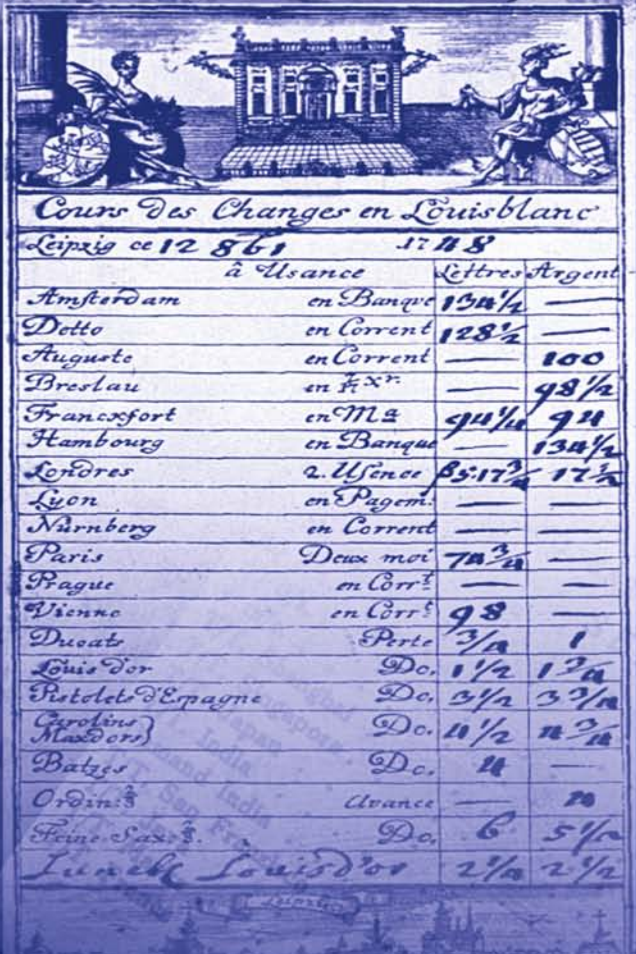
ROUTLEDGE

HANDBOOK OF WORLD EXCHANGE RATES, 1590–1914



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MARKUS A. DENZEL

HANDBOOK OF WORLD EXCHANGE RATES, 1590–1914

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Handbook of World Exchange Rates, 1590–1914

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PREFACE

When, in 1983, my academic teacher and mentor Jürgen Schneider, who held the Chair of Economic and Social History at the Otto-Friedrich-University of Bamberg at that time, started with his team to systematically collect exchange rates and money rates, and to process these data electronically, finally publishing this material, it was "the aim of the project … to create data manuals presenting, area-wide and comprehensively, the monetary circumstances of the respective region under study."[1] Several projects, promoted by the Deutsche Forschungsgemeinschaft, produced a database covering the majority of the exchange rates and money rates available worldwide for the period between the late 17th century and 1951, the year before the appearance of the International Financial Statistics, with their extensive exchange rate quotations. Thus it was the central aim of this edition to act as an English anthology presenting the most important exchange rate series in the form of a handbook. After a work of more than six years, this edition can now be presented, allowing the inclusion of numerous additions compared to the original database.

On retirement in 2002, Jürgen Schneider withdrew from the project, leaving it to the editor to develop the concept, and to introduce and publish this volume. Because of both this fact and in recognition of our always trustful and fruitful collaboration over almost twenty years, I feel I must express my sincere thanks to my mentor and friend Jürgen Schneider for all he did for me: without him I would not have found my way into economic history and without him this volume would not have been realized.

During the past eight years numerous colleagues and friends accompanied the development of this volume, supporting me with many questions and strengthening my point of view that it was an essential work: Jean-François Bergier (†), Peter Bernholz (Basel), Wim Blockmans (Leiden), Andrea Bonoldi (Trento), Leonid Borodkin (Moscow), Sushil Chaudhuri (Calcutta), Murat Çizakça (Kuala Lumpur), Rainer Cunz (Hannover), Antonio Di Vittorio (Bari), Dennis O. Flynn (Stockton, Ca.), Hans-Jürgen Gerhard (Hardegsen), Rainer Gömmel (Regensburg), Gabriel Imboden (Brig), Karl Heinrich Kaufhold (Göttingen), Niklot Klüßendorf (Marburg),

1 Oskar SCHWARZER / Petra SCHNELZER, Quellen zur Statistik der Geld- und Wechselkurse in Deutschland, Nordwesteuropa und dem Ostseeraum im 18. und 19. Jahrhundert, in Wolfram FISCHER / Andreas KUNZ (eds.), *Grundlagen der historischen Statistik von Deutschland. Quellen, Methoden, Forschungsziele*, Opladen 1991, pp. 175-191, here p. 176 (translated from German).

Martin Körner (†), Andrea Leonardi (Trento), John J. McCusker (San Antonio, Tx.), John Munro (Toronto), Bogdan Murgescu (Bucharest), Jürgen Nautz (Vienna), Patrick Karl O'Brien (London), Horst Pietschmann (Hamburg), Hans Pohl (Bonn), Şevket Pamuk (Istanbul), Om Prakash (Delhi), Philipp R. Rössner (Leipzig), Peter Spufford (Cambridge), Herman Van der Wee (Leuven), Margarete Wagner-Braun (Bamberg), Angelika Westermann (Kiel), Ekkehard Westermann (Rantrum) and Harald Witthöft (Siegen).

Conclusions resulting from the research work for this volume have been presented and discussed at many international conferences, such as the international symposium "Dinero, moneda y crédito. De la Monarquía Hispánica a la Integración Monetaria Europea" in Madrid (1999), the 22nd Settimana di Studi of the Istituto Internazionale di Storia Economica "F. Datini" in Prato (2000), the 13th International Economic History Congress in Buenos Aires (2002), the international workshop "Russia and Western Countries" in Moscow (2003), the 20th International Congress of Historical Sciences in Sydney (2005), the Congreso de la Asociación Española de Historia Económica in Santiago de Compostela (2005), the Deutscher Historikertag in Kiel (2005) and at the 14th International Economic History Congress in Helsinki (2006). Sincere thanks go to all colleagues who shared in making this volume as good as possible with their suggestions and contributions to discussion.

It is thanks to Dr John Smedley, Ashgate Publishing Limited, that the publication of this volume became a reality. He was taken with the project after the first conversation I had with him, and then he waited patiently for its eventual completion. In addition, I am indebted to my dear colleagues and friends Dennis O. Flynn and Patrick Karl O'Brien for establishing contact with him. I am grateful to all members of the staff of Ashgate Publishing Limited, especially Kirsten Weissenberg, and freelance copy-editor Elizabeth Teague for all their endeavours in producing the volume.

The publication of this book in English was possible only with a large amount of translation work and numerous discussions with Dr Angela Schröder (Göttingen), Dr Klaus U. Hachmeier (Frankfurt am Main) and Alexandra Holzhey MA (Leipzig). Dr Schröder prepared the rough version of many introductory texts of the single country chapters, Dr Hachmeier translated parts of the Introduction, and Mrs Holzhey provided the final version of the whole volume. I thank all translators very sincerely, above all Mrs Holzhey, who did the translation work alongside her role as my assistant when I held the Chair for Social and Economic History at the University of Leipzig.

My warmest thanks, however, go to my dear wife Alexandra, who has accompanied the exchange rate project since 1993, supported me on several archive visits and was, last but not least, a reliable co-worker on the data input throughout.

I dedicate this book to my academic teacher, mentor and friend Jürgen Schneider.

Markus A. Denzel

Leipzig and Bolzano, January 2010

CONTENTS

A rate of exchange is the condensed
effect of a variety of facts and forces
which are too numerous and too complex
to admit of exact appraisement.[1]

INTRODUCTION

How to use this *Handbook*

The introductions to the different exchange markets or countries covered by this *Handbook* are structured uniformly; they include:

- a list of the sources used for the documentation of the exchange rate quotations of the relevant exchange market(s). Each list is followed by text in brackets that gives that period of time covered by the respective source. Sometimes single (printed) sources are quoted in an abbreviated form, whereas the source will be given in full in the references;
- the indication of the concordance, i.e. where the relevant (detailed) exchange rate series can be found in *Währungen der Welt* or in the volumes of the *Historische Statistik von Deutschland*;
- a short history of those currencies in which the documented exchange rates of one single exchange market are quoted in the *Handbook*. These short sections are, where applicable, based on previous works of the author, and they consider only the most important facts of currency history as far as they are necessary for understanding the documented exchange rate series;[2]
- a description of the way exchange rates of respective exchange markets documented in the *Handbook* were originally quoted;
- a list of exchange rate series that were excluded from this *Handbook* for the reasons mentioned above. They can be found in *Währungen der Welt* or in the volumes of the *Historische Statistik von Deutschland*;
- a short presentation of both the development of a country's exchange market(s) whose quotations are documented in this *Handbook* and their importance within

1 George CLARE, The A.B.C. of the Foreign Exchanges, *The Institute of Bankers* 13/II (1892), pp. 121–149, esp. pp. 142f.

2 The statements regarding currency history are not intended to provide elaborate discussions of currency history and currency politics. A more detailed description of the history of each currency would go beyond the scope of this *Handbook*.

the international cashless payments system. For practicability, these presentations are revised versions of introductory paragraphs the author published in German in previous editions of *Währungen der Welt* or in the volumes of the *Historische Statistik von Deutschland*;

– a list of references to the books and articles that have been used throughout the *Handbook*. Due to the abundance of literature on currency history and currency politics, the list cannot claim to be exhaustive.

1. Objectives and Concept of the *Handbook*

Research on international exchange rates and cashless payments has been one of the 'classical' topics in monetary and currency history. On the one hand, this was due to the need to explain systematically the mechanisms and possibilities of cashless payments to merchants and entrepreneurs, which had already been practised for centuries with varying intensity; Francesco Balducci Pegolotti's *Practica della mercatura* is the earliest example.[3] Merchant manuals highly specialized in the needs of cashless payments since the 17th century give emphatic evidence of this.[4] On the other hand, the intention was to explain more clearly the mechanisms of international payments in the late 19th and early 20th centuries. This aim became even stronger in relation to the 1920s, because the inter-war period was a time of economic experiments and hitherto unknown inflationary processes.[5] In addition to handbooks giving surveys of cashless payments at, for example, the Asian exchange markets,[6] there are also detailed case studies from this period that investigate single-payment relations of international importance.[7] For this purpose, exchange rate quotations were sought and compiled in data series in order to construct a sufficient database for this financial and currency research. Such data series, however, were usually limited to the most important exchange relations of a country and did not result – apart from a few exceptions[8] – in a systematic collection of historical exchange rate quotations.

Without examining the extensive research, its different tendencies and the resul-

3 Francesco Balducci PEGOLOTTI, *La pratica della mercatura*, ed. Alan EVANS, Cambridge (Mass.) 1936 (repr. New York 1970).

4 Markus A. DENZEL / Jean Claude HOCQUET / Harald WITTHÖFT (eds.), *Kaufmannsbücher und Handelspraktiken vom Spätmittelalter bis zum beginnenden 20. Jahrhundert / Merchant's Books and Mercantile Pratiche from the Late Middle Ages to the Beginning of the 20th Century*, Stuttgart 2002.

5 Last but not least, this becomes apparent from extensive systematic compilations of exchange rates, e.g. Emil DIESEN, *Exchange Rates of the World / Cours de changes du monde / Devisen-Kurse der Welt / Verdens Valutakurser, January 1st 1914 – December 31st 1921*, 2 vols., Christiania 1923.

6 William F. SPALDING, *Eastern Exchange, Currency and Finance*, London ²1918; Walter MAHLBERG, *Über asiatische Wechselkurse*, Leipzig ²1920.

7 E.g. Arthur H. COLE, Statistical Background of the Crisis Period 1837–42, *Review of Economic Statistics* 10 (1928), pp. 182–195; idem, The New York Money Market of 1843 to 1862, *Review of Economic Statistics* 11 (1929), pp. 164–170.

ting literature on the history of exchange rates, of currencies and of their influence on economic policy and economic development – which would go beyond the scope of this book – the main emphasis is on the production of data handbooks on money and exchange rates. Extensive surveys of historical exchange rate series have not been presented as far as World War II, when economic historians increasingly acknowledged the benefits and the necessity of statistical foundations for their research. According to my knowledge, the compilation of the Paris exchange rates during the last decades of the 18th century, published by Jean Bouchary in 1937, represents the oldest of such handbooks.[9] The next one covered Neapolitan exchange rates during the 'long' 17th century, published by Luigi de Rosa in 1955,[10] whereas Henri Lapeyre had presented an overview of the quotations on the Lyons fairs from the second half of the 16th century two years earlier.[11] Valentín Vazquez de Prada's survey of the Antwerp quotations from 1558 up to 1606[12] followed, as did José Gentil da Silva's detailed documentation of the exchange rates of the Genoese Bisenzone fairs from 1552 until 1722.[13] Numerous other publications of these and the following decades integrated more or less extensive tables with exchange rate quotations of one or more exchange markets into their respective studies without solely concentrating on this matter and giving handbook-like overviews of more than one exchange market, however.[14] The first to take this step was John J. McCusker with his handbook *Money and Exchange in Europe and America, 1600–1775*, which systematically combines transatlantic exchange rate quotations with all involved important exchange markets and their respective monetary backgrounds from the 17th century to the American Revolution.[15] Peter Spufford worked on a more extensive research subject in his *Handbook of Medieval Exchange* by listing and commenting on all important European and Levant currencies as well as money and exchange markets

8 E.g. F.L. HO, An Index of Foreign Exchange Rates, 1898–1926, *Chinese Economic Journal* (1928), pp. 1–40.

9 Jean BOUCHARY, *Le marché des changes de Paris à la fin du XVIIIe siècle (1778–1800) avec des graphiques et le relevé des cours*, Paris 1937.

10 Luigi DE ROSA, *I cambi esteri del Regno di Napoli dal 1591 al 1707*, Napoli 1955.

11 Henri LAPEYRE, *Une famille de marchands: les Ruiz*, Paris 1953, pp. 464–471.

12 Valentín VAZQUEZ DE PRADA, *Lettres marchandes d'Anvers*, Paris 1960/61, vol. I, pp. 270–325.

13 José GENTIL DA SILVA, *Banque et crédit en Italie au XVIIe siècle*, Paris 1969, vol. II, pp. 102–239.

14 Some examples that are remarkable for their rich data are: S.J. BUTLIN, *Foundations of the Australian Monetary System 1788–1851*, Melbourne 1953 (Sydney ²1968); Astrid FRIIS / Kristof GLAMANN, *A History of Prices and Wages in Denmark 1660–1800*, vol. I, London – New York – Toronto 1958; Charles ISSAWI (ed.), *The Economic History of Iran 1800–1914*, Chicago – London 1971; J.T.M. VAN LAANEN, *Money and Banking 1816–1940* (= P. CREUTZBERG / J.T.M. VAN LAANEN (eds.), *Changing Economy in Indonesia. A Selection of Statistical Source Material from the Early 19th Century up to 1940*, vol. 6), The Hague 1980; Charles ISSAWI, *The Economic History of Turkey 1800–1914*, Chicago 1981; S.J. BUTLIN, *The Australian Monetary System 1851 to 1914*, [Sydney] 1986; Henry ROSEVEARE (ed.), *Markets and Merchants of the Late Seventeenth Century. The Marescoe–David Letters 1668–1680*, New York 1987; Jennifer NEWMAN, 'A Very Delicate Experiment'. British Mercantile Strategies for Financing Trade in Russia, 1680–1780, in Ian BLANCHARD / Anthony GOODMAN / Jennifer NEWMAN (eds.), *Industry and Finance in Early Modern History. Essays Presented to George Hammersley on the Occasion of his 74th Birthday*, Stuttgart 1992, pp. 116–141.

15 John J. MCCUSKER, *Money and Exchange in Europe and America, 1600–1775. A Handbook*, London – Basingstoke 1978.

from the end of the 12th century up to 1500.[16]

These two standard works of economic history substantially determined the direction and conception of further documentation of money and exchange rates in the following years. In Canada, for instance, Alan Bruce McCullough compiled exchange rates of the Canadian exchange markets in a study on *Money and Exchange in Canada to 1900*.[17] In Switzerland a team headed by Martin Körner compiled a handbook on money rates in Switzerland from the 17th and 18th centuries.[18] Within the scope of the programme *Historische Statistik von Deutschland* (*Historical statistics of Germany*) financed by the Deutsche Forschungsgemeinschaft (German Research Association), the German Jürgen Schneider and his team set out in 1983 to document money and exchange rates of German and Northwest European financial markets in the 19th century. Within about ten years this project was followed by several further ones that gradually produced documentation and research on almost all internationally important exchange markets in the whole world from the 17th up to the middle of the 20th century. This was the starting point of the collection of 11 volumes of *Währungen der Welt* (*Currencies of the World*) (abbreviation: *WdW*)[19] and the two relevant volumes of the collection of *Quellen und Forschungen zur Historischen Statistik von Deutschland* (*Sources and Research on Historical Statistics of Germany*) (abbreviation: *HStD*).[20] Mainly following in concept McCusker's handbook and, consequently, his methodological approach, the studies of Jürgen Schneider's team became increasingly oriented in their scope towards Spufford's *Hand-*

16 Peter SPUFFORD, *Handbook of Medieval Exchange*, London 1986.

17 Alan Bruce MCCULLOUGH, *Money and Exchange in Canada to 1900*, Toronto – Charlottetown 1984.

18 Martin KÖRNER / Norbert FURRER / Niklaus BARTLOME with assistance of Thomas MEIER / Erika FLÜCKIGER, *Währungen und Sortenkurse in der Schweiz / Systèmes monétaires et cours des espèces en Suisse / Sistemi monetari e corsi delle specie in Svizzera 1600–1799*, Lausanne 2001.

19 Jürgen SCHNEIDER / Oskar SCHWARZER / Friedrich ZELLFELDER (eds.), *Währungen der Welt I: Europäische und nordamerikanische Devisenkurse 1777–1914*, 3 vols., Stuttgart 1991; Jürgen SCHNEIDER / Oskar SCHWARZER / Markus A. DENZEL (eds.), *Währungen der Welt II: Europäische und nordamerikanische Devisenkurse 1914–1951*, Stuttgart 1997; idem (eds.), *Währungen der Welt III: Geld und Währungen in Europa im 17. Jahrhundert*, Stuttgart 1994; Jürgen SCHNEIDER / Oskar SCHWARZER / Friedrich ZELLFELDER / Markus A. DENZEL (eds.), *Währungen der Welt IV: Asiatische und australische Devisenkurse im 19. Jahrhundert*, Stuttgart 1992; Jürgen SCHNEIDER / Oskar SCHWARZER / Markus A. DENZEL (eds.), *Währungen der Welt V: Asiatische und australische Devisenkurse im 20. Jahrhundert*, Stuttgart 1994; Jürgen SCHNEIDER / Oskar SCHWARZER / Friedrich ZELLFELDER / Markus A. DENZEL (eds.), *Währungen der Welt VI: Geld und Währungen in Europa im 18. Jahrhundert*, Stuttgart 1992; Jürgen SCHNEIDER / Oskar SCHWARZER / Markus A. DENZEL (eds.), *Währungen der Welt VII: Lateinamerikanische Devisenkurse im 19. und 20. Jahrhundert*, Stuttgart 1997; idem (eds.), *Währungen der Welt VIII: Afrikanische und levantinische Devisenkurse im 19. und 20. Jahrhundert*, Stuttgart 1994; Markus A. DENZEL (ed.), *Währungen der Welt IX: Europäische Wechselkurse vor 1620*, Stuttgart 1995; idem (ed.), *Währungen der Welt X: Geld- und Wechselkurse der deutschen Messeplätze Leipzig und Braunschweig (18. Jahrhundert bis 1823)*, Stuttgart 1994; idem (ed.), *Währungen der Welt XI: Nordwestdeutsche und dänische Wechselkurse vom ausgehenden 17. Jahrhundert bis 1914*, Stuttgart 1999. Henceforth, the volumes of *Währungen der Welt* will be cited with the abbreviation *WdW* followed by the number of the respective volume.

20 Jürgen SCHNEIDER / Oskar SCHWARZER (eds.), *Statistik der Geld- und Wechselkurse in Deutschland (1815–1913)* (= *Historische Statistik von Deutschland*, vol. XII), St. Katharinen 1990; idem / Petra SCHNELZER (eds.), *Statistik der Geld- und Wechselkurse in Deutschland und im Ostseeraum (18. und 19. Jahrhundert)* (= *Historische Statistik von Deutschland*, vol. XII), St. Katharinen 1993. Henceforth, the volumes of *Historische Statistik von Deutschland* will be cited with the abbreviation *HStD* followed by the number of the respective volume (i.e. either *XI* or *XII*).

book, which was chronologically followed by *Währungen der Welt IX*, despite greater gaps in the source material. During recent years I have added the previous documentations and extended them to exchange markets so far neglected and worked out a means to present the theoretical and empirical development of the international cashless payment system[21] using earlier research on cashless payments as a basis.[22]

This *Handbook* is based mainly on the already-published material in *Währungen der Welt* and – to a smaller extent – on the data in *Historische Statistik von Deutschland*, and it documents exchange rate quotations between different exchange markets from the end of the 16th century up to World War I. So, not exclusively, but especially from the perspective of cashless payments, the analysed period covers an era of economic history that was mainly determined by Northwestern Europe and the markets there – above all the 'world financial centres' of Amsterdam and later London – and the institutions of payments developed or improved there, for example the stock exchange, the endorsement, and the discount. In the wake of the European expansion and the emergence of the world economy, the techniques and media of the European cashless payment system were brought from Northwestern Europe to many parts of the world outside Europe as well,[23] so that Northwest European merchants and trading companies as well as the political powers of this region have played a central role within this distribution process from the 17th century. Thus the *Handbook* covers the period from the point when the centre of the European economy shifted from the Mediterranean region to the Atlantic coast until the end of the first (liberal) phase of the world economy at the beginning of World War I.[24]

This *Handbook* aims to be much more than a simple reprint of already known

21 Esp. Markus A. DENZEL, Wechselplätze als territoriale Enklaven an der europäischen Peripherie: Von der Anbindung zur Integration von Finanzmärkten im System des bargeldlosen Zahlungsverkehrs (Spätmittelalter bis beginnendes 20. Jahrhundert), in Hartmut ZWAHR / Uwe SCHIRMER / Henning STEINFÜHRER (eds.), *Leipzig, Mitteldeutschland und Europa. Festgabe für Manfred Straube und Manfred Unger zum 70. Geburtstag*, Beucha 2000, pp. 545–560, or in French: Les places de change de la périphérie européenne considérées comme des enclaves territoriales: de l'association à l'intégration des marchés financiers dans le système de paiement par virements (bas Moyen Age – début du 20e siècle), in Paul DELSALLE / André FERRER (eds.), *Les enclaves territoriales aux Temps Modernes (XVIe–XVIIIe siècles). Actes du Colloque de Besançon*, Besançon 2000, pp. 209–232; idem, Der Beitrag von Messen und Märkten zum Integrationsprozeß des internationalen bargeldlosen Zahlungsverkehrssystems in Europa (13.–18. Jahrhundert), in Simonetta CAVACIOCCHI (ed.), *Fiere e mercati nella integrazione delle economie europee, secc. XIII–XVIII. Atti della "Trentaduesima Settimana di Studi" 8–12 maggio 2000 sotto l'Alto Patronato del Parlamento Europeo con il patrozinio del prof. Romano Prodi, Presidente della Commissione Europea*, Prato 2001, pp. 819–835; idem, Bargeldloser Zahlungsverkehr im europäischen Überseehandel von der Europäischen Expansion bis zum Ersten Weltkrieg, *Jahrbuch für europäische Überseegeschichte* 2 (2002), pp. 71–103; idem, The European Bill of Exchange. Its Development from the Middle Ages to 1914, in Sushil CHAUDHURI / Markus A. DENZEL (eds.), *Cashless Payments and Transactions from the Antiquity to 1914*, Stuttgart 2008, pp. 153–194; idem, *Das System des bargeldlosen Zahlungsverkehrs europäischer Prägung vom Mittelalter bis 1914*, Stuttgart 2008.

22 Esp. Markus A. DENZEL, *"La Practica della Cambiatura". Europäischer Zahlungsverkehr vom 14. bis zum 17. Jahrhundert*, Stuttgart 1994; idem, Die Integration Deutschlands in das internationale Zahlungsverkehrssystem im 17. und 18. Jahrhundert, in Eckart SCHREMMER (ed.), *Wirtschaftliche und soziale Integration in historischer Sicht. Arbeitstagung der Gesellschaft für Sozial- und Wirtschaftsgeschichte in Marburg 1995*, Stuttgart 1996, pp. 58–109.

23 Until the Iberian overseas possessions gained independence, cashless payment transactions on the basis of the bill of exchange played no important role there; see p. ciii.

24 Cf. Hans POHL, *Aufbruch der Weltwirtschaft. Geschichte der Weltwirtschaft von der Mitte des 19. Jahrhunderts bis zum Ersten Weltkrieg*, Stuttgart 1989, p. 25.

data. On the one hand, the English synopsis is intended to make the material available to the non-German-speaking scientific community as well. On the other hand, three significant modifications have been made to the original concept to improve the use of the data and to present just one manageable handbook for the historian's everyday work instead of presenting a huge number of single volumes.

First, only yearly averages are documented instead of monthly rates, which was the case for the German volumes. As the experience with the practical part of the work on the previous edition shows, these yearly averages are sufficient for historical research until around 1914. In order to answer questions that require more detailed material, i.e. monthly rates, one can refer to the German edition. Last but not least, this is also the (practical) reason why this *Handbook* ends with the beginning of World War I in July 1914. For the period of World War I, the interwar period, World War II and the immediate post-war years, it would probably be necessary to have at least monthly, if not daily, rates to answer questions regarding the development of currencies and payments.[25] Therefore the *Handbook* does not include the decades from August 1914 until around 1951, as it was done in *Währungen der Welt*.

Second, this *Handbook* concentrates almost exclusively on international exchange relations, in contrast to the previous edition. This means both that quotations between two exchange markets made in the same currency were as far as possible excluded, and that quotations of only one exchange market were always documented in relation to every currency area. There are only exceptional cases where it seemed necessary to understand the international cashless payment system with its economic and especially commercial and monetary implications: in particular, the quotations within the British Empire in pounds sterling could not be ignored, since they demonstrate the payment relations between the British overseas possessions or colonies and London, which became closer and closer. But even the quotations between the most important financial markets of the integrating economic region of the USA are worth documenting for the period when this integration in the field of cashless payments was still imperfect. In other cases, there were documented quotations on only the most important exchange market of a currency area. For France, e.g., quotations were available only for Paris, but despite some exceptions no quotations were documented for Bordeaux, Marseille, Lyons, Montpellier or other French exchange markets because of the only small differences between those quotations. When currency standardizations took place, as mainly in Italy or Germany in the 1860s or early 1870s, just the quotations for or on the most important exchange market were documented, sometimes even with a delay, after the exchange rate quotations had been adjusted to the new common currency. A few exceptions to this rule will be explained below.

Third, this edition – unlike the previous ones – will document only one quotation series of one exchange market on another. The increasing differentiation of several terms or usances from the 18th century has meant that the number of parallel series has grown significantly. In the 19th century, the overseas markets in particular

25 Moreover, this would be a reasonable approach for the years of extreme inflation during the period documented, esp. the years of the assignate's inflation in Revolutionary France, which were analysed by BOUCHARY, *Le marché des changes de Paris*.

quoted London, with up to six and in some cases with even more usances, among which only one series was selected for documentation.

Now, it is not only possible to correct errors found in the previous editions, but also to complete and enlarge their data series by including recently found source material. This refers especially to exchange rate quotations of Saint Petersburg, Riga, Leghorn and Smyrna in the 18th century and Montevideo, Adelaide (South Australia) and the Persian markets in the 19th century as well as those of the Canadian markets between the mid-18th century and 1914.

In the following sections this *Introduction* deals with more general problems of cashless payment transactions and the exchange rate quotations documented here. Section 2 details the (types of) sources used and how they were prepared for this *Handbook*. Section 3 analyses the function of the bill of exchange, the most important medium of cashless payment in Europe, throughout the research period, the mechanisms of cashless payment transactions and the 'European' type of bill of exchange, which was brought into all parts of the economically relevant world during the centuries covered. This last aspect will be completed by a theoretical and empirical analysis of the system of international cashless payments from the Middle Ages to World War I in Section 4.[26]

2. From the Sources to this Edition of the Exchange Rate Series

The exchange rate quotations presented here were taken mainly from four types of source:

1. Exchange rate currents and price currents, the oldest type of commercial and financial journals that cover mostly one or at most two pages,[27] are the main source

26 Prior attempts of that kind failed primarily due to insufficient base data. Cf. Michael Peter ZERRES, *Die Wechselplätze. Eine Untersuchung der Organisation und Technik des interregionalen und internationalen Zahlungsverkehrs Deutschlands in der ersten Hälfte des 19. Jahrhunderts*, Zürich – Frankfurt/Main – Thun 1977, esp. pp. 210–213.

27 Cf. John J. MCCUSKER / Cora GRAVESTEIJN, *The Beginnings of Commercial and Financial Journalism. The Commodity Price Currents, Exchange Rate Currents, and Money Currents of Early Modern Europe*, Amsterdam 1991; John J. MCCUSKER, The Italian Business Press in Early Modern Europe, in Simonetta CAVACIOCCHI (ed.), *Produzione e commercio della carta e del libro, secc. XIII–XVIII*, Prato 1992, pp. 797–841 (repr. in John J. MCCUSKER [ed.], *Essays in the Economic History of the Atlantic World*, London – New York 1997, pp. 117–144); idem, The Business Press in England before 1775, *The Library: Transactions of the Bibliographical Society*, 6th ser., VIII (1986), pp. 205–231 (repr. in MCCUSKER [ed.], *Essays*, pp. 145–176); idem, The Role of Antwerp in the Emergence of Commercial and Financial Newspapers in Early Modern Europe, in *La ville et la transmission des valeurs culturelles au bas Moyen Âge et aux Temps Modernes / Die Städte und die Übertragung von kulturellen Werten im Spätmittelalter und in die Neuzeit / Cities and the Transmission of Cultural Values in the Late Middle Ages and Early Modern Period. Actes / Abhandlungen / Records*, Bruxelles 1996, pp. 303–332; idem, Information and Transaction Costs in Early Modern Europe, in Rainer GÖMMEL / Markus A. DENZEL (eds.), *Weltwirtschaft und Wirtschaftsordnung. Festschrift für Jürgen Schneider zum 65. Geburtstag*, Stuttgart 2002, pp. 69–83.

for exchange rate quotations of the European and Levant markets for the period between the late 16th and the early 19th centuries. Usually dated exactly, they report on the quotations of an exchange market at a certain date. Exchange rate currents of many different kinds also represented the solidity of a stock market or an exchange market. Thus doubtful, fragmentary and less approved quotations were omitted as far as possible.[28]

2. Moreover, exchange rate quotations can be found in commercial and financial journals from the 18th century, but especially during the 19th and early 20th centuries, i.e. in price currents, shipping lists or registers with numerous pages and also in 'normal', i.e. non-specialized, newspapers with a business section.[29] In this section, daily rates are also included. They are usually given in tables, similarly to the older exchange rate currents. Such journals and newspapers can be found from at least the mid-19th century for almost all commercial metropolises in the world, although some of these exchange rate quotations were quoted more extensively, more exactly and regularly than others. *The Economist*, published in London, was undoubtedly the most important commercial and financial journal from the perspective of exchange rate quotations, because it was the medium by which not only London's quotations were published but also those of the most important exchange markets from all over the world. Therefore a large part of the non-European quotations on London could be found in London's *Economist*. During the 19th and early 20th centuries, the commercial and financial journals of the overseas markets increasingly listed the quotations of several overseas banks. Usually these bank quotations did not differ fundamentally from one another in their amount.[30] In most cases it was usual to put the different quotations together in one table, i.e. they were 'standardized' before publication. In individual cases, however, several tables were also printed with the quotations of different overseas banks, as can be seen particularly in the case of the Mauritius exchange rate quotations.

3. Official or quasi-official exchange rate quotations of stock exchanges or (central) banks were used to a smaller extent than expected, mainly for two reasons: on the one hand, such official quotation lists are often incomplete, i.e. they show only some of the exchange partners that were actually quoted regularly on a financial market and whose quotations appear, therefore, in local commercial and financial journals as well. This holds, for example, for both the *Cours du Change à Paris sur les principaux places étrangères* quoted by the Banque de France or the official quotations of the Madrid stock exchange stating only those exchange rates that should be regarded as the most important ones concerning the editing institution. On the other hand, the official quotations were not always daily rates but sometimes monthly rates so that they fit the research concept only to a limited extent. Therefore

28 For London see Jacob M. PRICE, Notes on Some London Price-Currents, 1667–1715, *Economic History Review*, sec. ser. 7 (1954/55), pp. 240–250; for Germany see Ernst BAASCH, Aus der Entwicklungsgeschichte des Hamburger Kurszettels, *Bank-Archiv* 5 (1905/06), pp. 8–11.

29 Cf. Oskar SCHWARZER / Petra SCHNELZER, Quellen zur Statistik der Geld- und Wechselkurse in Deutschland, Nordwesteuropa und dem Ostseeraum im 18. und 19. Jahrhundert, in Wolfram FISCHER / Andreas KUNZ (eds.), *Grundlagen der Historischen Statistik von Deutschland. Quellen, Methoden, Forschungsziele*, Opladen 1991, pp. 175–191.

30 Walter BRANDT, Kurs- und Kreditsicherung der Überseebanken, *Zeitschrift für Handelswissenschaft und Handelspraxis* (1913/12), pp. 362–367, esp. p. 363.

such official quotations of stock exchanges or (central) banks are only referred to if there is a lack of alternative sources. Stock exchange markets were, nonetheless, less important for quotations at the non-European exchange markets than in Europe, because those quotations were mainly done by overseas banks, as shown above. Official reports on quotations like that of the Camara Syndical dos Corretores de Fundos Públicos, which cover a longer period, are available only in the case of Rio de Janeiro.[31]

4. Finally, official quotations of political institutions are included, especially those of the British colonial governments, which can be found in the *Blue Books* of the Colonial Acts. As the official quotations of stock exchanges or (central) banks, government quotations often list only the main exchange rate of a colony, i.e. the one on the financial centre of the mother country, London.[32] Daily rates were not quoted in the *Blue Books* at all and monthly rates were usually quoted only in the economically more powerful colonies, e.g. the Cape Colony, New South Wales or the Straits Settlements. In most instances, only yearly rates are available. The same can be observed with the official exchange rate statistics of the colonial governments in Netherlands India[33] or in the Indochinese Union.[34] These government quotations were used for the documentation of the exchange rate series only if none of the other three mentioned types of sources was available for the documented period.

Additionally, it is often necessary to refer to exchange rate series that can already be found in the literature. The underlying sources include all types of sources mentioned here. So the use of such series follows the outlined premises as well. We can distinguish between quotation series already published by contemporaries, e.g. the series of the different markets in the Baltic Sea region in the 18th century[35] or of Brazil in the early 19th century,[36] and those series that have been compiled from the sources only during the recent decades. In addition, a vast number of single quotations were included, i.e. quotations that partly date back to exchange rate currents printed in contemporary merchant manuals and other publications or to scattered information in literature on commercial or currency history.

In this context, contemporary merchant manuals need to be mentioned as a special type of source material very suitable for research in the field of cashless payments. There are only a few cases where original quotations or even complete printed exchange rate currents can be found in these sources, but the analysis of quotati-

31 Camara Syndical dos Corretores de Fundos Públicos da Capital Federal (ed.), *Relatorio da Camara Syndical dos Corretores de Fundos Públicos da Capital Federal …*, Rio de Janeiro 1898–1915.

32 Cape Town represents an example for this statement. According to the *Blue Books* it quoted only London, but there is a commercial journal that also mentions quotations on Amsterdam, France, Calcutta, Madras and Bombay, although it is available only for a few years.

33 *Staat van de wisselkoers van Java op Nederland en Engeland. Handelingen van de Tweed Kamer der Staaten General 1852/52 II*, Annex VIII, B6, The Hague 1852.

34 *Administration des monnaies et des médailles, Rapport au Ministre des Finances*, Paris 1916, pp. 138–145.

35 E.g. John Jepson ODDY, *European Commerce …*, London 1805, or J.G. CANZLER, *Nachrichten zur genauern Kenntniß der Geschichte, Staatsverwaltung und ökonomischen Verfassung des Königreichs Schweden*, Erster Theil, Dresden 1778.

36 Horace E. SAY, *Histoire des relations commerciales entre la France et le Brésil*, Paris 1839, pp. 297–300.

ons of single exchange markets allow statements both on other markets with which an exchange market had regular exchange relations and on the extent to which it was integrated into the international payment system.[37]

This kind of source material is absolutely vital for investigating the international cashless payment system,[38] if there are exchange markets that lack either sufficient

37 The following merchant manuals have mainly been used for this work: M[artin] V[AN] VELDEN, *Fondament van de Wisselhandeling: Onderrichtingh ghevende van alle voornaemste Wisselen van Christenrijck, so van Trates, Remessen, vergelijcking van prysen, verscheyden comissien, te vormen, voegen ende calcula van baet of schade te maecken naer den cours, die te oordeelen, ende naer gelegentheyd van tijdt of plaets te konnen scheyden*, Amsterdam 1629; [2]1647 (in German: *Underricht der Wechsel-Handlung*, Frankfurt 1669); Johann Christian HERBACH, *Einleitung zum Gründlichen Verstand der Wechsel-Handlung ...*, Nürnberg 1716; idem, *Verbesserte und Viel-vermehrte Wechsel-Handlung ...*, Nürnberg 1726; idem, *Europäische Wechselhandlung ...*, Nürnberg 1756/57; [Marcus Rudolf Balthasar] G[ERHARDT] (ed.), *Johann Christian Nelkenbrechers Taschenbuch eines Banquiers und Kaufmanns ...*, Berlin [2]1769; idem (ed.), *Johann Christian Nelkenbrechers Taschenbuch eines Banquiers und Kaufmanns ...*, Berlin [4]1775; Jürgen Elert KRUSE, *Allgemeiner und besonders Hamburgischer Contorist*, Hamburg [4]1782; M[arcus] R[udolf] B[althasar] GERHARDT sen. (ed.), *Nelkenbrechers Taschenbuch der Münz- Maaß- und Gewichtskunde für Kaufleute*, Berlin [7]1793; idem (ed.), *Nelkenbrechers Taschenbuch der Münz- Maaß- und Gewichtskunde für Kaufleute*, Berlin [8]1798; Patrick KELLY, *The Universal Cambist and Commercial Instructor; Being a General Treatise on Exchange ...*, 2 vols., London 1811; J.S.G. OTTO (ed.), *J.C. Nelkenbrechers allgemeines Taschenbuch der Münz-, Maaß- und Gewichtskunde für Banquiers und Kaufleute*, Berlin [11]1815; idem (ed.), *J.C. Nelkenbrechers allgemeines Taschenbuch der Münz-, Maaß- und Gewichtskunde für Banquiers und Kaufleute*, Berlin [12]1817; Johann Philipp SCHELLENBERG (ed.), *J.C. Nelkenbrechers allgemeines Taschenbuch der Münz-, Maaß- und Gewichtskunde für Banquiers und Kaufleute*, Berlin [13]1820; P[atrick] KELLY, *The Universal Cambist and Commercial Instructor ...*, 2 vols., London [2]1821, repr. 1835; J[ohann] H[einrich] D[aniel] BOCK / Carl CRÜGER (eds.), *J.C. Nelkenbrechers allgemeines Taschenbuch der Münz-, Maaß- und Gewichtskunde für Banquiers und Kaufleute. Auf's neue herausgegeben und mit vielen Handelsplätzen Amerika's und Asien's, desgl. mit den Usancen der Staatspapiere vermehrt*, Berlin [14]1828; J[ohann] H[einrich] D[aniel] BOCK (ed.), *J.C. Nelkenbrechers allgemeines Taschenbuch der Münz- Maaß- und Gewichtskunde für Banquiers und Kaufleute*, Berlin [15]1832; Christian NOBACK, *Vollständiges Handbuch der Münz-, Bank- und Wechsel-Verhältnisse aller Länder und Handelsplätze der Erde*, Rudolstadt 1833; F. WOLFF (ed.), *J.C. Nelkenbrecher's allgemeines Taschenbuch der Maaß-, Gewichts- und Münzkunde, der Wechsel- Geld- und Fondscourse u.s.w. für Banquiers und Kaufleute*, Berlin [16]1842; Christian NOBACK / Friedrich NOBACK, *Vollständiges Taschenbuch der Münz-, Maass- und Gewichts-Verhältnisse, der Staatspapiere, des Wechsel- und Bankwesens und der Usanzen aller Länder und Handelsplätze*, 2 parts, Leipzig 1851; idem, *Münz-, Maass- und Gewichtsbuch. Das Geld-, Maass- und Wechselwesen, die Kurse, Staatspapiere, Banken, Handelsanstalten und Usanzen aller Staaten und wichtigern Orte*, Leipzig 1858; H. SCHWABE (ed.), *J.C. Nelkenbrecher's allgemeines Taschenbuch der Münz-, Maaß- und Gewichtskunde, der Wechsel-, Geld- und Fonds-Curse u.s.w.*, Berlin [19]1871; C. NEUBAUER (ed.), *J.C. Nelkenbrecher's Taschenbuch für Kaufleute, II part: Münz-Tabelle*, Berlin [20]1877; Friedrich NOBACK, *Münz-, Maass- und Gewichtsbuch. Das Geld-, Maass- und Gewichtswesen, die Wechsel- und Geldkurse, das Wechselrecht und die Usanzen*, Leipzig [2]1877; Ernst JERUSALEM (ed.), *J.C. Nelkenbrecher's Taschenbuch für Kaufleute. I. Abth.: Taschenbuch der Münz-, Maass- und Gewichtskunde, der Wechsel-, Geld- und Fonds-curse u.s.w. für Kaufleute*, Berlin [20]1890; Otto SWOBODA, *Die kaufmännische Arbitrage. Eine Sammlung von Notizen und Usancen sämmtlicher Börsenplätze für den praktischen Gebrauch*, Berlin [7]1889; idem, *Die kaufmännische Arbitrage. Eine Sammlung von Notizen und Usancen sämtlicher Börsenplätze der Welt*, ed. Adolf SANDHEIM, Berlin [11]1902; idem, *Die Arbitrage in Wertpapieren, Wechseln, Münzen und Edelmetallen. Handbuch des Börsen-, Münz- und Geldwesens sämtlicher Handelsplätze der Welt*, ed. Max FÜRST, Berlin [12]1905; idem, *Die Arbitrage in Wertpapieren, Wechseln, Münzen und Edelmetallen. Handbuch des Börsen-, Münz- und Geldwesens sämtlicher Handelsplätze der Welt*, ed. Max FÜRST, Berlin [13]1909; idem, *Die Arbitrage in Wertpapieren, Wechseln, Münzen und Edelmetallen. Handbuch des Börsen-, Münz- und Geldwesens sämtlicher Handelsplätze der Welt*, ed. Max FÜRST, Berlin [14]1913; idem, *Die Arbitrage in Wertpapieren, Wechseln, Münzen und Edelmetallen. Handbuch des Börsen-, Münz- und Geldwesens sämtlicher Handelsplätze der Welt*, ed. Max FÜRST, Berlin [16]1924/25; idem, *Die Arbitrage in Wertpapieren, Wechseln, Münzen und Edelmetallen. Handbuch des Börsen-, Münz- und Geldwesens sämtlicher Handelsplätze der Welt*, ed. Eduard WAGON, Berlin [17]1928.

exchange rate data or any data at all.[39]

The following methodical principles were applied in order to document the exchange rates extracted from the types of source material and also from the literature mentioned above:

1. Usually, only exchange rates were documented, but not money rates, i.e. quotations that refer to bills of exchange but not to the exchanging of coins. Money rates (for coins or banknotes) were only documented if it could be proved that they had been quoted on a certain place instead of exchange rates, or if they were indispensable for the understanding of the monetary history of the respective country or exchange market. Money rates were documented, for instance, if exchange rates had been quoted in inflationary paper money in order to understand the changing relations between hard currency (gold or silver coins) and paper currency.

2. All exchange rate quotations to be published were dated exactly, i.e. they were intended to be daily rates. Average rates – monthly or yearly rates – were only used if a data series was of interest due to a special quoting or exchange market, and no daily rates were available.

3. All exchange rates were throughout converted into decimal price quotations, i.e. into the currency that was the most important unit of account at a certain exchange market at a certain point in time. This 'intervention' in the original data is necessary to ensure a fast and direct comparability of the different exchange rate series. Therefore this step was the most important one of the whole process, because it converts non-decimal quotations into decimal rates and quantity quotations into price quotations, i.e. special types of quotations that might seem strange to the user of the *Handbook*; for example quotations in or for % premium or discount with reference to a fixed rate have been converted.[40] In order to ensure understanding of the different conversions, the original quotations are listed in a table in each chapter's introductory paragraph, as mentioned above, allowing the reader to convert quotations that may be found in the future and to insert them in the material given here.

4. If a quotation is stated with a fluctuation margin or one (or more) quotations for both buying and selling rates, the average value was calculated and documented. However, quotations from overseas in particular still differed a great deal during the

38 Cf. Markus A. DENZEL, Kaufmannshandbücher als Quellengattung zur europäischen Überseegeschichte im 19. und frühen 20. Jahrhundert, in Thomas BECK et al. (eds.), *Überseegeschichte – Beiträge der jüngeren Forschung. Festschrift anläßlich der Gründung der Forschungsstiftung für vergleichende europäische Überseegeschichte 1999 in Bamberg*, Stuttgart 1999, pp. 120–136; idem, Handelspraktiken als wirtschaftshistorische Quellengattung vom Mittelalter bis in das frühe 20. Jahrhundert. Eine Einführung, in idem / HOCQUET / WITTHÖFT (eds.), *Kaufmannsbücher und Handelspraktiken / Merchant's Books and Mercantile Pratiche*, pp. 11–45.

39 Empirical studies have successfully verified these findings. Cf. DENZEL, Integration Deutschlands, pp. 58–109; idem, Die Integration ostmittel-, ost- und südosteuropäischer Städte in die internationalen Zahlungsverkehrsverbindungen im 19. und beginnenden 20. Jahrhundert, *Südost-Forschungen* 55 (1996), pp. 45–73; idem, Die Integration der Schweizer Finanzplätze in das internationale Zahlungsverkehrssystem vom 17. Jahrhundert bis 1914, *Schweizerische Zeitschrift für Geschichte* 48 (1998), pp. 177–235; idem, Kolonialstädte als Finanzplätze vom 18. Jahrhundert bis 1914. Das asiatische Wechselnetz und seine Anbindung an das europäisch-internationale Zahlungsverkehrssystem, in Horst GRÜNDER / Peter JOHANEK (eds.), *Kolonialstädte – Europäische Enklaven oder Schmelztigel der Kulturen?*, Münster 2001, pp. 225–259.

40 For the concept of converting different exchange rates, see Oskar SCHWARZER, Eine EDV-gestützte Forschungskonzeption zur Bearbeitung historischer Geld- und Wechselkurse, in *WdW I/I*, pp. 180–196.

19th century, so "the market rates quoted for buying and selling London bills normally showed large differences – of 6 per cent. in India and 3–4 per cent in China".[41] It will be noted if only buying or selling rates were documented because of the available sources, as in the case of some exchange rate series between Asian and Australian exchange markets.

5. Wherever possible, one daily rate was listed for each month, preferably taken from the beginning of the relevant month. If there were quotations only from the middle or the end of a month available, they were used likewise. Therefore only a maximum of twelve quotations per year was stated, from which a yearly average was calculated. The number of single quotations that were used for calculating the yearly average is stated in the tables in brackets. The same rules were applied when monthly rates had to be used for the calculation. In exceptional cases yearly rates from the literature had to be used, marked by an (y) (= yearly).

6. If sources provide quotations for different usances on a quoted exchange market, the most common usance for this exchange relation will then be used. If it is impossible to determine the most common one, the shortest usance will be used, i.e. the highest ('most expensive') quotation will be documented. Information about the different usances can be found in the list of abbreviations for usances.

3. The Medium and the Mechanisms of Cashless Payment: The (European) Bill of Exchange

The bill of exchange was the European merchants' medium of cashless payment between the Middle Ages and the 20th century regardless of whether they were active in Europe or overseas. No doubt there were certain forms of cashless payment in various pre-modern and non-European cultures and economic regions. Here, I have chosen to refer to

- the *syngraphe*, adopted by the Romans from Greek law, and the *chirographum*;[42]
- the Arabic *suftadja* (draft)[43] or *sakk* (order of payment);[44]
- the *hundwîs* or *hoondees* of the Indian merchants;[45]
- the Armenian *awak*, *zmei awak* or *hndvi*;[46]
- the Chinese *Shansi bills*[47] or corresponding Japanese papers.

It remains highly questionable among researchers if and to what extent non-European papers can be compared to the European bill of exchange.[48] The *bill obligatory* (or *handschryft*), common in Northwestern Europe and in the Baltic Sea area in late medieval times, corresponded to the bill of exchange from the financial point of

41 A.S.J. BASTER, The Origins of the British Exchange Banks in China, *Economic History* (1934/1), pp. 140–151, esp. p. 144.

42 Both were documents of claims with the debtor committing in written form to paying a certain amount of money. They are supposed to have also served for the transaction of payments from one place to another; Carl Samuel GRÜNHUT, *Wechselrecht*, vol. 1, Leipzig 1897, pp. 22f.

view. By the end of the 16th century the bill obligatory was replaced by the bill of exchange as an international credit instrument in the Netherlands, England and later also in the Baltic Sea area, although the bill obligatory kept its great importance within the respective regions.[49] However, the following statements are exclusively restricted to the European bill of exchange coming from Italy and its exchange rates.[50]

43 "The *suftadja* is a banking instrument used in a monetary system and an economic life very different from that of the Christian West. … The *suftadja*, a banking instrument totally distinct from the bill of exchange, was a transaction in which three persons took part and the repayment of the loan was established in the same kind of money originally paid. The *suftadja* was often followed by endorsement." Eliahu ASHTOR, Banking Instruments between the Muslim East and the Christian West, *Journal of European Economic History* 1 (1972), pp. 553–573, esp. p. 572; cf. ibid., pp. 562–565. On the contrary, Alfred E. LIEBER, Eastern Business Practices and Medieval European Commerce, *Economic History Review* 21 (1968), pp. 230–243, esp. p. 233 speaks of the *suftadja* "as a draft which was sometimes also a true bill of exchange", yet without explaining in detail what he understands about a "true bill of exchange". Abraham L. UDOVITCH, Bankers without Banks: The Islamic World, in [CHIAPPELLI, Fredi (ed.),] *The Dawn of Modern Banking*, New Haven – London 1979, pp. 255–273, esp. p. 263, describes the *suftadja* as "a letter of credit or a bill of exchange". Cf. idem, Commercial Techniques in Early Medieval Islamic Trade, in David S. RICHARDS (ed.), *Islam and the Trade of Asia. A Colloquium*, London – Colchester 1970, pp. 37–62, esp. p. 54.

44 "The *sakk* – this is the word that gave origin to cheque in the European languages – is a genuine cheque, that is to say an order of payment made through the banker with whom the drawer has an account; … In using the cheque, the Muslims were actually using an instrument inherited from the Byzantines; an instrument already widespread in Egypt and some centuries before the Arab conquest." ASHTOR, *Banking Instruments*, p. 555. Not convincing is G. JAKOB, Die ältesten Spuren des Wechsels, *Westasiatische Studien* (1925), pp. 280f., who mentions the *sakk* as being equal to a bill of exchange.

45 *Hoondees* were a form of promissory notes that could be cashed in at their place of destination. Occasionally, there were *hoondee* quotations partially with commission charges and such *hoondees* could be discounted and endorsed. "A hoondee may be defined as a written order – usually unconditional – made by one person on another for the payment, on demand or after a specific time, of a certain sum of money to a person named therein"; L.C. JAIN, *Indigenous Banking in India*, London 1929, p. 71, quoted in Amiya Kumar BAGCHI, Money and Credit as areas of Conflict in Colonial India, in B. CHANDRA (Organizer), *Typology of Colonial Economic Development* (= *Eighth International Economic History Congress, Budapest 1982, B6*), Budapest 1982, pp. 28–35, esp. pp. 32f. Also, Celsa PINTO, *Trade and Finance in Portuguese India. A Study of the Portuguese Country Trade 1770–1840*, New Delhi 1994, pp. 71f. Cf. e.g. Irfan HABIB, The Monetary System and Prices, in Tapan RAYCHAUDHURI / Irfan HABIB (eds.), *The Cambridge Economic History of India, vol. 1: c. 1200–c. 1750*, Cambridge 1982, pp. 360–381, esp. pp. 362f.; idem, Merchant Communities in Precolonial India, in James D. TRACY (ed.), *The Rise of Merchant Empires. Long-Distance Trade in the Early Modern World, 1350–1750*, Cambridge 1990 (1993), pp. 371–399, esp. pp. 391–394; Om PRAKASH, The Cashless Payment Mechanism in Mughal India: The Working of the Hundi Network, in Sushil CHAUDHURI / Markus A. DENZEL (eds.), *Cashless Payments and Transactions from the Antiquity to 1914*, Stuttgart 2008, pp. 131–137; Sushil CHAUDHURI, No Ready Money? No Problem! The Role of Hundis (Bills of Exchange) in Early Modern India, c. 1600–1800, in ibid., pp. 139–151.

46 "These were interest bearing loans, usually fixed-term, repayable to a third party in a different place, and they could involve four of more persons: the drawee, the drawer, any representative of his, and the one who took the profit or his proxy. … These loans gave rise to the establishment of a sort of promissory note distinct from a bill of exchange and called *barat*." Michel AGHASSIAN / Kéram KÉVONIAN, The Armenian Merchant Network: Overall Autonomy and Local Integration, in Sushil CHAUDHURI / Michel MORINEAU (eds.), *Merchants, Companies and Trade. Europe and Asia in the Early Modern Era*, Cambridge 1999, pp. 74–94, esp. p. 85. At the same time, the authors emphasize that "the widespread use of bills of exchange needs to be put into the Irano-Indian context, although even then it shows peculiarities." Ibid.

3.1 The European Bill of Exchange and its Development in Italy in the Era of the Commercial Revolution

Following the expansion of trade, the Mediterranean navigation and the monetized economics in Europe during the time of the Crusades, it became increasingly neces-

47 The *Shansi bills* were a kind of bills of exchange drawn by the Shansi bankers, who were few in number (Beijing had only five Shansi bankers in 1900), but with their widespread credit connections they proved to be the most important agents in payments among Chinese merchants. These *Shansi bills* had an intermediate position between the bill of exchange and the letter of credit. If a merchant bought them with cash from a banker, they had the character of a bill of exchange; if they were bought on credit, one could rather speak of a letter of credit. The form of these bills was a 'triple bill', which means that the document consisted of three parts, the first a means of control for the banker, the second for the recipient and the third for the client; the document was cut in two after issue and the parts were handed to the persons involved. Both the banker and the recipient were responsible for encashing it, but the client was free of any responsibility. Acceptance was as obsolete as an order clause, as it was not an order but a bearer paper. Hence, such bills were put into circulation without any kind of endorsement and the bearer could not claim for recourse against the former bearer or the issuer. The liability went so far that in the case of bankruptcy of the original issuer the bills had to be cashed. The payments were mutually safeguarded by contracted current accounts. Sui-lu KU, *Die Form bankmäßiger Transaktionen im inneren chinesischen Verkehr mit besonderer Rücksicht des Notengeschäfts*, Hamburg 1926, pp. 40–44.

48 Amiya Kumar BAGCHI, Anglo-Indian Banking in British India: From the Paper Pound to the Gold Standard, *Journal of Imperial and Commonwealth History* 13 (1985), pp. 93–108, esp. p. 93 calls the *hoondee* an "Indian-style bill of exchange"; John CRAWFURD, A Sketch of the Commercial Resources and Monetary and Mercantile System of British India, with Suggestions for their Improvement, by Means of Banking Establishments (1837), in K[irti] N. CHAUDHURI (ed.), *The Economic Development of India under the East India Company 1814–58. A Selection of Contemporary Writings*, Cambridge 1971, pp. 217–316, esp. p. 291, "native bill of exchange"; CHAUDHURI, *Bengal*, p. 98 note 139, illus. before p. 99; Dietmar ROTHERMUND, *Indiens wirtschaftliche Entwicklung. Von der Kolonialherrschaft bis zur Gegenwart*, Paderborn et al. 1985, pp. 17, 45; Tapan RAYCHAUDHURI, Inland Trade, in idem / HABIB (eds.), *Cambridge Economic History of India*, vol. 1, pp. 325–359, esp. p. 346; David L. WHITE, *Competition and Collaboration. Parsi Merchants and the English East India Company in 18th Century India*, New Delhi 1995, p. 19.

49 The bill obligatory was similar to the *instrumentum ex causa cambii* (proven to have existed in England since the end of the 12th century). It was a payment promise rathern than an obligatory request for payment, and met the needs of the travelling merchants visiting fairs in the Netherlands until the 17th century. There were only two or three people involved in such deals: first, the merchant who borrowed the money and wanted to pay it back at the next fair, second, the merchant who lent the money and wanted to get it back at the next fair in person or via an agent, third, possibly the lender's representative who would collect the payment; John H. MUNRO, Art. "Inhaberschuldschein", in Michael NORTH (ed.), *Von Aktie bis Zoll. Ein historisches Lexikon des Geldes*, München 1995, pp. 172–174; idem, Die Anfänge der Übertragbarkeit: Einige Kreditinnovationen im englisch-flämischen Handel des Spätmittelalters (1360–1540), in Michael NORTH (ed.), *Kredit im spätmittelalterlichen und frühneuzeitlichen Europa*, Köln – Wien 1991, pp. 39–69, esp. pp. 46f.; M.M. POSTAN, Private Financial Instruments in Medieval England, *Vierteljahresschrift für Sozial- und Wirtschaftsgeschichte* 23 (1930), pp. 26–75, esp. pp. 27–42; Michael NORTH, Banking and Credit in Northern Germany in the Fifteenth and Sixteenth Centuries, in *Banchi pubblici, banchi privati e monti di pietà nell'Europa preindustriale. Amministrazione, tecniche operative e ruoli economici*, Genova 1991, vol. II, pp. 809–826, esp. pp. 819–822; G. DE MALYNES, *Consuetudo vel lex mercatoria, or The Ancient Law-Merchant*, London 1622 (repr. Amsterdam 1979), pp. 95–103.

50 Even here, the sources mentioned only one quotation for indigenous payment papers on non-European financial markets: *The Calcutta Weekly Gazette or Civil, Military and Commercial Register* published a list with *hoondee* quotations of Calcutta (Course of Hoondean) from January 12th 1840, quoting almost exclusively Madras, Bombay, Poona and Hyderabad as well as Hindustan cities at the border of the Punjab, including a few cities from the neighbouring Rajput countries and Madhya Pradesh, which seems to describe basically the entire monetary transaction rayon of that time; cf. DENZEL, Kolonialstädte, pp. 244f.

sary for merchants who worked also for the European-wide acting Papal Curia[51] to develop mechanisms for providing liquidity, whenever and wherever there was no or only little coined or uncoined precious metal available. So the new means of cashless payment started to emerge in Europe in the second half of the 12th century, probably in Genoa.[52] At first, the *lettres de foire* of the Champagne fairs[53] and the *instrumentum ex causa cambii* were developed. These means of cashless payment were combined instruments of credit and money transfer and served, thus, for the financing of exports as well as for transferring money without recourse to expensive and risky transfers of precious metals. They were developed by Italian, most likely Genoese merchants, especially for itinerant merchants travelling to the international Champagne fairs, "the forcing house for the development of bill of exchange,"[54] and they were notarially certified. So they were payment obligations or promises in the form of a debt certificate written by a notary. These early exchange contracts differ from the younger bill of exchange more in form than in function.[55] Moreover, only two or three people were included in these cashless transactions:

- the merchant, who raised a credit – for example in Genoa – and had his debt certificate and promise of repayment certified notarially;
- the merchant or creditor, who lent the money and could request repayment; and
- possibly the creditor's representative at a certain fair, who could receive the payment in place of the creditor himself.

As the merchant who had promised repayment at a certain fair used to travel there himself, he did not need a representative of his own who would effect the payment in his place.[56]

The situation changed when merchants started to settle at a certain town, stayed in their offices and instructed a trusted person, an agent or a partner to look after their obligations at fairs in other places.[57] With this person they would send, along with the formal notarial contract, an informal letter of advice (*littera*) as an order of

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51 Yves RENOUARD, *Les relations des papes d'Avignon et des compagnies commerciales et bancaires de 1316 à 1378*, Paris 1941; Arnold ESCH, Bankiers der Kirche im Großen Schisma, *Quellen und Forschungen aus italienischen Archiven und Bibliotheken* 46 (1966), pp. 277–398; Markus A. DENZEL, *Kurialer Zahlungsverkehr im 13. und 14. Jahrhundert. Servitien- und Annatenzahlungen aus dem Bistum Bamberg*, Stuttgart 1991; idem, Kleriker und Kaufleute. Polen im kurialen Zahlungsverkehrssystem des 14. Jahrhunderts, *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 82 (1995), pp. 305–331; Rudolf HIESTAND, Bologna als Vermittlerin im kurialen Zahlungsverkehr zu Beginn des 13. Jahrhunderts. Eine übersehene Rolle der frühen Universitäten, in ibid., pp. 332–349.

52 At least we can find the definitely largest number of sources for cashless payment in Genoese archives of that time.

53 Cf. L. GOLDSCHMIDT, Die Geschäftsoperationen auf den Messen der Champagne (Les divisions des foires de Champagne), *Zeitschrift für das Gesammte Handelsrecht* 40 (N.F. 25) (1892), pp. 1–32, esp. p. 27.

54 SPUFFORD, *Handbook*, p. xxxi.

55 "In my opinion, the *instrumentum ex causa cambii* is undoubtedly the prototype of the bill of exchange, for it fulfilled exactly the same function. True, the *instrumentum* took the form of a promise to pay, whereas the bill of exchange is an order to pay, but this distinction, being purely formal, is more superficial than real"; Raymond DE ROOVER, New Interpretations of the History of Banking, in Julius KIRSHNER (ed.), *Business, Banking and Economic Thought in Late Medieval and Early Modern Europe. Selected Studies of Raymond de Roover*, Chicago – London 1974, pp. 200–238, esp. p. 203.

payment, which then evolved into the actual bill of exchange.[58] This development was supported by the fact that the emerging net of agents and correspondents, who knew each other personally, made notarial certification obsolete. "A rich network of international commercial correspondents … extended to cover the entire economic and geographical area dominated by the Italian merchant bankers, and it was this that gave them the unrivalled possibilities for remitting to or drawing from any one place to any other."[59] The 'informal' bill of exchange was much easier to handle and less expensive than the former methods of payment. At first and in the 13th and 14th centuries it provided financial transactions only, and thus liquidity between two places and this usually only inside one trading company, for example between the merchant and his agent. This means was called *lettera di pagamento*. Since the 14th century such bills also circulated outside a single trading company between different merchants and different companies: the bill of exchange or the so-called *lettera di cambio* in its proper sense was generated, which became the most important means of cashless payment transactions and credit instrument for providing liquidity in the centres of trade and finance of the Italian merchant bankers, superseding the former means of cashless payment transactions.[60] The most important difference between the *letters de foires* and the *instrumentum ex causa cambii*, on the one hand, and the bill of exchange, on the other, was that the first constitutes a payment promise or obligation whereas the other is a payment order with the issuer of the bill ordering a third person at another place to settle a debt in his place.[61]

There were two elements fundamental for the exchange business: first, the *permutatio pecuniae absentis cum praesenti*; and, second, the *distantia* or *differentia loci*, i.e. the parties' difference in place and the exchange of the currency due to the underlying difference in coins that became manifest in the exchange rate. If one of the two elements was not given – especially the difference in place – an exchange transaction could not be effected, as the merchants would have been guilty of usury,

56 John H. MUNRO, Art. "Instrumentum Ex Causa Cambii", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 174f.; Raymond DE ROOVER, *L'évolution de la lettre de change, XIVe–XVIIIe siècles*, Paris 1953, pp. 23–42; R.D. FACE, Techniques of Business in Trade between the Fairs of Champagne and the South of Europe in the 12th and 13th Centuries, *Economic History Review* 2nd ser. 10 (1957/58), pp. 427–438. In the 11th and 12th centuries notarial certification was often necessary due to the basic fact that not all merchants were capable of reading and writing; cf. Alfred WENDEHORST, Wer konnte im Mittelalter lesen und schreiben?, in Johannes FRIED (ed.), *Schulen und Studien im sozialen Wandel des hohen und späten Mittelalters*, Sigmaringen 1986, pp. 9–33, esp. p. 28.

57 Raymond DE ROOVER, *Money, Banking and Credit in Medieval Bruges. Italian Merchant-Bankers, Lombards and Money-Changers. A Study in the Origins of Banking*, Cambridge (Mass.) 1948, p. 51.

58 MUNRO, Art. "Instrumentum Ex Causa Cambii", p. 175. Cf. Raymond DE ROOVER, Le contrat de change depuis la fin du treizième siècle jusqu'au début du dix-septième, *Revue belge de philologie et d'histoire* 25/1–2 (1946/47), pp. 111–128; idem, Précisions sur l'histoire de la lettre et du contrat de change (d'après des documents inédits des Archivs Datini à Prato), *La vie économique et sociale* 23 (1952), pp. 44–67; Georg SCHAPS, *Zur Geschichte des Wechselindossaments*, Stuttgart 1892, p. 9.

59 Alfonso LEONE, Some Preliminary Remarks on the Study of Foreign Currency Exchange in the Medieval Period, *Journal of European Economic History* 12 (1983), pp. 619–629, esp. p. 620.

60 DE ROOVER, *Lettre de change*, pp. 38–45; Markus A. DENZEL, Art. "Wechsel, Wechsler, Wechselbrief", in *Lexikon des Mittelalters*, vol. VIII, Zürich et al. 1997, columns 2086–2089.

61 John H. MUNRO, Art. "Wechsel", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 413–416, esp. p. 413.

which was seen as a mortal sin against natural law in the 13th century, in addition to being against the commandment of charity.[62] It was only after the 13th century, after theologians had placed emphasis on the difference of coins as being essential, and resulting from the difference in place, that the bill of exchange was considered to be a harmless means of (cashless) payment compared to the canonical ban on interest-bearing loans. Even the Church itself liked to use the bill of exchange; for the merchant's 'work' had to be paid because the money had to be transported and exchanged. So the profit that was hidden behind the exchange rate or the premium could be justified according to canon law in some degree. Since the *Tractatus de usuris* by the Franciscan Alexander Lombardus or Alexander of Alessandria (died 1314) at the latest, the *cambium* was no longer regarded as *mutuum* but as *permutatio pecuniae*, being no longer associated with the problem of usury. All subsequent leading theologians accepted this opinion.[63] In contrast to this, theologians rejected the term *cambium reale* or *cambium verum* regarding local exchanges, as these missed the difference in place and thus the necessity of money transport. Still, the Bologna Law of Bills from 1569, ratified by Pope Pius V (1566–1572), and his bull from 1570 forbade such local exchanges.[64]

In general, a bill of exchange contained the following pieces of information:[65]

(1) the three or four persons involved in the transaction:
   - the issuer of the bill, the drawer or drafter who receives money from the remitter. Because of receiving money the issuer was also called the taker or *prenditore*;
   - the addressee named in the bill or the drawee (*trattario*) who had to pay the bill (hence also payer or *pagatore*). The drawee became the acceptor after accepting the bill of exchange by signing it. If the acceptance was denied, i.e. if the drawee 'protested', the bill was dishonoured. If the bill was sent to a different place than the drawee's residence, it was said to be 'domiciled' to this third place (bills of exchange that were domiciled to one of the important bill markets were considered safe and easily to handle);
   - the beneficiary of the bill (*beneficiario*), who had to present the bill to the drawee (hence he was also named presenter) and to whom the drawee had to pay the face value of the bill (*payee*);
   - the deliverer or remitter (*rimettente*), who paid the issuer money for the bill he received from him (hence also *datore*).

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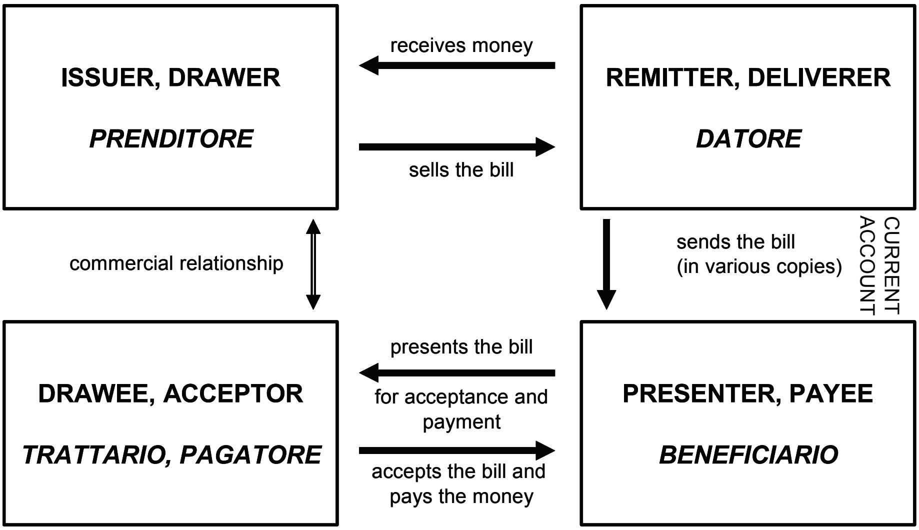
62 Jacques LE GOFF, *Wucherzins und Höllenqualen. Ökonomie und Religion im Mittelalter*, Stuttgart 1988.

63 Raymond DE ROOVER, The *cambium maritimum* Contract According to the Genoese Notarial Records of the Twelfth and Thirteenth Centuries, in David HERLIHY / Robert S. LOPEZ / Vsevolod SLESSAREV (eds.), *Economy, Society, and Government in Medieval Italy. Essays in Memory of Robert L. Reynolds*, Kent (Ohio) 1969, pp. 15–33, esp. pp. 28f. Cf. also Alonzo M. HAMELIN, *Un traité de morale économique au XIVe siècle: Le tractatus de Usuris de Maître Alexandre d'Alexandrie*, Louvain 1962, pp. 179–185; Raymond DE ROOVER, Les doctrines économiques des scholastiques: à propos du traité sur l'usure d'Alexandre Lombard, *Revue d'histoire ecclésiastique* 59 (1964), pp. 854–866, esp. pp. 858–860; idem, The Scholastics, Usury, and Foreign Exchange, *Business History Review* 41 (1967), pp. 257–271.

64 GRÜNHUT, *Wechselrecht*, vol. 1, pp. 27, 35f., 49–51.

65 Concerning the following terms cf. Friedrich ZELLFELDER, Glossar, in *WdW I/I*, pp. 197–207.

Figure 1: Exchange Transaction with Four Parties Participating[66] .



In a three-person-bill, the functions of the beneficiary and the remitter were usually joined in one person, which is why the modern Italian language also translates remitter by *beneficiario*.

(2) the sum of money over which the bill of exchange was issued;

(3) the currency in which the value of the bill had to be repaid, the exchange rate and the possible coinage in which the payment had to be effected;

(4) the usance or the term of the bill:[67] the usance, derived from the Italian *usanza*, usually meant the commercial custom at a place. Concerning cashless payment transactions, it determined the due date, i.e. the day of expiration of the bill of exchange and, thus, the timeframe during which the credit was granted within the transaction. The duration of bills varied between the different markets as well as the partners concerned, depending on the time of turnover between the two markets. Often the duration was extended to enlarge the *distancia temporis* caused by the *distancia loci* and, thus, widened the credit line. Until the 18th century, the terms of bills of exchange were accordingly set as 'uso' or '2 uso' or '2½ uso', meaning that the traditional duration of bills between two markets could be extended (or shortened). A merchant's knowledge of the traditional *uso* between two places was taken for granted. Usually, a distinction was made between dato bills and sight bills. Dato bills were to be repaid after a certain duration following the date of issuing (after date, *à date*, *dato fatta*), whereas the term

66 Cf. SPUFFORD, *Handbook*, p. xxxii; DENZEL, *"Practica"*, p. 90.

67 Cf. also Reinhold C. MUELLER, Art. "Usance", in North (ed.), *Von Aktie bis Zoll*, p. 403; Markus A. DENZEL, "Zeit ist Geld". Usancen-'Systeme' im bargeldlosen Zahlungsverkehr nach italienischen Kaufmannsnotiz- und -handbüchern des 14. und 15. Jahrhunderts, *Scripta Mercaturae* 29/2 (1995), pp. 96–111.

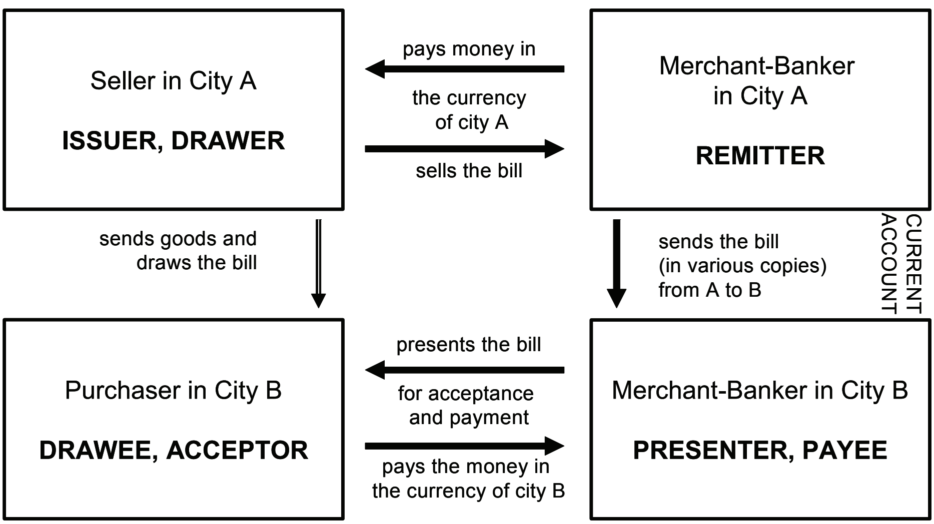
for the repayment of sight bills started after the drawee had seen (i.e. accepted) the bill (after sight, *à vue*, *vistà*). The bill at sight was a special type of sight bill. It had to be paid immediately following its presentation. When effecting cash-less payments at fairs it was common practice to determine the term of a bill to the next or next-but-one fair. In the 17th century it became common with almost all bills of exchange (with the exception of 'fair bills' and bills at sight) to admit some days of extra time to pay – the number of days varying for each market – meaning that a bill did not have to be repaid until a few days later than

(5) the date the bill of exchange was issued; and, finally,

(6) the signature of the issuer.

In principle, it is possible to determine two fields where transactions with bills of exchange were of great importance. The first was merchandise trade, where the bill of exchange was used as a means of payment and credit. The second was credit alone, when only money was sent and no connection to any trade in goods existed.

Figure 2: Exchange Transaction with Four Parties Participating in Connection with a Goods Credit[68].



In the first case, a seller in city A could have sent goods to a purchaser in city B and drawn a bill of exchange on him.[69] This meant that the seller instructed the purchaser to pay the amount he owed to the payee (*beneficiario*) within a certain time and in a certain currency in city B. Here, the seller corresponded to the taker or drawer

68 Cf. DENZEL, *"Practica"*, p. 90.

69 Concerning the following, cf. DE ROOVER, *Lettre de change*, pp. 43–47; MUNRO, Art. "Wechsel", pp. 413f.; Raymond DE ROOVER, Cambium ad Venetias. Contribution to the History of Foreign Exchange, in KIRSHNER (ed.), *Business, Banking and Economic Thought*, pp. 239–259, esp. p. 241.

(*prenditore*, *traente*), the purchaser to the payer or drawee (*pagatore*, *trattario*). From the 16th century the drawn *littera di cambio* was called *tratte* (from the Italian: *tracta*[70] *or tratta*).[71] In order to receive the money as soon as possible, the exporter would have sold the bill of exchange to a local trading partner against cash in the currency of city A, who thus allowed the seller a credit, indirectly financing the selling of the goods to the purchaser. In this way the seller regained liquidity for further trading and did not have to wait for the payment of the purchaser in a couple of weeks. By declaring that he had received the money from the buyer of the bill of exchange, the issuer also declared that the payee instead of himself was to receive the sum of money over which the bill was issued. He also gave a guarantee for the cashing of the bill and was, thus, responsible for the payee receiving the equivalent amount at the other place.[72] Then the buyer of the bill, the deliverer or remitter (*datore*, *rimettente*), sent the original bill of exchange and – to be safe – possibly various copies and an accompanying letter (advice letter) to the payee,[73] with whom he held an open account. The remitter or even the issuer sent the first copy of the bill, the *secunda* – sometimes also accompanied by a letter of advice – to the drawee.[74] The payee would then accredit the remitter with the amount over which the bill of exchange was issued (redeemed debts, for example) or would effect a re-exchange (*recambium*) by buying a bill of exchange that had to be paid in city A and that had been issued in favour of the original remitter. In this case the payee would present the bill of exchange to the purchaser for him to accept. The purchaser would accept his obligation to pay, writing the word *accettata* (or *vista* or *vista et accettata*), the date and his signature on the back of the bill and, thus, becoming the acceptor. In the late Middle Ages and early modern times the formal acceptance of bills of exchange negotiated beside fairs could be omitted as those bills often did not reach their place of destination until shortly before the day of settlement due to the difficulties in communication and travel. Thus the presentation of the bill often went along with demanding the payment. If a bill was presented for acceptance, this could also be done orally. The word of the acceptor meant among merchants as much as a written acceptance.[75] All mutual obligations were settled with the acceptor's payment (or the accrediting of the account) to the presenter according to the local or agreed duration (usance) of the bill. So the acceptor had enough time to sell his import and to acquire the money needed for the settlement of the bill of exchange.

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70 Cf. SCHAPS, *Geschichte*, p. 10.

71 Florence EDLER, *Glossary of Medieval Terms of Business. Italian Series 1200–1600*, Cambridge (Mass.) 1934 (repr. New York 1970), p. 154.

72 GRÜNHUT, *Wechselrecht*, vol. 1, p. 33.

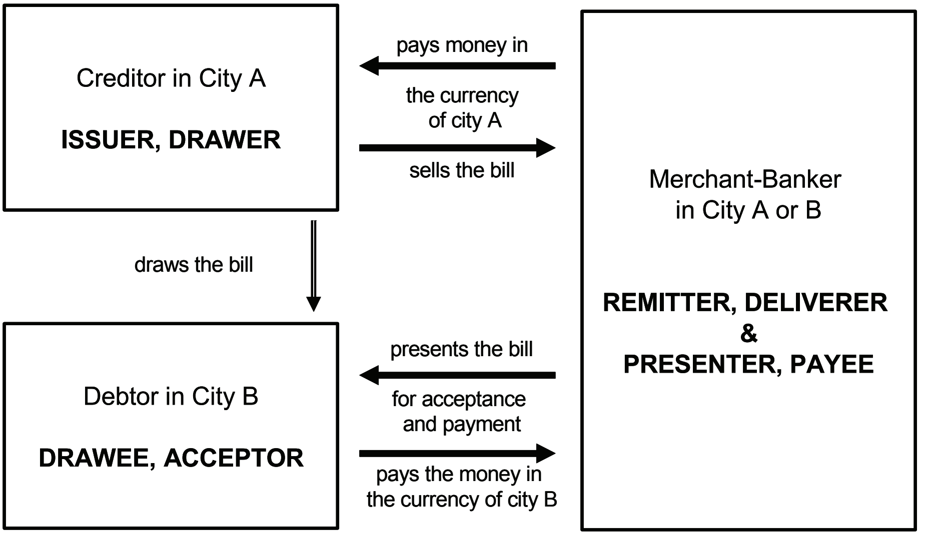
73 Such an advice letter could also have the form of an order of payment or cheque, as Heers found out for Genoa: since the 14th century the use of a *polizza* next to a bill of exchange was usual, "un véritable cheque" or "un véritable mandat de *paiement*; le tiré doit effectivement payer la somme portée sur le papier. Le plus souvent, c'est un ordre de *virement* adressé au scribe d'une banque privée ou au notaire d'un des registres de San Giorgio. … Rares sont les cas où le chèque est à l'origine d'une manipulation monétaire; il s'accompagne presque toujours d'une « scritta in banco »." Jacques HEERS, *Gênes au XVe siècle. Activité économique et problèmes sociaux*, Paris 1961, p. 74.

74 Cf. GRÜNHUT, *Wechselrecht*, vol. 1, pp. 64f.; Raban VON CANSTEIN, *Lehrbuch des Wechselrechts*, Berlin 1890, pp. 16–18.

75 GRÜNHUT, *Wechselrecht*, vol. 1, p. 67.

The advantage of this method of payment was that the seller did not have any lack of liquidity, the purchaser could buy the goods on credit, both the seller of the goods and the payee were paid in local currency, and the payment was made without expensive and dangerous transportation of precious metals. Moreover, possible differences in exchange rates between the two cities could be used profitably. Taking into consideration that the issuer of the bill often had a current account with the drawee, the issuer would in fact only sell his demand for a certain amount of money when selling the bill of exchange. As a result, his account with the payee was accredited with this respective amount. If this was impossible, the payee would have to give him credit. This is how the fundamental ideas of the acceptance credit were formed as early as at the end of the Middle Ages, with the bank house as the acceptor guaranteeing the cashing of the bill of exchange for the issuer.[76]

Figure 3: Exchange Transaction with Three Parties Participating in Connection with Money Transfer[77].



In the second case the transaction could serve only to send money. Mostly, only three people were involved in such a transaction, as the remitter and the payee could be the same person who would receive the issuer's (i.e. the creditor's) money from the drawee (i.e. the debtor).[78]

Even if the merchant issued a bill of exchange in favour of himself, meaning that the drawee and the remitter were one person, there were still only three people involved in the transaction.[79] The remitter could also sell the bill in order to send

76 MUNRO, Art. "Wechsel", p. 414.

77 Cf. DENZEL, *"Practica"*, p. 83.

78 Idem, Art. "Wechsel, -brief, Wechsler", column 2087.

money to another city, i.e. directly to the payee.[80]

The bill of exchange could fulfil four functions: first, it was a safe way to send money; second, it was a means of payment in trade; third, it functioned as a source of credit in lending money by issuing a bill of exchange (*dare a cambio*) and when selling a bill of exchange in foreign currencies on credit (*cambi a credenza*); fourth, one could benefit from the differences in exchange rates in different places (arbitrage transaction).[81] The chance and the risk of possible profits and losses of the exchange when issuing bills back and forth were of great concern to the merchants. Consequently, issuer and drawee would often agree on exchange rates that were higher than the mint parity or the 'usual local' rate for *cambium manuale*. According to Raymond de Roover, this difference in rates is to be seen as a hidden interest or profit. As long as this practice bore risk and uncertainty one could avoid ecclesiastic and secular bans on usury, which was – again according to de Roover – the overall and fundamental significance of bills of exchange. The risk consisted in the fact that exchange rates could change in the short or long term due to currency depreciation and appreciation, changes in the balance of payments, speculative trading of bills or changes in interest rates before the re-exchange could take place.[82]

A special form of the bill transaction was the dry exchange (*cambium siccum*) – "a loan dressed up as an exchange transaction"[83]– with the transfer of money being not the basis of the bill transaction, since no payment was made at the due date of the bill. Instead of this, the drawee (often equal to the payee) issued a bill of re-exchange (*recambium*) or the payee bought another bill of exchange with the money he had received from the first bill transaction, when the original remitter was called the new payee. On the due date this new payee could then achieve a higher sum than he had paid in the first transaction due to a possible change in exchange rates. A sequence of various re-exchanges between two cities without transferring any money could prolong a merchant's credit for however long his creditor was willing to renew the bill. The interest was the creditor's 'payment' for him, continually providing liquidity consisting of the difference between the exchange rates. There are examples from the early 14th to the 17th centuries of interest rates up to 12–14%.[84] The Church and the theologians regarded this type of bills of exchange as morally dubious, as there was in fact no difference in place but only a *distancia temporis*, and

79 "… si remittens ipse litteras cambiales exigit"; I.F. LEBKÜCHNER, *De valore cambii in Imperio*, Diss. Erlangae 1765, pp. x–xi. Cf. also DE ROOVER, *Lettre de change*, p. 44: "le preneur et le payeur étaient souvant une même personne". Cf. DENZEL, *"Practica"*, pp. 91–93. For examples see HEERS, *Livre de comptes*, p. 346.

80 MUNRO, Art. "Wechsel", p. 415. Cf. DENZEL, *"Practica"*, p. 94.

81 Jacques LE GOFF, *Kaufleute und Bankiers im Mittelalter*, Frankfurt/Main – New York 1993 (Paris 1956), pp. 33f., 70–77. It seems pointless to ask which of these functions was the most important, the transfer or the credit instrument. For this problem see the detailed discussion in SPUFFORD, *Handbook*, pp. xxxvii–xlix. Cf. Reinhold C. MUELLER, The Spufford Thesis on Foreign Exchange: The Evidence of Exchange Rates, *Journal of European Economic History* 24 (1995), pp. 121–129.

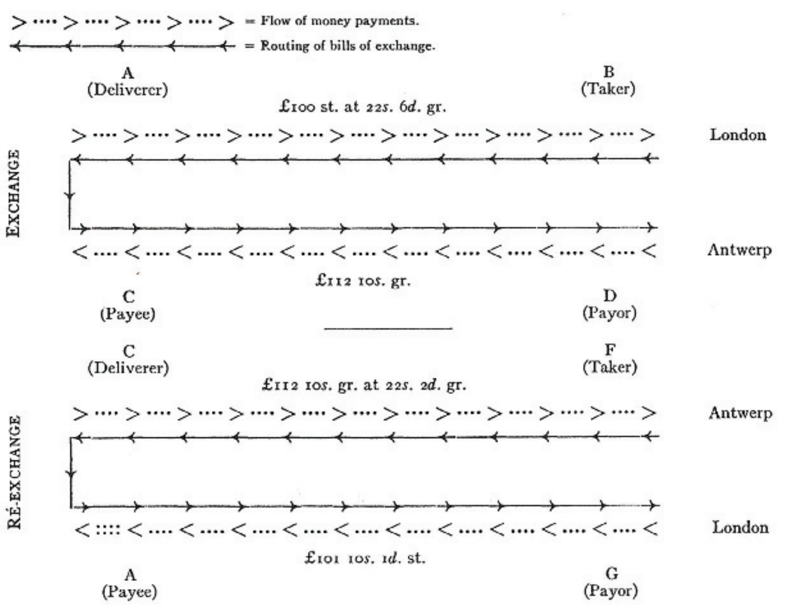
82 MUNRO, Art. "Wechsel", p. 415. For a critical comment on de Roover, cf. John H. MUNRO, Bullionism and the Bill of Exchange in England, 1272–1663: A Study in Monetary Management and Popular Prejudice, in [Fredi CHIAPPELLI (ed.),] *The Dawn of Modern Banking*, New Haven – London 1979, pp. 169–239, esp. pp. 170–172.

83 DE ROOVER, Cambium ad Venetias, p. 242.

the bill transaction was used as a means of providing funds that yielded ecclesiastically forbidden interest and of speculating on the unpredictable changes in exchange rates. Nonetheless, it remained a used trading practice. From the economic point of view the dry exchange provided the opportunity to receive a credit via bill transactions while the creditor could cancel the credit at any time by refusing the renewing of the bill of exchange.[85]

Raymond de Roover explained the connection between the bill of exchange and the bill of re-exchange in a fictitious example of a bill transaction between London and Antwerp using real exchange rates from 1564.

Figure 4: Exchange and Re-Exchange Transaction[86].



The deliverer, A, in London, having £100 st. [sterling] to spare, decides to buy a bill on Antwerp at the prevailing rate of 22s. 6d. gr. [groot, Flemish money] per pound sterling. B, the taker, needs £100 st. in London, but he does not have the sum available, though he has money coming

84 This practice can be interpreted as extortion only when the exchange rates had been fixed by the participants prior to the drawing of the (first) credit, e.g. when eliminating market risk. Cf. for the Late Middle Ages Reinhold C. MUELLER, *The Venetian Money Market. Banks, Panics, and the Public Debt, 1200–1500* (= *Money and Banking in Medieval and Renaissance Venice*, vol. I), Baltimore – London 1997, pp. 317–337.

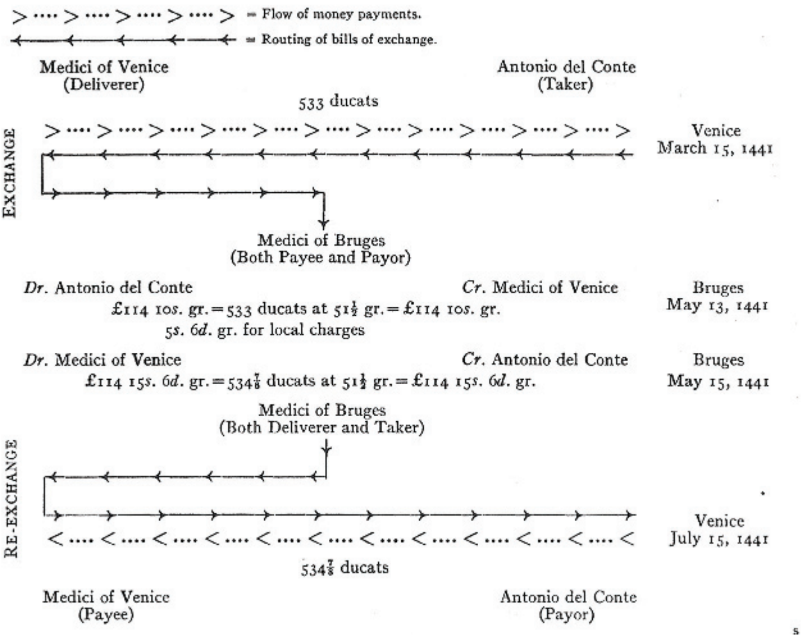
85 GRÜNHUT, *Wechselrecht*, vol. 1, pp. 50s.; Reinhold C. MUELLER, Art. "Trockenwechsel", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 398f.; Raymond DE ROOVER, What is Dry Exchange? A Contribution to the Study of English Mercantilism, in KIRSHNER (ed.), *Business, Banking and Economic Thought*, pp. 183–199; idem, Il trattato di fra Santi Rucellai sul cambio, il monte comune e il monte delle doti, in *Archivio Storico Italiano* 111 (1953), pp. 3–41, esp. pp. 29–34.

86 Idem, What Is Dry Exchange?, p. 189 (Chart I).

> to him in Antwerp. A and B will easily come to terms by exchanging money for a bill on Antwerp. In return for a loan of £100 st. B makes out a bill, payable at usance in Antwerp by his agent D, in favor of A's agent, C, for the value received from A, the deliverer or banker. When this bill matures at the end of one month, C collects from D the sum of £112 10s. gr. or the equivalent of £100 st. at 22s. 6d. gr. A, the banker in London, now has a balance of £112 10s. gr. standing to his credit in Antwerp. Instead of keeping this money idle, he instructs his agent, C, to seek out a taker and to remit the sum of £112 10s. gr. to London by exchange. In pursuance of these instructions, C buys from F a usance bill on London at 22s. 2d. gr. per pound sterling and sends it for collection to A, the original deliverer in London. When this bill matures, A collects £101 10s. 1d. st. or the equivalent of £112 10s. gr. at 22s. 2d. gr. per Pound Sterling. … By thus keeping his money running on the exchange, A has made a profit of £1 10s. 1d. st. in two months, or a return of about 9 per cent a year.[87]

Of course, such a double transaction was also possible if the payee and payer in the first part were the same person. This person would then function in the *recambium* as both deliverer and taker.

Figure 5: Dry-Exchange Transaction[88].



> Such a bill still involved the customary four parties, but two of them were fused in the same person. Bills of this sort were fairly common in the Middle Ages. They usually read 'Pay to yourselves' (Pagate a voi medesimi) instead of 'Pay to So-and-So.' The use of this formula

87 Ibid., p. 188. For more numeric examples of (Genoese) *recambium* transactions see HEERS, *Gênes*, pp. 79–88.

88 DE ROOVER, What Is Dry Exchange?, p. 196 (Chart II).

> frequently, but not always, indicated a transaction involving dry exchange. Bills thus payable 'to yourselves' did not give rise to any money payments but were usually settled by a transfer in the books of the payee, who was also the payer. Generally he wrote the amount stated in the bill to the debit of the taker and to the credit of the deliverer or the lender.[89]

Another form of the *cambio fittizio*, the fictitious bill of exchange transaction, was the *cambio con la ricorsa*, an agreement made between the participating parties that came to play a more important role with the Church's growing disapproval of the *cambia sicca*. The *ricorsa* that developed on the international exchange fairs of the 16th and 17th centuries was similar to the dry exchange in so far as it also was a hidden credit with uncertain profit or interest, but differed significantly from the *cambium siccum* as the repeated exchange back and forth, being an investment for the creditor and a credit for the debtor, was a binding agreement between the participating parties. The exchange rate for the re-exchange was also fixed in accordance with the existing exchange rates in order to guarantee a profit for the creditor (remitter). When processing such a *ricorsa* transaction the *cambista* or exchange banker instructed his colleague on the exchange fair to 'pay to himself' and to draw a bill of exchange on the first *cambista*, who then again paid himself on the due date. The exchange back and forth could be repeated a number of times each year, depending on the various exchange fairs that took place. Thus *ricorsa* exchanges served to cover up extortion in credit business, allowed quick drawing of credits and offered a profit-bearing investment with an average interest of 12–14% to capital owners. Nonetheless, the *ricorsa* exchange was approved by the Church, as it implied a *recambium* really taking place.[90]

There were three essential premises for all exchange transactions: a trusting personal relationship between the participating partners, the opportunity to sue for the payment of the bill of exchange in court if necessary and the existence of current accounts between the remitter and the presenter. In order to ensure that at least one copy of the bill of exchange reached the payee, the bill was issued in numerous copies (*prima*, *secunda*, *tertia*, etc.) that were sent to the different persons involved in the transaction.

The development of the bill of exchange revolutionized payments in Europe:

> No longer did every prospective purchaser or returning vendor need to carry with him large and stealable quantities of precious metals, whether in coin, or in marks of silver, or ounces of gold, depending on the trading area. Instead a manager could send and receive remittances from his factors and agents by bills of exchange without moving around Europe himself. This transformation of the methods of trade, which enabled a merchant to manage an international business without leaving his own home city, was so racial that de Roover christened it 'the commercial revolution of the thirteenth century'.[91]

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89 Ibid., p. 195.

90 Idem, *Lettre de change*, pp. 79–81; Giulio MANDICH, *Le pacte de ricorsa et le marché italien des changes au XVII^e siècle*, Paris 1953; GRÜNHUT, *Wechselrecht*, vol. 1, pp. 81f.; Reinhold C. MUELLER, Art. "Ricorsa", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 344f. Cf. Aldo DE MADDALENA, Affaires et gens d'affaires lombards sur les foires de Bisenzone. L'exemple des Lucini (1579–1619), *Annales. Économies – Sociétés – Civilisations* 22 (1967), pp. 939–990.

91 SPUFFORD, *Handbook*, pp. xxx-xxxi. Cf. idem, *Money and its Use in Medieval Europe*, Cambridge 1988, pp. 262f.: "The bill of exchange and the oral precursor of the cheque, rather than the florin or the grosso, were the really radical and important developments in the means of payment associated with the commercial revolution of the thirteenth century."

According to John Munro, the bill of exchange was "the most important achievement in the history of economics" and contributed greatly to the reduction of the international transfer of precious metals in Europe.[92]

3.2 The Innovations in Cashless Payments in the 16th and 17th Centuries: Endorsement and Discount – and their Consequence: The Decline of the International Exchange Fairs

With the bill of exchange as the medium of cashless payment transactions, a safe way of sending money and a source of credit had been developed, but a new problem arose: whereas coins or unminted precious metals could be transferred without any problems from one person to another, it was impossible to transfer a bill of exchange in either way. In late medieval times the bill of exchange was bound to the presenter mentioned in the document and only he could cash in the bill.[93] Thus it was impossible to transfer a bill to a person who was not involved in the exchange transaction, for Roman, Germanic, Islamic and Canon law did not allow the transfer of any kind of credit instrument.[94] This problem was solved primarily by using the big international fairs, where the merchants – either personally or via their representatives – gathered together in one place at certain times of the year representing a platform for the settlement of international payments:[95] At the Champagne fairs[96] and later at the Geneva fairs, the Castilian fairs, the Lyons fairs and, finally, at the Genoese Bisenzone fairs international payments were settled mainly during the fair business through the settlement of accounts. Provided that the creditor of the bill of exchange was at the same time the debtor of another bill, creditor and debtor would mutually write off their debts in the participating merchants' accounting books, i.e. all claims and debts were settled in a circle ('giro') of transfer and resulting compensation if there were, ideally, equally high debts.[97] Unsettled balances could then be transferred to the next fair using a bill of exchange, and the security of the payment of bills was guaranteed by the fair court.[98] This form of settling of payments doubt-

92 MUNRO, Art. "Wechsel", p. 415.

93 Peter OPITZ, *Der Funktionswandel des Wechselindossaments*, Berlin 1967, p. 31.

94 Harold J. BERMAN, *Recht und Revolution. Die Bildung der westlichen Rechtstradition*, Frankfurt/Main 1991 (Engl. 1983), p. 553.

95 Cf. DE ROOVER, *Lettre de change*, p. 65: "le caractère international du marché monétaire n'est pas un phénomène nouveau, puisqu'il remonte au temps des foires de Champagne."

96 At the Champagne fairs the settlement of accounts was fully developed as early as 1180; FACE, Techniques, pp. 428, 437; Jürgen SCHNEIDER, Messen, Banken und Börsen (15.–18. Jahrhundert), in *Banchi pubblici*, vol. I, pp. 133–169, esp. p. 135. Cf. also GOLDSCHMIDT, Geschäftsoperationen, pp. 30f.

97 VON CANSTEIN, *Lehrbuch*, pp. 26f.; GRÜNHUT, *Wechselrecht*, vol. 1, pp. 76–80; SCHNEIDER, Messen, Banken und Börsen, pp. 138f.; idem, Hat das Indossament zum Niedergang der Wechselmessen im 17. und 18. Jahrhundert beigetragen?, in Michael NORTH (ed.), *Geldumlauf, Währungssysteme und Zahlungsverkehr in Nordwesteuropa 1300–1800. Beiträge zur Geldgeschichte der späten Hansezeit*, Köln – Wien 1989, pp. 183–193, esp. p. 188.

98 Jürgen SCHNEIDER, Innovationen und Wandel der Beschäftigtenstruktur im Kreditgewerbe vom Spätmittelalter bis zur Mitte des 19. Jahrhunderts, in Hans POHL (ed.), *Innovationen und Wandel der Beschäftigtenstruktur im Kreditgewerbe. Erstes wissenschaftliches Kolloquium des Instituts für bankhistorische Forschung e.V. am 20. Juni 1986 in München*, Frankfurt/Main 1988, pp. 21–39, esp. p. 23; DENZEL, *"Practica"*, p. 97.

less had its climax during the Lyons fairs and at the Genoese exchange fairs of Bisenzone: in Lyons the central settlement of accounts was supported by the mediation of fair bankers keeping the merchants' money depots and opened current accounts. As the fair bankers also had current accounts with each other, payments could simply be made by crediting and debiting the respective accounts.[99] The Lyons fairs, just as the younger Bisenzone fairs, provided for a special unit of account, the *écu de marc* or the *scudo di marche* respectively, in relation to which all other traded currencies were set, thus significantly simplifying the settlement of payments.[100] The mechanisms of cashless settlement of claims were refined at the Bisenzone fairs,[101] which were founded exclusively for trading bills and without any trade in goods at all, so that they can be called "foire[s] de change par excellence".[102]

One can state in general that the opportunity of a concentrated, international settlement of claims several times a year without having to issue a new bill of exchange for every new transaction led to a concentration of cashless payments at these international fairs, so that they became the most important, even though not permanent, finance markets in Europe at their respective time. It was last but not least due to the great importance of the international fairs for cashless payment in late medieval Europe and of the 16th century that the contemporary legal literature made a difference between *cambia feriarium* (*nundinalia*) or *regularia* on the one hand and *cambia platearum* (*platealia*) or *irregularia* on the other,[103] i.e. the exchange business at the fairs was regarded as usual and bills of exchanges traded aside from fairs as exceptional.

An important innovation for the transferability of bills of exchange was the so-called endorsement, a notice written on the back (*in dosso* or *in dorso*) of a bill that enabled a person not yet part of the exchange transaction to present the bill. With the help of endorsing, the claim included in the bill of exchange was transferred to another person, which was determined by the signature *in dosso*.[104] By endorsement, the bill of exchange became a negotiable paper among merchants, almost like paper money:[105]

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99 Marc BRÉSSARD, *Les foires de Lyon au XV^e et XVI^e siècles*, Paris 1914, pp. 279f.; SCHNEIDER, Messen, Banken und Börsen, pp. 138f.

100 Giuseppe FELLONI, Un système monétaire atypique. La monnaie de marc dans les foires de change génois, XVI^e–XVIII^e siècle, in John DAY (ed.), *Études d'histoire monétaire, XII^e–XIX^e siècles*, Lille 1984, pp. 249–262; Jürgen SCHNEIDER, Die Bedeutung von Kontoren, Faktoreien, Stützpunkten (von Kompanien), Märkten, Messen und Börsen im Mittelalter und Früher Neuzeit, in Hans POHL (ed.), *Die Bedeutung der Kommunikation für Wirtschaft und Gesellschaft. Referate der 12. Arbeitstagung der Gesellschaft für Sozial- und Wirtschaftsgeschichte vom 22.–25.4.1987 in Siegen*, Stuttgart 1989, pp. 37–63, esp. pp. 52f.; DENZEL, *"Practica"*, pp. 304, 315.

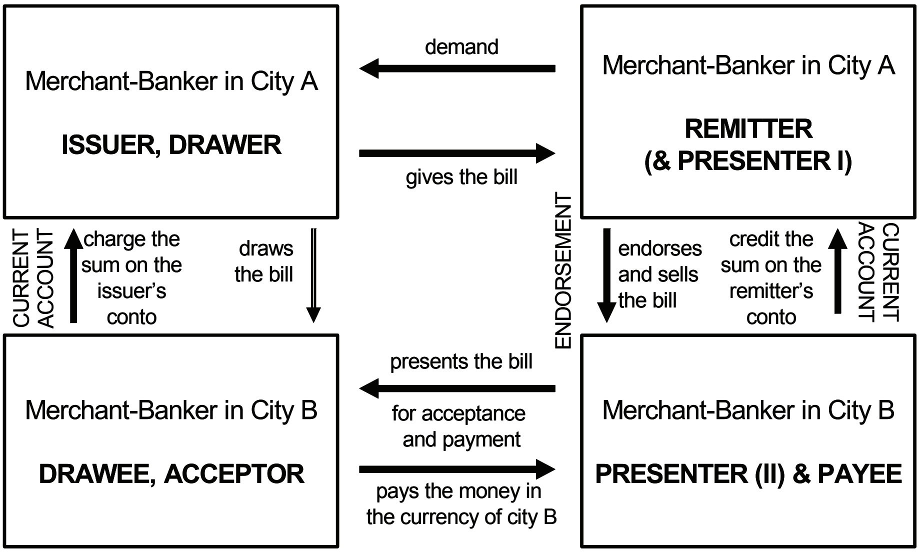
101 Pierre RACINE, Messen in Italien im 16. Jahrhundert: Die Wechselmessen von Piacenza, in Hans POHL (ed.), *Frankfurt im Messenetz Europas – Erträge der Forschung* (= Rainer KOCH, *Brücke zwischen den Völkern – Zur Geschichte der Frankfurter Messe*, vol. I), Frankfurt/Main 1991, pp. 155–170, esp. pp. 156–161, 168f.; DA SILVA, *Banque et crédit*, pp. 80–82; Giulio MANDICH, Delle fiere genovesi di cambi particolarmente studiate come mercati periodici de credito, *Revista di storia economica* 4 (1939), pp. 257–276; Claudio MARSILIO, *Dovè il denaro fa denaro. Gli operatori finanziari genovesi nelle fiere di cambio del XVII secolo*, Novi Ligure 2008.

102 DA SILVA, *Banque et crédit*, p. 12.

103 GRÜNHUT, *Wechselrecht*, vol. 1, p. 62.

104 Markus A. DENZEL, Art. "Indossament", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 165f., esp. p. 165.

Figure 6: Exchange Transaction with Endorsement[106].



"Now bills of exchange became not only more easily transferable, but also negotiable; in other words, the bearer had a greater financial security than the previous bearer, who remained jointly responsible for payment without being a surety in the strictly legal sense."[107] Just as the bill of exchange itself, the endorsed bill developed – probably in accordance with other endorsed papers – among innovative merchants in Italy,[108] which can be proved from at least the beginning of the 15th century.[109]A forerunner of the endorsement[110] was the order clause providing the transfer of credit papers and promissory notes from the end of the 14th century. If he was not sure that the payee could receive the repayment personally, a merchant could, nonetheless, make the paper payable to a bearer, representative or an authorized person by adding their name to the order clause as early as in the mid-12th century.[111] "Examples of these first, still primitive, forms of endorsement, applied to bills and cheques in the

105 SCHNEIDER, Innovationen und Wandel, p. 31; idem, Indossament, p. 189. Cf. DE ROOVER, *Lettre de change*, pp. 83f.

106 Cf. DENZEL, *"Practica"*, p. 102.

107 Herman VAN DER WEE, Monetary, Credit and Banking Systems, in Edwin E. RICH / Charles H. WILSON (eds.), *The Economic Organization of Early Modern Europe* (= *The Cambridge Economic History of Europe*, vol. V), Cambridge et al. 1977, pp. 290–392, esp. p. 329.

108 OPITZ, *Funktionswandel*, p. 36.

109 Federigo MELIS, Una girata cambiaria del 1410 nell'Archivio Datini di Prato, *Economia e storia* 5 (1958), pp. 412–421; Henri LAPEYRE, Une lettre de change endossée en 1430, *Annales. Économies, sociétés, civilisations* 13 (1958), pp. 260–264; Raymond DE ROOVER, Le marché monétaire au moyen âge et au début des temps modernes, *Revue historique* 94 (1970), pp. 34f.; HEERS, *Gênes*, pp. 88–96. Cf. SPUFFORD, *Handbook*, pp. xxxi, xxxiii.

110 On the development of endorsement from older methods of transfer, cf. SCHAPS, *Geschichte*, pp. 39–85.

south, were found for Venice (1386), Prato (1394–1410), Florence (1430–1494), Genoa (1459), Lyons (1519, 1537, 1547), Seville (1537), Medina del Campo (1561 [and following years]).”[112] In the 15th century bills of exchange could be endorsed only once (not a few times) and for the real act of endorsing the presence of both the drawee as well as the new and the former payee was necessary. Such transfers were valid only within one city or territory as legal certainty for the transfer of claims could not yet be guaranteed.[113]

Endorsement gained greater economic importance in connection with another innovative institution, the – in contrast to the fairs – year-round bourse. Trade with fungible goods – the bill of exchange was such a good – did not develop in Italy but in Northwestern Europe and here especially in the respective leading mercantile centres, in Bruges and from the second half of the 15th century in Antwerp. During the second half of the 16th century, the merchant bankers (and later the private bankers) needed increasingly to extend their use of endorsements, offering the opportunity to buy endorsed bills of exchange in order to resell them at this *marché permanent*, i.e. the New Stock Exchange in Antwerp that opened in 1531.[114]

In contrast to this, endorsing was rather limited in Italy, because the *campsores* had taken upon themselves the responsibility for arranging cashless payments. It also reduced the number of bills of exchange payable at the big international trade and exchange fairs, i.e. it reduced the volume of cashed bills, because endorsing reduced issuing new bills of exchange in principle. Thus the fair places and fair bankers protested the longest and hardest against allowing endorsements or at least repeated endorsement, as the practice of endorsing would have broken their monopoly in trading with bills of exchange at fairs for ever. Before its introduction only they could present bills for acceptance and settlement of accounts. This situation had two very important consequences for cashless payment transactions. First, the importance of fairs, especially of exchange fairs, whose existence was based on the settlement of accounts, fell significantly and permanently, for merchants no longer had to turn to

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111 John H. MUNRO, Art. “Inhaber-Klausel”, in NORTH (ed.), *Von Aktie bis Zoll*, pp. 171f.; idem, Übertragbarkeit, *passim*; Bernhard KIRCHGÄSSNER, Zur Geschichte und Bedeutung der Order-Klausel am südwestdeutschen Kapitalmarkt im 14. und 15. Jahrhundert, in Jürgen SCHNEIDER (ed.), *Wirtschaftskräfte und Wirtschaftswege. Festschrift für Hermann Kellenbenz, vol. I: Mittelmeer und Kontinent*, Stuttgart 1978, pp. 373–386; NORTH, Banking and Credit, p. 820. According to GRÜNHUT, *Wechselrecht*, vol. 1, p. 90, it was already supposed to be possible to add an order clause to promissory notes in antiquity.

112 VAN DER WEE, Monetary, Credit and Banking Systems, p. 328 ann. 2. Cf. also Raymond DE ROOVER, *The Rise and Decline of the Medici Bank (1397–1494)*, Cambridge (Mass.) 1963, pp. 137–140; Henri LAPEYRE, Las origins del endorso de lettras de cambio en España, in *Moneda y credito: Revista de economica* 52 (1952). Concerning the “cheque”, see Marco SPALLANZANI, A Note on Florentine Banking in the Renaissance: Orders of Payment and Cheques, *Journal of European Economic History* 7 (1978), pp. 145–168, esp. pp. 145f.: “By the XIVth century [the cheque] had taken on its full form, being distinct from both orders which a client would normally give to a banker by means of a letter, and from the more specific order to make payments to the client’s agent (*mandato all’incasso*). It was in this period that the cheque took on the characteristics typical of an instrument of payment with full power to extinguish debts with third parties. It is well known that these cheques, which were generally drafted on small slips of paper, have nearly all been destroyed and that virtually all the surviving examples come from Tuscany, particularly from Prato thanks to the Datini Archives.”

113 Jacques HEERS, *Le livre de comptes de Giovanni Piccamiglio homme d’affairs génois, 1456–1459*, Paris 1959, pp. 352, 356; DENZEL, Art. “Indossament”, p. 165.

114 SCHNEIDER, Messen, Banken und Börsen, p. 144.

the fair bankers for cashing bills of exchange and settling accounts. The decline of the exchange fairs and the total loss of their function and their fair bankers was irreversible and the endorsing merchant took over their activities. Second, the importance of the bill of exchange issued apart from at fairs grew for balancing payments, since the bill offered wider opportunities for circulation than the fair bill had ever had via the settlement of accounts.[115] The fundamental differences between the two types of balancing payments were four: first, the bill of exchange itself could be transferred by endorsement, whereas the settling of accounts could only transfer the claims resulting from the bills. Second, endorsement meant a written notice for the bill of exchange, whereas accounts could only be settled on the basis of the fair notebooks (*scartafacci*). Third, both payable bills and bills not yet payable could be endorsed, whereas the settlement of accounts was possible only with bills of exchange that were due for payment. Fourth, endorsement included the endorser's liability to the acceptant of the endorsed bill of exchange (endorsee), whereas the settlement of accounts excluded any kind of recourse as every participant had to be regarded as equally solvent.[116]

Only scarcely used during the 16th century,[117] the practice of endorsing at the Antwerp stock exchange led to its distribution throughout Northwestern Europe in the 17th and early 18th centuries: "This innovation was transferred to Amsterdam by the Portuguese Jews and various Protestants expelled from Antwerp in 1585 and was perfected with the establishment of the Amsterdam Wisselbank in 1609."[118] Unlike the Italian banks, the existing and developing stock exchanges and exchange banks accepted endorsed bills of exchange. Stock exchanges were founded in Amsterdam in 1530, in London in 1554/71 (the Royal Exchange), in Hamburg in 1558, in Cologne in 1566, in Danzig in 1593, in Bremen in 1614, in Berlin in 1685 etc. Exchange banks were established in Amsterdam in 1609 – the famous *Wisselbank* – then in Middelburg in 1616, in Hamburg in 1619, in Delft in 1621, in Rotterdam in 1635. In Danzig an exchange bank following the Amsterdam model was planned by Dutch immigrants but was never realized.[119] The more endorsing became important in the decades between 1610 and 1640, the more the importance of the fair bill declined. At the end of the Genoese era – as Fernand Braudel called it – the Bisenzone fairs underwent an emphatic process of decline. From the second half of the 17th century endorsing became accepted in large parts of Western and Central Europe according to the respective exchange regulations (*Wechselordnungen*), so in Hamburg, in Amsterdam in 1651, in France in 1673,[120] in Augsburg in 1665 or in 1707/16 respec-

115 Idem, Indossament, pp. 189–192; DENZEL, Art. "Indossament", p. 166; GRÜNHUT, *Wechselrecht*, vol. 1, pp. 12, 95f.

116 SCHAPS, *Geschichte*, pp. 44f.

117 According to Hans POHL, *Die Portugiesen in Antwerpen (1567–1648). Zur Geschichte einer Minderheit*, Wiesbaden 1977, p. 217, endorsement was rarely used in Antwerp at the beginning of the 17th century.

118 Larry NEAL, The Finance of Business During the Industrial Revolution, in R. FLOUD / D. MCCLOSKEY (eds.), *The Economic History of Britain since 1700, vol. I: 1700–1860*, Cambridge ²1994, pp. 151–181, esp. p. 159.

119 Maria BOGUCKA, La lettre de change et le crédit dans les échanges entre Gdansk et Amsterdam dans la premier moitié du XVIIe siècle, in Herman VAN DER WEE / Vladimir A. VINOGRADOV / Grigorii G. KOTOVSKY (eds.), *Fifth International Conference of Economic History, Leningrad 1970*, vol. IV, The Hague – Paris – New York 1976, pp. 31–41, esp. p. 38.

tively, in Frankfurt am Main in 1666, in Sweden in 1671, in Breslau in 1672, in Denmark and Norway in 1681, in Leipzig in 1682, in Brunswick in 1686 (limited again to only four endorsements in 1715), in Nuremberg in 1700, in Danzig in 1701, in the electorate of Brandenburg in 1709, in Prussia in 1724, but in Austria not until 1763.[121] The exchange places of the Holy Roman Empire, in particular, reflected the different exchange regulations that came into force in the individual cities, following one another relatively quickly in arguing over endorsements: endorsements were forbidden, for example, in Frankfurt am Main in 1620 and in 1635, but the 1666 regulation allowed it (confirmed in 1739). Following the Frankfurt example, Nuremberg forbade endorsement even in 1647, but the *giro* or endorsement was allowed there in 1654 and, finally, the multiple endorsement in 1700.[122] Later exchange regulations give the reason for the final approval of multiple endorsements; this instrument was then widely used in many other places and could no longer be forbidden for competitive reasons.[123] During the 18th century endorsing was a widely regarded common mercantile attribute, whereas the Italian exchange markets (Venice, the Bolzano fairs, the Bisenzone fairs at Novi, Naples and Florence) ruled out at least multiple endorsing because the *campsores* would otherwise have lost their function.[124] Nevertheless, bills were doubtless endorsed in some cases.[125] Endorsing appeared in Italy as a 'variety' of the *girata* that must have emerged around 1600. The *girata* did not differ from endorsing in function, but in the fact that it was not written on the back but on the front of the bill.[126] The term *girata* or its derivatives respectively – *giro* (instead of endorsement) and *girieren* (instead of to endorse) – were spread also in the Holy Roman Empire in the first half of the 17th century, last but not least through the Bolzano fairs,[127] so that these Italian terms are found rather of-

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120 It was already common in France to endorse bills before the *Ordonnance du commerce*, probably since the 1680 ban on *billets en blanc*, which were papers with the name of the creditor left open in order to provide for unrestricted circulation; SCHAPS, *Geschichte*, pp. 123f. For the fair business in Lyons restrictions were made in 1678: Bills of exchange from Venice and Bolzano could not be endorsed at all, those from Novi (Bisenzone fairs) and other Italian cities, from Germany, Switzerland and Piedmont could be endorsed only once; GRÜNHUT, *Wechselrecht*, vol. 1, pp. 97–99 note 21. Cf. also SCHAPS, *Geschichte*, p. 125.

121 Ibid., pp. 145–150, 185; SCHNEIDER, Messen, Banken und Börsen, p. 169; GRÜNHUT, *Wechselrecht*, vol. 1, pp. 97–99 note 21. Concerning England, cf. James Steven ROGERS, *The Early History of the Law of Bills and Notes. A Study of the Origins of Anglo-American Commercial Law*, Cambridge 1995, p. 170.

122 SCHAPS, *Geschichte*, pp. 146–148; GRÜNHUT, *Wechselrecht*, vol. 1, pp. 97–99 note 21; SCHNEIDER, Messen, Banken und Börsen, pp. 150f.

123 GRÜNHUT, *Wechselrecht*, vol. 1, pp. 97–99 note 21. Cf., for example, Franz WALDER, *Das Wechselrecht der Reichsstadt Augsburg*, Erlangen 1922, p. 58.

124 Ja[c]ques SAVARY, *Le parfait négociant ou instruction générale pour ce qui regarde le Commerce de toute sorte de Marchandises, tant de France, que des Pays Étrangers*, Genève 1676, P. II, liv. 2, ch. 4, pp. 482, 487; Jacques DUPUYS DE LA SERRA, *L'art des lettres de change suivant les plus célèbres places d'Europe*, Paris 1693, p. 12f.; VON CANSTEIN, *Lehrbuch*, p. 33; SCHAPS, *Geschichte*, pp. 88–94, 107; GRÜNHUT, *Wechselrecht*, vol. 1, pp. 97–99 note 21; SCHNEIDER, Messen, Banken und Börsen, p. 152.

125 This is already proven for the beginning of the 17th century; DE ROOVER, *Lettre de change*, p. 153 (Doc. 8). Cf. SCHAPS, *Geschichte*, pp. 107f.

126 Francesco FERRARA, *La girata della cambiale*, Roma 1935; G. CASSANDRO, Vicende storiche della lettera di cambio, in *Bolletino storico del Banco die Napoli* IX–XII/1, 1955/56; idem, Art. "Cambiale", in *Enciclopedia del Diritto* V, Varese 1959, p. 836; SCHAPS, *Geschichte*, pp. 39f. Cf. SCHNEIDER, Messen, Banken und Börsen, p. 150; idem, Indossament, p. 193.

ten in the exchange regulations of the 17th and 18th centuries.[128]

Similar to endorsement or its Italian 'variety', the *girata*, the discount became the second important innovation of cashless payment transactions in the late 16th and the 17th centuries: discount means interest subtracted in advance, when a credit paper – e.g. a bill of exchange – was repaid before the due date.[129] Thus, to discount a bill of exchange meant to sell it before the date it is due for cashing under subtraction of interest, which could have been considered usury due to the canonical ban on taking interest:[130]

> The first example of modern discount in Antwerp was found in the Kitson Papers and related to the discounting of a writing obligatory in 1536. It was still an exceptional occurrence. The creditor usually kept the writings obligatory and bills of exchange in his portfolio until the due date. If the creditor suddenly needed cash, he would ask one or more debtors to repay their debt earlier with a *rabat* (rebate): this was still the old procedure that had already been in common use in the Middle Ages (the traditional discount). … The writings obligatory usually had a long term to run, sometimes up to 12 months or more, so that the need for quick cashing was often quite sharply felt. However, the general introduction of the bill of exchange into northwest Europe was also to foster the discounting of bills.[131]

Among the merchants of Antwerp discounting spread in the second half of the 16th century but did not develop into a usual business practice until the end of that century. During the 17th century, discounting was established beside endorsement in Northwestern Europe – and especially in England.[132] "Modern discount banking had thus become a fact of economic life."[133]

3.3 The Bill of Exchange as the Dominant Means of International Payment in Europe (17th to 19th Century)

"Bills of exchange were the dominant means of international payment in the seventeenth century, and their exchange rate was the effective rate of exchange for most commercial activity."[134] With endorsement and discount, the stock exchange as the place of trade and the exchange regulations as the legal safeguarding, cashless pay-

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127 Markus A. DENZEL, *Die Bozner Messen und ihr Zahlungsverkehr (1633–1850)*, Bozen 2005, pp. 87–89.

128 SCHNEIDER, Messen, Banken und Börsen, p. 150.

129 Ibid., p. 153; John H. MUNRO, Art. "Diskont", in North (ed.), *Von Aktie bis Zoll*, pp. 85–87, esp. p. 85.

130 SPUFFORD, *Handbook*, p. xxxi.

131 VAN DER WEE, Monetary, Credit and Banking Systems, pp. 329f.

132 MUNRO, Art. "Diskont", p. 86. As early as during the 17th century goldsmith-bankers in England already discounted promissory notes, bills of exchange and even exchequer bills, although the transfer of such papers by endorsing them was not legally protected until the *Promissory Notes Act* from 1704. Cf. ROGERS, *Early History*, pp. 177–186; SCHAPS, *Geschichte*, pp. 178–180. Cf. also SCHNEIDER, Messen, Banken und Börsen, p. 154; Herman VAN DER WEE, *The Growth of the Antwerp Market and the European Economy (14th–16th Centuries), vol. II: Interpretation*, The Hague 1963, p. 349; idem, Monetary, Credit and Banking Systems, pp. 330f. Cf. also BRÉSSARD, *Foires de Lyon*, p. 281: "L'escompte fut pratiqué d'une manière courante à Lyon entre banquiers et marchands."

133 VAN DER WEE, Monetary, Credit and Banking Systems, p. 331.

134 Stephen QUINN, Gold, Silver, and the Glorious Revolution: Arbitrage between Bills of Exchange and Bullion, in *Economic History Review* 49/3 (1996), pp. 473–490, esp. p. 474.

ment transactions had gained a dynamic in Western and Central Europe since the close of the 17th century that flourished during the 18th century without any principal innovations. The mature mechanisms of cashless payments helped to raise the number of completed transactions, to accelerate their completion and to extend the range of the participants. A large number of merchants became merchant bankers not only in the big financial centres, but also in smaller country towns. This was the basis for the emergence of private bankers, finding its first climax, for example, in the Haute Banque Parisienne,[135] because merchant bankers specialized in banking when they owned a sufficient amount of capital. In the banking business they could definitely realize faster capital turnover than in commodity trading, which was of a quite long-drawn-out nature. Thus private banks developed from the former merchant-banking houses. Up to the mid-18th century as many as 30 private banks emerged in London alone and up to the early 19th century there were another 40.[136]

The individual element within the expansion of cashless payment transactions can be traced in the example of the, compared to international standards rather small, trading and banking house Amman in the little town Schaffhausen in Switzerland. The present exchange copy books give proof of more than 1,000 issuers from more than 320 cities, market towns and larger villages, situated in different parts of Western and Central Europe, in a few cases also in Southern Europe and Russia as issuing places for those bills of exchange that passed through the trading and banking house at one point or another. Generally, these bills of exchange reached Amman through a series of endorsements – sometimes up to eleven. The participants of these bill transactions often included – apart from various endorsers – only three parties: the issuer, the drawee and, as the third party, the banker financing the deal as remitter and presenter at the same time, as was often common in earlier centuries. Thus, if Amman bought commodities from a business partner at the French Atlantic Coast, the partner drew a bill of exchange on him, then Parisian bankers of Swiss origin, predominantly Tourton & Baur, Thellusson, Necker & C^ie^ and Sellont & C^ie^, acted as remitters and at the same time as presenters of the bill, which meant that they took up the bill of exchange from the merchant who sold the commodities at the Atlantic Coast and received their money, or a corresponding value, as another bill of exchange for example from Amman. Since this type of transactions in commodities was thus financed by Parisian bankers, and granted Amman at least a short-term credit in this way, Amman only seldom received bills of exchange sent to him directly by the supplier of the goods.[137] There are many examples from other parts of Europe giving proof of this development.[138]

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135 Cf. Herbert LÜTHY, *La Banque protestante en France de la révocation de l'Édit de Nantes à la Révolution, t. II: De la banque aux finances (1730–1794)*, Paris 1961.

136 Michael NORTH, *Das Geld und seine Geschichte. Vom Mittelalter bis zur Gegenwart*, München 1994, p. 139.

137 Markus A. DENZEL, Die Geschäftsbeziehungen des Schaffhauser Handels- und Bankhauses Amman 1748–1779. Ein mikroökonomisches Fallbeispiel, in *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 89, 2002, pp. 1–40; idem, Geldwesen und Zahlungsverkehr in regionalen und internationalen Zusammenhängen in der Alten Schweiz. Das Fallbeispiel des Schaffhauser Kaufmann-Bankiers Amman (um 1750–1781), in Pascal LADNER / Gabriel IMBODEN (eds.), *Alpenländischer Kapitalismus in vorindustrieller Zeit. Vorträge des siebenten internationalen Symposiums zur Geschichte des Alpenraums*, Brig 2004, pp. 55–99.

There appeared an essential innovation that made cashless payment even safer for these merchant bankers: the acceptance credit developing into a new form of short-term international credits in Amsterdam since the end of the 17th century. By accepting a bill of exchange drawn on him, a banker could then assume future payment obligations of a debtor, mostly an importer, who had settled his obligations with another exporter using a bill of exchange. The importer then asked his bank to declare that it honoured the bill on its due date, which it was not obliged to do if the importer did not have a sufficient amount of money deposited at the bank. This bank acceptance provided security for the issuer or remitter of the bill as well as ensuring that the exporter would receive their money. Moreover, the bill could be discounted much more easily as the discounting bank basically took over the role of the creditor from the exporter by guaranteeing the cashing of the bill of exchange. For a long time during the 18th century, the financial market of Amsterdam financed not only Dutch foreign trade on the basis of acceptance credits but also often the trade of other Northwest European cities (especially London, Hamburg and Bordeaux) and of other locations of the Baltic Sea area.[139] During the 19th century the acceptance credit gained outstanding importance:

> For as foreign trade grew and as the bill of exchange became its modal means of payment, the London discount market acquired a new function, that of accepting bills on behalf of clients, often external to the British Isles. Certain of the London private banks came to accept for a commission bills on behalf of clients. … When such a bill fell due for payment it would be paid by the accepting house, which in turn was reimbursed by its client. This acceptance business, carried on mainly by a group of the London merchant banks, became an integral part of the London discount market and 'the bill on London' a reputable form of payment in international trade.[140]

This can be put down to the fact that invoices for international and especially intercontinental trade were settled quite regularly in pounds sterling, even if other European merchants were participating in the deal. This process went so far that it was even used when two German companies traded with each other. When converting a price from pounds sterling into mark, in Hamburg an exchange rate was used that

138 E.g. Kurt SAMUELSSON, International Payments and Credit Movements by the Swedish Merchant-Houses, 1730–1815, *Scandinavian Economic History Review* 3 (1955), pp. 163–202; Vasilij V. DOROŠENKO / Elisabeth HARDER-GERSDORFF, Ost-Westhandel und Wechselgeschäfte zwischen Riga und westlichen Handelsplätzen: Lübeck, Hamburg, Bremen und Amsterdam (1758/59), *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde* 62 (1982), pp. 120–147; Elisabeth HARDER-GERSDORFF, Zwischen Riga und Amsterdam: die Geschäfte des Herman Fromhold mit Frederik Beltgens & Comp., 1783–1785, in *The Interactions of Amsterdam and Antwerp with the Baltic Region, 1400–1800. De Nederlanden en het Oostzeegebied, 1400–1800. Papers presented at the 3rd International Conference of the Association Internationale d'Histoire des Mers Nordiques de l'Europe (Utrecht 1982)*, Leiden 1983, pp. 171–180; eadem, Aus Rigaer Handlungsbüchern (1783–1785): Geld, Währung und Wechseltechnik im Ost-West-Geschäft der frühen Neuzeit, in Eckart SCHREMMER (ed.), *Geld- und Währung vom 16. Jahrhundert bis zur Gegenwart. Referate der 14. Arbeitstagung der Gesellschaft für Sozial- und Wirtschaftsgeschichte vom 9. bis 13. April 1991 in Dortmund*, Stuttgart 1993, pp. 105–120; eadem, *Zwischen Rubel und Reichstaler. Soziales Bezugsfeld und geographische Reichweite des Revaler Wechselmarktes (1762–1800)*, Lüneburg 2000; Bertil ANDERSSON, Early History of Banking in Gothenburg Discount House Operations 1783–1818, *Scandinavian Economic History Review* 31 (1983), pp. 50–67.

139 Helma HOUTMAN-DE SMEDT, Art. "Akzeptkredit", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 20f.

140 W.M. SCAMMEL, The London Discount Market: The Later 19th Century, in Ranald C. MICHIE (ed.), *The Development of London as a Financial Centre, vol. 2: 1850–1914*, London – New York 2000, pp. 151–177, esp. p. 154.

was fixed half a penny above the lowest level fixed at the Hamburg stock exchange for bills on London. Similar transactions in other European currencies were normally only settled, if they were pure commission business.[141]

The growing speed in transacting cashless payments is reflected both in the shortened time of turnover of bills of exchange noted with the current prices and in the acceptance of a shorter term as a second listing next to the traditional (longer) term. Whereas the usance of bills of exchange often depended on the time needed for transporting the bill – the usance of a bill of exchange from Amsterdam on Danzig being, for example, 40 days, on Königsberg 41 days – or a certain usance had become common over generations of merchants, the quotation for bills on sight became more frequent and more important during the 18th century. Thus Amsterdam introduced an at-sight quotation on London around the turn of the 17th to the 18th century and one on Paris in 1721. Starting in 1720, London differentiated within its quotations on Amsterdam between at-sight bills and longer-running bills (2 or 2½ months); an additional quotation for sight bills on Paris was introduced in 1721. In Hamburg an additional quotation for bills at short sight was introduced only for bills on Amsterdam, the most important partner for bills of exchange. The same was done for bills on London only in 1801, when the English metropolis surpassed the Dutch in importance from the perspective of Hamburg.[142] In the 18th century German bills of exchange with a term of fewer than eight days were called bills at short sight, whereas bills at long sight had a term that surpassed the usual usance of a bill market, meaning that they ran 'over uso'.[143]

In return, some usances of bills of exchange were prolonged in contemporary exchange rate currents, extending the credit term. This process could be interpreted as a growth of trust in the respective business partner. Hamburg, for example, lengthened its term for bills of exchange on Vienna from a four-week dato to a six-week dato; the one for bills on Prague was also extended from a four-week dato to a six-week dato about ten years later. In 1775/76 the usance for bills on Iberian cities (Madrid, Cádiz, Lisbon) was extended from a two-month dato to three-month dato. In return, the usance for bills on Hamburg was lengthed in Vienna in 1770 from two weeks after sight to a six-week dato, the one for bills on London from two weeks after sight to a two-month dato.[144] These examples demonstrate that the traffic and transport conditions had improved, allowing calculation with fixed dates after issuing bills of exchange and avoiding trusting in a certain term after sight – whenever this had supposedly occurred.

The listed usances of the exchange rate currents continued to change in the two noted tendencies during the 19th century. Hamburg is an example: the Hamburg exchange rate quotations listed Paris, Bordeaux, Saint Petersburg, London, Amsterdam and Antwerp with a two-month term far into the 19th century; only the Iberian places were listed with three months since 1775/76. In 1844 the commerce deputation asked the Senate to lengthen the term for bills of exchange to three months, but

141 Wilhelm FRIEDRICH, Die Technik des Zahlungs-Verkehrs im Export mit China, *Zeitschrift für handelswissenschaftliche Forschung* 4 (1910), pp. 340–350, esp. pp. 341, 346.

142 *HStD XII*, passim.

143 Cf. ZELLFELDER, Glossar, p. 206.

144 *HStD XII*, passim; *WdW VI*, S. 210–215; *WdW I/III*, pp. 309–326.

it disagreed about the merchants' interest in conceding longer-term credits to their foreign business partners. It was only when the commerce deputation stated that their request reflected the given situation that the Senate granted it partially in 1846. The terms for bills of exchange for most of the named places were lengthened, although those for Amsterdam and Antwerp had to be kept until 1856 and those for Germany and Austria until 1869, because small merchant houses, especially those trading mainly within Central Europe, had, by contrast, lengthened their main trading partners' credits.[145] The understanding of 'at short sight' and 'at long sight' changed fundamentally in Germany during the 19th century: in around 1859 one considered a usance of mostly two to three weeks (usually 14 days after sight) as 'at short sight'; a bill with a longer term was 'at long sight'.[146]

3.4 The Transfer of the European Techniques of Cashless Payment Overseas (16th to 19th Century)

With the help of endorsement and discount, the bill of exchange had become a popular negotiable paper developing into 'international money'.[147] But the use of the bill was limited: it remained a financing instrument of European merchants, as Raymond de Roover had already stressed for the 16th century: "la lettre de change au XVIe siècle ne circulait au-delà des limites de la Chrétienté latine."[148]

In the course of European expansion, however, the operating range of European merchants also grew regarding cashless payments: they brought their instruments and techniques into the non-European areas in which they were economically interested and carried out their exchange transactions there and from there with Europe (almost) as fast as if they were in Europe. This holds especially for the neo-European colonies, as John J. McCusker described it for the British colonies in North America: "In negotiating bills on the mother country, colonists followed the forms and procedures common to European Exchange. Bills were drawn, presented, and protested in much the same way between Philadelphia and London as between Amsterdam – or, better, Dublin – and London."[149] The same holds for Canada, Australia, New Zealand, the numerous colonies in the Caribbean and later also for Africa. Often European remitters served as creditors for the whole transaction, but there are also many examples of the reversed situation, i.e. when an overseas merchant banker granted a European merchant a credit, as often happened in trading tobacco from Maryland to London, for example: "The ability of the London importer to pay the Baltimore exporter in a bill of exchange depended … on the willingness of the Baltimore merchant banker, who had to accept the bill, to extend credit to the London merchant banker."[150] Here the bill of exchange could also serve only as a mere sour-

145 BAASCH, Entwicklungsgeschichte, p. 10.
146 Cf. ZELLFELDER, Glossar, p. 206.
147 Markus A. DENZEL / Oskar SCHWARZER, Art. "Wechsel", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 416f., esp. p. 416.
148 DE ROOVER, *Lettre de change*, p. 65.
149 MCCUSKER, *Money and Exchange*, p. 120.
150 NEAL, The Finance of Business, p. 159.

ce of credit for the European (!) merchant banker; so "the bill of exchange became the major source of credit for British merchants engaged in the growing trade with the North American colonies".[151]

In contrast to North America, in Latin America the bill of exchange did not similarly develop into a means of payment, for it was unnecessary. Until the end of the colonial era, payments from the Spanish colonies as well as from Brazil to Europe could be made by transferring precious metals. Moreover, the natives' European suppliers requested immediate payment for their delivered goods. Bills of exchange and *préstamos marítimos* served only to a very limited extent for financing colonial trade, especially between Spanish merchants, ship owners, factors and the Casa da Contratación.[152] A Spanish merchant banker could draw a bill of exchange on an American merchant, who promised to pay the amount to a local factor or agent of the European issuer. But such exchange transactions were – due to the great distance and risk – connected with an unusually high premium, so that they occurred only rarely.[153] Within the Spanish American colonial empire, transactions of cashless payments were often made with the help of so-called *libranzas*, which could be endorsed and thus traded; their acceptance was limited to the American market, though, normally only to a single vice-kingdom.[154]

The bill of exchange reached Asia primarily via the Northwest European East India companies, which used this instrument for transactions both among their posts in the area of the Indian Ocean and, on the other hand to Europe. Although it was possible in the Portuguese Estado da India to draw money *a câmbio* if needed at the beginning of the 17th century, this was not a 'classic' bill of exchange transaction, but rather 'emprunts contractés', contractually secured lending of money with a fixed interest rate, which was put in the form of a bill of exchange.[155] These kinds of 'bills' were probably nothing else but interest-bearing promissory notes with a questionable negiotiability, that served (alone?) for acquiring money.

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151 Ibid., p. 160.

152 Antonio-Miguel BERNAL, *La financiación de la Carrera de Indias (1492–1824). Dinero y crédito en el comercio colonial español con América*, Sevilla – Madrid 1992, especially capítulo I; idem, Crédito, financiación y beneficio en el comercio colonial español a través de los cambios y préstamos marítimos (ss XVI–XVII), in José CASAS PARDO (ed.), *Economic Effects of the European Expansion, 1492–1824*, Stuttgart 1992, pp. 39–76; Enrique OTTE, Letras de cambio de América, *Moneda y credito* 145 (1978), pp. 57–66; idem, Träger und Formen der wirtschaftlichen Erschließung Lateinamerikas im 16. Jahrhundert, *Jahrbuch für Geschichte von Staat, Wirtschaft und Gesellschaft Lateinamerikas* 4 (1967), pp. 226–266, esp. pp. 245f.

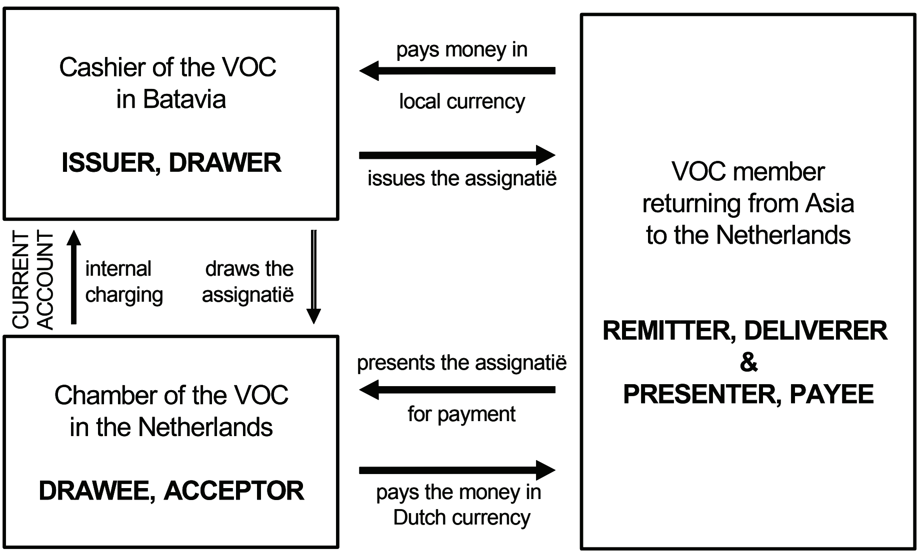
153 According to Thomás DE MERCADO the following courses were quoted in Seville in around 1570 for 100 pesos: on Santo Domingo 111 pesos, on México 118 pesos, on Panama 118 pesos; on Peru 133 pesos and on Chile 154 pesos; Thomás DE MERCADO, *Summa de tratos, y contrados*, Sevilla 1571, part 2, fol. 69v (cited from MCCUSKER, *Money and Exchange*, p. 299 note 135); André-E. SAYOUS, Les changes de l'Espagne sur l'Amérique au XVIe siècle, *Revue d'économie politique* 41 (1927), pp. 1417–1443.

154 Guillermo CÉSPEDES DEL CASTILLO, *América Hispánica (1492–1898)*, Barcelona 1983, p. 155; Hans POHL, *Die Wirtschaft Hispanoamerikas in der Kolonialzeit (1500–1800)*, Stuttgart 1996, p. 205f.; Murdo J. MACLEOD, Aspects of the Internal Economy of Colonial Spanish America: Labour; Taxation; Distribution and Exchange, in Leslie BETHELL (ed.), *The Cambridge History of Latin America, vol. II: Colonial Latin America*, Cambridge et al. 1984, pp. 219–264, esp. pp. 262–264. On Mexico in the ending colonial era, cf. D.A. BRADING, *Miners and Merchants in Bourbon Mexico 1763–1810*, Cambridge 1971, pp. 100–102.

155 Vitorino MAGALHÃES-GODINHO, *L'économie de l'empire portugais au XVe et XVIe siècles*, Paris 1969, p. 649.

As the opportunity remained limited for Europeans to draw a credit at the – otherwise highly developed – Asian financial markets, the Dutch Vereenigte Oostindische Compagnie (VOC) and the English East India Company (EIC) turned to other sources of credit: the companies started to issue money orders and bills of exchange in Asia that were payable by the companies' responsible offices in Europe:[156]

Figure 7: *Assignatië* Transaction between Asia and Europe[157].



Thus the VOC had, since 1620, provided its members with the opportunity to deposit their money with an authorized cashier[158] of the VOC before returning to the Netherlands from Asia. The cashier would issue them a so-called *assignatië* over the deposited value, which an office in the Netherlands would then cash. This *assignatië* can be interpreted as a sort of three-person bill of exchange considering that in this case the function of the remitter and the presenter has merged in the person of the VOC member, who deposited his cash in Batavia, i.e. the member bought a bill of exchange and presented it in the Netherlands to reclaim his money. In opposition to bills of exchange, the VOC agency in the Netherlands paid interest on the *assignatië* amounting in general to 4% between 1664 and 1735.[159] From this point of view the

156 K[irti] N. CHAUDHURI, *The Trading World of Asia and the English East India Company 1660–1760*, Cambridge et al. 1978, p. 165.

157 Cf. Markus A. DENZEL, Zur Finanzierung des europäischen Asienhandels in der Frühen Neuzeit: Vom Zahlungsausgleich im Gewürzhandel zum bargeldlosen Zahlungsverkehr, in idem (ed.), *Gewürze in der Frühen Neuzeit: Produktion, Handel und Konsum. Beiträge zum 2. Ernährungshistorischen Kolloquium im Landkreis Kulmbach 1999*, St Katharinen 1999, pp. 37–69, esp. p. 54.

158 Until the mid-18th century only the general government in Batavia and the governments and agencies in Ceylon and at the Cape of Good Hope, later also those in Bengal, Surat, and on the Coromandel Coast functioned as offices for the issuing of *assignatiës*.

transaction was more a kind of deposit banking with different locations of depositing and reclaiming. In addition, the whole transaction was settled within the company itself and bears a resemblance to the use of the *letteras di pagamento* within Italian companies of the 13th and 14th centuries. Thus it is not surprising that contemporary directors of the VOC spoke rather of '*assignatië*' than of '*wissel*'.[160]

Indications for transactions of cashless payments between different agencies of the EIC in Bengal can also be found, with bills of exchange and letters of credit, from 1651. In order to transfer money to Europe, the EIC members used 'bills of exchange', which probably bore a high similarity to the VOC's *assignatië*.[161] But next to the three-person bills of exchange one can also find bills with four participating parties, as the first recorded bill of exchange transaction from Canton to London proves.[162] Since the 1760s the importance of the bills of exchange issued by the EIC, the so-called Company's bills, grew for settling payments between China on the one hand and London or India on the other. Between 1773 and 1780/84 it was even possible for the European East India companies to use their local branches for a kind of 're-exchange' from Europe to Calcutta due to a growing accumulation of capital. The directors of the VOC bought bills of exchange from English–Dutch bank houses, which they drew on their agency in Calcutta. The agents of the VOC in Bengal could then cash these bills of exchange on sight.[163] The other East India companies, of course, participated in the profit-bearing transactions of cashless payment with other local companies in the Indian Ocean area and with Europe.[164] Thus the money order and bill of exchange became an often and regularly used instrument for cash-

159 Om PRAKASH, Financing the European Trade with Asia in the Early Modern Period: Dutch Initiatives and Innovations, *Journal of European Economic History* 27 (1998), pp. 331–356, esp. pp. 337f.; Femme S. GAASTRA, The Exports of Precious Metal from Europe to Asia by the Dutch East India Company, 1602–1795, in John F. RICHARDS (ed.), *Precious Metals in the Later Medieval and Early Modern Worlds*, Durham (NC) 1983, pp. 447–475, esp. p. 461; idem, Private Money for Company Trade. The Role of the Bills of Exchange in Financing the Return Cargoes of the VOC, *Itinerario. European Journal of Overseas History* 18 (1994), pp. 65–76, esp. pp. 66–68; idem, De Vereenigde Oost-Indische Compagnie in de zeventiende en achttiende eeuw: de groei van een bedrijf. Geld tegen goederen. Een structurele verandering in het Nederlands-Aziatisch handelsverkeer, *Bijdragen en mededelingen betreffende de geschiedenis der Nederlanden* 91 (1976), pp. 249–272, esp. pp. 256–260.

160 Idem, Die Vereinigte Ostindische Compagnie der Niederlande – Ein Abriß ihrer Geschichte, in Eberhard SCHMITT / Thomas SCHLEICH / Thomas BECK (eds.), *Kaufleute als Kolonialherren: Die Handelswelt der Niederländer vom Kap der Guten Hoffnung bis Nagasaki 1600–1800*, Bamberg 1988, pp. 1–89, esp. p. 54. Cf. also Arent POL, Tot gerieff van India. Geldexport door de VOC en de muntproduktie in Nederland, 1720–1740, *Jaarboek voor munt- en penningkunde* 72 (1985), pp. 65–195, esp. p. 90.

161 Sus[h]il CHAUDHURI, *Trade and Commercial Organization in Bengal 1650–1720. With Special Reference to the English East India Company*, Calcutta 1975, pp. 102, 106, 118–120, 122.

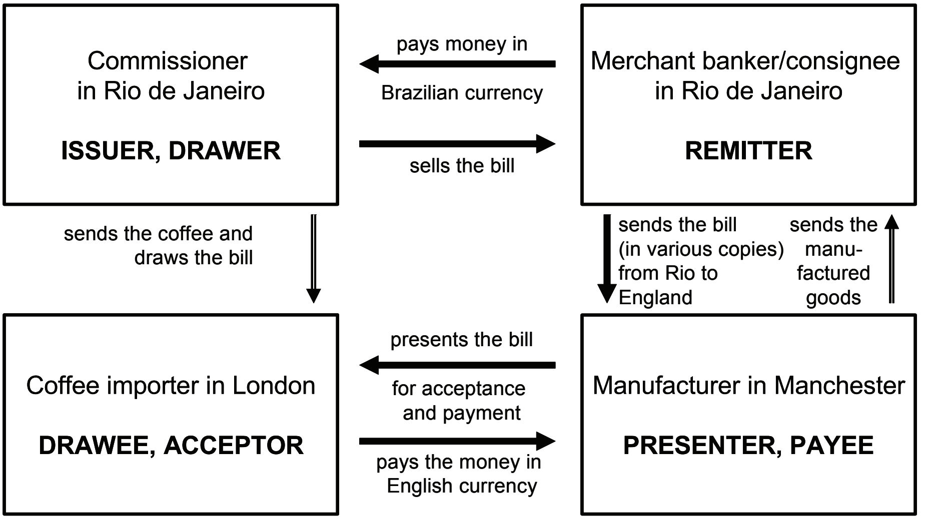
162 Source: Hosea Ballou MORSE, *The Chronicles of the East India Company Trading to China 1635–1834*, Oxford 1926, vol. V, p. 102; reprinted in Louis DERMIGNY, *La Chine et l'Occident. Le commerce à Canton au XVIIIe siècle 1719–1833*, Paris 1964, T. II, p. 762 note 2.

163 PRAKASH, Financing the European Trade, pp. 339f.; GAASTRA, Private Money, p. 73. According to PRAKASH, the fourth Dutch and English War prevented any further transactions from 1870 on; according to GAASTRA, the financial downfall of the VOC in 1784 was responsible for the drastic decline of such business transactions covering a total of nearly 12.8 million guilder between 1773 and 1785.

164 For the Danish *Asiatisk Kompagni*, for example, see Martin KRIEGER, *Kaufleute, Seeräuber und Diplomaten. Der dänische Handel auf dem Indischen Ozean (1620–1868)*, Köln – Weimar – Wien 1998, pp. 137f., 153f., 165, 167, 195.

less payment because it was used first by the East India companies and later more or less widely spread by private European businessmen or interlopers in the Asian trade. Exchange transactions in Asian–European or internal Asian payments served primarily as a direct source of liquidity: "The bills represented only a mechanism facilitating the transfer of purchasing power from Europe to Asia."[165] In general, bills of exchange were not used for commercial credit transactions,[166] as commodities were normally not paid for directly with a bill of exchange.[167] One would rather acquire cash with the help of a bill, using it to pay for the bought goods since local producers and intermediaries depended on receiving precious metal. One can state for the 19th century that "bills of exchange were known in Asia, but were not as commonly used in European–Asian trade as in European–American trade."[168]

Figure 8: Exchange Transaction between Overseas and Europe[169].



A vivid example of an exchange transaction between overseas and Europe in the first half of the 19th century is given by Horace Emile Say in his *Histoire des relations commerciales entre la France et le Brésil* from 1839.[170] A coffee importer in London asked a commissioner in Rio de Janeiro to send him a certain amount of

165 PRAKASH, Financing the European Trade, p. 341.

166 If there was, for example, a commercial credit transaction of a private agency, the above description of participants in the four-person bill of exchange would have been different. In this case the EIC occupied the position of the remitter and presenter attempting the cashless transfer of money from India or China to Europe and, at the same time, financing the private merchants' overseas trade.

167 KRIEGER, *Kaufleute*, S. 154.

168 Jacob M. PRICE, Transaction Costs: A Note on Merchant Credit and the Organization of Private Trade, in James D. TRACY (ed.), *The Political Economy of Merchant Empires*, Cambridge 1991, pp. 276–297, esp. p. 288.

169 Cf. DENZEL, Finanzplätze, Wechselkurse und Währungsverhältnisse in Lateinamerika, p. 3.

coffee and instructed him to draw a bill of exchange over the respective debt on his name (drawee). The commissioner would then issue the bill of exchange (drawer) and send the coffee and the original copy of the bill, the so-called *prima* or *tratte*, to London; the second copy of the bill of exchange, the *secunda* or *rimesse*, was sold in Rio de Janeiro after discounting to another merchant (remitter), who was in business relationship with England. This person could be a consignee who received factory goods from Manchester and had to pay for them. Instead of paying in cash, i.e. sending cash to Manchester, the consignee bought the *rimesse* from the coffee commissioner with the sales revenues or accredited his account with the agreed amount. Now the commissioner had cash (or a credit) at his disposal for new business operations. The buyer of the bill sent the *rimesse* to the producer in Manchester, who then presented the bill after its due date to the coffee importer in London. The last person, the drawer (acceptor), accepted the bill of exchange and paid the producer the amount over which the bill was issued in cash or he accredited his account with the respective amount. The money needed for cashing the exchange claim or accrediting the account had been earned in the meantime by selling the coffee. Thus all mutual obligations and claims could be settled.

The advantages of the exchange transaction have not changed since the Middle Ages: first, the business offered the opportunity to effect payments without the risky and expensive sending of precious metals (insurance costs, for example). If a bill of exchange was lost during its transportation, there were always other existing copies (*tertia*, *quarta*) that could document the mutual claims. Second, two credit deals took place: the European importer was not forced to pay instantly for the goods received. Instead of this, he had time to earn the money by selling the goods and to pay the bill of exchange; on the other hand, the overseas consignee also did not pay for the goods received from Manchester until the agreed term. Third, the respective recipient of the money was paid in his currency, i.e. the one he needed for new business operations in his country, pounds sterling in England, for instance, or milreis in Brazil. This was of great interest, especially for English exporters, because they used to revert to a compensation deal with overseas products in order to receive their money if they were not paid in sterling, bearing unpredictable risks for the desired revenues. Whether payments for goods sent overseas were really effected with bills of exchange (*rimesse*) or via the flow of commodities depended on the discretion of the European trading house and on the respective market situation.[171] Finally, the issuer of the bill of exchange would receive his money immediately by selling the *rimesse* without having to wait for payments from London, which would not have been effected until the due date of the bill. In this case the issuer had liquidity at his

170 SAY, *Histoire des relations commerciales*, pp. 101–104. This analysis of Say's example can also be found in Jürgen SCHNEIDER, *Handel und Unternehmer im französischen Brasiliengeschäft 1815–1848. Versuch einer quantitativen Strukturanalyse*, Köln – Wien 1975, p. 67. On cashless payment between Europe and overseas, its instruments and modalities, cf. Rolf WALTER, Wechsel, Pari, Kurs und ihre Bedeutung für das Überseegeschäft des 19. Jahrhunderts, *Scripta mercaturae* 16/1 (1982), pp. 55–78.

171 Cf. Rolf WALTER, Die nordwesteuropäische Wirtschaft in mikroökonomischer Perspektive: Das Beispiel Hasenclever, in Michael NORTH (ed.), *Nordwesteuropa in der Weltwirtschaft 1750–1950 / Northwestern Europe in the World Economy 1750–1950*, Stuttgart 1993, pp. 291–307, esp. pp. 296–304.

disposal that he could use for new business operations. This was a decisive factor for an overseas exporter: “the foreign exporter, who has consigned or sold produce to us, prefers to *draw* on London rather than have us remit. In so doing he finds a double advantage: – the advantage, namely, of getting his money at once by selling the bill, and the advantage of securing the best price for it by negotiating it himself. The foreign importer, too, who has to pay for the goods he has bought, would rather do so, by *remitting* to London than by allowing us to draw upon him.”[172]

This resulted in the noteworthy fact that all overseas trading places quoted London, but the reverse rates on London were exceptionally quoted until World War I, as “the exchanges between England and other countries are controlled from the side, and … we in London have practically neither part nor say in the matter. The rate of exchange, for example, between England and the United States, is fixed in New York; between England and Brazil, in Rio; … There may be exceptions, of which the Indian Exchange is the most notable, but that is the general rule.”[173] Of course this statement disregards that the credit system connected with cashless payment transactions was often much more difficult as, e.g., Stanley Champman described it for the transatlantic trade between the USA and Great Britain during the 1830s.[174]

3.5 From the Bill of Exchange to the Telegraphic Transfer and to the Cheque (from about 1850 to 1914)

“With the dramatic improvement in world communications, accompanied by the growth in numbers and expertise of financial intermediaries and institutions, a new era was coming into being after the mid-nineteenth century.”[175] Although the 19th century’s new means of transportation – steamboat and railroad – had reduced the time for the transportation of bills of exchange, the decisive progress regarding cashless payments did not set in until the appearance of the telegraph: the electronic telegraph made telegraphic money orders or transfers possible, i.e. telegraphic banking transactions, allowing depositing and cashing on the very same day between remote regions of the world.[176] Both developments taken together led not only to a harmonization of the usances of cashless payments everywhere but also to a significant shortening of the usances of intercontinental payments. The first result holds especially for Europe, where long-term bills of exchange were listed in general at 30

172 CLARE, The A.B.C. of the Foreign Exchanges, pp. 73–84, esp. p. 78.

173 Ibid., p. 79.

174 Stanley C. CHAPMAN, *The Rise of Merchant Banking*, London – Boston – Sydney ²1985, p. 109.

175 R.C. MITCHIE, *The London and New York Stock Exchanges 1850–1914*, London et al. 1987, p. 154.

176 Cf. Jorma AHVENAINEN, *The Far Eastern Telegraphs. The History of Telegraphic Communications between the Far East, Europe and America before the First World War*, Helsinki 1981; idem, Telegraphs, Trade and Policy. The Role of the International Telegraphs in the Years 1870–1914, in Wolfram FISCHER / R. Marvin MCINNIS / Jürgen SCHNEIDER (eds.), *The Emergence of a World Economy 1500–1914. Papers of the IX International Congress of Economic History, 2 parts*, Stuttgart 1986, part II, pp. 505–518; idem, The Role of Telegraphs in the 19th Century Revolution of Communications, in Michael NORTH (ed.), *Kommunikationsrevolutionen. Die neuen Medien des 16. und 19. Jahrhunderts*, Köln – Weimar – Wien 1995, pp. 73–80; Robert BOYCE, *Submarine Cables as a Factor in Britain’s Ascendency as a World Power, 1850–1914*, in ibid., pp. 81–99.

or at 90 days towards the end of the 19th century.[177] The second applies to the traffic between India and Great Britain after the opening of the Suez Canal in November 1869. The result was a reduction of the standard usance of six months' sight to four months' sight or six months' dato since the beginning of the 1870s, certainly by the 1880s. Moreover, the common usance between the USA and Great Britain of 60 days' sight was reduced to ten days' sight in 1876 after the installation of the third overseas cable; after the early 1880s sight drafts became predominant.[178] Exchange rates for telegraphic transfers were set up in important overseas places, for example, from Calcutta and Shanghai on London from 1878, from New York from 1879, from Hongkong from 1880, from Bombay from 1883, from Yokohama from 1894 and from Australia from 1906.[179] In addition:

> Even as early as 1877 the *Economist* drew attention to the fact that telegraphic transfers and international coupons were replacing the overseas bill of exchange as a means of payment. That the overseas bill of exchange was able to rise to predominance from 1860 and remain the important staple of the discount market down to the interwar years; that, even in face of speedier forms of payment, the bill on London and those who administered it enjoyed in the period 1870–1914 their golden age, was partly due to the enormous growth in the volume of trade in that period which served to obscure longer-term influences, but no doubt also to the basic utility, safety and convenience inherent in this process of payment for those who engaged in foreign trade.[180]

It was especially the installation of a special category of 'telegraphic transfer' or 'cable transfer' in the New York exchange rate currents on London from December 1879, on Paris, Amsterdam and the German Empire from the beginning of 1909 that was the economic consequence from the growing transatlantic trade and the resulting – mostly cashless – payments between the USA and Europe. In the era of the telegraph, worldwide reactions to changing rates on the exchange markets were a matter only of hours and minutes. "By about 1880, the principal financial centers of the world were in telegraphic contact and thereafter the system was refined and extended, with both transmission times and costs falling substantially. By 1908, on the London–New York route, a telegram could be sent, and a reply to it received, within 2.5 minutes. Furthermore, with the introduction of the London–Paris telephone in 1891, the ultimate in instantaneous and continuous contact was achieved."[181] The faster and more reliable communication became, the shorter became the usual usances in the system of cashless payment transactions.

Regarding the exchange rate currents of overseas places, this development led to an enlargement of the number of rates listed on European exchange partners by listing sometimes as many as six different usances. Around the turn of the 20th century Sydney had listed rates on London for 30, 60, 90 and 120 days after sight in addition to quotations for sight bills and telegraphic transfers. In around 1900, Hong Kong listed quotations on London for six and four months as well as for 30 days after sight

177 Cf. ZELLFELDER, Glossar, p. 206.

178 Shizuya NISHIMURA, *The Decline of Inland Bills of Exchange in the London Money Market 1855–1913*, Cambridge 1971, p. 39; L.E. DAVIS / J.R.T. HUGHES, A Dollar-Sterling Exchange, 1803–1895, *Economic History Review* sec. ser. 13 (1960/61), pp. 52–78, esp. p. 59.

179 *WdW I/I*, pp. 334f., 342, 349, 368; *WdW IV*, pp. 107f., 179, 239f., 254f., 329.

180 SCAMMEL, The London Discount Market, p. 155.

181 Ranald C. MICHIE, The Invisible Stabliser: Asset Arbitrage and the International Monetary System since 1700, *Financial History Review* 15 (1998), pp. 5–26, esp. p. 14.

and also for sight bills and telegraphic transfers.[182] These examples could easily be continued. Table 1 shows typical payment locations within intercontinental trade during the years prior to World War I.

Table 1: Typical Payment Locations within Intercontinental Trade, c. 1910[183]

British India, Western and Eastern Africa, Australia	30, 60, 90, 120 days
Netherlands India, Straits Settlements	30, 60, 90, 120 days up to 6 months
South Africa	60, 90, 120 days up to 6 months
China, Japan	3 months, but 2, 4 and 6 months as well
Northern Africa, Levant	4 to 9 months
Central America, West Indies	4, 6 to 9 months
South America	3, 4, 6, 9, 12 months, but especially 3 and 6 months

But, "where bills were used [only] as instruments of financing foreign trade, there may not have been such a drastic reduction of usance as from sixty days to nil (cable transfers)."[184] Such bills of exchange had served in principle

> to settle debts between financial markets without the need to continually transport precious metals. Unfortunately, not all trade led to the creation of bills of exchange, while there were also major imbalances in timing and location. For instance, there was a seasonal marked trend in international trade, with primary producing nations exporting at harvest time but importing throughout the year, leading to serious shortages of bills in different directions at different times of the year. The solution to this was the finance bill (or banker's draft or cheque), through which credit was extended, at a cost, until payment could be made.[185]

In Great Britain, in particular, a cheque was interpreted during great parts of the 19th century as a bill of exchange drawn on a bank and payable at sight.[186] Generally, one may regard a cheque as a "formal bank depot order on sight", "through which the issuer instructs his bank to pay upon deliverance of the document the therein recorded amount to a third person".[187] It was not until the 17th century that the cheque as a depot order given by a private person to his bank, which is first recorded as having occurred in 14th-century Italy, became relevant in Antwerp and Amsterdam with the so-called *kassiers*, whose "written *orderbriefjes* or *assignatiës* acted as cheques. Like bills of exchange, they were endorsable and thus might pass, as means of pay-

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182 *WdW IV*, pp. 99–108, 234–240, 323–329.

183 According to BRANDT, Kurs- und Kreditsicherung der Überseebanken, p. 363.

184 NISHIMURA, *The Decline of Inland Bills of Exchange*, pp. 39f.

185 Ibid.

186 SWOBODA [1913], p. 360; Dieter ZIEGLER, Art. "Scheck", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 354f., esp. p. 353. Cf. Ernst SEYD, *Das London Bank-, Check- und Clearinghouse-System nebst Winken für seine Einführung in Deutschland*, translated into German according to the 3rd English edition by Otto SJÖSTRÖM, Leipzig 1874, pp. 17f.: "In its interior the cheque is not even a bill of exchange, but a regular money order of one person to transfer a certain amount to another, arisen through common use and valid under certain rules," but "the cheque is the same thing as a due bill of exchange, as far as it is already due when issued."

187 Ibid.

ment, from hand to hand. Their *kassierskwitantiën* (goldsmith notes), receipts to their depositors, equally became negotiable by endorsement. They could take the form of promises to (re)pay the sum deposited. Such promises became gradually payable to bearer."[188] These papers finally had their breakthrough in England and Scotland in the 18th century:

> L'usage du chèque est très-répandu dans tous les pays anglais et plus particulièrement à Londres et en Écosse. Dans ces pays, la caisse du négociant est tenue par son banquier, sur lequel il dispose par un chèque chaque fois qu'il a un payement à faire et auquel il remet les chèques qu'il a reçus en payement, de telle sorte que le chèque est, en quelques sorte, la monnaie courante du commerce. … A Londres, le chèque est généralement présenté et recouvré le jour même, soit par le voie ordinaire, soit par une compensation entre banquiers à la *clearing house*.[189]

The London Bankers' Clearing House, dating back to 1770, was used by the clearing banks, as its members, to mutually settle bills of exchange; later cheques were also presented to them. It served at the same time as a model for the introduction of clearing or giro systems in other states:

> The giro traffic of the early Prussian Bank has been totally remodeled. Instead of the old incomplete system, a new one has been set, that does not only offer the giro customers of the Reichsbank the conveniences and commodities of the English banks, but also allows for the possibility to send and receive payments throughout the entire territory of the Reichsbank free of charge. Entire Germany has become one (sic!) giro-market on which payments between the giro customers of the Reichsbank can be settled without any costs or difficulties by merely signing the amount over from one account to another.[190]

The importance of British cheque transactions rose when the circulation of banknotes was limited by Peel's Bank Act in 1844 and thus caused a shortage of legal tender for the growing number of business transactions. At the instigation of the British banks of issue and with the help of the highly efficient clearing system, the cheque became the most important British means of business payments, surpassing even legal tender and the inland bill in this function,[191] while federal fiscal regulations – for example the high stamp tax on cheques and bills of exchange in Germany and France – hindered the spread of cheque transactions in continental Europe.[192] Moreover, the cheque's credit factor was much lower than that of the bill's, for the cheque was supposed to be cashed immediately at the place of payment. That is why the cheque did not play much of a role in international exchange rate quotations at this time – in contrast to the interwar period.[193] In 1880 cheque transactions were still

188 Pit DEHING / Marjolein 'T HART, Linking the Fortunes: Currency and Banking, 1550–1800, in Marjolein 'T HART / Joost JONKER / Jan Luiten VAN ZANDEN (eds.), *A Financial History of The Netherlands*, Cambridge 1997, pp. 37–63, esp. p. 43.

189 *Dictionnaire universel théorique et pratique du commerce et de la navigation, tome I: A–G*, Paris 1859, pp. 639f., esp. p. 639. On the clearing-house system, cf. SEYD, *Das London Bank-, Check- und Clearinghouse-System*, pp. 24–35.

190 *Verwaltungsbericht der Reichsbank für das Jahr 1876*, Berlin 1877, p. 6.

191 ZIEGLER, Art. "Scheck", p. 353. "The decline in the domestic bill which had become marked in the seventies continued and was intensified towards the end of the century by the rapid decline in the number of private banks. By 1914 the volume of domestic bills drawn and passing through the market was insignificant. The domestic bill which had brought the discount market into being and shaped its institutions had virtually disappeared." SCAMMEL, The London Discount Market, p. 160.

192 ZIEGLER, Art. "Scheck", p. 354.

193 Cf. *WdW II*, passim.

mostly limited to Great Britain in the form of a national money order made by a private person to a banking house with which the person had business relations. Starting in the 1890s, and especially after around 1910, cheque quotations can increasingly be found in international exchange rate currents.[194] The most important cheque quotation found so far are those from London on Paris (beginning in 1877), from Zurich on London (from 1884 onwards) and from Constantinople on London, Paris, Vienna and Berlin (1894–1911), as well as to a certain degree the Copenhagen exchange rate currents starting in 1881 (*a-vista* listings).[195]

Although the cheque as well as the sight credit gained increasing importance within domestic trade and Great Britain's industries, the bill of exchange of the London merchant banks remained essential for international capital movements.[196] Bills of exchange in London and the entire British Empire differed from one another according to the following criteria:

– the type of bill of exchange: clean or blue bills (bills between two or more merchants) or financial bills, which were drawn on stock banks;
– the usance: time bills (bills at longer sight) or sight bills (bills at sight);
– the quality: banker's bills or commercial bills.[197]

Especially for overseas bill transactions of the second half of the 19th century, exchange rate currents made a difference between different bill qualities; i.e. the drawee's financial standing depended on the securities presented with the bill (insurance policies, etc.). In Asia this differentiation was made as early as the early 20th century. Particularly in intercontinental payment transactions, "the export houses … were forced at many times to give their drawings to the banks for the handing over shipping documents, under the showing of granted credits and in general under giving all kinds of material and moral guarantees; the import houses would only accept bills of exchange on very limited terms."[198] Regarding bill transactions of the British Empire – i.e. from the different colonies to London – the exchange rate currents differentiated between Government or Treasury bills, Navy bills, mercantile or private bills as early as in the 19th century, while, in general, the exchange rate quotations became lower and lower from one type of bills to the others. Mauritius, Cape Town or West African places were quoted with differences between exchange rates of up to 3% and only sometimes higher.[199] Thus the following types of exchanges could be found at the big Asian financial centres between the late 19th and the early 20th century:[200]

– *documents* or *documentary bills*, distinguishing between documents against payment (the so-called *d/p drafts*) and documents against acceptance (the so-

194 Cf. ZELLFELDER, Glossar, p. 206.

195 *WdW I/II*, pp. 27f.; *WdW I/III*, pp. 236f.; *WdW VIII*, pp. 112, 116, 119–121; *WdW XI*, pp. 29f., 43f., 53f., 62–69. On the peculiarities of the *a-vista* listing in Copenhagen, see Chapter 9.

196 NORTH, *Das Geld*, p. 162f.

197 Cf. ZELLFELDER, Glossar, pp. 198f.

198 NOBACK [1877], S. 767. On the importance of documents in international settlement of payments also cf. Oskar SCHWARZER with Markus A. DENZEL / Friedrich ZELLFELDER, Das System des internationalen Zahlungsverkehrs, in *WdW I/I*, pp. 1–34, esp. p. 4.

199 *WdW IV*, pp. 276–279; *WdW VIII*, p. 76–88.

200 BRANDT, Kurs- und Kreditsicherung der Überseebanken, p. 363; FRIEDRICH, Die Technik des Zahlungs-Verkehrs, pp. 341–343, 348.

called *d/a drafts*). In both cases the European exporter would draw a corresponding bill of exchange on the overseas importer when shipping the goods, adding the so-called ‘documents’, usually three ocean bills of lading, an excerpt from the shipping insurance and the bill, all in duplicate. Usually, the overseas bank in Europe paid this bill to the exporter when the goods were delivered. In the case of a d/p draft, the importer did not receive the commodities until the repayment of the money to the overseas bank’s office overseas; in the case of a d/a draft, he received them on acceptance; the Indian merchants preferred the latter. Beside paying the price of the goods, the merchant had also to pay interest for the period between when the exporter had received the payment and the likely day of arrival of the corresponding amount in Europe. The exporter, however, did not get any discount;

– *clean bills* or *drafts* (i.e. finance bills), subdivided into *bank bills* and *credits* depending on whether they were drawn on overseas (exchange) banks[201] or were based on a customer credit;
– *telegraphic* or *cable transfers*.

In New York a distinction was made between clean bills on London, as between banker’s and commercial bills, sometimes also between ‘best’ or ‘prime banker’s’ (bills) i.e. bills drawn from overseas on the Bank of England, and ‘good banker’s’ (bills) (from 1871 to 1880), ‘first class credits’ or ‘prime commercial’ (bills) and ‘good commercial’ (bills) (from 1867 to 1880) respectively. The reliability of the companies on which bills were drawn determined subdivision into the categories best/prime, good or those without any additional remark.[202] Documentary bills and cable transfers were listed as further categories.[203] The practice in Valparaiso was similar.

This development led also to an increase in the number of quotations on European exchange partners in the exchange rate currents of the overseas places, ending in the Americas in the first decade of the 20th century and in Asia with the end of World War I.

201 BASTER, British Exchange Banks in China, pp. 140–151. For Germany see Richard HAUSER, *Die deutschen Überseebanken*, Jena 1906; Richard ROSENDORFF, Die deutschen Banken im überseeischen Verkehr, *Schmollers Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft* 28 (1904), pp. 93–134; idem, Le développement des banques allemands à l’étranger, *Revue économique internationale* 1 (1906), pp. 45–105.

202 COLE, Foreign-Exchange Market, pp. 401–403.

203 For details see Chapter 14.

4. Money and Exchange: European Currency Systems as the Dominant Monetary Systems in the International Payments System

This chapter follows a Euro-centred perspective. This is inevitable, because the countries involved in the international exchange system used almost exclusively European currencies or currencies on a European basis as a result of the political and/or economic influence of European colonial powers. Exceptions to this rule were India with the rupee, Persia with the kran and parts of China (especially Shanghai), which carried out their international cashless payments on the basis of the tael system. All other non-European countries used European (trade) coins and currency units respectively at least for their international transactions, or they followed those examples. The introductory paragraphs to the exchange rates of the respective countries contain references to local coins or currency systems in non-European countries, such as the Indian, Persian and Chinese tael system or the Japanese system before the establishment of the yen.

4.1 European Currency Systems from the Middle Ages up to c. 1870

The medieval and early modern systems of accounting and currency in Europe have their basis mainly in the early 4th-century currency system of Diocletian and Constantine, which was modified by the Carolingian currency reform of 793/94. From then on the libra or pondus was fixed at 20 solidi or 240 denari.[204] Many economically potential nuclei of medieval and early modern Europe generally used this system for accounting and tried either to adapt their own coins, minted under different designations, directly to this system or at least to relate them to it, such as France as well as England, the Netherlands, Northern Italy, parts of Southern Italy and the Christian part of Spain. In the Holy Roman Empire the libra–solidus system competed against different mark systems, representing the basic principles of the regional currency systems in Northern and Eastern Europe. Further examples of particular uses at the fringe of this European economic nucleus can be found in Southern Italy, with the ounces (*onzas*) consisting of 30 tari at 20 grani and in some parts of the Iberian Peninsula, above all in Castile, with maravedis at 10 dineros representing a survival of the Islamic era prior to the Reconquista.[205] As a result, Charlemagne's system became the basic relation for both the currencies becoming established over the centuries and the corresponding specifications differing regionally because of consistently slight variations of the pound and ounce weights.[206]

204 Cf. Harald WITTHÖFT, *Münzfuß, Kleingewichte, pondus Caroli und die Grundlegung des nordwesteuropäischen Maß- und Gewichtswesens in fränkischer Zeit*, Ostfildern 1984, especially pp. 38–40.

205 Markus A. DENZEL, Art. "Währungssystem", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 409–411; Michael NORTH, Art. "Währung", in *Lexikon des Mittelalters*, vol. VIII, München 2002, columns 1924f.; cf. SPUFFORD, *Handbook*, p. xxii.

206 See DENZEL, Art. "Währungssystem", p. 410.

Table 2: Divisions of the Pound in the Middle Ages[207].

France	1 livre	= 20 sols (sous)	= 240 deniers
Italy	1 lira	= 20 soldi	= 240 denari
Catalonia, Aragon, Valencia	1 libra	= 20 sueldos	= 240 dineros
England	1 pound	= 20 shillings	= 240 pence
Netherlands	1 pond	= 20 shillings	= 240 groot
Holy Roman Empire	1 pfund	= 20 schillinge	= 240 pfennige

The libra–solidus system, however, lost its importance only with the introduction and the establishment of the decimal system during the 19th century (in Great Britain as late as 1971), but numerous more or less different coinages masked its recognition. Nevertheless, it remained the basis for accounting and exchange rate fixing in many parts of Western and Southern Europe, because money of account emerged together with the Carolingian reform of 793/94, since the libra was regarded as a unit of account of 20 solidi and the solidus as a unit of account of 12 denari. Although 240 denari no longer corresponded to the libra (pondus) in real weight from the 9th century, the relation 240 denari = 1 libra was kept for accounting. Since the 13th century, coins were minted that were of the same value as the previous money of account of the libra–solidus system,[208] namely at first silver grosso coins of 12 denari or 1 solidus respectively, and from the mid-13th century gold coins of 20 solidi or grossi or 1 libra respectively.[209] In 1252 Florence started to mint golden li[b]ra coins, the fiorino d'oro (at 3.537 grammes), followed by Genoa's genovino and Venice's ducato.[210] The first silver coin with a value of one counted pound was the lira tron minted in Venice since 1472, followed by the Tyrolean guldiner minted since 1484/86 and equal to one gulden in gold at 60 kreuzer or 240 pfennige (= denari).[211]

The most important extension of the existing systems took place during the 16th century with the gradual introduction of high-value silver coins in different European countries which should be at least initially of the same value as previous gold coins. In the Holy Roman Empire the *reichsthaler* (rixdollar) emanated from the guldiner, becoming a sort of archetype for thaler coinages in many other European countries: not only in Spain during the 15th century (the real de a ocho from 1497, called 'peso' in America), in the Netherlands during the 16th century (since 1538), in England (the crown since 1551), in Denmark and Sweden, but also in Savoy (first under the reign of Philibert II [1497–1504] but mainly since 1566), Genoa (1507), Milan (by 1551), Venice (1562), Florence (1568), in the Kingdom of Naples (1586) and in the Papal States (1588), with the different thaler coinages of the Italian states

207 According to BRANDT, Kurs- und Kreditsicherung der Überseebanken, p. 363.

208 Cf. SPUFFORD, *Money and Its Use*, passim.

209 Rainer METZ, Art. "Rechengeldsystem", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 330–333, esp. pp. 330f.; DENZEL, *"Practica"*, p. 63.

210 R.S. LOPEZ, Back to Gold, 1252, in *Economic History Review* 9 (1956/57), pp. 219–240.

211 Named after the doge Nicolò Tron reigning in these years (1471–1473). Guido A. NEGRIOLLI, Monete venete nel Trentino e nell'Alto Adige, in *Archivio per l'Alto Adige* 33 (parte prima) (1938), pp. 653–668, esp. pp. 656–658; METZ, Art. "Rechengeldsystem", p. 331.

called tallero, ducatone (large ducat), scudo or piastra.[212] France (the Écu blanc in 1641), the Ottoman Empire (between 1687 and 1691) and the Russian Empire (the silver rouble of 100 kopecks in 1704) started to mint thaler or large silver coins only during the 17th and 18th centuries.[213]

Even though large silver coins and the numerous gold coins represented the most important means of payment for honouring debts resulting from bill transactions, monies of account were generally used to settle those transactions:

> A money of account is … a scale, a measure. It makes possible the classification of prices and creates a continuous procedure. It is a unit of measurement for gold coin, silver, billon … or copper; it brings them into a valid relationship with one another and itself becomes part of that relationship. … 'Imaginary' currencies were part of everyday life across the whole of Europe. … All prices, all accounting systems (even the most rudimentary) and all contracts – or at least almost all – were formulated in terms of an accounting unit, that is to say in a money which was 'not necessarily represented by metal currency', but which acted as a measure for the coin in circulation. … why these apparent complications? They existed simply because they proved to be unavoidable, because they rounded off the monetary system and gave it coherence. A metal coin 'of full weight which rings true' represented so many grams of gold and silver: that is, of a commodity – bullion – of which the price varied like that of any other mechandise. Doubtless, governments always endeavoured to have a real money which corresponded to the accounting unit (which, indeed, originally had also been a real coin). But as a result of the fluctuations in the price of precious metals it was necessary to readjust constantly the intrinsic weights of this money, so as to keep the current coins in line with the money of accounts. … As a result, the circulation soon consisted of coins which often differed considerably in weight, fineness, stamp, wear and tear, or illegal clipping (which often meant that they had to be weighted).[214]

Therefore, large parts of the exchange rates were quoted in different forms of money of account from the Middle Ages.[215] Not only those monies of account that had been established at international fairs but also those that became the basis for settling accounts in (public) banks of supra-regional importance attained special significance often reaching out beyond the quoting exchange market. In both cases the money of account served both to facilitate mutual clearings among merchants of different provenance who used to settle their accounts in different currency and money systems, and to supply the merchants' desire for safety because the establishment of a money of account as a medium of exchange dispossessed the governments to a large extent of the opportunity to undertake monetary experiments. Consequently, the development of a money of account system at a fair or within a bank meant that the respective institution was able to gain considerably more prestige, also improving its reputation among the merchants.

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212 Konrad SCHNEIDER, Art. "Taler", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 389–391; Dietrich KLOSE, Italienische Taler (Tallero, Scudo, Ducatone, Piastra), in Wolfgang HEß / Dietrich KLOSE (eds.), *Vom Taler zum Dollar 1486–1986*, München 1986, pp. 88f.; idem, Der spanische Taler (Peso), in ibid., pp. 93f.; idem, Niederländische Taler, in ibid., pp. 97–100; idem, Die Crown in Großbritannien, in ibid., pp. 103f.

213 Idem, Frankreich: Écu blanc und Laubtaler, in ibid., pp. 133f.; idem, Jefimok und Rubel, in ibid., pp. 136f.

214 Fernand BRAUDEL / Frank C. SPOONER, Prices in Europe from 1450 to 1750, in Edwin E. RICH / Charles H. WILSON (eds.), *The Economy of Expanding Europe in the Sixteenth and Seventeenth Centuries* (= *The Cambridge Economic History of Europe*, vol. IV), Cambridge et al. 1967, pp. 378–486, esp. pp. 378f.

215 E.g. Peter SPUFFORD, *Monetary Problems and Policies in the Burgundian Netherlands 1433–1496*, Leiden 1970, pp. 13–28.

Those fairs with an international reputation featured consistently a relatively stable money of account system throughout the period under investigation. At the 16th century Lyons fairs, for example, a differentiation was made between accounting in marc d'or (following the example of the older Geneva fairs), écu de marc d'or (= 1/65 marc d'or) or écu d'or au soleil. The écu de marc d'or at 3.08 grammes of fine gold was used as the most important clearing unit after 1533.[216] Following the example of the Lyons fairs, the exchange rates at the Genoese 'Bisenzone' fairs were quoted in the unit of account 'scudi (d'oro) di marche'. Since 1594/95 the value of the scudi (d'oro) di marche had resulted from the average weight of the seven internationally circulating gold coins from Antwerp, Spain, Genoa, Venice, Florence, Piacenza and Naples, being, therefore, independent of single national currencies. Whenever payments in cash were necessary to settle a balance, they were expressed in scudi di marche but executed in scudi d'oro (in oro), with the ratio of 100:101 of the scudi di marche to the average troy weight of the scudi d'oro remaining unchanged between 1552 and 1763.[217] The Bisenzone fairs' money of account influenced both the exchange fairs the Venetians had established in Verona in around 1630 and later in Murano, as well as even to some parts of the exchange rate quotations and the accounting at the Bolzano fairs. There, two systems of money of account developed: the moneta giro during the 17th century and the the valuta della fiera during the second half of the 18th century.[218] But also at the German fairs of international relevance, various systems of monies of account became important. In Frankfurt am Main, for example, the so-called 'Wechselgeld' (exchange money) was introduced in 1585 and endured with some changes until well into the 19th century. At the Leipzig fairs it became usual to settle accounts in 'Konventions-Wechselzahlung' after 1763. Generally, it has to be stated that systems of money of account were established at fairs only if they developed into centres of cashless payment transactions. If, however, they remained pure or mainly goods fairs, the development of a system of money of account did not happen because it was simply unnecessary, as, for instance, in Brunswick. In around 1577 Frankfurt am Main was primarily a reloading point for goods, evolving into an exchange market only during the early 1580s under the influence of French and Dutch immigrants who brought with them new techniques for banking and payment business, last but not least the use of an exchange money (introduced 1585).[219]

Similar to the big international fairs, a particular money of account developed in important supra-regional public banks, which represented a sort of bank money in which the bank kept its books and rendered its accounts, thus converting payments or clearings among merchants settling their transactions via this bank into this parti-

216 Helma HOUTMAN-DE SMEDT / Herman VAN DER WEE, Die Entstehung des modernen Geld- und Finanzwesens Europas in der Neuzeit, in Hans POHL (ed.), *Europäische Bankengeschichte*, Frankfurt/Main 1993, pp. 73–173, esp. p. 106.

217 Ibid., p. 110; DENZEL, *"Practica"*, pp. 315f.; Giuseppe FELLONI, All'apogeo dell fiere genovesi: Banchieri ed affari di cambio a Piacenza nel 1600, in *Studi in onore di Gino Barbieri. Problemi e metodi di Storia ed Economica*, vol. II, Pisa 1983, pp. 883–901.

218 DENZEL, *Die Bozner Messen*, pp. 97–114.

219 Hans-Peter ULLMANN, Der Frankfurter Kapitalmarkt um 1800: Entstehung, Struktur und Wirken einer modernen Finanzierungsinstitution, *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* 77 (1990), pp. 75–92, esp. p. 77. Cf. LAPEYRE, *Les Ruiz*, p. 294; DENZEL, *"Practica"*, p. 325.

cular money of account. The bank money of the Venetian Banco della Piazza di Rialto (founded in 1597), for example, became legal tender for cashless payments in 1593, when all bills of exchange had to be encashed or settled at this bank. When the Amsterdam Wisselbank, Hamburg's Banco and Nuremberg's Banco Publico had been established, modelled on the Venetian example, the following stable bank monies and monies of account were established there: the guilder banko in Amsterdam,[220] in Hamburg the rixdollar or the mark banko respectively, and in Nuremberg the guilder current (gulden kurant) as bank monies and monies of account.

Last but not least, the establishment of monies of account was a result of the creeping inflation of the 16th century, i.e. of the gradual debasement of token coins by adding copper, in economic history known as the 'price revolution', although seen from a different perspective. During the 16th century price revolution(s) were almost a pan-European phenomenon; they could be found – despite strong regional and temporal differences – in the Holy Roman Empire, in Spain, in France and in many Italian regions.[221] I refrain from analysing the background of the price revolution in 16th-century Europe and, above all, the impact of American precious metal on the different European economies discussed in the respective literature.[222] Nevertheless, it must be emphasized that, despite its individual causes in the respective regions, the increasing stamping of copper coins since the late 16th century at the latest took place against the common background of silver production declining worldwide. This finding resulted again mainly from the dramatic decline of silver production in Spanish America and the resultant lesser exports to Europe from the last decade of the 16th century. Silver exports clearly increased again only from 1660. Altogether, the European supply of precious metals worsened to a considerable extent during the first half of the 17th century in comparison to the 16th century.[223] It was this fact, together with the decision of the princes to use their coinage prerogative in order to gain additional income that led to an increased use of copper as coin metal in different European countries. Three examples of this 17th-century "copper era" – as Michael North called it[224] – may suffice for illustration.

Spain was the first country to change to increased copper coinage, minting millions of debased vellón coins in different phases between 1599 and 1660 (1599–1606, 1617–1619 and 1621–1626), which were recoined, up- and devalued several times from the 1630s. Counterfeited vellón coins imported from abroad enforced the drain of full-weight Spanish gold and silver coins further, so that the whole cash cycle performed in copper from the 1630s represented a heavy burden on payment

220 Concerning the Netherlands, for example, H. VAN WERVEKE, Monnaie de compte et monnaie réelle, in *Revue belge de philologie et d'histoire* 13 (1934), pp. 123–152.

221 E.g. Pierre VILLAR, *Gold und Geld in der Geschichte. Vom Ausgang des Mittelalters bis zur Gegenwart*, München 1984 (French edition: *Or et monnaie dans l'histoire, 1450–1920*, Paris 1972), pp. 131–174; Renate PIEPER, *Die Preisrevolution in Spanien (1500–1640). Neuere Forschungsergebnisse*, Stuttgart 1985; Hans-Jürgen GERHARD, Ursachen und Folgen der Wandlungen im Währungssystem des Deutschen Reiches 1500–1625. Eine Studie zu den Hintergründen der sogenannten Preisrevolution, in SCHREMMER (ed.), *Geld und Währung*, pp. 69–84.

222 As a survey, cf. NORTH, *Das Geld*, pp. 93–96.

223 John J. TEPASKE, New World Silver, Castile and the Philippines 1590–1800, in John F. RICHARDS (ed.), *Precious Metals in the Later Medieval and Early Modern Worlds*, Durham (N.C.) 1983, pp. 425–445.

224 NORTH, *Das Geld*, p. 97.

transactions alone because of the weight and amount of coins to be transported. This economically unsustainable situation ended only with the currency reform of 1680.[225]

In France and in the Holy Roman Empire a phase of currency debasement and dramatically increased copper minting also started during the first decade of the 17th century, developing in the Holy Roman Empire into the infamous 'see-saw period' ('Kipper-and-Wipper era') with regionally highly differing occurrences. From the 16th century the silver price was rising due to falling outputs of the Central European mining areas. Although this price increase took place quite slowly, the rixdollar was traded higher and higher since it was not connected to any fixed nominal coin. This nuisance was caused, first, by the inadequate imperial monetary system, i.e. the wrong relation between rixdollar and token coins; second, by a permanent worsening of the standard of coinage, i.e. the number of coins made of a certain unit of precious metal permanently rising in order to satisfy the increasing demand for small cash; third, by leasing many mints to mercenary businessmen; fourth, by an inadequate control of coinage and, finally, by the emperor himself, who did not take any steps to improve the situation because of his weak political position. It was not only merchants and money changers having good coins recoined into bad coins on a grand scale, but also businessmen making their profits by maintaining a mint who thrived on this situation. As a result, the decisive upturn of the rixdollar course set in precisely between 1602 and 1612 and the inflationary spiral went on rotating faster and faster during the last decade prior to the Thirty Years' War. The silver price and with it the rixdollar course got out of control when the Thirty Years' War began, because the war entailed enormous financial expenses for paying the troops. The so-called 'Kipper-and-Wipper era' (1619–23), being marked by a plentiful issue of debased small change (also called die lange Münze, the 'long coins'), set in in the Habsburg countries only after the Battle of White Mountain (Schlacht am Weißen Berge) on November 8th 1620, followed by the reintegration of Bohemia into the Habsburg possessions. In 1623 – right in the middle of the war – a reversion to more stable monetary conditions set in, even though the rixdollar's value was no longer connected to the silver price but it was attached with a certain value, as all the other nominal coins were. So the collection of those 'long coins' and the negotiations with the creditors who had given credits in 'long coins' extended over several years.[226] Nevertheless, debasing a currency remained a reliable instrument for financing extraordinary public expenditures even in later decades. The Emperor Leopold I

225 Fernando SERRANO MANGAS, El papel del vellón, in Antonio M. BERNAL (ed.), *Dinero, moneda y crédito en la Monarquía Hispánica. Actas del Simposio Internacional "Dinero, moneda y crédito. De la Monarquía Hispánica a la Integración Monetaria Europea", Madrid, 4–7 de mayo de 1999*, Madrid 2000, pp. 567–573; Richard GAETTENS, *Geschichte der Inflationen. Vom Altertum bis zur Gegenwart*, München ²1957, pp. 59–72; NORTH, *Das Geld*, pp. 97–99.

226 Heinz MOSER / Heinz TURSKY, *Corpus Nummorum Tirolensium. Die Münzen Kaiser Rudolfs II. aus der Münzstätte Hall in Tirol 1602–1612*, Rum bei Innsbruck 1986, pp. 41f.; idem, Die Münzstätte Hall in Tirol, in Heinz MOSER / Helmut RIZZOLLI / Heinz TURSKY (eds.), *Tiroler Münzbuch. Die Geschichte des Geldes aus den Prägestätten des alttirolischen Raumes*, Innsbruck 1984, pp. 61–194, esp. pp. 123, 129. Cf. GAETTENS, *Geschichte der Inflationen*, pp. 84, 93; Fritz REDLICH, *Die deutsche Inflation des frühen Siebzehnten Jahrhunderts in der zeitgenössischen Literatur: Die Kipper und Wipper*, Köln – Wien 1972; Paul W. ROTH, Die Kipper- und Wipperzeit in den Habsburgischen Ländern, 1620 bis 1623, in SCHREMMER (ed.), *Geld- und Währung*, pp. 85–103.

(1658–1705) used it, for example, to finance the war against the Ottoman Empire in 1659, resulting in a clearly inflationary process within the Habsburg Monarchy during the 1660s.[227]

Sweden may serve as the final example of the rising issue of copper coins. As a result of increased copper output, Sweden coined copper from 1625. This happened many times after Sweden had entered the Thirty Years' War in 1630, with copper plates, the so-called 'kopparplåtmynt', subdivided into values between 1 and 10 dalers representing the dominant current money in circulation until 1700. Because these copper plates could weigh up to 20 kilograms and were therefore very unmanageable, and copper prices were subject to heavy fluctuations, the Stockholm Banco was founded in 1656, to follow the example of Amsterdam's Wisselbank. From 1668 it was managed under the direct control of the Swedish Estates (therefore called Rikets Ständers Bank); later this bank became the Sveriges Riksbank. Accordingly, the Stockholm Banco first issued banknotes in 1661, the so-called 'kreditivsedlar', intended to help monetary circulation.[228]

Michael North calls the 18th century the "era of currency reforms".[229] The reforms of coins and currency taking place in many European states represent the background of this estimation and can be traced back to the increasing acceptance of gold as a currency metal. Serving as the prime example for this development, England concluded the so-called Methuen contract with Portugal in 1703. Consequently, the inflow of gold from Brazil via Portugal to the British Isles increased heavily since large gold deposits had been discovered in today's Minas Gerais between 1693 and 1695. The Brazilian gold led to a reorientation of the British coinage away from silver and towards gold, so that Great Britain gradually changed to a gold standard as early as the 18th century. France, however, established a double standard of gold and silver when stabilizing its monetary conditions with the 1726 coinage reform: a new louis d'or (louis aux lunettes) and a new silver écu (écu aux lauriers) was introduced to overcome the disordered situation after John Law's monetary experiment with paper money during the 1720s. This double standard became characteristic of the French monetary conditions of the late 18th and 19th centuries outlasting in the long run even the confusions of the assignat paper money during the early years of the French Revolution. Double standards were also introduced in many Italian states as a result of currency reforms during the 18th century as, for example, in Venice (in 1722, 1733), Genoa (in 1745, 1759, 1792), Savoy (in 1755) and Milan (in 1778). The aims of all these currency reforms were both to start the production of copper token coins and to align the coinage to the gold–silver ratio by reducing the high part of gold within the circulation of money by upvaluing silver. Moreover, it was intended to reduce the number of nominal coins and mint standardized nominal coins in the different states. Thus one can assume that there were already beginnings

227 MOSER / TURSKY, Die Münzstätte Hall in Tirol [1984], pp. 134–140.

228 T. LINDGREN, The First Swedish Bank Notes, in *Revue international d'histoire de la banque* (1968), pp. 402–408; Oskar SCHWARZER / Markus A. DENZEL / Petra SCHNELZER, Geld- und Wechselkurse in Deutschland und im Ostseeraum (18. und 19. Jahrhundert), in *HStD XII*, pp. 2–43, esp. pp. 26f. Cf. also *Sveriges Riksbank 1668–1924. Bankens Tillkomst och Verksamhet*, Stockholm 1931, especially p. 141.

229 NORTH, *Das Geld*, p. 121.

of monetary standardization within Italy long before the Risorgimento.[230] In Spain there was also a currency reform standardizing the coinage in 1716 by prohibiting individual coinages in different parts of the country. Then a distinction was introduced within the circulation of money between the high-value moneda nacional of the Spanish-American possessions and the low-value moneda provincial of the 'province' of Spain, which was why exchange rates in Spain itself were throughout quoted in money of account during the 18th century. The peseta, a double real provincial, became the external sign of the standardized currency within the 'province' of Spain, replacing the maravedí as unit of account during the 19th century.[231]

In contrast to these standardizing tendencies in Western and Southern Europe, the monetary systems of the Holy Roman Empire developed in different directions in the course of the Austro–Prussian dualism: The Habsburg Hereditary Lands introduced a new 20-gulden standard in 1750, the so-called Konventionsfuß according to the Münzkonvention between Austria and the Electorate of Bavaria of 1753. The Konventionsthaler resulting from this currency reform and the Kronenthaler respectively coined in the Austrian Netherlands from 1790 became the dominant means of payment, together with the French louis aux lunettes (Schild-Louisd'or) and the écu aux lauriers (Laubthaler) in the Habsburg Hereditary Lands and beyond it in the whole West and South of the Empire. Under the direction of Johann Philipp Graumann, however, Brandenburg-Prussia introduced a new current dollar under the designation 'rixdollar' in 1750 based on a 14-thaler standard, the so-called Graumann standard of coinage. After an experiment with low-value war coins during the Seven Years' War (1756–1763), the Graumann standard of coinage of 1750 was reintroduced in 1764. Apart from the special developments of the monetary and currency system of the Hanseatic cities (especially in Hamburg and Bremen), the following simplified statement can be made: since the second half of the 18th century there was a monetary dualism within the Holy Roman Empire characterizing the development of money and currency in Germany until the German Empire was founded in 1871.

There was another direction to development of the 18th century that resulted in multiple currency reforms: several European states experimented with the introduction of paper money, regularly ending in more or less heavy inflation, with only one single exception. As early as the 1660s the Sveriges Riksbank was the precursor of this development. It was the first to begin issuing banknotes for a few years. During the 18th century the issue of bank notes was normally a result of shortages within public finances as a consequence of wars. Shortly after the issue a forced exchange was often imposed on the respective national paper money, so that its acceptance

230 John J. McCusker / James C. Riley, Money Supply, Economic Growth, and the Quantity Theory of Money: France 1650–1788, in Eddy H.G. van Cauwenberghe / Franz Irsigler (eds.), *Münzprägung, Geldumlauf und Wechselkurse / Minting, Monetary Circulation and Exchange Rates. Akten des 8th International Economic History Congress, Section C 7 (Budapest 1982)*, Trier 1984, pp. 265–289; Carlo M. Cipolla, *Le avventure della lira*, Milano 1958, pp. 73–75; Ugo Tucci, Monete e riforme monetarie nell'Italia del settecento, in *Rivista storica italiana* 98 (1986), pp. 78–119; Giuseppe Felloni, *Il mercato monetario in Piemonte nel secolo XVIII*, Milano 1968, pp. 139–167, 233–246; North, *Das Geld*, pp. 121–124.

231 Earl J. Hamilton, *War and Prices in Spain, 1651–1800*, Cambridge (Mass.) 1947, pp. 56f.; North, *Das Geld*, p. 124.

among the people became obligatory. Together with the fast-rising expenditures, this was why the value of such paper money rapidly declined below par, which also held for France and its issue of paper money following the Système Law (1716–1720) after the lost War of the Spanish Succession and of assignates during the French Revolution (1790–1796). In Sweden the so-called transport sedlar (transport bills) had been issued as early as 1701; these were generally used for payment transactions from the late 1730s and were followed by the banko sedlar and the riksgäld sedlar after the insolvency of the issuing Sveriges Riksbank in 1776. In Denmark banknotes of the Kurantbanken had been issued since 1737; these were also a means of payment convertible to precious metal for only a few years. In Austria the Bancozettel of the Vienna Stadtbanco (from 1762) became more and more wide-spread passing into the Wiener Währung (Vienna currency) that became obligatory from 1800 as a result of the French Revolutionary Wars.[232] From 1768/69 the banco rouble or assignat rouble served as means of payment in Russia, and from 1786 also as national paper money. In Spain vales reales were issued as a consequence of war since 1780.[233]

The notes of the Bank of England were the only exception to this development. They were issued only in moderation, in comparison with the continent, so that these notes enjoyed a good reputation in Great Britain and became an increasingly important means of payment. From 1708 there was no other bank with more than six participators, other than the Bank of England, allowed to issue banknotes in England and Wales. That was why most of the private banks of issue remained comparatively small enterprises, which could not compete with the Bank of England. These country banks were founded mainly in the country, where there were no notes of the Bank of England circulating during the second half of the 18th century, and they mobilized the rural population's savings for the London capital market. It was only in the course of the French Revolutionary Wars during the 1790s that the English bank and currency system, which had weathered the heavy speculation crisis of the South Sea Company (the so-called South Sea Bubble of 1719/20), got into such severe difficulties that the bank's obligation to cash the notes had to be suspended until 1820/23. This did not lead to a national bankruptcy in Great Britain – unlike in Austria.[234] Generally, it was not until 1815 that most of the European states, having issued paper money during the 18th century, were successful in damming the flood of paper money little by little – even though not always for a long time.[235]

In post-Napoleonic Europe there were two central development directions characterizing monetary policy: first, steps were taken to harmonize different currencies within economic areas that were becoming increasingly integrated; and, second, there was a move to implement the gold standard following the example of Great Britain. Because this second step was of an importance reaching far beyond the European borders, it will be dealt with in a separate section (see Section 4.3).

The first development direction can be observed within the German Confedera-

232 Ibid., pp. 130–138.

233 Pedro TEDDE DE LORCA, *El Banco de San Carlos (1782–1829)*, Madrid 1988.

234 NORTH, *Das Geld*, pp. 133–135.

235 Ibid., p. 138.

tion. In 1834 seven parallel standards of coinage existed there besides the currency area of the Habsburg Monarchy, and each of these could again include different monetary systems. The variety of currencies and circulating coins within Germany was regarded an important barrier to trade and economic integration. This was why the Coinage Confederation of Southern Germany (Süddeutscher Münzverein) was founded in Munich in 1837, only a few years after the foundation of the German Customs Union (Zollverein) in 1834. As a consequence, Southern Germany had a widely standardized monetary system and a joint currency area based on the standard of coinage of 24½ guilders per mark of Cologne, which had been in use before. The next step was the Coin Treaty of Dresden from July 30th 1838, establishing a fixed relation between the guilder South German current and the thaler Prussian current (with a standard of coinage of 14 thaler per mark of Cologne). Being valid in all contractual states, a new coin, the so-called 'Vereinsmünze' (union coin), documented this relation: 1 Vereinsmünze = 2 thaler Prussian current = 3½ guilders South German current. After 1838 most of the other German states sooner or later joined the Coin Treaty of Dresden, with the exceptions of Hamburg, Bremen, Lübeck, both Mecklenburgs and Schleswig–Holstein. Finally, the Coin Treaty of Vienna of 1857 achieved the unification of the currency areas of the Coin Treaty of Dresden and the Habsburg Monarchy (as well as of Liechtenstein) using the metric pound at 500 grammes instead of the traditional mark as the basis of the coin weight. From then on, 30 thaler or 45 guilders Österreichische Währung (Austrian currency) or 52½ guilders South German current was to be coined out of one metric pound. At the same time, the Prussian thaler coin became, together with the 'Doppeltaler' (double thaler) of 1838 a union coin, called the 'Vereinstaler' (union thaler), expanding its validity area to Southern Germany and Austria. Austria and Liechtenstein, however, resigned from the Coin Treaty of Vienna as early as in 1867, after the War of 1866. In Germany, a definitive standardization of currency and coinage was achieved only after the Constitution of the German Empire in 1871 by gradually introducing a new standard currency, the mark Reichswährung (imperial currency), until 1876, which eliminated at the same time six different currency systems remaining in four currency areas.[236]

The currency standardization in Italy, the second nation state constituted at this time, proceeded within a considerably shorter period. Consequently, the lira currency (lira nuova) of the Kingdom of Piedmont–Sardinia, being equal to the French franc, was imposed on all Italian states attached to the Piedmontese state in the course of the Risorgimento. The first part of the standardization process took place within the Kingdom of Piedmont–Sardinia itself by eliminating the currency of the former Republic of Genoa in 1816/26 and introducing the lira nuova also on Sardinia in 1842/43.[237] In 1859/60 the currencies of all Italian states belonging to the Kingdom of Piedmont–Sardinia or Kingdom of Italy were changed to the Piedmontesian lira

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236 Hans-Jürgen GERHARD, Vom Leipziger Fuß zur Reichsgoldwährung. Der lange Weg zur "deutschen Währungsunion" von 1871/76, in Reiner CUNZ (ed.), *Währungsunionen. Beiträge zur Geschichte überregionaler Münz- und Geldpolitik*, Hamburg 2002, pp. 249–290, esp. pp. 273–286; Bernd SPRENGER, Harmonisierungsbestrebungen im Geldwesen der deutschen Staaten zwischen Wiener Kongreß und Reichsgründung, in SCHREMMER (ed.), *Geld und Währung*, pp. 121–142; idem, *Das Geld der Deutschen. Geldgeschichte Deutschlands von den Anfängen bis zur Gegenwart*, Paderborn et al. ³2002, pp. 152–161.

nuova. A new currency unit, the lira italiana, was proclaimed for the whole Kingdom of Italy on July 17th 1861, which was of equal value to the previous Piedmontese lira nuova. On August 24th 1862 a law for the standardization of specie followed to supersede previous ways of accounting within the old currency units. After Venetia, Mantua and the remaining parts of the Papal States had been incorporated on September 3rd 1868 and October 13th 1870 respectively, the validity of the new uniform currency of Italy as a whole was extended to these areas.[238]

Finally, Switzerland also arrived at standardized coinage and currency conditions, but not before the mid-19th century. During the period of the Ancien Régime a variety of different currencies characterized the Swiss territory. Even though Switzerland was quite small, the situation resembled that of the Holy Roman Empire because the cantons had the right to mint and issue coins.[239]A first attempt to standardize currencies had been made with a new common currency unit, the Schweizerfranken (Swissfranc), during the period of the Helvetic Republic (1798–1803), but a currency and coinage reform was only enforced between 1849 and 1852 after the constitution of the Swiss Confederation in 1848 and the end of cantonal sovereignty. Similar to the Piedmontese lira nuova or the lira italiana, the Swiss franc (Schweizer Franken) was introduced as the common coinage and currency unit equal to the French franc in 1849/50.[240]

Furthermore, currency agreements among states that were not confederated within superordinate institutions as, for instance, the Deutsche Bund, led to a harmonization of currencies. During the 19th century those monetary unions were arranged both in Scandinavia and in the Latin countries of Europe, which followed France regarding their economic and/or monetary policy. Thus the Latin Monetary Union was arranged between France, Belgium, Italy and Switzerland in 1865. Without any official arrangement, Piedmont–Sardinia (1816), Belgium (1832), Switzerland (1850/60) and Italy (1861/62) had adopted the French double standard based on the French franc, the franc Germinal of 1803, under country-specific designations. Since the silver token coins of the different currencies had been of different fineness, fluctuating exchange rates and speculative trade had often occurred. Consequently, the Latin Monetary Union was intended to avoid these developments. France dominated the decisions on coinage and currency, such as the decision to maintain the double standard instead of introducing the gold standard, because of the sheer supremacy of the Paris capital market within the countries involved. For this reason the 1865 treaty in effect carried forward this supremacy. The aims of this union were to establish a united circulation of coins, facilitate mutual payment transactions and reduce exchange rate fluctuations. Until the official end of the union in 1926, however, these aims could only partially be achieved, particularly since Italy pursued a largely inde-

237 Giuseppe FELLONI, Monete e zecche negli Stati Sabaudi dal 1816 al 1860, *Archivio economico dell'unificazione italiana* II 2 (1956).

238 R. DE MATTIA, *L'unificazione monetaria italiana*, Torino 1959; Markus A. DENZEL, Die währungspolitische Einigung Italiens: Italienische Wechselplätze zwischen 1815 und 1861, in *WdW I/I*, pp. 82–104, esp. pp. 97f.

239 Martin KÖRNER, Zum Problem der Währungsvielfalt in der Schweiz, in VAN CAUWENBERGHE / IRSIGLER (eds.), *Münzprägung, Geldumlauf und Wechselkurse*, pp. 219–236.

240 Markus A. DENZEL, Vom "Schweizerfranken" zum "schweizer Franken" (1798–1860), in *WdW I/I*, pp. 72–81, esp. pp. 72–78.

pendent monetary policy often directed against the union itself. Although the union was very attractive to other countries during the first years of its existence – Greece (with its drachma in 1868), the Papal States (with its Papal lira in 1866/67), Romania (with its leu in 1868), Spain (with its peseta), Finland (with its markka) and later on Bulgaria (with its lew) and Serbia (with its denar) adopted the union's standard of coinage without becoming formal members – from the 1890s it existed only on paper.[241]

In contrast to the Latin Monetary Union, the Scandinavian Monetary Union proved far more successful until 1914. Officially it existed until 1933. With the Treaty of December 18th 1872, Sweden, Norway and Denmark formed a monetary union establishing a new, standardized and – for the first time – decimal monetary system based on gold, the crown of 100 öre. Unlike the area of the Latin Monetary Union, the coin circulation within the Scandinavian Monetary Union had already developed to an advanced state and the involved economies were quite convergent before the conclusion of the contract in 1872. The Scandinavian Monetary Union intended to create a wider currency area, to facilitate payment transactions and to stabilize exchange rates. The most important measure supporting these aims was the agreement between the central banks of the three countries involved from 1885. According to this agreement, the three countries mutually granted themselves three months' credit free of interest and commission in order to settle balances so that the drain of gold and coins could be restricted. Thanks to the well-coordinated discount policy and the partners' willingness to carry out the necessary adjustments, the Scandinavian Monetary Union functioned successfully and the original parity between the three currencies persisted until 1914.[242]

4.2 European Currency Systems and Trade Coins in the Non-European Regions of the World from the European Expansion up to c. 1870

In the wake of the European expansion the monetary systems of single European countries gained importance that reached far beyond Europe. Basically, two different development directions can be distinguished: on the one hand, certain coins became important as so-called world trade coins, i.e. they were specially produced for international trade and exported into certain world regions as a means of payment. On the other hand, the different European powers, in the course of building up colonies or overseas possessions, usually imposed their monetary systems on those overseas territories belonging to the respective European country. This held, for instance, for the Spanish and Portuguese Viceroyalties in America as well as for the English colonies in North America, Australia, New Zealand and – from the 19th century – in Africa. France and the Netherlands also imposed their monetary systems on their overseas possessions. India represents the most important exception: here, no European power was successful in implementing its monetary system. Instead, the Europeans had to adopt the Indian monetary system, which could maintain a certain

241 Friedrich ZELLFELDER, Der Lateinische Münzbund: Grundlagen, Entstehung und Scheitern, in ibid., pp. 105–121, esp. pp. 110ff.

242 Idem, Art. "Skandinavische Münzunion", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 367f.

independence even after its connection to the pound sterling as a result of the 1893 reforms.[243]

Apart from the European possessions in China since the second half of the 19th century, which play a specific role from the perspective of monetary history, the implementation of the monetary system of the respective 'colonial power' was usually successful.[244] This implementation sometimes caused great difficulties requiring multiple measures such as the British government's "periodic attempts to impose some uniformity on the empire, attempted to establish a common monetary system throughout the empire by encouraging the use of British coinage" since the 1820s.[245] The 'mother countries', however, were not always successful in having the same money in circulation in their overseas possessions as they had at home. Instead of this, the system of the 'mother country' was often officially used for accounting, such as pounds, shillings and pence in the British colonies in North America, whereas token money of one's own or from neighbouring world regions was used as payment, such as paper money of the single colonies and Spanish dollars from Spanish America in the North American colonies.[246] This was also the most important reason for the dollar currencies becoming accepted as currency units and means of payment in the United States of America and later on also in Canada, in contrast to sterling currency.

The introduction of originally European coins overseas was above all successful in regions without a distinctive indigenous monetary culture or a competing European colonial power. This held for Australia, New Zealand and most of the African possessions. Even in Africa, however, a 'new' colonial power could only with difficulty substitute European monetary systems already established: for instance, it took many decades until the Dutch monetary system of the Cape Colony was replaced by a 'newer' British one. When the German Empire started to act as a colonial power in Africa, it was sometimes very difficult to establish the German monetary system in place of the older British system. Even though accounting in mark Reichswährung (imperial currency) was introduced in Togo as early as August 1st 1887, British token money dominated in this protectorate until the first decade of the 20th century. It was not until 1900 that the German means of payment became accepted, particularly since German small change was lacking before 1907.[247] The situation in Africa during the 19th and 20th centuries is, by the way, an excellent example of the fact that

243 Cf. Anton ARNOLD, *Das indische Geldwesen unter besonderer Berücksichtigung seiner Reformen seit 1893*, Jena 1906.

244 Canada was an important exception of this development.

245 MCCULLOUGH, *Canada*, p. 92.

246 For a summary of the development of paper money in the colonies see John J. MCCUSKER, Colonial Paper Money, in Eric P. NEWMAN / Richard G. DOTY (eds.), *Studies on Money in Early America*, New York 1976, pp. 94–104.

247 Markus A. DENZEL, Geldwesen und Zahlungsverkehr in den deutschen Schutzgebieten (bis 1914). Eine währungshistorische Skizze mit Problemaufriß für künftige Forschungen, in Thomas BECK / Marília DOS SANTOS LOPES / Christian RÖDEL (eds.), *Barrieren und Zugänge. Die Geschichte der europäischen Expansion. Festschrift für Eberhard Schmitt zum 65. Geburtstag*, Wiesbaden 2004, pp. 322–342, esp. p. 326. Cf. Karl-Dieter SEIDEL, *Die deutsche Gesetzgebung seit 1871. Münzen – Papiergeld und Notenbanken mit den Münzverträgen der deutschen Staaten im 19. Jahrhundert*, München 1973, pp. 133f.; Günther MEINHARDT, *Die Geldgeschichte der ehemaligen deutschen Schutzgebiete 2: Togo*, Dortmund 1956, pp. 12, 14, 16, 22.

the dominance of the European currency did not mean its exclusive use. The indigenous commodity money, which was at least used for local retail trade and sometimes also for regional trade, was tariffed like foreign trade coins such as gold dust and cowries in the Windward Districts of the British Gold Coast or palm oil in the German protectorate of Cameroon.[248] This was absolutely necessary because the colonial powers were usually unsuccessful in supplying an adequate volume of small cash for their possessions, having already strongly influenced the distribution of Spanish dollars and their fractions as well as of paper money in North America.

When the colonies or overseas possessions became independent, the previous monetary system was either continued partly with changed coin designations (as in the Spanish and Portuguese possessions in Latin America, in Australia and South Africa) or it was modified in accordance with the respective economic needs (as in the United States of America and Canada). Using the monetary problems resulting from the American Revolutionary War as a starting point, the young United States tried to harmonize the previous monetary systems of each state following the British example by establishing the Spanish or Mexican dollar, the most important trade coin of the North American and the Caribbean region, as the model of a standardized US currency unit.

Representing a novelty, the new US currency oriented itself towards the most important trade coin of America in modern times, the Spanish peso or dollar. It was minted in Mexico, which was why it had been also called the Mexican dollar since the 18th century. As early as the 16th century the Spanish or Mexican dollar had gained importance as an international trade coin far beyond the Spanish possessions in America, such as in the Caribbean, in the English colonies in North America or in Portuguese Brazil. There, it was known under the designation 'pataca' or 'patacão', being differently valued in the unit of account reís (480 reís in 1643, 640 reís in 1676, 800 reís in 1734 or 960 reís in around 1800).[249] The Spanish peso, however, functioned as international trade coin not only in America and Asia but also in the Ottoman Empire and in bordering African regions. It was as early as the 16th century that the Spanish real de a ocho (= peso) had stimulated the coinage of specific thaler coins in Italy (see above). Via the Italian trading towns, the peso also diffused in the Ottoman Empire, particularly because payment transactions with this world region were mainly conducted predominantly on the basis of cash money. Consequently, the peso obtained under the designation piastra the function of an international trade coin in the whole of Northern Africa, in the Levant, in Arabia, Abyssinia and far into the Sahara region. The Dutch Löwenthaler (lion dollar) became another international trade coin of this region in 1576 similar to the Austrian Marie Theresa thaler in 1753, developing into the most important trade coin of the whole Orient from the late 18th century.[250]

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248 Markus A. DENZEL, Zahlungsverkehr, Wechselkurse und Währungsverhältnisse von Britischen Besitzungen in Afrika (1822–1931), in *WdW VIII*, pp. 1–29, esp. pp. 11, 14; idem, Geldwesen und Zahlungsverkehr in den deutschen Schutzgebieten, p. 325.

249 Dietrich KLOSE, Der spanische Piaster als Welthandelsmünze und die von ihm abgeleiteten Großsilbermünzen, in HEß / KLOSE (Bearb.), *Vom Taler zum Dollar*, pp. 187–190, esp. pp. 188f.; Markus A. DENZEL, Art. "Dollar", in NORTH (ed.), *Von Aktie bis Zoll*, pp. 87f.

250 KLOSE, Der spanische Piaster als Welthandelsmünze, p. 187.

Large quantities of Spanish dollars from both Europe and the Levant reached the Indian Ocean area, Southern and East Asia and even Australia during the late 18th century. Moreover, the so-called Current dollar, a money of account on Mauritius and in the whole Indian Ocean area, can be traced back to the Spanish dollar. The Philippines with Manila developed into an important transfer centre exchanging Spanish dollars against Chinese commodities, with silver having twice the value in China than in America. Although innumerable pesos had been melted down into silver bullion before in China, Spanish dollars established even as circulating money in Southern China and in several coast towns. When China ran short of the old Spanish American dollars during the 19th century, resulting in an inflated value for these dollars, great quantities of Mexican dollars entered the Asian sphere from 1854 via the China trade originating in California. After attempts to establish English or Indian money in Hong Kong had failed, the so-called British dollar or Hong Kong dollar was minted in Hong Kong between 1866 and 1868 both in the tradition of accounting and paying in Spanish and Mexican dollars and following the example of the Mexican dollar already in use there. The same held for the New British dollar or British Trade dollar minted in Bombay from 1895. In the Straits Settlements (Singapore, Malacca, Penang) the Straits Settlements dollar replaced the Mexican dollar in 1903/04. In the Chinese coast towns, at least, it remained usual to settle accounts and transact payments in Mexican dollars until the interwar period and as many as approximately 400 millions of Mexican dollars are said to have been circulating or hoarded in China in around 1910. The dollar had become so important that, despite serious reservations, the imperial government had to allow the provincial governors in 1890 to mint Chinese silver dollars, the so-called dragon dollars, depicting a Chinese dragon. In 1911 the Chinese government established the Silver dollar (*yuan*) as the national currency unit. Japan also followed the example of the Mexican dollar when introducing its new currency, the yen of 100 sen, in 1871. The Mexican dollar had already been used for foreign trade and international payment transactions during the first years after the opening up of Japan to the West. Finally, the Spanish dollar became approved as an authorized medium of circulation in Australia's Botany Bay in 1791, but it never became accepted since the coins were drained out of the country because of its chronic balance of trade deficit.[251]

The US dollar, the most important 'spin-off' of the Spanish-Mexican dollar, itself became an example many currencies followed, for instance the currencies of the British colony of Canada (from 1864/67 dominion; with the US dollar as a circulating coin and the formal introduction of accounting in dollars and cents in 1857), of Panama, the Dominican Republic of Guatemala, Liberia, the Kingdom of Hawaii and on Cuba from 1899. However, the attempt failed to create a US coin for foreign trade, the US Trade dollar, between 1873 and 1885 in order to replace the Mexican dollar within the East Asian trade. As a result, the US Trade dollar lost all im-

251 Markus A. DENZEL, Die Adaption 'europäischer Währungssysteme' in China und Japan im 19. und beginnenden 20. Jahrhundert. Zur Durchsetzung des Dollar-Systems im ostasiatischen Raum, in Harald WITTHÖFT with Karl Jürgen ROTH, *Acta Metrologiae Historicae V: 7. Internationaler Kongreß des Internationalen Komitees für Historische Metrologie (CIMH) 25.–27. September 1997 in Siegen)*, St. Katharinen 1999, pp. 227–254; KLOSE, Der spanische Piaster als Welthandelsmünze, pp. 189f.

portance within international payment transactions after the drop of silver prices in 1877.[252] Finally, France also issued trade dollars following the example of the Mexican dollar. The so-called piastres de commerce, minted from 1885, were to replace the Mexican dollar in Indochina, similar to the British attempts in Malaysia.[253]

The Albertthaler (or Albertusthaler) of the Spanish Netherlands, the Löwenthaler of the Austrian Netherlands and above all the Austrian Marie Theresa thaler represent further trade coins of international relevance. The Löwenthaler (*Leeuwendaalder*), issued from 1575, is the oldest among these trade coins and was the first independently issued coin of the Spanish Netherlands. Because all thaler coins were equally valued in the Levant, the Löwenthaler with its relatively low silver content was primarily exported there since the mid-17th century. Until the early 19th century they circulated in the Levant under the Turkish designation *arslan* ('lion') or under the Arab designation *abu kelb* ('father of the dog' since the Arabs regarded the lion as a dog). It was only during the 18th century that first the Spanish dollars and then the Maria Theresa thaler replaced them as the most important trade coin.[254] Even though the Löwenthaler also circulated in Central and Eastern Europe, the Albertthaler (patagon or zilveren dukaat) was of much more importance in this area from the late 17th century. Being issued in the so-called Burgundian standard of coinage with a slightly lower silver content than the rixdollar it was imitated in many Central European territories from 1670. Moreover, the Albertthaler became not only the most important trade coin of the coastal towns and areas of the Baltic Sea region until far into the Russian Empire since the 17th century as a result of the important Dutch trade with the Baltic Sea region, but it was also used as unit of account in many towns such as Riga.[255]

Marie Theresa thaler were Austrian thaler coins, issued in the Convention standard (i.e. 10 thaler for one mark of Cologne fine silver) depicting Empress and Queen Maria Theresa. These coins were in such great demand in the Levant that the Austrian trade with them was very profitable, especially when in 1776 everybody was allowed to have Marie Theresa thaler coined from silver in different mints and to export them freely into the Orient. Because of their wide acceptance in the Levant, these Convention thaler, being especially minted for the trade, were later coined with Marie Theresa's portrait, even after her death in 1780. Being mainly exported via Leghorn, Trieste and Marseille, i.e. important ports for the Levant trade, they are said to have been used as means of payment for coffee in Yemen as early as around 1770. As with the Albertthaler many European states often imitated the Maria Theresa thaler. As early as the 18th century they circulated in the whole Ottoman Empire and in Arabia.[256] Arab merchants brought them along the North African coast as far as the Azores, Central Africa and Ethiopia, along the East African coast to Zanzibar, Mozambique and India (even though they were normally melted down

252 Ibid., p. 190; idem, Der amerikanische Dollar, in HEß / KLOSE (Bearb.), *Vom Taler zum Dollar*, pp. 202f.; DENZEL, Art. "Dollar", pp. 87f.; A. PIATT ANDREW, The End of the Mexican Dollar, in *Quarterly Journal of Economics* 18/3 (1904), pp. 321–356.

253 KLOSE, Der spanische Piaster als Welthandelsmünze, p. 190.

254 Idem, Niederländische Taler, pp. 98f.

255 Dietrich KLOSE, Albertus-Taler in Deutschland und im Ostseegebiet, in HEß / KLOSE (Bearb.), *Vom Taler zum Dollar*, pp. 129f.; KLOSE, Niederländische Taler, p. 99.

there), and, finally, even to Java. In the Balkan region the Marie Theresa thaler circulated until the end of Ottoman rule in the respective country and sometimes even longer than that, for instance in Bosnia and Herzegovina at least until 1878 or in Greece until 1882.[257] Marie Theresa thaler were quoted in the money and exchange rate currents of the most important European export ports such as Leghorn and Trieste; in Trieste with some interruptions as recently as 1914.[258]

4.3 The International Gold Standard System (from c. 1870 up to 1914)

Great Britain was the only European country with a gold standard until 1870. In existence during the 18th century, gold currency was officially introduced with the act of June 22nd 1816 defining gold as the only legal tender for consolidating the currency after the Napoleonic Wars. Moreover, the obligation of the Bank of England to redeem notes in the respective amount of gold, suspended in 1797, was re-established in 1821 guaranteeing again the convertibility of the circulating paper money. There were two reasons for the British model of a gold currency becoming accepted in the long run in Europe and the world, in comparison with the silver standard or at least the double standard of nearly all other countries such as France. This can be traced back, first, to Great Britain's industrial, commercial and financial power to offer worldwide financial services and, second, to the fact that there were no restrictions within the money and capital transactions of Great Britain. Thus the pound sterling became the most important currency of the world during the 19th century, with more than two-thirds of total world trade being transacted in this currency during the late 19th century.[259] Conducting a large part of its foreign trade with Great Britain, Portugal connected its currency to the gold standard as early as 1854. The gradual transition of more and more countries to the gold standard was based on the discovery of gold in California in 1848, in Australia in 1851/53 and in South Africa and Alaska in the 1890s.[260]

With gold reducing in price in comparison to silver as a result of its increased supply since the 1850s, the actual price relation between these metals shifted mainly in countries with a double standard currency based on an officially fixed gold–silver ratio such as France (1:15.5). Large quantities of gold, for example, were imported into France. Because it was overvalued there, it was exchanged for silver, which was then exported to Asia and above all to India. Also, the four countries oriented towards the French franc, i.e. France (franc), Belgium (Belgian franc), Italy (lira) and Switzerland (franken or franc), used debased silver coins to buy adequately valued

256 "The Muskat trader sells locally in rupees or [Maria Theresa] dollars, usually payable in instalments concluded in about three months." Report on the Conditions and Prospects of British Trade in Oman, Bahrain and Arab Ports in the Persian Gulf, in *Great Britain. Accounts and Papers* 1905, 85, pp. 2–4, cited in Charles ISSAWI (ed.), *The Economic History of the Middle East, 1800–1914. A Book of Readings*, Chicago 1966, p. 310.

257 Dietrich KLOSE, Der Maria-Theresien-Taler, in HEß / KLOSE (Bearb.), *Vom Taler zum Dollar*, pp. 195–199, esp. pp. 195–197.

258 *WdW I/II*, pp. 228, 449f.

259 Michael COLLINS, *Money and Banking in the UK*, London 1988, pp. 124–126.

260 NORTH, *Das Geld*, pp. 145f.

coins in neighbouring countries in order to sell the latter at a profit. Consequently, these four countries following the franc founded a confederation, the so-called Latin Monetary Union, in 1865 in order to tackle the problem of the continuous drain on silver. Within this union, France, the economically and politically most powerful partner, enforced its ideas of keeping the double standard although the three remaining countries preferred a transition to the gold standard. It was during the International Currency Conference at the World Exhibition in Paris in 1867 that the gold standard was regarded as having definitely better prospects of making a contribution to a worldwide harmonization of currencies.[261]

When the silver price dropped dramatically during the early 1870s as a result of an increase in production after silver had been discovered in the Rocky Mountains (Nevada), this gave reason for many European states to accept the gold standard. The newly founded German Empire, the most powerful industrial and commercial nation of the Continent, was the first of these states to establish the gold standard in 1873 (limping gold standard), representing the starting point for many smaller countries to follow suit. In the very same year Denmark and Sweden founded the Scandinavian Monetary Union, which incorporated Norway in 1875. The Netherlands introduced the gold standard in 1875/76. As a consequence, the countries of the Latin Monetary Union came under such heavy monetary pressure that they all accepted the limping gold standard during the 1880s, except Italy. Finally, Austria–Hungary and the Russian Empire joined this group during the 1890s. So all neighbouring countries of the German Empire and Great Britain had established the gold standard one after the other, following the example of the most powerful industrial and commercial nations of Europe with whom they maintained their most important commercial and financial relations. Countries that had established the (limping) gold standard sold their silver at the world market, with the result that, first, more and more countries felt impelled to establish the gold standard for monetary considerations and, second, the silver price was continually dropping since the 1870s. According to Barry Eichengreen, however, the latter aspect should not be overestimated.[262]

Because of increasingly powerful countries adopting the gold standard, the system of the so-called 'classic gold standard' developed during the 1870s as an internationally accepted system of payment settlement (see Table 3).[263]

> The classic gold standard was characterised by three principles: convertibility of gold, exchange rate stability and balance of payments adjustment. Whereas the governments had only to ensure gold convertibility, exchange rate stability and balance of payments adjustment emerged auto-

261 Ibid., pp. 146f.; Barry EICHENGREEN, *Vom Goldstandard zum Euro. Die Geschichte des internationalen Währungssystems*, Berlin 2000, p. 33.

262 Ibid., pp. 35f. Cf. also Guilio M. GALLAROTTI, The Scramble for Gold: Monetary Regime Transformation in the 1870s, in Michael D. BORDO / Forrest CAPIE (eds.), *Monetary Regimes in Transition*, Cambridge 1993, pp. 15–67.

263 The literature on the gold standard is enormous. Hence, only some essential works will be cited, presenting the state of research: A.G. FORD, *The Gold Standard 1880–1914. Britain and Argentina*, Oxford 1962; Marcello DE CECCO, *Money and Empire. The International Gold Standard, 1890–1914*, Oxford 1974; Barry EICHENGREEN (ed.), *The Gold Standard in Theory and History*, New York 1983; Ian M. DRUMMOND, *The Gold Standard and the International Monetary System 1900–1939*, Basingstoke 1987; Michael D. BORDO / Ronald MACDONALD, Violations of the "Rules of the Game" and the Credibility of the Classical Gold Standard, 1880–1914, in National Bureau of Economic Research (ed.), *Working Paper 6115*, Cambridge (Mass.) 1997; EICHENGREEN, *Vom Goldstandard zum Euro*.

matically, if seen from a theoretical point of view. … In the case of two countries the process of adjustment can theoretically be described as follows: falling prices in the home country raise exports and, as a consequence, lead to an active trade balance. The resulting surplus of foreign currency lowers the exchange rate, which after reaching the gold import point leads to an import of gold into the home country and, thus, increases the money supply. As one result, interest rates fall with the consequence of capital exports to the foreign country where higher interest rates are paid. Now, the exchange rate rises again deteriorating the balance of trade. Moreover, the previously mentioned increase of the money supply increases prices in the home country and exports decline. Therefore, both the interest rate mechanism and the price mechanism work towards a balance of trade equilibrium. The process of adjustment in the foreign country proceeds in the same direction: In the foreign country from which gold is exported the money supply shrinks and prices decline. This causes a rise of exports and, thereby, a contribution to the adjustment process in the trade balance. Capital movements responding very fast to changes of interest rates play a very important role in connection with the functioning of the system, as they are the basis for the very important stabilising speculation. According to this theory, the expected adjustments mechanisms should lead to an equilibrium in the balance of trade and to stability of prices.[264]

Table 3: The Transition to the Gold Standard[265].

Year	Country
1816 (by law)	Great Britain
1854	Portugal
1862	Uruguay
1871/76	Germany
1873	Sweden, Denmark, Norway, Belgium, France
1875	Italy, the Netherlands
1877	Finland
1885	Egypt
1890	Romania
1891	Tunis
1892/1900	Austria–Hungary
1895	Chile
1896	Costa Rica
1897	Russia, Japan
1899	India
1900	USA, Ecuador
1902	Siam
1903	Colombia
1904	Panama
1905	Mexico

264 Margarete WAGNER-BRAUN, Commercial Integration during the Era of the Classic Gold Standard, in Markus A. DENZEL (ed.), *From Commercial Communication to Commercial Integration. Middle Ages to 19th Century*, Stuttgart 2004, pp. 249–271, esp. p. 263. Cf. also W. SCAMMELL, The Working of the Gold Standard, in EICHENGREEN (ed.), *The Gold Standard*, pp. 103–120; EICHENGREEN, *Vom Goldstandard zum Euro*, pp. 45–50.

265 POHL, *Aufbruch der Weltwirtschaft*, pp. 247f.