, the ability to issue coins can be seen as a hallmark of a centralized and organized state apparatus. It requires a system of mints, reliable sources of precious metals, and a bureaucracy capable of regulating and controlling the production and circulation of currency. The Khazars demonstrated such administrative sophistication through their coinage efforts, even though the special issue coins did not have the intended impact.

In summary, the importance of coinage for the Khazar Khaganate is multifaceted. Economically, it was essential for trade and fiscal stability. Politically and ideologically, it was a tool for the state to express and reinforce its identity, sovereignty, and authority. The special issue coins of 223 AH/837-838 AD, were especially significant in that they represented a deliberate and calculated attempt by the Khazar leadership to craft and convey a new state identity an endeavor that highlights the intrinsic value of coinage as a medium for state messaging and unity.

The weights system of the Khazars, while not extensively documented in surviving sources, can be reconstructed to some extent based on historical evidence and linguistic analysis. The Khazars likely used a system of weights similar to other contemporary civilizations, tailored to their needs for trade and commerce. One term commonly associated with Khazar weights is *"qadaq,"* which is believed by Pritsak to have represented a raÔl -pound.[227] The *" raÔl "* was a unit of weight used in various cultures across the Middle East and Central Asia, typically equivalent to around 409.5 grams. The Khazar *qadaq* may have been divided into smaller units for more precise measurements.[228]

Another term, *"sam,"* is thought to have denoted half of a pound. This indicates that the Khazars likely had a system of fractional weights to facilitate transactions involving smaller quantities of goods.[229] Additionally, linguistic analysis suggests that the Khazars may have used the term "*yarmaq"* to refer to a unit of weight equivalent to a dirham. The Khazars may have adopted it as a standard unit of weight for trade purposes.[230]

[227] Pritsak 1998: 31.
[228] Noonan 1995: 267.
[229] Golb & Pritsak 1982: 7.
[230] Pritsak 1998: 32.

Overall, while specific details of the Khazar weights system remain uncertain, it is evident that they had a sophisticated system in place to measure and quantify goods for trade and commerce. This system would have been essential for facilitating the Khazar's active involvement in international trade networks during their heyday.[231]

V.III.II. The Rus

Before minting their own currency, the Rus heavily relied on foreign coins for trade. They engaged in extensive trade with the Islamic Caliphate, the Byzantine Empire, and various European states.[232] Islamic dirhams began to be widely used in the East Slavonic world in the early 8th century, with the earliest Russian hoard dating back to the mid-8th century.[233] These dirhams, especially Samanid and Volga Bulgar silver coins, were valued for their high silver content and often served as a standard for other currencies.[234] Coins were clipped or cut to create smaller denominations for practical trade use.[235] Dirham hoards in Eastern Europe not only contained Islamic and Volga Bulgar dirhams but also Byzantine coins like the solidus circulated in Rus territories, with the Rus trading furs and slaves for these gold coins, as well as luxury goods like silks. Western European coins, including the denarius, also circulated, particularly in areas of Rus closer to Western Europe.[236]

Vladimir the Great's late 10th and early 11th-century reforms initiated local coinage, featuring the prince's image and inscriptions, which had both economic and political purposes, such as asserting sovereignty and aiding trade.[237] Concurrently, deniers from various Western European regions, like Germany, England, Norway, Denmark, Sweden, Ireland, Italy, and Bohemia became increasingly common in Kievan Rus hoards.[238]

In the Rus weight and currency systems, the *grivna* served as a central unit for measuring silver and gold, with its weight being adjusted to conform to Byzantine standards, promoting integration into regional trade networks. The golden *grivna* notably held a value 12.5 times that of its silver counterpart, a testament to the relative value of precious metals within the system. To facilitate smaller transactions, units like the *kuna,* which originated from the dirham and

[231] Kovalev 2005: 227.
[232] Zguta 1975: 483-484.
[233] Kuleshov 2021: 160.
[234] Kovalev 2001: 245.
[235] Noonan 1998: 151.
[236] Noonan 1980: 150-151.
[237] Spassky 1967: 50-51.
[238] Nikolaus 1929: 40.

eventually transitioned from currency to a weight measure for silver, were utilized.[239] The value of the *kuna* relative to the *grivna* varied in response to economic conditions. Notably, the exchange rate between gold and silver was established at a ratio of 1:15, echoing the rate employed by the Khazar, with Pritsak emphasizing the Khazar weight system's impact on Southern Rus. [240]

Further, the *veksha*, which represented both a squirrel skin and a monetary unit, was fixed at one-sixth of a *kuna*, and a silver *veksha* weighed about one-third of a gram. This smallest denomination highlighted the fur trade's central role in the Rus economy. Additionally, a halved Islamic dirham, known as a *rezana*, approximated 1.38 grams of 900 fineness silver and was valued at one-fiftieth of a *grivna* in the 9th century. The *grivenka*, a larger weight unit similar to the Islamic mithqal with minor regional weight variations, was employed by the Volga Bulgar and the Khazars.[241]

The weight system of Southern Rus closely paralleled those of the Abbasid caliphate and the Byzantine empire, enabling straightforward conversions and reinforcing trade relations. This compatibility was vital for economic interactions, as it simplified the trading process and permitted the seamless exchange of goods and currency across these regions. In contrast, the weight system of Northern Rus evolved to better reflect and accommodate the increasing trade volume with Western European states, marking a divergence in economic strategies tailored to distinct geopolitical trade environments.[242]

Coin hoards from this era reveal significant currency trends, such as the reduced influx of Islamic dirhams into northeastern Rus in the early 11th century, suggesting a shift in trade patterns and sources of precious metals. The presence of dirhams in hoards buried in Rus until the late 11th and early 12th centuries indicates a gradual transition towards economic independence, possibly through the minting of their own currency or adaptation to other forms of coinage prevalent in trade with Western Europe.[243] The Rus currency and weight systems were sophisticated and multifaceted, enabling effective trade with diverse cultures and empires. Their strategic location and adaptability were crucial to their economic success, with their

[239] Pavlova 1994: 380-382.
[240] Pritsak 1998: 38.
[241] Hinz 1970: 2. Sperber 1996: 110.
[242] Zguta 1975: 383-392.
[243] Noonan 1980: 301-303. Jankowiak 2013: 137.

weight systems reflecting a blend of cultural influences and practical responses to the demands of regional and international trade.

In closing, the historical narrative of the Rus is one that is deeply enmeshed with their economic sophistication, which played a pivotal role in the rise and sustenance of their civilization. The convention of Rus economic practices, particularly their currency and weight systems, reveals a society adept at navigating the complexities of international trade in a period marked by diverse cultural exchanges and evolving political landscapes.

The examination of the Rus economic system offers profound insights into their societal structure and priorities. Their initial reliance on foreign coins reflects a pragmatic approach to commerce, allowing them to engage in trade networks without the immediate need for a localized currency. However, the transition to minting their own currency underscores a strategic shift towards economic sovereignty and political assertion. The introduction of Vladimir the Great's reforms, which included the minting of coins bearing his likeness, was not only an economic maneuver but also a declaration of the Rus growing independence and identity. The trade routes established by the Rus, such as the Volga and the route from the Varangians to the Greeks, were not merely channels for the exchange of goods but also conduits for cultural and technological transfer. The use of currency systems that bore semblance to those of their trade partners, such as the Abbasid caliphate and the Byzantine empire, facilitated smoother transactions and reinforced diplomatic ties. The decline of the Kievan Rus in the 12th century, exacerbated by internal strife and external pressures, was mirrored in their economic systems. The decreased influx of Islamic dirhams, as evidenced by coin hoards, may suggest a shift in trade patterns, possibly due to changing political alliances or the exhaustion of readily accessible trade routes.

In the realm of scholarly investigations, extensive analyses of the Rus weight system have been undertaken, with notable contributions from scholars such as Pritsak providing in-depth insights into this facet of Rus economic history. However, the current review aims to provide a fundamental understanding of the broader economic context. This groundwork is instrumental in facilitating subsequent investigations, particularly regarding the Máramaros “Huszt” hoard.

V.III.III. The Viking

During the Viking Age, a variety of currencies and coin types circulated within Viking territories and beyond, reflecting the extensive trade networks and cultural interactions of the

period. Here's a summary of the currencies and coin kinds associated with the Vikings: Dirhams: A significant portion of the Viking currency system was influenced by their trade with the Islamic world. The Vikings obtained large quantities of silver dirhams through trade, raiding, and tribute payments. These silver coins, originating primarily from the Abbasid Caliphate and later from the Samanid and Volga Bulgar, became a prized possession among the Vikings. The influx of Islamic silver into Scandinavia and the Slavic lands from around 800 AD to 1015 AD underscores the Vikings' extensive trade connections and their appetite for silver. Dirhams were often melted down and used for bullion or hack-silver, reflecting a versatile use of currency where the value was based on the silver content rather than the coin's face value.[244] Scandinavian Imitations: Between circa 995-1020 AD, local mints in places like Lund and Sigtuna produced imitations of Anglo-Saxon pennies. The craftsmanship and use of official English dies indicate that these were not mere experiments but part of a sophisticated monetary operation.[245] Anglo-Saxon Pennies: Vikings had access to English coins, which were prevalent in hoards, especially those found in Norway, indicating strong trade links with the Danelaw region of England.[246] German Coins: Hoards in southern and eastern parts of Scandinavia contained a relatively larger portion of German coins, suggesting different points of trade contact compared to those connected with the British Isles. Nordic Coins: Early Scandinavian coinage, including those from Denmark, Sweden, and Norway, became more common after the establishment of state coinages in the mid-eleventh century.[247] Foreign Intrusions: Viking hoards also contained coins from various other regions, including Frankish, Bohemian, Italian, Russian, and Hiberno-Norse origins, though in smaller numbers. This variety is a testament to the Vikings' extensive trading connections. State Coinages: By the mid-eleventh century, official coinages issued by Scandinavian kings became more prevalent. Estimates suggest that Danish issues reached into the millions, indicating the significance of coinage in the late Viking economy.[248] These various currencies were not only indicative of the Vikings' vast trade networks but also their integration into a broader economic system where coins were valued beyond their weight in precious metal. The presence of coins from different regions and periods in Viking hoards suggests that they were widely accepted and used in

[244] Metcalf 1997: 296–335.
[245] Coupland 2022: 114- 120.
[246] Blackburn 1985: 101-124. Spufford 1989: 55.
[247] Metcalf 1998: 347- 371.
[248] Jonsson 1994: 220-223

commerce throughout Viking lands, making the Viking Age a transformative time in the history of coinage and monetary practices in Scandinavia.[249]

During the Viking Age, Norse peoples engaged in extensive trading, raiding, and exploration, necessitating a sophisticated method for valuing and exchanging goods, incorporating not just coinage but also the weighing of bullion primarily silver and gold. They primarily used a weight-based currency system for internal trade, with silver in forms such as hack-silver, ingots, and foreign coins, valued by weight using scales. This discussion draws upon the insights from Jane Kershaw's research, which provides a nuanced understanding of the Viking's weight-based economic system and its implications for trade, both within Viking society and with the broader medieval world, including the Islamic world. The system revolved around units like the mark, *ørtug*, and *øre,* with the mark being the most significant, typically divided into eight *ørtug* and each *ørtug* into three *øre,* although the exact mass of these units could vary by region.[250]

The Vikings' interaction with the Islamic world was marked by their trade with Islamic-ruled regions, acquiring dirhams, which were abundant in Viking hoards, reflecting strong trade connections.[251] These Islamic silver coins were often melted down or kept as trade items, with the dirham weight of about 2.97 grams becoming a cornerstone in the Viking weight system, especially in Baltic trade. The Vikings employed various weights, such as cub octahedral and oblate-spheroid, to measure silver, with weight ratios derived from dirhams providing a consistent standard for trade.[252]

The Viking weight and currency system, as illuminated by Jane Kershaw's research, reveals a complex economic framework that enabled extensive trade and interaction with other political communities. This weight-based system allowed for a flexible and pragmatic approach to commerce, enabling transactions of various sizes and emphasizing the interconnectedness of medieval trade networks. The Viking weight and currency system, with its standardized weights for precious metals, facilitated trade both within Viking society and with external partners, notably in the Islamic world, showcasing the Vikings' adaptability and significant role in medieval global trade. This adaptability is also evident in the way Vikings integrated into the broader economic framework of their time, adopting Islamic dirham weight standards,

[249] Gullbekk 2008: 167.
[250] Kershaw 2019: 127-138. Gruszczynski 2019: 169.
[251] Brather 2010: 143-160.
[252] Kilger 2010: 161-169.

which facilitated trade and provided a reliable basis for transactions with foreign traders familiar with these standards.[253]

The discovery of scales and weights in Viking settlements and graves indicates the widespread nature of trade activities, transcending social and gender boundaries, with women actively participating in the economy, challenging traditional perceptions of Viking society. The Vikings' economic pragmatism is also demonstrated in their approach to foreign coins, including Islamic, Anglo-Saxon, Frankish, and Byzantine currencies, which were valued by their silver content and incorporated into the Viking weight system, enabling trade across different regions and underscoring the Vikings' practical approach to commerce.[254]

In this academic inquiry, we refrain from an exhaustive examination of the intricate intricacies of the Viking weight system. A plethora of scholarly investigations and comprehensive references exist on this subject, with notable contributions including the seminal study by Jane Kershaw. Our objective herein is to present a comprehensive overview that facilitates a broad understanding of Viking weights. Such elucidation is deemed essential for contextualizing the broader significance of the surrounding contexts pertinent to the Máramaros “Huszt” hoard. Through this approach, we endeavor to establish a foundational understanding conducive to further scholarly exploration and interpretation.

V.III.IV. The Volga Bulgar

The monetary system of the Volga Bulgar in the tenth century, particularly their weight standards, reflects a complex interplay of cultural, economic, and religious factors. This system was intricately tied to the broader networks of trade and commerce during that period.[255] The primary currency in circulation was the Samanid silver dirham, which underwent a standard weight adjustment to 3.41 grams in the early tenth century. The Volga Bulgars, having embraced Islam around 900 AD, played a crucial role in transporting Samanid silver into Eastern Europe.[256]

Analysis reveals a preference for coin weights ranging from the Volga Bulgar between 3.01 grams and 3.51 grams, aligning closely with the Samanid dirham's standard weight of 3.41 grams. [257] While the Khazar system equated 1 pelt to 2.5 dirhams, the Volga Bulgarian system

[253] Jankowiak 2018: 15-30
[254] Kershaw 2019: 127-138.
[255] Zimonyi 1990: 81-83.
[256] Noonan 1997: 142
[257] Jankowiak 2023: 331.

valued 1 pelt at 2 dirhams. This adjustment in weight standards, including fractional units based on the *bezmen*, reflects an evolving monetary system influenced by both Islamic and indigenous traditions.[258]

With the adoption of Islam, the Volga Bulgars incorporated Muslim metrological standards into their system. The canonical gold *al-mithqāl* of 4.25 grams became prevalent, alongside standard commercial bronze weights based on multiples of the *raÔl*. Additionally, the use of the Muslim canonical dirham *al-kayl* (3.15- 3.125 grams) for silver transactions became common, further integrating Islamic metrological units into Volga Bulgarian commerce.

The coexistence of various weight standards, underscores the complexity of the Volga Bulgarian metrological system. Silver ingots, such as the *saum(a)* 204.75 grams, were also integral to trade, reflecting a diverse range of denominations and values.[259]

In summary, the weight system of the Volga Bulgars was a product of cultural exchange, economic dynamics, and religious influences, resulting in a nuanced monetary framework that facilitated trade within Western Eurasia during the tenth century.

Regarding the currency in circulation among the Volga Bulgars, a comprehensive examination will be conducted to provide a thorough and precise elucidation of the various types of coins utilized, as well as the evolutionary developments leading up to the establishment of their own minting coins. Furthermore, specific examples found within the scope of our analysis, such as those uncovered in the Máramaros "Huszt" hoard, will be utilized to illustrate the practical application of these numismatic principles.

V.III.V. The Magyar

The arrival of the Hungarians in the Carpathian Basin during the early 10th century precipitated a transformation in trade patterns and commercial networks. The coins circulating among the Hungarians conquering the Carpathian Basin came from a very large area, as mentioned by the written sources.[260] Prior to the introduction of their coinage system, the Hungarians relied on foreign currencies, as evidenced by the unearthing of Western European, Byzantine, and Islamic coins within the Carpathian Basin.[261] László Kovács in his comprehensive study has

[258] Pritsak 1998: 34.
[259] Curta 2013: 314.
[260] Langó 2012: 54.
[261] Kristó 2000: 139. Gedai 1986: 71.

particularly emphasized that these coins might have reached the Hungarians in many different ways.

In Western Europe, Hungarian economic activities are documented through a diverse array of sources, including concrete reports, narrative descriptions lacking precise numerical data, and general enumerations detailing instances of the campaigns.[262] Italian coinage emerged as a significant component of economic exchanges, with historical records highlighting payments made by Italian rulers to Hungarians, exemplified by King Hugh of Provence's disbursement of ten modii of silver coins in 942 AD. Despite historical discrepancies posing challenges in quantifying these transactions, the substantial nature of these payments underscores their economic significance.[263] Hungarian campaigns into Italy, dating back to 899 AD, involved a series of campaigns and interventions, culminating in the detailed military operation at Monte Cassino in 937 AD.[264]

Similarly, engagements in Germany yielded substantial wealth for Hungarians, as exemplified by the exchange of 200 solidi for a non-aggression pact with monks from Duchy of Lotharingia in 954 AD. Campaigns against Saxony and interventions in local conflicts underscore the multifaceted nature of Hungarian economic endeavors in the region.[265] In France, while specific numerical data regarding is scant, the 937 AD raid targeting the monastery of Saint Basol in Verzy serves as an illustrative example of Hungarian incursions into French territories.[266]

Moreover, unexpected financial transactions, such as the ransom of YaÎyÁ Ibn MuÎammad ibn al-ÓawÐl from the Córdoban caliphate, highlight the far-reaching economic interactions facilitated by Hungarian expeditions.[267] In any event, coins minted in North Africa or Andalusia have not been uncovered in Carpathian Basin burial sites to date, potentially attributable to their non-recovery or interment, or the absence of any instances having been excavated. The complexity of Hungarian campaigns against the Principality of Bohemia, influenced by geographical barriers and shifting political alliances, adds nuance to the understanding of

[262] Kovács 2011: 11.
[263] Gedai 1988: 257.
[264] Bóna 2000: 49-50.
[265] Hóman 1916: 144.
[266] Gedai 1993: 273-277.
[267] Kovács 2011: 28. Szilágyi 2003: 100.

economic exchanges in Central Europe.[268]Archaeological evidence further corroborates the significance of coinage, particularly in burial practices.

Byzantine Coins: Dr. Péter Langó has shed significant light on Byzantine coins in the Carpathian Basin during the early 10th century, highlighting their importance in the region's economic landscape. As the Hungarians established themselves in the area, they heavily relied on foreign currencies, with Byzantine coins holding a prominent position among them. Comprehensive analyses have revealed the various pathways through which these coins reached the Hungarians, reflecting extensive trade networks spanning Byzantine territories and beyond.[269] Archaeological excavations have discovered Byzantine coins alongside Western European and Islamic currencies, indicating the broad scope of economic interactions in the Carpathian Basin during this period.[270] Moreover, scholarly investigations underscore the multifaceted nature of Hungarian economic endeavors, encompassing campaigns into Byzantine territories and diplomatic exchanges with Byzantine rulers. In light of Dr. Langó's research, it is evident that Byzantine coins played a pivotal role in shaping trade patterns and commercial networks in the Carpathian Basin during the 10th century.

Islamic Coins: Detailed exploration of Islamic coins and their significance in the Carpathian Basian will be addressed in subsequent chapters of this dissertation.

Moreover, it is unwarranted to presume that the majority of coins were subject to melting down by the Hungarians. While it is evident that they repurposed certain coins as raw material, this practice constituted only a minor portion of the overall silver and gold resources utilized by them.[271]

The weight system employed by the Hungarians during this period remains a subject of scholarly inquiry and conjecture due to the paucity of direct evidence. However, contemporary accounts, such as those provided by Ibrāhīm Ibn Yaʿqūb, offer valuable glimpses into the commercial practices and weight standards prevalent in Hungarian society during this era.[272] Ibn Yaʿqūb's reports from the early 10th century depict Hungarian traders of diverse backgrounds converging at the Prague market, engaging in trade activities characterized by the exchange of various goods, including items measured using the unit of mass known as "*al-*

[268] Székely 2001: 107-111.
[269] Langó 2012: 49-66.
[270] Hunka 2009: 395-401.
[271] Langó 2012: 54.
[272] al-ÍumyrÐ, *al-RÙÃ al-MuÝaÔÁra, 86*.

mithqāl."[273] The "*al-mithqāl*," equivalent to 4.25 grams, served primarily as a standard for measuring precious metals, particularly gold and silver, within Islamic commerce.[274] Its presence among Hungarian traders indicates an adoption of weight standards prevalent in Islamic societies, reflecting the interconnectedness of economic activities across cultural boundaries. However, the exact nature and scope of the weight system employed by the Hungarians during this period remain elusive, prompting scholars to explore alternative sources of evidence.

Comparative analyses with neighboring societies and trading partners offer additional insights, allowing scholars to contextualize Hungarian weight systems within broader regional economic frameworks. By examining trade routes, material culture, and currency and weight systems from adjacent cultures such as the Khazar, the Vikings, the Rus, the Volga Bulgar, and the Muslim Caliphate, researchers can construct a more nuanced understanding of Hungarian commerce and its place within trade networks. Despite the inherent challenges stemming from a paucity of direct evidence, the ongoing interdisciplinary research endeavors persistently strive to elucidate the multifaceted nature of Hungarian economic activities during the 10th century. Collaborative efforts among historians, archaeologists, numismatists, and specialists in material culture are indispensable for synthesizing an array of diverse sources and methodologies. Through such concerted endeavors, scholars endeavor to meticulously reconstruct the intricacies of the 10th century Hungarian commerce, delving into the intricate mechanisms of trade, the significance of weight standards, and their far-reaching implications for broader socio-economic dynamics. Despite the formidable obstacles posed by the scarcity of direct empirical data, the sustained scholarly pursuits hold considerable promise for enhancing our comprehension of this intricate facet of Hungarian history.

V.III.VI. The Muslim

The Muslim monetary system of the early medieval period was characterized by intricate relationships between gold and silver coinage, influenced by both historical precedents and contemporary economic dynamics.[275] At the heart of this system was the dirham, the silver coin whose weight and value were closely tied to the gold coin, the dinar.[276]

[273] al-BakrÐ, *al-MasÁlik wa'l-mamÁlik, I* / 253.
[274] Abdullah 2020: 8.
[275] Abdullah 2020: 2.
[276] RamaÃÁn 2008: 59-60.

The foundational reform of the Muslim silver dirham occurred during the currency reforms of the 5th Umayyad Caliph ‘Abd al-Malik ibn Marwān in 77-79 AH (696-698 AD). Under his rule, the weight of the dirham was standardized, with its value linked to the weight of the gold dinar. This relationship was established at a ratio of 10 dirhams to 7 dinars, a formula that played a pivotal role in determining the weight of both coins.[277]

This new currency system of the empire consisted of an almost pure gold dinar regulated to the mithqal weight (4.25 g), an almost pure silver dirham regulated to a dirham weight (2.8 2.9 g) and unregulated copper coins which had a token character.[278] The gold dinar, derived from Byzantine models, served as the standard for ‘Abd al-Malik's reform. However, variations in the weight of solidi, ranging from 4.41 grams to 4.59 grams, led to complexities in determining the precise weight of the dinar and, by extension, the dirham.[279]

Three main types of *al-mithqāl* 4.25 grams, emerged within the Muslim world: the Syro-Arabian (the Umayyad dynasty), the Iraqi (the Abbasid dynasty) and the Egyptian (separate dynasties since the ninth century AD). Each had its own weight standards, leading to further variability in the weight of the dirham across different regions.[280] The canonical *al-mithqāl*, or gold weight, formed the basis for determining the weight of the dirham. However, due to the absence of a universal standard for the *mithqāl*, discrepancies arose in the weight of dirhams minted in various Muslim territories.[281]

The weight of the dirham also depended on its intended use. The commercial dirham, used for accounting purposes, was based on a full-weight *al-mithqāl*. In contrast, the silver coin, or the dirham, was tied to the weight of a debased solidus, resulting in a lighter dirham.[282]

In regions such as North Africa, where historical and economic factors differed, unique variations of the dirham emerged. The lightweight North African dirham, for example, was influenced by European gold coinage trends and weighed 2.73 grams.[283] Throughout the Muslim world, the weight of coins was intricately linked to local economic conditions and the availability of precious metals. Variations in the gold-to-silver ratio further contributed to the

[277] Grierson 1960: 244.
[278] Heidemann 2010: 656.
[279] Miles 1960: 197.
[280] Pritsak 1998: 17.
[281] Abdullah 2020: 8.
[282] Rebstock 2008: 2256.
[283] Abdullah 2016: 79.

diversity of coin weights observed across different regions and time periods.[284] Furthermore, the introduction of fractional units, within the *al-mithqāl* system added another layer of complexity to coinage standards. These fractional units facilitated precise measurements but also contributed to the overall diversity of coin weights observed across the Muslim world.[285]

Overall, the weight Muslim system was a dynamic and multifaceted ecosystem, characterized by a complex interplay of historical legacies, regional variations, and economic imperatives. This intricate system played a crucial role in shaping commercial transactions, trade networks, and economic development across medieval Muslim lands and beyond.

In this study, we refrain from exhaustive examination of the intricacies inherent in the Muslim weight system. A wealth of scholarly investigations and comprehensive references exists on this subject matter, with notable contributions including the work of Hinz Walther... The focal objective herein is to present a broad overview facilitating comprehension of the generalized application of Muslim weights. Such an elucidation is deemed instrumental in discerning the economic and historical milieu underpinning the Máramaros “Huszt” hoard.

V.III.VII. Closing

In closing, the examination of currency and weight systems across different medieval societies reveals a rich tapestry of economic interactions, trade networks, and cultural exchanges that shaped the fabric of the past. While our exploration has provided a broad overview of the Rus, Vikings, Khazars, Volga Bulgars, Muslims, and Magyars' currency and weight systems, it is important to acknowledge the wealth of detailed research and scholarly references available on each of these topics. In this dissertation, we have refrained from delving into precise details of each system, as our primary focus has been to offer a foundational understanding of the broader economic context in which these systems operated. By contextualizing these currency and weight systems, we aim to pave the way for a deeper understanding of the Máramaros “Huszt” hoard and its significance within the larger historical narrative. Through this approach, we seek to provide a framework for further research and exploration into the intricate relationships between currency, weights, and the material culture surrounding the Máramaros “Huszt” hoard.

VI. The Máramaros “Huszt” hoard

In 1904, a significant hoard of Islamic dirhams, known as the Máramaros "Huszt" hoard, was discovered in Máramaros county, located in the northeastern part of historic Hungary. Today,

[284] Hinz 1955: 27.
[285] Pritsak 1998: 17.

this territory is situated in northwestern Romania and western Ukraine. Although the exact location of the discovery is not the town of Huszt itself, it can be localized to the area of Máramaros county. The region of Máramaros county, which is now part of the Transcarpathian territory, lies north of the river Tisza and extends into the Pannonian Basin. This area is the only part of Ukraine that lies beyond the Carpathian Mountains and connects Ukraine with East-Central Europe through various mountain passes.[286]

The Huszt hoard apparently went through several vicissitudes, as it surfaced in the former Maramureș County before 1904 under unclear circumstances; neither its exact findspot, the manner of its discovery, nor the original composition and number of coins were known. The coins likely dispersed over time, with 232 dirhems acquired by the Maramureș County Museum in Sighetu Marmației, Romania, which the Hungarian national museum purchased in 1905, along with 166 specimens from the numismatist Károly Ferenc Nuber, and an additional two pieces from the sculptor Ede Telcs in 1906, thus assembling a collection of 400 pieces. Preliminary identifications were made by the renowned orientalist Eduard von Zambaur in 1905, who, unfortunately, exchanged 24 duplicate pieces, leaving 376 in the Hungarian national museum, which later decreased to 368 by the time of the 1957-1968 revision. Thanks to acquisitions from the Zambaur collection, the count of dirhems studied increased to 371. Currently, the Hungarian national museum houses a total of 373 dirhams, with limited information available regarding the origin of two additional dirhams. In a study conducted by Kovács in 2011, it was mentioned that these two dirhams were discovered from an unknown site and subsequently gifted to the museum by separate donors, Kovács did not include them in the existing hoard.[287] Notably, both dirhams bear resemblance to Volga Bulgar imitations and share identical die characteristics with coins from the hoard, hinting at a potential connection to the hoard, these two dirhams have been added to the hoard by the coin cabinet in the museum.

For a long time, the hoard remained unstudied but kept together in the museum, which led the Hungarians archaeologist László Kovács to seek assistance from Aleksey Vladimirovich Fomin, an expert in Muslim coinage from Moscow, for their monograph on the era's coin finds. Fomin conducted the dirhems' identification based on photographs sent by Kovács and a brief study visit to Budapest, with the results published in a joint volume in 1987 in Budapest.

[286] Kovács & Fomin 1987: 7.
[287] Kovács 2011: 183.

The work was highly praised, with Gert Rispling, a specialist from the Stockholm Numismatic Institute, meticulously verifying each coin's identification based on the illustrations and requesting new photographs of uncertain pieces for corrections in 1993.[288]

The Máramaros "Huszt" hoard is considered an important collection, even when compared to the numerous oriental silver coin hoards found in Northern and Eastern Europe. The dirhams in this hoard are of the Abbasid silver dirhams type, dating from the tenth century to the Samanid dynasty in Central Asia and the period after the Hungarian conquest of the Carpathian Basin. Additionally, the hoard includes a significant quantity from Volga Bulgar, with many rare types among them. Several characteristics distinguish the Máramaros hoard. It exclusively consists of dirhams, with no half or quarter dirhams (which are typical in Europe). Out of the hoard's 154 exemplars, all are cut round.

In this chapter, we will delve into the fascinating world of the Máramaros "Huszt" hoard, examining it through the lens of the various mints involved. The hoard holds great significance in the realm of Islamic numismatics. In this chapter, we will study the coins from the perspective of an Islamic numismatics expert in his native Arabic language, which is written on the dirhams. The dirhams will be meticulously identified and errors from previous studies corrected not only based on photographs but also through physical examination of each coin, measuring its weight and diameter using modern tools to provide precise weights for each coin. The examination continued for over five years with periodic visits to the coins cabinet at the Hungarian national museum. New findings about the hoard have been discovered, which will be presented in this dissertation.

Our exploration begins with the al-Shash mint, where a number of dirhams from the hoard were produced. We will uncover the historical and cultural context surrounding this mint and its role in the creation of these exquisite coins. Moving forward, we will journey to the Samarqand mint, another important mint represented in the Máramaros hoard. We will unravel the stories behind the dirhams minted here. Next, we will explore the AndarÁbah mint, the Balkh mint, the MaÝdan mint, and Nishapur mint each contributing their unique dirhams to the hoard. We will examine the distinctive characteristics of these mints. Additionally, we will delve into the realm of Volga Bulgar dirhams, which form a significant part of the Máramaros

[288] Rispling 1993: 119-134.

hoard. We will explore the Bulgar Mint and the dirham it produced, as well as the influence of al-Amīr Yaltwar of the Volga Bulgar on the creation of these imitations.

Moreover, the examination of the Máramaros "Huszt" hoard serves as a testament to the interdisciplinary nature of numismatic studies, integrating methodologies from archaeology, history, metallurgy, and linguistics. By employing a holistic approach to coin analysis, researchers can unravel intricate historical narratives embedded within these coins.

VI. I. al-Shash mint

Al-Shash mint, located in the historic principality of Uzbekistan and the modern-day capital city of Tashkent, played a significant role in the coinage of the Samanid dynasty during the tenth century. Situated in northeastern Uzbekistan, near the border with Kazakhstan, al-Shash was an important city in the region, particularly under the rule of the Samanids.[289]

After the Islamic conquest of al-Shash by Qutayba Ibn Muslim in 95 AH/714 AD, the city flourished as a center for trade along the Silk Road.[290] It became renowned for its production and export of silk, cotton, textiles, and other goods, serving as a prominent trade hub with Eastern Europe. The Samanids recognized the economic importance of al-Shash and took measures to ensure its prosperity. [291] Under the Samanid dynasty, al-Shash became a vital link in the trade routes across Central Asia. The Samanid army secured these routes, safeguarding commercial convoys and facilitating the transportation of goods to Islamic countries. This ensured economic stability in the vast lands under Samanid control. [292]

Arab and Persians geographers of the ninth and tenth centuries, such as al-Yaʿqūbī and Ibn Íawqal, mentioned al-Shash as a significant city near Samarkand. Ibn Íawqal described it as the largest province in Mesopotamia and Khurasan, with numerous cities. He praised the region for its vastness, stating that al-Shash and Elak (another city in the province) were connected and appeared as one city. The area was abundant in water and greenery, making it the most beautiful country beyond the river.[293] According to Muslim geographers Ibn Khurdadbih and al-Muqaddisī, al-Shash and Elak were known for their silver extraction. Ibn Hawqal also

[289] YÁqÙt, *MuÝjam al- buldÁn,* 2 vols, 23.
[290] Gibb 1923: 45.
[291] MuÎammad ÝAbd al-ÝAÛÐm 2009: 98.
[292] MuÎammad ÝAbd al-ÝAÛÐm 2009: 98.
[293] al-Yaʿqūbī *Kitāb al-BuldÁn,* 123. Ibn Íawqal, *KitÁb ÒÙrat al-arÃ,* 416-419.

mentioned that silver dirhams were minted in two places in Transoxania: Deinket, the capital of the Ilak mining region (Chach), and the city of Samarkand.[294]

al-Shash mint was one of the most prolific in striking dirhams under the Samanids. During the first two decades of the tenth century, dirhams minted in al-Shash dominated over all others issued by the Samanids. These dirhams were the most common and widely used coins in the Samanid external trade relations, particularly in northern and eastern Europe.[295]

Numismatic evidence suggests that the majority of the dirhams struck in al-Shash were discovered outside of Central Asia, primarily in northern and eastern Europe. This indicates that these dirhams were specifically minted for trade with the region. Over a period of one hundred years, the production of dirhams in al-Shash experienced significant peaks and falls, reflecting the fluctuations in demand and economic conditions.[296]

The dirhams minted in al-Shash during the tenth century exhibit various designs and inscriptions, reflecting the artistic and cultural influences of the time. The dirhams featured Arabic inscriptions, including the name of the ruler and the mint, along with decorative elements such as geometric patterns and floral motifs. The quality and craftsmanship of these coins were highly regarded, contributing to their widespread circulation and acceptance in trade.[297]

In the Máramaros "Huszt" hoard, 31.3% of the dirhams were struck in al-Shash, totalling 117 dirhams. The minting of dirhams in al-Shash began in 287 AH/900 AD and continued until 323 AH/935 AD, with only eight years lacking any recorded dirhams from the al-Shash mint. The first dirhams were struck in 287 AH/900 AD during the rule of Samanid Amīr Ismāʿīl ibn Aḥmad (279-295 AH/892-907 AD) and in the name of Abbasid caliph al-Muʿtaḍid Billah (279-289 AH/892-902 AD). Naṣr Ibn Aḥmad (301-331 AH/914-943 AD) was responsible for releasing 80% of all al-Shash dirhams issued by the Samanids in the hoard, totaling 98 dirhams, making him the most prolific al-Amīr in striking dirhams at this mint. al-Amīr Aḥmad Ibn Ismāʿīl (295-301 AH/907-914 AD) minted 12% of all dirhams produced at al-Shash by the Samanids, making him the second-most productive ruler in the hoard. al-Amīr Ismāʿīl ibn Aḥmad (279-295 AH/892-907 AD) issued 8% of all Samanid dirhams struck at the al-Shash

[294] Ibn Khurdadbih, *al-MasÁlik wa'l-mamÁli*, 119. al-MuqaddasĐ, *AÎsan al-taqÁsĐm fĐ maÝrifat al-aqÁlĐm,* 130.
Ibn Íawqal, *KitÁb ÒÙrat al-arÃ,* 416-419.
[295] Kovalev 2002: 50.
[296] MuÎammad ÝAbd al-ÝAÛĐm 2009: 98.
[297] al-BaghdÁdĐ 1939: 134.

mint, making him the least productive ruler in the Máramaros "Huszt" hoard. In the year 287 AH/900 AD, mint production fell but remained higher compared to the period before 287 AH/900 AD. Six dirhams in the hoard were struck in 287-288 AH/900-901 AD during the rule of Samanid al-Amīr Ismāʿīl ibn Aḥmad and Abbasid caliph al-Muʿtaḍid Billah (279-289 AH/892-902 AD). The years 290-292 AH/902-904 AD experienced a major drop in output, unseen since 287 AH/900 AD. In this year, two dirhams from the al-Shash mint are recorded in the hoard, dating back to Ismāʿīl ibn Aḥmad and Caliph al-Muḳtafī Billah (289-295 AH/902-908 AD). The following year, 293-294 AH/905-906-907 AD, three dirhams struck during the rule of Ismāʿīl ibn Aḥmad and caliph al-Muḳtafī Billah saw a rise in production, which remained high and relatively steady until 303-304 AH/915-916 AD.

From the year 295 AH/907 AD to 301 AH/913-914 AD, thirteen dirhams were recorded in the hoard with the name of Samanid al-Amīr Aḥmad Ibn Ismāʿīl (295-301 AH/907-914 AD) and caliph al-Muqtadir Billah (295-320 AH/908-932 AD). In the following year, 301 AH/913-914 AD, one dirham was struck with the name of al-Amīr Naṣr Ibn Aḥmad and caliph al-Muqtadir Billah; no dirhams from year 302 AH/913-914 AD in the hoard were recorded at the al-Shash mint. In the following years, 303 AH/915-916 AD: no dirhams recorded, in year 304 AH/916-917 AD, three dirhams; in years 305 AH/917-918 AD and 306 AH/918-919 AD, no recorded dirhams in al-Shash mint; in year 307 AH/919-920 AD, one dirham. In the subsequent year, 308 AH/920-921 AD, the mint rebounded with four dirhams from the previous years.

The mint rebounded on several occasions after 307-308 AH/919-920 AD, such as in 311 AH/923-924 AD with five dirhams, in 312 AH/924-925 AD three dirhams, in 313-314 AH/925-926-927 AD only one dirham for each year. In 315 AH/927-928 AD, with four dirhams; in 316 AH/928-929 AD with thirteen dirhams, in 317 AH/929-930 AD ten dirhams, in 318 AH/930-931 AD eight dirhams, and in 319 AH/931-932 AD fourteen dirhams, all bearing the name of al-Amīr Naṣr Ibn Aḥmad and caliph al-Muqtadir Billah. In the following years, 320 AH/932 AD one dirham, 321 AH/933 AD twenty-one dirhams, 322 AH/933-934 AD three dirhams, bearing the name of al-Amīr Naṣr Ibn Aḥmad and Caliph al-Qāhir Billah (320-322 AH/932-934 AD). The mint production fell to a new low in 323 AH/935 AD with one dirham struck by Naṣr Ibn Aḥmad and Caliph al-Rādī Billah (322-329 AH/934-940 AD).

Based on the above, the most intense dirham output at al-Shash occurred within its first twenty-seven years (284-312 AH/897-924 AD) of operation, accounting for 41 dirhams of all coins struck at this mint by the Samanids in the hoard. The decline in output between 303-304

AH/915-916 AD was significant. From year 313 AH/925 AD to 319 AH/931-932 AD, 55 dirhams of all dirhams were struck at al-Shash. The peak occurred during the years 317-318 AH/929-930-931 AD, with 20 dirhams of all dirhams in the hoard struck at this mint. During the time of Abbasid Caliph al-Qāhir Billah and Caliph al-Rādī Billah, 17% of all dirhams in the hoard were struck at the al-Shash mint.

In colsing, the analysis of the Máramaros "Huszt" hoard provides valuable insights into the minting of dirhams at the al-Shash mint during the Samanid dynasty. The mint was most active during its first twenty-seven years of operation, accounting for 32.7% of all dirhams struck at this mint in the hoard. The production of dirhams fluctuated over time, with periods of high output and periods of decline. The reigns of al-Amīr Naṣr Ibn Aḥmad a was particularly significant, as he as responsible for the majority of dirhams minted at al-Shash.

Fig 1: The percentage of the dirhams minted in al-Shash followed the Samanids amīrs

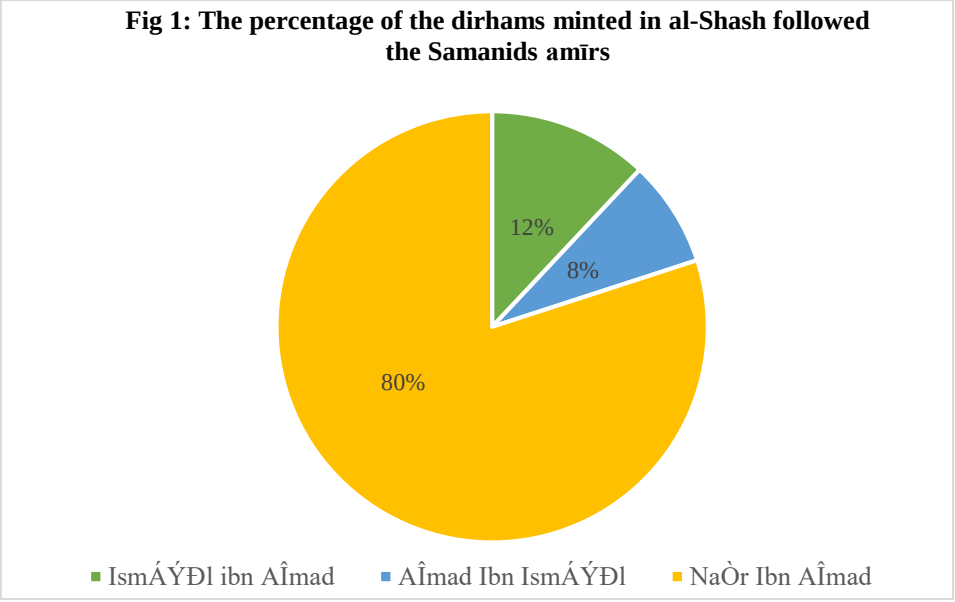
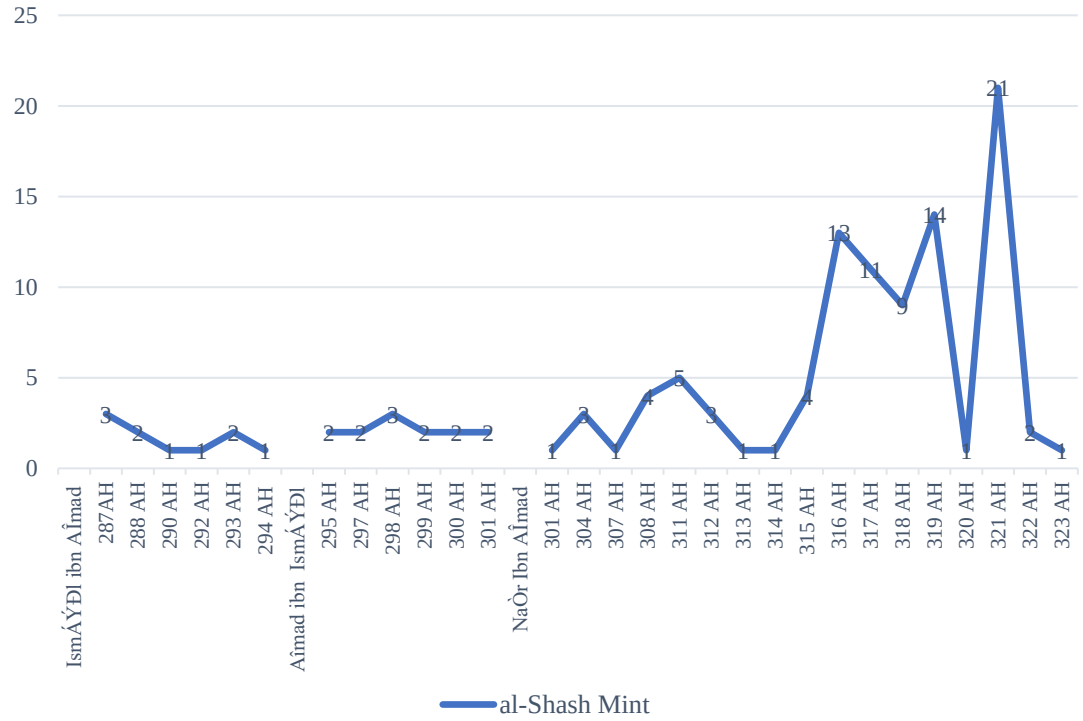


Fig 2: Dirhams of al-Shash mint



VI. II. Samarqand mint

The city of Samarqand, located within the borders of present-day Uzbekistan, is considered one of the oldest settlements in Central Asia.[298] In the early eighth century, Samarkand was conquered by the Muslims. In 710 AD/91 AH, Islamic armies led by Qutayba ibn Muslim entered the city. Although Qutayba did not implement Arab settlement policies in the region, he imposed taxes on the local administrators. After the Muslim conquest, Samarkand became one of the easternmost outposts of Islam and, along with Bukhara, one of the prominent cities in Mawara' al-Nahr (the land beyond the river).[299] The Abbasid administration in Samarkand came to an end with the Samanid dynasty's domination in 860 AD/246 AH. Over a period of approximately 150 years, the Samanids declared Samarkand as the capital of their dynasty, further enhancing its commercial importance.[300] During the Samanid era, Samarkand reached its zenith, becoming the largest city in terms of area and population (500,000 inhabitants) in Tranoxania, surpassing even Bukhara. It was strategically located at the crossroads of key trade routes to India via Balkh, Persia via Marw, and the Turkish lands.[301]

[298] Hammet 2022: 188.
[299] ÝAdil 2006: 27.
[300] Hammet 2022: 190.
[301] Bregel 2003: 22. Barthold 1958: 83-88.

In the tenth century, the Persian writer and geographer al-IÒÔakhrÐ, known for his work Kitab al-MasÁlik wa'l-mamÁlik, traveled through the Transoxiana region and described Samarkand and its surroundings as the most fertile, green, and attractive place he had ever seen.[302] Samarqand was also home to one of the most prolific Samanid mints during the tenth century, rivaled only by al-Shash.[303] The Samanid dirhams minted in Samarqand circulated widely outside of Central Asia during the tenth and eleventh centuries. The mountains surrounding Samarkand, such as the Nuratau and Navoi, contained polymetallic ore deposits, including silver. According to the tenth-century geography of Ibn al-Hawqal, there were old mines in the hills around Samarkand that were no longer in operation.[304]

The dirhams minted in Samarqand were known for their high quality and craftsmanship. They were valued not only for their silver content but also for their aesthetic appeal. The coins played a crucial role in facilitating trade and commerce in the region, as they were widely accepted and recognized as a reliable form of currency. The minting of coins in Samarqand during the tenth century was a testament to the city's economic importance and its position as a major center of trade and commerce. The availability of silver deposits in the surrounding mountains contributed to the production of these coins. The available evidence strongly suggests that the majority of the dirhams minted in Samarqand were intended for trade with northern Europe. These coins played a significant role in facilitating trade between Samarqand and the regions to the north.[305]

In the Máramaros "Huszt" hoard, 24.9% of all the Samanid dirhams were struck in the Samarqand mint, totalling 93 dirhams. The dirhams can be dated to three Samanid rulers: Ismāʿīl ibn Aḥmad, Aḥmad Ibn Ismāʿīl, and Naṣr Ibn Aḥmad. The earliest dirhams from Samarqand were minted in the year 284 AH/897 AD, during the reign of ʿAbbāsid Caliph al-Muʿtaḍid Billah, under the rule of Ismāʿīl ibn Aḥmad. From 284 AH/897 AD to 295 AH/907 AD, Samarqand produced an increasing number of dirhams, reaching its peak in output by 287 AH/900 AD. During the seven-year rule of Aḥmad Ibn Ismāʿīl, 4% of all dirhams minted in Samarqand by the Samanids were struck. However, it was under the rule of Naṣr Ibn Aḥmad that Samarqand saw its highest mint output, with Naṣr minting 91% of the dirhams struck in Samarqand.

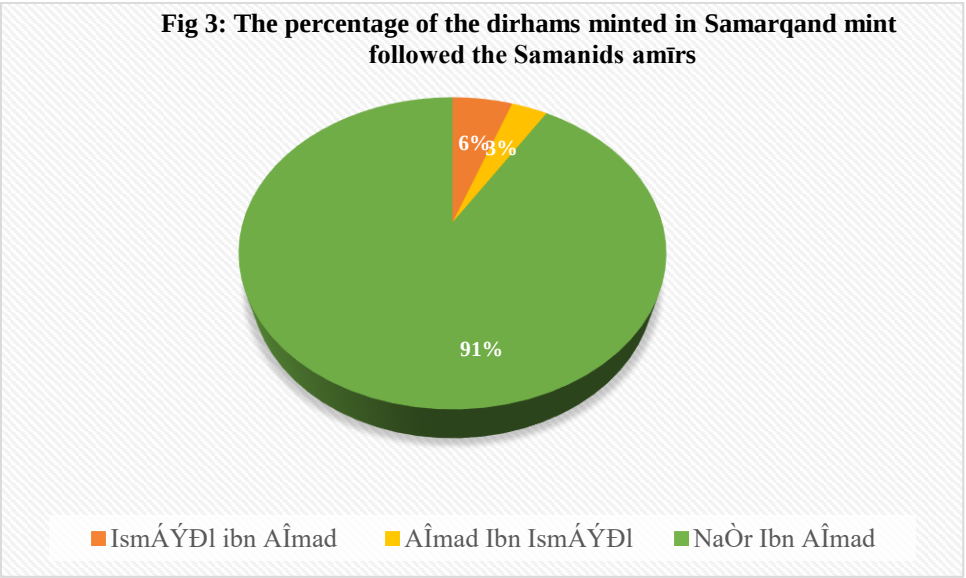
[302]al-IÒÔakhrÐ *al-MasÁlik wa'l-mamÁlik: 281.*
[303] Kovalev 2002: 204.
[304] Suerchkov 2009: 155. Ibn Íawqal, *KitÁb ÒÙrat al-arÃ*, 422-430.
[305] Roman, 2002: 3.

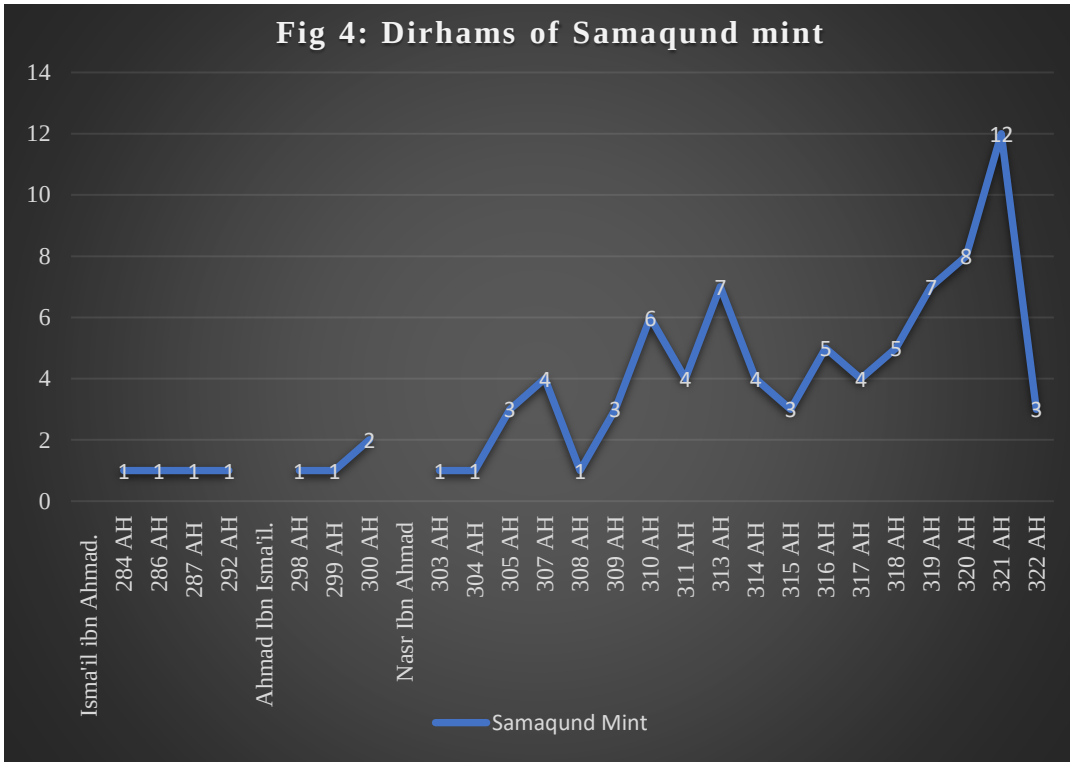
The dirhams in the hoard provide insight into the production patterns of the Samarqand mint. From 284 AH/897 AD to 287 AH/900 AD, three dirhams were struck during the rule of Samanid al-Amīr Ismāʿīl ibn Aḥmad and Abbasid caliph al-Muʿtaḍid Billah, and one in 292 AH/905 AD during Abbasid caliph al-Muqtadir Billah's reign. From 295 AH/907 AD to 301 AH/914 AD, four dirhams were struck during the seven-year rule of Aḥmad Ibn Ismāʿīl, with the name of Abbasid Caliph al-Muqtadir Billah. In the years, 303 AH/ 915-916 AD: one dirham, 304 AH/916-917: one dirham, 305 AH/917-918 AD: two dirhams, in 307 AH/919-920 AD: four dirhams, 308 AH/920-921 AD: one dirham, 309 AH/921-922 AD: three dirhams, 310 AH/922-923 AD: six dirhams, 311 AH/923 AD: four dirhams, no dirhams from year 312 AH/924-925 AD in the hoard were recorded at Samarqund mint. In 313 AH/925-926 AD: six dirhams, 314 AH/926-927 AD: four dirhams, 315 AH/927-928 AD: four dirhams, 316 AH/928-929 AD: four dirhams, 317 AH/929-930 AD: four dirhams, 318 AH/930-931 AD: six dirhams, 319 AH/931-932 AD: six dirhams, 320 AH/932 AD: five dirhams, all bearing the name of al-Amīr Naṣr Ibn Aḥmad and caliph al-Muqtadir Billah.

In the following years, 321 AH/933 AD twelve dirhams, 322 AH/933-934 AD two dirhams, bearing the name of al-Amīr Naṣr Ibn Aḥmad and Caliph al-Qāhir Billah.

In conclusion, the analysis of the dirhams in the Máramaros "Huszt" hoard reveals that Samarqand was a primary Samanid mint during the late ninth and tenth centuries. The mint's production levels fluctuated over time, with notable peaks and falls. However, overall, the mint consistently increased its volume and production intensity, especially during the reign of Naṣr Ibn Aḥmad. Samarqand continued to issue dirhams in large numbers until the end of Naṣr's reign, highlighting its importance in facilitating trade and commerce in the region.

Fig 3: The percentage of the dirhams minted in Samarqand mint followed the Samanids amīrs





VI. III. AndarÁbah mint

Andarābah is the name of a river and the town located in northern Afghanistan, which was once part of the province of Ṭuḵārestān during the medieval Islamic period. The town is situated in a wooded region known as the Nahr Andarāba, which is the southeasternmost headwater of the Došī river.[306] After the Arab conquest, Andarābah became part of the province of Ṭuḵārestān and was administered from Balḵh. The town gained significance as a coin mint during the Samanid era. In the tenth century, Ibn Ḥawqal described Andarābah as being nine stages away from the city of Balḵh.[307]

Andarābah played a crucial role in the trade routes across the Hindu Kush to Kabul and India. One of the main routes led from Andarābah across the Ḵāvak pass into the Panjhīr valley. In the mountains of the Panjhīr valley, there were two major centers of silver mining in Afghanistan: Jārīāba, located three stages from Andarābah, and Panjhīr, located one stage further on. These mines were considered the richest in the eastern portion of the Muslim world. The silver extracted from these mines was brought to Andarābah for distribution across the eastern Islamic lands. [308] According to the anonymous geographer who wrote ÍudÙd al-ÝAlam,

[306] al-IÒÔakhrÐ *al-MasÁlik wa'l-mamÁlik:* 120. YÁqÙt, *MuÝjam al-buldÁn*. 1 v, 260.
[307] Ibn Íawqal, *KitÁb ÒÙrat al-arÃ,* 389.
[308] YÁqÙt, *MuÝjam al-buldÁn*. 1 v, 260.

"Andarābah is a borough mid-mountains, with abundant cultivation and grain. Here, dirhams are struck from the silver extracted from the mines of Panjhīr and JÁriyiyÁs."[309]

During the Samanid era, local Amīrs from the Banijurid or Abu Dawudid dynasties, who were vassals of the Samanids, ruled Ṭuk̲ārestān and parts of the Hindu Kush. The Banijurids and the ÑaffÁrid dynasty both produced coins in the mint of Andarābah that were distinct from the contemporary coinage of the caliphate. The earliest dated dirham attributable to Banijurid MuÎammad was minted in Andarābah in 269 AH/883 AD.[310]

Both dynasties struck dirhams with spelling mistakes and poorly formed letters. Andarābah was the only consistently productive mint in the region during the second half of the third century, as it was where the abundant silver deposits of the Panjhir mines were turned into dirhams.[311]

In the tenth century, Andarābah ranked as the third town in Ṭuk̲ārestān, after Talqan and Warwallz, and served as the main mint in the region during the Samanid era. The Andarābah mint issued large, multiple dirhams that were characteristic of the upper Oxus minting practice at that time.[312] Initially, Andarābah continued to strike dirhams from dies made by the resident engravers in the early years of Samanid rule. However, the Samanid governors decided to expand the local mint network and improve the style of the crude local dirhams to match the standards of the metropolitan mints in Samarqand and al-Shash. They replaced the Andarābah engraver with a more skilled craftsman. The Andarābah engraver's die provided the prototype for ornamental devices, such as ornate forms of the caliphal title and leaf-shaped letter terminals, which briefly appeared on the dirhams. However, the engraver was not particularly competent beyond these designs.[313]

From an economic standpoint, governing Andarābah meant controlling a rich source of silver bullion. However, the real demand, based on international trading patterns, was for struck coins rather than bullion. Given the remote location and size of Andarābah, it is highly unlikely that coin production was solely undertaken to meet local needs. With the decline of international

[309] ÍudÙd al-ÝAlam, 79.
[310] al-NusfÐ, *al-Qand fÐ dzikr ÝUlamaÞ Samarqnd,* 38.
[311] Bacharach 1976: 148.
[312] Barthold 1958: 67.
[313] Treadwell 2012: 102.

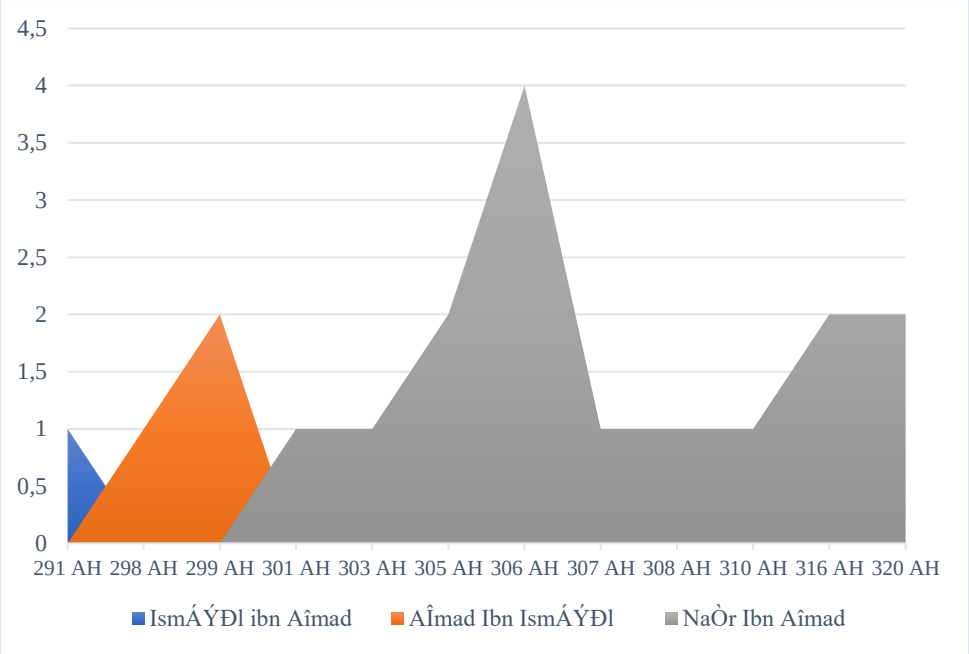
trade, coin minting activities in Andarābah ceased. Samarqand, even without European trade, had a large enough market that coin production was necessary for local exchanges. [314]

In the Máramaros "Huszt" hoard, 5,3%, totalling 20 dirhams of all the dirhams were struck in Andarābah, making it the third most prolific Samanid mint in the hoard. The dirham struck by Amīr Ismāʿīl Ibn Aḥmad in 291 AH/903 AD in the name of Caliph al-Muktafī Billah marked the beginning of the dirhams minted in Andarābah. Overall, three dirhams minted in 298-299 AH/910-911-912 AD in Andarābah by the Samanids were struck during the seven-year rule of Aḥmad Ibn Ismāʿīl with the name of Abbasid Caliph al-Muqtadir Billah. Aḥmad Ibn Ismāʿīl was the second-most prolific Amīr in striking dirhams in Andarābah in the hoard.

Naṣr Ibn Aḥmad was the most prolific Amīr in striking dirhams in Andarābah. Naṣr minted 86% of all dirhams struck in Andarābah, and all the dirhams were minted in the name of Abbasid Caliph al-Muqtadir. One dirham was minted in 301 AH/913-914 AD, one dirham in 303 AH/915-916 AD, two dirhams in the year 305 AH/917-918 AD, four dirhams in the year 306 AH/918-919 AD, one dirham minted in 307 AH/919-920 AD, one dirham minted in year 308 AH/920-921 AD, two dirham minted in 310 AH/ 922-923 AD, two dirham minted in 316 AH/ 928-929 AD, two dirham minted in 320 AH/ 932AD.

Fig 5: Dirhams of AndarÁbah mint

[314] Bacharach 1976: 149.



VI. IV. Balkh mint

Balkh is a town in the Balkh Province of Afghanistan, located approximately 20 km northwest of the provincial capital, Mazar-e Sharif, and about 74 km (46 mi) south of the Amu Darya river and the Uzbekistan border.[315]

In the early eighth century, the Sasanian King Ardashir I conquered the Kushan king of Bactria, establishing Iranian rule over the region. Balkh, along with Merv (in present-day Turkmenistan), became a major center of Arab settlement in northeastern Iran during the Arab conquests.[316] It gained prominence during the early Abbasid caliphate in the eighth and ninth centuries as the original home of the Barmakid family of viziers, who had a significant influence in the region. Balkh earned various epithets, including "the mother of cities" and "the dome of Islam," highlighting its importance in Islamic history in Central Asia. [317]

From the time of the Muslim conquests until the Mongol conquest in 618 AH/1220-1221 AD, Balkh thrived as a center of commerce, learning, and culture. The city experienced a renaissance of arts and culture under the Samanid dynasty.[318]

Arab and Persian geographers of the ninth and tenth centuries, such as al-Yaʿqūbī and al-Masʿūdī, described Balkh during the Samanid rule as a large and prosperous city with mud-

[315] Briant 2002: 743.
[316] Grenet, Jonathan, Martinez, & Ory 2007: 243-67.
[317] Gibb 1923: 8-9. Azad & Kennedy 2018: 284.
[318] Azad 2013: 4.

brick walls, seven gates, and numerous mosques. It was a melting pot of Persian, Turkish, Jewish, and Indian communities, fostering a vibrant intellectual and artistic scene.[319]

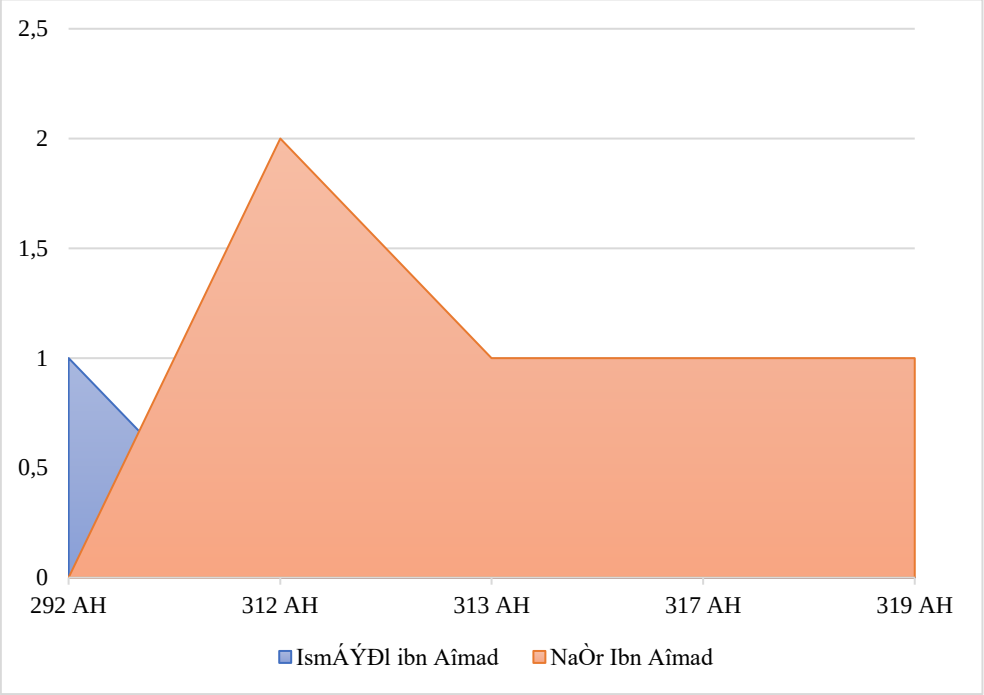
Determining the exact start of Samanid dirham production in Balkh is challenging. In the late ninth and early tenth centuries, the Banijurids or Abu Dawudids, who administered eastern Khurasan, minted a small quantity of dirhams in Balkh and Madinat Balkh. However, the production of Samanid dirhams in Balkh began more prominently in the first decade of the tenth century, with dirhams struck between 290-291 AH/902-903 AD and 297-298 AH/909-910 AD. The Balkh dies used for minting dirhams were distinct and showcased attention to detail and visual appeal, setting them apart from other coins of the time.[320]

The dirhams minted in Balkh, like those from Samarqand and al-Shash, were primarily intended for export to northern and eastern Europe in exchange for fur and slaves. Balkh's mint production followed a similar pattern to Samarqand, with both mints being particularly active during the first half of the tenth century.[321] However, Balkh's mint declined significantly after the time of Naṣr Ibn Aḥmad, while Samarqand continued to issue dirhams at regular or slightly increasing rates. [322]

In the Máramaros "Huszt" hoard, 2.6%, totalling 10 dirhams of all the dirhams were struck in Balkh, making it the fourth most prolific Samanid mint in the hoard. The first dirham minted in Balkh was by Ismāʿīl Ibn Aḥmad during the reign of Abbasid Caliph al-Muktafī Billah, with the name of Banijurid ruler Aḥmad Ibn Muḥammad on the reverse in 292 AH/904 AD. Naṣr Ibn Aḥmad was the most prolific Amīr in striking dirhams in Balkh in the hoard, with all the dirhams dating after the year 311 AH/923 AD. From the year 312 AH/924-925 AD to 319 AH/931-932 AD, dirhams were struck in the name of Naṣr Ibn Aḥmad and Abbasid Caliph al-Muqtadir Billah. Four dirhams date to years 321-322 AH/933-934 AD, bearing the names of Abbadid Caliph al-Qāhir Billah and Naṣr Ibn Aḥmad, the Samanid Amīr.

[319] al-Yaʿqūbī *Kitāb al-BuldÁn,* 54. al-MuqaddasÐ, *AÎsan al-taqÁsÐm fÐ maÝrifat al-aqÁlÐm,* 130.
[320] Noona & Kovalev 2002: 166.
[321] Treadwell 2012: 110.
[322] Kovalev 2002: 11.

Fig 6: Dirhams of Balkh mint



V. V. MaÝdan mint

The MaÝdan mint is mentioned in Mr. Mitchiner's book "The World of Islam," where he suggests that the occasional letters found after the name of MaÝdan mint may be contractions of Panjhir and JrÁbÁya. He speculates that MaÝdan is likely MaÝdan Panjhir, referring to the two well-known silver mining towns on the upper Panjhir River, located a day's journey apart.[323]

According to the "HudÙd al-Ālam," these towns were part of Tukhāristān, despite their location across the KhÁwak Pass from Andarābah, a city that is undisputedly included in Tukhāristān.[324]

However, the oversize dirhams minted in MaÝdan clearly belong to the series of Badakhshān and are frequently die-linked with them.[325]

These dirhams differ from those of Andarābah in both size and the names of the local Panjhir.[326] Badakhshan is a province in the northeastern part of Afghanistan, bordered by Tajikistan's Gorno-Badakhshan in the north and the Pakistani regions of Lower and Upper Chitral and

[323] Mitchiner 1977: 133.
[324] ÍudÙd al-ÝAlam, 92.
[325] Nastich 2010: 167.
[326] Album 1976: 249.

Gilgit-Baltistan in the southeast.[327] MaÝdan mint struck multiple dirhams, which were of indifferent quality but provided a means of rapidly converting newly minted silver into a readily usable form. The earlier multiple dirhams were struck during the rule of Samanid Amīr NaÒr Ibn AÎmad. [328]

In the Máramaros "Huszt" hoard, only 1,6 %, 6 dirhams of all the Samanid dirhams were minted in MaÝdan. Five dirhams from the hoard were struck in MaÝdan, all bearing the name of Samanid Amīr NaÒr Ibn AÎmad and minted during the time of Abbasid Caliph al-Muqtadir Billah. The first two dirhams were struck in the year 306 AH/918-919 AD, the second one dirhams in the year 307 AH/919-920 AD, one dirham in the year 315 AH/929-930 AD, and one dirham in 317 AH/ 929-930 AD.

Based on the dirhams found in the Huszt hoard, it is suggested that the mint of MaÝdan cannot be MaÝdan Panjhir. This is because the name of the mint in the marginal legend on the obverse of the dirhams clearly reads "MaÝdan" in Arabic, and there are no occasional letters after the name of the mint. Instead, the dirhams indicate the exact year of the mint. For example, the first two dirhams indicates the year 306 AH/918 AD.

VI. VI. Nishapur mint

Nishapur is the second-largest city in the Razavi Khorasan Province of Northeast Iran. It is located in a fertile plain at the base of the Binalud Mountain Range and has historically been the capital of the Western Quarter of Greater Khorasan.[329] During the reign of ÝUthman ibn ʿAffān (644-656 AD/23-35 AH), the third of the "Rightly Guided Caliphs," the city was conquered by the Arabs in 31 AH/651 AD under the leadership of ʿAbd Allāh ibn ʿĀmir ibn Kurayz, the governor of Basra. Over the following centuries, Nishapur experienced a series of changing rulers.[330]

In 750 AD, the Abbasid caliphate came to power, and Nishapur grew in importance. In the 9th century, the city served as the capital under the Tahirid dynasty and operated as an almost self-governing regional province within Khorasan.[331] After 50 years, it was taken over by the Saffarid dynasty. By the 10th century, Nishapur was under the rule of the Samanid dynasty and became renowned for its poets, scholars, and strategic position as a trading center on the Silk

[327] YÁqÙt, *MuÝjam al- buldÁn,* 1 vols, 319.
[328] Mitchiner 1977: 134.
[329] YÁqÙt, *MuÝjam al- buldÁn,* 5 vols, 331.
[330] al-ÓabarÐ, *TaÞrÐkh al-rusul wa'l-mulÙk,* 296.
[331] Bosworth 1969: 103

Road. The city flourished as a regional capital and a hub of scholarship, arts, and crafts. During this time, Nishapur had a population of 100,000 to 200,000 people and covered an area of approximately 6.5 square miles. [332]

Most of the Samanid gold dinars were minted on a large scale outside of Transoxania, particularly in Nishapur and Muhammadiyya (Rayy). Hoards of gold coins found in Transoxania mainly consist of externally minted Samanid dinars, with Nishapur being a significant source. The majority of Samanid dinars from Nishapur were of the highest quality, with gold purity ranging from 93% to 98%, typically 96% fine gold. In Transoxania, gold coins were primarily used as rewards or gifts and served as a form of treasure and universal currency, rather than as a medium of exchange in domestic trade. This is evident from the composition of the hoards, the well-preserved state of the coins, the peculiarities of their actual weights, and the fact that local mints in Transoxania only periodically issued dinars.

The silver dirhams minted in Nishapur during the tenth century were also of high quality. They were typically made of 90% silver and featured various designs and inscriptions, including the name of the Samanid Amīr and the mint of Nishapur. The coins minted in Nishapur during the tenth century were widely circulated and used as a medium of exchange in trade and commerce. They played a crucial role in the economic development of the region and reflected the prosperity and cultural achievements of Nishapur during this period. [333]

In the Máramaros "Huszt" hoard, there is only one dirham minted in Nishapur for Samanid Amīr IsmÁÝÐl ibn AÎmad, bearing the name of Caliph al-MuktaffÐ Billah, in the year 294 AH/906 AD. The historical prominence of Nishapur as a pivotal center along the Silk Road, coupled with its status as a hub of intellectual and cultural activity during the Samanid era, underscores the significance of numismatic artifacts originating from this region. The meticulous craftsmanship and high-quality metallurgy evident in the Samanid gold dinars and silver dirhams minted in Nishapur exemplify the city's contribution to the broader economic and cultural landscape of medieval Central Asia. The presence of a single dirham from Nishapur in the Máramaros "Huszt" hoard serves as a testament to the city's enduring legacy as a minting center and highlights the interconnectedness of trade networks spanning across Eurasia.

[332] Treadwell 1991: 91. al- Samarqandī, *Kitab al-Furūq,* 10.
[333] Dani & Davidovich 1998: 396.

VI. VIII. Volga Bulgar

The Volga Bulgars began minting Islamic dirhams in the early tenth century.[334] These coins were direct imitations of the silver dirhams struck by the Samanids, who were their main trading partners.[335] The imitation dirhams followed the general style of the Samanids' coins, featuring the names of Samanid rulers and Abbasid caliphs on the reverse, as well as the names of Samanid mints such as al-Shash, Samarqand, AndÁrabah, and Balkh on the obverse. [336]

The Volga Bulgars continued to mint imitations of Samanid dirhams throughout the tenth century. During this period, they also introduced semi-imitative dirhams, which included local elements such as the names of local rulers and the mint's name. These semi-imitative dirhams had an equal amount of silver but could be distinguished by their distinct calligraphy. [337]

The purpose of these imitations was to circulate alongside the original Samanid coins.[338] Many of the imitation dirhams have defaced legends, with varying degrees of disfigurement. Some dirhams minted in Andarābah and MaÝdan have particularly badly defaced legends, giving them a more imitation-like appearance.[339] It is difficult to determine a precise line between true imitation dirhams and Samanid coins made by unskilled mint workers, as the skill level varied across different mints of the Samanid.[340]

From around 337-338 AH/949-950 AD, the Volga Bulgars began minting their own "official" coinage, which continued intermittently until 376-377 AH/986-987 AD.[341] These dirhams featured the names of Volga Bulgar rulers, the local mints of Bulgar and Suwar along the Volga River, and the exact dates of minting.[342] They resembled the standard issues of other Islamic states. Some dirhams bore the name of a Samanid Amīr, such as NaÒr Ibn AÎmad combined with the Volga Bulgar mints. Others retained the Samanid mint combined with the name of MikhÁÞÐl Ibn JaÝfar.[343] a later stage, Volga Bulgar dirhams featured the name of Amīr MikhÁÞÐl on the reverse and the mint name Bulgar on the obverse, marking the transition from imitation coins to independent coinage. [344]

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[334] Kovalev 2016: 191.
[335] Noonan 2001: 140-219.
[336] Al Halabi 2022: 445.
[337] Vasmer: 1925: 67. RamaÃÁn 2008: 373.
[338] Jonsson 2018: 7.
[339] Mitchiner 1977: 134.
[340] Rispling 2001: 329.
[341] Christian 1832: 175.
[342] Rispling 1983: 146-148.
[343] Rispling 1989: 1-4. Kovalev 2016: 191.
[344] Zimonyi 1990: 81-83.

The final stage saw the refined dirhams of ÓÁlib Ibn AÎmad, minted in 330-340 AH/941-42 960-61 AD. The largest number of official Bulgar coins were minted in 360 AH/970 AD in the names of Muʾmin Ibn Íasan and Muʾmin Ibn AÎmad.[345]

The circulation of these coins was extensive, as evidenced by the discovery of Bulgar dirhams in hoards across Russia, Ukraine, Hungary, Estonia, Poland, Finland, Denmark, Sweden, and Norway. [346]

It is believed that the Volga Bulgars continued to mint imitation Samanid dirhams even after issuing their own independent dirhams. The Volga Bulgars were the first people in medieval European Russia to have their own coinage. [347]

Regarding the Mīkāʾīl coins, the city and year on the Samanid coins remained the same, while only the Amīr's name was different. In the case of the Volga Bulgars, the exact imitations of Samanid coins were used for the obverse, and a new stamp with the name Mīkā'il was made for the reverse. [348]

Many of the imitation dirhams minted by NaÒr Ibn AÎmad bear the name of the Bulgar and Suwar mint on the obverse. The Samanid legends on these coins remained unchanged, with only the city name being different. It is clear that NaÒr could not mint coins in these cities as he did not own them, confirming that these dirhams are Bulgarian imitations.[349]

Written sources about the rulers of Volga Bulgaria are scarce, and information about the issuers of Bulgar coins is primarily derived from numismatic evidence.[350]

The Volga Bulgar dirhams in the Máramaros "Huszt" hoard imitate the dirhams of the Samanid dynasty in Central Asia. 34% of all the dirhams in the hoard were imitations of Volga Bulgar. This result generally opens the door to developing a new model for the steppe economy in the ninth and tenth centuries. The prototype for most of these imitations is a dirham with the name of NaÒr Ibn AÎmad while some imitate the dirhams of IsmÁÝÐl ibn AÎmad. There are also some rare dirhams among these imitations.

In general, the high-quality imitations show more intricate die relations. Poor imitations are often found in small amounts and were typically struck using just one set of dies. It is uncommon to find coins that were minted using dies of various grades. This suggests that the

[345] Golemikhov 2019: 86.
[346] Curta 2013: 314.
[347] Noonan 1980: 297.
[348] Golglov & Golemikhov 2021: 44.
[349] Гоглов & Големихов 2017: 51.
[350] Kovalev 2016: 193.

abundance of crude imitations with small quantities of coins is characteristic of the technical standards of European finances.

The quality of the imitation dies declines from excellent to crude simplifications, and the majority of the imitations are of lower quality. This indicates that both skilled artisans and journeymen were involved in the minting process. While some artisans manufactured more of these contemporary goods in bulk, others produced specimen copies that accurately replicated the original. Most of the poorly made dies were only used for a few cycles, possibly because they were not hard enough. This could be due to the fact that they were made of a soft metal or were not properly hardened. On the other hand, high-quality dies were harder and could be used to mint larger numbers of coins. The fact that different quality dies were used in the same coin suggests that the masters of die engraving were also capable of minting the coins themselves. Alternatively, it could indicate that these masters made an effort to prevent the mixing of their own high-quality dies with the poorer ones during minting.

According to the prevailing theory in Oriental numismatics, the masters who engraved the coin dies made a feeble attempt to duplicate the Arabic inscriptions on the Kufic dirhams. Many of them had little or no knowledge of the language in which the legends were written, and they were not always aware that they were working on objects with inscriptions. They copied the letters or, at best, the individual words in a clumsy way, making numerous mistakes. Among the craftsmen, there were individuals with different talents, including master craftsmen who were true masters of their art, imitators who made accurate copies, and journeymen.

The Máramaros "Huszt" hoard contains thirty types (TYP) of imitations, making it one of the richest hoards in terms of the types of imitation dirhams. There are a total of 126 dirham imitations in the hoard, divided into thirty types.

TYP 1: This type consists of thirty-eight imitation dirhams of the Samanid Amīr IsmÁÝÐl ibn AÎmad with the name of Caliph al-MuktaffÐ Billah. On the obverse, the central legend contains a few mistakes, and the legends are badly distorted. The name of the mint and the year of striking are unclear in the marginal legend, and the outer margin has a distorted legend. The craftsman was unable to mark out the legend correctly, so he omitted a few letters and words. On the reverse, the central legend with the first three lines "Allah, MuÎammad, is the Messenger of God" is fairly correct without mistakes, but the third line with the name of the caliph al-MuktaffÐ Billah and the fourth line with the name of Amīr IsmÁÝÐl ibn AÎmad have crude mistakes. The marginal legend is also crudely distorted. The minting quality of the coins in this

type is very low, and all the dirhams 37 were struck with one pair of dies expected one N:R.II. 12124 struck in other die.

TYP 2: This type consists of twenty-one imitation dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. These dirhams were minted in al-Shash in the year 8 AH (308 AH/920-921 AD). The date of many early Volga Bulgar imitations of dirhams is indicated according to the Muslim chronology, but without indicating tens and hundreds of years. This may be due to the lack of space for carving these details on the stamps or the Bulgars' adaptation to the Muslim calendar. All first fifteen dirhams in this type were struck with one pair of dies. The analysis of the condition of the coins reveals that they are of good quality workmanship and copied with marvelous accuracy, which could easily be mistaken for original Samanid dirhams at first sight. However, they are imitations due to the blunders in making the dies, such as in the description of the date and place of minting in the marginal legend of the obverse, or the omission of a few letters from the legend of the reverse. The omissions occur at the point where the beginning and the end of the legend meet. Despite the high quality of the dies, the minting quality of the coins in this group is very low, with the middle part of the reverse die fully blocked, causing the design to become obliterated. The genuine al-Shash dirhams issued in that year include some very different types with elegant script and ornamentation. The fact that these imitation dirhams were struck with one pair of dies sets them apart from the original dirhams. The die was most likely made of a soft metal.

TYP 3: This type consists of seven dirhams minted in Samarqund, the dirhams are imitation of the dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah, minted in Samarqund in the year XX8 AH (308 AH/920-921 AD). On the obverse, the words Samarqund and eight are legible in the inner legend, but the tens and hundreds are omitted from the descriptions of the date.

TYP 4: consists of ten dirhams dirham imitations of the dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah, all the dirhams were struck with one pair of dies.

TYP 5: This type consists of two dirhams minted in AndÁrabah, and imitations of the dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah, minted in AndÁrabah in the year ??. On the obverse, the word AndÁrabah is legible in the inner legend, but the outer legend is distorted. On the reverse, the central legend is more or less correct, but the marginal legend is distorted.

TYP 6: This type consists of three dirhams imitations of the dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah, the central legend is more or less correct, but the marginal legend is distorted.

TYP 7: This type consists of three dirhams imitation of the dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. On the obverse, the central legend is more or less correct, the outer legend is distorted. On the reverse, the central legend is more or less correct, but the marginal legend is distorted.

TYP 8: Three imitation dirhams of NaÒr Ibn AÎmad and caliph al-Muqtadir Billah. the dirhams are struck with one pair of dies. On the obverse, the outer legend is distorted. On the reverse, the central legend is more or less correct, but the marginal legend is distorted.

TYP 9: Two imitation dirhams of NaÒr Ibn AÎmad and caliph al-Muqtadir Billah. there is no date of struck the coins but the mint most probably is Samarqund. On the obverse, the minter tried to reproduce the legend of the Kufic coins but he blundered the words. The dirhams are struck with one pair of dies.

TYP 10: Two imitation dirhams of NaÒr Ibn AÎmad. dirhams were struck with one pair of dies. the date and the place of minting are omitted. On the obverse: without rings, a substantially correct legend in the middle reproduced with a schematized writing, the outer legend copies the central legend only partially, otherwise it consists of vertical letter tails. On the reverse, the central legend is reproduced correctly with only minor errors. Both coins are struck with one pair of dies

TYP 11: Three dirhams imitation of NaÒr Ibn AÎmad, On the obverse, there are distorted legends, with only a few Arabic letters recognizable. On the reverse, the central legend is more or less correct, but the marginal legend is distorted. They were struck with one pair of dies.

TYP 12: two dirhams imitation of NaÒr Ibn AÎmad, On the obverse, the mint most probably is Samarqund, but the outer legend is distorted. On the reverse, the central legend is more or less correct, but the marginal legend is distorted.

TYP 13: One dirham imitation of Samanid Amīr IsmÁÝÐl ibn AÎmad, On the obverse, there are distorted legends. At first glance, on the reverse the dirham can be identified as Samanid because the central legend and marginal legend are correct. It is possible that the die was intended for struck gold dinars.

TYP 14: Dirham imitation of the dirhams of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, the date and the place of minting are omitted. On the obverse, the legends are sketchily reproduced and are not always legible. On the reverse, the legends are crudely copied.

TYP 15: : One dirham imitation of Samanid Amīr IsmÁÝÐl ibn AÎmad the legends are crudely copied.

TYP 16: Imitation dirham NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, the date and the place of minting are omitted. Crude imitation, the third line on the obverse in the central legend is engraved like a mirror image.

TYP 17: dirham imitation of the dirhams of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, the date and the place of minting are omitted. On the obverse, the central legend is a crude, mirror image-like imitation. On the reverse, the central legend is fairly correct, in the outer legend, the minter tried to reproduce certain letters and signs in a rhythmic style.

TYP 18: dirham imitation of the dirhams of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, the date is omitted and the place of minting most probably is Samarqund. On reverse the central legend is more or less correct, but the marginal legend is distorted.

TYP 19: Dirham imitation of the dirhams of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, the date and the place of minting are omitted. On the obverse, the legends are sketchily reproduced and are not always legible. On the reverse, the legends are crudely copied.

TYP 20: One dirham imitation of the dirhams of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, the date and the place of minting are omitted. On the obverse, a crude imitation of Kufic legends, and on the reverse, a fairly correct reproduction of the central legend.

TYP 21: One dirham imitation of the dirhams of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, the legends are distorted on both the reverse and the obverse, with only a few Arabic letters recognizable

TYP 22: Dirham imitation of the dirhams of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, the date and the place of minting are omitted. On the obverse, the legends are sketchily reproduced and are not always legible. On the reverse, the legends are crudely copied.

TYP 23: Imitation dirham with distorted legends on both sides.

TYP 24: One dirham imitation of the dirhams of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, crudely distorted legends on both sides.

TYP 25: Two imitation dirhams of NaÒr Ibn AÎmad. On the obverse and the reverse, crudely distorted legends. Both coins are struck with one pair of dies.

TYP 26: Imitation one dirham, all the legends crudely distorted.

TYP 27: One dirham imitation, all the legends crudely distorted.

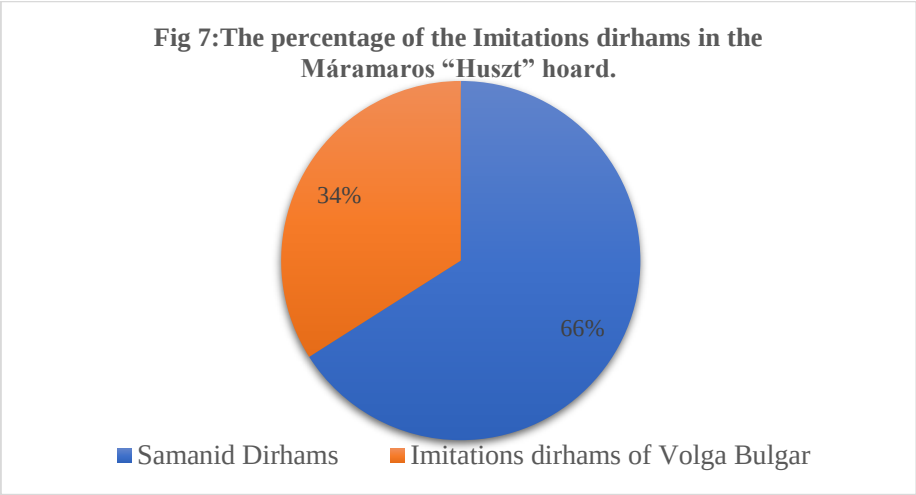
TYP 28: One dirham imitation, all the legends crudely distorted.

TYP 29: One dirham imitation, three line on the obverse and the reverse all the legends crudely distorted no Arabic letters recognizable.

TYP 29: One dirham imitation, three line on the obverse and the reverse all the legends crudely distorted no Arabic letters recognizable.

TYP 30: This dirham is exptionally unique among imitation dirhams, differing from the Volga Bulgar imitation found in the hoard. It may be an imitation of the Khazar. The general shape of the coin is a dirham without Arabic writing. We will await the upcoming discoveries about this die and its place of origin, which will help us in correctly identifying this imitation.

These are the main types of imitation dirhams found in the Máramaros "Huszt" hoard. Each type has its own unique characteristics and variations in the legends and minting quality. The hoard provides valuable insights into the imitation coinage of the Volga Bulgars and their attempts to replicate the dirhams of the Samanid dynasty.



VI. VIII. I. Bulgar mint

Bulgar the capital of the state of Volga Bulgaria is located on the left bank of the Volga River, 140 kilometers away from Kazan. The town of Bulgar is situated in northeastern Europe, making it possible for it to play a significant role as a center for communication between the east and the west and the north and south. Of all the steppe people of Eastern Europe, the Bulgars were the most open for traders from elsewhere.[351]

Geographical literature from the first half of the tenth century and later regards the town of Bulgar as a meeting place where many merchants used to come from Muslim countries, Slavonic regions, the Rus and the Khazar.[352] Nearly everything we know about this town in the tenth century derives from the information mostly quoted by Ibn Faḍlān, Ibn Íawqal and al-MuqaddasÐ. These three authors lived and wrote during the tenth century.[353]

According to Ibn Faḍlān, the town was about one farsakh away from the Itil River. According to his account, it was made up of felt cottages that were most likely constructed in the shape of a cupola, which is why Ibn Faḍlān gave it the name qubba (inplural gibab). He claimed that the enormous qubba of the Bulgar ruler could accommodate a thousand people.[354]

al-MuqaddasÐ gives more trustworthy description than Ibn Faḍlān. He reports that Bulgar was divided into two parts and its buildings were from he mosque was located wood and cane on the market. He also added that the town was located on the river Itil. [355] al-Isṭaḥrī that in the winter the inhabitants of Bulgar lived in wooden buildings and in felt huts in the summer.[356]

In the first half of the twelfth century, AbÙ ÍÁmid al-GharnÔÐ, who spent a significant amount of time in the Bulgar capital, described Bulgar as a large town surrounded by an oak wall and constructed of pine wood. It is obvious that the town had grown from a tiny felt hut village to a sizable timber-fortified center between the period of Ibn Fadlan and AbÙ ÍÁmid.[357]

[351] Noonan 1980: 297.
[352] Polgár 2019: 125.
[353] Zimonyi 1990: 81-83.
[354] Ibn Faḍlān, *Risālat Ibn Faḍlān,* 203-207.
[355] al-MuqaddasÐ, *AÎsan al-taqÁsÐm fÐ maÝrifat al-aqÁlÐm.* 361.
[356] al-IÒÔakhrÐ, *al-MasÁlik wa'l-mamÁlik,* 132.
[357] AbÙ ÍÁmid al-GharnÁÔÐ. *TuÎfat al-ÞalbÁb wa Nukhbat al-ÞaÝjab*, 132.

Modern scholars concur that the Volga Bulgha had a significant increase in wealth in the late tenth and early eleventh centuries and that during that time Bolgar was by far the richer and more prosperous city than Kiev.[358]

The trade with Central Asia, which was enormous by any standard and the largest in all of tenth-century Eurasia, was the source of these exceptional riches.[359] Bulgar had by far the largest fur market in all Eastern Europe during the tenth and early-eleventh centuries. It has been suggested that Volga Bulghar was a “silver bridge” between Scandinavia and Samanid Central Asia.[360] Indeed, because of the furs and slave trade, millions of dirhams entered Eastern Europe through the Volga Bulghar in the direction of Scandinavia.[361]

The dirhams were struck in various mints in Central Asia, In addition, imitations of Samaanid dirhams were also struck in Volga Bulghar, during the first half of the tenth century,[362] the Volga Bulgars began to mint coins that were copies of the Samanid ones.[363] The early coins of the Volga Bulgars contained an inscription of the Samanid ruler’s name, along with the location of the coin minting Bulgar.[364] Subsequently, the coins retained their Samanid look, but the inscribed name became that of the Volga Bulgars ruler.[365] The earliest coins of the Volga Bulgars are found mostly along the Oka and Volga Rivers, as far as Scandinavian and Eastern Europe.[366]

There is only one dirham in the Máramaros “Huszt” hoard minted in Bulgar, the dirham is one of the earliest coins of the Volga Bulgars. On the obverse the central legend is correct "There is no God except Allah, He is Alone, There is no partner to him. On the marginal legend In the name of God this dirham was struck in Bulgar "بلغار" after the name of the mint the word "سنة" year, then the date of sturck is omitted from the legend. The outer margin the legends are badly distorted and engraved like a mirror image. On the reverse the central legend is correct " Allah MuÎammad is the Messenger of God NaÒr ibn AÎmad." The legend contained an inscription of the Samanid ruler NaÒr ibn AÎmad without the name of Abbasid Caliph as the earliest coins of the Volga Bulgar.

[358] Martin 2004: 6.
[359] Curta 2013: 313.
[360] Vasmer: 1925: 67.
[361] Noonan 2001: 210.
[362] Christian 1832: 175.
[363] RamaÃÁn 2008: 373.
[364] Zhivkov 2015: 151.
[365] Rispling 1983: 146-148.
[366] Kovalev 2016: 191.

The discovery and accurate interpretation of the dirham minted in Bulgar, as evidenced by its presence within the Máramaros "Huszt" hoard, hold paramount significance in the realm of numismatics and historical inquiry. This dirham stands as one of the earliest coins minted by the Volga Bulgars, marking a pivotal moment in the economic and cultural history of Eastern Europe during the tenth century.

By meticulously deciphering the inscriptions and motifs adorning this dirham, scholars can glean invaluable insights into the intricate commercial exchange relationships that characterized the interactions between the Bulgars, Hungarians, and Muslims during this epoch. The accurate identification of the mint, alongside the inclusion of specific legends and motifs, serves as tangible evidence of the multifaceted trade networks and cultural exchanges that permeated the Eurasian landscape during this period.

Furthermore, the correct interpretation of the dirham's legends and inscriptions provides scholars with a nuanced understanding of the socio-political dynamics within Volga Bulgaria and its interactions with neighboring regions. The inclusion of the Samanid ruler's name on the coin, albeit with modifications over time, sheds light on the evolving political alliances and power structures in the region. Moreover, this dirham exemplifies the role of numismatics as a tool for reconstructing historical narratives and elucidating the complexities of intercultural encounters. Through careful numismatic analysis, scholars can trace the trajectories of economic prosperity, cultural diffusion, and political influence that shaped the development of societies along the Volga River and beyond.

In closing, the meticulous examination and accurate interpretation of the dirham minted in Bulgar not only enrich our understanding of Volga Bulgar numismatics but also offer valuable insights into the broader historical context of Eurasian trade networks and cultural interactions during the tenth century. This dirham serves as a tangible artifact that bridges the gap between historical texts and material evidence, illustrating the enduring significance of numismatics in unraveling the complexities of the past.

V.I VIII. II. al-Amīr Yaltwar of the Volga Bulgar

In the realm of Islamic numismatics, the attribution of certain dirhams has long been a subject of debate and scholarly inquiry.[367] Particularly, the inscription bearing the title or name on these coins has posed a challenge, leading to various readings and interpretations over the course of

[367] Vasmer 1925: 74.

more than two centuries. Scholars have proposed different variant readings, such as al-Amīr al-Hamid (Adler)[368], al-Amīr Barmal (Aurivillius,[369] Tormberg, Grotzfeld, Fomin)[370], al-Amīr Brşal (Janina)[371], and al-Amīr Barman (Frähn,[372] Barthold, Dorn, Welin, Granberg, Hovén, Rispling, etc). However, current scholarly consensus tends to favor the reading of "al-Amīr Yaltawar" following the research of G. Rispling, as referenced in his work published in 1990.[373]

The rationale behind assigning these dirhams to "al-Amīr Yaltawar" is rooted in historical and textual evidence. Ibn Faḍlān's account from 922 AD mentions Khan Almas as the sole ruler in the region who embraced Islam and was recognized as an Islamic leader under the authority of Baghdad.[374] Khan Almas, upon his conversion to Islam, adopted the name Amīr Jaʿfar ibn ʿAbdallah, as documented in various Arabic sources under different names such as Ālmash ibn YalÔwar, Ālmas ibn ShalkĐ YalÔwar, al-Íasan ibn YalÔwar.[375]

There are two dies of this type:

GGI-d2330 (*Rispling* K101-R27)

GGI-d427 (*Rispling* K102-R37)

The dirhams associated with Yaltawar are significant as they represent the earliest coins that can be definitively attributed to the Volga Bulgars.[376] While earlier imitations of Samanid coins were produced by the Volga Bulgars, these dirhams faithfully copied the inscriptions of the Samanid prototypes.[377] The mint where these dirhams were likely struck is believed to be in Bulgar, the capital and important trade center of the Volga Bulgars.[378] The coinage of Yaltawar's

[368] Adler 1792
[369] Aurivillias 1775: 79-107
[370] Fomin & Kovács 1987: 33.
[371] Janina 1962: 179.
[372] Frähn 1832: 171-180.
[373] Rispling 1990: 275-282.
[374] Ibn Fadlān 2005: 80-98.
[375] Jankowiak 2023: 325.
[376] Kovalev 2016: 191.
[377] Rispling 1990: 278.
[378] Rispling 1983: 146-148.

successors explicitly mentions this mint on their coins, with later coins also being struck in Suwar.[379]

In the Máramaros "Huszt" hoard, seven rare dirhams of the al-Amīr Yaltawar type are present.[380] The use of these dies dates back to at least 323 AH, making them some of the earliest examples associated with Yaltawar. These dirhams hold a unique place in the numismatic world, offering valuable insights into the coinage of the Volga Bulgars and the historical context in which they were minted. The discovery of the seven rare dirhams of the al-Amīr Yaltawar in the Máramaros "Huszt" hoard is of significant importance in the realm of Islamic numismatics for several reasons. These dirhams are some of the earliest coins definitively attributed to the Volga Bulgars, marking a crucial phase in the monetary history of this region. Their attribution to al-Amīr Yaltawar, following the research of G. Rispling, offers a tangible connection to the Volga Bulgars' early Islamic coinage and bears witness to their conversion to Islam and recognition as Islamic leaders under the authority of Baghdad. This historical connection is corroborated by accounts such as those by Ibn Faḍlān.

From a numismatic perspective, the inscriptions on these dirhams, with the debated reading ultimately favoring "al-Amīr Yaltawar," provide critical textual evidence. The variety of readings proposed over centuries showcases the complexity and nuances in interpreting early Islamic inscriptions. Additionally, while earlier imitations of Samanid coins by the Volga Bulgars simply copied inscriptions, these dirhams exhibit a more distinct and authentic representation of Volga Bulgar coinage, reflecting the region's growing autonomy and identity in its monetary system.

The presence of these dirhams in the Máramaros "Huszt" hoard, found in the northeastern part of historic Hungary, indicates the extensive trade networks and interactions between the Volga Bulgars and the Carpathian basin. This discovery underscores the wide circulation of their coinage and the economic and cultural exchanges in medieval Eurasia. Furthermore, the likely minting of these dirhams in Bulgar, the capital of the Volga Bulgars, and the later coins explicitly mentioning Suwar, provide insights into the major centers of coin production, helping to map the economic landscape and administrative capabilities of the Volga Bulgars. The use of these dies dating back to at least 323 AH (935 AD) places these dirhams among the earliest

[379] Jankowiak 2023: 325.
[380] Fomin & Kovács 1987: 33.

examples associated with Yaltawar, making this precise dating crucial for constructing an accurate chronological framework of Volga Bulgar coinage and understanding the historical timeline of their Islamic conversion and rule. Finally, these dirhams contribute to ongoing scholarly efforts to reinterpret and refine the understanding of early Islamic numismatics in the Volga Bulgar region, offering a basis for further research, debate, and consensus-building in the academic community.

In summary, the seven rare dirhams of the al-Amīr Yaltawar found in the Máramaros "Huszt" hoard are invaluable for their historical, numismatic, archaeological, and chronological significance. They provide a rare glimpse into the early Islamic period of the Volga Bulgars, their monetary practices, and their integration into the wider Islamic world, enriching the numismatic corpus and enhancing our understanding of the cultural and economic history of medieval Eurasia.

V. VIII. Closing

In closing, the exploration of the Máramaros "Huszt" hoard has provided invaluable insights into the world of Islamic numismatics, offering a window into the intricate history and production of Islamic dirhams during the tenth century. The hoard holds great significance in the realm of Islamic numismatics, serving as a rich repository of coins that offer a glimpse into the economic, political, and cultural landscapes of the time.

Throughout this chapter, we have delved into the fascinating world of the Máramaros "Huszt" hoard, examining it through the lens of various mints involved. The hoard's coins have been studied meticulously by Islamic numismatics expert, who have identified and corrected errors from previous studies through rigorous examination of each coin, including measurements of weight and diameter using modern tools. This comprehensive approach, spanning over five years with periodic visits to the numismatics department at the Hungarian national museum, has yielded new findings that enrich our understanding of the hoard and its significance.

The distribution of dirhams from each mint within the hoard showcases the varying levels of production and influence of each mint. The al-Shash mint accounts for 31.3% of the dirhams in the hoard, followed by the Samarqand mint at 24.9%, Andarābah at 5.3%, Balkh at 2.6%, MaЎdan at 1.6%, Nishapur at 0.3%, and the Volga Bulgar imitations at 34%. Each mint's unique characteristics and contributions to the hoard highlight the diversity and complexity of Islamic coinage during this period.f particular significance is the identification of a dirham

minted in Bolgar, one of the earliest coins of the Volga Bulgars, emphasizing the intricate commercial exchange relations between the Bulgars, Hungarians, and Muslims in the tenth century. The inclusion of coins originating from these mints underscores the extensive trade networks and cultural interactions that characterized this period. These urban centers served as pivotal mints and likely constituted the primary sources of coins in North and Eastern Europe during the tenth century. Of particular significance is the identification of a dirham minted in Bolgar, one of the earliest coins of the Volga Bulgars, emphasizing the intricate commercial exchange relations between the Bulgars, Hungarians, and Muslims in the tenth century.

Finally, the Máramaros "Huszt" hoard stands as a testament to the enduring legacy of Islamic numismatics, offering a wealth of knowledge that continues to inspire scholars and enthusiasts alike. As we continue to unravel the stories behind each coin, we honor the remarkable craftsmanship, economic significance, and historical context encapsulated within this remarkable collection. Continued examination of numismatic collections dispersed throughout Eastern and Northern Europe promises to further enrich our comprehension of Islamic coinage. Through systematic analysis of these artifacts, researchers stand to unearth novel historical revelations and gain deeper insights into the intricate socio-economic dynamics of the era. Such scholarly endeavors hold the potential to illuminate the multifaceted cultural heritage encapsulated within these coins, thereby fostering a more comprehensive understanding of the broader historical context in which they circulated.

VII. The archaeological interpretation

The archaeological study of the ninth-tenth centuries Kufic dirhams found in the tenth-century Hungarian graves has been a subject of enduring scholarly interest. These coins, discovered within the Carpathian Basin, provide a fascinating glimpse into the interactions between the Islamic world and the early medieval societies of Central Europe. The seminal works of scholars like László Kovács have laid the foundation for understanding the distribution and significance of these coins, highlighting their presence in both Hungarian and broader European contexts.

This chapter aims to build upon the existing body of research by re-examining the findings associated with these dirhams, particularly in light of new discoveries and advances in numismatic studies. By analyzing the specific dates, mints, and contexts in which these coins were found, we seek to offer a more nuanced interpretation of their role and significance in the region during this period.

The dirhams found in Hungarian graves, often associated with high-status burials, suggest a complex network of trade and cultural exchanges extending across vast distances. The presence of these coins in graves not only marks the movement of goods and wealth but also hints at the socio-political dynamics and economic strategies of the time. This chapter will explore the archaeological and historical implications of these finds, focusing on key discoveries such as the Máramaros "Huszt" hoard and other significant burial sites.

Through a detailed examination of the dirhams and their archaeological contexts, we aim to contribute to the broader academic discourse on early medieval trade networks and cultural interactions. The analysis of these coins, including their chronological and geographical distribution, provides crucial insights into the historical landscape of the Carpathian Basin and its connections with the Islamic world.

VII.I. Ninth-Tenth Century Islamic dirhams discovered in the Carpathian Basin

Building upon the groundwork laid by László Kovács, our study seeks to expand the existing body of knowledge concerning Islamic dirhams discovered in the Carpathian Basin during the ninth and tenth centuries. Kovács' seminal works, published in both Hungarian and German, have provided invaluable insights into these finds, laying the foundation for further scholarly inquiry. However, as new discoveries emerge and analytical techniques evolve, it becomes imperative to revisit and reanalyze these findings to glean a deeper understanding of their significance.

In examining the newly discovered dirhams in the Carpathian Basin, we aim to delve into the minutiae of these coins, considering their historical context and distribution patterns. By adopting a multidisciplinary approach that integrates numismatics, archaeology, and historical research, our objective is to offer a more comprehensive and nuanced understanding of the role of these dirhams within the region.

As specialists in Islamic numismatics, our endeavor is not only to contribute to the academic discourse surrounding these coins but also to provide a scientifically rigorous and accurate analysis of their archaeological, historical, economical, and cultural importance. By building upon Kovács' foundational research and incorporating recent discoveries, we strive to enrich our understanding of the dynamics that shaped the presence of Islamic dirhams in the Carpathian Basin during this pivotal period in history.

The dirhams are minted with specific dates and mints, these dirhams, enable the identification of the most recent coin within a hoard, setting the earliest possible date the *terminus post quem*

(*tpq*)[381] for when the dirhams could have been hidden. The gap between this (*tpq)* and the actual hiding of the trove poses a greater challenge to pinpoint.[382] In transactions involving the export of goods to the Islamic world, the coins were quickly passed down a line of middlemen; however, upon reaching their endpoint, they were predominantly stockpiled. Therefore, it's probable that (*tpq)* closely match the true dates of burial; while not exact, they offer a valuable framework for understanding the timing of dirham distributions into the northern and eastern regions of Europe.[383]

This is clearly demonstrated by the Carpathian Basin's only Islamic sliver dirhams hoard find, which implies that significantly more traders activities at this area. however, the (*tpq)* data of the closing coin in the graves sets offers no further possibility for assuming the exact time of burial.[384]

The dirhams analyzed in this study were meticulously re-examined using photographs and descriptions documented in Kovács' research. Furthermore, the most recent discoveries of dirhams in the Carpathian Basin have been integrated into this analysis. Dr. Attila Türk has generously provided the author with photographs of the majority of the most recent finding dirhams for detailed identification and examination. The remaining dirhams were examined in person by the author, allowing for the collection of precise measurements of weight and diameter. This research presents novel findings and theories that have not been addressed in prior studies.

Key finds include:

- Ásotthalom-Rívó (Csongrád-Csanád County- Hungary): Within the burial of a man interred with an ornate belt, a dirham belonging to the Samanid Amīr Ismāʿīl ibn Aḥmad, struck in Balkh in 293 AH/ 905-906 AD. (tpq.) 905/906.[385]

- Bodrogvécs (Zemplén County; Somotor-Vec, Trebišov District, Košice Region, Slovakia): found among the saved finds of tenth century Hungarian graves destroyed in 1897: a pierced coin of Volga Bulgar imitation of the Samanid Amīr Aḥmad Ibn Ismāʿīl, minted in al-Sash in 299 AH/911-912 AD; tpq. 911/912.[386]

[381] (*tpq*) are given for Arabic coins only.
[382] Jankowiak 2018: 15-20.
[383] Jankowiak 2021: 108.
[384] Kovács 2011: 83.
[385] Kovács 1989: 16-17: Nr. IV
[386] Kovács 1989: 25-26. Nr. XXXI.

- Eger-Almagyar (Heves County- Hungary):: Among the remaining artifacts from a destroyed cemetery, a Volga Bulgar imitation of dirham of Ismāʿīl ibn Aḥmad,; tpq. 897/898.[387]

- Eger-Répástet (Heves county- Hungary):: A dirham discovered in the left chest of a horseman archer with a saber in the initial grave of a two-grave cemetery section; unfortunately, the coin was damaged during restoration; *tpq*. 895-896.[388]

- Galgóc (Nyitra County; Hlohovec, Trnava District, Trnava Region, Slovakia): Among the remnants from the grave of a distinguished horseman warrior with a belt plate (or potentially his female companion's burial), Volga Bulgar imitation of the dirham of NaÒr Ibn AÎmad, with the name of Caliph al-Muqtadir Billah, struck in Samarqund in 306 AH/918-919 AD.; tpq. 918/919. [389]

- Hajdúdorog-Temetőhegy (Hajdú-Bihar County- Hungary): In a nearly completely excavated 10th-12th century village cemetery with 716 graves, among the artifacts from graves destroyed before the excavation, a pierced of Volga Bulgar imitation dirham of NaÒr Ibn AÎmad, minted in al-Shash; tpq. 919/920-924.[390]

- Jászfelsőszentgyörgy (Jász-Nagykun-Szolnok County, Hungary): in 2023 metal detectorists found Abbbasid dirham al-Mutawakkil ʿala Allāh caliph 232- 247 AH / 847- 861 AD. Minted in Surra Man RaÞa (SÁmarra). 237 AH/ 851 AD.

- Karos- Eperjesszög cemetery (Borsod–Abaúj–Zemplén county- Hungary):: 73 graves from 5 burials revealed a Muslim coin.

Grave 1: An unidentified dirham, hammered into a disc without piercing, was found between the right chest and elbow of an elderly woman; *tpq* 895-899 AD.[391]

Grave 2: In the burial of a young man on horseback, a quarter of an undated coin, possibly from the 290-310 AH/ 902-923 AD period and of unknown origin, was found at the meeting point of his collarbones; *tpq* 902-923 AD.[392]

Grave 7: In the burial of a Jasz horseman, one dirham without piercing was found between the man's knees, and three pierced dirhams were found between the horse's shinbones: a dirham of

[387] Kovács 1989: 21. Nr. XVa.
[388] Kovács 1989: 26. Nr. XXXII.
[389] Kovács 1989: 26: Nr. XXXII.
[390] Kovács 1989: 30. Nr. XLI.
[391] Kovács 1989: 170: Nr. CLIXb.
[392] Kovács 1989: 170: Nr. CLIXc.

al-Amīr Ismāʿīl ibn Aḥmad, mited in al-Shash in 285AH/ 898-899 AD, an imitation dirham of the Volga Bulgar, and dirham of al-Amīr NaÒr Ibn AÎmad minted in AndarÁbah in 303 AH/ 915-916 AD, and dirham minted in 310 AH/922-923 AD; tpq. 922-923 AD.[393]

Grave 51: In the burial of a horseman, one pierced dirham was found in the right chest, next to the left chest, and under the left forearm: dirhams from al-Amīr Ismāʿīl ibn Aḥmad, minted in al-Shash in 288 AH/ 900-901 AD, ÓÁhir ibn MuÎammad Saffarid Amīr (287-296 AH/900-909 AD), minted in Madinat Zarandj in 294 AH/906-907 AD, and dirham of al-Amīr AÎmad Ibn IsmÁÝÐl, minted in al-Shash in 298 AH/ 910-911 AD; *tpq* 910-911 AD.[394]

Grave II/ 52: The most prestigious burial in the cemetery, featuring a distinguished belt, buckle plates, a sword-wielding horseman, a distinguished quiver, and a distinguished horse harness.[395] Under the pelvis, 12 pierced German denars were found, and above the teeth and on the left chest, one pierced dirham each: IV. (Child) Louis Eastern Frank/German King (900-911) 12 denars from Mainz, al-Amīr Ismāʿīl ibn Aḥmad minted in al-Shash in 292 AH/ 904-905 AD; *tpq* 904-905 AD.[396]

- Karos (BAZ)-Eperjesszög, II. cemetery (Libatanya- Hungary):: Among the stray finds that emerged from before the excavation began, there were also two dirhams: a non-perforated quarter dirham minted in AndarÁbah by during the years 299-301AH/ 911-912-913-914 AD by al-Amīr Ismāʿīl ibn Aḥmad, and a perforated dirham minted in al-Shash in 302AH/ 914-915 AD by al-Amīr NaÒr Ibn AÎmad *tpq* 914/915 AD.[397]

- Kenézló- Fazekaszug I. cemetery (Borsod–Abaúj–Zemplén- Hungary): Islamic coins were found in two burials from a cemetery with 25 graves. Grave 14: A notable individual with a decorated belt, belt plate, and saber was buried with five pierced dirhams, dirhams of to the Samanid Amīr Ismāʿīl ibn Aḥmad, minted in al-Sash in 290 AH/ 902-903 AH and 291 AH/ 903-904 AD, dirham of NaÒr Ibn AÎmad, with the name of caliph al-Muqtadir Billah, minted in AndarÁbah in 309 AH/ 921-922 AD, and two Volga Bulgar imitation dirhams dated 320-330 AH/932-941-942 AD.[398] Grave 18: At the right corner of the jaw of a horseman with a saber, there was a flattened dirham with a hole in the center. Volga Bulgar imitation dirham.[399]

[393] Kovács 1989: 170-171: Nr. CLIXd.
[394] Kovács 1989: 171: Nr. CLIXf.
[395] Türk, Mártonb, Strohmayer, & Fjodorov 2021: 75.
[396] Kovács 1989: 171: Nr. CLIXg.
[397] Kovács 1989: 170 : Nr. CLIXa.
[398] Kovács 2005: 63.
[399] Kovács 2011: 178.

-Kenézló- Fazekaszug II. cemetery (Borsod–Abaúj–Zemplén county- Hungary): In the 20th grave of a 25-grave cemetery, a prominent horseman with a decorated belt was buried with a Volga Bulgarian imitation of a dirham minted by al-Amīr Aḥmad Ibn Ismāʿīl, minted in Samarqand in 295-299 AH/ 907-908-911-912 AD; tpq. 907/908.[400]

- Kecskemét-Orgovány (Bács-Kiskun County- Hungary): A pierced dirham of the Samanid Amīr Aḥmad Ibn Ismāʿīl, likely from a disturbed grave, minted in al-Shash in 283-286 AH/ 896-897-899-900 AD; tpq. 896/897.[401]

- Kisdobra (Zemplén County; Dobrá, Trebišov District, Košický Region, Slovakia)-Ligahomok: Following the disturbance of the cemetery, the second grave of an eight-grave section revealed an adult with nine pierced dirhams adorning the clothing: A dirham of Abbasid caliph al-Muʿtaḍid Billah minted in al-Sash in 280 AH/893-894 AD, four dirhams of the Samanid Amīr Ismāʿīl ibn Aḥmad, minted in al-Sash in 286 AH/899-900 AD, 287 AH/ 900 AD, Samarqand in 290 AH/ 902-903 AD, and al-Sash in 292 AH/ 904-905 AD, three dirhams of the Samanid Amīr Aḥmad Ibn Ismāʿīl, minted in al-Sash in 295 AH/ 907-908 AD, Samarqand in 297 AH/ 909-910 AD, and al-Sash in 298 AH/ 910-911 AD, and a dirham of NaÒr Ibn AÎmad minted in al-Sash in 316 AH/ 928-929 AD; tpq. 928/929.[402]

- Kistokaj-Homokbánya (Borsod–Abaúj–Zemplén county- Hungary) - In the 53rd grave of a cemetery section, in the necklace of a child lay a dirham of the Samanid Amīr Ismāʿīl ibn Aḥmad, minted in al-Shash in 294 AH/ 906-907 AD.; tpq. 906/907.[403]

-Mala Kopanya (Zakarpattia Oblast- Ukraine) in 2023 metal detectorists found a dirham of the Samanid Amīr AÎmad Ibn IsmÁÝÐl minted in al-Shash in 300 AH/912-913 AD.

- Nyírkarász (Szabolcs-Szatmár-Bereg County, Hungary): in 1892

- Pap-Rózsadomb (Szabolcs-Szatmár-Bereg county Hungary) In the 7th grave of a cemetery section, a child was found with half of an unpierced dirham of the Samanid Amīr Ismāʿīl ibn Aḥmad minted in Balk in 290 AH/ 902-903 AD, by the left chest; tpq. 902/903-912.[404]

- Perse-Pápföld, Bérc-dűlő (Nógrád County; Prša, Lučenec District, Banskobystrický Region, Slovakia) A section of a cemetery with 143 graves, mostly from the late Avar period, six from

[400] Kovács 1989: 37-38: Nr. LIIIB.
[401] Kovács 2011: 180.
[402] Kovács 1989: 38: Nr. LIV.
[403] Kovács 1989: 41: Nr. LVII
[404] Kovács 1989: 52: Nr. LXXXVII.

the 10th century, and 52 from the early Árpád period. In one of the 10th-century burials, in grave 101, a richly adorned woman was buried with a pierced, unidentified dirham NaÒr Ibn AÎmad minted in al-Shash, in her mouth as a funerary obolus; tpq. 914-913.[405]

-Rovantsi grave (Volyn Oblast, Ukraine): three dirhams one of the Samanid Amīr NaÒr Ibn AÎmad, minted in Samarqand in 307 AH/ 919-920 AD. the second Imitation Volga Bulgar dirham and the third is Abbasid dirham most probably belong to the seventh Abbasid caliph, al-MaʾmÙn (194-218 AH/810-833 AD).

- Sárospatak-Baksahomok (Borsod–Abaúj–Zemplén county-Hungary): A cemetery section with 10 verified and excavated graves: Grave 1: In the burial of a horseman with a saber and bow, 10 pierced dirhams were found in an unobserved position: 2 dirhams of the Samanid Amīr Ismāʿīl ibn Aḥmad, minted in Samarqand in 288AH/ 900-901 AD and AndarÁbah in 295 AH/ 907-908 AD; four dirhams of the Samanid Amīr Aḥmad Ibn Ismāʿīl, minted in al-Sash in 298 AH/ 910-911 AD, one each from al-Sash and Samarqand in 299 AH/ 911-912 AD, and Samarqand in 300 AH/912-913 AD; four dirhams of NaÒr Ibn AÎmad, one each from al-Sash and Samarqand in 302 AH/914-915 AD, and two from Samarqand in 306 AH/ 918-919; tpq. 918/919-914.[406]

Grave 2: In the burial of a horseman with a bow, five pierced and 1 cut-center dirham were found in an unobserved position: three dirhams of the Samanid Amīr Aḥmad Ibn Ismāʿīl, minted in al-Sash in 299 AH/ 911-912 AD, and two in 300 AH/912-913 AD; two dirhams of NaÒr Ibn AÎmad minted in AndarÁbah in 304 AH/ 916-917 AD and Merv in 306 AH/ 918-919; finally, a cut-center dirham ring, of Ismāʿīl ibn Aḥmad, Samanid emir minted in al-Sash in 283-284 AH/ 896-898; tpq. 918/919.[407]

Grave 4: In the burial of a horseman with a bow, in an unobserved position, a dirham of NaÒr Ibn AÎmad minted in Samarqand in 290 AH/ 902-903 AD and al-Sash in 304 AH/ 916-917 AD, was found; tpq. 916/917.[408]

-Szabolcs - Prokop-Szabolcsi-dűlő(Szabolcs-Szatmár-Bereg County, Hungary): in 2022 at sír 10 discovered two dirhams come, one of the Samanid Amīr NaÒr Ibn AÎmad minted in Samarqand in 306 AH/ 918AD.

[405] Kovács 1989: 52-53. Nr. XC.
[406] Kovács 1989: 57. Nr. XCVIIa.
[407] Kovács 1989: 57-58. Nr. XCVIIb.
[408] Kovács 1989: 57-58. Nr. XCVIIb. 293.

-Szeged - Királyhalom (Csongrád-Csanád County, Hungary): According to Dr. Attila Türk, a dirham was discovered here, and it is the only dirham found in the southern region.

- Szolnok-Strázsahalom (Jász-Nagykun-Szolnok county -Hungary): Among the belongings of a man buried with a decorated belt, belt plate, and decorated horse gear, was found a dirham of NaÒr Ibn AÎmad, minted in al-Sash in 300 AH/ 912 AD, and an imitation dirham from Volga Bulgar; tpq. 920/921-917.[409]

- Szomód- Bocskahegy (Komárom-Esztergom County-Hungary): among the remains of a solitary archer buried with horse gear, two complete dirhams: a dirham of the Samanid Amīr Aḥmad Ibn Ismāʿīl, minted in Samarqand in 295 AH/ 907-908 AD, and a dirham of NaÒr Ibn AÎmad, minted in Samarqand in 311 AH/ 923-924 AD; tpq. 923/924-918.[410]

- Szilas-Tercsi dúló: (Komárom County; Brestovec, Komárno District, Nitriansky Region, Slovakia) Among the artifacts from disturbed graves were two pierced dirhams: one of the Samanid Amīr Aḥmad Ibn Ismāʿīl, minted in al-Sash in 295 AH/ 907-908 AD, and one of NaÒr Ibn AÎmad, minted in Samarqand between 303-313 AH/ 915-926 AD; tpq. [411]

- Tardoskedd-Paptag (Nitra County; Tvrdošovce, Nové Zámky District, Nitriansky Region, Slovakia)In the solitary burial of a adorned child, a pierced dirham was found under the skull, a half-imitation Volga Bulgar dirham, minted in 301 AH/ 913-914; tpq. 913/914.[412]

- Tiszacsoma-Széplak (Bereg County; Cuma, Berehove District, Zakarpattia Oblast, Ukraine): In the 3rd grave of a cemetery section with 108 graves, a fragment of about one-third of a dirham of NaÒr Ibn AÎmad (301- 331 AH/ 914- 943 AD) was found among the belongings of a horseman with a bow; the mint and year of issuance could not be determined due to its fragmentary state tpq. 320.[413]

- Tiszasüly-Éhhalom (Jász-Nagykun-Szolnok county) Based on the remains from possibly two disturbed graves a dirham of the Samanid Amīr Aḥmad Ibn Ismāʿīl, was found, minted in al-Sash in 298 AH/ 910-911 AD, belonged to a horseman buried with a decorated belt and sabre; tpq. 910/911-921 AD.[414]

[409] Kovács 1989: 67-68. Nr. CXXIII.
[410] Kovács 1989: 68. Nr. CXXIV.
[411] Kovács 1989: 34. Nr. LI. 123.
[412] Kovács 1989: 68. Nr. CXXVI. 45
[413] Kovács 2011: Nr. 17.
[414] Kovács 1989: 71/72. Nr. CXXXVI.

Dirhams from unknown places of discovery:

-A dirham dirham of the Samanid Amīr Aḥmad Ibn Ismāʿīl, minted in 300 AH/ 912-913AD; *tpq*. 912-913AD.[415]

-A dirham of the Samanid NaÒr Ibn AÎmad (AH 301-331/914-943), minted in AH 301 (913/914), a Volga Bulgar half-imitation; *tpq* 301 AH/ 932 AD.[416]

-Two Volga Bulgar imitations dirhams of the Samanid Ismāʿīl ibn Aḥmad; *tpq*. 914 AD.[417]

-A Volga Bulgar imitation dirham of the Samanid NaÒr Ibn AÎmad; *tpq*. 914 AD.[418]

-A Volga Bulgar imitation dirham of the Samanid NaÒr Ibn AÎmad; *tpq*. 914 AD.[419]

Islamic coins from the ninth and tenth centuries are held in various Hungarian museums, also from unknown places of discovery including the Hungarian national museum in Budapest, the Herman Ottó museum in Miskolc, the Jósa András museum in Nyíregyháza, and the Kisvárdai museum in Kisvárda, as well as the Archaeological Institute of the Slovakian Academy of Sciences in Nitra. These coins, originating from unknown places of discovery, represent a significant aspect of the collections in these institutions and were studied by the author in 2022. The study was greatly facilitated by Dr. Péter Langó, whose provision of photographs of the dirhams was instrumental in the comprehensive analysis and inclusion of these coins in the research.[420]

The collections include 8 dirhams of Ismāʿīl ibn Aḥmad and 2 dirhams of Aḥmad ibn Ismāʿīl, along with 4 dirhams of Samanid ruler Naṣr ibn Aḥmad at the Herman Ottó Museum; 1 dirham of Ismāʿīl ibn Aḥmad at the Jósa András Museum; 1 dirham of Ismāʿīl ibn Aḥmad at the Kisvárdai Museum; and 2 dirhams of Naṣr ibn Aḥmad at the Archaeological Institute, Slovakian Academy of Sciences, Nitra. 18

[415] Kovács 1989: 78. Nr. 454.
[416] Kovács 1989: 79. Nr. 457.
[417] Kovács 1989: 176. Nr. 1125-1126.
[418] Kovács 1989: 176. Nr. 1127.
[419] Kovács 1989: 176. Nr. 1129.
[420] Al Halabi 2022: 444-460.

A particularly noteworthy collection is housed in the Hungarian national museum. In 2024, a chance discovery due to packaging in the coins cabinet revealed two hoards, prompting Dr. Vida István, the keeper of the coins cabinet, to request the author's assistance in identifying and examining these finds. The first hoard consisting of 176 dirhams dating to the first half of the 8th century, minted during the reign of Umayyad Caliph Hishām ibn ʿAbd al-Malik in Wāsiṭ an early Islamic city in Iraq, in 110 AH / 728-729 AD; and another hoard of 71 dirhams dating to the tenth century, comprises 56 dirhams of Abbasid Caliph al-Muqtadir Billah, 1 dirham of Abbasid Caliph al-Mu'tadid, 4 dirhams of Abbasid Caliph al-Muktafi Billah, 4 dirhams of Samanid ruler Nasr ibn Ahmad, and 6 dirhams of Hamdanid rulers Nasir al-Dawla and Sayf al-Dawla. Currently, the exact place of discovery of these coins remains undetermined. The ongoing examination of the coins by the author is expected to provide further insights, with findings to be published in the near future.

In conclusion, the examination of ninth-tenth century Muslim dirhams found in the Carpathian Basin has provided valuable insights into the archeological, historical, economic, and cultural dynamics of the region during this period. Through a meticulous analysis of dirhams discovered at the Carpathian Basin, we have uncovered a rich tapestry of trade networks, cultural interactions, and political influences that shaped the Carpathian Basin in the medieval period.

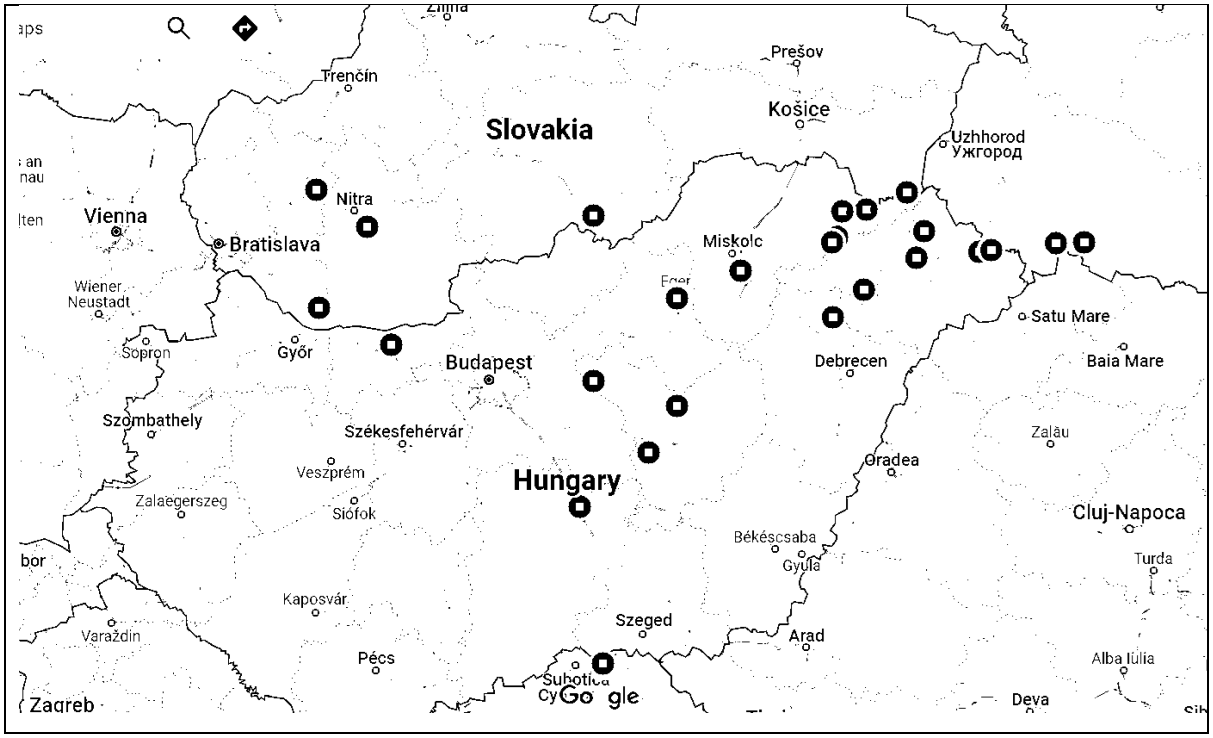
The dirhams included in this study comprise 169 Islamic dirhams from the ninth-tenth century in the Carpathian Basin. These coins are categorized as follows: 72 coins from archaeological excavations and graves, 2 coins discovered by metal detectorists, 6 coins from unknown places of discovery, 18 coins from Hungarians museums collections, and 71 coins from the tenth-century hoard of the Hungarian national museum.

The reexamination and reinterpretation of these dirhams, along with the incorporation of recent discoveries and insights, have deepened our understanding of their significance in the broader regional context. The identification of specific mints, dates, and imitations has enabled us to establish important chronological frameworks for the circulation and distribution of dirhams in the Carpathian Basin, shedding light on the timing and patterns of trade and exchange. Furthermore, the diverse array of dirhams, including Samanid, Volga Bulgar imitations, and other variants, underscores the multifaceted nature of economic activities and cross-cultural encounters in the Carpathian Basin during the ninth and tenth centuries.

As specialists in Islamic numismatics, our academic endeavor has aimed to contribute to the scholarly discourse surrounding these dirhams and provide a rigorous and accurate analysis of their archeological, historical, economic, and cultural significance. By delving into the details of these dirhams and contextualizing them within the broader historical narrative of the Carpathian Basin, we have sought to offer a nuanced and comprehensive understanding of the role of Islamic dirhams in shaping the medieval landscape of the region.

In light of the complexities and nuances revealed through our examination, further research and exploration are warranted to continue unraveling the mysteries and implications of these ninth-tenth century coins found in the Carpathian Basin. The study of these coins not only enriches our knowledge of the past but also opens new pathways for interdisciplinary scholarship and collaboration in the fields of medieval numismatics, archaeology, history, economics, and cultural studies. Moreover, the integration of numismatic data with other archaeological and historical sources will enhance our ability to construct a more cohesive and detailed picture of the region's past.

Future research, potentially incorporating advanced analytical techniques and interdisciplinary approaches, will undoubtedly continue to illuminate the significance of these coins, offering new avenues for exploring the interconnected histories of the Carpathian Basin and the Islamic world.



Map 11. Ninth-tenth centuries Islamic coins in the Carpathian basin. (by Suleman Al Halabi 2024)

Location	Dirhams Found	Details
Ásotthalom-Rívó (Hungary)	1	Samanid dirham, 905-906 AD
Bodrogvécs (Slovakia)	1	Volga Bulgar imitation, 911-912 AD
Eger-Almagyar (Hungary)	1	Volga Bulgar imitation, 897-898 AD
Eger-Répástet (Hungary)	1	Dirham, 895-896 AD
Galgóc (Slovakia)	1	Volga Bulgar imitation, 918-919 AD
Hajdúdorog-Temetőhegy (Hungary)	1	Volga Bulgar imitation, 919-920 AD
Jászfelsőszentgyörgy (Hungary)	1	Abbasid dirham, 851 AD
Karos-Eperjesszög (Hungary)	10	Various dirhams, 898-923 AD
Kenézló-Fazekaszug I (Hungary)	5	Samanid and Volga Bulgar imitation dirhams, 902-941 AD
Kenézló-Fazekaszug II (Hungary)	1	Volga Bulgar imitation, 907-908 AD
Kecskemét-Orgovány (Hungary)	1	Samanid dirham, 896-900 AD
Kisdobra (Slovakia)	9	Abbasid and Samanid dirhams, 893-929 AD
Kistokaj-Homokbánya (Hungary)	1	Samanid dirham, 906-907 AD
Mala Kopanya (Ukraine)	1	Samanid dirham, 912-913 AD
Nyírkarász (Hungary)	1	Dirham, unidentified
Pap-Rózsadomb (Hungary)	1	Samanid dirham, 902-912 AD
Perse-Pápföld (Slovakia)	1	Volga Bulgar imitation, 914-913 AD
Rovantsi (Ukraine)	3	Samanid and Volga Bulgar imitations, 810-920 AD
Sárospatak-Baksahomok (Hungary)	10	Samanid and Volga Bulgar dirhams, 900-919 AD
Szabolcs - Prokop-Szabolcsi-dűlő (Hungary)	2	Samanid dirhams, 918 AD
Szeged - Királyhalom (Hungary)	1	Dirham, unspecified
Szolnok-Strázsahalom (Hungary)	2	Samanid and Volga Bulgar imitation dirhams, 912-921 AD
Szomód-Bocskahegy (Hungary)	2	Samanid dirhams, 907-924 AD
Szilas-Tercsi dúló (Slovakia)	2	Samanid dirhams, 907-926 AD
Tardoskedd-Paptag (Slovakia)	1	Volga Bulgar imitation, 913-914 AD
Tiszacsoma-Széplak (Ukraine)	1	Dirham fragment, 914-943 AD
Tiszasüly-Éhhalom (Hungary)	1	Samanid dirham, 910-921 AD
Dirhams from Unknown Places	7	Various Samanid and Volga Bulgar dirhams, 896-943 AD

VII.II. The archaeological interpretation of the Máramaros "Huszt" hoard

The archaeological interpretation of the Máramaros "Huszt" hoard provides a fascinating glimpse into the complex dynamics of the Carpathian Basin during the period of the Hungarian conquest. This chapter delves into the significance of Islamic dirhams found in graves, particularly those of armed men, whose burials often included both weapons and coins.

These dirhams, likely acquired as war booty and through trade, signify status among their bearers, despite their silver value being lower than that of items found in the graves of knights with other types of coins. We explore the high concentration of dirham-containing graves in Northeast Hungary, a phenomenon that lacks a definitive explanation but offers intriguing hypotheses, including Lászlo Kovács' theory of Muslim traders crossing the Carpathian passes. This chapter also examines the Karos-Eperjesszög cemeteries, the richest cemeteries in the Carpathian Basin in the tenth century, and their implications for understanding the region's trade interactions. Additionally, the presence of early dirhams and their chronological significance in the Upper Tisza region provides insight into the broader commercial systems at play. Finally, we consider the broader implications of these findings for Hungarian hegemony and trade networks in the tenth century, drawing connections between archaeological evidence and historical narratives.

In the archaeological findings from the period of the Hungarian conquest, the presence of Islamic coins, particularly dirhams, is notable. A significant number of these dirhams were discovered in the graves of armed men, with a smaller proportion found in the graves of women and children, as discussed in the ninth-tenth century Islamic dirhams in the Carpathian Basin finds. The burials containing both weapons and coins suggest that the dirhams were likely acquired through war booty and trade. Those individuals buried with dirhams appear to have been of higher status, as evidenced by the inclusion of such items in their graves. This association between dirhams and status highlights the importance of these coins in the social and economic contexts of the time.[421] However, their status or wealth was not necessarily reflected in the silver value of their coins, as it was generally much less than the value of the items found in the graves of knights with other types of coins.

It's also worth noting the particularly high concentration of graves containing dirhams in Northeast Hungary, for which there is no proven explanation. The most plausible hypothesis by Lászlo Kovács is that Muslim traders, crossing the Carpathian passes, sought to quickly

[421] Vörös 1996: 177.

conduct their business, possibly among related peoples who otherwise could not have been Muslims, as their religion would not have allowed burial with material accompaniments. [422] this hypothesis we will discuss later in this archaeological interpretation.

Given that no specific reports remain regarding the activities of the traders who arrived in the Carpathian Basin, the sequence of the dirhams could only be hypothesized based on the chronological order of the dirhams, which could be recognised from Máramaros "Huszt" hoard.[423] However, the concentration of grave findings in the Carpathian Basin, especially in the Upper Tisza region, underscores the region's pivotal significance. [424] This concentration of archaeological findings prompts a series of compelling archaeological and historical inquiries, which will be the subject of further examination and deliberation in this scholarly investigation.

In the Upper Tisza region, the Karos-Eperjesszög cemeteries have garnered significant attention as richest cemeteries in the Carpathian Basin in the tenth century. Previous interpretations have suggested that these burial grounds may have served as the final resting places for members of the princely retinue, with the most opulent grave likely belonging to a prominent figure of the era. Scholarly observations, notably by István Bóna, have drawn comparisons between the burials at Karos-Eperjesszög and those associated with armed Danish forces or retinues, shedding light on the unique characteristics of these discoveries. [425]

A notable feature of the Karos-Eperjesszög cemeteries is the prevalence of Islamic dirhams. [426] The abundance of Islamic coins in the Upper Tisza region hints at an early influx of trade and cultural interaction, with Eastern influences shaping the local economy and societal dynamics. The coexistence of Islamic dirhams and Western European coins within the same burial site underscores the diverse and interconnected nature of the region during this period. [427]

Further analysis of the Islamic coins found in the Upper Tisza region, along with the insights gleaned from previous discoveries, aligns with the research of Dr. Péter Langó and Dr. Attila Türk.[428] Their exploration into the historical context raises intriguing questions about the Hungarian border in the early tenth century, suggesting the plausibility of the Dniester River

[422] Kovács 2011: 81.
[423] Fomin & Kovács 1987: 61.
[424] Kovács 1997: 234–240.
[425] Bóna 2000: 64.
[426] Langó 2004: 88.
[427] Révész 1996: 187.
[428] *For more details see:* Türk & Langó 2019: 51-67. Langó & Türk 2004: 365–457. Türk 2012: 1-6. Türk 2018: 240-245. Türk 2012: 3-28. Türk 2014: 19-30. Langó 2005: 179-180. Türk 2023: 385–402.

as a significant boundary controlled by the Hungarians until the 940 AD. This novel perspective, informed by Moldovan specialists, elucidates several key aspects, including the significance of the Karos cemetery. [429]

In light of the findings and interpretations presented, it becomes evident that the Upper Tisza region played a crucial role in Hungarian hegemony during the tenth century. The strategic location of the area, combined with the presence of Islamic dirhams, underscores its importance in the political and economic landscape of the time. The Karos-Eperjesszög cemeteries, previously subject to critique due to their eastern location, now emerge as central to Hungarian dominance. This reevaluation highlights the intricate historical dynamics at play and underscores the significance of the region in shaping Hungarian history during this period. Further research and excavations in the region may provide additional insights into the complex dynamics of the Carpathian Basin during this period.

One of the archaeological assumption suggested that the earlier dirham would likely be less abundant with the traders if they were Muslims compared to those issued closer to the "year in question", which could be more, the "closing coins" of a larger payment would tend to be closer to the year of the transaction. However, this is merely assumption, as neither the seller nor the buyer was concerned with the age of the coins, since the value for both was guaranteed by the total weight of the coins, that is, their silver content.[430] Moreover, even this randomly assembled sum did not remain intact, when selling presumed slaves, furs, possibly horses, or other goods, could have received much larger amounts than the one dirham.

From the hoard including the earliest dirham in the hoard was minted in 284AH / 897 AD in Samarqand, during the reign of al-Amīr Ismāʿīl ibn Aḥmad and Abbasid caliph al-Muʿtaḍid Billah. The latest dirham in the hoard was minted in 323 AH / 935 AD in al-Shash, during the reign of al-Amīr NaÒr ibn AÎmad and Abbasid caliph al-Rāḍī Billah, by utilizing the *tpq* of the hoard according to the most recently dirham is 323 AH / 935 AD *tpq*.

Thus, it becomes uncertain when the inflow of dirhams into the homeland of the Hungarians, and the exact end of this process is equally ambiguous. It is also impossible to estimate when the Máramaros “Huszt” hoard, and the Islamic coins arrived in the Carpathian Basin, nor can we determine whether it was buried immediately or much later. These challenges underscore

[429] Langó 2017: 77-87.
[430] Kóvacs 2008: 489.

the necessity for a more cautious approach to traditional archaeological dating methods, particularly in assessing the reliability of coin-based dating.

The complexities involved in interpreting archaeological finds, such as the interplay between coinage and other grave goods, demand a comprehensive and interdisciplinary approach to establish more accurate chronological frameworks. By integrating typo-chronological analyses and considering the acquisition circumstances of grave goods, researchers may develop more refined relative chronological schemes, enabling a deeper understanding of the temporal contexts of archaeological sites.[431]

In 2023, a significant discovery was made by metal detectorists led by Imre Milák along the banks of the Zagyva River in the periphery of Jászfelsőszentgyörgy. This significant find, a dirham with a diameter of 25.5 mm and a weight of 3.19 grams, was minted by caliph al-Mutawakkil ʿala Allah 232- 247 AH / 847- 861 AD. minted in Surra Man Raƀa (SÁmarra) situated in present-day Iraq. This find holds considerable significance within the context of numismatics and archaeological studies, offering valuable insights into the historical and economic dimensions of currency circulation in the region during the specified period. [432]

Prior to this discovery, the prevailing scholarly consensus, as articulated by László Kovács, identified the earliest Abbasid dirham in the Carpathian Basin during the Hungarian conquest as originating from the Karos-Eperjesszög I site. This dirham, minted in 249 AH/863-864 AD under Caliph al-Mustaʿīn billah (248-252 AH/ 862-866 AD) probably minted in Mervi, alongside the dirhams of Ismaʿīl ibn AÎmad minted in al-Shash in 293 AH/905-906 AD, was considered the earliest Islamic coinage in the Carpathian Basin. Kovács's work, underscored the significance of these findings within the context of the Hungarian conquest of the Carpathian Basin.[433]

However, recent identification and examination of a dirham from Jászfelsőszentgyörgy have revealed a noteworthy discovery. This dirham, minted in 237 AH/851 AD and bearing the name of al-Mutawakkil ʿala Allah, predates the previously recognized earliest examples. This discovery necessitates a re-evaluation of the historical narrative concerning the circulation of Islamic coinage in the region.

Kovács's assertion that the dirhams found in graves dating to the period of the Hungarian conquest represent the earliest Islamic coinage in the Carpathian Basin is significant. Nonetheless, the Jászfelsőszentgyörgy dirham, despite not being found in a conquest-era grave, prompts critical questions regarding its origins. The minting date of this dirham suggests two potential scenarios: either

[431] Langó 2012: 52.
[432] Türk, et al., 2024
[433] Kovács 2011, 181 : MU-29. Kovács 1989, 33-34: XLVIII. Révész 1996: 14.

it arrived with the Hungarian conquerors, corroborated by historical evidence of Hungarian trade with the East during that period, or it predated the Hungarian arrival in the Carpathian Basin.[434] The former hypothesis appears more plausible, given the documented trade activities and the established pattern of dirham circulation in Europe, where such coins often underwent extensive use before being deposited.[435]

The latter theory, while less likely, cannot be entirely dismissed without further archaeological evidence. The presence of only a single dirham from this period, contrasted with the numerous ninth and tenth-century dirhams discovered, including the Máramaros "Huszt" hoard in the Carpathian Basin,[436] supports the hypothesis that this dirham accompanied the Hungarian conquerors.

The implications of this finding extend beyond numismatics, offering insights into the historical context of currency circulation in the Carpathian Basin during this era. Future excavations and discoveries are anticipated to yield additional data, enhancing our understanding of the timeline and dynamics of currency flows into this region. Continued scholarly research and archaeological endeavors are essential to elucidate the complexities surrounding early Islamic coinage and its broader historical impact on the Carpathian Basin.

Among the dirhams discovered in the Carpathian Basin, the one found in grave 3 at Tiszacsoma (Zakarpattia Oblast, Ukraine) offers a compelling case study. [437] This article aims to re-examine the Tiszacsoma dirham through meticulous analysis, new photographic evidence, and precise measurements, thereby contributing to the broader discourse on Kufic coins and their archaeological and historical context within the Carpathian Basin.

The prevailing scholarly conjecture posits that the uninterrupted circulation of dirhams in the Carpathian basin experienced a disruption during the tenure of Nāsr son's son, al-amīr Nūh Ibn Nāsr (331-343 AH/943-954 AD), resuming only during the reign of his grandson, al-amīr Manṣūr Ibn Nūh (350-365 AH/961-976 AD).[438] This postulation stems primarily from the examination of a dirham discovered in grave 3 at Tiszacsoma.[439]

Despite the efforts of Hungarian archaeologists László Kovács and Révész László to read the dirham,[440] a meticulous re-examination of the Tiszacsoma dirham raises doubts about this hypothesis.[441] The coin's

[434] Zimonyi 1990: 20-21. Ibn RustÁ, *al-ÞAÝlÁq al-NafÐsÁ,* 142- 143.
[435] Jankowiak 2021: 108.
[436] Fomin & Kovács, 1987. Kovács 1997, 234–244. Kovács 2005, 35-96. Al Halabi 2022, 444-460.
Al Halabi 2022, 27-41.
[437] Révész 2014: 74.
[438] Kovács 2011: 84.
[439] Révész 2014: 74.
[440] Kovács 2010: 81-88.
[441] Тюрк, Аль Халабі, Прохненко, & Жиленко 2023: 174.

degraded condition complicates definitive attribution to a specific Samanid Amīr, thereby challenging the previously accepted narrative.[442]

Upon scrutinizing the dirham, it becomes evident that its provenance cannot be ascertained with absolute certainty. The degradation of the coin precludes the possibility of forming a comprehensive hypothesis based solely on this single coin. Notably, the dirham lacks the engraving of al-amīr Manṣūr Ibn Nūh, suggesting potential association with another Samanid Amīr. This observation significantly impacts our understanding of the dirham's historical context.

During my examination of this coin in 2024, we captured new photographs and obtained precise measurements of its weight and diameter to provide a more accurate understanding of the coin's characteristics and potential origins. The acquisition of such precise data is crucial for making informed judgments about the dirham's place within the broader context of Samanid coinage in the Carpathian Basin.[443]

The obverse of the Tiszacsoma dirham raises further questions, particularly due to the conspicuous omission of the mint's designation. The striking date, potentially corresponding to the reign of Nāsr Ibn Aḥmad (301-331 AH/914-943 AD): *914-943 AD tpq*,[444] adds complexity to the analysis. The absence of mint attribution and the narrow chronological window complicate efforts to precisely identify the coin's origins.

Examining the reverse face of the dirham reveals further ambiguities. The inscription of the Abbasid Caliph's name, typically positioned in the third line from the central legend, remains indistinct. Only the fragment "By God" (بالله) is discernible, adding to the puzzle. Additionally, the fourth line of the central legend, which usually contains the name of the Samanid Amīr, is enigmatic, with only probably the final Arabic letter "D" perceptible. This partial inscription introduces significant ambiguity into the analysis.

Dirhams issued by al-Amīr Manṣūr Ibn Nūh exhibit stylistic, thematic, and calligraphic variances contingent upon the era of his reign.[445] This diversity is integral to consider in the analytical framework, as it may influence the attribution of this particular dirham.[446] The intricate details of these variances highlight the challenges faced by numismatists in accurately identifying and attributing Kufic coins.

As a practitioner in Islamic numismatics, the commitment to precision in analysis is paramount. The complexities surrounding the Tiszacsoma dirham underscore the necessity for a cautious and thorough approach. While the current condition of the dirham precludes definitive attribution, its potential dating

[442] Brackelmann 1949: 165.
[443] Тюрк, Аль Халабі, Прохненко, & Жиленко 2023: 174.
[444] Kamoliddin 2011: 210. Frye 1975: 57.
[445] al-Jardīzī, *Zaīn al-ʾAkhbār*, 223- 224.
[446] al-Nrshkhī, *Tārīk Bukhāraa*, 141.

to the reign of the Samanid Amīr Nasr ibn Ahmad invites further investigation and scholarly discourse.[447]

In Summary, the re-examination of the dirham found in grave 3 at Tiszacsoma provides significant insights into the circulation of ninth- and tenth-century Kufic coins in the Carpathian Basin. Through meticulous analysis, this study challenges previously accepted hypotheses about the continuous flow of Islamic dirhams in the region. This conclusion posits that the circulation of dirhams in the Carpathian Basin likely experienced an interruption after 301-331 AH/914-943 AD, consistent with the timeframe of al-amīr Nāsr Ibn Aḥmad. the findings emphasize the need for continued archaeological excavations and new discoveries, which hold the promise of yielding further insights into the multifaceted dynamics of Islamic coinage in the Carpathian Basin.

Furthermore, it's a widespread phenomenon that the peak in the quantity of Muslim hoard finds in Eastern-Central, Northern, and Eastern Europe in the 950 AD did not cease a decade later but decreased to less than half of its peak. Generally, two reasons are identified for this process: Firstly, the campaigns of Sviatoslav, the Grand Prince of Kiev, which followed his attacks on the Vyatichs and the Volga Bulgars in the mid 960 AD, pushing deep into the Caucasus against the Khazars, potentially leading to the collapse of the Khazar empire and thus the trade relations with the Arab world.[448]

Thus, the scarcity of good silver coins began to be felt. From the third quarter of the 10th century, this gap was increasingly filled by Western European deniers, but it was not until after the period around the year 1000 AD, that deniers could replace dirhams, which resulted in an increase in the proportion of fragmented silver, such as jewelry and coin fragments, at least in Southern Scandinavia and the northern part of Eastern Europe.[449]

The Carpathian Basin seems to have been excluded from this development trend, as there was a scarcity of fragmented silver finds, and the necessary precision scales and weights for measuring silver have not yet been found in graves, nor could Western deniers naturally replace Muslim dirhams in the hoard finds, as evidenced by the unique hoard trove of dirhams from Máramaros "Huszt" hoard, followed only by a series of extremely rare hoards consisting mostly of Hungarian deniers from the 11th century, belonging to the first Hungarian king.[450]

[447] Тюрк, Аль Халабі, Прохненко, & Жиленко 2023: 174.
[448] Dunlop 1990: 122
[449] Kovács 2011: 86.
[450] Kovács 1997: 37-51.

The Volga Bulgar emerged as a central hub of East European trade, and they started minting their own coins in their cities, Bulgar and Suvar as we discussed before.[451] The main route from Khwarezm through the Kazakh steppe passed through Bulgar, their capital, before turning towards Kiev, Krakow, and branching off towards the Carpathian mountain passes.[452]

The 10th-century Hungarian-Volga Bulgar relations are convincingly evidenced by the Volga Bulgar dirhams found in graves finds and in the Máramaros "Huszt" hoard: the only one dirham in the Máramaros "Huszt" hoard minted in Bulgar, the dirham is one of the earliest coins of the Volga Bulgars and the only dirhams from bulgar could found in the Carpathian basin. the thirty types of imitation dirhams found in the hoard. Each type has its own unique characteristics and variations in the legends and minting quality. The seven dirhams of al-Amīr Yaltawar in the hoard. The beginning of the use of these dies is dated no later than 323 AH / 935 AD of the Máramaros "Huszt" hoard. This die recorded as the earliest dies of al-Amīr Yaltawar.[453]

The assumption that the Volga Bulgars played a prominent role in the early Rus trade is becoming more and more prevalent in Russian literature.[454] it's clear that the Bulgars were significant trading partners; their position as middlemen is well known to us because the Volga Bulgars invaded the wooded area surrounding Perm, giving the locals access to a variety of items (such as metal tools, Chinese silks, weapons, and other goods) in return for furs, Slaves, and other valuable forest products.[455] However, given that no specific written reports remain on this subject, this assumption created many questions, To what exact extent do the Volga Bulgars regularly engage in business endeavors? how much of a role they actually played? the conventional view was they were limited to trading locally. but the wide variety of imitations of dirhams of Volga Bulgar found in Máramaros' "Huszt" hoard, and in the graves are not compatible with the conventional view, these imitations provide valuable insights into the economic connections between the Volga Bulgar and the Carpathian Basin. The hoard contains many dirhams with some of the oldest imitation dies of the Volga Bulgar, further highlighting the significance of these economic connections. This evidence suggests that the Bulgars may have played a pivotal role in the broader steppe-Viking-Muslim trading network, thus challenging previous assumptions regarding the extent of their commercial influence.

[451] Jankowiak 2023: 331.
[452] Noonan 1997: 142. Noonan 1987: 221
[453] Rispling 1983: 146-148.
[454] Казанцев 2006: 3. Подражания куфическим дирхемам.
[455] Polgár 2000: 193- 206.

Regarding to The most plausible hypothesis by László Kovács is that Muslim traders, crossing the Carpathian passes, sought to quickly conduct their business, possibly among related peoples who otherwise could not have been Muslims, He suggested that Eastern traders embarked on their journey to Europe with significant amounts of dirhams, likely not just a few hundred dirhams in their pouches. Moreover, as he mentioned the concentration of grave findings in the Carpathian Basin, especially in the Upper Tisza region, suggests that these traders did not necessarily have to return immediately after conducting their business. Instead, their purchases in the area could have been seen as a detour, and they might have continued their journey towards Krakow in the northwest or Prague in the west.[456]

This hypothesis is supported by historical accounts such as that of Ibrāhīm ibn Ya'qūb, who, around 961/962 AD or 965/966 AD, documented a significant event in Prague. as we mentioned previously, during this event, Hungarian Muslim, Jewish, and Turkic (Hungarian) traders congregated, bringing with them various unspecified goods and notably possessing a substantial number of contested al-mithqā (commercial weight measures). [457]

Historical sources preceding the specified date lack direct evidence of trade between Magyar merchants and Muslims, thus prompting inquiries into the predominant actors in steppe trade, namely Muslim or Volga Bulgar merchants. The numismatic evidence within the Carpathian Basin suggests the involvement of Volga Bulgar merchants in transregional commerce. Renowned for their receptivity to external trade, the Volga Bulgars exhibited a greater propensity for commercial engagement than other steppe populations in Eastern Europe. [458] Their established trade networks and connections with diverse regions and traders suggest a plausible role in facilitating the circulation and dissemination of coins throughout the Carpathian Basin.

An alternative hypothesis posits that these coins may have reached the region through intermediary entities such as the Rus and the Khazars, whose territories witnessed widespread coin circulation. Historical accounts attest to the Russ extensive trade networks, stretching from Central Europe to Bulgar and KhawÁrizm in the east. The Russ merchants significantly influenced trade networks, especially through their interactions with the Bulgars and the

[456] Kovács 2011: 82-83.
[457] al-BakrÐ, *al-MasÁlik wa'l-mamÁlik, I* / 253.
[458] Kazakov 2023: 302.

Khazars. Their presence in markets from Prague to Bulgar highlighted their integral role in the exchange of goods and slaves, furthering economic ties across vast distances.

Moreover, the strategic geographic location of the Khazar realm conferred significant significance to its role in trade, with revenue derived from border taxes, customs levies, and tribute payments imposed on subordinate peoples. [459] Notably, al-Amīr Yaltawar of the Volga Bulgars, whose coins are represented in the Máramaros "Huszt" hoard, initially served as a vassal of the Khazars. [460] However, it is essential to recognize that such dynamics primarily pertain to the steppe and forest-steppe regions.

In the context of Samanid territory, rigorous numismatic inquiries into coin hoards and individual discoveries have been meticulously undertaken by eminent scholars including Davidovich[461], Bykov, Dovutov,[462] and Sharifzoda.[463] Their scholarly endeavors have yielded invaluable insights into the monetary flow and economic intricacies prevailing during the Samanid era. These investigations have extensively analyzed the geographic dispersion of Samanid coins, delineating the minting locales, represented emirs, and prevalence of various coin denominations.

Furthermore, a noteworthy scholarly contribution to this domain is Jalolzoda's recent comprehensive study conducted in 2018. Jalolzoda's meticulous examination has significantly augmented the existing scholarly discourse by offering in-depth analyses of coin hoards and individual findings across diverse regions within the Samanid territorial domain. His research endeavors have illuminated nuanced regional patterns in coin circulation, highlighting the predominance of specific mints such as Bukhara, juxtaposed with the notable absence of certain emirs' coinage in particular locales. Moreover, Jalolzoda's scholarship has elucidated the economic ramifications of Samanid coinage, unveiling the pivotal role played by dirhams and felses in facilitating trade and commercial activities across the southwestern, central, and northwestern territories of contemporary Tajikistan. It is pertinent to note that despite the extensive presence of Volga Bulgar coins in various regions, they are notably absent within the confines of the Samanid territorial expanse.[464]

[459] Noonan 1980: 150-151.
[460] Ibn Fadlān 2005: 80-98.
[461] Давидович 1970: 158.
[462] Довутов 2006: 106. Довутов 1985: 260.
[463] Шарифзода 2002: 44.
[464] Jalolzoda 2018: 5-22.

Future research endeavors and archaeological excavations hold the promise of yielding further insights into the multifaceted dynamics of the Carpathian Basin during this epochal period.

In Summary, The Máramaros "Huszt" hoard stands as a crucial piece of the puzzle in understanding the archaeology, history, economic, and cultural landscape of the Carpathian Basin during the Hungarian conquest period. Through a detailed analysis of grave finds, dirham chronology, and the broader trade networks, this chapter sheds light on the multifaceted interactions between local populations and external traders. The high concentration of dirham-containing graves, particularly in the Upper Tisza region, underscores the area's significance as a hub of trade and cultural exchange. The examination of the Karos-Eperjesszög cemeteries, with their rich burial goods and diverse coinage, highlights the interconnectedness of the region with both Eastern and Western influences. By integrating numismatic evidence and archaeological findings, we gain a deeper understanding of the temporal and economic contexts that shaped the Carpathian Basin. The complexities of interpreting these finds, particularly the role of Volga Bulgar merchants and the significance of dirham distributions, emphasize the need for a nuanced approach to historical and archaeological research. As new discoveries continue to emerge, they will undoubtedly refine our understanding of this pivotal period in Eastern European history, providing further clarity on the intricate web of trade, politics, and cultural interactions that defined the region.

VII.III. Closing

In this chapter of ninth-tenth century Muslim dirhams in Hungarian grave finds and the archaeological interpretation of the Máramaros "Huszt" hoard, we have delved into a rich tapestry of historical, cultural, and economic dynamics that have shaped the Carpathian Basin during this pivotal period. The meticulous analysis of these dirhams, their mints, dates, and imitations, has provided valuable insights into the trade networks, cultural interactions, and political influences that characterized the region in the ninth and tenth centuries.

The concentration of Islamic dirhams in the Carpathian Basin, particularly in the Upper Tisza region, underscores the pivotal significance of this geographical area and raises compelling archaeological and historical questions that warrant further investigation and discussion. The presence of Muslim coins in Hungarian grave sites, particularly among armed individuals, suggests a connection to war booty and trade, shedding light on the social status and economic activities of the individuals buried with these coins.

The discovery of the Jászfelsőszentgyörgy dirham as the earliest Muslim silver coin from the Hungarian conquest period challenges previous beliefs and offers new perspectives on currency circulation in the Carpathian Basin. The examination of the flow of dirhams, the decline in their quantity, and the emergence of Western European deniers illuminate the evolving economic landscape of the region, highlighting the interconnectedness of trade routes and cultural exchanges. The hypothesis put forth by László Kovács regarding Muslim traders crossing the Carpathian passes and engaging in commerce in the region offers a compelling narrative that prompts further inquiry into the role of Volga Bulgar merchants in the trade networks of Eastern Europe. The numismatic evidence, along with historical context, suggests the potential involvement of the Volga Bulgars in facilitating the circulation of coins in the Carpathian Basin, emphasizing their openness to trade and connections with various regions and traders. As we continue to unravel the complex dynamics of the Carpathian Basin during the ninth and tenth centuries, further research and excavations in the region hold the promise of uncovering additional insights into the intricate economic, social, and political interactions that shaped this historical period. The exploration of Islamic dirhams in Hungarian grave finds and the Máramaros "Huszt" hoard serves as a testament to the enduring significance of numismatics in illuminating the past and enriching our understanding of the region's history.

VIII. Archeometry examination of the Máramaros “Huszt” hoard

This chapter focuses on the archaeometry examination of the Máramaros "Huszt" Hoard, providing valuable insights into the composition and characteristics of the hoard. This chapter delves into the instrumentation used for the examination, including elemental analysis through X-ray fluorescence, and presents the findings regarding the percentage of silver in the hoard.

In the field of archaeology, elemental analysis is a crucial tool for examining coins and other metal objects. By analyzing the elemental makeup of a coin, researchers can infer information about the utilized ore, the geographical distribution of ancient mints, and the minting periods. [465] Variations in the concentrations of different elements over time in the coins can also provide insights into economic history. [466] Additionally, since medieval Islamic minting facilities were often located near mines, locating the precious metal mines can help pinpoint the location of coin production. [467]

[465] Ponting, Evans, & Pashley, 2003: 591–597.
[466] Brown & Tindall, 1979: 27–46.
[467] Anita, Károly, Róbert, & János, 2013: 1. al-Kofahi & al-Tarawneh, 2000: 39–47.

One of the primary methods used for elemental analysis is X-ray fluorescence examination.[468] This non-destructive technique involves irradiating the surface of a sample with an X-ray beam. The energy from the beam causes photoelectrons to be emitted, and when outer electrons fill the void, the energy difference is released as X-ray fluorescence radiation.[469]

The excitation energies of the elements correspond to their emission lines, and the intensity of the emission indicates their concentration on the sample surface. [470]

X-ray fluorescence analysis offers several advantages in the study of historic coins. It is a rapid and non-destructive method that does not require any sample preparation. It can provide detailed information about the composition of both metallic and non-metallic surfaces. [471]

While the technique is unaffected by the chemical states of the elements, it does not provide information on the chemical bonds or oxidation states of the elements being studied. With the appropriate excitation source, all components of the sample can be analyzed simultaneously during a measurement, allowing for the study of both solid and liquid substances. [472]

In the case of the Máramaros "Huszt" Hoard, the use of X-ray fluorescence analysis as part of the archaeometry examination provides valuable insights into the composition of the coins. By determining the percentage of silver in the hoard, researchers can gain a better understanding of its economic value and the trade networks associated with the coins.

This analysis contributes to our knowledge of the economic connections, and trade networks of the medieval period, shedding light on the lives and interactions of the people who used and accumulated these coins.

VIII. I. Instrumentation

Micro-XRF Spectrometers M4 Tornado:

The Micro-XRF Spectrometers M4 Tornado is the preferred tool for sample characterization using small-spot micro X-ray fluorescence. Its measurements provide information about the composition and element distribution, even below the surface. Bruker's micro-XRF spectrometer is optimized for high-speed analyses of points, lines, and 2D area scans (element mapping) of various sample types, including organic, inorganic, and liquid samples. The

[468] Tsuji, Nakano, Hayashi, Hayashi, & Chul-Un, 2008: 4421.
[469] Julio, et al., 2015: 2.
[470] Janssens, és mtsai., 2000: 73.
[471] Claudio, et al., 2016: 280-284. Ager, és mtsai., 2016: 150.
[472] Ilisch, Lorenz, Stern, & Steuer, 2003: 12-13.

primary X-ray excitation employs a polycapillary lens, offering small spot sizes and high X-ray intensity.[473]

Fig 9: The Micro-XRF Spectrometers M4 Tornado (Photo: Al Halabi Suleman 2021)

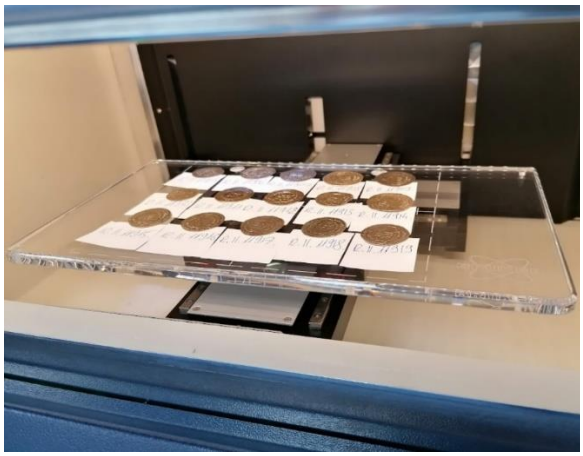


Fig 10: Analyzing dirhams form the Máramaros "Huszt" Hoard by Micro-XRF. (Photo: Al Halabi Suleman 2022)

Digital Microscope VHX-6000 Series:

Digital microscopes combine observation, image capture, and profile measurement capabilities while providing an on-screen interface for viewing objects. The Keyence VHX-6000 Digital Microscope is a state-of-the-art microscope integrated with advanced technology, including an advanced microscope that provides a large depth-of-field and multi-angle observations.

The VHX 6000 combines lighting techniques from a metallurgical microscope and stereoscope to achieve optimal lighting conditions.

Real-time 2D and 3D measurements can be performed with the advanced measurement capabilities of the VHX. With edge detection, users of any experience level can easily perform accurate measurements. All measurements can be taken directly on the screen, saved with the image, and an automatic report can be generated with all the image and measurement data. For the photographs of the silver dirham coins, we utilized the Z20×50 lens.

[473] Merkel 2016: 79-82.

Fig 11: The Digital Microscope VHX-6000 (Photo: Al Halabi Suleman 2021)

These advanced instruments, the MICRO-XRF SPECTROMETERS M4 TORNADO and the Digital Microscope VHX-6000 Series, were employed for the examination of the Máramaros "Huszt" Hoard. The combination of micro X-ray fluorescence and digital microscopy techniques allowed for detailed analysis and documentation of the hoard's composition, element distribution, and visual characteristics.

VIII. II. Archaeometry examination of the Máramaros "Huszt" hoard

In 2021, a collaborative project on the archaeometry examination of the dirhams from the Máramaros "Huszt" Hoard was initiated by Pázmány Péter Catholic University, the National Museum of Hungary, and The Laboratory for Heritage Science MTA Atomki, Debrecen. This new study aims to present the latest findings from the archaeometry examination of the silver dirhams using X-ray fluorescence (XRF) analysis in the laboratory.

The X-ray fluorescence (XRF) technique was employed to analyze the silver dirhams from various perspectives. The analytical conditions for the XRF analysis included a Rh cathode, 50 kV voltage, 400 mA current, and the use of filters such as no filter or a combination of 100mm Al and 25 mm Ti. The beam size was set at 25 mm, and the detection system consisted of two XFlash® SDD detectors with a 30 mm2 area and a Be window.

During the measurement process, two areas were randomly selected on both the obverse and reverse sides of each coin. Five points were measured on each area, with a measurement time of 60 seconds per point. This resulted in a total of 20 points analyzed per coin.

To ensure the quality assurance and quality control of the measurement data, the system was calibrated, and the measurement results were validated using silver standard reference materials, specifically 133XAGA3, 133XAGA2, and 131XAGP1.

The X-ray fluorescence (XRF) analysis of the silver dirhams from the Máramaros "Huszt" Hoard provides valuable insights into their composition and characteristics. This examination contributes to our understanding of the hoard's historical and cultural significance, shedding light on the economic connections, and trade networks of the medieval period.

Fig 12: During the examination of the dirhams in the The Laboratory for Heritage Science MTA Atomki, Debrecen. (Photo: D. Boglárka 2022)

VII. IV. Closing

In closing, Chapter VII of this study focused on the archaeometry examination of the Máramaros "Huszt" Hoard. The examination utilized advanced instrumentation and techniques to gain valuable insights into the composition and characteristics of the hoard.

The instrumentation used for the examination included the MICRO-XRF SPECTROMETERS M4 TORNADO and the Digital Microscope VHX-6000 Series. These tools provided detailed

analysis and documentation of the hoard's composition, element distribution, and visual characteristics.

Through the archaeometry examination, the percentage of silver in the hoard was determined. the examination has provided valuable insights into the composition and silver content of the dirhams found within.

Furthermore, we have explored the variations in silver content within each mint, noting the specific dirhams with the highest and lowest percentages. This information provides a deeper understanding of the historical context and regional differences in coin production.

The presence of other elements such as copper, iron, gold, and various trace elements adds to the complexity and uniqueness of each dirham. These elements not only contribute to the physical properties of the coins but also offer insights into the metallurgical techniques employed during their production.

The comprehensive analysis of the hoard has not only shed light on the silver content of the dirhams but has also deepened our understanding of the historical and cultural significance of these coins. The meticulous examination of the hoard has allowed us to appreciate the craftsmanship, trade networks, and economic systems of the time.

Overall, the archaeological examination of the Máramaros "Huszt" hoard presented in this chapter contributes to the broader field of archaeology and our understanding of the medieval period. It highlights the importance of advanced instrumentation and archaeometric analysis in uncovering the hidden stories and valuable information contained within coins.

IX. The result of the archaeometry examination and The percentage of silver in the hoard

This chapter delves into the realm of the dirhams of the Máramaros "Huszt" Hoard, specifically focusing on the intricate details of the silver content found in dirhams minted across various mints and under different rulers. From al-Shash to Samarqand, Andarābah, Balkh, Maʿdan, Nishapur, and Volga Bulgar dirhams, this chapter meticulously examines the varying percentages of silver in these coins, offering a glimpse into the historical, economic, and cultural significance of each mint's coin production. By exploring the composition and metallurgical aspects of these dirhams, we uncover a wealth of information that illuminates the

craftsmanship and artistry behind these dirhams. The percentage of silver in the hoard of dirhams varies depending on the year and the mint.

al-Shash mint

Coin number	*Cu*	*Zn*	*A*	*Au*	*Pb*	*Bi*	*Ag Ka/ Ag La*
1. R.II.11855	20.8	0.052	77.1	0.830	0.450	0.108	2.63
2. R.II.11861	1.24	0.048	97.7	0.077	0.310	0.329	3.32
3. R.II.11862	1.30	0.02	97.4	0.292	0.492	0.179	3.36
4. R.II.11857	2.23	0.008	96.6	0.280	0.460	0.211	3.11
5. R.II.11863	1.69	0.008	97.2	0.179	0.382	0.256	3.31
6. R.II.11864	1.65	0.022	97.3	0.110	0.308	0.334	3.39
7. R.II.11866	1.29	0.011	97.6	0.189	0.350	0.290	3.36
8. R.II.11868	1.27	0.006	97.6	0.122	0.294	0.446	3.28
9. R.II.11869	1.38	0.015	97.5	0.179	0.314	0.385	3.34
10. R.II.11870	1.24	0.024	97.6	0.144	0.282	0.438	3.28
11. R.II.11872	1.47	0.013	97.2	0.044	0.365	0.701	3.26
12. R.II.11874	1.29	0.031	97.5	0.023	0.166	0.717	3.28
13. R.II.11875	1.53	0.023	96.9	0.223	0.535	0.466	3.24
14. R.II.11876	1.57	0.011	97.2	0.021	0.329	0.662	3.30
15. R.II.11877	1.69	0.033	97.0		0.226	0.850	3.36
16. R.II.11879	1.47	0.021	97.4	0.012	0.238	0.589	3.29
17. R.II.11880	1.40	0.058	97.2	0.012	0.210	0.877	3.31
18. R.II.11873	1.34	0.029	97.4	0.080	0.396	0.465	3.29
19. R.II.11882	1.29	0.016	97.4	0.009	0.250	0.771	3.30
20. R.II.11885	1.22	0.015	97.4	0.011	0.189	0.967	3.24
21. R.II.11886	0.582	0.028	98.0	0.009	0.150	1.00	3.28
22. R.II.11887	1.40	0.010	97.4	0.192	0.388	0.367	3.27
23. R.II.11888	2.08	0.021	96.4	0.096	0.406	0.631	3.48
24. R.II.11892	2.09	0.015	96.3	0.118	0.520	0.774	3.29
25. R.II.11897	2.47	0.009	95.4	0.269	1.25	0.308	3.25
26. R.II.11899	2.16	0.014	96.0	0.091	0.575	0.861	3.25
27. R.II.11900	2.14	0.009	95.6	0.040	0.716	1.26	3.21
28. R.II.11942	2.42	0.033	95.9	0.346	0.825	0.265	3.41
29. R.II.11871	1.86	0.012	96.6	0.260	0.544	0.511	3.32
30. R.II.11926	1.83	0.030	96.7	0.131	0.427	0.592	3.24
31. R.II.11927	2.02	0.021	96.1	0.229	0.650	0.757	3.24
32. R.II.12183	1.83	0.008	96.5	0.194	0.750	0.568	3.20
33. R.II.11954	1.69	0.010	95.5	0.320	1.34	0.910	3.17
34. R.II.11955	2.30	0.017	95.2	0.341	1.04	0.913	3.22
35. R.II.11956	2.20	0.015	95.6	0.083	0.956	0.910	3.12

al-Shash mint

Coin number	*Cu*	*Zn*	*A*	*Au*	*Pb*	*Bi*	*Ag Ka/ Ag La*
36. R.II.11958	1.94	0.026	96.5	0.179	0.537	0.593	3.19
37. R.II.12222	1.77	0.015	96.4	0.481	0.851	0.316	3.23
38. R.II.11957	2.11	0.018	96.0	0.360	0.854	0.468	3.29
39. R.II.11962	2.27	0.018	96.0	0.072	0.941	0.586	3.19
40. R.II.11934	2.15	0.021	96.5	0.073	0.433	0.600	3.30
41. R.II.11969	2.02	0.010	95.9	0.127	1.22	0.559	3.22
42. R.II.11975	2.24	0.010	95.5	0.104	1.20	0.708	3.27
43. R.II.11985	2.56	0.024	95.4	0.254	0.946	0.639	3.22
44. R.II.11987	3.24	0.022	94.8	0.208	0.848	0.709	3.24
45. 1B/ 904-251	1.83	0.030	96.7	0.131	0.427	0.592	3.24
46. R.II.12015	2.78	0.043	95.3	0.087	0.710	0.849	3.18
47. R.II.11971	2.52	0.014	95.7	0.135	0.879	0.626	3.22
48. R.II.11979	2.62	0.014	95.4	0.255	0.883	0.633	3.21
49. R.II.11990	1.94	0.009	95.7	0.115	1.254	0.775	3.11
50. R.II.11991	2.15	0.016	95.7	0.110	1.170	0.621	3.23
51. R.II.11992	1.64	0.006	96.6	0.076	0.700	0.810	3.19
52. R.II.11994	3.12	0.009	95.0	0.131	0.851	0.675	3.39
53. R.II.11995	2.51	0.007	95.8	0.431	0.739	0.351	3.27
54. R.II.11996	2.73	0.013	95.4	0.374	0.825	0.412	3.40
55. R.II.11997	3.14	0.012	95.0	0.191	0.863	0.618	3.21
56. R.II.12000	2.46	0.007	95.6	0.185	0.904	0.600	3.16
57. R.II.12005	3.17	0.027	94.9	0.251	0.888	0.629	3.21
58. R.II.12018	2.73	0.019	95.5	0.261	0.645	0.534	3.20
59. R.II.12174	0.080	0.025	98.1	0.155	0.680	0.777	3.17
60. R.II.12004	2.42	0.020	95.7	0.052	0.719	0.951	3.22
61. R.II.12009	2.51	0.029	94.8	0.050	0.550	1.922	3.22
62. R.II.12010	2.00	0.042	95.5	0.009	0.607	1.659	3.39
63. R.II.12011	2.82	0.041	95.5	0.199	0.654	0.599	3.21
64. R.II.12012	2.72	0.043	96.0	0.294	0.530	0.261	3.38
65. R.II.12013	2.78	0.017	95.2	0.207	0.751	0.759	3.24
66. R.II.12014	2.23	0.012	95.3	0.149	1.007	1.081	3.19
67. R.II.12016	1.94	0.017	96.1	0.254	0.837	0.671	3.17
68. R.II.12017	3.04	0.019	94.8	0.270	1.034	0.583	3.31
69. R.II.12107	1.72	0.033	96.7	0.041	0.377	0.916	3.41
70. R.II.12027	2.50	0.012	95.7	0.080	0.620	0.908	3.23
71. R.II.12028	2.45	0.013	95.7	0.181	0.739	0.681	3.25
72. R.II.12029	2.56	0.041	95.9	0.053	0.655	0.594	3.16
73. R.II.12030	2.96	0.012	94.9	0.114	0.976	0.822	3.22

al-Shash mint

Coin number	*Cu*	*Zn*	*A*	*Au*	*Pb*	*Bi*	*Ag Ka/ Ag La*
74. R.II.12031	3.04	0.022	95.0	0.034	0.689	0.981	3.24
75. R.II.12032	3.10	0.042	94.4	0.097	0.998	1.154	3.28
76. R.II.12033	2.72	0.016	94.6	0.055	1.493	0.930	3.25
77. R.II.12034	2.89	0.022	94.5	0.127	1.160	1.065	3.18
78. R.II.12036	2.94	0.028	95.3	0.115	0.821	0.569	3.23
79. R.II.12044	2.73	0.025	94.8	0.048	0.847	1.342	3.30
80. R.II.12045	3.02	0.021	95.2	0.104	0.619	0.881	3.32
81. R.II.12046	3.21	0.041	95.0	0.133	0.912	0.549	3.23
82. R.II.12047	2.69	0.019	95.5	0.015	0.599	0.967	3.18
83. R.II.12048	2.85	0.023	95.5	0.081	0.836	0.544	3.15
84. R.II.12049	2.45	0.015	95.2	0.227	1.110	0.833	3.19
85. R.II.12050	2.83	0.015	95.4	0.100	0.789	0.745	3.19
86. R.II.12051	2.98	0.025	95.0	0.034	0.723	1.067	3.10
87. R.II.12052	2.08	0.026	95.2	0.319	1.364	0.797	3.16
88. R.II.12084	2.82	0.020	95.1	0.375	1.118	0.395	3.19
89. R.II.12105	2.62	0.016	94.7	0.037	0.752	1.716	3.16
90. R.II.12109	2.30	0.032	95.3	0.021	0.564	1.532	3.27
91. R.II.12128	2.36	0.049	95.7	0.027	0.491	1.135	3.17
92. R.II.12063	2.88	0.018	94.8	0.104	0.847	1.209	3.21
93. R.II.12021	2.97	0.014	94.9	0.018	0.467	1.410	3.18
94. R.II.12067	2.97	0.033	94.7	0.043	0.653	1.459	3.19
95. R.II.12068	2.70	0.032	95.0	0.068	0.807	1.238	3.17
96. R.II.12069	1.85	0.024	96.3	0.061	0.576	0.987	3.22
97. R.II.12070	2.70	0.028	95.4	0.013	0.447	1.263	3.23
98. R.II.12071	2.81	0.034	95.1	0.035	0.595	1.186	3.52
99. R.II.12072	2.75	0.031	95.0	0.059	0.699	1.228	3.26
100. R.II.12073	2.23	0.017	96.0	0.030	0.552	0.994	3.23
101. R.II.12074	3.02	0.038	94.9	0.109	0.682	1.108	3.33
102. R.II.12075	2.51	0.009	95.1	0.043	0.748	1.376	3.09
103. R.II.12076	1.95	0.050	96.1	0.064	0.491	1.122	3.19
104. R.II.12077	2.66	0.039	95.0	0.058	0.703	1.393	3.19
105. R.II.12078	2.43	0.009	95.6	0.079	0.612	1.035	3.19
106. R.II.12079	2.34	0.016	95.3	0.062	0.613	1.030	3.21
107. R.II.12080	3.18	0.020	94.5	0.043	0.729	1.287	3.17
108. R.II.12081	2.36	0.018	94.7	0.062	0.827	1.788	3.15
109. R.II.12082	2.97	0.024	94.9	0.045	0.692	1.194	3.16
110. R.II.12093	2.98	0.024	95.1	0.055	0.653	1.013	3.17
111. R.II.12103	2.54	0.019	95.3	0.032	0.558	1.369	3.15

al-Shash mint

Coin number	*Cu*	*Zn*	*A*	*Au*	*Pb*	*Bi*	*Ag Ka/ Ag La*
112. R.II. 12112	2.51	0.050	95.3	0.041	0.655	1.296	3.13
113. R.II.12114	2.70	0.045	95.5	0.039	0.512	0.976	3.22
114. R.II.11963	3.04	0.012	94.7	0.067	0.858	1.20	3.18
115. R.II.12097	2.65	0.021	94.7	0.020	0.813	1.603	3.19
116. R.II.12098	1.98	0.017	95.0	0.017	0.676	2.106	3.16
117. R.II.12102	2.59	0.013	95.2	0.051	0.748	1.225	3.18

In the al-Shash mint, the dirhams struck by the Samanid Amīr IsmÁÝĐl ibn AÎmad and Caliph al-MuÝtaÃid Billah have different levels of silver content.

Here is a breakdown of the silver percentages for the dirhams:

- Dirham N.1. R. II. 11855 minted in 287 AH/900 AD has the lowest silver content at 77.1% Ag. - Two dirhams struck in the same year have N.2. R. II. 11861: 97.4% Ag and N.3. R. II. 11862: 97.7% Ag. - In the following year, dirham N.4. R. II. 11857: has 96.6% Ag and dirham N.5. R. II. 11863 has 97.2% Ag. - The only dirham minted in 290 AH/902-903 AD has N.6. R. II. 11864: 97.3% Ag. - Dirhams of Amīr IsmÁÝĐl ibn AÎmad Caliph al-MuktaffĐ Billah minted in 292 AH/904 AD have N.7. R. II. 11866: 97.3% Ag.

- Two dirhams of the year 293 AH/905-906 AD have N.8. R. II. 11868: 97.6% Ag and N.9. R. II. 11869: 97.5% Ag. - The dirham of the following year, 294 AH/906-907 AD, has N.10. R. II. 11870: 97.6% Ag.

During the seven years of the reign of al-Amīr AÎmad Ibn IsmÁÝĐl, the dirhams struck in al-Shash have a high level of silver. Here are the dirhams:

- Dirhams from the year 295 AH/907 AD have N.11. R. II. 11872: 97.2% Ag and N.12. R. II. 11874: 97.5% Ag. - In the year 297 AH/909-910 AD, two dirhams have N.13. R. II. 11875: 96.9% Ag and N.14. R. II. 11876: 97.2% Ag. - In the three dirhams of the next year, 298 AH/910-911 AD, have N.15. R. II. 11877: 97.0% Ag, N.16. R. II. 11879: 97.4% Ag, and N.17. R. II. 11880: 97.2% Ag.

- Two dirhams minted in 299 AH/911-912 AD, N.18 R. II. 11873. N.19. R. II. 11882, have 97.4% Ag. - Two dirhams minted in 300 AH/ 912-913 AD N.20. R. II. 11885: 97.4 % Ag. N.21. R. II. 11886: 98.0 % Ag.In the last year of al-Amīr AÎmad Ibn IsmÁÝĐl, 301 AH/913-914 AD, two dirhams from the hoard have N.22: 97.4% Ag and N.23: 96.4% Ag.

NaÒr Ibn AÎmad, who was the most prolific Amīr in striking dirhams in the hoard at al-Shash mint with the name of Abbasid caliph al-Muqtadir Billah, the dirhams in his region contain a varying percentage of silver. The highest is 98.1% Ag, and the lowest is 94.5% Ag.

Here are the dirhams from NaÒr Ibn AÎmad's reign:

- One dirham minted in year 301 AH/913-914 AD, N. 24. R. II. 11892 has 96.3% Ag.

- Dirhams from the year 304 AH/916-917 AD have N.25. R. II. 11897: 96.5% Ag, N.26. R. II. 11899: 96.0% Ag, and N.27. R. II. 11900: 95.6% Ag.

- In the year 307 AH/919 AD, dirham N.28. R. II. 11942 has 95.9% Ag.

- The four dirhams struck in 308 AH/920-921 AD have N.29. R. II. 11871: 96.6% Ag, N.30. R. II. 11926: 96.1% Ag, N.31. R. II. 11927: 96.1 % Ag, and N.32. R. II. 12183: 96.5% Ag.

- The five dirhams minted in 311 AH/923 AD have N.33. R. II. 11954: 95.5% Ag, N.34. R. II. 11955: 95.2% Ag, N.35. R. II. 11956: 95.6% Ag, N.36. R. II. 11958: 96.5% Ag, and N.37. R. II. 12222: 96.4% Ag.

- In the next year, 312 AH/924-925 AD, three dirhams N.38. R. II. 11957 and N. 39. R. II. 11962 have 96.0% Ag. N.40. R. II. 11934: 96.5% Ag

- Dirham of the year 313 AH/925-926 AD, N.41. R.II.11969: 95.9% Ag.

- Dirham of the year 314 AH/926-927 AD have N.42. R. II. 11975: 95.5% Ag.

- Dirhams of the year 315 AH/927-928 AD have N.43. R. II. 11985: 95.4% Ag, N.44. R. II. 11985: 94.8% Ag, N. 45. 1B/ 904-251: 96.7: 95.4% Ag, and N. 46. R. II. 12015: 95.3% Ag.

- In the year 316 AH/928-929 AD, thirteen dirhams have varying silver percentages: N.47. R.II.11971: 95.7% Ag, N.48. R.II.11979: 95.4% Ag, N.49. R.II.11990: 95.7% Ag, N.50. R.II.11991: 95.7% Ag, N.51. R.II.11992: 96.6% Ag, N.52. R.II.11994: 95.0% Ag, N.53. R.II.11995: 95.8% Ag, N.54. R.II.11996: 95.4% Ag, N.55. R.II.11997: 95.0% Ag, N.56. R.II.12000: 95.6% Ag, N. 57. R.II.12005: 94.9% Ag, and N. 58. R.II.12018: 95.5 Ag. Dirham N.59. R.II.12174 has the highest silver content in al-Shash mint at 98.1% Ag.

- In the year 317 AH/929-930 AD, ten dirhams have varying silver percentages: N. 60. R.II.12004: 95.7% Ag, N. 61. R.II.12009: 94.8% Ag, N.62. R.II.12010, N. 63 R.II.12011: 95.5% Ag, N.64. R.II.12012: 96.0% Ag, N.65. R.II.12013: 95.2% Ag, N.66. R.II.12014: 95.3%

Ag, N.67. R.II.12016: 96.1% Ag, N.68. R.II.12017: 94.8% Ag, and N.69. R.II.12107: 96.7% Ag.

- In the following year, 318 AH/930-931 AD, eight dirhams have more than 94.4% of silver: N.70. R.II.1202, N.71. R.II.120287: 95.7% Ag, N.72. R.II.12029: 95.9% Ag, N.73. R.II.12030: 94.9% Ag, N.74. R.II.12031: 95.0% Ag, N. 75. R.II.12032: 94.4% Ag, N.76. R.II.12033: 94.6% Ag, N.77. R.II.12034: 94.5% Ag.

- After one year, in 319 AH/931-932 AD, fourteen dirhams were struck with varying silver percentages: N.78. R.II.12036: 95.3% Ag, N.79. R.II.12044: 94.8% Ag, N.80. R.II.12045: 95.2% Ag, N.81. R.II.12046: 95.0% Ag, N.82. R.II.12047: 95.5% Ag, N.83. R.II.12048: 95.5% Ag, N.84. R.II.12049: 95.2% Ag, N.85. R.II.12050: 95.4% Ag, N.86. R.II.12051: 95.0% Ag, N.87. R.II.12052: 95.2% Ag, N.98. R.II.12084: 95.1% Ag, N.89. R.II.12105: 94.7% Ag, N.90. R.II.12109: 95.3% Ag, N.91. R.II.12128: 95.7% Ag,

- The only dirham minted in the year 320 AH/932 AD, N.92. R.II.12063 has a silver content of 94.8% Ag.

-In the following year, 321 AH/933 AD, twenty-one dirhams were struck with the name of Amīr NaÒr Ibn AÎmad and Abbasid caliph al-QÁhir Billah in al-Shash mint, except for three dirhams in the year 322 AH/933-934 AD. Here are the silver percentages for the dirhams minted in 321 AH/933 AD: N.93. R.II.12021: 94.9% Ag, N.94. R.II.12067: 94.7% Ag, N.95. R.II.12068: 95.0% Ag, N.96. R.II.12069: 96.3% Ag, N.97. R.II.12070: 95.4% Ag, N.98. R.II.12071: 95.1% Ag, N.99. R.II.12072: 95.0% Ag, N.100. R.II.12073: 96.0% Ag, N.101. R.II.12074: 94.9% Ag, N.102. R.II.12075: 95.1% Ag, N.103. R.II.12076: 96.1% Ag, N.104. R.II.12077: 95.0% Ag, N.105. R.II.12078: 95.6% Ag, N.106. R.II.12079: 95.3% Ag, N.107. R.II.12080: 94.5% Ag, N.108. R.II.12081: 94.7% Ag, N.109. R.II.12082: 94.9% Ag, N.110. R.II.12093: 95.1% Ag, N.111. R.II.12103: 95.3% Ag, N.112. R.II. 12112: 95.3% Ag, N.113. R.II. 12114: 95.5% Ag,

- For the dirhams minted in the year 322 AH/933- 934 AD, the silver percentages are as follows: N.114. R.II.11963- N.115. R.II.12097: 94.7% Ag, N.116. R.II.12098: 95.0% Ag.

- There is only one dirham struck with the name of NaÒr Ibn AÎmad and Abbasid Caliph al-RÁdĐ Billah, and it has a silver content of N. 117. R.II.12102: 95.2%.

The dirhams minted in al-Shash during the reign of NaÒr Ibn AÎmad have a wide range of silver content, with some dirhams having a higher percentage of silver (up to 98.1% Ag) and others having a lower percentage (as low as 94.4% Ag).

It's important to note that the silver content of dirhams can vary due to factors such as the quality of the silver used, the minting process, and the wear and tear of the coins over time. The percentages mentioned here are based on the analysis of the dirhams found in the hoard at al-Shash mint.

All the dirhams minted in al-Shash have a percentage of copper between 1.83% and 3.17% Cu. The highest copper content is found in dirham N.56 with 3.17% Cu, and the lowest copper content is in dirham N.57 with 0.080% Cu. The exception is dirham number 1, which has a copper content of 20.8% Cu. The dirhams also contain a small percentage of iron, ranging from 0.022% to 0.450% Fe. Additionally, there is a small percentage of gold in the dirhams, ranging from 0.481% to 0.013% Au. The highest gold content is found in dirham number 1 with 0.830% Au. The dirhams of al-Shash mint also contain trace amounts of other elements such as Mn (Manganese), Ni (Nickel), Zn (Zinc), Hg (Mercury), Pb (Lead), and Bi (Bismuth).

The total weight of all the dirhams minted in al-Shash is 359.78 grams.

Samaqund mint							
Coin number	***Cu***	***Zn***	***A***	***Au***	***Pb***	***Bi***	***Ag Ka/ Ag La***
1. R.II.11858	1.2	0.014	97.7	0.158	0.445	0.243	3.14
2. R.II.11859	1.13	0.019	97.5	0.230	0.385	0.264	1.34
3. R.II.11860	1.45	0.015	97.1	0.515	0.535	0.077	3.43
4. II-B/1990-10	1.58	0.008	97.0	0.142	0.614	0.478	3.32
5. R.II.11924	1.92	0.022	96.7	0.039	0.499	0.638	3.32
6 .R.II.12108	1.86	0.013	96.4	0.121	0.701	0.704	3.24
7. R.II.11878	1.29	0.009	97.5	0.076	0.485	0.356	3.29
8. R.II.11883	1.58	0.011	97.1	0.048	0.525	0.485	3.36
9. R.II.11895	2.35	0.011	96.1	0.216	0.777	0.242	3.25
10. R.II.11898	1.65	0.022	96.5	0.095	0.431	1.06	3.31
11. R.II.11901	2.41	0.016	95.4	0.326	1.36	0.263	3.30
12. R.II.11902	2.22	0.009	95.9	0.314	1.08	0.272	3.30
13. R.II.12113	2.98	0.019	95.1	0.222	0.923	0.571	3.14
14. R.II.11906	1.66	0.009	96.6	0.255	0.862	0.325	3.34
15. R.II.11911	2.07	0.023	96.3	0.295	0.780	0.295	3.22
16. R.II.11912	2.25	0.019	95.5	0.304	1.13	0.527	3.25
17. R.II.11913	1.97	0.016	96.1	0.336	1.03	0.312	3.33
18. R.II.11937	2.38	0.011	95.3	0.461	1.35	0.376	3.25
19. R.II.11939	2.32	0.018	95.4	0.523	1.16	0.330	3.28
20. R.II.11940	2.40	0.016	96.1	0.501	0.665	0.091	3.26

21. R.II.11941	2.33	0.019	95.7	0.533	0.920	0.297	3.30
22. R.II.11894	0.127	0.009	98.2	0.080	1.13	0.218	3.24
23. R.II.11945	1.63	0.027	96.5	0.458	0.879	0.289	3.16
24. R.II.11946	2.49	0.025	95.3	0.539	0.960	0.418	3.20
25. R.II.11949	2.73	0.029	95.2	0.497	1.15	0.200	3.32
26. R.II.11950	2.62	0.015	95.5	0.337	0.897	0.404	3.15
27. R.II.12158	2.49	0.010	95.8	0.448	0.804	0.228	3.24
28. R.II.11893	1.31	0.012	97.0	0.188	0.87	0.401	3.26
29. R.II.11951	2.40	0.029	95.5	0.571	0.953	0.327	3.21
30. R.II.11952	2.59	0.019	95.7	0.507	0.893	0.138	3.16
31. R.II.11961	2.19	0.036	96.0	0.455	0.788	0.274	3.26
32. R.II.11944	3.10	0.039	94.8	0.342	1.01	0.479	3.25
33. R.II.11948	3.12	0.022	94.9	0.356	1.08	0.352	3.28
34. R.II.11965	2.41	0.011	96.0	0.233	0.853	0.334	3.21
35. R.II.11966	1.77	0.030	96.7	0.358	0.702	0.246	3.26
36. R.II.11967	2.38	0.014	96.0	0.214	0.901	0.356	3.15
37. R.II.11968	1.75	0.012	96.9	0.062	0.595	0.474	3.19
38. R.II.11947	2.59	0.053	95.3	0.228	0.993	0.580	3.32
39. R.II.11972	2.18	0.011	96.2	0.223	0.766	0.463	3.19
40. R.II.11984	2.30	0.046	95.6	0.314	0.989	0.545	3.26
41. R.II.11986	2.24	0.031	96.1	0.245	0.809	0.368	3.16
42. R.II.11989	2.65	0.021	95.3	0.294	0.985	0.507	3.38
43. R.II.11977	2.13	0.011	96.5	0.309	0.463	0.340	3.26
44. R.II.11978	2.24	0.033	96.3	0.152	0.629	0.490	3.22
45. R.II.11980	3.25	0.017	94.9	0.353	0.934	0.389	3.24
46. R.II.11993	2.36	0.009	95.9	0.339	0.651	0.548	3.29
47. R. II. 11981	1.86	0.013	96.4	0.121	0.701	0.704	3.24
48. R.II.11998	2.45	0.014	96.0	0.230	0.858	0.279	3.25
49. R.II.11999	2.91	0.011	94.7	0.320	1.354	0.533	3.18
50. R.II.12001	2.24	0.009	95.9	0.171	0.960	0.508	3.22
51. R.II.12002	2.31	0.014	95.9	0.238	0.795	0.535	3.20
52. R.II.12111	0.051	0.014	98.5	0.214	0.072	0.925	3.25
53. R.II.11953	2.03	0.020	96.3	0.132	0.834	0.529	3.16
54. R.II.11973	2.80	0.017	95.2	0.169	1.077	0.488	3.18
55. R.II.12006	3.21	0.026	94.4	0.445	1.218	0.479	3.23
56. R.II.12007	3.05	0.015	94.7	0.375	1.233	0.450	3.19
57. R.II.12008	2.71	0.022	95.3	0.368	0.888	0.553	3.24
58. R.II.11935	2.74	0.009	95.9	0.290	0.653	0.229	3.18
59. R.II.11936	1.96	0.012	96.1	0.347	0.933	0.432	3.21

60. R.II.12020	3.54	0.010	94.3	0.269	1.147	0.619	3.26
61. R.II.12023	1.42	0.019	96.8	0.548	0.638	0.335	3.28
62. R.II.12024	2.37	0.015	95.7	0.389	0.879	0.394	3.26
63. R.II.12025	3.08	0.045	94.8	0.314	1.075	0.347	3.23
64. R.II.11974	2.53	0.020	95.7	0.099	0.756	0.651	3.19
65. R.II.12037	2.57	0.019	95.2	0.504	1.159	0.420	3.20
66. R.II.12038	2.61	0.025	95.7	0.281	0.742	0.439	3.25
67. R.II.12040	2.95	0.043	95.0	0.268	1.032	0.490	3.16
68. R.II.12041	2.63	0.029	95.9	0.149	0.733	0.394	3.18
69. R.II.12043	2.58	0.040	95.1	0.279	1.150	0.589	3.17
70. R.II.12106	2.69	0.026	95.4	0.262	1.076	0.402	3.17
71. R.II.12053	2.87	0.093	95.0	0.092	0.732	0.779	3.32
72. R.II.12054	2.62	0.009	95.4	0.246	0.919	0.684	3.22
73. R.II.12056	2.88	0.077	94.9	0.193	0.884	0.832	3.19
74. R.II.12057	2.50	0.016	95.7	0.141	0.977	0.507	3.10
75. R.II.12058	2.59	0.029	95.0	0.164	1.119	0.753	3.13
76. R.II.12059	2.71	0.016	95.3	0.075	0.808	0.871	3.17
77. R.II.12060	2.76	0.028	95.6	0.140	0.630	0.582	3.17
78. R.II.12062	2.42	0.030	95.5	0.031	0.448	1.276	3.34
79. R.II.11964	2.82	0.013	95.5	0.123	0.790	0.630	3.16
80. R.II.12039	2.72	0.014	95.5	0.127	0.618	0.828	3.20
81. R.II.12061	2.68	0.014	95.5	0.152	0.949	0.555	3.23
82. R.II.12083	2.38	0.035	95.8	0.202	0.841	0.496	3.22
83. R.II.12085	2.33	0.038	95.6	0.197	0.945	0.676	3.37
84.R.II.12086	2.33	0.047	95.9	0.131	0.786	0.610	3.24
85. R.II.12087	2.78	0.041	95.1	0.073	0.746	1.077	3.17
86. R.II.12088	2.12	0.025	96.0	0.148	0.835	0.669	3.19
87. R.II.12089	1.82	0.029	96.5	0.093	0.697	0.620	3.19
88. R.II.12091	2.61	0.028	95.5	0.113	0.769	0.711	3.33
89. R.II.12092	2.45	0.023	95.6	0.262	0.791	0.604	3.27
90. R.II.12104	2.85	0.054	95.1	0.085	0.857	0.836	3.16
91. R.II.12099	2.17	0.044	96.0	0.147	0.676	0.602	3.20
92. R.II.12100	3.20	0.017	95.1	0.088	0.689	0.666	3.20
93. R.II.12101	2.66	0.043	95.3	0.116	0.871	0.821	3.23

The dirhams minted in Samarqand in the Máramaros "Huszt" hoard had a high percentage of silver, up to 94.3% Ag. These dirhams were struck during the rule of Samanid Amīr IsmÁÝÐl ibn AÎmad and Abbasid Caliph al-MuÝtaÃid Billah.

The earliest issue dirham in the hoard, N.1. R.II.11858: was minted in Samarqand by Amīr IsmÁÝÐl ibn AÎmad in the year 284 AH/897 AD and has a silver content of 97.7% Ag. In the following year, 286 AH/899 AD, dirham N.2. R.II.11859: has 97.5% Ag, and in the year 287 AH/900 AD, dirham N.3. R.II.11860: has 97.1% Ag. The only dirham with the name of Abbasid caliph al-MuktaffÐ Billah and IsmÁÝÐl ibn AÎmad minted in 292 AH/ 904AD, N.4. II-B/1990-10: has a silver content of 97.0% Ag.

After IsmÁÝÐl, his son al-Amīr AÎmad Ibn IsmÁÝÐl became al-Amīr and was the second-most prolific Amīr in striking dirhams in Samarqand. These dirhams were minted with the name of Abbasid caliph al-Muqtadir Billah. The first dirham of the year 298 AH/910-911 AD, N.5. R.II.11924: has a silver content of 96.7% Ag. In the following year, 299 AH/911-912 AD, dirham N.6.R.II.12108: has 96.4% Ag. The two dirhams of the year 300 AH/912-913 AD, N.7. R.II.11878 and N.8. R.II.11883, have silver contents of 97.5% and 97.1% Ag, respectively.

Under the third Samanid Amīr NaÒr Ibn AÎmad, Samarqand continued to issue dirhams in great numbers until the end of his reign. NaÒr was the most prolific Amīr in striking dirhams in Samarqand, with 74% of all the dirhams struck by him in Samarqand bearing the name of Abbasid Caliph al-Muqtadir Billah.

-Starting with dirham N.9. R.II.11895, minted in the year 303 AH/915-916 AD, the silver content is 96.1% Ag.

-In the following year, 304 AH/916-917 AD, dirham N.10. R.II.11898 has 96.5% Ag. The three dirhams of the year 305 AH/917 AD, N.11. R.II.11901, N.12. R.II.11902, and N.13. R.II.12113, have silver contents of 95.4%, 95.9%, 95.3%, and 95.1% Ag, respectively.

-In the year 307 AH/919-920 AD, three dirhams were struck in Samarqand, N.14. R.II.11906, N.15. R.II.11911, and N.16. R.II.11912, and N.17. R. II. 11913, with silver contents of 96.6%, 96.3%, 95.5%, and 96.1% Ag, respectively.

- The only dirham of the year 308 AH/920-921 AD, N.18. R.II.11913, has silver contents of 95.3% Ag.

- The dirhams of the year 309 AH/921-922 AD, N.19. R.II.11937, N.20. R.II.11939, and N.21. R.II.11940 , have silver contents of 95.4%, 96.1%, and 95.7% Ag, respectively.

- Five dirhams of the next year, 310 AH/922-923 AD, N.22. R. II. 11894, N.23. R. II. 11945, N.24. R. II. 11946, N.25. R. II. 11949, N.26. R. II. 11950, and N.27. R. II. 12158. have silver contents of 96.5%, 95.3%, 95.2%, 95.5%, 95.8% Ag, respectively.

- In the year 311 AH/923-924 AD, five dirhams, N.28. R. II. 11893, N.29. R. II. 11951, N.30. 30. R. II. 11952, and N.31. R. II. 11961, have silver contents of 97.0%, 95.5%, 95.7%, and 96.0% Ag, respectively.

- In the year 313 AH/925-926 AD, one of the largest numbers of dirhams were minted in Samarqand. Seven dirhams, N.32. R. II. 11944 , N.33. R. II. 11948 , N.34. R. II. 11965, N.35. R. II. 11966, N.36. R. II. 11967, N.37. R. II. 11968, and N.38. R. II. 11947, have silver contents of 94.8%, 94.9%, 96.0%, 96.7%, 96.0%, 96.9%, and 95.3% Ag, respectively.

- Four dirhams of the next year, 314 AH/926 AD, N.39. R.II.11972, N.40. R.II.11984, N.41. R.II.11986, and N.42. R.II.11989, have silver contents of 96.2%, 95.6%, 96.1%, and 95.3% Ag, respectively.

- In the following year, 315 AH/926-927 AD, four dirhams, N.43. R. II. 11977, N.44. R. II. 11978, N.45. R. II. 11980, and N.46. R. II. 11993, have silver contents of 96.5%, 96.3%, 94.9%, and 95.9%Ag, respectively.

- Six dirhams of the year 316 AH/928-929 AD, N.47. R. II. 11981, N.48. R. II. 11998, N.49. R. II. 11999, N.50. R. II. 12001, N.51. R. II. 12002, and N.52. R. II. 12111, have silver contents of 96.4%, 96.0%, 94.7%,95.9%, 95.9%, and 98.5% Ag, respectively.

- In the next year, 317 AH/929-930 AD, five dirhams, N.53. R. II. 11953, N.54. R. II. 11973, N.55. R. II. 12006, N.56. R. II. 12007, and N.57. R. II. 12008 , have silver contents of 96.3%, 95.2%, 94.4%,, 95.3%, and 95.9%Ag, respectively.

In the year 318 AH/930-931 AD, six dirhams were struck in Samarqand, N.58. R. II. 11935, N.59. R. II. 11936, N.60. R. II. 12020, N.61. R. II. 12023, N.62. R. II. 12024, and N.63. R. II. 12025. with silver contents of 95.9%, 96.1%, 94.3%, 96.8%,95.7% , and 94.8% Ag, respectively.

- In the year 319 AH/931-932 AD, seven dirhams, N.64. R. II. 11974, N.65. R. II. 12037, N.66. R.II.12038, N.67. R. II. 12040, N.68. R. II. 12041, N.69. R. II. 12043, and N.70. R. II. 12106, have silver contents of 95.7%, 95.2%, 95.7%, 95.0%, 95.9%,95.1%, and 95.4% Ag, respectively.

- In the following year 320 AH/932 AD, eight dirhams, N.71. R. II. 12053, N.72. R. II. 12054, N.73. R. II. 12056, N.74. R. II. 12057, N.75. R. II. 12058, N.76. R. II. 12059, N.77. R. II. 12060, and N.78. R. II. 12062, having silver contents of 95.0%, 95.4%, 94.9%, 95.7%, 95.0%, 95.3%, 95.6%, and 95.5% Ag, respectively.

- The most prolific year for dirham striking in Samarqand was, 321 AH/933 AD, twelve dirhams, N.79. R. II. 11964, N.80. R. II. 12039, N.81. R. II. 12061, N.82. R. II. 12083, N.83. R. II. 12085, N.84. R. II. 12086, N.85. R. II. 12087, N.86. R. II. 12088, N.87. R. II. 12089, N.88. R. II. 12091, N.89. R. II. 12092, and N.90. R. II. 12104, having silver contents of 95.5%, 95.5%, 95.5%, 95.8%, 95.6%, 95.9%, 95.1%, 96.0%, 96.5%, 95.5%, 95.6%, and 95.1% Ag, respectively.

- The three dirhams minted in the year 322 AH/933-934 AD, N.91. R. II. 12099, N.92. R. II. 12100 and N.93. R. II. 12101, have silver contents of 96.0%, 95.1%, and 95.3% Ag, respectively.

The dirhams of Samarqand have the same percentage of copper as the al-Shash mint, ranging from 1.02% to 3.06% Cu. The highest copper content is found in dirham N.61 with 3.08% Cu, and the lowest is in dirham N.1 with 1.02% Cu. The dirhams also have a percentage of iron ranging from 0.018% to 0.151% Fe. Additionally, the dirhams contain a small percentage of gold ranging from 0.048% to 0.523% Au, with the highest gold content found in dirham number 21 with 0.523% Au.

The total weight of all the dirhams minted in Samarqand is 249.79 grams.

AndarÁbah mint							
Coin number	***Cu***	***Zn***	***A***	***Au***	***Pb***	***Bi***	***Ag Ka/ Ag La***
1. R.II.11865	0.143	0.035	97.0		0.501	1.93	3.19
2. R.II.11889	0.071	0.029	97.0		1.21	1.41	3.31
3. R.II.11881	0.174	0.068	99.2		0.021	0.204	3.37
4. R.II.11890	0.112	0.048	99.3		0.044	0.306	3.44
5. R.II.11891	0.058	0.012	97.8	0.207	0.482	1.21	3.20
6. R.II.11896	0.088	0.034	99.3		0.045	0.298	3.35
7. R.II.11903	1.56	0.008	97.3	0.121	0.149	0.642	3.33
8. R.II.11904	0.095	0.022	98.5	0.023	0.147	0.902	3.28

9. R.II.11907	0.088	0.022	97.6	0.326	0.948	0.788	3.28
10. R.II.11908	0.081	0.029	98.7		0.556	0.437	3.25
11. R.II.11909	3.26	0.049	94.8	0.690	0.520	0.445	3.46
12. R.II.12115	0.069	0.020	97.0	0.203	0.569	1.965	3.14
13. R.II.11943	0.106	0.032	98.7		0.426	0.561	3.23
14. R.II.11925	0.073	0.015	97.7	0.170	0.195	1.60	3.25
15. R.II.11905	2.89	0.012	95.5	0.182	0.183	0.972	3.37
16. R.II.12110	0.049	0.021	98.2		0.447	1.082	3.21
17. R.II.12090	0.100	0.041	96.8	0.317	0.679	1.910	3.19
18. R.II.12110	0.049	0.021	98.2		0.447	1.082	3.21
19. R.II.12064	0.114	0.039	97.6	0.032	0.780	1.224	3.16
20. R.II.12065	0.050	0.024	91.6	0.000	0.324	7.84	3.15

The third most prolific mint was Andarābah, which had the highest percentage of silver among all the dirhams from the Máramaros "Huszt" hoard, ranging from 97.0% to 99.3% Ag. The high percentage of silver is due to the presence of two major silver-mining centers in Afghanistan, Jārīāba and Panjhir, located near Andarābah.

The dirham N.1. R. II. 11865, struck by Amīr Ismāʿīl Ibn Aḥmad in 291 AH/903 AD in the name of Caliph al-Muqtadir Billah, has a silver content of 97.0% Ag. The three dirhams N2. R. II. 11889, N.3. R. II. 11881, and N.4. R. II. 11890 issued by his son Aḥmad Ibn Ismāʿīl in the name of Abbasid Caliph al-Muqtadir Billah in 298-299 AH/910-911-912 AD have silver contents of 97.0%, 99.2%, and 99.3% Ag.

Most of the dirhams minted in Andarābah were struck by al-Amīr Naṣr Ibn Aḥmad in the name of Abbasid caliph al-Muqtadir. In 301 AH/913-914 AD, dirham N.5. R. II. 11891 has a silver content of 97.8% Ag. In 303 AH/915-916 AD, dirham N.6. R. II. 11896 has a silver content of 99.3% Ag. In the year 305 AH/917-918 AD, two dirhams were minted with silver contents of N.7. R. II.11903: 97.3% Ag, and N.8. R. II. 11904: 98.5%Ag. The largest number of dirhams minted in the year 306 AH/918-919 AD have silver contents of N.9. R. II. 11907: 97.6% Ag, N.10. R. II. 11908: 98.7% Ag, N.11. R. II. 11909: 94.8% Ag, and N.12. R. II. 12115: 97.0% Ag. In the year 307 AH/919-920 AD, one dirham was minted with silver contents of N.13. R. II. 11943: 98.7% Ag. From the year 308 AH/920-921 AD, one dirhams N.14. R. II. 11925 has 97.7% Ag. In the year 310 AH/ 922-923 AD, two dirhams N.15. R. II. 11905, N.16. R. II. 11910 have 95.5% Ag, and 98.2% Ag. Two dirhams from the year 316 AH/ 928-929 AD, N.17. R. II. 12090 and N.18. R. II. 12110 have 96.8% Ag, and 98.2% Ag. From year 320 AH/932 AD, two

dirhams were minted with silver contents of N.19. R. II. 12064: 97.6% Ag, and N.20. R. II. 12065: 91.6% Ag, which is the lowest percentage of silver among all the dirhams minted in Andarābah.

N.16: 97.7% Ag, N.17: 98.6% Ag, N.18: 98.2% Ag, N.19: 97.6% Ag, and N.20:

The dirhams from Andarābah mint also have a percentage of copper ranging from 0.05% to 2.89% Cu, with the highest copper content found in dirham N.12 with 3.26% Cu. The dirhams also contain small percentages of other elements such as iron, gold, manganese, nickel, zinc, mercury, lead, and bismuth. The total weight of all the dirhams minted in Andarābah is 51.24 grams.

Balkh mint							
Coin number	***Cu***	***Zn***	***A***	***Au***	***Pb***	***Bi***	***Ag Ka/ Ag La***
1. R.II.11867	1.02	0.009	97.7	0.085	0.401	0.488	3.23
2. R.II.11959	0.65	0.040	98.5	0.065	0.221	0.315	3.31
3. R.II.11960	0.42	0.039	97.2	0.016	0.438	1.63	3.23
4. R.II.11970	0.27	0.016	99.1	0.077	0.136	0.217	3.23
5. R.II.12019	0.870	0.016	97.1	0.148	0.706	0.998	3.21
6. R.II.11983	0.920	0.020	98.1	0.011	0.117	0.613	3.29
7. R.II.12026	0.955	0.010	96.7	0.160	0.599	1.396	3.16
8. R.II.12066	1.031	0.025	97.4	0.000	0.332	1.066	3.35
9. R.II.12095	0.408	0.017	98.8	0.074	0.188	0.238	3.24
10. R.II.12096	0.865	0.032	95.4	0.104	0.774	2.680	3.17

The dirhams from the fourth mint, Balkh, also have a high percentage of silver, ranging from 96.7% to 99.1% Ag. The first dirham, N.1. R. II. 11867, minted by Ismāʿīl ibn Aḥmad and with Abbasid Caliph al-Muktaffī Billah in 292 AH/904 AD, has 97.7% Ag. From the year 312 AH/924-925 AD, two dirhams N.2. R. II. 11959: 98.5% Ag, and N.3. R. II. 11960: 97.2% Ag. One dirham minted in the year 313 AH/ 925-926 AD, N.4. R. II. 11970 has 99.1% Ag the highest percentage of silver among all the dirhams minted in Balkh. Dirham from year 317 AH/ 929-930 AD, N.5. R. II. 12019 has 97.1% Ag. Dirham from year 319 AH/ 931-932 AD, N.6. R. II. 11983 has 98.1% Ag. In the year 321 AH/ 933AD, with the name of Abbasid caliph al-Qāhir Billah and Nāṣir Ibn Aḥmad Samanid Amīr, two dirhams N.7. R. II. 12026, and N.8. R. II. 12066 have 96.7% Ag, 97.4% Ag. In the following year 322 AH/ 933-934 AD, two dirhams N.9. R. II. 12095 and N.10. R. II. 12096 have 98.8% Ag, 95.4% Ag.

The dirhams of Balkh also have a small percentage of other elements such as iron, gold, manganese, nickel, zinc, mercury, lead, and bismuth. The total weight of all the dirhams minted in Balkh is 29.15 grams.

MaÝdan mint							
Coin number	***Cu***	***Zn***	***A***	***Au***	***Pb***	***Bi***	***Ag Ka/ Ag La***
1. R.II.12194	1.07	0.019	98.2	0.057	0.205	0.262	3.31
2. R.II.12202	0.069	0.016	97.9	0.151	0.203	1.317	3.17
3. R.II.11914	0.102	0.008	97.2		0.534	1.96	3.30
4. R.II.11982	0.905	0.038	97.8	0.091	0.465	0.590	3.19
5. R.II.12003	1.75	0.025	97.6	0.020	0.022	0.285	3.24
6. R. II. 12035	0.903	0.037	97.7	0.090	0.466	0.589	3.18

In the Maʿdan mint, six dirhams were struck with the name of Samanid Amīr Nāṣir Ibn Aḥmad and during the time of Abbasid caliph al-Muqtadir Billah. The two dirhams, minted in the year 306 AH/918-919 AD, N.1. R. II. 12194, and N.2. R. II. 12202 have 98.2% Ag (the highest percentage of silver among all the dirhams minted in Maʿdan), and 97.9% Ag, The dirham minted in the year 307 AH/ 919-920 AD, N.3. R. II. 11914 has 97.2% Ag. The dirham minted in the year 315 AH/ 927-928 AD, N.4. R. II. 11982 has 97.8% Ag. In the year 317 AH/ 929-930 AD, one dirham N.5. R. II. 12003, has 97.6% Ag. The last dirham from Maʿdan mint in the hoard was minted in 319 AH/ 931- 932AD, N.6. R. II. 12035, has 97.7% Ag. The dirhams of Maʿdan also have a small percentage of other elements such as iron, gold, manganese, nickel, zinc, mercury, lead, and bismuth. The total weight of all the dirhams minted in Maʿdan is 16.59 grams.

Nishapur mint							
Coin number	***Cu***	***Zn***	***A***	***Au***	***Pb***	***Bi***	***Ag Ka/ Ag La***
1. R.II.11884	1.56	0.008	97.2	0.181	0.417	0.447	3.31

The only dirham from the Nishapur mint struck in the year 291 AH/904 AD with the name of Samanid Amīr Ismāʿīl ibn Aḥmad and Abbasid caliph al-Muktaffī Billah, has 97.2% Ag, and the weight of the dirham is 2.67 grams.

Volga Bulgar							
Coin number	***Cu***	***Zn***	***A***	***Au***	***Pb***	***Bi***	***Ag Ka/ Ag La***
1. R.II.11988	3.63	0.015	95.7	0.205	0.035	0.335	3.40
2. R.II.12055	3.70	0.018	95.8	0.206	0.002	0.206	3.23
3. R.II.12094	2.21	0.012	97.2	0.217	0.005	0.139	3.24
4. R.II.12124	3.13	0.020	95.7	0.191	0.240	0.604	3.30

5. R.II.12166	3.13	0.027	96.4	0.238	0.008	0.066	3.36
6. R.II.12167	2.40	0.026	97.1	0.208	0.006	0.108	3.35
7. R.II.12168	2.69	0.022	96.8	0.216	0.008	0.126	3.24
8. R.II.12169	2.53	0.024	96.9	0.222		0.072	3.33
9. R.II.12170	2.46	0.034	97.0	0.211	0.006	0.053	3.47
10. R.II.12171	2.19	0.021	97.3	0.223	0.005	0.062	3.34
11. R.II.12172	2.82	0.036	96.7	0.204	0.011	0.048	3.33
12. R.II.12173	3.73	0.045	95.1	0.180	0.115	0.689	3.37
13. R.II.12175	4.02	0.040	95.3	0.204	0.039	0.336	3.37
14. R.II.12176	2.63	0.024	96.9	0.217	0.007	0.058	3.40
15. R.II.12177	2.88	0.031	96.6	0.207	0.011	0.047	3.35
16. R.II.12178	2.53	0.042	96.9	0.225	0.008	0.059	3.28
17. R.II.12179	4.20	0.089	94.7	0.239	0.110	0.465	3.36
18. R.II.12180	3.18	0.017	96.3	0.207	0.004	0.205	3.36
19. R.II.12181	4.13	0.019	94.7	0.176	0.120	0.721	3.34
20. R.II.12182	2.55	0.029	96.9	0.204	0.010	0.103	3.40
21. R.II.12184	2.60	0.025	96.9	0.184	0.009	0.109	3.28
22. R.II.12185	2.89	0.042	96.5	0.201	0.006	0.222	3.33
23. R.II.12186	2.46	0.026	97.0	0.175	0.013	0.125	3.35
24. R.II.12187	2.94	0.024	96.5	0.212	0.010	0.149	3.34
25. R.II.12188	3.53	0.041	95.7	0.232	0.020	0.349	3.37
26. R.II.12189	2.98	0.027	96.4	0.203		0.187	3.41
27. R.II.12190	2.58	0.033	96.9	0.228	0.005	0.072	3.33
28. R.II.12191	2.31	0.016	97.1	0.213	0.007	0.121	3.33
29. R.II.12192	3.34	0.020	95.8	0.199	0.051	0.424	3.40
30. R.II.12193	2.56	0.036	96.9	0.209	0.013	0.125	3.34
31. R.II.12195	3.18	0.017	96.2	0.202	0.018	0.230	3.43
32. R.II.12196	1.88	0.022	97.7	0.224	0.008	0.027	3.40
33. R.II.12197	3.40	0.035	96.1	0.217	0.015	0.141	3.31
34. R.II.12198	2.18	0.053	97.3	0.221	0.007	0.035	3.33
35. R.II.12199	2.62	0.051	96.6	0.227	0.024	0.259	3.22
36. R.II.12200	3.37	0.028	96.2	0.201	0.007	0.044	3.39
37. R.II.12201	3.10	0.026	96.4	0.219	0.010	0.150	3.23
38. R.II.12203	3.15	0.020	96.0	0.196	0.046	0.456	3.40
39. R.II.11915	2.39	0.018	96.4	0.141	0.129	0.705	3.38
40. R.II.11916	2.70	0.019	96.1	0.157	0.128	0.659	3.39
41. R.II.11917	1.84	0.009	96.8	0.170	0.187	0.738	3.36
42. R.II.11918	2.40	0.011	96.3	0.157	0.105	0.756	3.29
43. R.II.11919	2.86	0.016	95.6	0.163	0.103	0.992	3.52

44. R.II.11920	3.15	0.012	95.3	0.139	0.205	1.02	3.32
45. R.II.11921	2.56	0.025	96.0	0.141	0.222	0.873	3.22
46. R.II.11922	2.75	0.018	96.0	0.171	0.107	0.690	3.26
47. R.II.11923	2.04	0.012	97.2	0.183	0.180	0.222	3.32
48. R.II. 11928	2.39	0.018	96.4	0.141	0.129	0.705	3.38
49. R.II.11929	2.50	0.013	95.9	0.173	0.120	1.10	3.44
50. R.II.11930	2.85	0.013	95.6	0.181	0.145	0.972	3.31
51. R.II.11931	3.97	0.019	94.8	0.179	0.216	0.603	3.34
52. R.II.11932	3.44	0.015	95.4	0.196	0.223	0.509	3.36
53. R.II.11933	3.38	0.021	95.4	0.165	0.272	0.504	3.33
54. R.II.12130	3.23	0.014	95.3	0.162	0.179	0.940	3.33
55. R.II.12133	2.16	0.007	96.4	0.167	0.227	0.928	3.24
56. R.II.12165	3.15	0.010	95.9	0.224	0.151	0.454	3.17
57. R. II. 11938	2.50	0.013	95.9	0.173	0.120	1.10	3.44
58. R.II.12042	2.59	0.026	96.1	0.210	0.160	0.719	3.30
59. R.II.12160	3.14	0.011	95.5	0.194	0.767	0.286	3.25
60. R.II.12162	3.45	0.071	95.4	0.207	0.329	0.372	3.35
61. R.II.12216	2.56	0.012	96.0	0.156	0.433	0.639	3.32
62. R.II.12131	3.00	0.012	96.1	0.163	0.104	0.416	3.37
63. R. II. 12163	2.39	0.018	96.4	0.141	0.129	0.705	3.38
64. R.II.12140	2.17	0.015	95.6	0.240	1.06	0.687	3.23
65. R.II.12141	3.16	0.011	95.8	0.209	0.135	0.522	3.40
66. R.II.12142	2.41	0.024	95.6	0.173	1.07	0.530	3.21
67. R.II.12143	2.60	0.016	95.6	0.325	0.909	0.383	3.21
68. R.II.12144	0.977	0.007	96.4	0.098	2.05	0.313	3.18
69. R.II.12146	2.06	0.034	96.5	0.035	0.516	0.636	3.27
70. R.II.12147	0.138	0.014	96.8	0.657	0.615	1.61	3.23
71. R.II.12148	1.94	0.013	96.8	0.187	0.251	0.665	3.35
72. R.II.12149	2.03	0.013	96.5	0.166	0.359	0.772	3.31
73. R.II.12151	2.40	0.014	96.6	0.180	0.124	0.518	3.34
74. R.II.12152	2.86	0.016	96.0	0.208	0.184	0.625	3.31
75. R.II.12153	2.66	0.011	96.0	0.210	0.287	0.659	3.32
76. R.II.12155	1.86	0.016	96.5	0.325	0.686	0.363	3.27
77. R.II.12156	2.05	0.006	95.8	0.263	0.905	0.825	3.22
78. 57/1936-1	2.58	0.008	95.9	0.178	0.198	0.948	3.36
79. R.II.12132	0.046	0.012	97.3	0.092	0.523	1.861	3.05
80. R.II.12221	0.082	0.028	89.2	0.006	10.2		3.25
81. R.II.12134	3.24	0.009	95.3	0.155	0.260	0.873	3.36
82. R.II.12135	4.3	0.022	94.6	0.163	0.287	0.578	3.34

83. R.II.12150	3.19	0.032	94.9	0.216	0.587	0.902	3.33
84. R.II.12159	2.82	0.018	95.2	0.361	1.01	0.419	3.27
85. R.II.12210	2.17	0.015	96.8	0.231	0.270	0.293	3.33
86. R.II.12212	2.34	0.025	96.6	0.227	0.162	0.393	3.40
87. R.II.12139	2.14	0.010	96.9	0.262	0.086	0.433	3.36
88. R.II.12211	3.45	0.031	94.5	0.174	1.17	0.550	3.30
89. R.II.12215	3.03	0.013	95.2	0.199	1.01	0.427	3.38
90. R.II.12218	2.90	0.034	95.3	0.104	0.761	0.713	3.35
91. R.II.12154	1.98	0.005	96.3	0.235	0.590	0.707	3.30
92. R.II.12157	2.31	0.014	96.8	0.194	0.085	0.421	3.34
93. R.II.12204	2.38	0.015	96.6	0.194	0.312	0.320	3.23
94. R.II.12207	1.78	0.008	97.3	0.205	0.298	0.263	3.22
95. R.II.12219	2.94	0.020	95.3	0.162	0.421	1.022	3.39
96. R. II. 12129	2.34	0.025	96.6	0.227	0.162	0.393	3.40
97. 47B/ 922-86	2.58	0.008	95.9	0.178	0.198	0.948	3.30
98. R.II.12138	2.47	0.024	96.0	0.146	0.313	0.864	3.34
99. R.II.12137	1.96	0.012	96.8	0.167	0.314	0.618	3.23
100. R.II.11856	1.94	0.015	97.1	0.198	0.330	0.176	3.25
101. R.II.12145	3.83	0.015	94.9	0.155	0.170	0.840	3.33
102. R.II.12223	1.97	0.015	97.1	0.186	0.120	0.385	3.32
103. R.II.12205	3.63	0.016	95.6	0.191	0.267	0.192	3.35
104. R.II.12220	2.48	0.018	96.6	0.208	0.162	0.337	3.34
105. 57/1936-2	2.31	0.014	96.8	0.194	0.085	0.421	3.34
106. R.II.12164	2.52	0.013	96.4	0.212	0.315	0.310	3.24
107. R.II.12161	3.26	0.021	95.5	0.189	0.473	0.377	3.32
108. R.II.12216	2.56	0.012	96.0	0.156	0.433	0.639	3.32
109. R.II.12214	3.10	0.023	94.7	0.275	1.16	0.486	3.25
110. R.II.12126	2.39	0.397	96.5	0.216	0.141	0.015	3.34
111. R.II.12136	2.91	0.014	96.1	0.199	0.315	0.285	3.23
112. R.II.12127	2.76	0.010	96.4	0.225	0.084	0.344	3.30
113. R.II.12206	2.74	0.011	96.5	0.221	0.069	0.297	3.33
114. R.II.12217	1.69	0.015	97.0	0.277	0.523	0.292	3.30
115. R. II. 12117	3.63	0.016	95.6	0.191	0.267	0.192	3.35
116. R.II.12209	4.14	0.040	94.5	0.148	0.521	0.442	3.29
117. R.II.12213	3.18	0.057	95.6	0.182	0.416	0.407	3.52
118. R.II.12208	2.78	0.017	95.7	0.175	0.603	0.551	3.36
Bulgar mint							
119. R. II.11976	4.14	0.026	95.0	0.218	0.087	0.369	3.35

al- AmÐr Yaltwar							
120. R.II.12118	0.003	0.059	95.5	0.149	0.410	0.420	3.42
121. R.II.12119	2.80	0.112	96.4	0.220	0.166	0.182	3.23
122. R.II.12120	3.95	0.028	95.1	0.221	0.346	0.286	3.51
123. R.II.12121	3.42	0.043	95.7	0.252	0.356	0.085	3.43
124. R.II.12122	3.95	0.028	95.1	0.221	0.346	0.286	3.51
125. R.II.12123	3.42	0.043	95.7	0.252	0.356	0.085	3.43
126. R.II.12125	3.87	0.053	95.2	0.209	0.276	0.240	3.36

The dirhams of the Volga Bulgar in the hoard have a high percentage of silver between 94.6-98.1% Ag. Interestingly, the percentages of silver in the imitation dirhams are equal to the original Samanid dirhams, and sometimes by a higher percentage than the dirhams that were struck in al-Shash and Samarqund.

-In the first type (TYP) the thirty eight imitations dirhams of the Samanid Amīr IsmÁÝÐl ibn AÎmad with name of caliph al-MuktaffÐ Billah have a high percentage of sliver up to 94.7% Ag, N.1. R. II. 11988: 95.7%, N.2. R. II. 12055: 95.8%, N.3. R. II. 12094: 97.2%, N.4. R. II.12124: 95.7%, N.5. R. II. 12166: 96.4%, N.6. R. II. 12167: 97.1%, N.7. R. II. 12168: 96.8%, N.8. R. II. 12169: 96.9%, N.9. R. II. 12170: 97.0%, N.10. R. II. 12171: 97.3%, N.11. R. II. 12172: 96.7%, N.12. R. II. 12173: 95.1%, N.13. R. II. 12175: 95.3% Ag 4.02% Cu, N.14. R. II. 12176: 96.9%, N.15. R. II. 12177: 96.6%, N.16. R. II. 12178: 96.9%, N.17. R. II. 12179: 94.7% it is the lowest percentage of silver in the first type of imitations 4.20% Cu the highest percentage of copper in all the hoard. N.18. R. II. 12180: 96.3%, N.19. R. II. 12181: 94.7%, N.20. R. II. 12182: 96.9%, N.21. R. II. 12184: 96.9%, N.22. R. II. 12185: 96.5%, N.23. R. II. 12186: 97.0%, N.24. R. II. 12187: 96.5%, N.25. R. II. 12188: 95.7%, N.26. R. II. 12189: 96.4%, N.27. R. II. 12190: 96.9%, N.28. R. II. 12191: 97.1%, N.29. R. II. 12192: 95.8%, N.30. R. II. 12193: 96.9%, N.31. R. II. 12195: 96.2%, N.32. R. II. 12196: 97.7% it is the highest percentage of silver in the first type of imitations, N.33. R. II. 12197: 96.1%, N.34. R. II. 12198: 97.3%, N.35. R. II. 12199: 96.6%, N.36. R. II. 12200: 96.2%, N.37. R. II. 12201: 96.4%, N.38. R. II. 12203: 96.0% Ag.

- The second TYP contain seventeen dirhams imitation of the Samanid Amīr NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah were minted in al-Shash in the year 8 AH which mean 308 AH/ 920- 921 AD, N.39. R. II. 11915: 96.4%, N.40. R. II. 11916: 96.1%, N.41. R. II. 11917: 96.8%, N.42. R. II. 11918: 96.3%, N.43. R. II. 11919: 95.6%, N.44. R. II. 11920: 95.3%, N.45. R. II. 11921 and N.46. R. II. 11922: 96.0%, N.47. R. II. 11923: 97.2%, N.48. R. II. 11928: 96.4%, N.49. R. II. 11929: 95.9%, N.50. R. II. 11930: 95.6%, N.51. R. II. 11931:

94.8%, N.52. R. II. 11932 and N.53. R. II. 11933: 95.4%, N.54. R. II. 12130: 95.3% , N.55. R. II. 12133: 96.4%, N.56. R. II. 12165: 95.9% Ag.

- The third TYP of imitation contain seven dirhams imitation of NaÒr Ibn AÎmad and Abbasid Caliph al-Muqtadir Billah. N.57. R. II. 11938: 95.9%, N.58. R. II. 12042: 96.1%, N.59. R. II. 12160: 95.5%, N.60. R. II. 12162: 95.4%, N.61. R. II. 12216: 96.0%, N.62. R. II. 12131: 96.1%, N.63. R. II. 12163: 96.4% Ag.

- TYP 4 contain fifteen dirhams of this type imitation of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah, the date and the place of minting are omitted, N.64. R. II. 12140: 95.6%, N.65. R. II. 12141: 95.8%, N.66. R. II. 12142: 95.6%, N.67. R. II. 12143: 95.6%, N.68. R. II. 12144: 96.4%, N.69. R. II. 12146: 96.5%, N.70. R. II. 12147 and N.71. R. II. 12148: 96.8%, N.72. R. II. 12149: 96.5%, N.73. R. II. 12151: 96.6%, N.74. R. II. 12152 and N.75. R. II. 12153: 96.0%, N.76. R. II. 12155: 96.5%, N.77. R. II. 12156: 95.8%, N.78. 57/1936-1: 95.9% Ag.

- TYP 5 imitation of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. N.79. R. II. 12132: 97.3%, N.80. R. II. 12221: 89.2% Ag.

- TYP 6 four imitation dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. N.81. R. II. 12134: 95.3%, N.82. R. II. 12135: 94.6%, N.83. R. II. 12150: 94.9%, N.84. R. II. 12159: 95.2% Ag.

- TYP 7 three imitation dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. N.85. R. II. 12210: 96.8%, N.86. R. II. 12212: 96.6%, N.87. R. II. 12139: 96.9%Ag.

- TYP 8 three imitation dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. N.88. R. II. 12211: 94.5%, N.89. R. II. 12215: 95.2%, N.90. R. II. 12218: 95.3%Ag.

- TYP 9 two imitation dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. N.91. R. II. 12154: 96.3%, N.92. R. II. 12157: 96.8%Ag.

- TYP 10 two imitation dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. N.93. R. R. II. 12204: 96.6%, N.94. R. II. 12207: 97.3%Ag.

- TYP 11 three imitation dirhams of NaÒr Ibn AÎmad with the name of Caliph al-Muqtadir Billah. N.95. R. II. 12219: 95.3%, N.96. R. II. 12129: 96.6%, N.97. 47B/ 922-86: 95.9%Ag.

- TYP 12 two imitation dirhams of NaÒr Ibn AÎmad. N.98. R. II. 12138: 96.0%, N.99. R. II. 12137: 96.8%Ag.

- TYP 13 one imitation dirham of IsmÁÝÐl ibn AÎmad. N. 100. R. II. 11856: 97.1%Ag.

- TYP 14 one imitation dirham of NaÒr Ibn AÎmad. N.101. R. II. 12145: 94.9%Ag.

- TYP 15 one imitation dirham of NaÒr Ibn AÎmad. N.102. R. II. 12223: 94.9%Ag.

- TYP 16 one imitation dirham of NaÒr Ibn AÎmad. N.103. R. II. 12205: 95.6%Ag.

- TYP 17 one imitation dirham of NaÒr Ibn AÎmad. N.104. R. II. 12220: 96.6%Ag.

- TYP 18 one imitation dirham of NaÒr Ibn AÎmad. N.105. 57/1936-2: 96.8%Ag.

- TYP 19 one imitation dirham of NaÒr Ibn AÎmad. N.106. R. II. 12164: 96.4%Ag.

- TYP 20 one imitation dirham of NaÒr Ibn AÎmad. N.107. R. II. 12161: 95.5%Ag.

- TYP 21 one imitation dirham of NaÒr Ibn AÎmad. N.108. R. II. 12116**:** 96.0%Ag.

- TYP 22 imitation dirham. N.109. R. II. 12214: 94.7%Ag.

- TYP 22 imitation dirham. N.109. R. II. 12214: 94.7%Ag.

- TYP 23 imitation dirham. N.110. R. II. 12126: 96.5%Ag.

- TYP 24 imitation dirham. N.111. R. II. 12136: 96.1%Ag.

- TYP 25 two imitation dirhams. N.112. R. II. 12136: 96.1, and N.113. R. II. 12206 96.5 %Ag.

- TYP 26 imitation dirham. N.114. R. II. 12217: 96.5%Ag.

- TYP 27 imitation dirham. N.115. R. II. 12117: 95.6%Ag.

- TYP 28 imitation dirham. N.116. R. II. 12209: 94.5%Ag.

- TYP 29 imitation dirham. N.117. R. II. 12213: 95.6%Ag.

- TYP 30 imitation dirham. N.118. R. II. 12208: 95.7%Ag.

- The only dirham minted in Bolgar N. 119. R. II.11976: 95.0% Ag, 4.14% Cu it is the second highest percentage of copper in all the hoard.

- Al-Amīr Yaltwar dirhams.: N.120. R. II. 12118: 95.5% Ag, N.121. R. II. 12119: 96.4% Ag, N.122. R. II. 12120: 96.4% Ag, N.123. R. II.12121: 95.7% Ag, N.124. R. II. 12122: 95.1% Ag, N.125. R. II.12123: 95.7% Ag, N.126. R. II.12123: 95.2% Ag,

In conclusion, the examination of the dirham hoard originating from diverse mints offers valuable insights into the silver compositions of these coins. Dirhams sourced from al-Shash, Samarqand, Andarābah, Balkh, Maʿdan, and Nishapur demonstrate notable silver purity, ranging from 94.6% to 99.3% Ag. Particularly noteworthy is the discovery that certain

imitation dirhams of the Volga Bulgar exhibit even higher silver percentages compared to the original Samanid dirhams.

This study has delved into the specific silver contents of individual dirhams, underscoring the inherent variability within each mint. Ranging from the pinnacle silver content of 99.3% Ag found in dirham from Andarābah to the nadir silver content of 94.6% Ag in the imitation dirhams, these findings elucidate the craftsmanship and quality distinctions inherent in these coins.

The consistent predominance of silver as the principal constituent in these dirhams is a compelling observation, indicative of the historical reverence and utilitarian value accorded to this precious metal. Furthermore, the varying proportions of copper, iron, gold, and other trace elements contribute to the distinctive character and compositional diversity of each dirham.

In summary, the comprehensive analysis of the hoard provides a nuanced understanding of the silver content encompassed within the dirhams, thereby elucidating the intricate details and historical significance inherent in these coins sourced from diverse geographical origins.

X. The Máramaros “Huszt” hoard from international view

This chapter discusses the Máramaros "Huszt" hoard from an international perspective by comparing the percentage of silver in the hoard's dirhams with the dirhams analyzed from other hoards found in Europe. The comparison is based on findings presented in the book "Dirham und Rappenpfennig Mittelalterliche," published in 2003 in Bonn, Germany.

The book presents the results of X-ray fluorescence measurements conducted as part of the interdisciplinary research project "Medieval Coinage in Mining Regions." This project, funded by the Volkswagen Foundation, was carried out from 1996 to 1999 in collaboration with geochemists, historians, archaeologists, and Islamic scholars. The project aimed to study medieval coinage in two mining regions: Central Asia and Southwest Germany.

The book provides numerical data from approximately 6,000 measured coin surfaces and related objects. It offers valuable insights into the composition of coins from different hoards. By comparing the silver percentages of the dirhams in the Máramaros "Huszt" hoard with those from other hoards, researchers can gain a better understanding of the international context and significance of the Máramaros "Huszt" hoard.

The analysis of the silver content percentage within the Máramaros "Huszt" hoard necessitates a rigorous examination, wherein each dirham present in the hoard is systematically compared with its corresponding representation in the scholarly work "Dirham und Rappenpfennig Mittelalterliche." This comparative assessment is meticulously conducted in accordance with the chronological and geographical parameters denoted by the year of minting and the mint of origin attributed to each coin. Through this methodological framework, scholar endeavor to discern variations in the silver content of the dirhams between the Máramaros "Huszt" hoard and the numismatic data outlined in the referenced publication. By adhering to a systematic approach that accounts for temporal and spatial dimensions, researcher aim to ascertain any disparities or consistencies in the silver composition of the hoard's dirhams relative to those cataloged in the scholarly discourse. Such an analytical endeavor serves to elucidate the metallurgical characteristics, potential regional variations, and broader implications for understanding the economic and trade dynamics within the medieval period.

One of the key findings from the comparative analysis is the high silver content of the dirhams in the Máramaros "Huszt" hoard. The percentage of silver in these dirhmas is higher than the dirhams found in other hoards. This suggests that the Carpathian basin was an important center for the circulation of Islamic coins during the tenth century.

The analysis of the Máramaros "Huszt" hoard involved comparing each dirham according to its year of minting and the mint. Notably, some minted years represented in the Máramaros "Huszt" hoard are absent from the data documented in the book "Dirham und Rappenpfennig Mittelalterliche." Specifically, the book documents 16 analyzed dirhams from the Volga Bulgars, with only two coins, one minted under al-Amīr Yaltwar, and the second minted al-Shash in 308 AH / 920-921 AD, matching those in the Máramaros "Huszt" hoard. The Máramaros "Huszt" hoard is particularly notable for its wide variety of Volga Bulgar dirhams. Approximately 34% of all the dirhams in the hoard were imitations of Volga Bulgar coins. Among these, one dirham was minted in Bolgar, and seven are rare dirhams of al-Amīr Yaltawar. Upon comparison, the dirhams from the Máramaros "Huszt" hoard exhibited a higher silver content than their counterparts documented in the book.

These findings highlight the significance of the Máramaros "Huszt" hoard in understanding the economic and trade connections of the region, particularly the intricate commercial exchange relations between the Volga Bulgars, the Carpathian Basin, and the Islamic world during the tenth century.

The comparative analysis of the Máramaros "Huszt" Hoard from an international perspective holds significant importance in the field of medieval numismatics for several reasons. Firstly, by comparing the silver content of the dirhams in the Máramaros "Huszt" hoard with those from other European hoards, researchers can gain insights into the economic and trade networks of the region during the tenth century. The high silver content in the Máramaros "Huszt" hoard dirhams suggests a thriving economy and possibly trade relations with the Volga Bulgars and Islamic regions. The collaboration between geochemists, historians, archaeologists, Islamic scholars and numismatists allows for a comprehensive analysis of the Máramaros "Huszt" hoard within its historical and cultural context.

Furthermore, the comparison of the Máramaros "Huszt" hoard dirhams with those from the Volga Bulgars sheds light on the connections between different regions and the circulation of coins across vast distances. This study not only enhances our understanding of the Máramaros "Huszt" hoard but also contributes to a broader understanding of medieval trade routes and economic interactions. Additionally, the findings from this comparative analysis can have implications for future research on medieval coinage and monetary systems. By identifying the unique characteristics of the Máramaros "Huszt" hoard dirhams, researchers can potentially establish new criteria for categorizing and analyzing similar hoards in the future.

Table 1: Al-Shash Mint			
Year of Mint		Number	AG %
287AH/ 900AD	(MHH)	1. R.II.11855	77.1
		2. R.II.11861	97.7
		3. R.II.11862	97.4
	((DURM)	557	97.3
		558	97.0
		559	97.9
288 AH/ 900-901 AD	(MHH)	4. R.II.11857	96.6
		5. R.II.11863	97.2
	(DURM)	560	95.9
290 AH/ 902-903 AD	(MHH)	6. R.II.11864	97.3
	(DURM)	563	97.2
		564	97.0
		565	96.5
		566	97.4
292 AH/ 904AD	(MHH)	7. R.II.11866	97.6
	(DURM)	570	96.7
		571	96.0
		572	95.6
		573	96.5
293 AH/ 905-906 AD	(MHH)	8. R.II.11868	97.6
		9. R.II.11869	97.5
	(DURM)	574	95.7
		575	96.7
294 AH/ 906AD	(MHH)	10. R. II. 11870	97.6
	(DURM)	576	97.0
		577	97.0
		578	96.5
		579	96.8
295 AH/ 907AD	(MHH)	11. R.II.11872	97.1
		12. R.II.11874	97.5
	(DURM)	580	96.0
		581	95.7
		582	96.5
		583	96.7
		584	93.8
		585	94.7
	(MHH)	13. R.II.11875	96.9

Table 2: Samarqund Mint			
Year of Mint		Number	AG%
286AH/ 899AD	(MHH)	2. R.II.11859	97.5
	(DURM)	1080	95.6
287AH/ 900AD	(MHH)	3. R.II.11860	97.1
	(DURM)	1081	95.8
		1082	95.2
292 AH/ 905AD	(MHH)	4. II-B/1990-10	97.0
	(DURM)	1090	94.5
		1091	93.8
298 AH/ 910-911 AD	(MHH)	5. R.II.11924	96.7
	(DURM)	1099	93.8
		1100	96.3
299 AH/ 911-912 AD	(MHH)	6 .R.II.12108	96.4
	(DURM)	1101	93.3
		1102	94.9
		1103	92.3
		1104	92.3
300 AH/ 912-913 AD	(MHH)	7. R.II.11878	97.5
		8. R.II.11883	97.1
	(DURM)	1105	94.2
		1106	94.9
		1107	93.5
		1108	94.9
		1109	95.9
303 AH/ 915-916 AD	(MHH)	9. R.II.11895	96.1
	(DURM)	1118	91.2
		1119	93.1
		1120	90.9
304 AH/ 916-917 AD	(MHH)	10. R.II.11898	95.4
	(DURM)	1121	92.7
		1122	91.7
		1123	93.3
305 AH/ 917-918 AD	(MHH)	11. R.II.11901	95.4
		12. R.II.11902	95.9
		13. R.II.12113	95.3
	(DURM)	1124	91.0
	(MHH)	14. R.II.11906	96.6
		15. R.II.11911	96.3

297 AH/ 909-910 AD		14. R.II.11876	97.2
	(DURM)	588	96.7
298 AH/ 910-911 AD	(MHH)	15. R.II.11877	97.0
		16. R.II.11879	97.4
		17. R.II.11880	97.2
	(DURM)	589	97.1
		590	96.3
299 AH/ 911-912 AD	(MHH)	18. R.II.11873	97.4
		19. R.II.11882	97.4
	(DURM)	591	96.9
		592	94.8
		593	96.7
300 AH/ 912-913 AD	(MHH)	20. R.II.11885	97.4
		21. R.II.11886	97.4
	(DURM)	594	94.8
301 AH/ 913-914 AD	(MHH)	22. R.II.11887	97.4
		23. R.II.11888	96.4
		24. R.II.11892	96.3
	(DURM)	594	94.8
		595	95.8
301 AH/ 913-914 AD	(DURM)	595	95.8
		596	97.3
		597	95.8
		598	95.2
		599	91.6
304 AH/ 916-917 AD	(MHH)	25. R.II.11897	95.4
		26. R.II.11899	96.0
		27. R.II.11900	95.6
	(DURM)	606	94.1
		607	95.9
307 AH/ 919-920 AD	(MHH)	28. R.II.11942	95.9
	(DURM)	611	93.5
308 AH/ 920-921 AD	(MHH)	29. R.II.11871	96.6
		30. R.II.11926	96.7
		31. R.II.11927	96.1
		32. R.II.12183	96.5
	(DURM)	612	93.7
	(MHH)	33. R.II.11954	95.5
		34. R.II.11955	95.2
307 AH/ 919-920 AD		16. R.II.11912	95.5
		17. R.II.11913	96.1
307 AH/ 919-920 AD	(DURM)	1127	90.6
		1128	82.6
		1129	94.1
308 AH/ 920 AD	(MHH)	18. R.II.11937	95.3
	(DURM)	1130	90.3
		1131	94.0
		1132	89.0
		1133	89.4
309 AH/ 921-922 AD	(MHH)	19. R.II.11939	95.4
		20. R.II.11940	96.1
		21. R.II.11941	95.7
	(DURM)	1134	89.4
		1135	88.2
310 AH/ 922-923 AD	(MHH)	22. R.II.11894	98.2
		23. R.II.11945	96.5
		24. R.II.11946	95.3
		25. R.II.11949	95.2
		26. R.II.11950	95.5
		27. R.II.12158	95.8
	(DURM)	1136	91.2
311 AH/ 923-924 AD	(MHH)	28. R.II.11893	97.0
		29. R.II.11951	95.5
		30. R.II.11952	95.7
		31. R.II.11961	96.0
	(DURM)	1137	87.0
		1138	92.9
313 AH/ 925-926 AD	(MHH)	32. R.II.11944	94.8
		33. R.II.11948	94.9
		34. R.II.11965	96.0
		35. R.II.11966	96.7
		36. R.II.11967	96.0
		37. R.II.11968	96.9
		38. R.II.11947	95.3
	(DURM)	1141	85.8
		1142	90.3
		1143	83.8
	(MHH)	39. R.II.11972	96.2

311 AH/ 923-924 AD		35. R.II.11956	95.5
		36. R.II.11958	96.5
		37. R.II.12222	96.4
	(DURM)	616	94.5
312 AH/ 924-925 AD	(MHH)	38. R.II.11957	96.0
		39. R.II.11962	96.0
		40. R.II.11934	96.5
	(DURM)	617	95.5
		618	94.0
313 AH/ 925-926 AD	(MHH)	41. R.II.11969	95.9
	(DURM)	619	94.5
		620	91.0
314 AH/ 926-927 AD	(MHH)	42. R.II.11975	95.5
	(DURM)	621	90.6
315 AH/ 927-928 AD	(MHH)	43. R.II.11985	95.4
		44. R.II.11987	94.8
		45. 1B/ 904-251	96.7
		46. R.II.12015	95.3
	(DURM)	622	89.9
		623	90.4
316AH/ 928-929AD	(MHH)	47. R.II.11971	95.7
		48. R.II.11979	95.4
		49. R.II.11990	95.7
		50. R.II.11991	95.7
		51. R.II.11992	96.6
		52. R.II.11994	95.0
		53. R.II.11995	95.8
		54. R.II.11996	95.4
		55. R.II.11997	95.0
		56. R.II.12000	95.5
		57. R.II.12005	94.9
		58. R.II.12018	95.5
		59. R.II.12174	98.1
	(DURM)	624	92.6
		625	96.8
		626	94.1
		60. R.II.12004	95.7
		61. R.II.12009	94.8
314 AH/ 926-927 AD		40. R.II.11984	95.6
		41. R.II.11986	96.1
		42. R.II.11989	95.3
	(DURM)	1144	88.2
315 AH/ 927-928 AD	(MHH)	43. R.II.11977	96.5
		44. R.II.11978	96.3
		45. R.II.11980	94.9
		46. R.II.11993	95.9
	(DURM)	1145	92.3
		1146	90.4
		1147	86.9
316AH/ 928-929AD	(MHH)	47. R. II. 11981	96.4
		48. R.II.11998	96.0
		49. R.II.11999	94.7
		50. R.II.12001	95.9
		51. R.II.12002	95.9
		52. R.II.12111	98.5
	(DURM)	1148	87.8
		1149	91.8
317 AH/ 929-930 AD	(MHH)	53. R.II.11953	96.3
		54. R.II.11973	95.2
		55. R.II.12006	94.4
		56. R.II.12007	94.7
		57. R.II.12008	95.3
	(DURM)	1150	88.2
		1151	88.1
318 AH/ 930-931AD	(MHH)	58. R.II.11935	95.9
		59. R.II.11936	96.1
		60. R.II.12020	94.3
		61. R.II.12023	96.8
		62. R.II.12024	95.7
		63. R.II.12025	94.8
	(DURM)	1153	92.6
		1154	92.4
319 AH/ 931-932AD	(MHH)	64. R.II.11974	95.7
		65. R.II.12037	95.2
		66. R.II.12038	95.7
		67. R.II.12040	95.0
		68. R.II.12041	95.9

317 AH/ 929-930 AD	(MHH)	62. R.II.12010	95.5
		63. R.II.12011	95.5
317 AH/ 930 AD	(MHH)	64. R.II.12012	96.0
		65. R.II.12013	95.2
		66. R.II.12014	95.3
		67. R.II.12016	96.1
		68. R.II.12017	94.8
		69. R.II.12107	96.7
	(DURM)	627	95.4
		628	93.7
318 AH/ 930-931AD	(MHH)	70. R.II.12027	95.7
		71. R.II.12028	95.7
		72. R.II.12029	95.9
		73. R.II.12030	94.9
		74. R.II.12031	95.0
		75. R.II.12032	94.4
		76. R.II.12033	94.6
		77. R.II.12034	94.5
	(DURM)	629	92.4
		630	91.4
319 AH/ 930-932 AD	(MHH)	78. R.II.12036	95.3
		79. R.II.12044	94.8
		80. R.II.12045	95.2
		81. R.II.12046	95.0
		82. R.II.12047	95.5
		83. R.II.12048	95.5
		84. R.II.12049	95.2
		85. R.II.12050	95.4
		86. R.II.12051	95.0
		87. R.II.12052	95.2
		88. R.II.12084	95.1
		89. R.II.12105	94.7
		90. R.II.12109	95.3
		91. R.II.12128	95.7
	(DURM)	631	88.3
320 AH/ 932 AD	(MHH)	92. R.II.12063	94.8
	(DURM)	632	91.6
		633	91.3
		634	91.5
		69. R.II.12043	95.1
		70. R.II.12106	95.4
	(DURM)	1155	90.5
320 AH/ 932AD	(MHH)	71. R.II.12053	95.0
		72. R.II.12054	95.4
		73. R.II.12056	94.9
		74. R.II.12057	95.7
		75. R.II.12058	95.0
		76. R.II.12059	95.3
		77. R.II.12060	95.6
		78. R.II.12062	95.5
	(DURM)	1156	93.0
		1157	94.3
		1158	93.4
321 AH/ 933 AD	(MHH)	79. R.II.11964	95.5
		80. R.II.12039	95.5
		81. R.II.12061	95.5
		82. R.II.12083	95.8
		83. R.II.12085	95.6
		84.R.II.12086	95.9
		85. R.II.12087	95.1
		86. R.II.12088	96.0
		87. R.II.12089	96.5
		88. R.II.12091	95.5
		89. R.II.12092	95.6
		90. R.II.12104	95.1
	(DURM)	1159	97.6
		1160	94.7
		1161	94.8
		1162	90.5
322 AH/ 933-934 AD	(MHH)	91. R.II.12099	96.0
		92. R.II.12100	95.1
		93. R.II.12101	95.3
	(DURM)	1163	92.3
		1164	94.1
		1165	93.0
		1166	92.9

321 AH/ 933 AD	(MHH)	93. R.II.12021	94.9
		94. R.II.12067	94.7
		95. R.II.12068	95.0
		96. R.II.12069	96.3
		97. R.II.12070	95.4
		98. R.II.12071	95.1
		99. R.II.12072	95.0
		100. R.II.12073	96.0
		101. R.II.12074	94.9
		102. R.II.12075	95.1
		103. R.II.12076	96.1
		104. R.II.12077	95.0
		105. R.II.12078	95.6
		106. R.II.12079	95.3
321 AH/ 933 AD	(MHH)	107. R.II.12080	94.5
		108. R.II.12081	94.7
		109. R.II.12082	94.9
		110. R.II.12093	95.1
		111. R.II.12103	95.3
		112. R.II. 12112	95.3
		113. R.II.12114	95.5
	(DURM)	635	91.2
		636	93.0
322 AH/ 933 AD	(MHH)	114. R.II.11963	94.7
		115. R.II.12097	94.7
		116. R.II.12098	95.0
	(DURM)	637	87.1
323 AH/ 935 AD	(MHH)	117. R.II.12102	95.2

Table 3: AndarÁbah Mint

Year of Mint		*Number*	*AG%*
291 AH/ 903AD	(MHH)	1. R.II.11865	97.0
	(DURM)	1424	97.0
298 AH/ 910 AD	(MHH)	2. R.II.11889	97.0
	(DURM)	1442	96.8
299 AH/ 911-912 AD	(MHH)	3. R.II.11881	99.3
		4. R.II.11890	99.2
	(DURM)	1443	94.4
301 AH/ 913-914 AD	(MHH)	5. R.II.11891	97.8
	(DURM)	1449	99.3
		1450	98.6
		1451	97.2
303 AH/ 915-916 AD	(MHH)	6. R.II.11896	99.3
	(DURM)	1454	98.6
		1455	98.9
305 AH/ 917-918 AD	(MHH)	7. R.II.11903	97.3
		8. R.II.11904	98.5
	(DURM)	1458	97.7
		1459	97.5
		1460	98.2
306 AH/ 918-919 AD	(MHH)	9. R.II.11907	97.6
		10. R.II.11908	98.7
		11. R.II.11909	94.8
		12. R.II.12115	97.0
	(DURM)	1461	96.9
		1462	82.9
		1463	94.9
307 AH/ 919-920 AD	(MHH)	13. R.II.11943	98.7
	(DURM)	1464	87.3
308 AH/ 920-921 AD	(MHH)	14. R.II.11925	97.7
	(DURM)	1465	96.5
		1466	98.1
		1467	96.6
310 AH/ 922-923 AD	(MHH)	15. R.II.11905	95.5
		16. R.II.12110	98.2
	(DURM)	1471	88.4
		1472	79.5
		1473	90.8
		1474	72.2
		1475	88.9
		1476	88.0
		1477	91.3
		1478	92.0
		1479	68.2
		1480	84.0
		1481	81.6
		1482	87.2
		1483	97.4
		1484	93.6
310 AH/ 922 AD	(DURM)	1485	82.9
316 AH/ 928-929 AD	(MHH)	17. R.II.12090	96.8
		18. R.II.12110	98.2
	(DURM)	1504	78.3
		1505	88.2
		1506	83.6
		1507	93.0
320 AH/ 932AD	(MHH)	19. R.II.12064	97.6
		20. R.II.12065	91.6
	(DURM)	1519	79.0
		1520	92.7

Table 5: Volga Bulgar			
Year of Mint		*Number*	*AG%*
al-Shash xx8 308 AH/ 920-921 AD	(MHH)	39. R.II.11915	96.4
		40. R.II.11916	96.1
		41. R.II.11917	96.8
		42. R.II.11918	96.3
		43. R.II.11919	95.6
		44. R.II.11920	95.3
		45. R.II.11921	96.0
		46. R.II.11922	96.0
		47. R.II.11923	97.2
		48. R.II. 11928	96.4
		49. R.II.11929	95.9
		50. R.II.11930	95.6
		51. R.II.11931	94.8
		52. R.II.11932	95.4
		53. R.II.11933	95.4
		54. R.II.12130	95.3
		55. R.II.12133	96.4
		56. R.II.12165	95.9
	(DURM)	3193	93.3
		3194	92.8
		3195	96.0
		3196	96.8
al-Amīr Yaltwar	(MHH)	120. R.II.12118	95.5
		121. R.II.12119	96.4
		122. R.II.12120	95.1
		123. R.II.12121	95.7
		124. R.II.12122	95.1
		125. R.II.12123	95.7
		126. R.II.12125	95.2
	(DURM)	3191	93.5

Table 4: Balk Mint			
Year of Mint		*Number*	*AG%*
292 AH/ 904AD	(MHH)	R.II.11867	97.7
	(DURM)	2189	97.6
312 AH/ 924-925 AD	(MHH)	2. R.II.11959	98.5
		3. R.II.11960	97.2
	(DURM)	2203	98.3
		2204	98.4
		2205	92.3
313 AH/ 925-926 AD	(MHH)	4. R.II.11970	99.1
	(DURM)	2206	80.2
		2207	81.1
		2208	78.3
		2209	84.5
		2210	96.2
		2211	97.6
		2212	97.3
317 AH/ 929-30 AD	(MHH)	5. R.II.12019	97.1
	(DURM)	2218	93.6

Closing:

In closing, the comparative analysis of the Máramaros "Huszt" hoard within an international framework offers profound insights into the intricate economic and trade networks of the tenth century. The rigorous examination of each dirham, considering its minting year and origin, coupled with the interdisciplinary collaboration of geochemists, historians, archaeologists, and Islamic scholars, has provided a comprehensive understanding of the metallurgical and numismatic characteristics of the hoard.

This study not only illuminates the historical significance of the Máramaros "Huszt" hoard but also contributes to the broader discourse on medieval trade routes and economic interactions. The documentation and analysis presented in this chapter serve as a valuable resource for future research on medieval coinage and monetary systems, establishing new benchmarks for categorizing and examining similar hoards.

Ultimately, the Máramaros "Huszt" hoard exemplifies the complex web of medieval commerce and the dynamic exchange relations that characterized the era. This chapter's findings highlight the importance of continued interdisciplinary research in uncovering the multifaceted dimensions of our historical and economic past, paving the way for new discoveries and a deeper appreciation of medieval numismatics.

XI. 3D Measurements of the hoard dirhams

In this chapter, we focused on the application of advanced measurement capabilities and imaging techniques to perform 3D measurements and capture detailed images of the dirhams from the Máramaros "Huszt" Hoard. Using the Digital Microscope VHX-6000 Series, we were able to accurately measure the engravings and inscriptions on the dirhams and capture high-resolution images for further analysis.

The advanced measurement capabilities of the VHX allowed us to perform precise 3D measurements of the dirhams. With the use of edge detection, even users with varying levels of experience could easily obtain accurate measurements. All measurements were taken directly on the screen, and the image and measurement data were saved for further analysis.

In addition to the 3D measurements, we also utilized the imaging capabilities of the VHX to capture high-resolution images of the dirhams. These images provided a detailed visual record of the dirhams' engravings, allowing for a closer examination of the design and craftsmanship.

To further enhance our understanding of the dirhams, we also employed photogrammetry techniques. By taking multiple photographs of each dirham from different angles, we were able to create 3D models of the coins. These models provided a virtual representation of the dirhams, allowing for a more comprehensive analysis of their shape, surface features, and overall condition.

The combination of 3D measurements and imaging techniques allowed us to gain a deeper understanding of the dirhams' design. The precise measurements of the engravings and inscriptions provided valuable insights into the historical and cultural significance of the dirhams. The high-resolution images and 3D models allowed for a detailed examination of the dirhams' physical characteristics and surface features.

To further disseminate the findings of our study, we included the 3D models and high-resolution images of the dirhams in this dissertation. These visual representations provide a valuable resource for future researchers and enthusiasts interested in studying the Máramaros "Huszt" Hoard and its dirhams.

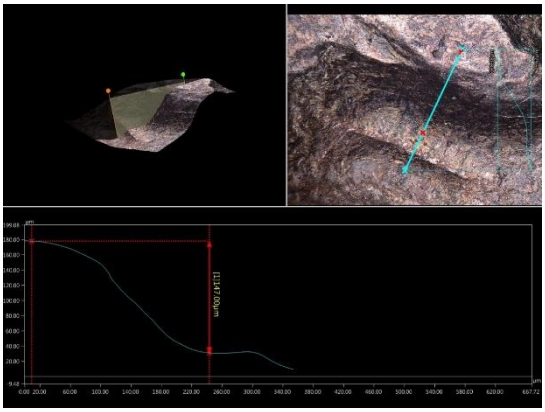
The application of 3D measurements in numismatics is a recent development, and the examination of the Máramaros "Huszt" Hoard dirhams provided an opportunity to apply this technique to the study of medieval coins. The precise measurements of the engravings and

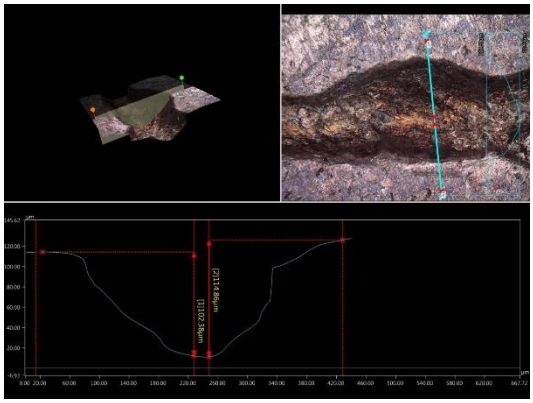
inscriptions contribute to our understanding of the historical and cultural significance of the dirhams.

In conclusion, Chapter XI highlighted the application of advanced measurement capabilities and imaging techniques to analyze the engravings and inscriptions on the dirhams from the Máramaros "Huszt" Hoard. The 3D measurements and high-resolution images provided valuable insights into the design of the dirhams. This chapter contributes to the growing field of numismatics and showcases the importance of advanced measurement and imaging capabilities in uncovering the hidden details and historical significance of ancient coins

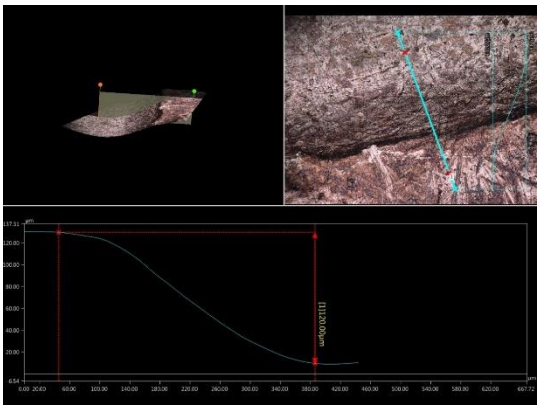
al-Shash mint

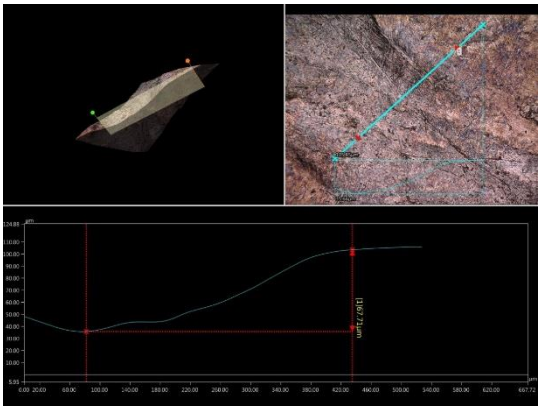
5. R.11.11863. Obverse Reverse



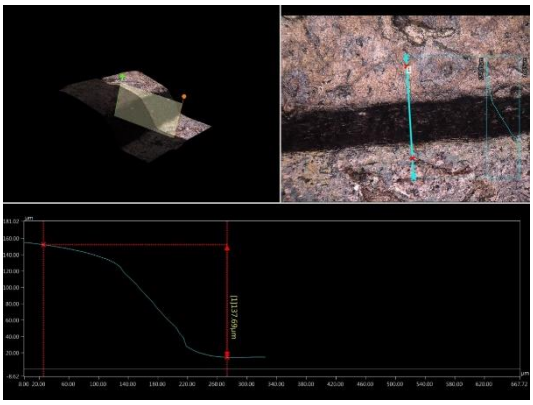


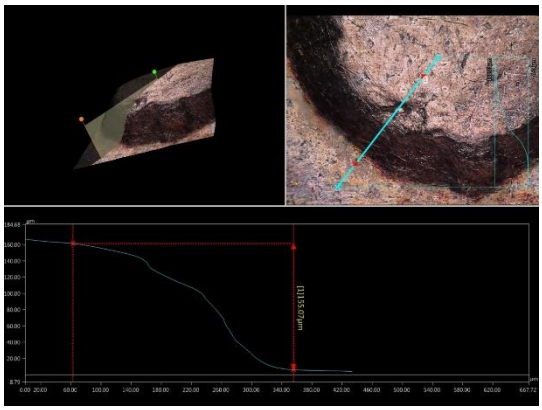
6. R.11.11864. Obverse Reverse



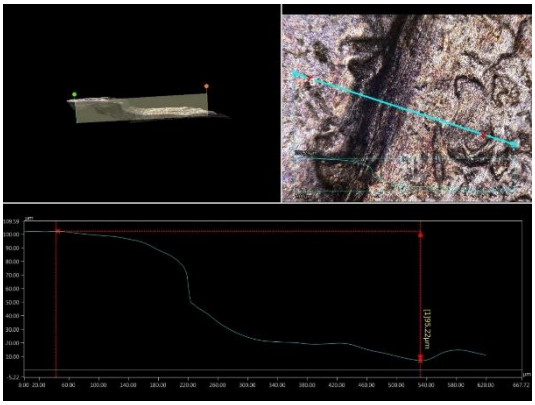


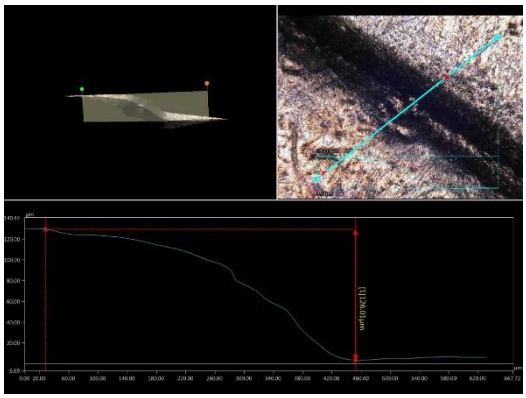
24. R.11.11898. Obverse Reverse



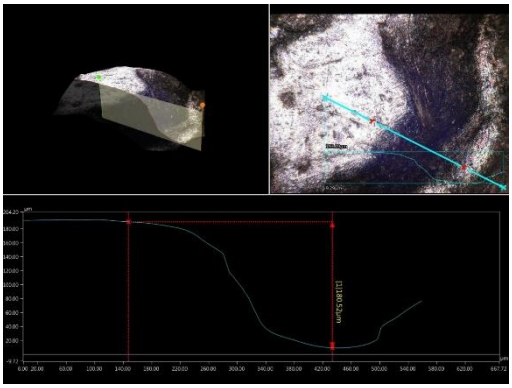


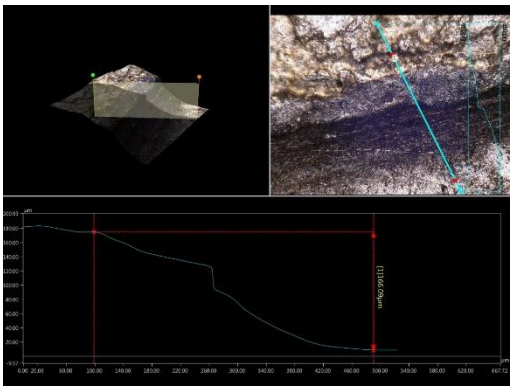
49. R.11.11991. Obverse Reverse



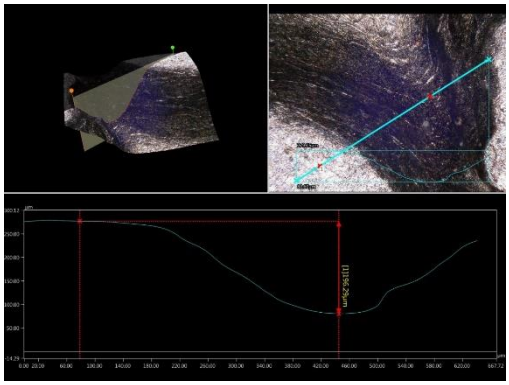


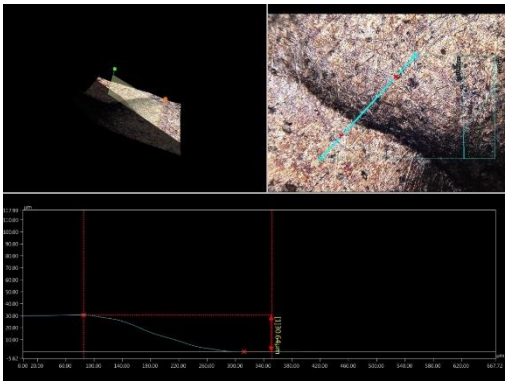
53. R.11.12000. Obverse Reverse





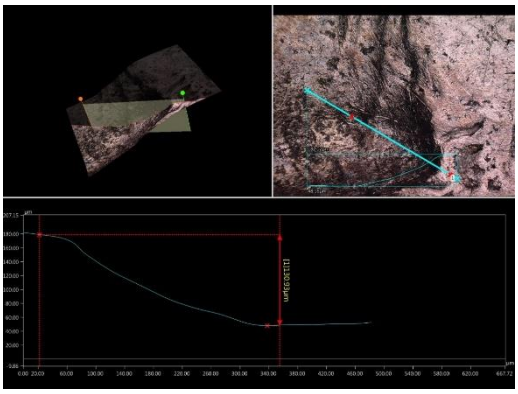
55. R.11.12174. Obverse Reverse

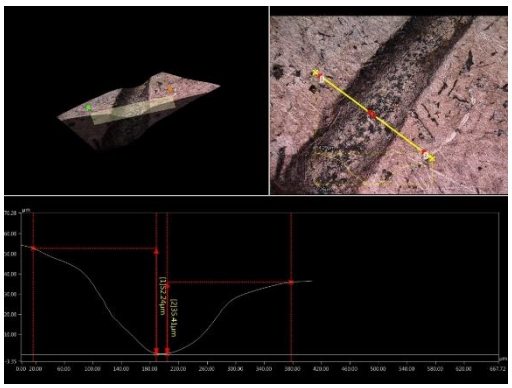




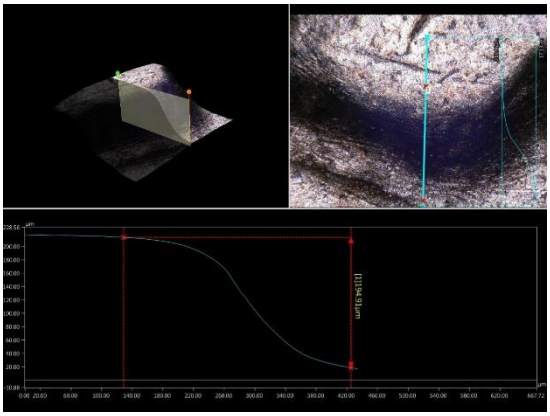
Samarqund Mint

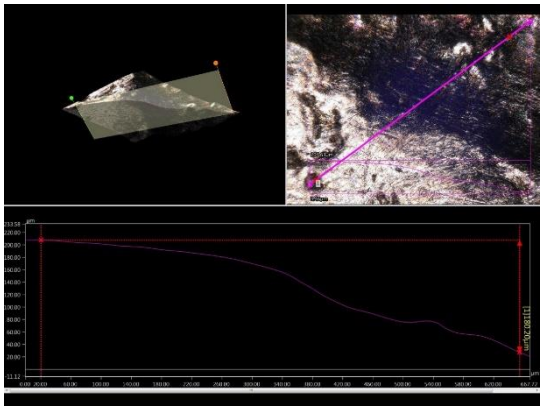
10. R.11.1897. Obverse Reverse



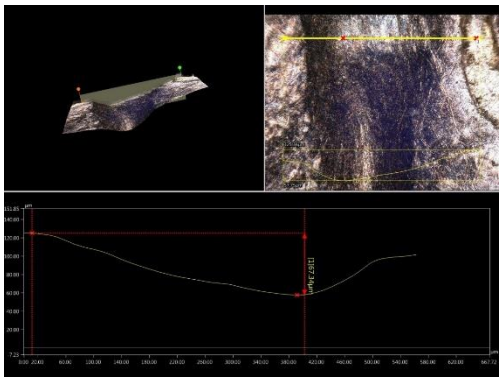


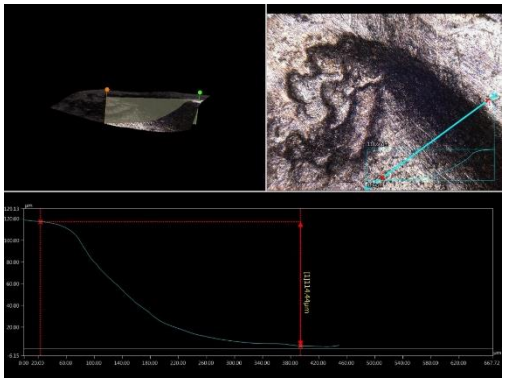
43. R.11.1989. Obverse Reverse



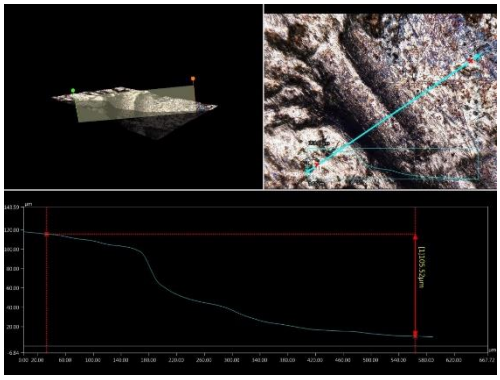


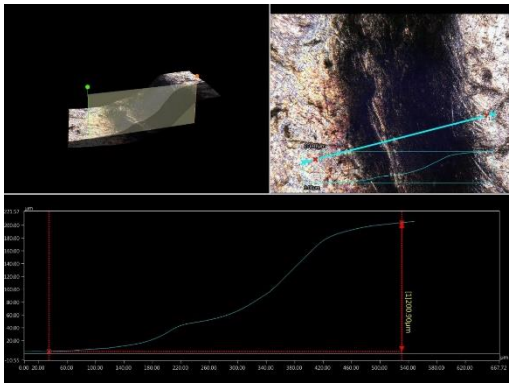
47. R.11.1993. Obverse Reverse





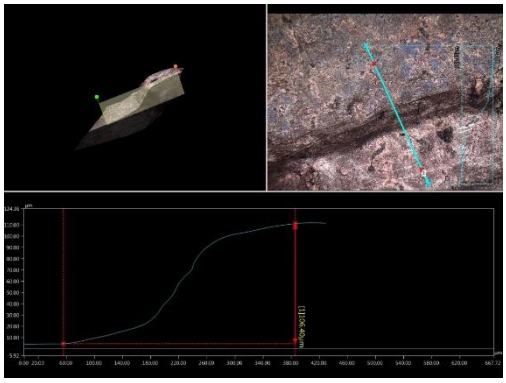
54. R.11.12007. Obverse Reverse

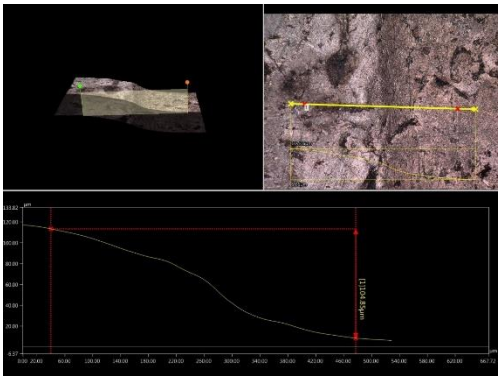




AndarÁbah mint

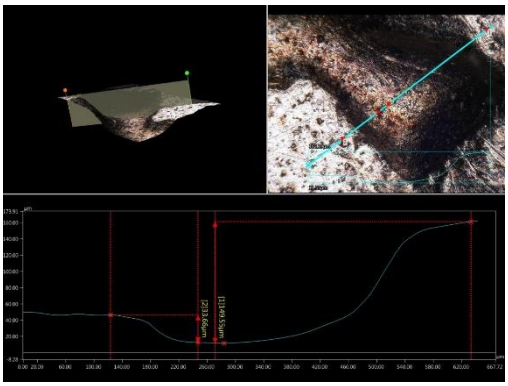
2. R.11.1889. Obverse Reverse

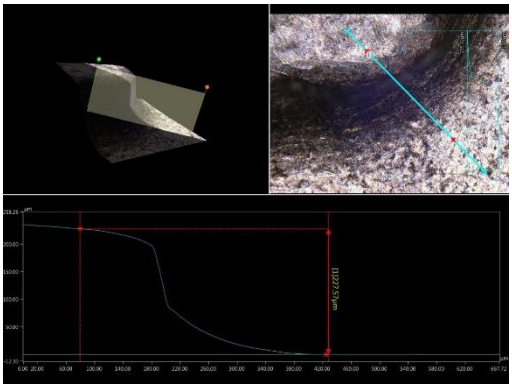




Balkh mint

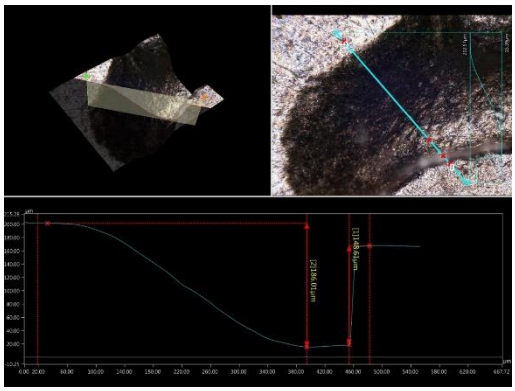
7. R.11.1983. Obverse Reverse

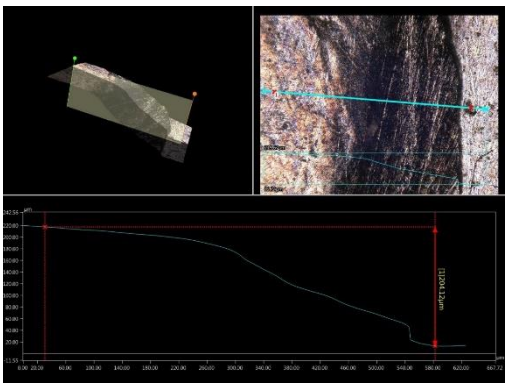




MaÝadin mint

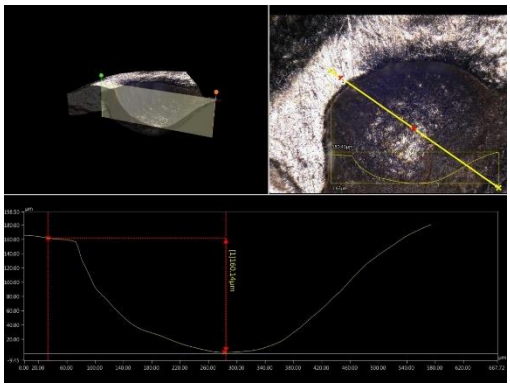
2. R.11.1988. Obverse Reverse

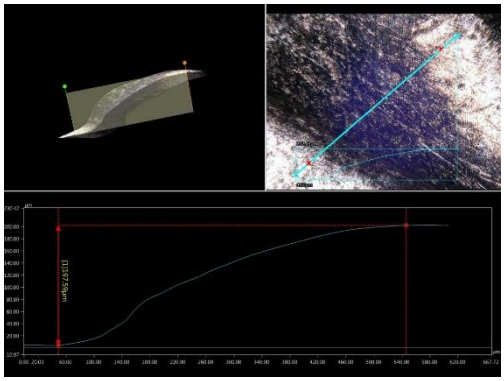




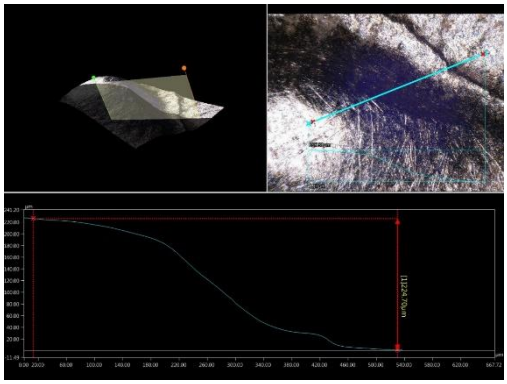
Imitation Volga Bulgar

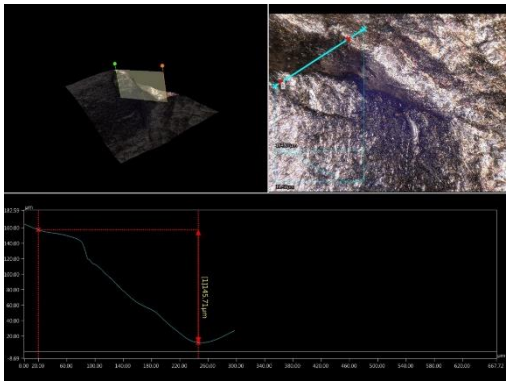
Type 1. 11. R.II.11988. Obverse Reverse



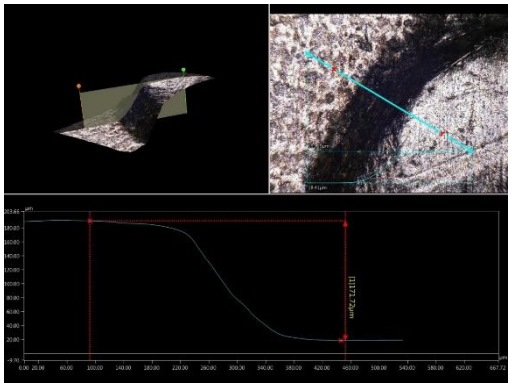


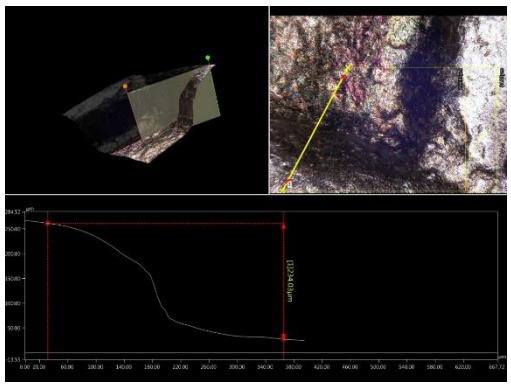
5. R.11.12166. Obverse Reverse



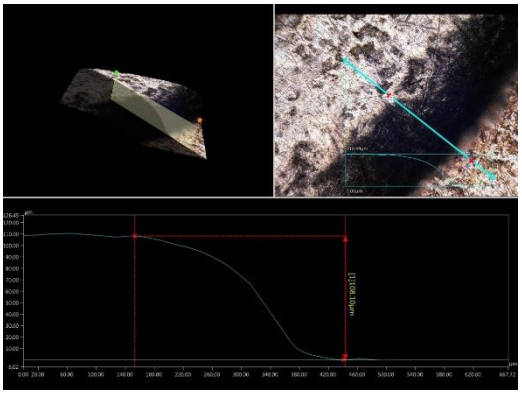


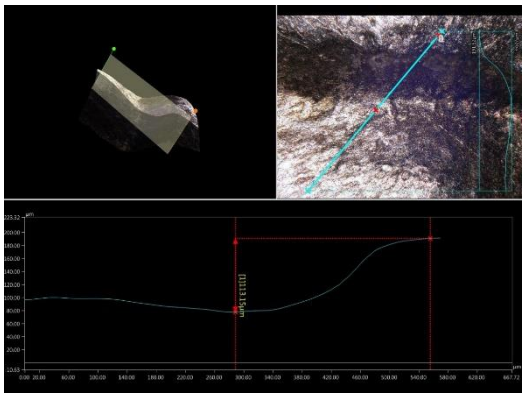
Type 2. 39. R.11. 11915. Obverse Reverse



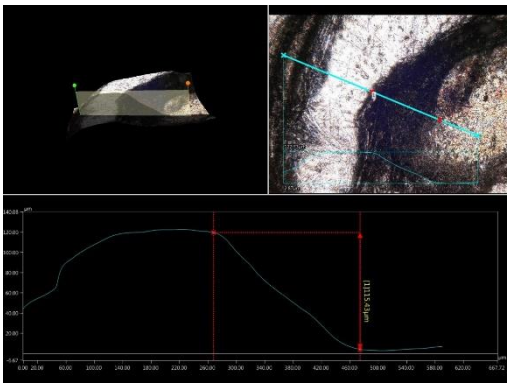


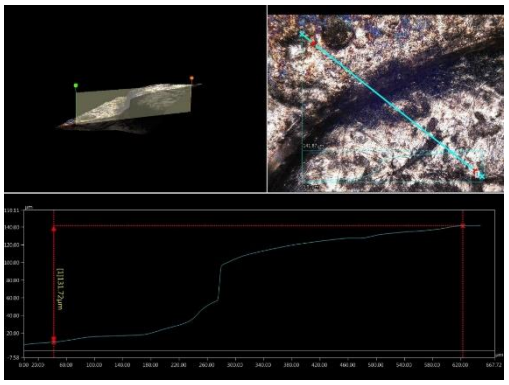
Type 3. 54. R.11. 11894. Obverse Reverse



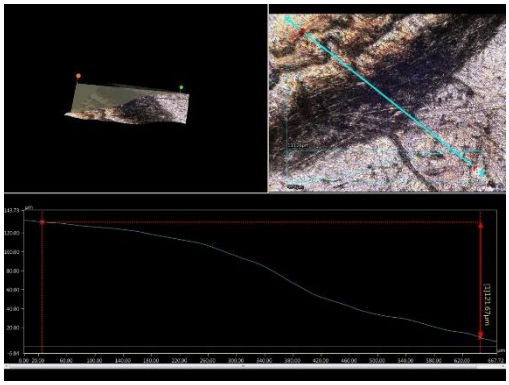


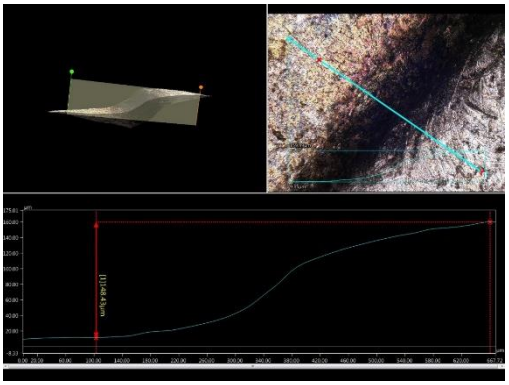
Type 5. 74. R.11.12149. Obverse Reverse



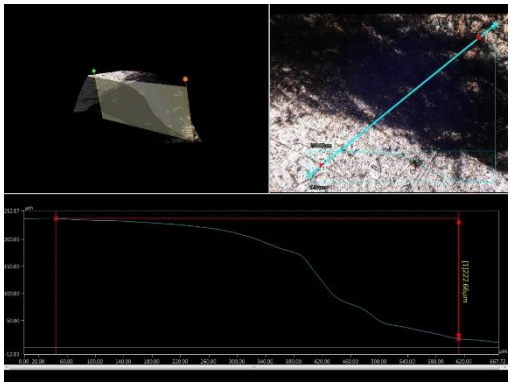


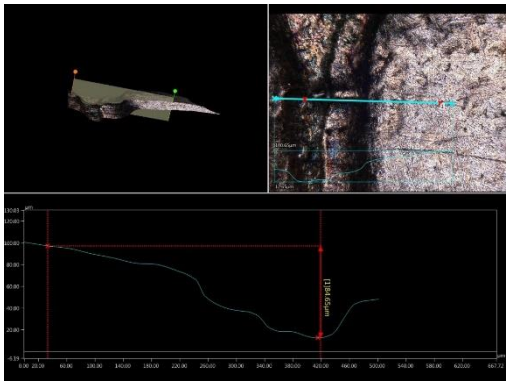
Type 6. 81. R.11.12134. Obverse Reverse



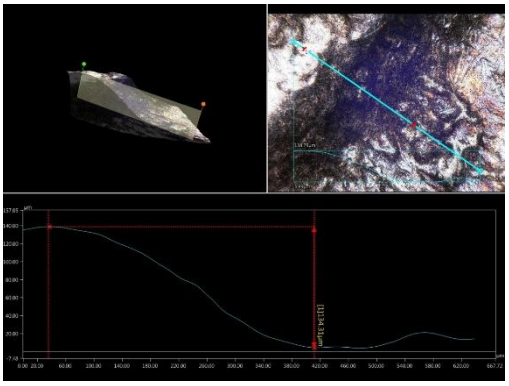


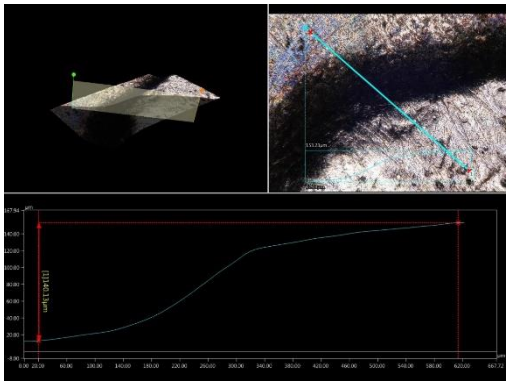
Type 7. 85. R.11.12137. Obverse Reverse



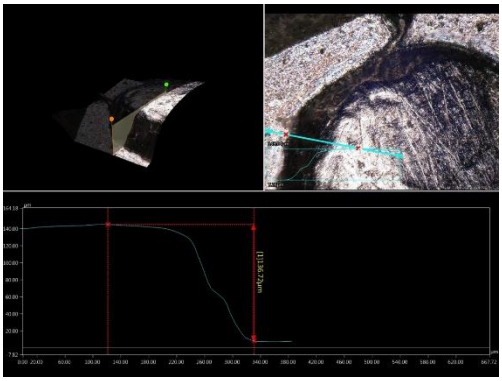


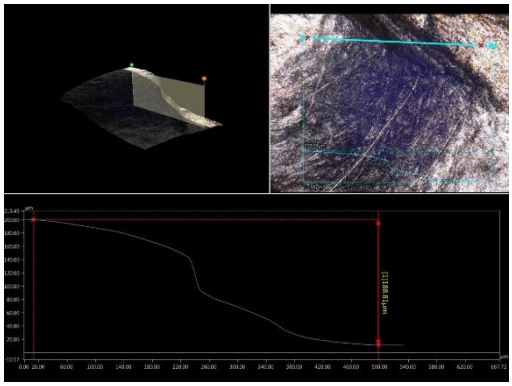
Type 11. 96. R.11.12154. Obverse Reverse



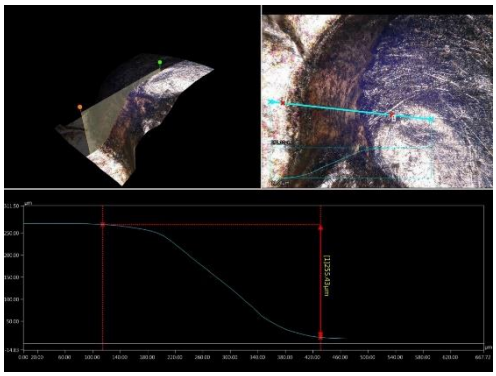


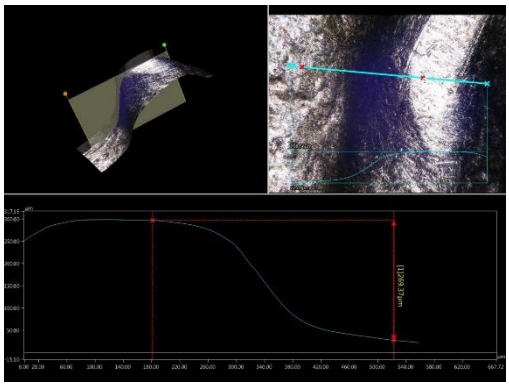
Type 13. 101. R.11.12206. Obverse Reverse





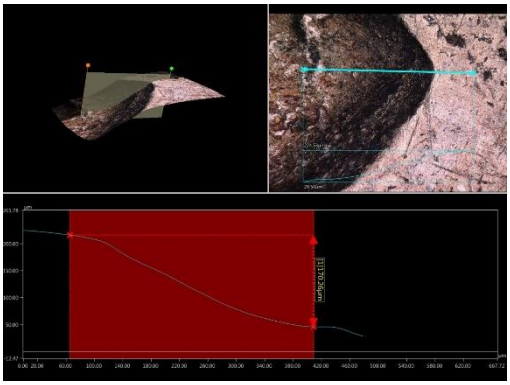
Type 28. 117. R.11.12208. Obverse Reverse

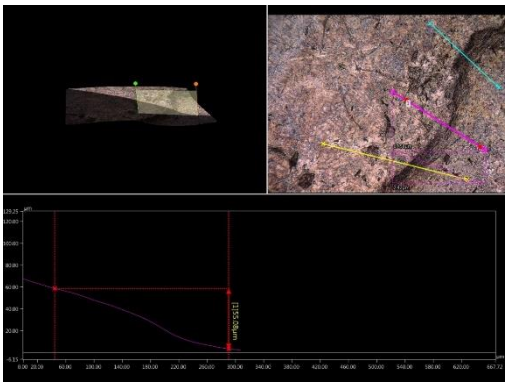




al- AmĐr Yaltwar of the Volga Bulgar

1. R.II.12118. Obverse Reverse





XII. Conclusion

A comprehensive examination of the temporal and geographical characteristics of the Máramaros "Huszt" hoard, juxtaposed with contemporaneous discoveries, provides significant insights into the numismatic landscape of the tenth century. Of particular interest is its comparison with the Bezlyudovka hoard, discovered in 1930 near the Kharkiv region of South Russia. The Bezlyudovka hoard represents the largest assemblage of Eastern European imitations of Islamic Kufic dirhams documented to date, serving as a pivotal resource for historical and numismatic inquiry. Dating to the first half to mid-tenth century, this hoard encompasses a total of 1,198 silver Islamic coins.[474]

The Bezlyudovka hoard comprises a diverse array of coinage, including 2 Abbasid, 102 Samanid, and 29 Volga Bulgarian coins, alongside a notable abundance of imitations. Notably, the bulk of the collection comprises imitative coinage. Specifically, the hoard contains 608 imitations of Samanid origin and 456 Kufic coins, totaling 1,066 imitations. The oldest coin in the hoard dates back to an 'Abbasid dirham of al-Muʿtamid ʿalā Allah, minted in Arminiya in 277 AH/ 890-891 AD, while the most recent datable coins include two Samanid dirhams of Nasr b. Ahmad, minted in Samarqand and al-Shash in 324 AH/ 935-936 AD *tpq.*[475]

The Bezlyudovka hoard stands as a significant numismatic artifact, meticulously studied by scholars like Richard Vasmer, whose initial exploration of the hoard commenced in the early 20th century.[476] Subsequently, A.A. Bykov undertook the task of preparing Vasmer's findings for publication, eventually included in a 2012 publication by Vyach. S. Kuleshov.[477]

The detailed description of the Bezlyudovka hoard, provided by Koloda, Lebedev, and Yenukov in 2014, characterizes the current state of the hoard, noting the preservation of 1006 out of the original 1198 coins. This description addresses the coin damage incurred during preparation for local circulation and usage, the metrology of clipped coins, graffiti on the coins, and the elemental composition of certain coins. [478]

[474] Колода, Лебедев, & Енуков 2014: 6.
[475] Кулешов 2014: 161.
[476] Фасмер 1933: 480–481.
[477] Быков А. А. 2012: 329–343.
[478] Колода, Лебедев, & Енуков 2014: 6-29.

The authors limited their attribution efforts to formal descriptions of the hoard's dirham imitations, which constitute 92.6% of the preserved coins, recognizing the hoard's multifaceted and often unique information on tenth-century minting and currency circulation.[479]

The most recent study of the Bezlyudovka hoard, conducted by Goglov in 2017, offers significant insights into the complexities of Kufic dirham imitations, which constitute the majority of the coins in the hoard. Goglov describes the Bezlyudovka hoard as a unique "encyclopedia of imitations" due to the diversity of its coin types. Despite more than a century of research, numismatics has made limited progress in addressing the intricate nature of these imitations, which hold considerable importance for socio-economic and potentially political reconstructions.[480]

In Eastern Europe, hoards containing Islamic dirhams typically include a small number of dirham imitations. Hoards with a substantial number of imitations are uncommon. Notable examples include the hoard found in the village of Borovikovo, Pskov province the Borovikovo hoard has the most finds of imitations (27.04% or 34 specimens out of 123).[481] In the hoard from the village of Kokryat, Spassky district. Kazan province, among 64 coins that reached study out of 300 found, 62 turned out to be imitations (20.66%).[482]

One of the most significant hoards in terms of the number of imitations is the hoard discovered in 1910 in the village of Bereza, in the Dmitrievsky district of the Kursk province.[483] This hoard contained 726 complete coins and 907 fragments, among which there were several hundred imitations.[484]

Another hoard was discovered in the Grayvoronsky district of the Belgorod Oblast. It included approximately 120 coins, 101 of which have been attributed and catalogued. The most recent coins date from *tpq* 313 AH/ 925-926 AD. Of the attributed dirhams, only 16 belong to the Abbasid and Samanid, while the rest are emissions of the Volga Bulghars or imitations, primarily of Volga Bulgar origin. Most of the coins are clipped into a circular shape, with the predominant “norm” being a circle with a diameter of 22.5 mm. [485]

[479] Колода, Лебедев, & Енуков 2014: 6-29.
[480] Гоглов 2017: 9.
[481] Марков 1910: 37-38.
[482] Марков 1910: 46.
[483] Lebedev 2011: 23.
[484] Vasmer 1929: 22.
[485] Kolosov, Kalinin, & Goglov 2020: 83.

The hoard provides a visual representation of the composition, methods of accumulation, and features of monetary circulation in the second quarter of the 10th century on the southeastern borders of the Severians' land.[486] The enormous Murom hoard found in 1868 contained 818 imitations of Samanid dirhams. [487] However, this substantial number represents only 7.38% of the hoard, which totaled 11,077 coins, excluding 14 pounds of fragments discovered within it.[488]

The updated topography of Eastern coins silver and Bulgar imitations discovered in the lands of Volga Bulgaria and neighboring territories, as studied in a 2016 Russian article by Salakhov, has been published, offering significant insights into the economic history of the region. This comprehensive study includes three maps detailing the topographies of hoards from the 9th, 10th, and 11th centuries, as well as a map illustrating the distribution of coin finds within early Bulgar. Analysis of these maps reveals that the circulation of Kufic coins in Volga Bulgaria and its economically influenced territories peaked during the 10th century. The topography of hoards has identified three primary centers of monetary accumulation: the core region of Volga Bulgaria, the Middle Oka River area, and the northern part of modern Udmurtia. This study also presents new data on coins minted by the emirs of Volga Bulgaria found in the Middle Volga region. [489]

In the study of Salakhov, 146 locations of Eastern coin finds have been identified across the examined territories, including 47 coin hoards, 70 individual coin finds, and 29 coin complexes from burial sites. The burial sites containing Eastern coins are categorized into early Bulgar and ancient Mari groups, with 7 sites dating to the late 8th-9th centuries, 19 to the 10th century, and 3 to the 11th century. Notable excavations, such as those at Dubovskoye, Nizhnyaya Strelka, Vyzhumskoye, and Rusenikhinskoye, have yielded significant numbers of new coins minted by the emirs of Volga Bulgaria.

Additionally, a hoard discovered in 2010 in Russian Yurtykul contained six coins minted by the AmÐr of Volga Bulgar, Mika'il b. Ja'far.[490] One of the most significant hoards from the 10th century is the collection found near Buraevo in 2012, which included three coins minted by the emirs of Volga Bulgaria: two by Mika'il b. Ja'far and one by 'Abdallah b. Tegin.[491]

[486] Kolosov, Kalinin, & Goglov 2020: 83.
[487] Марков 1910: 5-6. Салахов 2016: 79.
[488] Reva 2020: 213.
[489] Салахов 2016: 75.
[490] Лебедев, Трушин, & Кожевин 2012: 172-174.
[491] Беговатов & Черняев 2014: 26-27.

Currently, Gomzin is working on the topography of 10th-century Eastern European hoards of Kufic coins and 11th-12th century hoards containing Islamic coins.[492] This updated topography not only enhances our understanding of the monetary history of Volga Bulgaria but also provides valuable data for future research into the region's economic and political interactions with neighboring areas.

In a study conducted by Okhrimenko, Krychevsky, and Lokaychuk in 2019, the significance of Islamic dirhams in Northwest Ukraine was explored, with a focus on coin hoards from the 10th century as key sources of information.[493]

Notable hoards of Islamic coins and related items discovered in the Vitebsk, Minsk, Mogilev, and Grodno regions of Belarus indicate extensive trade connections along ancient routes, particularly linked to the Dnieper trade route. For instance, The Kazyankiv hoard found in 1973 near the village Kazyanka, Polotsk district, Vitebsk region. Contin 7,588 Islamic dirhams with a total weight of about 20 kg, mainly of the Samanid (mints of AndarÁbah, Samarqund, Balkh, al-Shash etc., Dirhams of the Abbasids, Saffarids, Volga Bulgaria - Bulgar mint). The hoard was hidden in 940 AD.[494]

The Dobryn hoard near Dobryna in the Vitebsk region consisted of a Scandinavian silver neck ring and 527 dirhams from the Umayyad dynasty, buried in the early 840 AD. The Parechcha hoard in the Vitebsk region comprised 561 coins, including Kufic dirhams ranging from 717-718 AD to 1014-1015 AD, a Byzantine miliaresion, and a Rus silver coin.[495]

The Bryli hoard in the Minsk region contained 300 Islamic dirhams and fragments, a 78 gram silver neck ring, and 10 weights (copper and iron), with coins dated to 742-743 AD and 890-891 AD. The Stary Dziedzyn hoard in the Mogilev region included 202 dirhams dated from 811-812 to 978-979 AD, a Byzantine miliaresion, and two German denarii.

The Paharelschyna hoard near Paharelschyna in the Minsk region, weighing 4850 grams and contained in a metal vessel, included a silver neck ring and 1904 dirhams (whole and fragmented). The Rakovets hoard near Rakovets in the Grodno region comprised 826 coins, including 810 Islamic dirhams dated from 908-932 AD and 940-944 AD.[496]

[492] Гомзин 2012: 390–393.
[493] Охріменко, Кричевський, & Локайчук 2019: 139-162.
[494] Гетаў 1993: 292.
[495] Гетаў 1993: 228.
[496] Охріменко, Кричевський, & Локайчук 2019: 142

These hoards, found north of the Pripyat Polesia in Belarus, often contain Arab dirhams from the 8th to 10th centuries, sometimes alongside other currency types, indicating extensive trade routes connected to the Dnieper and its offshoots.

One of the notable coin hoards discovered in Northwest Ukraine is the Lviv Hoard, discovered near the village of Yosypivka in the vicinity of Lviv. Dating back to the 10th century, this hoard contained a significant number of Islamic dirhams, providing valuable insights into the economic landscape of the region during this period. Another noteworthy discovery is the Dolzhyv hoard, found in the Turivskyi Raion, also dating to the 10th century, included Islamic dirhams among its contents, underscoring the widespread circulation of Islamic coins in Northwest Ukraine.[497]

In the study by the numismatist R. Fasmer, it was noted that the circulation of Islamic dirhams in Rus occurred in the 9th to 10th centuries, supported by found hoards of Islamic coins, especially in the Chernihiv region.[498] V. Yanin also mentioned that the spread of Islamic dirhams began in the late 8th century when trade links between the Caliphate and Rus emerged.[499]

Islamic coins have been predominantly found in Eastern Ukraine, notably in regions like Kharkiv, Sumy, Chernihiv, and Kyiv, some dating back to the 8th century. The number of discoveries of Arab coins in Volyn and Volyn Polissia is also increasing. For example, the Volyn Regional Museum has 297 silver Kufic dirhams minted in 918-921 AD, some coins are fragmented.[500]

Near the village of Klevan in Rivne region, a hoard of Islamic coins was found, as well as separate dirhams. In 1917, a hoard of 200 Islamic dirhams was found in Torchin in the Lutsk region.[501]

Another hoard was discovered near the village of Ostrovia in the Kremenets region. Near the village of Ozeriani in the Turii region, 32 Islamic coins were found. Near the village of Ivanychi in the Volyn region, a hoard of about 100 coins was found. In 2009, on the outskirts of Lyuboml, a hoard of silver coins, including 1420 Islamic dirhams, was discovered.[502]

[497] Охріменко, Кричевський, & Локайчук 2019: 143.
[498] Фасмер 1933: 476.
[499] Янин 1956: 79.
[500] Гулько 2017: 161-162.
[501] Пасюк 2016: 29.
[502] Malarczyk & Ostapiuk 2017: 308.

In 2011, near the village of Dorosyne in the Rozhyshche region, a hoard consisting of dirhams and jewelry was found. In the village of Khoniakiv in the Ostroh region, a large hoard consisting of silver gilded vessels was found.[503]

Different periods saw dominance by coins from different Islamic dynasties, with the Umayyads and Abbasids prominent in the early period, and Samanids dominating later on. The locations of hoards and individual coin finds in different regions of Ukraine suggest that more than 30 points have been identified where Arab coins have been discovered.[504]

The Bezlyudovka hoard and the Máramaros "Huszt" hoard, with their significant quantities of imitations, surpass previously mentioned hoards in terms of both percentage and absolute numbers. The compilation of mints associated with the genuine Kufic coins in the Bezlyudovka hoard and the Máramaros "Huszt" hoard is particularly noteworthy.[505]

Both hoards share a proximate terminus post quem (*tpq*) date, circa 324 AH / 935-936 AD for the Máramaros "Huszt" hoard and 324 AH / 935-936 AD for the Bezlyudovka hoard. The Máramaros "Huszt" hoard predominantly comprises 34% Volga Bulgar imitations, whereas the Bezlyudovka hoard exhibits a striking predominance of 92.6% Volga Bulgar imitations.[506]

Both the Máramaros "Huszt" hoard and the Bezlyudovka hoard feature a notable prevalence of dirhams issued by Naṣr Ibn Aḥmad, although there is a disparity in the distribution of mint locations. The Bezlyudovka hoard has a higher concentration of Samarqand dirhams,[507] while the Máramaros "Huszt" hoard contains more coins from al-Shash. This difference may reflect regional preferences or trade patterns in the respective areas where the hoards were discovered.

A discernible decline in the quality of Islamic coins circulating in Europe during the tenth century is evident, as indicated by the prevalence of dirham fragments in European hoards, some of which weigh less than a tenth of a gram. One such understudied hoard is the Lutsk hoard, which comprises 303 Samanid dirhams dating back to the reigns of NÙh ibn NaÒr (331-342 / 943-954 AD), ÝAbd al-Malik ibn NÙh (342-350 AH / 954-961 AD), and al-Amīr Manṣūr Ibn NÙh (350-365 AH / 961-976 AD). The majority of these dirhams were minted in Bukhara, al-Shash, and Samaqund. Additionally, the hoard includes a few Abbasid dirhams, and notably, 249 of the dirhams are in fragmentary condition. The origins of these dirhams are particularly

[503] Охріменко, Кричевський, & Локайчук 2019: 144.
[504] Охріменко, Кричевський, & Локайчук 2019: 156.
[505] Fomin & Kovács 1987: 46.
[506] Лебедев, Колода, & Енуков, 2017: 113.
[507] Кулешов 2014: 161.

challenging to trace. It is postulated that the treasure was discovered in the post-war decades of the 1940 and 1950. This hypothesis is supported by the absence of these dirhams in inventory records from the interwar period. The hoard is mentioned in the monograph "Hoards and Rare Coins in Northwestern Ukraine." One of the authors, G. Gulko, references a local historian who passed away in the same year as the publication. This historian suggested that the dirhams were found near Lutsk on the Styr River in northwestern Ukraine, within Volyn Oblast. However, this information is derived solely from oral sources. The dirhams are currently under scholarly examination by the author. This rigorous study will analyze the coins' inscriptions and historical context. Comprehensive results from this study will be published, contributing significantly to our understanding of the economic and cultural exchanges in the region during the respective periods.

This trend suggests an increase in fragment quantity and a decrease in weight by the early eleventh century, linked to the "silver crisis" in the Orient, particularly during the latter part of Naṣr Ibn Aḥmad 's reign.[508] The Samanid dirhams in the Máramaros “Huszt” hoard show various quality issues, including surface cracks, chipped edges, and a darker hue towards the end of Naṣr's rule. The designs of these coins became less distinct, likely due to deteriorating dies and inferior coin metal quality. The decline in minting quality around 310 AH/ 922 AD is observed in dirhams from al-Shash, Samarqand, and Balkh, with simplified designs and more uniform script post 310 AH.

In the Máramaros “Huszt” hoard, there is a notable subset of coins that are rarely found in other tenth-century hoards: coins that have been meticulously cut round using scissors, resulting in a distinctly circular appearance. These Kufic coins were altered in this manner to maintain the original dirham form while adjusting their weight to align with the local currency standards, which differed from those officially recognized in the caliphate.

Most hoards featuring round-cut dirhams have been discovered in the southern regions of Russia, specifically in the Orlov, Kursk, Voronezh, and Kharkov districts. The Bezlyudovka hoard, is from this area as well. more than 1000 dirhams, cut into a circle, which almost entirely consisted of imitations. Calculations indicate that the average weight of these clipped dirhams ranged from 1.2 to 1.3 grams, suggesting a standard weight of approximately 1.25 grams. [509]

[508] Jankowiak 2023: 349.
[509]Лебедев, Колода, & Енуков 2017: 117.

The clipped coins in the Máramaros “Huszt” hoard can be categorized into two distinct groups: Samanid dirhams and Volga Bulgar imitations. The Samanid dirhams total 58 coins, which can be further divided as follows: from al-Shash, there are 27 coins comprising 4 of al-Amīr Ismāʿīl ibn Aḥmad, 6 of al-Amīr Aḥmad Ibn Ismāʿīl, and 17 of al-Amīr Naṣr Ibn Aḥmad; from Samarqand, there are 20 coins, all of which are of al-Amīr Naṣr Ibn Aḥmad; from Andarāba, there are 8 coins including 1 of al-Amīr Ismāʿīl Ibn Aḥmad, 2 for al-Amīr Aḥmad Ibn Ismāʿīl, and 5 for al-Amīr Naṣr Ibn Aḥmad; from Balkh, there are 2 coins, both of al-Amīr Naṣr Ibn Aḥmad; and from Maʿādin, there is 1 coin of al-Amīr Naṣr Ibn Aḥmad. The Volga Bulgar imitations total 96 coins. Consequently, nearly half of the 373 extant coins in the hoard are round-cut.

The weight standard of the clipped dirhams is slightly higher than that of the cut imitations. None of the round-cut dirhams weigh less than 1.5 grams, whereas 20 of the imitations do. When calculating a generalized weight standard based on the average weights of the dirhams and imitations, it is evident that the majority of the clipped coins fall within the 1.5 to 2.2-gram range, with a peak distribution between 1.7 and 2.0 grams.

The study of tenth-century coin hoards, particularly through archaeometry, provides valuable insights into the intricate details of silver content in dirhams minted across various mints and under different rulers. Specifically, the Máramaros “Huszt” hoard, among others, can be re-evaluated using contemporary scientific techniques in numismatics to refine our understanding and uncover new insights.

Modern methodologies, such as metallurgical analysis, advanced imaging technologies, and detailed die studies, enable precise determinations of coin compositions and minting processes. By meticulously examining the varying percentages of silver in these coins, researchers can gain a deeper understanding of the historical, economic, and cultural significance of each mint's coin production.

Exploring the composition and metallurgical aspects of these dirhams reveals a wealth of information about the craftsmanship and artistry behind their creation. Revisiting other hoards from this period, such as the Isfahan hoard, using the rigorous methodologies applied to the Máramaros “Huszt” hoard, can provide fresh perspectives. Comparing the percentages of silver in tenth-century hoards can uncover variations in minting standards, coin circulation, and economic interactions between different regions. Systematic analysis of die relations and wear patterns offers insights into production techniques and distribution networks of the time.

Re-examining the Máramaros “Huszt” hoard and other contemporary hoards using advanced scientific methods represents a significant opportunity to deepen our understanding of the numismatic landscape of the tenth century. Applying these techniques to historical artifacts allows researchers to uncover hidden details, refine existing theories, and contribute to a more comprehensive understanding of the economic, political, and cultural dynamics of the period. In closing , the study of coin hoards from the tenth century serves as a valuable lens through which to examine the economic interactions, minting practices, and regional trade networks of the time. By utilizing modern scientific methodologies, researchers can shed new light on these ancient artifacts, enriching our understanding of the complexities of coin circulation and production during this pivotal period in history.

This dissertation has conducted an exhaustive examination of the Máramaros “Huszt” hoard, providing detailed descriptions of each individual coin within the collection, including information on mint origins, names of associated Samanid Amir and Abbasid Caliph, dates, weights, diameters, inscriptions, and content. Through innovative methodologies, new insights have been gleaned into the trajectories of these silver dirhams, elucidating their movements into and out of the Muslim world and their eventual presence in the Carpathian Basin. The study has also underscored the potential trade and economic relations between the Islamic world and Eastern Europe during the period under investigation.

Significant contributions to the field of numismatics and historical inquiry have emerged from this research. Notably, the identification of a dirham minted in Bolgar, representing one of the earliest coins of the Volga Bulgars, stands as a seminal discovery. This finding, previously unexplored in extant literature, confirms commercial exchange relations between the Bulgar, Hungarian, and Muslim entities during the tenth century. The correct interpretation of the mint name adds critical nuance to our understanding of economic and cultural dynamics in Eastern Europe during this epoch.

Moreover, through a comprehensive analysis of ninth and tenth-century Muslim dirhams found in Hungarian graves and within the Máramaros “Huszt” hoard, this study has elucidated the multifaceted historical, cultural, and economic tapestry of the Carpathian Basin during the period in question. The series of Islamic coins listed in this dissertation of the Hungarian graves of the time of the Hungarian conquest and supplemented with the Máramaros “Huszt” hoard embracing mainly the period between 237 AH/851 AD and 323 AH/935-936 AD. most of the discovered dirhams were issued by the Samanids or Volga Bulgar imitations coins. The

remaining are Abbasid coins the ninth-century dirhams of Karos and Kisdobra cemeteries, which were discovered together with tenth-century Samanid dirhams.

The arrangement of the Samanid dirhams found in the Carpathian basin in chronological order reveals that with one exception all the coins are from a period after the Hungarian conquest of the Carpathian basin in 895-896 AD. Virtually every year of the period starting from the ascendance of emir Ismail b. Ahmad 280 AH/ 893 AD and ending with the earliest minting date of the latest coin in the Máramaros "Huszt" hoard 324 AH/ 935-936 AD is represented by a mint in the Carpathian basin. The prevalence of Islamic coins in this region, particularly concentrated around the Upper Tisza area, suggests significant socio-economic activity and raises pertinent inquiries into the region's past, including potential ties to warfare and commerce.

The identification of the Jászfelsőszentgyörgy dirham as the earliest Muslim coin from the Hungarian conquest period challenges existing assumptions and provides fresh insights into currency circulation within the region. Furthermore, tracking the evolution of dirham circulation alongside the rise of Western European currency sheds light on the evolving economic landscape and interconnected trade routes of the Carpathian Basin.

The study also explores hypotheses regarding the role of Muslim traders, particularly Volga Bulgar merchants, in facilitating trade networks within Eastern Europe. This interdisciplinary investigation, drawing upon numismatic evidence, historical context, and archaeological findings, highlights the region's openness to trade and its interconnectedness with diverse merchants and regions.

Future research and excavations hold promise for uncovering additional insights into the socio-economic, cultural, and political interactions of the time. The archaeological interpretation of the Máramaros "Huszt" hoard, alongside investigations into Islamic dirhams found in Hungarian graves, underscores the enduring importance of numismatics in reconstructing historical narratives and enriching our understanding of the region's past.

Furthermore, advanced archaeometric techniques, such as X-Ray fluorescence (XRF) analysis, have provided valuable insights into the composition, metallurgical characteristics, and regional differences in coin production within the hoard. By comparing the silver content of dirhams in the Máramaros "Huszt" hoard with those from other European hoards, this research has contributed to a deeper understanding of medieval trade networks and economic interactions.

In conclusion, the Máramaros “Huszt” hoard serves as a pivotal artifact exemplifying the intricate web of medieval commerce and exchange relations. The findings presented in this dissertation not only illuminate the historical significance of the hoard but also contribute to broader discussions on medieval trade routes and economic interactions. This research provides a valuable resource for scholars interested in the complex interplay of economics, culture, and history in medieval Europe, inspiring further interdisciplinary inquiry into similar hoards and their implications for our understanding of the past.

Finally, The Máramaros “Huszt” hoard dirhams were presented in one modern catalog with photos taken by Digital Microscope VHX-6000 Series, and 3D measurements of the dirhams, the Images of the samples were recorded using 20x-200x and 500-5000x zoom lenses at different magnifications with reflective illumination. All measurements were taken directly on the screen, and saved with the image, and an automatic report was generated with all the image and measurement data.

The research, illuminated the Archaeology, historical, economic, and cultural connections that shaped the ninth-tenth-century Carpathian Basin and its interactions with the Islamic world. The result of this study also contributed to the historiography of Carpathian Basin by studying the Islamic coins and highlighting the region's role in the extensive trade networks of the time. Through the interdisciplinary approach employed, we hope to inspire further research into similar hoards and their broader implications. In conclusion, this dissertation provides a comprehensive and insightful examination of the intricate connections between Archaeology, history, economics, and culture in medieval Europe in the ninth-tenth centuries, offering a valuable contribution to the scholarly discourse on this subject.

XIII. Bibliography

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XIV. The Catalogue of the Máramaros “Huszt” hoard

al-Shash mint, 117 Dirhams. 31,3%

IsmÁÝÐl ibn AÎmad (279- 295 AH. 892- 907 AD). 10 dirhams.

Obverse:

Center Legend
لا إله الا
الله وحده
لا شريك له

There is no God
except Allah
He is Alone
There is no partner to him

Marginal Legend:
بسم الله ضرب هذا الدرهم بالشاش سنة ست وثمان ومئتين
In the name of God this dirham was struck in **al-ShÁsh** in the year two hundred and eighty-seven. (287) AH.

Outer margin: ((From Qur’ān XXX, 4-5))

لله الامر من قبل ومن بعد يومئذ يفرح المؤمنون

with Allah is the decision, in the past and in the future: on that day shall the believers rejoice.

Reverse:

Center Legend
الله
محمد
رسول الله
المعتضد بالله
إسماعيل بن أحمد

Allah
MuÎammad
is the Messenger of God
al-MuÝtaÃid billah
IsmÁÝÐl ibn AÎmad

Marginal Legend:

Outer margin: ((From Qur’ān IX, 33))

محمد رسول الله أرسله بالهدى ودين الحق ليظهره على الدين كله ولو كره المشركون.
Muhammad is the messenger of God. He sent him with guidance and the true religions to reveal it to all religions even if the polytheists abhor it

1. R. II. 11855
287AH/ 900AD.
2.67 g. 25.91 mm.

Obverse

2. R. II. 11861
287AH/ 900 AD.
2.65 g. 25.48 mm.

Obverse

3. R. II. 11862
287AH/ 900 AD.
Cut round.
2.74 g. 28.27 mm.

Obverse

4. R. II. 11857
288 AH/ 900-901 AD.
2.86 g. 27.27 mm.

Obverse

5. R. II. 11863
288 AH/ 900-901 AD.
2.78 g. 27.21 mm.

Obverse

Reverse

6. R. II. 11864
290 AH/ 902-903 AD.
Cut round.
2.24 g. 24.86 mm.

Reverse

7. R. II. 11866
292 AH/ 904 AD.
Cut round.
2.18 g. 24.97 mm.

Reverse

8. R. II. 11868
293 AH/905-906 AD.
3.21 g. 28.31 mm.

Reverse

9. R. II. 11869
293 AH/ 905- 906 AD.
3.45 g. 27.54 mm.

Reverse

10. R. II. 11870
294 AH/ 906-907 AD. Cut round.
2.26 g. 24.96 mm.

Obverse

Reverse

Obverse

Reverse

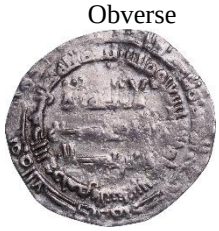
Obverse

Reverse

Obverse

Reverse

Obverse



Reverse

AÎmad Ibn IsmÁÝÐl (295- 301 AH/ 907- 914 AD). 13 dirhams. 6 Cut round.8

Obverse:

Center Legend
لا إله الا
الله وحده
لا شريك له

There is no God
except Allah
He is Alone
There is no partner to him

Reverse:

Center Legend
الله
محمد
رسول الله
المقتدر بالله
أحمد بن إسماعيل

Allah
MuÎammad

Marginal Legend:
بسم الله ضرب هذا الدرهم بالشاش سنة خمس وتسعين ومئتين
In the name of God this dirham was struck in **al-ShÁsh** in the year two hundred and ninety-five (295) AH.

Outer margin: ((From Qur'ān XXX, 4-5))

لله الامر من قبل ومن بعد يومئذ يفرح المؤمنون

with Allah is the decision, in the past and in the future: on that day shall the believers rejoice.

is the Messenger of God
al-Muqtadir billah
AÎmad Ibn IsmÁÝÐl

Marginal Legend:

Outer margin: ((From Qur'ān IX, 33))

محمد رسول الله أرسله بالهدى ودين الحق ليظهره على الدين كله ولو كره المشركون.
Muhammad is the messenger of God. He sent him with guidance and the true religions to reveal it to all religions even if the polytheists abhor it

11. R. II. 11872
295 AH/ 907AD.
Cut round.
1.81 g. 23.58 mm.

Obverse

Reverse


12. R. II. 11874
295 AH/ 907AD.
Cut round.
1.75 g. 24.05 mm.

Obverse

Reverse


13. R. II. 11875
297 AH/ 909-910 AD.
2.80 g. 27.15 mm.

Obverse

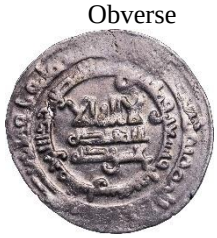
Reverse


14. R. II. 11876
297 AH/ 909-910 AD.
3.12 g. 28.05 mm.

Obverse

Reverse


15. R. II. 11877
298 AH/ 910-911 AD.
2.84 g. 27.36 mm.

Obverse

Reverse


16. R. II. 11879
298 AH/ 910-911AD.
2.34 g. 28.35 mm.

17. R. II. 11880
298 AH/ 910-911 AD. Cut round.
2.07 g. 23.50 mm.

18. R. II. 11873
299 AH/ 911-912 AD.
2.74 g. 26.39 mm.

19. R. II. 11882
299 AH. 911-912 AD. Cut round.
2.81 g. 25.17 mm.

20. R. II. 11885
300 AH/ 912-913 AD.
2.80 g. 26.76 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

21. R. II. 11886
300 AH/ 912-913 AD. Cut round.
2.72 g. 24.34 mm.

Obverse

Reverse

22. R. II. 11887
301 AH/ 913-914 AD. Cut round.
2.86 g. 29.31 mm.

Obverse

Reverse

23. R. II. 11888
301 AH/ 913-914 AD
3.29 g. 26.20 mm

Obverse

Reverse

NaÒr Ibn AÎmad (301- 331 AH/ 914- 943 AD). 98 dirhams.

Obverse:

Center Legend
لا إله الا
الله وحده
لا شريك له

There is no God

Reverse:

Center Legend
الله
محمد
رسول الله
المقتدر بالله
نصر بن احمد

except Allah
He is Alone
There is no partner to him

Marginal Legend:
بسم الله ضرب هذا الدرهم بالشاش سنة أربع وثلاثمائة
In the name of God this dirham was struck in **al-ShÁsh** in the year three hundred and one (301) AH.

Outer margin: ((From Qur'ān XXX, 4-5))

لله الامر من قبل ومن بعد يومئذ يفرح المؤمنون

with Allah is the decision, in the past and in the future: on that day shall the believers rejoice.

Allah
MuÎammad
is the Messenger of God
al-Muqtadir billah
NaÒr ibn AÎmad

Marginal Legend:

Outer margin: ((From Qur'ān IX, 33))

محمد رسول الله أرسله بالهدى ودين الحق ليظهره على الدين كله ولو كره المشركون.
Muhammad is the messenger of God. He sent him with guidance and the true religions to reveal it to all religions even if the polytheists abhor it

24. R. II. 11892
301 AH/ 913-914 AD.
1.83 g. 23.79 mm.

Obverse

Reverse

25. R. II. 11897
304 AH/ 916-917 AD.
3.31 g. 28.39 mm.

Obverse

Reverse

26. R. II. 11899
304 AH/ 916-917 AD.
3.75 g. 27.59 mm.

Obverse

Reverse

27. R. II. 11900
304 AH/ 916-917 AD. Cut round.
2.00 g. 22.47 mm.

Obverse

Reverse

28. R. II. 11942
307 AH/ 919-920 AD.
3.13 g. 27.41 mm.

Obverse

Reverse

29. R. II. 11871
308 AH/ 920-921 AD.
2.72 g. 27.11 mm.

30. R. II. 11926
308 AH/ 920- 921 AD.
2.89 g. 27.85 mm.

31. R. II. 11927
308 AH/ 920- 921 AD.
2.92 g. 27.34 mm.

32. R. II. 12183
308 AH/ 920- 921 AD. Cut round.
2.04 g. 22.97 mm.

33. R. II. 11954
311 AH/ 923-924 AD. Cut round.
2.52 g. 26.93 mm.

Obverse

Reverse

34. R. II. 11955
311 AH/ 923-924 AD.
2.99 g. 28.16 mm.

Obverse

Reverse

35. R. II. 11956
311 AH/ 923-924 AD. Cut round.
2.74g. 25.66 mm.

Obverse

Reverse

36. R. II. 11958
311 AH/ 923-924 AD.
3.11 g. 29.71 mm.

Obverse

Reverse

37. R. II. 12222
311 AH/ 923-924 AD.
3.11 g. 29.59 mm.

Obverse

Reverse

38. R. II. 11957
312 AH/ 924-925 AD. Cut round.
2.13 g. 24.40 mm.

Obverse

Reverse

39. R. II. 11962
312 AH/ 924-925 AD.
3.12 g. 27.38 mm.

Obverse

Reverse

40. R. II. 11934
312 AH/ 924-925 AD.
2.96 g. 26.88 mm.

Obverse

Reverse

41. R. II. 11969
313 AH/ 925-926 AD.

Obverse

Reverse

42. R. II. 11975
314 AH/ 926-927 AD.
3.33 g. 28.62 mm

Obverse

Reverse

43. R. II. 11985
315 AH/ 927-928 AD.
2.89 g. 26.58 mm.

. 2.89 g. 28.09 mm

.

Obverse

Reverse

44. R.II.11987
315 AH/ 927-928 AD.
3.70 g. 27.49 mm.

Obverse

Reverse

45. 1B/ 904-251
315 AH/ 927-928 AD.
3.20 g. 27.48 mm.

Obverse

Reverse

46. R. II. 12015
315 AH/ 927-928 AD.
3.06 g. 28.90 mm.

Obverse

Reverse

47. R. II. 11971
316 AH/ 928-929 AD.
2.72 g. 28.52 mm

Obverse

Reverse

48. R. II. 11979
316 AH/ 928-929 AD.
2.88 g. 29.05 mm

Obverse

Reverse

49. R. II. 11990
316 AH/ 928-929 AD.
2,88 g. 28.74 mm.

Obverse

Reverse

50. R. II. 11991
316 AH/ 928-929 AD.
2,96 g. 27.53 mm.

Obverse

Reverse

51. R. II. 11992
316 AH/ 928-929 AD.
3.42 g. 28.00 mm.

Obverse

Reverse

52. R. II. 11994
316 AH/ 928-929 AD.
2.79 g. 27.59 mm.

Obverse

Reverse

53. R. II. 11995
316 AH/ 928-929 AD.
2.91 g. 28.41 mm.

Obverse

Reverse

54. R. II. 11996
316 AH/ 928-929 AD.
2.89 g. 28.48 mm.

Obverse

Reverse

55. R. II. 11997
316 AH/ 928-929 AD.
3.01 g. 29.04 mm.

Obverse

Reverse

56. R. II. 12000
316 AH/ 928-929 AD.
2.92 g. 26.92 mm.
.

Obverse

Reverse

57. R. II. 12005
316 AH/ 928-929 AD.
2.79 g. 29.09 mm

Obverse

Reverse

58. R. II. 12018
316 AH/ 928-929 AD.
3.01 g. 28.05 mm.

Obverse

Reverse

59. R. II. 12174
316 AH/ 928-929

Obverse

Reverse

60. R. II. 12004
317 AH/ 929-930 AD.

Obverse

Reverse

61. R. II. 12009

Obverse

Reverse

62. R. II. 12010
317 AH/ 929-930

Obverse

Reverse

63. R. II. 12011
317 AH/ 929-930 AD.

AD. Cut round.
2.44 g. 25.84 mm

2.99 g. 28.65 mm.

317 AH/ 929-930
AD. Cut round.
2.86 g. 27.68 mm.

AD. Cut round. 8
3.42 g. 26.34 mm

3.02 g. 29.07 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

64. R. II. 12012
317 AH/ 929-930
AD.
3.31 g. 27.67 mm

65. R. II. 12013
317 AH/ 929-930
AD.
2.99 g. 28.15 mm.

66. R. II. 12014
317 AH/ 929-930
AD.
3.11 g. 29.36 mm.

67. R. II. 12016
317 AH/ 929-930
AD.
3.19 g. 26.36 mm.
.

68. R. II. 12017
317 AH/ 929-930
AD.
2.76 g. 29.24 mm
.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

69. R. II. 12107
317 AH/ 929-930
AD. Cut round.

70. R. II. 12027
318 AH/ 930-931
AD.

71. R. II. 12028
318 AH/ 930-
931AD.

72. R. II. 12029
318 AH/ 930-931
AD.

73. R. II. 12030
318 AH/ 930-931
AD. Cut round.

3.34 g. 27.75 mm

Obverse

Reverse

3.13 g. 28.01 mm.

Obverse

Reverse

2.73 g. 26.98 mm.

Obverse

Reverse

3.15 g. 27.43 mm.

.

Obverse

Reverse

2.58 g. 26.65 mm.

Obverse

Reverse

74. R. II. 12031
318 AH/ 930-931 AD. Cut round. 11
2.96 g. 27.77 mm

Obverse

Reverse

75. R. II. 12032
318 AH/ 930-931 AD.
2.69 g. 27.46 mm.

Obverse

Reverse

76. R. II. 12033
318 AH/ 930-931AD.
2.84 g. 28.41 mm.

Obverse

Reverse

77. R. II. 12034
318 AH/ 930-931 AD.
2.45 g. 29.62 mm.

Obverse

Reverse

78. R. II. 12036
319 AH/ 931- 932 AD.
3.85 g. 27.52 mm.

Obverse

Reverse

79. R. II. 12044
319 AH/ 931- 932 AD.
2.75 g. 27.11 mm
Obverse

Reverse

80. R. II. 12045
319 AH/ 931- 932 AD.
2.90 g. 28.25 mm
Obverse

Reverse

81. R. II. 12046
319 AH/ 931- 932 AD. Cut round.
3.85 g. 28.05 mm.
Obverse

Reverse

82. R. II. 12047
319 AH/ 931- 932 AD. Cut round.
1.93 g. 26.39 mm
Obverse

Reverse

83. R. II. 12048
319 AH/ 931- 932 AD. Cut round.
2.05 g. 24.70 mm.
Obverse

Reverse

84. R. II. 12049
319 AH/ 931- 932AD.
3.03 g. 28.45 mm.
Obverse

Reverse

85. R. II. 12050
319 AH/ 931- 932AD.
2.82 g. 27.61 mm.
Obverse

Reverse

86. R. II. 12051
319 AH/ 931- 932AD.
2.94 g. 29.04 mm.
Obverse

Reverse

87. R. II. 12052
319 AH/ 931- 932AD.
2.54 g. 28.92 mm.
.
Obverse

Reverse

88. R. II. 12084
319 AH/ 931- 932AD.
3.41 g. 30.35 mm
.
Obverse

Reverse

89. R. II. 12105

90. R. II. 12109

91. R. II. 12128

92. R. II. 12063

93. R. II. 12021

319 AH/ 931- 932AD.
3.52 g. 28.38 mm
.

Obverse

Reverse

319 AH/ 931- 932 AD. Cut round.
3.14 g. 27.16 mm

Obverse

Reverse

319 AH/ 931- 932 AD. Cut round.

2.43 g. 26.91 mm.

Obverse

Reverse

320 AH/ 932 AD.
2.90 g. 28.11 mm.

Obverse

Reverse

321 AH/ 933 AD.
2.58 g. 29.87 mm.

Obverse

Reverse

94. R. II. 12067
321 AH/ 933AD.
2.86 g. 29.11 mm.

Obverse

Reverse

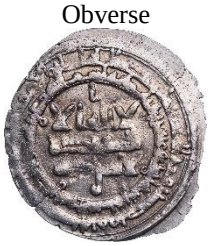
95. R. II. 12068
321 AH/ 933AD.
2.62 g. 28.82 mm.

Obverse

Reverse

96. R. II. 12069
321 AH/ 933AD.
3.32 g. 30.28 mm.

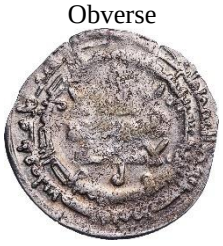
Obverse



Reverse

97. R. II. 12070
321 AH/ 933AD.
2.50 g. 27.86 mm.

Obverse



Reverse

98. R. II. 12071
321 AH/ 933AD.
3.27 g. 28.57 mm.

Obverse

Reverse

99. R. II. 12072
321 AH/ 933AD.
2.55 g. 27.43 mm.

Obverse

Reverse

100. R. II. 12073
321 AH/ 933AD.
2.71 g. 27.74 mm.

Obverse

Reverse

101. R. II. 12074
321 AH/ 933AD.
2.43 g. 25.84 mm.

Obverse

Reverse

102. R. II. 12075
321 AH/ 933AD.
3.22 g. 28.02 mm

Obverse

Reverse

103. R. II. 12076
321 AH/ 933AD.
2.64 g. 27.57 mm.

Obverse

Reverse

104. R. II. 12077
321 AH/ 933AD.
2.86 g. 29.69 mm.

Obverse

Reverse

105. R. II. 12078
321 AH/ 933AD.
2.66 g. 29.66 mm.

Obverse

Reverse

106. R. II. 12079
321 AH/ 933AD.
3.12 g. 28.35 mm.

Obverse

Reverse

107. R. II. 12080
321 AH/ 933AD.
2.88 g. 28.15 mm.

Obverse

Reverse

108. R. II. 12081
321 AH/ 933AD.
Cut round.
2.87 g. 25.00 mm.

Obverse

Reverse

109. R. II. 12082
321 AH/ 933AD.
3.16 g. 27.40 mm.

Obverse

Reverse

110. R. II. 12093
321 AH/ 933AD.
3.48 g. 27.54 mm.

Obverse

Reverse

111. R. II. 12103
321 AH/ 933AD.
2.63 g. 28.20 mm.

Obverse

Reverse

112. R. II. 12112
321 AH/ 933AD.
2.15 g. 26.47 mm.

Obverse

Reverse

113. R. II. 12114
321 AH/ 933AD.
2.86 g. 27.10 mm.

Obverse

Reverse

114. R. II. 11963
322 AH/ 933-934 AD.
3.87 g. 26.81 mm.

Obverse

Reverse

115. R. II. 12097
322 AH/ 933-934 AD.
3.01 g. 26.71 mm.

Obverse

Reverse

116. R. II. 12098
322 AH/ 933-934 AD.
2.82 g. 26.91 mm.

Obverse

Reverse

117. R. II. 12102
323 AH/ 935AD.
3.03. g. 28.60 mm

Obverse

Reverse

Samarqand mint. 93 Dirhams. 24,9 %.

IsmÁÝÐl ibn AÎmad (279- 295 AH. 892- 907 AD). 4 dirhams.

1. R. II. 11858
284AH/ 897AD.
2.46 g. 25.38 mm.

Obverse

Reverse

2. R. II. 11859
286AH/ 899 AD.
2.98g. 27.46 mm.

Obverse

Reverse

3. R. II. 11860
287 AH/ 900 AD.
3.00 g. 26.11 mm.

Obverse

Reverse

4. II-B/1990-10
292 AH/ 904AD.
2.87 g. 26.92 mm.

Obverse

Reverse

AÎmad Ibn IsmÁÝÐl (295- 301 AH/ 907- 914 AD). 4 dirhams.

5. R. II. 11924
298 AH/ 910-911AD.
2.95 g. 27.77 mm.

Obverse

Reverse

6. R. II. 12108
299 AH/ 911-912 AD.
2.89 g.26.68 mm.

Obverse

Reverse

7. R. II. 11878
300 AH/ 912-913 AD. Cut round.
2.81 g. 26.93 mm.

Obverse

Reverse

8. R. II. 11883
300 AH/ 912-913 AD.
2.93 g. 27.62 mm.

Obverse

Reverse

NaÒr Ibn AÎmad (301- 331 AH/ 914- 943 AD). 80 dirhams.

9. R. II. 11895
303 AH/ 915-916 AD. Cut round.
1.72 g. 22.51 mm.

Obverse

Reverse

10. R. II. 11898
304 AH/ 916-917 AD.
2.93 g. 26.21 mm.

Obverse

Reverse

11. R. II. 11901
305 AH/ 917- 918 AD.
2.91 g. 26.80 mm.

Obverse

Reverse

12. R. II. 11902
305 AH/ 917- 918 AD.
2.93 g. 27.04 mm.

Obverse

Reverse

13. R. II. 12113
305 AH/ 917- 918 AD.
2.47 g. 28.84 mm.

Obverse

Reverse

14. R. II. 11906
307 AH/ 919-920 AD.
2.62 g. 27.36 mm.

Obverse

Reverse

15. R. II. 11911
307 AH/ 919-920 AD.
2.96 g. 27.64 mm.

Obverse

Reverse

16. R. II. 12912
307 AH/ 919-920 AD. Cut round.
2.48 g. 27.43 mm.

Obverse

Reverse

17. R. II. 11913
307 AH/ 919-920 AD. Cut round.
2.21 g. 24.09 mm.

Obverse

Reverse

18. R. II. 11937
308 AH/ 920- 921 AD. Cut round.
2.06 g. 24.69 mm.

Obverse

Reverse

19. R. II. 11939
309 AH/ 921-922 AD.
2.75 g. 28.07 mm.

20. R. II. 11940
309 AH/ 921-922 AD. Cut round.

21. R. II. 11941
309 AH/ 921-922 AD. Cut round.

22. R. II. 11894
310 AH/ 922-923 AD.
2.83 g. 27.10 mm.

23. R. II. 11945
310 AH/ 922-923 AD.
2.84 g. 28.54 mm.

1.61 g. 22.33 mm. 2.13 g. 24.05 mm.

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

24. R. II. 11946
310 AH/ 922-923 AD.
2.98 g. 27.89 mm.

25. R. II. 11949
310 AH/ 922-923 AD. Cut round.
1.81 g. 22.90 mm.

26. R. II. 11950
310 AH/ 922-923 AD. Cut round.
1.82 g. 22.90 mm

27. R. II. 12158
310 AH/ 922AD.
Cut round.
2.36 g. 25.20 mm.

28. R. II. 11893
311 AH/ 923-924 AD.
2.72 g. 28.07 mm

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

29. R. II. 11951
311 AH/ 923-924 AD. Cut round.

30. R. II. 11952
311 AH/ 923-924 AD.
2.81 g. 28.26 mm.

31. R. II. 11961
311 AH/ 923-924 AD. Cut round.

32. R. II. 11944
313 AH/ 925-926 AD.
2.85 g. 29.11 mm.

33. R. II. 11948
313 AH/ 925-926 AD.
2.91 g. 28.58 mm.

1.54 g. 22.17 mm.

1.74 g. 23.91 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

34. R. II. 11965
313 AH/ 925-926 AD.
2.87 g. 26.89 mm.

35. R. II. 11966
313 AH/ 925-926 AD.
2.46 g. 27.75 mm.

36. R. II. 11967
313 AH/ 925-926 AD. Cut round.
2.06 g. 25.33 mm.

37. R. II. 11968
313 AH/ 925-926 AD.
2.64 g. 28.10 mm

38. R. II. 11947
313 AH/ 925-926 AD.
2.78 g. 26.58 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

39. R. II. 11972
314 AH/ 926-927 AD.
3.35 g. 30.31 mm.

40. R. II. 11984
314 AH/ 926-927 AD.
2.73 g. 29.31 mm.

41. R. II. 11986
314 AH/ 926-927 AD.
2.80 g. 28.82 mm.

42. R. II. 11989
314 AH/ 926-927 AD.
2,80 g. 29.85 mm.

43. R. II. 11977
315 AH/ 927-928 AD. Cut round.
2.21 g. 25.12 mm.

Obverse

Reverse

44. R. II. 11978
315 AH/ 927-928 AD. Cut round.
1.91 g. 24.66 mm.

Obverse

Reverse

45. R. II. 11980
315 AH/ 927-928 AD.
2.65 g. 28.66 mm.

Obverse

Reverse

46. R. II. 11993
315 AH/ 927-928 AD.
2.77 g. 29.03 mm.

Obverse

Reverse

47. R. II. 11981
316 AH/ 928-929 AD. Cut round.
2.44 g. 26.74 mm.

Obverse

Reverse

48. R. II. 11998
316 AH/ 928-929 AD.
2.98 g. 29.05 mm.

Obverse

Reverse

49. R. II. 11999
316 AH/ 928-929

Obverse

Reverse

50. R. II. 12001
316 AH/ 928-929 AD.

Obverse

Reverse

51. R. II. 12002
316 AH/ 928-929 AD.

Obverse

Reverse

52. R. II. 12111
316 AH/ 928-929

Obverse

Reverse

53. R. II. 11953
317 AH/ 929-930 AD.

AD.
2.69 g. 28.89 mm.

3.03 g. 28.66 mm.

3.02 g. 28.95 mm.

AD. Cut round.
2.00 g. 23.83 mm.

3.11g. 27.95 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

54. R. II. 11973
317 AH/ 929-930 AD.
2.94 g. 28.69 mm.

Obverse

Reverse

55. R. II. 12006
317 AH/ 929-930 AD.
2.76 g. 29.21 mm.

Obverse

Reverse

56. R. II. 12007
317 AH/ 929-930 AD.
2.89 g. 28.74 mm.

Obverse

Reverse

57. R. II. 12008
317 AH/ 929-930 AD.
2.92 g. 27.94 mm.

Obverse

Reverse

58 R. II. 11935
318 AH/ 930- 931 AD. Cut round.
3.05 g. 28.61 mm.

Obverse

Reverse

59. R. II. 11936
318 AH/ 930- 931 AD.
2.83 g. 27.49 mm.

60. R. II. 12020
318 AH/ 930-931 AD. Cut round.
1.69 g. 27.54 mm.

61. R. II. 12023
318 AH/ 930-931 AD.
3.14 g. 27.64 mm.

62. R. II. 12024
318 AH/ 930-931 AD.
3.08 g. 28.75 mm.

63. R. II. 12025
318 AH/ 930-931 AD. Cut round.
1.73 g. 23.96 mm.

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

Obverse

Reverse

64. R. II. 11974
319 AH/ 931-932 AD.
3.26 g. 28.87 mm.

Obverse

Reverse

65. R. II. 12037
319 AH/ 931- 932 AD. Cut round.
2.38 g. 27.01 mm.

Obverse

Reverse

66. R. II. 12038
319 AH/ 931- 932 AD.
2.92 g. 29.25 mm.

Obverse

Reverse

67. R. II. 12040
319 AH/ 931- 932 AD.
2.87 g. 27.90 mm.

Obverse

Reverse

68. R. II. 12041
319 AH/ 931- 932 AD.
2.89 g. 27.66 mm.

Obverse

Reverse

69. R. II. 12043
319 AH/ 931- 932AD.
2.91 g. 29.65 mm.

Obverse

Reverse

70. R. II. 12106
319 AH/ 931- 932AD.
2.75 g. 28.69 mm.

Obverse

Reverse

71. R. II. 12053
320 AH/ 932AD.
2.84 g. 27.26 mm.

Obverse

Reverse

72. R. II. 12054
320 AH/ 932AD.
1.99 g. 27.95 mm.

Obverse

Reverse

73. R. II. 12056
320 AH/ 932AD.
2.96 g. 30.35 mm.

Obverse

Reverse

74. R. II. 12057
320 AH/ 932AD.
2.72 g. 28.45 mm.

Obverse

Reverse

75. R. II. 12058
320 AH/ 932AD.
2.45 g. 28.75 mm.

Obverse

Reverse

76. R. II. 12059
320 AH/ 932AD.
2.52 g. 28.47 mm.

Obverse

Reverse

77. R. II. 12060
320 AH/ 932AD.
3.00 g. 30.11 mm.

Obverse

Reverse

78. R. II. 12062
320 AH/ 932AD.
3.68 g. 28.95 mm.

Obverse

Reverse

79. R. II. 11964
321 AH/ 933 AD.
2.72 g. 30.89 mm.

80. R. II. 12039
321 AH/ 933AD.
2.78 g. 28.90 mm.

81. R. II. 12061
321 AH/ 933AD.
2.61 g. 29.92 mm.

82. R. II. 12083
321 AH/ 933AD.
2.62 g. 29.30 mm.

83. R. II. 12085
321 AH/ 933AD.
2.83 g. 29.36 mm.

Obverse

Reverse

84. R. II. 12086
321 AH/ 933AD.
2.86 g. 28.83 mm.

Obverse

Reverse

85. R. II. 12087
321 AH/ 933AD.
2.90 g. 29.52 mm.

Obverse

Reverse

86. R. II. 12088
321 AH/ 933AD.
3.24 g. 28.64 mm

Obverse

Reverse

87. R. II. 12089
321 AH/ 933AD.
2.33 g. 29.66 mm.

Obverse

Reverse

88. R. II. 12091
321 AH/ 933AD.
2.89 g. 29.35 mm.

Obverse

Reverse

89. R. II. 12092

Obverse

Reverse

90. R. II. 12104

Obverse

Reverse

91. R. II. 12099

Obverse

Reverse

92. R. II. 12100

Obverse

Reverse

93. R. II. 12101

321 AH/ 933AD.
2.50 g. 28.83 mm.

Obverse

Reverse

321 AH/ 933AD.
2.35 g. 29.62 mm.

Obverse

Reverse

322 AH/ 933-934 AD.
2.62 g. 27.46 mm.

Obverse

Reverse

322 AH/ 933-934 AD.
3.13 g. 30.94 mm.

Obverse

Reverse

322 AH/ 933-934 AD.
3.06 g. 29.99 mm.

Obverse

Reverse

AndarÁbah Mint 20 dirhams. 5,3 %.

IsmÁÝÐl Ibn AÎmad

1. R. II. 11865
291 AH/ 903AD.
Cut round.
2.86 g. 27.40 mm.

Obverse

Reverse

AÎmad Ibn IsmÁÝÐl

2. R. II. 11889
298 AH/ 910-911AD.
3.30 g. 28.33 mm

Obverse

Reverse

3. R. II. 11881
299 AH. 911-912 AD. Cut round.
1.96 g. 23.46 mm.

Obverse

Reverse

4. R. II. 11890
299 AH. 911-912 AD. Cut round.
1.85 g. 22.96 mm.

Obverse

Reverse

5. R. II. 11891
301 AH/ 913-914 AD. Cut round.
3.08 g. 26.79 mm.

Obverse

Reverse

6. R. II. 11896
303 AH/ 915-916 AD. Cut round.
2.25 g. 22.98 mm.

Obverse

Reverse

7. R. II.11903
305 AH/ 917- 918 AD.
2.28 g. 27.02 mm.

Obverse

Reverse

8. R. II. 11904
305 AH/ 917- 918 AD. 2.90 g. 30.76 mm.

Obverse

Reverse

9. R. II. 11907
306 AH/ 918-919 AD.
2.93 g. 27.42 mm.

Obverse

Reverse

10. R. II. 11908
306 AH/ 918-919 AD.
3.00 g. 29.71mm.

Obverse

Reverse

11. R. II. 11909
306 AH/ 918-919 AD.
2.53 g. 29.20 mm.

Obverse

Reverse

12. R. II. 12115
306 AH/ 918-919 AD.
3.08 g. 29.16 mm.

Obverse

Reverse

13. R. II. 11943
307 AH/ 919-920 AD.
3.29 g. 28.50 mm.

Obverse

Reverse

14. R. II. 11925
308 AH/ 920- 921 AD.
2.96 g. 28.62 mm.

Obverse

Reverse

15. R. II. 11905
310 AH/ 922-923 AD. Cut round.
2.59 g. 24.70 mm.

Obverse

Reverse

16. R. II. 11910
310 AH/ 922-923 AD. Cut round.
1.89 g. 24.12 mm.

Obverse

Reverse

17. R. II. 12090
316 AH/ 928-929 AD.
2.75g. 28.86 mm.

Obverse

Reverse

18. R. II. 12110
316 AH/ 928-929 AD. Cut round.
2.11 g. 24.35 mm.

Obverse

Reverse

19. R. II. 12064
320 AH/ 932AD.
2.92 g. 30.78 mm.

Obverse

Reverse

20. R. II. 12065
320 AH/ 932AD.
3.63 g. 29.76 mm

Obverse

Reverse

Balkh Mint 10 dirhams. 2,6 %.

IsmÁÝÐl ibn AÎmad

NaÒr Ibn AÎmad

1. R. II. 11867
292 AH/ 904AD.
2.96 g. 27.93 mm.

Obverse

2. R. II. 11959
312 AH/ 924-925 AD.
2.98 g. 26.88 mm.

Obverse

3. R. II. 11960
312 AH/ 924-925 AD.
2.88 g. 28.28 mm.

Obverse

4. R. II. 11970
313 AH/ 925-926 AD.
3.13 g. 26.30 mm.

Obverse

5. R. II. 12019
317 AH/ 929-930 AD.
3.20 g. 27.13 mm.

Obverse

Reverse

6. R. II. 11983
319 AH/ 931-932 AD.
2.44 g. 27.26 mm.

Reverse

7. R. II. 12026
321 AH/ 933AD.
3.16 g. 28.46 mm.

Reverse

8. R. II. 12066
321 AH/ 933AD. Cut round.
2.84 g. 27.90 mm.

Reverse

9. R. II. 12095
322 AH/ 933-934 AD. Cut round.
2.21 g. 25.73 mm.

Reverse

10. R. II. 12096
322 AH/ 933-934 AD.
3.35 g. 28.87 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Revers

MaÝadin mint 6 dirhams. 1,6 %. NaÒr Ibn AÎmad.

1. R. II. 12194
306 AH/ 918-919 AD.
2.84 g. 29.71 mm.

Obverse

2. R. II. 12202
306 AH/ 918-919 AD. Cut round.
2.53 g. 25.95 mm.

Obverse

3. R. II. 11914
307 AH/ 919-920 AD.
3.36 g. 30.42 mm.

Obverse

4. R. II. 11982
315 AH/ 927-928 AD.
3.33 g. 28.30 mm.

Obverse

5. R. II. 12003
317 AH/ 929-930 AD.
2.12 g. 28.25 mm.

Obverse

Reverse Reverse Reverse Reverse Reverse





6. R. II. 12035
319 AH/ 931-
932AD.
2.41 g. 31.80 mm.

Obverse

Reverse

Nishapur mint 1 dirham. 0,2 %

1. R. II. 11884
IsmÁÝÐl ibn AÎmad.
291 AH/ 904 AD.
2.67 g. 24.51 mm.

Obverse

Reverse

Volga Bulgar, 126 dirhams. 34%.

1. R. II. 11988
TYP 1. Cut round.
1.23 g. 22.65 mm.

Obverse

2. R. II. 12055
TYP 1. Cut round.
1.53 g. 23.62 mm.

Obverse

3. R. II. 12094
TYP 1. Cut round.
1.36 g. 24.66 mm.

Obverse

4. R. II.12124
TYP 1. Cut round.
1.74 g. 25.04 mm.

Obverse

5. R. II. 12166
TYP 1. Cut round.
1.48 g. 24.04 mm.

Obverse

Reverse

6. R. II. 12167
TYP 1. Cut round.
1.53 g. 23,69 mm.

Reverse

7. R. II. 12168
TYP 1. Cut round.
1.76 g. 24.03 mm.

Reverse

8. R. II. 12169
TYP 1. Cut round.
1.61 g. 24.48 mm.

Reverse

9. R. II. 12170
TYP 1. Cut round.
1.35 g. 22.84 mm.

Reverse

10. R. II. 12171
TYP 1. Cut round.
1.51 g. 24.78 mm.

Obverse

Reverse

11. R. II. 12172
TYP 1. Cut round.
1.54 g. 24.00 mm.

Obverse

Reverse

12. R. II. 12173
TYP 1. Cut round.
1.90 g. 25.38 mm.

Obverse

Reverse

13. R. II. 12175
TYP 1. Cut round.
1.30 g. 23,76 mm.

Obverse

Reverse

14. R. II. 12176
TYP 1. Cut round.
1.28 g. 22.92 mm.

Obverse

Reverse

15. R. II. 12177
TYP 1. Cut round.
1.23 g. 23.59 mm.

Obverse

Reverse

16. R. II. 12178
TYP 1. Cut round.
1.36 g. 24.97 mm.

Obverse

Reverse

17. R. II. 12179
TYP 1. Cut round.
1.40 g. 24,61 mm.

Obverse

Reverse

18. R. II. 12180
TYP 1. Cut round.
1.68 g. 24.45 mm.

Obverse

Reverse

19. R. II. 12181
TYP 1. Cut round.
1.74 g. 24,42 mm.

Obverse

Reverse

20. R. II. 12182
TYP 1. Cut round.
1.41 g. 23.04 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

21. R. II. 12184
TYP 1. Cut round.
1.48 g. 22.93 mm.

Reverse

22. R. II. 12185
TYP 1. Cut round.
1.59 g. 24.86 mm.

Reverse

23. R. II. 12186
TYP 1. Cut round.
1.42 g. 22.95 mm.

Reverse

24. R. II. 12187
TYP 1. Cut round.
1.51 g. 24.44 mm.

Reverse

25. R. II. 12188
TYP 1. Cut round.
1.59 g. 24.40 mm.

Obverse

Reverse

26. R. II. 12189
TYP 1. Cut round.
1.58 g. 24.67mm.

Obverse

Reverse

27. R. II. 12190
TYP 1. Cut round.
1.22 g. 24.78 mm.

Obverse

Reverse

28. R. II. 12191
TYP 1. Cut round.
1.54 g. 24.51 mm.

Obverse

Reverse

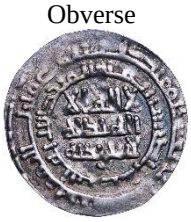
29. R. II. 12192
TYP 1. Cut round.
1.40 g. 24.54 mm.

Obverse

Reverse

30. R. II. 12193
TYP 1. Cut round.
1.61 g. 22.42 mm.
.

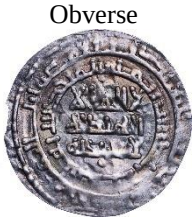
Obverse



Reverse

31. R. II. 12195
TYP 1. Cut round.
1.58 g. 24.47 mm.

Obverse



Reverse

32. R. II. 12196
TYP 1. Cut round.
1.84 g. 24.17 mm

Obverse

Reverse

33. R. II. 12197
TYP 1. Cut round.
1.72 g. 24.10 mm

Obverse

Reverse

34. R. II. 12198
TYP 1. Cut round.
1.53 g. 23.82mm.

Obverse

Reverse

35. R. II. 12199
TYP 1. Cut round.
1.09 g. 21.61 mm.

Obverse

Obverse

Obverse

Obverse

Obverse


Reverse

36. R. II. 12200
TYP 1. Cut round.
1.16 g. 23.28 mm.

Reverse

37. R. II. 12201
TYP 1. Cut round.
1.52 g. 23.13 mm.

Reverse

38. R. II. 12203
TYP 1. Cut round.
1.40 g. 23.93 mm.

Reverse

39. R. II. 11915
TYP 2. Die 1
2.85 g. 28.14 mm.

Reverse

40. R. II. 11916
TYP 2
2.74 g. 27.02 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

41. R. II. 11917
TYP 2
2.88 g. 27.31 mm.

Reverse

42. R. II. 11918
TYP 2
2.71 g. 26.98 mm.

Reverse

43. R. II. 11919
TYP 2
3.17 g. 26.65 mm.

Reverse

44. R. II. 11920
TYP 2
2.73 g. 27.02 mm.

Reverse

45. R. II. 11921
TYP 2
3.15 g. 28.05 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

46. R. II. 11922
TYP 2. Cut round.
2.98 g. 27.37 mm.

Reverse

47. R. II. 11923
TYP 2 Cut round.
1.69 g. 22.13 mm.

Reverse

48. R. II. 11928
TYP 2. Cut round.
3.16 g. 28.66 mm.

Reverse

49. R. II. 11929
TYP 2. Cut round.
2.69 g. 25.41 mm.

Reverse

50. R. II. 11930
TYP 2. Cut round.
2.12 g. 24.89 mm.

Obverse


Reverse


51. R. II. 11931
TYP 2. Die 2. Cut round.
2.12 g. 25.06 mm.


Reverse


52. R. II. 11932
TYP 2. Die 3 Cut round. 45
1.73 g. 25.16 mm.


Reverse


53. R. II. 11933
TYP 2. Die 4
2.27 g. 26.20 mm.


Reverse


54. R. II. 12130
TYP 2. Die 5
2.86 g. 29.13 mm


Reverse


55. R. II. 12133
TYP 2. Die 6.
3.17 g. 27.73 mm

Obverse

Reverse


Obverse

Reverse


Obverse

Reverse


Obverse

Reverse


Obverse

Reverse


56. R. II. 12165
TYP 2. Die 7. Cut round.
2.22 g. 25.64 mm.

Obverse

Reverse


57. R. II. 11938
TYP 3
2.46 g. 27.20 mm.

Obverse

Reverse

58. R. II. 12042
TYP 3. Cut round.
2.55 g. 27.09 mm.

Obverse

Reverse


59. R. II. 12160
TYP 3. Die 2
2.75 g. 29.94 mm.

Obverse

Reverse

60. R. II. 12162
TYP 3. Die 2
2.89 g. 28.40 mm.

Obverse

Reverse

61. R. II. 12216
TYP 3. Die 2
2.46 g. 26.37 mm.

62. R. II. 12131
TYP 3. Die 3. Cut round.
2.19 g. 27.82 mm.

63. R. II. 12163
TYP 3. Die 1
3.38 g. 28.13 mm.

64. R. II. 12140
TYP 4. Cut round.
2.43 g. 26.39 mm.

65. R. II. 12141
TYP 4. Cut round.
2.16 g. 25.83 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

66. R. II. 12142
TYP 4. Cut round.
2.05 g. 25.25 mm.

67. R. II. 12143
TYP 4. Cut round.
2.13 g. 25.41 mm.

68. R. II. 12144
TYP 4. Cut round.
2.32 g. 25.79 mm.

69. R. II. 12146
TYP 4. Cut round.
1.75 g. 25.40 mm.

70. R. II. 12147
TYP 4. Cut round.
1.87 g. 25.41 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

71. R. II. 12148
TYP 4. Cut round.
2.03 g. 26.83 mm.

72. R. II. 12149
TYP 4. Cut round.
2.17 g. 26.57 mm.

73. R. II. 12151
TYP 4. Cut round.
2.08 g. 24.16 mm.

74. R. II. 12152
TYP 4. Cut round.
2.07 g. 25.76 mm.

75. R. II. 12153
TYP 4. Cut round.
2.34 g. 25.86 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

76. R. II. 12155
TYP 4. Cut round.
1.55 g. 25.03 mm.

Reverse

77. R. II. 12156
TYP 4. Cut round.
2.05 g. 25.99 mm.

Reverse

78. 57/1936-1
TYP 4. Cut round. 63
1.82 g. 25.60 mm.

Reverse

79. R. II. 12132
TYP 5
2.31 g. 27.89 mm

Reverse

80. R. II. 12221
TYP 5
2,90 g. 30.49 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

81. R. II. 12134
TYP 6
3.22 g. 30.93.

Reverse

82. R. II. 12135
TYP 6
2.71 g. 29.16 mm.

Reverse

83. R. II. 12150
TYP 6. Cut round.
2.04 g. 23.84 mm.

Reverse

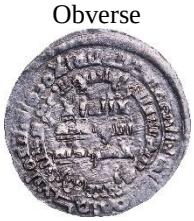
84. R. II. 12159
TYP 6. Cut round.
2.09 g. 24.40 mm.

Reverse

85. R. II. 12210
TYP 7. Cut round.
1.99 g. 23.68 mm.

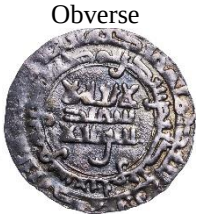
Obverse

Obverse



Obverse

Obverse



Obverse

Reverse

86. R. II. 12212
TYP 7. Cut round.
1.74 g. 24.01 mm.

Reverse

87. R. II. 12139
TYP 7. Cut round.
1.69 g. 24.93 mm.

Reverse

88. R. II. 12211
TYP 8. Cut round.
2.15 g. 25.79 mm.

Reverse

89. R. II. 12215
TYP 8
2.90 g. 28.57 mm.

Reverse

90. R. II. 12218
TYP 8. Cut round.
2.47 g. 24.60 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

91. R. II. 12154
TYP 9. Cut round.
1.93 g. 24.48 mm

92. R. II. 12157
TYP 9. Cut round.
1.84 g. 25.23 mm

93. R. II. 12204
TYP 10. Cut round.
1,91 g. 22.16 mm.

94. R. II. 12207
TYP 10. Cut round.
1.84 g. 22.89 mm.

95. R. II. 12219
TYP 11
2.47 g. 27.32 mm.

Obverse

Reverse

96. R. II. 12129
TYP 11
2.55 g. 27.26 mm.

Obverse

Reverse

97. 47B/ 922-86
TYP 11. Cut round.
2.41 g. 26.97 mm.

Obverse

Reverse

98. R. II. 12138
TYP 12. Cut round.
1.61 g. 24.81 mm.

Obverse

Reverse

99. R. II. 12137
TYP 12. Cut round. 77
1.94 g. 24.42 mm.

Obverse

Reverse

100. R. II. 11856
TYP 13
2.72 g. 24.91 mm.

Obverse

Reverse

101. R. II. 12145
TYP 14
2.73 g. 25.90 mm.

Obverse

Reverse

102. R. II. 12223
TYP 15. Cut round.
1.95 g. 24.17 mm.

Obverse

Reverse

103. R. II. 12205
TYP 16. Cut round.
2.23 g. 23.87 mm.

Obverse

Reverse

104. R. II. 12220
TYP 17. Cut round.
2.04 g. 25.28 mm.

Obverse

Reverse

105. 57/1936-2
TYP 18
2.67 g. 26.68 mm.

106. R. II. 12164
TYP 19. Cut round.
1.70 g. 23.94 mm.

107. R. II. 12161
TYP 20. Cut round.
1.78 g. 22.22 mm.

108. R. II. 12116
TYP 21
1.71 g. 25.99 mm.

109. R. II. 12214
TYP 22. Cut round.
2.20 g. 25.84 mm.

110. R. II. 12126
TYP 23. Cut round.
1.52 g. 22.35 mm.

Obverse

Reverse

111. R. II. 12136
TYP 24. Cut round.
2.04 g. 23.94 mm.

Obverse

Reverse

112. R. II. 12127
TYP 25. Cut round.
1.84 g. 22.61 mm.

Obverse

Reverse

113. R. II. 12206
TYP 25. Cut round.
1.83 g. 23.39 mm.

Obverse

Reverse

114. R. II. 12217
TYP 26. Cut round.
2.09 g. 24.94 mm.

Obverse

Reverse

115. R. II. 12117
TYP 27. Cut round.
1.75 g. 24.04 mm.

Obverse

Reverse

116. R. II. 12209
TYP 28. Cut round.
90
1.39 g. 22.77mm.

Obverse

Reverse

117. R. II. 12213
TYP 29. Cut round.
1.40 g. 19.87 mm.

Obverse

Reverse

118. R. II. 12208
TYP 30
2.38 g. 25.62 mm.

Obverse

Reverse

119. R. II.11976
Bulgar Mint
Cut round.
1.84 g. 22.61 mm.

Obverse

Reverse

120. **R. II. 12118**
al-Amīr Yaltwar.
Cut round.
2.10 g. 24.62 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

121. R. II. 12119
al-Amīr Yaltwar.
Cut round.
1.89 g. 25.29 mm.

122. R. II. 12120
al-Amīr Yaltwar
2.82 g. 27.09 mm.

123. R. II.12121
al-Amīr Yaltwar.
Cut round.
2.00 g. 24.48 mm.

124. R. II. 12122
al-Amīr Yaltwar
2.35 g. 25.42 mm.

125. R. II.12123
al-Amīr Yaltwar.
Cut round.
2.07 g. 24.41 mm.

Obverse

Obverse

Obverse

Obverse

Obverse

Reverse

Reverse

Reverse

Reverse

Reverse

126. R. II. 12125
al-Amīr Yaltwar
2.23 g. 26.27 mm.

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Obverse

Reverse