THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Economic History Working Papers No: 338

How Successful was Germany's First Common Currency? A New Look at the Imperial Monetary Union of 1559

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April 2022

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Key words: Currency unions, early modern monetary policies, Gresham's Law
JEL codes: E42, E52, N13, N43

Abstract
The paper starts out from the insight that success or failure of the common currency, on which the diet of the Holy Roman Empire agreed in 1559, cannot be assessed against how modern currencies are functioning. Rather, the benchmark is provided by historical criteria, primarily by the aims of the political authorities that joined the union. The analysis finds that there were two overriding aims: 1) preventing high-ranking economic agents from exploiting their social standing in order to push up prices and rents, and 2) removing the conditions that allowed Gresham's Law to undermine monetary stability. The participants in the union tried to reach the first aim by retaining regional small change in addition to the Empire-wide larger units. While there is limited evidence for the common currency preventing the functioning of Gresham's Law within the Empire up to the immediate run-up to the Thirty Years War (1618-48), it failed to prevent inflation and the inflow of foreign coinage. However, in neither respect the post-1559 Empire differed from other contemporary polities. On balance, therefore, the Empire's common currency can be considered a success.

1. Introduction

About a decade ago the editors of a planned volume on key events in German financial and banking history offered me the chance to contribute a chapter: I was to write something on the failure of the common currency of the Holy Roman Empire in 1559, the year Ferdinand I published the 'Augsburg Imperial Coinage Ordinance' (cf. Figure 1, p. 4). I was of course flattered to be asked, delighted to be suggested a topic that so closely matched my research interests, and cheerfully set about producing a paper that did not draw on any new archival sources but that I thought offered a nicely rounded political economy-based explanation of why the Empire's currency did not succeed.[1]

The fact that I was offered this topic is indicative of how the monetary policies of the Holy Roman Empire are perceived: They are widely considered a failure. This applies not only to the attempts to create a common currency in 1524 and 1551 and to Ferdinand's bill of 1559, but also to its amendments of 1566 and -71 that were designed to bolster it. Such a view is not restricted to Germany. A prestigious exhibition on German history the British Museum put on between October 2014 and January 2015 illustrated the country's early modern political structure with a map to which dozens, maybe hundreds of coins of the various estates of the Empire were affixed: as striking an image of diversity you could wish for.[2] Specialists in the field – economic historians – argue in a more nuanced way. In the 1960s Friedrich Lütge, the doyen of German economic history, stated that policies aimed at regulating currency questions were the most successful of all that the Empire pursued in economic matters.[3] Friedrich Wilhelm Henning, whose three-volume textbook on German economic history appeared in the 1990s, claimed that on the whole, the attempts to harmonise the Empire's currency were fruitful, though it proved impossible to prevent individual estates from debasing their coinage.[4] By contrast, Hermann Kellenbenz, long a dominant figure in German economic historiography, refrained from assessing the Empire's success or failure in this field, which given the fanciful character of his account was

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[1] Oliver Volckart, "Die Reichsmünzordnung von 1559: Das Scheitern reichseinheitlichen Geldes," in *Schlüsselereignisse der deutschen Bankengeschichte*, ed. Dieter Lindenlaub, Carsten Burhop, and Joachim Scholtyseck (Stuttgart: Franz Steiner Verlag, 2013). For the text of the ordinance see Josef Leeb, ed., *Der Kurfürstentag zu Frankfurt 1558 und der Reichstag zu Augsburg 1559*, vol. 3, Deutsche Reichstagsakten: Reichsversammlungen 1556-1662 (Göttingen: Vandenhoeck & Ruprecht, 1999), no. 804, pp. 1953-1988.
[2] David Blackbourn, "Germany: Memories of a Nation by Neil MacGregor review – bold, fluent and sharply intelligent," *The Guardian*, 23 Dec 2014.
[3] Friedrich Lütge, *Deutsche Sozial- und Wirtschaftsgeschichte: Ein Überblick*, 3 ed. (Berlin, Heidelberg, New York: Springer, 1966), p. 370.
[4] Friedrich-Wilhelm Henning, *Handbuch der Wirtschafts- und Sozialgeschichte Deutschlands*, vol. 1: Deutsche Wirtschafts- und Sozialgeschichte im Mittelalter und in der frühen Neuzeit (Paderborn: Schöningh, 1991), p. 552-553.

probably wise.[5] Franz Mathis finally, author of the volume on sixteenth-century economic history in the widely used 'Enzyklopädie deutscher Geschichte' textbook series, argued that in the final analysis, the 'ambitious project' of creating a common currency failed.[6]

While general economic historians are divided where the success of the common currency is concerned, specialists in monetary history lean to the view that it was largely a failure. Fritz Blaich, who published the first modern analysis of the Empire's monetary policies, implies that the 'Augsburg Imperial Coinage Ordinance' of 1559 was widely implemented but shies back from trying to determine how effectively this was done.[7] Herbert Rittmann, whose target readership is numismatists, claimed that Emperor Ferdinand's Augsburg Imperial Coinage Ordinance of 1559 did not enjoy any lasting or sweeping success.[8] According to Bernd Sprenger, whose survey is directed at economic historians as well as at the general public, the ordinance did not achieve a 'decisive breakthrough' and failed to do away with the 'fragmentation of the coinage' that was a legacy of the Middle Ages.[9] Hans-Jürgen Gerhard, the leader of a major research project on the monetary policies pursued by the imperial circles (the administrative districts into which the Empire was subdivided, see Figure 2, p. 15), which the Volkswagen-trust supported in the 1990s, concluded that none of the bills intended to create the common currency was ever really implemented.[10] And Philipp Rössner, the most prominent of the younger generation of German

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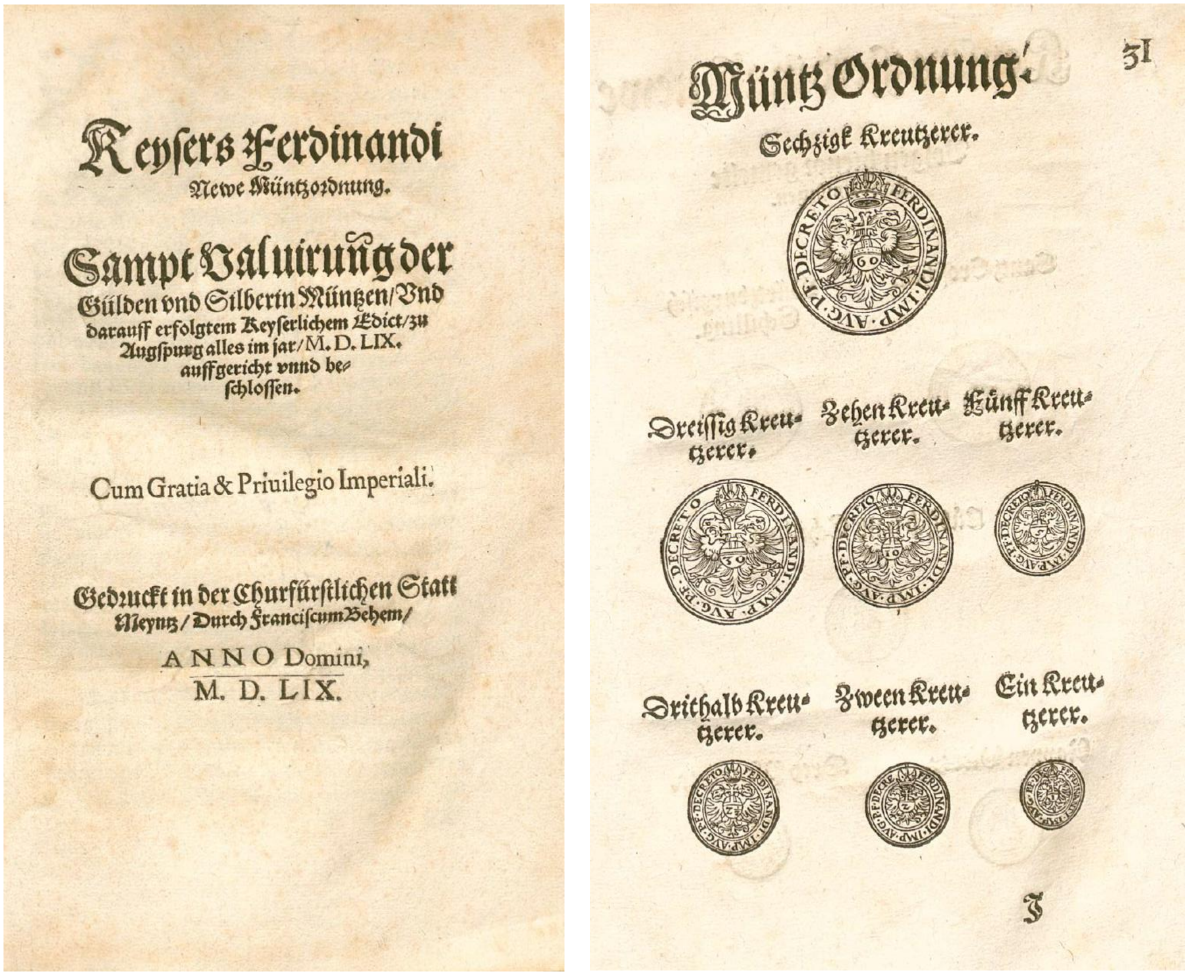
[5] Hermann Kellenbenz, *Deutsche Wirtschaftsgeschichte*, vol. 1: Von den Anfängen bis zum Ende des 18. Jahrhunderts (München: Beck, 1977), pp. 222-223.
[6] Franz Mathis, *Die deutsche Wirtschaft im 16. Jahrhundert*, ed. Lothar Gall, Enzyklopädie deutscher Geschichte 11, (München: Oldenbourg, 1992), p. 70.
[7] Fritz Blaich, *Die Wirtschaftspolitik des Reichstags im Heiligen Römischen Reich: Ein Beitrag zur Problemgeschichte wirtschaftlichen Gestaltens*, Schriften zum Vergleich von Wirtschaftsordnungen 16, (Stuttgart: Fischer, 1970), pp. 239-246.
[8] Herbert Rittmann, *Deutsche Geldgeschichte 1484-1914* (München: Battenberg, 1975), pp. 186, 204.
[9] Bernd Sprenger, *Das Geld der Deutschen: Geldgeschichte Deutschlands von den Anfängen bis zur Gegenwart*, 3 ed. (Paderborn, München, Wien, Zürich: Schöningh, 2002), pp. 102-103.
[10] Hans-Jürgen Gerhard, "Ein schöner Garten ohne Zaun: Die währungspolitische Situation des Deutschen Reiches um 1600," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 81, no. 2 (1994), p. 164.

monetary historians, claimed that the absence of monetary integration and stability post 1559 was evidence for the failure of the ‘attempted’ harmonization of monetary policy at the level of the circles that the Imperial Coinage Ordinance demanded.[11]

Figure 1: The ‘Augsburg Imperial Coinage Ordinance’, 1559[12]


Keysers Ferdinandi
Newe Müntzordnung.
Sampt Valuirung der
Gülden vnd Silbertin Müntzen/ Vnd
darauff erfolgtem Keyserlichem Edict/ zu
Augspurg alles im jar/ M. D. LIX.
auffgericht vnnd be=
schlossen.

Cum Gratia & Priuilegio Imperiali.

Gedruckt in der Churfürstlichen Statt
Meyntz/ Durch Franciscum Behem/
ANNO Domini,
M. D. LIX.

Müntz Ordnung. 31
Sechzigk Kreutzerer.
Dreissig Kreu=tzerer.
Zehen Kreu=tzerer.
Fünff Kreu=tzerer.
Dritthalb Kreu=tzerer.
Zween Kreu=tzerer.
Ein Kreu=tzerer.
J

This largely negative picture has recently begun to change. In a number of articles, Michael North explored how the North-German imperial circles implemented the

[11] Philipp Robinson Rössner, "Monetary Instability, Lack of Integration, and the Curse of a Commodity Money Standard: The German Lands, c.1400–1900 A.D.," *Credit and Capital Markets – Kredit und Kapital* 47, no. 2 (2014/06/01 2014), pp. 310, 312.
[12] Anonymous, Keysers Ferdinandi Newe Müntzordnung, (Mainz: Franciscus Behem, 1559), title folio and fol. 31 recto. Note that the currency this bill introduced was the first in Europe whose units indicated their ‘face’ values.

Empire's currency bill,[13] while after discovering (and publishing, alongside many other pertinent documents) the minutes of one of the monetary policy conferences that the imperial diet convened in order to draft the bill,[14] I was for the first time able to trace in detail how the common currency was created.[15] The emerging new view of the effectiveness of monetary policies in sixteenth-century Germany is in line with the reassessment of the role the early modern Holy Roman Empire played in German history. Far into the second half of the twentieth century, the Empire was considered moribund and essentially no more than an obstacle on Prussia's way to fulfil its destiny, which was the creation of a German nation state.[16] Joachim Whaley, one of the foremost experts in the field, summarises how much ideas have changed since the 1970s: 'From the outside, it' – that is, the Empire – 'does look chaotic', he admitted, 'particularly if you look at an historical atlas, where you see a blaze of colour, and little bits of territory here there and everywhere, everything looking very confused, but I think on the whole it worked as well as many other early modern states'.[17]

Strikingly, though, where monetary policies are concerned the jury still seems to be out. North's work concerns parts of the Empire only, while my own research has so far been focused on the political processes ahead of the publication of Emperor Ferdinand's common currency bill of 1559. This is where the present

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[13] Michael North, "The Reception of Imperial Monetary Reforms in 16th-century Northern Germany," in *Money and Finance in Central Europe During the Later Middle Ages*, ed. Roman Zaoral (London: Palgrave, 2016); ibid., "Monetary Reforms in the Holy Roman Empire in the Fifteenth and Sixteenth Centuries," in *Money in the Western Legal Tradition: Middle Ages to Bretton Woods*, ed. David Fox and Wolfgang Ernst (Oxford: Oxford University Press, 2016).

[14] Oliver Volckart, ed., *Eine Währung für das Reich: Die Akten der Münztage zu Speyer 1549 und 1557*, Deutsche Handelsakten des Mittelalters und der Neuzeit XXIII (Stuttgart: Steiner, 2017).

[15] ibid., "Power Politics and Princely Debts: Why Germany's Common Currency Failed, 1549-1556," *The Economic History Review* 70, no. 3 (2017); ibid., *Währung*; ibid., "Bimetallism and its Discontents: Cooperation and Coordination Failure in the Empire's Monetary Policies, 1549-59," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 105, no. 2 (2018); ibid., "The Dear Old Holy Roman Realm: How Does it Hold Together? Monetary Policies, Cross-cutting Cleavages and Political Cohesion in the Age of Reformation," *German History* 38, no. 4 (2020); ibid., *Trade in Coinage, Gresham's Law, and the Drive to Monetary Unification: The Holy Roman Empire, 1519-59*, Economic History Department, London School of Economics and Political Science (London, 2021).

[16] Len Scales and Joachim Whaley, "Rewriting the History of the Holy Roman Empire," *German History* 36, no. 2 (2018).

[17] Neil MacGregor, *Germany: Memories of a Nation* (London: Penguin, 2016), p. 80.

paper contributes to the debate. It questions the success or failure of the monetary union created in that year and offers a re-appraisal of the currency introduced by Ferdinand's bill and bolstered by subsidiary legislation in 1566 and -71. The period the analysis covers ends with the run-up to the Thirty Years War in the second decade of the seventeenth century.

The paper begins by outlining the criteria needed for assessing the success or failure of the monetary union of 1559. Its starting point is the insight that it cannot be measured against how modern currencies are functioning. Rather, the benchmark must be provided by historical criteria, first and foremost by the aims of the political authorities that joined the union. The evidence indicates that two such aims stand out: preventing socially high-ranking individuals from using the introduction of a new currency as a chance for rising prices or rents, and removing the conditions that allowed Gresham's Law to undermine monetary stability. While there is some evidence for the common currency preventing the functioning of Gresham's Law within the Empire before the immediate run-up to the Thirty Years War, it failed to prevent the inflow of foreign coinage. Inflationary pressure continued. However, in both respects the post-1559 Empire functioned no different from other contemporary polities that experienced inflation and where the money supply was essentially international, too. The paper thus contributes to 'normalising' the Holy Roman Empire in its European context.

Below, the conditions shaping its monetary policies and the aims of the estates that joined the Monetary Union created in 1559 are examined first (Section 2). Thereafter, the aims of the estates joining the union are examined (Section 3). Sections 4 and 0 take a closer look at how they tried to reach these aims and at the extent to which they were successful. Section 6 concludes by summarising the main findings of this article.

2. Which conditions shaped monetary policies at the level of the Empire?

In order to demonstrate what the imperial estates that formed the monetary union of 1559 tried to achieve it is necessary first to establish the historical context. This is provided by five fundamental conditions that shaped the Empire's monetary policies before the agreement of 1559.

1. The first (and rather obvious) of these is the fact that a large number of authorities within the Holy Roman Empire were issuing coins in parallel with each other. To be sure, originally the emperors had regarded coinage as their exclusive prerogative. However, there had always been some rulers who did not share this view and minted their own money without imperial consent.[18] Moreover, in regions the emperors controlled more closely they began using the right to issue coins in order to reward supporters. From the eleventh century onward maintaining monetary uniformity proved impossible,[19] and by the mid-sixteenth century there were up to 100 estates of the Empire that minted their own coins.[20] While it was widely bemoaned that 'everybody, even nuns and monks' enjoyed the privilege to do so,[21] when it came to changing this some rulers urged caution: The elector of Saxony, for example, argued in 1544 that forcing estates to give up their right to issue coins would cause great discord in the Empire 'where there is more than enough discord as it is. And if, in addition to that, discord about the coinage would arise the total break-up and downfall of the Empire might follow'.[22] This was an alarmist position. Neither the emperor nor the imperial diet – nor the two of them acting together – had any realistic chance of withdrawing privileges like

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[18] For example the dukes and electors of Saxony. Walter Schwinkowski, "Das Geld- und Münzwesen Sachsens," *Neues Archiv für sächsische Geschichte* 38 (1917), pp. 141, 144.
[19].Sprenger, *Geld*, p. 60.
[20] Volckart, *Monetary Unification*, p. 10. The figure of about 600 political authorities privileged to mint that Blaich mentions is fictitious. Blaich, *Wirtschaftspolitik*, p. 12.
[21] Volckart, *Währung*, no. 99, p. 303.
[22] Erwein Eltz, ed., *Deutsche Reichstagsakten unter Kaiser Karl V.: Der Speyrer Reichstag von 1544*, vol. 1, Deutsche Reichstagsakten: Jüngere Reihe 15 (Göttingen: Vandenhoeck & Ruprecht, 2001), no. 67, p. 335.

the right to mint from estates some of which were among the most influential in the Empire.

2. Monetary diversity was even larger than this would lead one to expect. The German lands did not consist of neatly defined currency regions separated by clear and well-monitored borders. Some estates did occasionally attempt to ban at least certain types of coins issued elsewhere, but normally it was up to the consumers to decide whether and on what terms they were prepared to accept money minted elsewhere. Moreover, what applied within the Empire applied to its external borders, too: They were wide open. People, goods and coin crossed them without being hindered, registered or taxed. Germany's monetary diversity was therefore not only the result of decentralisation, but also of the import of money from abroad.[23] When the imperial diet convened a commission of experts who were to analyse the coinage current in the Empire in 1551, the panel tested the gold- and silver-content of almost 340 different types of coins: c. 190 golden ones, about 100 of which had been minted in the German lands, the rest in silver, again with c. 100 German types.[24] Thus, roughly 50 per cent of the gold and 30 per cent of the silver units analysed were from abroad – evidence of the fact that high-purchasing power gold coins played a larger role in long-distance trade than silver, which tended to be more often used in local and regional exchange (for reasons discussed below this changed in the first half of the sixteenth century). This lack of currency borders was the second condition the Empire's monetary policies had to take into account.

3. None of the princes or towns minting in the Empire had a bureaucracy sophisticated enough to withdraw old coins from circulation when they issued new ones of a different standard. Old and new coins would then circulate side by side, and as authorities were generally too weak to enforce their circulation at specific

[23] Cf. Eric Helleiner, *The Making of National Money: Territorial Currencies in Historical Perspective* (Ithaca, London: Cornell University Press, 2003), pp. 21-23.
[24] Volckart, *Währung*, no. 88, pp. 318-342.

values they would normally do so at varying rates that consumers negotiated in the same way in which they reached agreements about the acceptance of foreign or unfamiliar coins.[25] Again, the report the expert panel convened of 1551 gives evidence of this: The oldest dateable coin tested was from between 1424 and -37.[26] That state capacities were not sufficiently developed to withdraw old coins from circulation was the third essential condition.

Finally, we must take two macroeconomic conditions into account: one historians have been aware of for a long time, and another that has been detected only in recent years:

4. Since the nineteenth century, we have known of the quick rise in price levels that the sixteenth century experienced. While much of the research done since the mid-twentieth century focused on shifts in relative prices, in our context these are less important than the fact that there was virtually no good – not even labour – that became cheaper between 1500 and 1600. This is true not only if we look at nominal prices, but also if we control for changes in the bullion content of the currencies: silver prices went up, too.[27] As we will see, contemporaries were well aware of this development.

5. The other macro-economic condition of crucial relevance for monetary policies was the increasing economic integration of the lands of the Empire and its neighbours. Recent research has found that like commodity markets in general, currency markets were far more closely linked in the early sixteenth century than they had been a hundred years before – very likely in consequence of the reforms

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[25] Philipp Robinson Rössner, *Deflation - Devaluation - Rebellion: Geld im Zeitalter der Reformation*, ed. Günter Schulz et al., Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, Beiheft 219, (Stuttgart: Steiner, 2012), p. 564-568.
[26] Volckart, *Währung*, no. 88, p. 322 (§7.3); cf. Rössner, "Monetary Instability,", p. 302.
[27] Bernd Sprenger, "Münzverschlechterung, Geldmengenwachstum und Bevölkerungsvermehrung als Einflußgrößen der sogenannten Preisrevolution im 16. und beginnenden 17. Jahrhundert in Deutschland," in *Theorie und Empirie in Wirtschaftspolitik und Wirtschaftsgeschichte: Festschrift für Wilhelm Abel zum 80. Geburtstag*, ed. K.H. Kaufhold and F Riemann, Göttinger Beiträge zur Wirtschafts- und Sozialgeschichte 11 (Göttingen: Schwartz, 1984), p. 138.

of the imperial constitution that increased legal security and made it more attractive and profitable to engage in currency arbitrage or invest capital in larger quantities and over longer distances.[28] High-purchasing-power coins – mostly gold – had of course been used for a long time in long-distance trade. What seems to have been new in the first half of the sixteenth century was that even small-value units travelled huge distances. Thus, in 1553 the government of Lower Austria raised the issue of foreign small change with King Ferdinand:

> 'Most gracious lord, we are herewith sending your Roman Royal Majesty copies of two letters together with a purse of coins from Henneberg, which we have received from your Royal Majesty's councillor and governor of Carinthia, Christoph Khevenhüller, and said two letters describe how this coinage from Henneberg has flooded Carinthia and is increasing to such an extent that the common man cannot obtain any other money whatsoever, which is a great hardship for the country folk'.[29]

People in Carinthia were using these coins as 2-*Pfennig* pieces, which definitely makes them small change. While 'flooded' is certainly no more that rhetoric hyperbole, enough of them entered circulation to cause a stir: unsurprisingly, considering that the distance between Henneberg in modern Central Germany and Carinthia is more than 300 miles and that the main range of the Alps runs across the way. A Saxon currency ordinance of 1511 shows what complications the inflow of foreign small change created for the population. According to this law Saxons had to deal with 37 different types of coins below the size of a *Groschen*, only four of which were domestic. Consumers were expected to be able to correctly identify the non-Saxon pieces they were offered, learn their official values in Saxon money and remember them.[30] What these conditions imply is a high degree of

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[28] David Chilosi, Max-Stephan Schulze, and Oliver Volckart, "Benefits of Empire? Capital Market Integration North and South of the Alps, 1350-1800," *The Journal of Economic History* 78, no. 3 (2018); David Chilosi and Oliver Volckart, "Money, States and Empire: Financial Integration and Institutional Change in Central Europe, 1400-1520," *The Journal of Economic History* 71, no. 3 (2011); Giovanni Federico, Max-Stephan Schulze, and Oliver Volckart, "European Goods Market Integration in the Very Long Run: From the Black Death to the First World War," *The Journal of Economic History* 81, no. 1 (2021).
[29] ÖStA, HHStA Wien, RHR, Miscellanea Münzwesen 2: Münzwesen im Reich, 1551-1564, fol. 443r.
[30] Rössner, *Deflation*, pp. 381-386.

uncertainty about monetary values among the consumers, which in turn imply high transaction costs. For political actors, they had further consequences to which I will come below.

3. What was the common currency intended to achieve?

Like the success or failure of the bill of 1559 and its later amendments, this issue is debated, with four hypotheses having been advanced. First, some historians speculate that the common currency was a project driven by Charles V and King Ferdinand, and that the aim was political integration: What was to be achieved was a closer unity of the imperial estates that was to augment the emperor's power.[31] Evidence – documentary or otherwise – supporting this idea does not seem to exist. A second opinion is advanced by other historians, notably by Fritz Blaich, who argues that the core aim the imperial diet tried to reach with the introduction of a common currency was putting a stop to inflation.[32] There is good evidence that the imperial estates discussing the creation of a common currency did indeed think of this issue. At the imperial diet of Worms of 1545, for example, the monetary policy committee argued that 'it was to be hoped that a good, honourable, upright and silver-rich coinage would cause lower and more seemly prices of all things'.[33] Everyone concerned was aware of the fact that trade reacted to debasements by increasing nominal prices,[34] and that had to be avoided. Still, as we will see in a moment this was not the main aim; moreover, political decision makers were primarily thinking not of a rise in general price levels but rather of a specific kind of price hikes that required specific counter measures.

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[31] Petr Vorel, *Monetary Circulation in Central Europe at the Beginning of the Early Modern Age: Attempts to Establish a Shared Currency as an Aspect of the Political Culture of the 16th Century (1524-1573)* (Pardubice: Univerziteta Pardubice, 2006), p. 20.
[32] Blaich, *Wirtschaftspolitik*, p. 13.
[33] Rosemarie Aulinger, ed., *Deutsche Reichstagsakten unter Kaiser Karl V.: Der Reichstag zu Worms 1545*, vol. 2, Deutsche Reichstagsakten: Jüngere Reihe Band XVI (München: Oldenbourg, 2003), no. 86, p. 959.
[34] Cf. E.g. Erwein Eltz, ed., *Deutsche Reichstagsakten unter Kaiser Karl V.: Der Reichstag zu Augsburg 1550/51*, vol. 1, Deutsche Reichstagsakten: Jüngere Reihe 19 (München: Oldenbourg, 2005), no. 72, p. 224; Rössner, "Monetary Instability,", p. 318.

As for the main aim of the common currency, most research has adopted – or rather: has taken for granted – a third hypothesis. It is widely believed that like other premodern monetary unions, it served the same aim as its modern counterparts: helping economic integration.[35] In fact, this seemed a perfectly reasonable idea. It is the angle taken by economists, none of whom doubts that monetary harmonisation reduces the costs of negotiating commercial agreements between regions that used to have different currencies. Currency unions thus help interregional trade. What is disputed is merely whether their creation is a purely political act or whether they can be introduced only where markets already are fairly well-integrated.[36]

It is only very recently that this hypothesis has been called in question and superseded by a fourth one. It is being suggested that like many other pre-modern monetary unions, the one based on Ferdinand's Augsburg Imperial Coinage Ordinance of 1559 was designed not to help but to hinder commerce, or at least one type of commerce: the one contemporaries called the 'trade in coinage'.[37] In fact, this trade – which flourished before the background of the multiplicity of old and new coins, the lack of currency borders and the increasing economic integration – presented the imperial estates with a number of serious problems that concerned their revenues as well as their reputation. There is abundant

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[35] Cf. Friedrich Frhr. von Schrötter, "Das Münzwesen des deutschen Reichs von 1500-1566, Teil II," *Schmollers Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft* 36, no. 1 (1912), pp. 99-100; Peter Lennartz, "Die Probationstage und Probationsregister des niederländisch-westfälischen Kreises," *Numismatische Zeitschrift* 46 (1913), p. 1; Johann Kamann, "Der Nürnberger Patrizier Christoph Fürer der Ältere und seine Denkwürdigkeiten 1479-1537," *Mitteilungen des Vereins für Geschichte der Stadt Nürnberg* 28 (1928), p. 259; Blaich, *Wirtschaftspolitik*, p. 15; Günther Probszt, *Österreichische Münz- und Geldgeschichte von den Anfängen bis 1918* (Wien, Köln, Graz: Hermann Böhlaus Nachf., 1973), p. 397; Gerhard Schön, "Die Münzprobationstage im Alten Reich," *Abhandlungen der Braunschweigischen Wissenschaftlichen Gesellschaft* 61 (2008), p. 467; Lars Boerner and Oliver Volckart, "The Utility of a Common Coinage: Currency Unions and the Integration of Money Markets in Late Medieval Central Europe," *Explorations in Economic History* 48 (2011), p. 63; Rössner, "Monetary Instability,", p. 309; Hiram Kümper, *Der Traum vom ehrbaren Kaufmann: Die Deutschen und die Hanse* (Berlin: Propyläen, 2020), p. 180.
[36] Andrew K. Rose, "One Money, One Market: Estimating the Effects of Common Currencies on Trade," *Economic Policy* 30 (2000); ibid., "Currency Unions and Trade: The Effect is Large," *Economic Policy* 33 (2001).
[37] Trade in coinage ('*kauffmanschafft inn der muntz*'): E.g. Volckart, *Währung*, no. 37, p. 129.

evidence for traders involved in it focusing on collecting relatively high-value coins issued by one estate in order to deliver them to the mint of another where they would be melted, mixed with base metal and re-issued as more or less accurate copies of the better originals. A memo the councillors of Charles V's younger brother Ferdinand drafted in June 1543 (at that time he was King of the Romans and as such Charles' designated successor) is typical of the evidence reflecting this commerce. The memo stated that

> 'everyone knew his royal Majesty's silver-rich coin … had not benefited his Majesty's land and people, but that the money had all been exported like a commercial good, melted elsewhere and re-minted into poorer coins which, together with other light coins, had then been re-imported into the country and become common'.[38]

In short, what we are observing here is Gresham's Law at work. This was so common that the German language had adopted a technical term of its own to describe the process: Melting another authority's coins and using them as raw material for base imitations that then flooded the market was called 'breaking' money.

We learn from the duchy of Pomerania what this implied. Its coins were exported to neighbouring Mecklenburg where they were used as raw material for the coins issued for example by the town of Rostock – coins that were practically indistinguishable from the Pomeranian originals. After some time the underweight imitations became dominant in Pomerania; by the 1550s, the dukes were complaining about the requirement to pay their dues to the Empire in good money while they received their revenues in bad coins.[39] Moreover, the Rostock mint was able to offer a higher nominal price for the bullion it purchased than the Pomeranian mints, whose supply of specie therefore dried up, and with it the

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[38] Eltz, *Reichstag von 1544*, no. 70, p. 341; cf. Eduard Šimek, "Die Zusammenhänge zwischen Währung und Handel im Böhmen des 16. Jahrhunderts," in *Der Außenhandel Ostmitteleuropas 1450-1650: Die ostmitteleuropäischen Volkswirtschaften in ihren Beziehungen zu Mitteleuropa*, ed. Ingomar Bog (Köln, Wien: Böhlau, 1971), p. 244.
[39] Volckart, *Währung*, no. 103, p. 415.

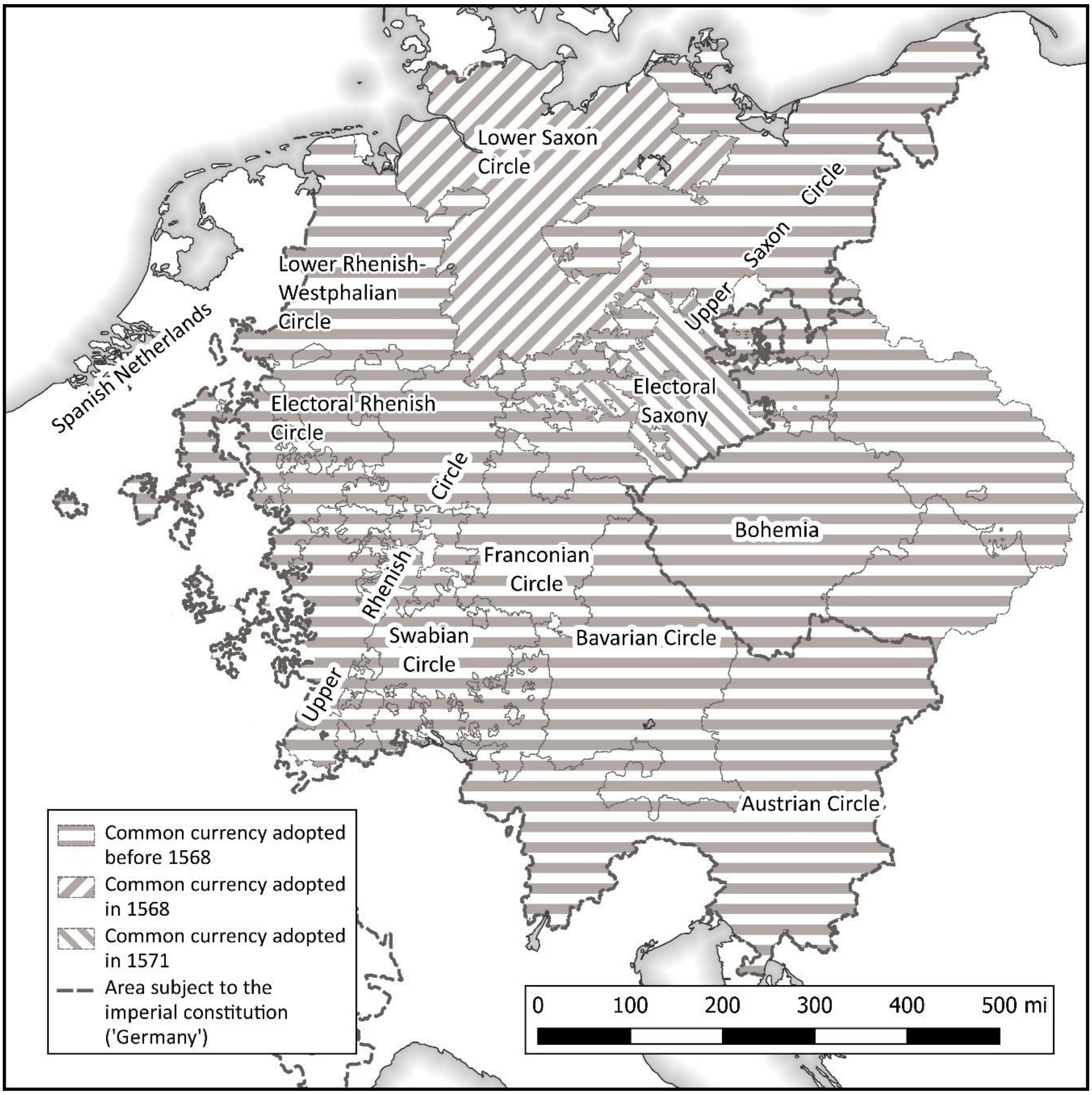
seignorage the dukes had received.[40] The breaking of coins thus had unambiguously negative revenue effects, which were particularly painful in an age of growing governmental and courtly expenses. Being unable to issue their own coins moreover robbed the estates of a chance to shape their public image, and finally, their reputation with their peers was bound to suffer, too.

The sources reflecting the talks about the introduction of the Empire's common currency leave no room for doubt about the fact that preventing the trade in coins that were used as raw material for base imitations – and thus the circulation of such base imitations – was the main aim the imperial estates tried to reach. The memo submitted by Ferdinand of Austria's councillors in 1543 stressed that a 'common, orderly and stable' currency was needed to 'prevent and supress the evil, deceitful and self-interested business' that the diversity of coins allowed.[41] Two years later, the currency committee convened at the imperial diet of Worms argued that a 'good, honourable, upright and silver-rich coinage' would serve to prevent 'self-interested people, who seek their own advantage and have sought and made their own unjust profit, from doing business with the irregular and uneven coins'.[42] Or as the delegates of the elector Palatine put it on a later occasion: 'One thing is certain: When all estates mint according to the same standard that they faithfully observe, the breaking of coins is impossible because it can no longer be done without incurring a loss'.[43] In particular, a common currency would prevent 'abusing other minting authorities' seals, coats of arms and coinage designs' – issuing imitations that were easy to confuse with the originals would no longer be possible.[44] 'A uniform, good, even and stable coinage' had to be created, 'so that debasements and also the great damage, harm and deception done in the trade in coinage were averted and in future prevented, and the common weal thereby greatly advanced'.[45] In short: It was not the desire to support political integration

[40] ibid., "Politics,", p. 759; ibid., *Währung*, pp. LIV-LVI; Rössner, *Deflation*, p. 375.
[41] Eltz, *Reichstag von 1544*, no. 70, p. 339.
[42] Aulinger, *Reichstag zu Worms 1545*, no. 86, p. 960.
[43] Volckart, "Politics,", no. 100, p. 405.
[44] Aulinger, *Reichstag zu Worms 1545*, no. 86, pp. 959-960.
[45] ibid., *Reichstag zu Worms 1545*, no. 87, p. 962.

or to help trade or economic integration that gave rise to the wish to create a common, Empire-wide currency; rather, it was the need to slow down inflation, and even more importantly, to eliminate the conditions that allowed Gresham's Law to spread poor imitations of better coins. By the 1550s, there was a broad consensus about this among the imperial estates, and once the diet had passed Emperor Ferdinand's 'Augsburg Coinage Ordinance' in 1559 and the Saxon *Taler* was integrated (as *Reichstaler*) in 1566, the common currency was widely adopted (Figure 2, p. 15).

Figure 2: The common currency zone, 1559 to c. 1610



4. Did the common currency prevent arbitrary increases in prices and rents?

While there is no doubt that mid-sixteenth-century political decision makers worried about inflation and tried to create conditions that would slow it down or reverse it, I have suggested above that general price levels were not uppermost in their mind. Rather, they were primarily concerned about a specific kind of price hikes. In order to see what these were, we need to take into account how contemporaries were perceiving and explaining inflation. A good starting point is a chapter on 'The Great Dearth of the Time of Charles V' that the Frankfurt printer Christian Egenolff added to the new edition of his *Chronica* – his chronological world history – in 1534. Egenolff claimed that

> 'in times gone by, no dearth continued for longer than a year or six months, but now the world has lost faith to an extent that we can no longer be rid of dearth, so much is the price of everything increasing …. Never in history (except in times of war and when there was dearth in Egypt) have we read of such dearth in all things, and there is no one who does not complain, no one who is glad, and the rich man – according to his station in life – feels just as poor as the beggar …'.[46]

This sounds unexceptional enough, and moreover, Egenolff was clearly correct at least as far as living memory was concerned. Seasonal price fluctuations had always existed and were expected; what was new since the 1520s was that an underlying sustained upwards movement of prices had begun. The interesting aspect in our context is how Egenolff explained what he and many others were observing: He ascribed 'this dearth to the lack of faith among people and to usurious speculators, who purchase everything the common man owns. And then, when they hold it in their fist, one has to sing their tune and pay for everything according to their whim'.[47] In a way typical of the time – we find similar arguments for example in Luther's publications – the usurious practices of specific,

[46] Christian Egenolff, *Chronica: Von an vnd abgang aller Weltwesen. Auß den glaubwirdigsten Historien, On alle Glose vnd Zusatz, Nach Historischer Warheit beschriben* (Frankfurt: Egenolff, 1534), fols. CLXI verso to CLXII recto.

[47] ibid., *Chronica*, fols. CLXI verso to CLXII verso.

identifiable individuals – more common than in the past because of a spreading lack of piety – were held responsible.[48]

The problem was particularly acute due to the strongly hierarchical character of German society. Among the imperial estates, this is nicely reflected by the way people addressed each other. A textbook that taught letter writing to secretaries working in the chancelleries of the estates listed 49 graded forms of address for spiritual personages, from cardinal to common priest, and 180 for temporal persons from emperor down to bailiff and cellarer (counting German recipients only). 142 of these forms of address applied to imperial estates.[49] And of course, any communication directed at someone higher up in the pecking order had to be peppered with 'submissive', 'most submissive' (if the social distance was more than one rank) and similar expressions of deference. No wonder English travellers, used to a less graded society, found the Germans 'ever tedious in their stiles or titles'.[50] One consequence of this hierarchy (which extended to the bottom of society) was that individuals higher up in the ranking had a good chance of using their standing vis-à-vis lower-ranking persons to pressure their transaction partner into paying more (or accepting less) than supply and demand would have justified. In particular the 'common man' often felt cheated in this way, whether he paid a merchant for a good he purchased or his landlord for the right to farm his land holding.[51]

[48] Philipp Robinson Rössner, ed., *Martin Luther: On commerce and usury (1524)* (London: Anthem Press, 2015), pp. 121-123; Philipp Robinson Rössner, "Monetary Theory and Cameralist Economic Management, c. 1500–1900 A.D," *Journal of the History of Economic Thought* 40, no. 1 (2018), p. 110; cf. e.g. Johann Eberlin von Günzburg, *15 Bundsgenossen, bearb. und eingerichtet von Michael Holzinger* (Berlin: Holzinger, 1521/2013), pp. 77, 80; Susan Groag Bell, "Johan Eberlin von Günzburg's Wolfaria: The First Protestant Utopia," *Church History* 36, no. 2 (1967), p. 132.
[49] Johann Peter Zwengel, *New Groß Formular vnd vollkommlich Cantzlei Buch: von den besten vnd auszerlesenen Formularien aller deren Schrifften, so in ... Cantzleyen, auch sonst in den Ampten ... fürfallender geschäfft halben, bräuchlich seindt* (Frankfurt: Christian Egenolffs Erben, 1568), fols. XIII-XXX.
[50] Fynes Moryson, *An Itinerary Containing His Ten Yeeres Travell through the Twelve Dominions of Germany, Bohmer-land, Sweitzerland, Netherland, Denmarke, Poland, Italy, Turky, France, England, Scotland & Ireland*, vol. 1 (Glasgow: Glasgow University Press, 1617/1907), p. 46.
[51] Rössner, *Deflation*, pp. 574-575.

What political decision makers discussing the creation of a monetary union feared was that higher ranking individuals would misuse the introduction of a new currency as an opportunity to increase prices and rents over and above what changes in the intrinsic value of the coinage warranted – a situation that in some ways recalls the one after the introduction of Euro coins and banknotes, when there was the widespread (and mistaken) perception that trade exploited the situation to drive up prices.[52] In the sixteenth century this was especially worrying where everyday purchases of consumer goods and regular dues such as rents were concerned, that is, transactions between merchants or landlords on the one side – people whose relatively high social status gave them a strong bargaining position –, and the 'common man' – mainly peasants – on the other. In the mid-1550s the peasant war of 1524-25 was still within living memory, and political authorities remembered well that back then, the insurgents had regularly complained about matters of coinage.[53] Small change was particularly important in this context. As the instructions the delegates of the elector of Saxony received for monetary-policy talks with the other estates in early 1549 stressed, this had to be regulated carefully because if it was neglected, 'it would be burdensome for the common man and might easily cause an uprising in the Empire'.[54]

The solution the imperial diet found was to allow a certain number of estates to retain their traditional small change; this should merely be modified so far that clear and fixed numerical relations with the larger denominations valid all over the Empire were established. Already in 1545, the monetary policy committee at the diet argued that this would help: 'One would be able to take this into account in future transactions, contracts, purchases and sales so that the prices of commodities down to the *Pfennig*-bread' – a generic term used for all cheap and everyday goods – 'are not being increased, because one retains the small *Pfennig*

[52] Hans Wolfgang Brachinger, "Der Euro als Teuro? Die wahrgenommene Inflation in Deutschland," *Wirtschaft und Statistik* 9 (2005), p. 1007.
[53] Rössner, *Deflation*, pp. 486, 513, 553.
[54] Volckart, *Währung*, no. 2, p. 10; cf. no. 92, p. 379.

at every place and can use it to determine how much more or less should be paid in the new coinage' (which consisted of the larger denominations only).[55]

The core insight that follows from this is that the monetary union created in 1559 never aimed at creating complete uniformity. That some traditional small change was to be retained was not disputed, not even by those who advocated that at some unspecified point in the future it should be replaced by a common imperial *Pfennig*.[56] Who should be allowed his own small change was a different question, and one that made it easier for the imperial diet to convince reluctant but influential estates of the advantages of a monetary union: These estates were granted a number of medium-sized units of their own, too (though in 1559 this number was radically reduced from that Charles V's failed ordinance of 1551 had permitted). After all, it made sense to show consideration for the higher ranking and more influential princes, whose support for the common currency was needed and part of whose prestige had for centuries rested on having their own coinage. That is why at a conference convened by the imperial diet in 1549 to draft the common currency bill the delegate of Elector Joachim II of Brandenburg insisted on Brandenburg being treated in the same way as electoral-Saxony where regional small change was concerned.[57] The idea to introduce Empire-wide larger coins but to retain regional small change was thus a pragmatic compromise that took both the wishes of some of the imperial estates and the needs of the common man into account.

The question of whether the Empire reached its aim of preventing inflation is an entirely different matter. In this respect, there is no denying that monetary policies failed. Inflation continued unabated, though from 1559 onward we have

[55] ÖStA HHStA, RHR, Miscellanea Münzwesen 1: Münzwesen im Reich (2. Konvolut), fol. 221 r.; cf. Aulinger, *Reichstag zu Worms 1545*, no. 87, p. 970.
[56] An anonymous and undated memorial found between other such reports from about 1550 advocated that 'the other *Pfennigs*, as each one has them and as they are common in each one's land, should also stay current; it was then to be expected that over time they would disappear and the imperial *Pfennig* would prevail'. ÖStA, HHStA, Reichshofrat, Miscellanea Münzwesen 2: Münzwesen im Reich, 1551-1564, fol. 24-28.
[57] Volckart, *Währung*, no. 137, p. 141.

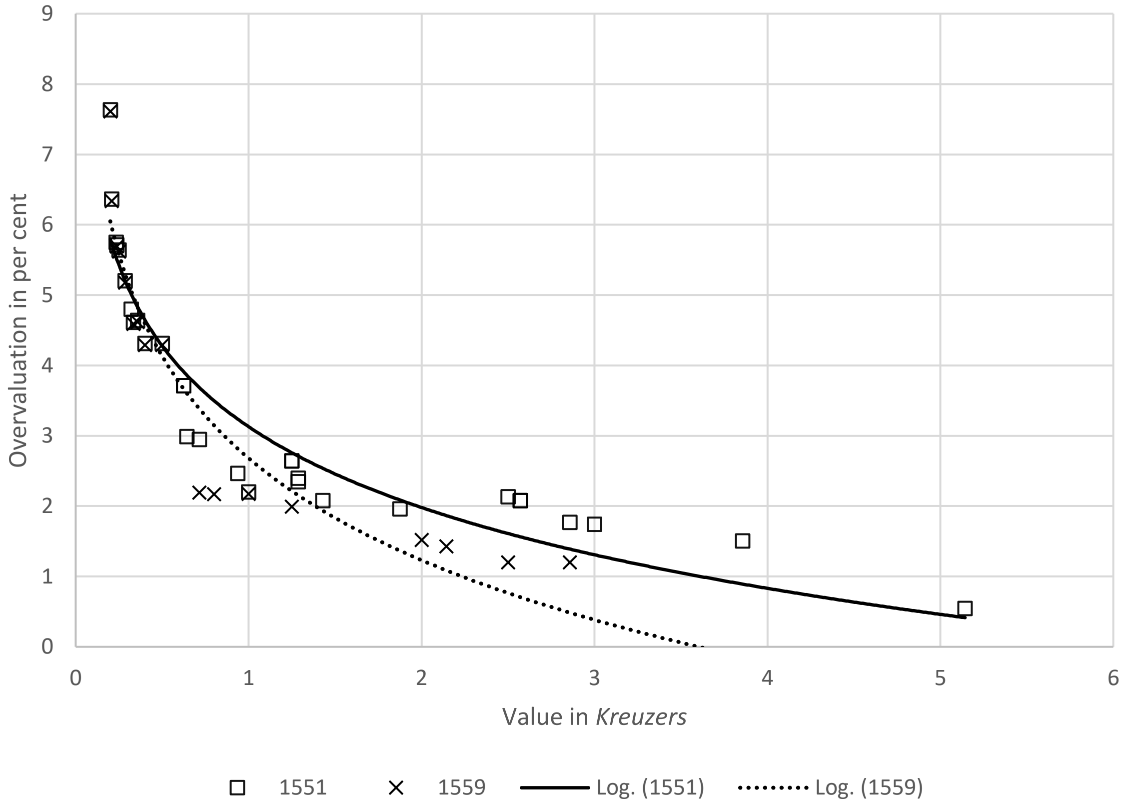
to distinguish between wholesale and retail prices. This is because while the larger units of the common currency that were used across the Empire and in long-distance and wholesale trade remained intrinsically stable, the regional small change continued to be debased. The reason was straightforward. Relative to the total nominal value minted, it cost more to produce small change than larger units, with the wages of the moneyers playing the decisive role.[58] Rulers typically left the decision which types to mint to their mint officials, who took this into account. The consequence was that if nothing was done, mints focused on issuing high-purchasing power units rather than small change.

Most authorities addressed the problem by reducing the pure silver content of small coins. Their aim was offsetting the higher labour costs of minting small change with lower costs for the bullion needed as raw material. This turned small coins into official tokens that were overvalued relative to their bullion content. In the Empire, both the 'Augsburg Imperial Coinage Ordinance' of 1559 and its predecessor of 1551 applied this principle. In 1551, the line between full-bodied coins and small-change was drawn between the 6- and 3-*Kreuzers*-pieces, while eight years later anything below the value of 5 *Kreuzers* was a token. Such a policy was a balancing act, though. If you failed to lower the pure silver content of small change sufficiently, producing it was still so expensive that your mint would focus on issuing the larger pieces; if you reduced it to much, the markets would be swamped with small change. Figure 3 shows that both in 1551 and 1559 coins were the more strongly overvalued the smaller they were. This helped covering the relatively higher labour costs their production involved. The trend lines also show a clear difference between the two bills, with the one of 1551 overvaluing small change too much and that of 1559 not enough. The consequence was that the few estates that adopted the bill of 1551 issued too much small change,

[58] Cf. Thomas J. Sargent and François R. Velde, *The Big Problem of Small Change*, ed. Joel Mokyr, The Princeton Economic History of the World, (Princeton, Oxford: Princeton University Press, 2002), p. 53.

whereas after 1559 too little was being produced, with for example electoral-Saxony hardly minted any small change at all.[59]

Figure 3: Overvaluation of small change relative to the large coins, 1551 and 1559



Elsewhere – for example in the Lower Rhineland and Westphalia – the imperial circles coordinated the response, agreeing on a concerted debasement of their regional small change.[60] This was progress in so far as debasements did no longer take place in a completely arbitrary way, but it still had adverse consequences: As state capacities were too underdeveloped to force consumers to use money at its face value, it caused the appreciation of the larger, Empire-wide units (*Reichstalers* and -*guldens*) in small change (cf. Table 1).

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[59] Robert Wuttke, "Die Probationsregister des Obersächsischen Kreises," *Numismatische Zeitschrift* 29 (1897), pp. 248-249.
[60] Lennartz, "Probationstage," pp. 10-11.

Table 1: Taler- and Gulden rates in small change, 1559-1619[61]

	Taler				*Gulden*		
	Albus	*Groschen*	*Kreuzer*	*Schilling*	*Albus*	*Groschen*	*Kreuzer*
1559 (legal rate)			68.0		23.3	21.0	60.0
1565-69			69.0	29.1		21.0	60.0
1570-74		24.0	67.0	30.9	27.0	21.0	
1575-79			72.2	31.0			
1580-84	32.6		70.7	32.0			
1585-89	34.0		71.4	34.0			60.0
1590-94	35.5		72.0	37.0	27.0		62.0
1595-99	36.3		73.4	38.0			64.0
1600-04	37.3	25.0	75.0	39.0			64.4
1605-09	39.4	27.1	79.1	38.6			68.4
1610-14	38.1	29.9	85.4	38.8		22.5	75.1
1615-19	41.1	32.1	89.9	42.6			80.1

The asymmetric development of wholesale and retail prices reflects the appreciation of the larger units. For example, in Frankfurt the retail wheat price index (based on payments in small denominations) rose from 1 to 1.8 between 1560 and 1610, while the wholesale index (based on *Reichstaler*-prices) only rose to

[61] Karl Weisenstein, *Die Kipper- und Wipperzeit im Kurfürstentum Trier* (Koblenz: Numismatischer Verlag Forneck, 1991), p. 93-94; Carl Friedrich Evers, *Mecklenburgische Münz-Verfassung, besonders die Geschichte derselben*, vol. 1 (Schwerin: Baerensprung, 1798), p. 56; Johann Friedrich Klotzsch, *Versuch einer Chur-Sächschen Münzgeschichte: von den ältesten, bis auf jetzige Zeiten*, vol. 2 (Chemnitz: Johann Christoph Stößel, 1780), pp. 492-494, 521; William Löbe, *Geschichte der Landwirthschaft im Altenburgischen Osterlande* (Leipzig: Brockhaus, 1845), p. 37; Johann Christoph Hirsch, *Des Teutschen Reichs Münz-Archiv*, vol. 2 (Nürnberg: Adam Jonathan Felßeckers seel. Erben, 1756), pp. 25, 46, 379; ibid., *Des Teutschen Reichs Münz-Archiv*, vol. 5 (Nürnberg: Adam Jonathan Felßeckers seel. Erben, 1759), pp. 50, 54; ibid., *Des Teutschen Reichs Münz-Archiv*, vol. 7 (Nürnberg: Adam Jonathan Felßeckers seel. Erben, 1761), pp. 135, 155; Alfred Francis Pribram, *Materialen zur Geschichte der Preise und Löhne in Österreich*, vol. 1 (Wien: Carl Ueberreuters Verlag, 1938), p. 28; Konrad Schneider, *Frankfurt und die Kipper- und Wipperinflation der Jahre 1619-1623* (Frankfurt: Stadtarchiv, 1990), p. 74; Fritz Popelka, "Die Lebensmittelpreise und Löhne in Graz vom 16. bis zum 18. Jahrhundert," *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 23 (1930), p. 167; Leonhard Willibald Hoffmann, *Alter und neuer Münz-Schlüssel Oder Beantwort- und Eröffnung CCXXII. Curioser Fragen* (Nürnberg: J. Zieger, 1692), 'Auf- und Absteigungs-Tafel'; Johann Diederich von Steinen, *Westphälische Geschichte*, vol. 3 (Lemgo: Meyer, 1755), pp. 1075, 1090; Jürgen Elert Kruse, *Allgemeiner und besonders Hamburgischer Contorist*, 3 ed., vol. 1 (Hamburg: Eigenverlag, 1766), pp. 163, 193; Konrad Schneider, "Hamburg während der Kipper- und Wipperzeit," *Zeitschrift des Vereins für hamburgische Geschichte* 67 (1981), p. 54; Hermann Grote, *Osnabrück'sche Geld- und Münz-Geschichte* (Leipzig: Hahn'sche Verlagsbuchhandlung, 1864), p. 38; Hans-Christian Altmann, *Die Kipper- und Wipperinflation in Bayern (1620-1623): Ein Beitrag zur Strukturanalyse des frühabsolutistischen Staates*, Miscellanea Bavarica Monacensia, (München, 1976), p. 272.

1.3.[62] In so far, the Empire's monetary policies failed to reach their aim – though in all fairness we need to take into account that in this respect, its currency functioned no worse than others at the time. Small change was everywhere linked only in a loose and uncertain way to the higher units of the currency, no matter whether it was issued in the form of tokens for example by merchants or as part of the official currency by political authorities.[63]

5. Did the common currency prevent Gresham's Law from undermining monetary stability?

What did the imperial estates do in order to reach the main aim of the common currency, that is, make it impossible for Gresham's Law to undermine stability? In principle, after 1559 there was still scope enough for the Law to become effective. At that time, up to almost 150 authorities within the Empire were minting.[64] For the common currency to work, each of them had to maintain the imperial standard, with the danger being that if one of them deviated from it and issued underweight money, the trade in coinage with all its unpleasant consequences would get going again. The question was, how was this achieved?

One fundamental issue was the way the production of coins was financed. In the late Middle Ages, rulers often outsourced their mints. In practice, this meant that for example in France, the government saved the initial outlay of money that running a mint required by auctioning off the right to issue coins of a prescribed standard to the highest bidder; this was normally done for a year at a time. In fifteenth-century Germany, four to six years were common.[65] Often, the successful

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[62] Bernd Sprenger, "Preisindices unter Berücksichtigung verschiedener Münzsorten als Bezugsgröße für das 16. – 17. Jahrhundert – dargestellt anhand von Getreidepreisen in Frankfurt/Main," *Scripta Mercaturae* 11 (1977), p. 63.
[63] Helleiner, *National Money*, pp. 23-24.
[64] Bernhard Prokisch, *Grunddaten zur europäischen Münzprägung der Neuzeit ca. 1500-1990* (Wien: Verlag Fassbaender, 1993), pp. 1-244.
[65] Peter Spufford, "Mint Organisation in Late Medieval Europe," in *Later Medieval Mints: Organisation, Administration and Techniques. The Eighth Oxford Symposium on Coinage and Monetary History*, ed. Peter Spufford and Nicholas J. Mayhew (Oxford: B.A.R. Publications, 1988), p. 17.

bidders – the 'mint farmers' – seem to have been the mint masters themselves who had a hand in the trade with precious metals. Charles V's common currency bill of 1551 prohibited the practice, and this was one of the complaints the delegates of the elector of Trier raised against the ordinance during monetary policy talks in Speyer in 1557.[66] On that occasion, the envoys of Württemberg summarised the common objections to mint farming: They considered it

> 'most harmful and serving to nothing but to allow the mint masters to look to their self-interest and hinder the common weal, as daily experience has – with all due respect – shown almost anywhere in practice'.[67]

Mint farmers were obviously tempted to debase the coinage without the government's knowledge, thereby increasing their share in the profit. Calling a practice 'self-interested', as the Württembergers did, was typically sufficient to close the matter, and that was the case here, too. Ferdinand's amended currency bill of 1559 prohibited outsourcing mints just as its predecessor had done.[68]

A mint's financial autonomy that the practice of mint farming implied made governmental supervision harder, but in principle mint masters working as government officials faced the same incentives as mint farmers did. Their wage consisted of a share of the coins they produced, and they could increase this by clandestinely debasing the coinage. In the late Middle Ages, rulers had begun to realise that supervising mints was necessary and had begun to appoint officials tasked with checking their mint-masters' work.[69] However, not all of them had done so. Most were struggling to make do with their regular revenues, and having to pay the salary of another official was something that particularly poor ones tried

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[66] Volckart, *Währung*, no. 90, p. 370; no. 99, p. 401.
[67] ibid., *Währung*, no. 101, p. 412.
[68] Leeb, *Reichstag zu Augsburg 1559*, no. 804, p. 1985.
[69] Spufford, "Mint Organisation," , p. 24; Hubert Emmerig, "Der Münzbetrieb in Mittelalter und früher Neuzeit: Personal, Ausrüstung, Tätigkeiten," *Vorträge zur Geldgeschichte* 3 (2006), p. 9.

to avoid.[70] In 1559, a supplement bill to the Coinage Ordinance – the so-called 'Probation Ordinance' (probation is the technical term for testing coins) – made having a technical supervisor mandatory; moreover, it closely regulated what this official had to do. An essential part was checking that the alloy the mint master prepared contained the correct proportion of pure gold or silver and base metal and that the coins minted from it had the correct weight.[71]

So far, legal requirements did not deviate from tried and tested practices. However, the imperial estates were aware of the fact that this was not enough. After all, mint masters and their supervisors faced incentives to collude: They could agree on a debasement, share the profits, and no one would be the wiser. The law of 1559 prohibited this,[72] but how could it be prevented? The problem was old and a general one. The early second-century poet Juvenal had addressed it by asking a famous question '*quis custodiet ipsos custodes?*' ('who watches the watchmen?).[73] It was this problem to which the imperial diet found a solution that was not only innovative and effective, but ideally suited to a decentralised polity like the Empire. Phrased in the ceremonial language of the time, the relevant paragraph of Ferdinand's bill read,

> 'so that Our and the Holy Empire's Coinage Ordinance is obeyed and observed the more strictly, the minting authorities in each of the Holy Empire's circles shall ordain that common probation diets and tests of the common imperial coins shall be held twice every year …, for which reason we have ordered a particular Probation Ordinance to be set up. We also wish that soon after this imperial edict has been published, each circle's minting authorities agree on a common place to meet where the first probation shall be held on the first day of May and the second on the following first of October, as defined in said our Probation Ordinance'.[74]

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[70] In the 1520s, the mint of Königsberg in Prussia operated without an assayer. Oliver Volckart, *Die Münzpolitik im Deutschordensland und Herzogtum Preußen von 1370 bis 1550* (Wiesbaden: Harrassowitz, 1996), no. 10, p. 409.
[71] Leeb, *Reichstag zu Augsburg 1559*, no. 805, pp. 1991-1992.
[72] ibid., *Reichstag zu Augsburg 1559*, no. 805, p. 1998.
[73] Juvenal, Satire 6, 347-348.
[74] Leeb, *Reichstag zu Augsburg 1559*, no. 804, p. 1980.

Making the circles responsible for supervising the coinage was a master stroke. There had been earlier attempts to utilise them in the context of monetary policies. Charles V had drawn on the circles to implement the Ordinance of 1551, and already in 1524 a first attempt at creating a common currency had involved bi-annual probation diets in six of the ten circles (leaving out those dominated by the Habsburgs and by the electors).[75] In 1545 the diet of Worms extended this to all circles, later monetary policy assemblies,[76] and the Coinage Ordinance of 1559 did so, too. The Probation Ordinance of that year ordered every imperial estate issuing coins to send one or two councillors experienced in monetary politics together with its mint master and assayer to the probation diet of its circle; estates that failed to do so three times were to forfeit their right to mint.[77] Later imperial assemblies added a few more provisions: Each circle was to shut down all except three or four mints, and neighbouring circles were to 'correspond', that is, to cooperate in currency questions.[78]

Probation diets solved the problem of watching the watchmen. The assayers of the estates had to bring samples of every batch of coins minted since the last meeting – samples marked with the date they had been produced – that were now analysed in the presence of all councillors, mint masters and other assayers. If they had produced coins of which they did not bring specimens, this would likely be noticed, especially as the Ordinance required estates that were not minting but using the money produced by their neighbours to attend the probation diets, too.[79]

In recent years, historians have begun to examine in detail how well the circles performed. One that has received special attention is the Lower-Saxon Circle,

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[75] Johann Christoph Hirsch, *Des Teutschen Reichs Münz-Archiv*, vol. 1 (Nürnberg: Adam Jonathan Felßeckers seel. Erben, 1756), no. CLXVII, p. 243.
[76] Aulinger, *Reichstag zu Worms 1545*, no. 68, pp. 893, 898; GStAPK, I. HA, Rep. 15, Nr. 1 G, fols. 3r.-3v.
[77] Leeb, *Reichstag zu Augsburg 1559*, no. 805, p. 1993.
[78] Maximilian Lanzinner, ed., *Deutsche Reichstagsakten: Reichsversammlungen 1556-1662 - Der Reichstag zu Speyer 1570*, vol. 2: Akten und Abschied (Göttingen: Vandenhoeck & Ruprecht, 1988), no. 567, pp. 1246-1247; Hirsch, *Münz-Archiv*, 2, no. XLVI, p. 106.
[79] Leeb, *Reichstag zu Augsburg 1559*, no. 805, p. 1993.

much of which consisted of lands that in the late Middle Ages were politically 'distant' to the emperor. To some extent, this was still the case in the mid-sixteenth century. Lower Saxony was the only circle not represented at crucial monetary policy talks that prepared the common currency. After the imperial diet had passed the bills of 1559, there was trouble, too. The emperor employed the circles in order to make the content of the bill known among the estates (including those that had not attended the diet) and the wider population.[80] Where the Lower-Saxon circle was concerned, the process was fraught with problems: For example, the imperial chancellery did not know who the directors of the circle were and sent copies of the bills to Archbishop George of Bremen instead of Archbishop Sigmund of Magdeburg.[81] This was a minor glitch. What was more important was that once the circle diet convened, the Lower-Saxon estates refused to implement the Coinage and Probation Ordinances. In 1564, the emperor insisted again, but to no avail. This changed only once the imperial diet had accepted the *Taler* as part of the Empire-wide common currency in 1566. Two years later the Lower-Saxon estates agreed to implement the amended version of the laws passed nine years before.[82] From then on, the common currency was as well-managed in Lower Saxony as it was further south, for example in Bavaria, Franconia or Swabia.

Probation diets did not hesitate to censure the estates if deficiencies came to light. For example, at an Upper-Saxon diet held in December 1571 in Jüterbog close to the border between electoral-Brandenburg and Saxony, it was noted that

> 'a mint master expelled from the Lower-Saxon circle is operating an illicit mint on behalf of counts Volrath and Charles of Mansfeld, where good coins are being melted and turned into bad and poor ones, so that

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[80] ibid., *Reichstag zu Augsburg 1559*, p. 1954-1955 with FN 10.
[81] Michael North, "Reich und Reichstag im 16. Jahrhundert: Der Blick aus der angeblichen Reichsferne," in *Der Reichstag 1486-1613: Kommunikation – Wahrnehmung – Öffentlichkeiten*, ed. Maximilian Lanzinner and Arno Strohmeyer (Göttingen: Vandenhoeck & Ruprecht, 2006), p. 224.
[82] ibid., "Reich und Reichstag im 16. Jahrhundert: Der Blick aus der angeblichen Reichsferne," , p. 225.

at that place the Imperial Coinage Ordinance is being violated in many ways'.[83]

The probation diet decided not only to notify Emperor Maximilian II – Ferdinand's son and successor – but also to call on the director of the Upper-Saxon circle, Elector Augustus of Saxony, to intervene.[84] In 1572 electoral-Saxon officials destroyed the illicit mint and arrested its staff.[85] Moreover, when the circle implemented the decision of the imperial diet to shut down all except three or four of its mints, they chose Leipzig, Berlin and Stettin, leaving the counts of Mansfeld empty-handed – and this despite the counts controlling one of the most important silver mining districts of the Empire.[86]

How effective were these measures? The problem in answering this question is that we have no way of quantitatively assessing the volume or value of the coinage traded as raw material for the mints maintained by the estates. Qualitative evidence of the type quoted above seems to become gradually more frequent in the decades leading up to 1559, but does not necessarily imply that the trade in coinage was becoming more important. It may just as well reflect the better preservation of sources. As for the post 1559 period, the frequency seems to decline, but a comprehensive survey of the surviving evidence has never been attempted. What is undeniable is that the trade in coinage continued to be an issue. The concluding document of the diet of Speyer of 1570, for example, claimed that it was 'evident' that several estates had debased their small change and used it to buy

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[83] Johann Christoph Hirsch, *Des Teutschen Reichs Münz-Archiv*, vol. 3 (Nürnberg: Adam Jonathan Felßeckers seel. Erben, 1757), no. XLVIII, pp. 119-120.
[84] ibid., *Münz-Archiv*, 3, no. XLVIII, pp. 119-120.
[85] Thomas Nicklas, *Macht oder Recht: Frühneuzeitliche Politik im obersächsischen Reichskreis* (Stuttgart: Steiner, 2002), p. 128.
[86] Joachim Krüger, *Zwischen dem Reich und Schweden: Die landesherrliche Münzprägung im Herzogtum Pommern und in Schwedisch-Pommern in der frühen Neuzeit (ca. 1580-1715)* (Berlin: LIT, 2006), p. 55; North, "Reich und Reichstag im 16. Jahrhundert: Der Blick aus der angeblichen Reichsferne," , p. 226.

up the 'good imperial coinage, to throw it into the crucible and turn it into base *Pfennigs* and *Hellers* with which they fill all lands'.[87]

However, the widely implemented decision to limit the number of mints to three or four per circle is likely to have had some effect. It implies that the remaining mints struck coins on behalf of several – and sometimes of a large number – of estates. As minting those of one estate only to melt down the product in order to use it as raw material for the coins of another would have made no sense, we can assume that the scope for engaging in the trade in coinage was massively reduced – at least as long as the number of mints was restricted in the way described above. This seems to have been the case for some decades, but in the last years of the sixteenth century illicit mints began to be re-established: In the Upper-Rhenish circle, there were twenty next to the four legal ones in about 1600, and the Upper-Saxon circle gave up minting according to the common currency ordinance of 1559 in 1610.[88] Still, with regard to its main aim – eliminating the conditions that allowed Gresham's Law to operate – the imperial monetary union by and large achieved what it was supposed to achieve – at least for thirty or forty years, and at least within the Empire.

Relations with neighbouring countries – among them most importantly the Netherlands that were economically closely linked but politically increasingly distant – were a different matter. Of this, the emperor's councillors were strongly aware. A memo that the imperial *Pfennig*-master – the official tasked with collecting the contributions the estates made to the upkeep of the imperial chamber court – Georg Ilsung submitted in 1571 lauded the Coinage Ordinance; the problem was that local authorities, especially in the border regions of the

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[87] Maximilian Lanzinner, ed., *Deutsche Reichstagsakten: Reichsversammlungen 1556-1662 - Der Reichstag zu Speyer 1570*, vol. 1: Protokolle (Göttingen: Vandenhoeck & Ruprecht, 1988), no. 567, p. 1243.
[88] Friedrich Frhr. von Schrötter, *Wörterbuch der Münzkunde* (Berlin, Leipzig: de Gruyter, 1930), pp. 256-257; Wuttke, "Probationsregister,", p. 243.

Empire, did not put a stop to the import of base foreign coins.[89] This was particularly relevant in the regions neighbouring the Netherlands as the Dutch exported *rijksdaalders* – underweight imitations of the Empire's high-value *Talers* – in order to pay for their growing import of grain and other food. By about 1600, the province of Holland alone sent at least 2 million such pieces per year to the grain-producing regions on the south-coast of the Baltic.[90] Now, Ilsung was certainly right, but what were local authorities supposed to do? There was no practicable way how foreign money could be kept out. This did not only apply to the Empire: It is all too rarely realised that territorial currency monopolies were only established in the nineteenth century. The Empire may have been 'a beautiful garden with no fence around it', as a prominent merchant of Leipzig called it in a monetary policy memo drafted in 1592, but so were all other countries.[91] Still, within the Empire, the aim of preventing the trade in coinage, the breaking and reminting of coins was to a certain extent achieved. In so far, the common currency can be considered a success – not without weak points, but a success nevertheless. Moreover, concerning the large coins valid across the Empire – primarily *Reichstalers* and *-guldens* – the success of the monetary union was unqualified. Intrinsically these units were perfectly stable, and while prices continued to rise

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[89] Peter Rauscher, *Zwischen Ständen und Gläubigern: Die kaiserlichen Finanzen unter Ferdinand I. und Maximilian II. (1556-1576)*, ed. Institut für Österreichische Geschichtsforschung, Veröffentlichungen des Instituts für Österreichische Geschichtsforschung 41, (Wien, München: Oldenbourg, 2004), p. 113.

[90] Artur Attman, "The Bullion Flow from Europe to the East: 1500-1800," in *Precious Metals, Coinage and the Changes of Monetary Structures in Latin-America, Europe and Asia (Late Middle Ages - Early Modern Times)*, ed. Eddy H. G. van Cauwenberghe (Leuven: Leuven University Press, 1989), p. 67; Michael North, "Bullion Transfer from Western Europe to the Baltic and the Problem of Trade Balances: 1550-1750," in *From the North Sea to the Baltic* (Aldershot: Variorum Reprints, 1996), pp. X, 59-60; cf. Hans-Wolfgang Bergerhausen, "„Exclusis Westphalen et Burgundt": Zum Kampf um die Durchsetzung der Reichsmünzordnung von 1559," *Zeitschrift für historische Forschung* 20 (1993). The silver gulden introduced in the Netherlands in 1543 could be used for the same purpose as it contained about 16 per cent less pure silver than the imperial silver gulden (19.150 grams versus 22.905 grams). Gottfried Pusch, *Staatliche Münz- und Geldpolitik in den Niederlanden unter den burgundischen und habsburgischen Herrschern besonders unter Kaiser Karl V.* (München: Val. Höfling, 1932), p. 86; Volckart, *Währung*, p. XCVIII.

[91] Gerhard, "Garten,", p. 156; Helleiner, *National Money*, p. 21. For Germany see Adolf Soetbeer, *Denkschrift betreffend Deutsche Münzeinigung: Den Hohen Deutschen Regierungen* (Berlin: Liebheit & Thiesen, 1869), pp. 9-10; Karl Theodor Helfferich, ed., *Ludwig Bamberger: Ausgewählte Reden und Aufsätze über Geld- und Bankwesen* (Berlin: Guttentag, 1900), pp. 188-189.

this was a consequence of the growth of the quantity of money rather than of debasement.[92]

6. Conclusion

Contemporaries and later observers praised the monetary union: In 1571 an anonymous author noted that Emperor Ferdinand's Ordinance of 1559 and its amendment of 1566 were 'imposing and well considered' and could 'hardly be improved'; twenty years later another admitted that while they had met some opposition ('like all good proposals'), they took all relevant circumstances into account and were 'highly useful measures'.[93] There were weak points that contemporaries addressed: For example, the integration of the Habsburg Low Countries that the estates had repeatedly demanded failed.[94] As we have seen, they also complained about the lack of stable numeric relations between small change and the higher denominations and about the continuing inflow of foreign coins into the Empire. Measured by the original aims of the reform, the introduction of the common currency was no more than a partial success. However, its deficiencies were by no means unique. In fact, all other premodern European currencies suffered from the same defects, primarily from the weak integration of small change into the monetary system and from the circulation of foreign coins next to the domestic money. Moreover, it is undeniable that the creation of the monetary union of the Holy Roman Empire massively improved everyday life. When Fynes Moryson from Cadeby in Lincolnshire, who had travelled the Empire in the 1590s, published the account of his journey in 1617, he warned other travellers: In Germany, he said, the lands of princes were of small extent, 'and each of these Princes doth coyne small pieces of brasse money'. He cautioned:

[92] Sprenger, "Einflußgrößen," pp. 137-139.
[93] Hirsch, *Münz-Archiv*, 7, no. LXXVII, p. 87; Tielemannus Friese and Cyriacus Spangenberg, *Müntz-Spiegel/ das ist: Ein New und Wolaußgeführter Bericht von der Müntz* (Frankfurt: Johann Feyrabendt, 1592), pp. 204-205; cf. Hirsch, *Münz-Archiv*, 2, no. XLVI, p. 102.
[94] Volckart, *Währung*, p. LXXIV; Bergerhausen, "„Exclusis Westphalen et Burgundt",", p. 192.

> 'It behooveth the passenger to take heede, that he spend each Princes brasse moneys within his Territory, or else that upon the confines hee change them into brasse moneys currant in the next Territory; which if hee neglect, the subjects of the new Prince … will not receive them without great gaine, they being of themselves little worth, and onely by the prerogative of each Prince, currant among their owne subjects'.[95]

By the 1590s the estates had debased regional small change to 'brass', which no one outside their home territories was willing to accept. Such coins were fiat money – money people used because they trusted in the integrity of the authority issuing it and knew they would be able to exchange them for silver. It is likely that this trust was rooted in the estates' continued observance of the legal standard of the larger coins that were valid all over the Empire.

Many small territories, each with its own small change that could be used nowhere else: measured by modern standards this sounds like a nightmare. However, considering conditions before the reform of the Empire's monetary system, it was a distinct improvement. After all, earlier in the sixteenth century, small change from Henneberg had circulated as far afield as Carinthia, while the subjects of the electors and dukes of Saxony were expected to learn to recognise dozens of different types of small change, most of which were foreign, and not merely to recognise them, but also to use them at the value the Saxon governments had determined. Such conditions created uncertainty and complicated transactions for the broad majority of the population. This had changed. Now, for example consumers in the landgraviate of Leuchtenberg in the Bavarian circle used the copper *Hellers* and *Pfennigs* that the landgrave's mint produced for small purchases and larger units that were valid all over the Empire for large transactions.[96] For most people, conditions had become much simpler and clearer than they had been for their grandparents. In so far, the Empire's common currency was a resounding success – which is why after roughly a decade, I stand

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[95] Fynes Moryson, *An Itinerary Containing His Ten Yeeres Travell through the Twelve Dominions of Germany, Bohmer-land, Sweitzerland, Netherland, Denmarke, Poland, Italy, Turky, France, England, Scotland & Ireland*, vol. 2 (Glasgow: Glasgow University Press, 1617/1907), p. 133.
[96] ibid., *Itinerary, Vol. 1*, 1, p. 34.

corrected: Today, I would no longer write a chapter like the one I published in 2013 on ‘the failure of the Empire’s common currency’.

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