Framing the Roman monetary system: An introduction

The main goal of this book is to properly frame and analyse the operation of the Roman monetary system from the first to the third century AD in the eastern provinces. The comprehensive study of a system such as the Roman may also give us the opportunity, in the future, to compare it with the medieval and the early modern ones, since they all share a range of similar characteristics. Here I may restrict myself to the use of comparative points with selected case studies (from Europe, North America and China) but I am convinced that fully comparative studies could and should emerge. I also hope that such a volume will enhance our understanding of the nature of ancient money and that, at the same time, it will prove that the Roman monetary economy was based on a sophisticated pre-industrial, pre-capitalist, pre-modern system. By this, I mean a monetary system that regulated the economic agents, controlled the money supply and identified the specific medium of transactions. Behind this system, at least in the case of the Roman empire, hid the central government, which guaranteed the value of money and the exchange of currencies, while it determined its monetary policies according to the needs of the treasury and the demands of the markets.

This study will be restricted to the geographical area of the eastern Mediterranean provinces. These provinces represent a mosaic of different coinages, all of which were unified under Roman political rule. The regions of the southern Balkans, Asia Minor, Palestine and Syria[1] are characterised by the production of local civic coinages, which complemented the 'official' currency. On the other hand, the areas of the northern Balkans (esp. Dacia and Pannonia) resemble the western provinces, since they had not established their own mints but relied exclusively on the distribution

[1] In the text the provinces of Palestine and Syria will be called wider Syria. This term will describe all the area south of Cilicia that includes the regions of (a) Palestine (southern Syria) and (b) Phoenicia, Coele Syria, Commagene and Cyrrhestica (northern Syria).

of coins from the mint at Rome. Despite the self-imposed geographical restriction to the eastern regions, there are regular references to evidence from the western provinces and the closed currency system of Egypt. This way, we may be able to acquire a more rounded understanding of the Roman monetary system across the Roman empire. In addition, although the role of the Mediterranean in the movement of commodities and money is uncontested,[2] I decided to include regions (e.g. Dacia or Dura Europos) that are more distant and without a close connection to the sea. This inclusion paints a more accurate picture of the manifold economic natures of the frontier zones at the fringes of the empire, while it may highlight the impact or not of land routes on the movement of populations and the use of coined money. Furthermore, since large numbers of troops were stationed in these zones, the results from the study of coin distribution could be contrasted with the results from other, non-militarised but highly urbanised areas of the eastern provinces.

Chronologically speaking, this volume refers to the Augustan monetary system from its establishment in the late first century BC until its collapse in the 260s. Although there are references to the entire period in question, the core numismatic material that is statistically analysed here ranges from the end of the first century AD (the reign of Trajan) until the end of the reign of Gallienus in AD 268. This material allowed for the contrast between a stable economic era – the Antonine – and an era characterised by reforms and general instability – the Severan and Military Anarchy periods. It is well known that periods of crisis can highlight the operation of the political, economic, social and other systems. The Roman empire during the third century AD went through a political, military and, eventually, numismatic crisis that revealed the weaknesses of the governance system and led to widespread reforms in the socioeconomic structures. Most scholars agree that plagues and wars caused a demographic decline, the increase of military expenses, stronger state intervention in the provinces, changes in the labour system and possible economic decline.[3] From an environmental point of view, Haas[4] recently emphasised a crisis in climate, combined with a decline in population, soil exhaustion and forest clearances that may have caused the crisis of the third century.

Several scholars, though, have contested the use of the term crisis in describing the otherwise well-known economic decline. For example,

[2] Selectively, see Horden and Purcell 2000.
[3] Selectively, see Alföldy 1989; Potter 1990; Herrmann 1990. For limitations on the archaeological evidence see Millet 1981; De Blois 2002.
[4] Haas 2006.

Strobel shows explicit preference for the terms 'change and transition'.[5] Similarly, Witschel suggests that existing evidence does not prove the occurrence of a *Weltkrise* (world crisis) but, instead, indicates a slow transformation from the second to the fourth centuries, which is characterised by the further enrichment of the elite.[6] Despite the value of these opposing viewpoints, I find myself siding with the recently expressed views of Duncan-Jones[7] and Giardina,[8] who acknowledge the existence of an economic crisis but refuse to believe that it had cataclysmic consequences or that it caused the collapse of the economic system. Instead, they think that the crisis became a powerful force, which led to the transformation of the Roman empire. In this volume, though, I will not engage further in the debate but will restrict myself to the discussion of the numismatic decline during the third century, in an attempt to find concrete evidence with regard to the function of the monetary system throughout the Principate.

In order to achieve my goal, I will further refrain from getting entangled in the primitivist–modernist debate, which in our case may prove to be counterproductive. So far, scholars tend to have opposing views on the nature of ancient money and the workings of the monetary systems in antiquity. I understand that any attempt on my part to describe these opposing views in the short space of an introduction bears the danger of oversimplification. It is necessary, though, to briefly mention the main protagonists of the debate and to evaluate their contribution. First of all, Bolin's work on *State and Currency in the Roman Empire* was the first to analyse seriously the role of the Roman monetary system in connection to the state.[9] His elaborate statistical analysis and theoretical mathematics effectively undermined the value of his writings and placed him in the disreputable modernist group. In all fairness, although his study revolutionised traditional numismatics, he seemed overzealous in trying to apply modern economics to the ancient material without taking seriously into consideration the constraints of pre-industrial economies.

The rise of the star of Polanyi[10] and the continuation of his school of thought by Finley[11] in the 1970s, who studied extensively the ancient economy, gave the final blow to the modernist school and drove almost all monetary historians into substantivism. Most prominent among them, Michael Crawford denied the existence of economically motivated monetary policies, while he claimed that the monetary system underwent no sudden changes during the reign of Augustus.[12] This is because, as he

[5] Strobel 1993. [6] Witschel 1999. [7] Duncan-Jones 2004.
[8] Giardina 2008. [9] Bolin 1958. [10] Polanyi 1968.
[11] Finley 1973. [12] M. Crawford 1970: 46. These views were repeated in his later works.

stated, 'coinage was probably invented in order that a large number of state payments might be made in a convenient form and there is no reason to suppose that it was ever issued by Rome for any other purpose than to enable the state to make payments, that is, for financial reasons'. With the same point in mind Duncan-Jones elaborated on Crawford's perspective and declared that 'the empire of the Principate was not fully monetised', while 'government policy ignored economic rationalism'.[13] This attitude, though, restricted the study of the Roman monetary economy to its state dimension, disregarding almost completely the power of the markets. The acknowledgement of such a deficiency led a number of researchers, among them Rathbone[14] and Howgego,[15] to position themselves between modernism and substantivism, thus avoiding the ensuing polarisation. In this volume, I hope to avoid the trap of the debate altogether, so that I can focus on the continuity and change in the Roman monetary system. Nevertheless, I cannot deny that its direct or indirect comparison with other pre-industrial systems may be considered suspicious by the researchers who insist on placing everyone in one or the other school.

In my attempt to explain the nature of money in the Roman world, I will employ certain theoretical tools, whose careful application to ancient economics highlights different angles of our object. In the first instance, I will analyse the bimetallic laws that defined the Roman system and I will demonstrate how these were applied in practice, even if the Romans did not develop any economic theories with regard to this issue. Bimetallic systems were in force from the Roman period until the nineteenth century, when economic and political analysts abandoned them in favour of the 'modern' monometallic systems.[16] The long duration of bimetallism gives the opportunity to study the subject in comparative perspective and, thus, allows us to form a clear idea of its function in antiquity. The manipulation of the bimetallic laws was profitable for the states during medieval times and the early modern period and up until the end of the nineteenth century. The depreciation of the silver currencies brought quick profits to the minting authorities, which needed additional revenues for the maintenance of the governmental military and bureaucratic mechanisms. However, the unrestricted manipulation of the bimetallic system may have brought about the devaluation of gold coins and their subsequent demonetisation, export outside the area where they were legal tender and/or melting, in accordance with Gresham's Law.[17]

[13] Duncan-Jones 1994: 3–4. [14] Rathbone 1991. [15] Howgego 1992.
[16] Bordo 1992; Redish 2000. [17] Laughlin 1897; Flynn 1982.

In addition, I will explore the practical implementation of the Quantity Theory of Money (its elements being inflation, monetisation, velocity of money, mint production) and, this way, I will show how Roman imperial policies were actually subject to the laws that also define modern economies in the Western world. The employment of the Quantity Theory of Money could help economists of the ancient world identify changes in prices or in the monetisation of a region. According to this model the amount of money inserted in the economy multiplied by the velocity of money is equal to the price level of goods and services multiplied by the transactions of goods and services offered: M*V = P*T. A rise in the money supply will be met by an exactly proportionate increase in prices, while the velocity of circulation (V) and the quantity of the transactions in goods and services (T) remain largely stable. The effects of changes in this equation will not be felt in the short run on the economy; instead, inflation will rise only in the long run (for modern economies the time was estimated at three to ten years later).[18]

Last but not least, I intend to demonstrate that the theories of chartalism or metallism are most appropriate for the description of the non-modern monetary economies: metallism referring to the use of coins, which are accepted in the markets at their real value, while chartalism refers to coins as tokens of value. Even if we accept that metallism could describe the early monetary economies of the archaic and possibly also the classical period, by the Augustan period the inhabitants of the empire may have used intrinsically inferior coins for their transactions. Even so, the value of money may not have been entirely independent from its medium, as the metal could either have been sold as a commodity or exchanged as coins. If the metal content predetermined up to a point the value of money in circulation, then we should exclude the possibility of the application of pure chartalist theories in ancient monetary economies. Therefore, it would be more accurate if we developed a new theory that bears some (but not all) of the characteristics of both chartalism and metallism.

In the first chapter I intend to clarify the numismatic methods I followed in analysing statistically the coin finds. Since statistical analysis has been employed in the study of ancient coins, a range of scholars positioned themselves either for or against it. My first step will be to evaluate the use of large numbers of finds (coin hoards, stray coins and coins found in the course of excavations) as evidence in the writing of economic history. The next step will be to stress the problems that the study of the different

[18] Fisher 1926; Friedman 1956; Friedman 1969.

categories entails and how it affects economic discourse. It cannot be doubted that the antiquity of the material, the lack of written evidence from the Roman world and modern prejudices in the collection of coins could affect our results. Despite pessimistic approaches regarding the value of the use of statistics in numismatics, some of the results reflect more or less accurately the prevailing conditions in the Roman empire and give us insights into the inflation, monetisation, integration and general use of money.

The scope of the second chapter is to determine the role of the state in the production and circulation of precious-metal coinages across the empire. None could deny that the Roman government was interested in the direct control and the centralisation of the mints, which produced silver and gold coins either in Rome or in the provincial cities. Whether the coins were based on the official denarial standard or on other Hellenistic standards, they were exchanged at a fixed rate that was set by the central administration. The reasons for such strict control over the numismatic issues were predominantly financial. The need to balance the budget and to make certain that the revenues would have covered the expenses commanded the intervention of the state and its dominance over the production of precious-metal currencies. As will be shown in this chapter, the emperor's need for stable revenues to pay for the army, his building projects, handouts to the populace and gifts to his friends prompted him to impose annual taxes paid in cash and to mint his own coins. At the same time, the significance of the military expenses will be assessed by comparing them to other imperial expenses and by estimating the impact of the increasing salaries of soldiers on the monetary economy during the first half of the third century AD. In addition, the state monopoly over the production of currencies, which remained an unchanged imperial policy throughout the centuries, could give us an idea of the flow of taxes and the rate at which coins were recalled to the mint. Even if this process does not provide accurate numbers, the rates could be compared with other pre-industrial societies and give us an idea of the overall level of the taxes.

The third chapter is dedicated to the implementation of the bimetallic system in the Roman Principate – a system that remained in use for centuries after the fall of the empire. The lack of gold coins from the excavation records during the third century AD prompted me to reconsider the monetisation of the economy, the valuation of precious metal coins, the intervention of the state in the production and circulation of currencies and the impact of individual decisions on the future of specific denominations. The numismatic reforms that took place during the economic crisis of the

third century also hinted at the multiple functions of the monetary system within the wider economy. On the whole, it will be shown that bimetallic laws determined the function of money in the Roman world. When these laws were not broken, then the state prospered and the transactions of the citizens were facilitated. Yet, if the laws were stretched to their limits, then the currency system came closer to the brink of collapse and the economy was in danger of becoming demonetised.

In the fourth chapter I employ the Quantity Theory of Money in order to explain changes in the level of inflation and monetisation (the extent of the use of money) of the Roman economy. The main indicator for such changes were the abrupt increases (or decreases) in coin production, as the statistical analysis of coins coming from hoards, excavations or museum collections indicates. Additionally, epigraphic material from Asia Minor attests to the level of monetisation in the eastern provinces and how this changed gradually until the end of the third century, when the weight standards became irrevocably altered. Once more, numismatic reforms and the general state of the economy during the third century seem to have been the main forces behind structural changes in the monetary system, which eventually collapsed by the end of the reign of Gallienus. Despite its collapse, though, monetised transactions probably continued to occur in the eastern markets, albeit not with the same density as in previous decades.

In the next chapter, the study of the monetary integration of the empire by comparison to similar pre-modern monetary unions (through the study of differences in the processes of local, interregional or long-distance trade) expands our understanding of the development of ancient monetary economies and the power of the markets. Despite the variations in weight standards, Rome managed to keep all of its silver currencies under a 'denarial umbrella', since traditional Hellenistic coinages were connected to the denarius at a fixed exchange rate. In true imperialistic fashion, they allowed some administrative freedom to the local authorities, while they supervised the effective operation of the entire system. The *pax Romana*, the monetary edicts and the regulation of mint production created the right commercial environment for the development of a monetary system that lasted for centuries. In the process of this creation, there is a possibility that the monetary economy became more integrated, even if trade tended to generate more restricted numismatic circulation pools. Main forces behind this integration were the upper and middle social strata of the Roman Principate, who traded their commodities under the auspices of the central government. Comparative points with other integrated economies, e.g.

the *Zollverein* and China, could highlight similarities and differences in integrating processes and their effect.

In chapter 6 I study the production, circulation and use of small change especially in the Roman provinces of Greece, Asia Minor and Syria. Deeply rooted Hellenistic traditions seemed to have substantial impact on the decisions of Rome, regarding the continuation of civic mints and the legal circulation of their bronze currencies. Once the city undertook the minting of its own small change, its authorities also were expected to react to any local demands for more coins (army movements, debasements etc.), even without central approval; this way, the markets remained functional. Of course, in some cases we notice attempts to regulate the situation at a provincial or at a state level but these did not change the overall diverse picture. Despite the colourful mosaic of civic currencies, which may have caused some uncertainties about their exact value, daily transactions were greatly facilitated. In fact, monetisation remained quite high in this pre-industrial society, even if we cannot assess the exact level. This level could become less ambiguous if we attempt to compare it to the monetisation of the classical and Hellenistic transactions or the markets of the Roman Republic.

In the last chapter the nature of ancient money is explored in more detail. By using the theories of metallism and chartalism I try to assess the impact of the civic authorities and the extent of the intervention of the Roman state in the control of the monetary supply. Consequently, I emphasise the effect of private enterprises (trade, banking or other) on both the production and the distribution of money in the provinces. Economic mechanisms, based either on the direct intervention of the Roman state or the secondary impact of the markets, guaranteed the effective operation of the monetary economy. So, when one of the determinants changed, for whatever reason, the monetary system was endangered and/or reformed. The example of the Roman Principate from Augustus until the end of the third century indicates that aspects of both metallist and chartalist theories may be applicable and that this unique system was strong enough to remain unaltered for centuries.

CHAPTER 1

Statistics and numismatics

Over the last few decades a lot of ink has been spent in order to decide what is the most efficient way to study ancient coins. In particular, several articles were dedicated to answering the following question: should we or should we not use statistics in the analysis of ancient material? Since statistical analysis is fundamental in economics, a response to this problem may change basic perceptions with regard to the study of the discipline. However, scholarly views range from the nihilistic approach that denies all value to statistics to the opposite side that promotes the use of advanced mathematical formulas. Such polarisation seems to be counterproductive and it inhibits rather than facilitates the reconstruction of the ancient economy. Instead, a combination of the opposing positions may give us some tangible results and at the same time further our knowledge on the subject. In my study I employ simple statistical practices, which could assist in the economic analysis of Roman coins, while I still believe strongly in the qualification of the available data. In this chapter I intend to reveal in more detail the methodology I followed throughout the entire book: a methodology based on the experience of several numismatists who have studied coins since the beginning of the twentieth century. In addition, I will attempt to explain the problems arising from the study of the ancient monetary economies as well as the possible solutions. I am aware that these solutions are nothing more than simple recommendations, which cannot be applied in all circumstances but should be taken into consideration at all times. To start with, we should categorise our numismatic finds according to the conditions under which they have been found, the circumstances of their loss in antiquity and the reasons for their loss. In order to achieve this goal, numismatic finds should be divided into three main groups: (a) coin hoards, (b) site finds and (c) stray finds.

COIN HOARDS

On the night of 12 June 1667, Samuel Pepys decided to conceal his money. His main concern was to protect his wealth from the Dutch fleet that made its way into the Thames estuary. The next morning he sent his father and his wife off by coach with 1,300 pounds in gold. According to his explicit instructions, they had to conceal the treasure at his country estate in Huntingdonshire. Pepys later sent another 1,000 gold pieces through a special messenger. The money remained concealed for four months, when he became able to recover them. Meanwhile, he wrote in his diary that his wife gave him

> so bad an account of her and my father's method in the burying of our gold, that made me mad; and she herself is not pleased with it, she believing that my sister knows of it. My father and she did it on Sunday, when they were gone to church, in open daylight, in the midst of the garden, where for aught they know, many eys might see them; which put me into trouble, and I presently cast about, how to have it back again to secure it here, the times being a little better now.

In order to safeguard his wealth, he dug at night until he recovered two bags filled with gold. In the meantime, though, the bags had rotted away and the coins were scattered. Pepys eventually recovered most of his gold, with a loss of only twenty pounds.[1] This example is indicative of the nature of hoards and the circumstances of their concealment.

It is essential, though, to distinguish between hoards that came together for economic purposes and 'ritual' deposits that have been used as part of religious ceremonies. Coins as votive offerings can be found in springs, close to the statue of a god or in graves. In the first two instances, the process may have taken several years until the hoard was completed, while in the last case the hoard is formed at the moment of the burial. Strictly speaking, these are hoards, but we should bear in mind that the coins have been immobilised without the intention to recover them. Money offered to gods or to a dead person is not used in the markets, unless the god's devotees bring these coins back into circulation, if the circumstances demand it.[2] Since in most cases they did not function in an economic way, they should form a separate category and, thus, will not be studied here. Nevertheless, burial hoards, which were formed in a specific point in time, will be used sparingly for comparative purposes, if their structure resembles the structure of other hoards from the same area and period.

[1] The story can be found in Kent 1974: 188; Grierson 1975: 124. [2] Guest 1994: 27–8.