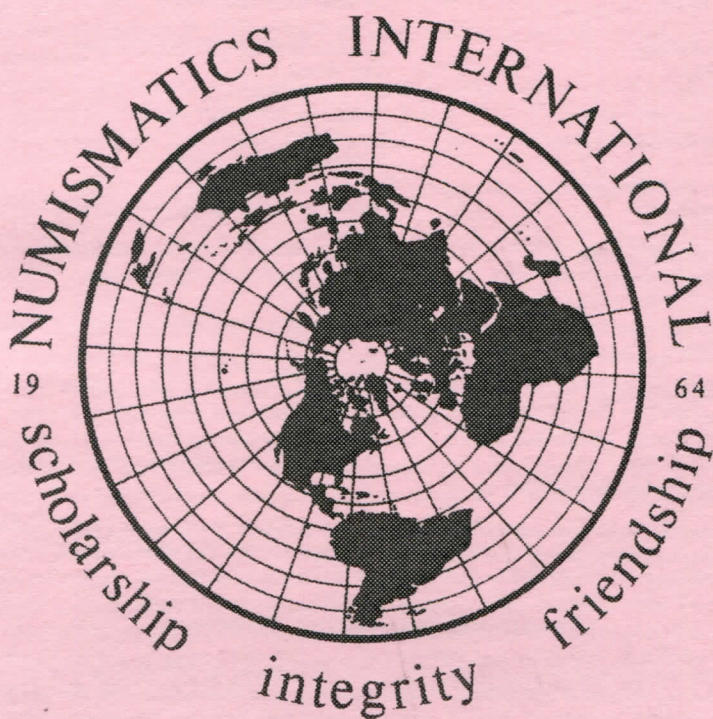


NI Bulletin

A Publication of Numismatics International Inc.

Volume 45 Nos. 7 / 8



July / August 2010

\$4.00

The Monetary Operations of the Dutch East Indies Company in the Seventeenth Century

Jean Elsen

Jean Elsen & ses Fils, NI #2696

Translated by Robert Ronus, NI #LM139

The Dutch East India Company played a primordial role in the expansion of the Republic of the United Provinces during its Golden Century, the 17th century. The great prosperity the young state enjoyed in the course of this century cannot be disassociated from the exceptional development of the *Vereenigde Oostindische Compagnie* (VOC), which was for a time the most important commercial company in the world. At the peak of its power it possessed more than half the world's sea-going ships and was the most influential of the European companies founded in the seventeenth century to exploit the riches of Asia. This flowering of industry and commerce lasted as long as the period of Dutch colonization,¹ i.e., until the middle of the 18th century. After that London gradually became preeminent. The VOC played a capital role not only in the history of the United Provinces but also in that of the principalities, sultanates and empires all along the coasts of India, Ceylon, Malaysia, the islands that today constitute Indonesia, China and Japan. With just one exception, during all the 17th century the VOC did not strike its own coinage for its Asian trade. It used the pieces of 8 reals struck in the Spanish colonies in Latin America, coins of the United Provinces and of the Spanish Netherlands and silver ingots from the Republic and Japan. In order to deal with the constant fluctuations in exchange rates and to limit the massive exodus of large silver coins, the VOC had recourse to raising the coins' value by countermarking coins with the accepted weight and precious metal content. The export of coins struck in the name of the VOC to the East Indies only began in the 18th century.

By 1570 the shipyards of the Northern Netherlands had created a new type of ship, the *flûte* (fluyt, fluit) or *Vlieboot*, a sturdy ship with enlarged broadsides to give a large amount of space but which needed a crew one-fifth smaller than other ships of the same tonnage. This lower cost constituted a considerable advantage because, in the long run, personnel costs (wages, food) were the largest item of expenses.² These ships allowed a rapid expansion of trade with the Indies from the end of the 16th century. A very large number of refugees from the Spanish Netherlands,³ Jews expelled from Spain and Portugal and French Huguenots, were among the first pioneers of trade with the Indies. The first captains were refugees from Antwerp or English officers sent by Queen Elizabeth of England to fight the Spaniards. Starting in 1593, more than 20,000 "independents," opponents of the established religion belonging to independent and autonomous churches, emigrated from England. They provided the colonial companies of the young Dutch Republic with a number of naval officers.

As a result of intervention by the *Generalité* (the federal government), the States General (representative assembly) of the Republic, and by the mayors of Amsterdam, the trading companies which had been formed at the end of the 16th century merged to form two big companies: the Holland company and the Zeeland company (1600). In this period Holland and Zeeland possessed the largest number of ships in all of Europe.⁴ Their merchant navies amounted to "200000 tons and 600000 tons at the

end of the century, which was double that of France and England combined.”⁵ As soon as they had been formed, the two new companies set themselves against each other in pitiless competition. As a result, under pressure from the Grand Pensionary (the Dutch title equivalent to Prime Minister) Jan van Oldenbarnevelt, all the trading companies active in the Indies—essentially from Holland and Zeeland—merged on March 20th, 1602 to form the United East Indies Company (*Vereenigde Ostindische Compagnie* or VOC),⁶ a commercial company founded for the purpose of trade with the Orient, with the enormous capital of 6.5 million florins, ten times more than that of its English competitor, the East India Company, founded in 1600. The VOC or, more familiarly, *Jan Compagnie* (John Company),⁷ owned by some large shareholders with 40% of its capital subscribed by exiles from the Southern Netherlands,⁸ was thus in 1602 the first true European share company and the first large limited liability company in history.⁹ It would enjoy rapid development, importing into the United Provinces quantities of pepper, spices, silk, cotton and porcelain. These purchases were financed by the profits realized in Asia and from the shipment of manufactured goods and precious metals in the form of coins and ingots.

After the closure of the river *Escaut* (or *Schelde* in Dutch) which led to the decline of the Belgian provinces, pepper and spices from Asia were directed to the Dutch ports, despite the war against Spain. One of Spanish America’s most important export products, silver, after transit through Spain, ended up for the most part in the United Provinces.¹⁰ The transformation of imported metals into the coins required for trade had become an important activity for the Republic’s mints and an international exchange market quickly developed,¹¹ essentially concentrated in Amsterdam. The capital of the province of Holland had become the greatest metropolis in the United Provinces: in the course of the 17th century its population increased from 100,000 to 200,000 inhabitants. From Amsterdam, before 1600, the imported metal was exported to the Baltic and Mediterranean regions.¹² Much of the silver was imported in the form of ingots but above all in the form of crudely struck coins called pieces of 8, reals of 8 (*reales de a ocho*),¹³ pieces of 8 reals, Spanish piastres or mattes.¹⁴ Apart from the Spanish real, the most important silver coin of the peninsula, there were struck reals of Mexico and Peru, half-reals and pieces of 2 and 4 reals. The striking of 8 reals, planned from November 1537, had begun in the reign of Philip II.¹⁵ In the end production was essentially concentrated on the pieces of 8 reals¹⁶ and these circulated massively in the Northern and Southern Netherlands during the second half of the 16th century. The theoretical weight of the real was fixed by its size relative to the Cologne mark.¹⁷ Since this had a theoretical weight of 233 g,¹⁸ the real, struck 67 to the Mark, had a weight of 233/67 or 3.48 g.¹⁹ This is exactly the weight put forward by the twentieth century scholar Enno van Gelder.²⁰ This size was maintained throughout the reign of Philip III and in the first years of Philip IV, the 1620s.²¹ The theoretical weight of the 8 *reals* or *mattes* was 27.82 g.

The crude striking of the reals and their multiples and their very irregular shape made clipping easy. The weight was also reduced by wear. The regulations of the archdukes Albert and Isabelle therefore fixed minimum weights, below which they could not be circulated. The real had to weigh “2 *esterlins* or more,” i.e., at least 3.06 g.²² In 1611 the value was no longer set on the basis of a real but on the basis of a piece of 8 reals, the weight of which was given as: 17 *esterlins* and 25 *as* (with an allowed tolerance of 6 *as* [“*as*” is comparable to “grain,” see note 22—*Ed.*]),²³ i.e., a

weight of 27.22 g, equivalent to one ninth of a Troy mark.²⁴ It was considered that coins in circulation, having lost a little of their weight due to wear or clipping, should weigh at least 9 pieces to a mark of 245 g. There is no reason to think it was different in the United Provinces. A weight of 9 to the mark was easy to check and it is unlikely that the mark weighed more in Amsterdam than in the Southern Netherlands.²⁵

Towards the end of the 16th century and in the early years of the 17th century, the amount of American gold and silver imported was reduced due to the war with Spain. On the other hand, in the same period the demand for precious metals for the Asian trade, where Spanish reals were the most widely used and most sought after coins despite their rough appearance, increased markedly. Moreover, the export of mattes to Asia was very profitable. As a result, the amount of metal available for coin striking and monetary circulation in the Republic was meaningfully reduced.²⁶



Dordrecht: AR 8 reales, 1601, struck by the Compagnie Van Verre of Amsterdam for trade in the East Indies. Obverse: 1601 over crowned arms of the Province of Holland between four numeral ones sideways on each side (= value of 8), around it INSIGNIA • HOLLANDIAE •. Reverse: Crowned arms of Amsterdam, supported by lions, around it (rosette) ET CIVITATIS • AMSTELREDAMENSIS •. Ref.: Scholten 1, Dav.413, Delm.1206, Salvesen 11, KM 10. (Image courtesy of Goldberg Coins.)

The pieces of 8 reales shipped to Asia were greatly appreciated in India²⁷ and by the Javanese and the Malays, who called them *real batoe*. However, because of the war with Spain, the quantity of mattes sent was insufficient. In 1600 the *Compagnie Van Verre* (1594-1602) of Amsterdam asked the States of Holland for authorization to strike coins for the East Indies where supplies were inadequate. This was granted on March 1 1601, but on condition that the coins could not circulate in the Republic. The same year the Dordrecht mint issued six denominations in silver: pieces of 8 reales, halves of 4 reales, quarters of 2 reales, eighths of 1 real, sixteenths of a half real and thirty-seconds of a quarter of a real. The value of the real was fixed at the level of a *schelling* (escalin, shilling), the piece of 8 reales being then worth 8 *schellingen* or 48 stuivers.²⁸ The theoretical weight of the piece of 8 reales was very probably 1/9 of a mark, i.e., if we take the mark as 245 g, it is 27.22 g, the same weight as the matte in the Spanish Netherlands. The theoretical weight of the piece of 8 and its subdivisions would then be: 27.22g; 13.61 g; 6.81 g; 3.40 g; 1.70 g; 0.85 g.²⁹ It is very probable that the precious metal content was the same as that of the 8 Spanish reals, 0.931 or, for the stuiver, 0.5277 g of fine silver³⁰ (1 g of fine silver = 1.90 stuiver), while in the

Belgian provinces the piece of 8 reals was valued at 40 stuivers so that a stuiver was worth 0.6329 g of fine silver (1 g of fine silver = 1.58 stuiver). Priced 20% higher, the 8 reals of the Compagnie Van Verre obviously could not circulate in the Republic. They had to be shipped to the Indies where the exchange rate was 20% higher than in the Southern Netherlands.



Middelburg: AR 8 reales, 1602, struck by the Compagnie Van Verre of Middelburg (United Company of Zeeland) for trade in the East Indies Obverse: Garnished 9-field shield with the arms of the Nobility and Cities of Zeeland), around it (tower mm of Middelburg). MONE•ARG•ORDI•ZEELANDIAE• Reverse: 1602 over crowned arms of Zeeland dividing 8-R, around it •LVCTOR•ET•EMERGO• Ref.: Scholten 7, Dav.414, Delm.1209, KM 20. (Image courtesy of Geldmuseum, Utrecht)

In 1601 the two Zeeland companies trading with the Indies (de *Moucheron* and *Ten Haeff*) merged to form one single *Vereenigde Zeeuwsche Compagnie* (United Zeeland Company). Following the example of the Company of Amsterdam, the *Compagnie Van Verre* of Middelburg (Zeeland) requested similar permission to strike coins, which the States of Zeeland granted in a resolution of November 16th, 1601. The only coin struck under this concession was a piece of 8 reals dated 1602. The resolution states that the mintmaster Melchior Wyntges had agreed to supply silver to the Company to strike 1200 marks of 8 reals (*reaal van achten*) or 10800 pieces of 8.³¹ This number shows that these pieces were struck 9 to the mark and had a theoretical weight of $245 \text{ g}/9 = 27.22 \text{ g}$. The coin has on the obverse a nine-field shield with the arms of the nobility and the cities of Zeeland encircled by the legend MONE.ARG.ORDI.ZEELANDIAE (small tower) and on the reverse the crowned arms of Zeeland dividing 8-R, surrounded by the legend, LVCTOR.ET.EMERGO (I struggle and survive), with, above the crown, the date 16-02.³² With the same weight, the Zeeland 8 reals would certainly have had the same precious metal content as the pieces of 8 reals of the company of Amsterdam (27.22 g; 0.931) and the same value, 48 stuivers. The coins would certainly have been prohibited from circulating in the Republic.

At the beginning of the 17th century, silver was sent to the Indies in the form of 8 reals or matts but, starting in 1602, the price of reals in the Republic increased so shipping them became less profitable. Apart from Spanish reals, South and East Asia also used gold ducats. Gold from the African possessions of Portugal, which had been united with Spain since 1580, was transformed into ducats in the mints of the

Republic but was then exported to the Baltic,³³ where the price was higher. In certain periods the amounts exported, issued by about ten well-equipped mints, were so large that the money circulating in the Republic was all foreign. The mints were therefore very dependent on the precious metals trade concentrated in Amsterdam.³⁴

With the exchange rate of the 8 reals having increased, the VOC tried to introduce other large silver coins into its trading posts. In 1615/16, the Amsterdam directors for the first time sent a strong-box of *leeuwendaalders* or lion daalders (4000 pieces), but it was not a success. The Chinese preferred to return home with silver coins or ingots rather than with ships filled with goods and demanded to be paid in silver for the products they sold. But they refused the lion daalders because they considered the alloy too low (0.750).

Jean Pieterszoon Coen, one of the first governors of the Company in the *Insulinde* (Islands of the East Indies), from 1617 to 1623 and from 1627 to 1629, requested that small silver money, escalins (*schellingen*) and double, single and half stuivers be sent out for the use of the VOC. In 1617 the directors of the Company at head office, known as The Seventeen Gentlemen (*Heeren Zeventien* or *Heeren XVII*), sent a first shipment: double and single stuivers equivalent to 14000 florins. After the foundation of Batavia³⁵ in 1619, a second shipment was sent out in 1622, also consisting of double and single stuivers, with a value of 40000 florins. In the following years small coins, also for trade, were sent out regularly.³⁶

Following the poor success of the lion daalders, the directors of the VOC in the Indies proposed to their counterparts at headquarters that ingots should be shipped out. In 1620 the Amsterdam directors sent out a first shipment of silver ingots, along with Spanish 8 real pieces and Netherlands coins,³⁷ gold ducats, lion daalders, rijksdaalders and schellingen which were put into circulation at an exchange rate fixed in Batavia. In addition to silver and gold coins, especially ducats, the VOC then regularly shipped gold and silver ingots to Asia.³⁸ As soon as they arrived in Batavia, the silver coins disappeared from circulation. The high value of silver meant that the rate for silver coins presented for exchange was regularly increased and they came to be considered objects of speculation. Bought at low prices, silver coins were then sold at higher prices.³⁹ Quantities of small silver coins were also imported. Put into circulation in bags of 300 florins, these bags of 300 florins could be used to pay larger sums. The public notice dated July 11, 1639, drew attention to the difference in the precious metal content of good Dutch money and small coins.⁴⁰ It was above all the large Netherlands silver coins that the natives hoarded to sell at a large profit when the Chinese junks arrived. Every measure was tried to prevent the exodus of the white metal; the exchange rate was raised, then reduced. These imprecise tariffs⁴¹ quickly gave rise to interminable disputes with the directors of the Company at head office who sometimes forbade the fixing of the exchange rates by the Batavia government and sometimes revoked their own orders or fixed the rates higher or lower.⁴² The Chinese took advantage of this by buying and exporting the best coins.

In 1625 the United Provinces began a long period of monetary stability during which the exchange rate of coins hardly changed,⁴³ but on March 18th, 1633, new general coin regulations decreed for the Belgian provinces by Philip IV increased the exchange rate of the 8 reals and its subdivisions. The Spanish 8 real, weighing 17 esterlins and 25 as (with a tolerance of 6 as), was raised to 2 florins and 8 patards or

48 sols (stuivers), with equivalent changes for the 4 and 2 real pieces. Reals of Mexico and Peru, with the same weight and tolerance, were given an exchange rate of 2 florins and 7 patards or 47 sols, again with equivalent changes for the 4 & 2 real pieces. The Spanish real weighing at least 2 esterlins would be worth 5 patards. In the Republic, the exchange rate of the matte was already 48 stuivers in 1626.⁴⁴ This increase in the exchange rate to 48 stuivers made more difficult profitable shipments of 8 reals to Batavia, where the real was also valued at 48 stuivers. On the other hand, the lion daalders, quoted at 40 stuivers since 1610, with a silver content of 20.76 g—the 8 reals with a weight of 27.22 g contained 25.33 g of fine silver—became a very attractive piece of merchandise to ship to Asia, where demand for silver remained strong. The lion daalders appeared in Batavia. Sent on to Surat and Siam,⁴⁵ they were much appreciated. In Batavia, the 8 real became less commonly used since its value was kept unchanged at 48 stuivers and “*real*” became a denomination for accounting purposes considered synonymous with 48 stuivers or 12 schellingen.

In Spain, on December 23rd, 1642, Philip IV decreed that the real would keep the same alloy but that new reals would be struck at 83 1/4 to the mark instead of 67 to the mark.⁴⁶ The theoretical weight of the new 8 real pieces was only 22.39 g.⁴⁷ These new provisions, reducing the weight by nearly 20%, increased the value of the silver mark (0.931) and silver coins by more than 24%. They were intended to reduce significantly the massive exports of gold and silver but were not effective because the foreigner or merchant who sold a product for a *real de a ocho* (a piece of 8 reals) now demanded 10 reals of the new money, which came to the same thing. Therefore, Philip IV quickly reversed himself, probably in 1643 or 1644, coming back to a higher weight for the real and its multiples, hardly lighter than before 1643.

It is probable that the arrival in 1643-44 in Batavia of these light reals of 22.39 g, containing only 20.84 g of fine silver⁴⁸ made the fine silver content of the real of 48 stuivers used in accounting fall to 20.84 g compared to 25.89 g before. Furthermore, the fine silver of the lion daalder was almost the same as that of the light real: $27.68 \text{ g} \times 0.750 = 20.76 \text{ g}$. The lion daalder now had the value of the accounting real of 48 stuivers. In any case, the lion daalder was very common in Batavia in 1645 and was called a *kroon* (*couronne*, crown). Scholten wrote that in 1645 “the *lion daalder* or *real kroon* represented the fictional accounting real.”⁴⁹

The lion daalder thus replaced the 8 real in Batavia as the coin representing the accounting denomination of the real of 48 stuiver, even though Philip IV already in 1643 or 1644 brought the weight back to close to what it had been before.⁵⁰ The increasing melting down of reals in the Spanish Netherlands favored the adoption of the lion daalder as the new base coin and coin of account, with an exchange rate of 1 real or 48 stuivers. Worth 40 stuivers in Amsterdam and 48 stuivers in Batavia, a 20% profit could be made from sending coins to the Indies.

The Issue of Silver Coins in Batavia, 1645

The massive melting down of mattes and their fractions had meaningfully reduced the amount of metal exported from the Belgian provinces to the United Provinces and from there to Batavia, which continued to severely lack silver coins. The profitable trade carried on with the merchants on the Chinese junks who visited Batavia required payment in silver coins because the Chinese continued to insist on payment

in cash for the goods they bought. Moreover, the natives hoarded large silver coins with the aim of reselling them at a higher price when the Chinese junks arrived. In a proclamation dated February 26th, 1645, the East Indies Company decided that a lot of countermarked Japanese silver ingots (*japans schuitzilver*)⁵¹ could be used to strike coins to fill their needs⁵² and meet the demand for large silver coins.

In 1645 the VOC thus had silver coins struck called crowns, half-crowns and quarter-crowns of Batavia, which circulated with a value of 48, 24 and 12 stuivers respectively.⁵³ The type was designed with a sword capped with two laurel branches crosswise and the Company's monogram in a crown. The legends consisted of the words "ANNO 1645 BATAVIAE" and the indication of value.

Since the Chinese did not appreciate the low grade alloy of the lion daalders, Batavia probably decided to issue coins with a greater silver content but with a lower weight. If the weight indicated in the public notice is correct (7/8 of a lion daalder),⁵⁴ the crown should have a weight of 24.22 g. To maintain the fine silver content of the real at the same level as the lion daalder, the precious metal content had to be higher than that of the lion daalder. Using an alloy of 6/7 or 0.857, the silver content would remain the same as that of the lion daalder and equally the value of the real: $27.68 \text{ g} \times (7/8) \times (6/7) = 27.68 \text{ g} \times 3/4 = 20.76 \text{ g}$. Numerous forgeries quickly appeared, probably due to a too low precious metal content since underweight coins could easily be spotted. The new coins were already ordered to be withdrawn from circulation on September 23rd, 1647.

Apart from the issue of light reals decreed by Philip IV towards the end of 1642, other important events certainly influenced the Batavia authorities. A large scale fraud had developed in Potosi. All the coins that were struck in the 1640s were below weight and made with a low grade alloy. After this great conspiracy was discovered, a strict check of all coins in circulation was instituted. Philip IV was obliged to issue a new coin regulation on October 2 1647, ordering the reduction in value of reals in the Spanish Netherlands to billon since "tests have shown that a large number of these pieces have been altered, forged or are unequal in weight or precious metal content: the evaluation and the selection have become impossible".⁵⁵ The change to billon (money to be melted down) was decreed for the pieces from Peru as well as the "parts of Spanish reals that were distributed among the people representing forty, twenty, ten, five and two-and-a half patards" under the proclamation of 1610. All coins that were too light had to be brought to the coin offices or attested money changers "to be given the value according to the tests that would be made."⁵⁶ These events probably contributed to the replacement in Batavia of mattes by lion daalders, with a stable weight and precious metal content, valued at 1 real or 48 stuivers.

In the mint workshops in the United Provinces, new silver coins were struck in quantity starting in 1659: the silver rider, officially called *zilveren rijder* with an exchange rate fixed at 63 stuivers,⁵⁷ and the silver ducat, called *zilveren dukaat* worth 50 stuivers. These pieces quickly came to be called *ducaton* and *rijksdaalder*. Their fine silver content was the same as that of the coins of the Spanish Netherlands.⁵⁸ Again, in 1659 the patagon (24.59 g of fine silver) was called a *Brabantsche rijksdaalder* and valued at 50 stuivers, the same as the *Nederlandse rijksdaalder* (25.69 g of fine silver) which then saw its value climb from 50 to 52 stuivers and continued to be exported to be used for payments at an exchange rate of 52 stuivers or

more.⁶⁰ The lion daalder moved from 40 to 42 stuivers and the stuiver correspondingly represented $27.68 \text{ g} \times 0.750/42 = 0.4943 \text{ g}$ of fine silver.

The new coins bore a large shield with the arms of the Union and a smaller shield with the provincial arms and similar legends to the 1606 issues, except that the word NOVA (new) was added to distinguish the new pieces from the heavier older ones.⁶¹ The continuation of the manufacture of the two old coins, the Nederlandse rijksdaalder (now also called *bankrijksdaalder*) and the lion daalder, was authorized and they continued for export purposes until the beginning of the 18th century. There thus existed a dual system of values and accounting, one based on the ducaton and the rijksdaalder for current circulation (*courant geld*) and another for exported coins based on the bankrijksdaalder and lion daalder (*bankgeld*). Until the French invasion of 1672, the two new coins were struck in great quantities and came partially to replace the ducaton and patagon from the Southern Netherlands.

It was in 1670 that the VOC first asked to send ducaton to the Indies.⁶² They were an immediate success: "the ducaton was the main coin put into circulation by the Company, especially in Batavia. Its value was fixed at 13 escalins or schellingen of 6 sous (stuivers), while in reality it was only worth 10-1/2 escalins! In this way the company made a profit of 2-1/2 escalins or 15 sous on each ducaton!"⁶³ or 23.8%. Valued at 13 schellingen or 78 stuivers, the exchange rate of the ducaton was going to be changed once again.

The exchange rate of the ducaton and the patagon had been maintained at 60 and 48 stuivers since they were first issued in the Spanish Netherlands in 1612 and 1618. On the other hand, the control by countermarks or weighing of reals of Spain as well as of Mexico and Peru was a failure and by an ordinance of February 8 1672 it was decided to prohibit the circulation of all reals, good and bad.⁶⁴ In the Spanish Netherlands the use of the reals of Spain, Mexico and Peru as coins thus came to an end. Henceforth the *real de a ocho* was only accepted as an ingot based on its precious metal content.⁶⁵

The Stamping of Rider Countermarks on Some Ducatons and Half-Ducaton in the Indies, 1686

In the Indies the exchange rate of the Dutch ducaton struck since 1659 and those of the Spanish Netherlands was changed to 72 stuivers in Batavia from 1676, to the great dismay of the *Heeren XVII*. At the same time the pieces of 8 reals imported into Batavia from the Philippines by the Spaniards were equally valued at 60 stuivers or 10 schellingen.⁶⁶ Eight years later, in 1684, the exchange rate of the ducaton was reduced to 60 stuivers. This low rate quickly made them disappear from circulation and the VOC had to increase the rate again to prevent them all being exported.⁶⁷ These variations in exchange rates led to the need to countermark coins to give them a higher value. By a resolution of September 3, 1686, the VOC decided to have the ducaton and half-ducaton of the Spanish Netherlands and of the Republic countermarked with a small rider on the left.⁶⁸ The countermark fixed the exchange rate at 12 escalins (schellingen) or 72 stuivers and 6 escalins or 36 stuivers respectively, while coins not countermarked were worth 66 stuivers and 33 stuivers respectively.⁶⁹ The circulation of two sorts of ducaton was however forbidden by the *Heeren XVII*. The order concerning the stamping of countermarks was cancelled in

1692 and the countermarked coins were withdrawn from circulation the same year.⁷⁰ At the beginning the use of countermarks on coins seems to have been popular. In 1687 good Zeeland stuivers were also countermarked with a small lion next to their Zeeland arms, the mark serving simply to distinguish the good stuivers from the numerous forgeries in circulation.⁷¹

The lack of silver coins remained a crucial problem in the Indies. By a new decree of July 17th, 1693, the circulation of Indian coins stamped with a rider countermark was authorized.⁷² These silver rupees of Surat⁷³ had to be countermarked with a small rider on the left and circulated with a value of 28 stuivers.⁷⁴ Rupees without a countermark were worth only 4 schellingen or 24 stuivers.

Coin production for the *Compagnie Van Verre* of Amsterdam and for the Zeeland Company was a response to the lack of silver coins. When the enormous inflow of 8 real mattes stopped, they were replaced by lion daalders. A new shortage of silver coins gave rise to the issuance of crowns and half- and quarter-crowns by the VOC in 1645, which were withdrawn in 1647. Starting in 1670, the VOC requested the shipment of ducats, which met with immediate success. Their high precious metal content made them disappear as soon as they arrived. Changes in the exchange rate made no difference. The use of countermarks to raise the value of the ducaton in 1684 was equally unsuccessful. The metal continued to be exported, above all to China.



Batavia: AR Batavia half crown or half real of 24 stuiver, 1645. Obverse: Pointed Sword in laurel wreath around it • BATAVIAE • (arabesque) • ANNO • 1645 • (arabesque). Reverse: Monogram of the (VOC) Company, above denomination 24 • ST •. Ref.: Scholten, 13; Verk., 200, 3; Mailliet, 13.2. 13.21 g. (Four specimens known.)



Batavia: AR half ducaton of Brabant, 1638, Brussels. Counterstamped with a rider facing left. Obverse: Bust of Philip IV right, counterstamp in field behind head. Reference Scholten, 15c (this specimen). 16.03 g. (Only specimen known.)

(The original version of this article first appeared in the catalog of Public Sale 99 of *Jean Elsen & ses Fils*, held in Brussels on March 28, 2009, where a rare Batavia 1645 half kroon of 24 stuivers and a unique 1638 Brabant half ducaton with the VOC rider countermark were offered. The article was translated from the French by Robert Ronus, with considerable assistance from the author, Jean Elsen.)

Notes

1. At the beginning of the 17th century, Holland was one of the most heavily populated regions of Europe and was by far the most influential of the seven provinces, whose inhabitants were all called *Hollandais* (Hollanders) by contemporaries, as still today. To avoid confusion between the inhabitants of all the provinces and those of the province of Holland, we prefer to use the terms *néerlandais* (people of the Netherlands), republic of the United Provinces or Republic. In the same way, following Jacques Pirenne, the southern provinces which were part of the Spanish Netherlands are called the *Belgian* provinces. This territory corresponded more or less with that of the Kingdom of Belgium and the Grand Duchy of Luxembourg, which were separated in 1830.
2. F. Braudel, *Civilisation matérielle, économie et capitalisme, XVe-XVIIIe siècle*, 3 vols, Paris, 1993 (1979 edition), vol.3: *Le temps du monde*, pp. 219-20. See also J.R. Bruijn, "Productivity, profitability and costs of private and corporate Dutch shipping. Some 17th and 18th century aspects," in J. Tracy (ed.), *Rise of Merchant Empires*, Cambridge and New York, 1989.
3. After Alexander Farnese took Antwerp in 1585, the number of exiles from the South, merchants and artisans bringing their capital with them, increased considerably, enriching the towns of Zeeland and Holland where they found refuge. During the period 1590-94 the percentage of new citizens coming from the Catholic and Spanish southern provinces was 80% in Leyden and 78% in Middelburg.
4. J.R. Bruijn, "Les Etats et leurs marines de la fin du XVIe à la fin du XVIIIe siècle" in P. Contamine (ed.), *Guerre et concurrence entre les Etats européens du XIVe au XVIIIe siècle*, Paris, 1998, pp. 83-121.
5. H.A. Enno van Gelder, *Histoire des Pays-Bas du XVIe siècle à nos jours*, Paris, 1936, p. 27.
6. F.S. Gaastra, *De geschiedenis van de VOC, Haarlem*, 1982, 2nd edition, Zutphen, 1991.
7. C.R. Boxer, *Jan Compagnie in oorlog en vrede, Beknopte geschiedenis van de VOC*, Bossum, 1977, English translation, *Jan Compagnie in war and peace, 1602-1799*, Hongkong, 1979.
8. G. Parker, *The Dutch Revolt*, London, 1977, p. 251; H. Hasquin. *Louis XIV face à l'Europe du Nord, L'absolutisme vaincu par les libertés*, Brussels, 2005, p. 27: "the immigrants coming from the south became the acquirer of 38% of the shares."
9. On the economic and financial history of the Republic and of the East Indies Company in the 17th century, see C. de Heer, *Bijdrage tot de financiële geschiedenis der Oost-Indische Compagnie*, 's-Gravenhage, 1929; M.A.P. Meilink-Roelofs, *Asian Trade and European Influence*, The Hague, 1962; H. de Haan, *Moedernegotie en grote vaart. Een studie over de expansie van het Hollandse handelskapitaal in de 16e en 17e eeuw*, Amsterdam, 1977; J.H. van Stuijvenberg (ed.), *De economische geschiedenis van Nederland*, Groningen, 1979; L. Blusse & F.S. Gaastra, *Companies and trade. Essays on overseas trading companies during the Ancient Regime*, The Hague, 1981; M. Aymard, *Dutch capitalism and world capitalism. Capitalisme hollandais et capitalisme mondial*, Cambridge and Paris, 1982; W. Smith, "The European-Asian trade of the seventeenth century and the modernization of

- commercial capitalism” in *Itinerario*, 6, 2, 1982, pp. 68-90; C.R. Boxer, *The Dutch seaborne empire: 1600-1800*, London, 1965; Dutch translation: *Het profijt van de macht. De republiek en haar overzeese expansie, 1600-1800*, Amsterdam, 1988; J. Israel, *Dutch primacy in world trade, 1585-1740*, Oxford, 1989, 3rd edition, Oxford-New York, 1991, Dutch translation *Nederland als centrum van de wereldhandel, 1585-1740*, Franeker, 1991; M.C. 'T Hart, J.L. van Zanden & J. Jonker, *A financial history of the Netherlands*, Cambridge, 1997; D. Ormrod, *The rise of commercial empires. England and the Netherlands in the age of mercantilism. 1650-1750*, Cambridge, 2003.
10. C.H.H. Wake, “The changing pattern of Europe’s pepper and spice imports, ca. 1400-1700,” in *The Journal of European Economy* 8, 1979, pp. 361-403; J. Israel, *Conflicts of empires: Spain, the Low Countries and the struggle for world supremacy, 1585-1713*, London-Rio Grande, 1997.
 11. J.G. van Dillen, *De Opstand en het Amerikaanse zilver, in Mensen en achtergronden, Groningen*, 1964; J. Israel, *The Dutch Republic and the Hispanic World, 1606-1661*, Oxford, 1982; M. Morineau, *Incroyables gazettes et fabuleux métaux. Les retours des trésors américains d’après les gazettes hollandaises (XVIe-XVIIIe siècle)*, Paris-Cambridge, 1983; F.S. Gaastra, “The export of precious metal from Europe to Asia by the Dutch East India Company, 1602-1795” in J.F. Richards (ed.), *Metals in the Later Medieval and Early Modern World*, Durham, 1983, pp. 447-76.
 12. J.G. van Dillen, *Amsterdam marché monétaire des métaux précieux au XVIIe et au XVIIIe siècles in Revue historique*, 152, 1926, pp.194-201; J.G. van Dillen, “Amsterdam als wereldmarkt der edele metalen”, in *Economisch-historische herdrukken*, 's-Gravenhage, 1964; G. Mak, Amsterdam, 1999.
 13. On the “pieces of 8,” see T. Dasi, *Estudio de los reales de a ocho*, 5 vols, Valencia, 1950-1951 (volume 2); J. De Yriarte, *Catalogo de los reales de a ocho*, Madrid, 1955.
 14. In the New World and Spain, these coins were called *duros* or *macuquinas*, in the United Provinces, *8-reaalstukken* or *8-realenstukken*, *stukken van achten*, *spaansche matten* or *Spaanse matten*. In the 17th century the pieces of 8 reals with the columns of Hercules struck in Latin America were commonly called *pilaer* (pillars) in the Republic. The Spaanse matten were immortalized by the popular song in praise of the Dutch privateer Piet Heyn “whose name is small but whose acts are big” and who captured the “*Zilvervloot*” (the silver fleet) with many pieces of 8 on board (“*Die had er veel Spaansche matten aan boord*”).
 15. M. Hoc, “*Le cours et le marquage des réaux d’Espagne et de Mexique aux Pays-Bas*” in *Revue Belge de Numismatique*, 1960, pp. 285-94 and especially p. 286 and note 2.
 16. A fifth (the *quinto real*) of all the production of precious metals went to the Spanish Crown who fixed the weight and precious metal content of coins. J.R. Lasser & J.E. Restrepo, *The cob coinage of Colombia*, New York, 2000, pp. xv-xvi.
 17. The theoretical weight of the real was determined by the measure of 67 to the Cologne mark. This mark had been used in the Iberian Peninsula since the Middle Ages. Castile was already using the Cologne mark in the 13th century. F. Mateu Y Llopis, *Catalogo de los ponderales monetarios del museo arqueologico nacional*, Madrid, 1934, pp. 31 & 33. A 1344 document indicates that two marks were important in Spain, the Cologne mark and the Troyes mark: “*dos Marcos, el uno de la Ciudad de Colonia de Alemania, y el otro de la Ciudad de Troya o Troyers de la Provincia de Campana en el Reyno de Francia.*” J. Garcia Caballero, *Breve Cotejo y Balance de la pesas y medidas de varias naciones, reynos y provincias, comparadas y reducidas a las que corren en estos Reynos de Castilla*, Madrid, 1731, cited by J. Pellicer I Bru, *Repertorio metrologico medieval de los reinos hispanicas*, Barcelona-Madrid, 1999, p. 134. This utilization of the Cologne marc is confirmed by a royal ordinance of 1348 concerning marks, reissued under Philip II: “*...ordenamos y mandamos, que en todas las ciudades y villas y lugares de nuestros reynos, los pesos y medidas sean todos unos en la forma siguiente: que el oro y la plata y vellon de moneda, que se pese por el marco de Colonia, que aya en el ocho oncas...* (we order and command that in all the cities, towns and places in our kingdoms, the weights and measures be in the

- following form: that the gold and silver and billon money be weighed in relation to the Cologne mark, which is divided into eight ounces),” cited by F. Mateu Y Llopis, *Catalogo de los ponderales monetarios*, p. 44. In Spain and in the colonies the theoretical weight and precious metal content of the piece of 8 reals and its subdivisions were strictly respected. On November 23 1566, Philip II ordered escudos and double escudos of 22 carats (0.917) to be struck, the weight of the escudo being fixed at 68 to the mark. The ordinance also stipulated the striking of reals, double reals and 4 reals with a precious metal content of 11 deniers 4 grains (0.9306) struck 67 to the mark: “*escudos sencillos, i dobles de oro de lei de veinte i dos quilates, i de sesanta i ocho piezas de escudos sencillos por marco, que es conforma a la lei i peso que los escudos que el Emperador, i Rei, mi Senor labro, tienen, i que ansimesmo se labren reales sencillos, dobles, i de a quatro de lei de once dineros, i quatro granos, i de sesenta i siete reales por marco que son de la misma lei*” (single and double gold escudos of 22 carats, with 68 pieces of a single escudo to the mark, which conforms with the fineness and weight that the Emperor, the King, my Lord maintain, and at the same time strike single, double and four real pieces of 11 deniers and 4 grains fine, with 67 reals to the mark, which are of the same fineness). Cited by A. Heiss, *Descripcion General de la monedas hispano-christianas desde la invasion de los Arabes*, I, Madrid, 1865, reprint, Saragossa, 1962, p. 161.
18. Given the degree of uncertainty, which for a very long time remained at about 1%, of the mass of weights, of weighing, of the lengths of arms of scales, it made no sense to try to fix the theoretical mass of the Cologne mark in decigrams or centigrams. The theoretical weight of the Roman pound was thus 326 g, that of the Troyes mark 245 g and that of the Cologne mark 233 g. L. Blancard, *Sur les poids des anciennes provinces belges in Revue belge de numismatique*, 1898, pp. 62-65. Already in 1986 Ghysens wrote: “As L. Blancard, based on the work of Pegolotti, has shown, the Cologne mark was already given a weight of about 233 g at the beginning of the 14th century. Pegalotti stated clearly that the Bruges gold mark, which is identical to the Paris mark, was equivalent in London to 8 ounces 8 esterlins at the Tower weight, or 168/160 or 21/20. As the London and Cologne marks are identical, they both weigh 20/21 of 244.7529 g or 233.098 g.” J. Ghysens, “Quelques mesures de poids du moyen âge pour l’or et l’argent,” in *Revue belge de numismatique*, 1986, pp. 55-82 and in particular pp. 69-70. We say 20/21 of the theoretical weight of the Bruges mark, equivalent to the Troyes mark (245 g) or, rounding to the nearest gram, a theoretical weight of 233 g. That was the Cologne mark, the Tower of London mark (the coiner’s mark), and the marks of Montpellier, Barcelona, Spain and Portugal. On the other hand, the pound of the Tower of London weighed 350 g and was divided into 12 ounces. The mark equivalent to 8 oz. therefore weighed $350 \text{ g} \times 8/12 = 233 \text{ g}$. At the beginning of the 16th century the Cologne mark weighed 4800 grains in Spain. This grain ($233 \text{ g}/4800 = 0.04854 \text{ g}$) was probably a grain of hulled barley.
 19. The theoretical weight of the gold escudo was consequently $233 \text{ g}/68 = 3.43 \text{ g}$ and that of the piece of 8 silver reals $8 \times 233 \text{ g}/67 = 27.82 \text{ g}$.
 20. H. Enno van Gelder, *De Nederlandse munten*, Utrecht-Antwerp, 1972, p. 267.
 21. The silver real and its multiples, the pieces of 8, 4, 2 and 1/2 reals continued to be issued in Spain and in America with the same precious metal content and with a weight of 67 reals to the mark: “the silver coins that were made in the first years of the reign of Philip IV were at 11 deniers and 4 grains fine (931 *milesimos*). 67 silver reals were made from one mark and from this 8, 4, 2, 1 and 1/2 silver reals were issued in Spain and America.” A. Heiss, *Descripcion General*, p. 186.
 22. The Troy mark (245 g) was divided into 160 esterlins (1.53 g) of 32 grains and thus weighed 5120 grains or *as* (in Dutch, *greinen* or *azen*). Concerning the Troy mark with a theoretical weight of 245 g, see O. Elsen, “La monnaie des comtes de Flandre Louis de Nevers (1322-1346) et Louis de Male (1346-1384) d’après les comptes et ordonnances monétaires,” in *Revue belge de numismatique*, 141, 1995, pp.37-183, p.14 and note 14.
 23. M. Hoc. *Le cours et le marquage des réaux d’Espagne*, p. 287.

24. 17 esterlins 25 as are equivalent to $17 \times 32 + 25 = 569$ as. A weight of 9 to the mark of 5120 as gives $5120/9 = 568.89$ as.
25. *The Dormant du Véritable Poids de Troyes* (The Fixed Form of the True Troyes Weight) kept at the Brussels mint disappeared during the French invasion of 1794. Ghysens recalled that "...the standard of the Zeeland mark is kept in the Museum of Utrecht. This 16 mark standard dates from 1612 and has been adjusted to the Holland standard, which itself has been made to conform to the Brussels weight in 1553/54. The pound coming from this weight weighed 492.008 g in 1827." J.Ghysens, *Quelques mesures de poids du moyen âge pour l'or et l'argent*, p. 57. The difference between 246 and 245 g is only 0.4%, less than the margin of error at the time.
26. In Holland the striking of the *Unie Rijksdaalder* (Delm. 900; 29.24 g; 0.888; 25.97 g fine silver) took place only in 1595, after the striking of the *Prinsendaalder* (Delm. 921; 29.03 g; 0.885; 25.69 g fine silver), stopped in 1592, then restruck in 1600-1602. The production of *daalders* only started again in 1606 with the *Nederlandse Rijksdaalder* (Delm. 939; 29.03 g; 0.885; 20.76 g fine silver) on the same conditions as the *Prinsendaalder* of 1592 and 1602 and lasted until 1693 without any change in its fine silver content. The production of the *lion daalder*, the *leeuwendaalder* (Delm. 831; 27.68 g; 0.750; 20.76 g fine silver, and then, from 1606, Delm. 832; 27.68 g; 0.750; 20.76.g fine silver) continued without interruption on the same conditions for the whole of the seventeenth century. In Zeeland the production of the same types was very similar to that of Holland. Delm. = A. Delmonte, *Le Benelux d'Argent*, Amsterdam, 1967.
27. In the Indies the 8 real was called the *ringgit*. The Chinese who exported many coins from the Indies for re-melting particularly appreciated the precious metal content of the reals. J.E. Ter Gouw, "De Munt in de volkstaal," in *Tijdschrift van het Koninklijk Nederlandsch Genootschap voor munt-en penningkunde*, 1906, pp. 191-217 and in particular pp. 194 & 197.
28. A. Engel & R. Serrure, *Traité de numismatique moderne et contemporaine*, Paris, 1897, p. 587; J.E. Ter Gouw, *De munt in de volkstaal*, pp. 193-194; C. Scholten. *De munten van de Nederlandsche gebiedsdeelen overzee, 1601-1948*, Amsterdam, 1951, (English translation: *The Coins of the Dutch Overseas Territories, 1601-1648, Amsterdam, 1953*) p. 32, 1-6. The real or *schelling* was worth 6 stuivers or 48 duiten.
29. The weights of a series of 6 coins sold in 2005, Jean Elsen et ses Fils s.a., public sale 84, 18 June 2005, lot 1833 are: 27.13 g, 13.54 g, 6.79 g, 3.37 g, 1.70 g and 0.77 g. They confirm the proposed proportion of 9 to the Troyes mark and show with what great precision the strikes were made.
30. $(245 \text{ g}/9) \times 0.931/48 = 0.5277$ g.
31. C. Scholten, *De Munten van de Nederlandsche gebiedsdeelen overzee*, p. 32.
32. —, *De Munten van de Nederlandsche gebiedsdeelen overzee*, p. 32, 7.
33. V. Magalhães Godhino, *L'économie de l'empire portugais au XVe et XVIe siècles*, Paris, 1969. While gold was preferred in the Baltic region, silver was more appreciated in Asia.
34. J.G. van Dillen, *Amsterdam marché monétaire des métaux précieux*, pp.194-201.
35. Batavia is the old name of what is now Jakarta, the capital of Indonesia.
36. B. van Beek, "VOC numismatiek," in *De Beeldenaar*, 9, 5, September-November 1985, pp. 149-157, especially p. 153.
37. A. Pol, "Baren voor Bengalen. De produktie van staafzilver ten behoeve van de VOC," in *De Beeldenaar*, 1987, pp. 208-212 and especially p. 208.
38. F.S. Gaastra, "The exports of precious metal from Europe to Asia by the Dutch East India Company, 1602-1795," in J.F. Richards (ed.), *Precious metals in the Later Medieval and Early Modern World*, Durham, 1983, pp. 447-76.
39. M. de Man, "Gestempelde Soeratsche ropijen," in *Tijdschrift van het Koninklijk Nederlandsch Genootschap voor munt-en penningkunde*, 1905, pp. 286-97 and in particular p. 286, cites Dapper, *Asia of nauwkeurige beschrijving van het Rijk des Grooten Mogols*, Amsterdam, 1672, p. 186, who wrote that "many Bengalis run an exchange business with great profit, since they purchase gold and silver from the arriving Dutch and English ships

- from Europe when they are at their lowest prices: and increase afterwards the exchange rate when the money is transported to places inside the country. All the gold and silver, minted into coin or not, brought from other countries, is melted down and struck into coins with Persian letters concerning the name and the dignity of the king.”
40. “...the valuable alloy of the Dutch coins and their low or modest valuation compared to the foreign coins circulating at the same value...” E. Netscher & J.A. van Der Chijs, *De Munten van nederlandsch-indie beschreven en afgebeeld*, Batavia, 1863, p. 20, cited by M. de Man, *Gestempelde Soeratsche ropijen*, p. 287.
 41. To give an example, the rijksdaalders were worth 50 stuivers or 2-1/2 florins since 1610 but in the Indies the rate was 48 stuivers: “although the *risdale*, equivalent to 50 sous in Europe and to only 48 sous in the Indies, was generally used in private commercial transactions.” M. Nahuys, “Numismatique des Indes néerlandaises,” in *Revue Belge de Numismatique*, 1887, pp. 230-40 and pp. 501-14 and especially p. 503.
 42. M. de Man, *Gestempelde Soeratsche ropijen*, p. 288-91.
 43. H. Enno van Gelder, *De Nederlandse munten*, p. 104.
 44. In the journal kept in Dordrecht by Maria van den Corput, the aunt of Johan de Witt, she mentions in 1626 a *Spaensche mat* at a rate of 2- 8, i.e., 2 florins 8 stuivers (8 schellingen). J.E. Ter Gouw, *De munt in de volkstaal*, p. 198.
 45. B. van Beek, *VOC numismatiek*, p. 153.
 46. The king ordered “*que, de aqui adelante, del marco de plata de ley de once dineros y cuatro granos, del qual se labraran sesenta y siete reales...se labren y saquen ochenta y tres reales y un quartillo*” (that, from here on, from the silver mark of 11 deniers and 4 grains fine from which sixty-seven reals have been produced...will be struck eighty-three and a quarter reals). Cited by A. Heiss, *Descripción General*, p. 186; F. Matheu Y Llopis, *Catalogo de los ponderales monetarios*, p. 125.
 47. The real being struck at 83-1/4 to the Cologne mark (233 g), and the multiples proportionally, the theoretical weight of the piece of 8 reals is $(233 \text{ g}/83.25) \times 8 = 22.39 \text{ g}$.
 48. $8 \times (233 \text{ g}/83.25) \times 0.93055 = 20.84 \text{ g}$ of fine silver, the alloy being unchanged (0.931).
 49. C. Scholten, *Die munten van de Nederlandsche gebiedsdeelen overzee*, p. 35: “It seems that from the year 1645 the Lion daalder, or crown, weighing 18 engels = 27.684 g was considered the real coin representing the imaginary Real (money of account).” Scholten assumed 246.08 g as the weight of the Troyes mark and thus obtained the weight of the lion daalder: $18 \times (246.08 \text{ g}/160) = 27.684 \text{ g}$.
 50. In the Spanish Netherlands, under the ordinance of February 1644, reals and their multiples and fractions with the correct weight (at least 9 to the mark for the piece of 8 reals) were kept at the exchange rates which had been fixed on March 18th, 1633, to wit 8 reals for 48 stuivers, 4 reals for 24 stuivers, 2 reals for 12 stuivers, 1 real at 6 stuivers or 1 schelling (escalin or shilling) and a half-real for 3 stuivers or a half schelling. This decree increased the exchange rate for gold coins; that of silver coins remained unchanged: the patagon kept its value of 48 stuivers and the ducaton remained at 60 stuivers.
 51. E. Netscher & J.A. van Der Chuis, *De munten van Nederlandsch-Indie*, p. 24; M. de Man, *Gestempelde Soeratsche ropijen*, p. 290.
 52. “...to be produced from the available Japanese silver bars...as many crowns of Batavia as necessary to satisfy our needs by the citizen and goldsmith Jan Ferman and the Chinaman Konjok.” Cited by C. Scholten. *Die munten van de Nederlandsche gebiedsdeelen overzee*, p. 35.
 53. These pieces are of the highest rarity. In 1993 L. Schulman knew three examples of the piece of 24 stuivers: one example in the *Nederlandse Bank* collection, one example in the collection of the *Museum van Land-en Volkenkunde*, the third example in his sale 10 on April 5-6, lot 407. This last one was offered in sale 99 of *Jean Elsen & ses Fils*, March 28th, 2009, lot 2760 (13.21 g). A fourth example appeared in *Baldwin's* sale 48, September 26th, 2006, lot 5081.

54. The public notice of February 2nd, 1645 mentioned "...at the correct weight of 7/8 real or lion daalder." Cited by C. Scholten, *Die munten van de Nederlandsche gebiedsdeelen overzee*, p. 35. The weight of the half-crown in the Lasser collection is 13.22 g.
55. M. Hoc, *Le cours et le marquage des réaux d'Espagne*, p. 289.
56. Cited by M. Hoc, *Le cours et le marquage des réaux d'Espagne*, p. 289. Still on April 10th, 1648 Philip IV decided to permit temporarily the circulation of whole reals, with the correct weight, and to "exposer et recevoir lesdicts réaux de huit appelez mattes, pourveu qu'en ce faisant ils soient de faict pesez et trouvez estre de juste poids" (to offer and receive the so-called reals of 8, called mattes, provided that they are weighed and found to be of the correct weight), all the others (too light) remained to be turned into billon and had to be brought to the Mint.
57. The exchange rate at which the ducats from the Belgian provinces circulated was officially recognized in the Republic after a long resistance to their circulation. Already in 1634 the quantity of ducats imported from the Southern Netherlands into the United Provinces was such that the States General of the Republic felt obliged to publish an announcement on March 17th, 1634 declaring the southern ducats billon: "We understand that here in the country are daily imported from Brabant certain silver coins named ducats, struck and valued there at three guilders or sixty stuivers, against which already in 1619 a public notice was posted declaring them billon and that these coins are forced into our country at a rate of 63 stuivers, that is at least three stuivers above their value relative to our Rijksdaalder valued at 50 stuivers. There is no doubt that in a matter of time these coins will be imported in such quantities that our provinces will be full of them, causing enormous damage to our good inhabitants and advantage to those on the other side." Cited by J.E. Ter Gouw, *De munt in de volkstaal*, pp. 212-13.
58. The Philip IV ducat contained $32.48 \text{ g} \times 0.944 = 30.66 \text{ g}$ of fine silver. The rider ducat $32.78 \text{ g} \times 0.941 = 30.85 \text{ g}$. The patagon contained $28.10 \text{ g} \times 0.875 = 24.59 \text{ g}$ of fine silver, the silver ducat $28.25 \text{ g} \times 0.873 = 24.66 \text{ g}$. The slight difference is in part due to the adoption of a weight of 246 g for the Troyes mark in the Republic. The difference between 246 g and 245 g is 0.4%.
59. Delm. 939; 29.03 g, 0.885; 25.69 g of fine silver; 1 stuiver = 0.5138 g of fine silver.
60. H. Enno van Gelder, *De Nederlandse munten*, p. 220. The stuiver was then worth $29.03 \text{ g} \times 0.885/52 = 0.4941 \text{ g}$ of fine silver and 1 g of fine silver = 2.02 stuivers while, for the patagon, 1 stuiver was worth $28.10 \text{ g} \times 0.875/50 = 0.4918 \text{ g}$ and 1 g of fine silver = 2.03 stuiver.
61. H. Enno van Gelder, *De Nederlandse munten*, pp. 131-32.
62. B. van Beek, *VOC numismatiek*, p. 153.
63. M. Nahuys, *Numismatique des Indes néerlandaises*, p. 503.
64. "...nous avons trouvé convenir de billonner et billonnons par cestes généralement toutes lesdictes mattes, tant d' Espagne que de Portugal, Mexico, Peru, voulans et ordonnans que doit le jour de la publication de la présente, personne les pourra présenter, bailler ou recevoir à quelque priz que ce soit, soubz les peines statuées au regard des aultres especes de billon." (...we have found it advisable to billon (i.e., melt down) and we will billon by these orders generally all the so-called mattes, from Spain as from Portugal, Mexico, Peru we wish and order that from the day of the publication of the present order, no one will be able to present them, deliver them nor receive them at whatever price, under the statutory penalties applicable to other kinds of billon...), cited by M. Hoc, *Le cours et le marquage des reaux d'Espagne*, p. 292. If Spanish merchants kept sending mattes, the entry of these mattes was authorized "par nos ports et bouches de mer, et non par d'autres voie"s (through our ports and outlets to the sea, but not by other routes) but it was forbidden to put them into circulation. These reals had to be brought to the Mints to be converted into coins with the stamps and arms of the king, and this requirement was equally valid, within a period of six weeks, for all mattes which were in the country.
65. Finally, orders of Charles II on November 18th, 1679, November 4th, 1683 and February 18th, 1687 authorized the free entry of mattes as well as gold and silver ingots, exclusively

- by ports and outlets to the sea, and their free exit. M. Hoc, *Le cours et le marquage des réaux d'Espagne*, pp. 292-93.
66. M. Nahuys, *Numismatique des Indes néerlandaises*, p. 503, did not mention in which period the pieces of 8 were valued at 60 stuivers. However, the fine silver content of the ducaton being 30.85 g and that of the stuiver $30.85 \text{ g}/72 = 0.4284 \text{ g}$, the silver content of the real at a rate of 60 stuivers is $27.22 \text{ g} \times 0.93055/60 = 0.4222\text{g}$. The two rates were contemporaneous.
67. The ordinance prescribed to do “alles om het groot geld hier ter stede te houden” (everything to keep the large coins in our city). M. de Man, *Gestempelde Soeratsche ropijen*, p. 290.
68. The ordinance stipulated that the coins should be “punched with a special mark of a horseman riding to the left.” E. Netscher & J.A. van Der Chijs, *De Munten van Nederlandsch-Indie*, p. 39; M. de Man, *Gestempelde Soeratsche ropijen*, p. 291; C. Scholten. *Die munten van de Nederlandsche gebiedsdeelen overzee*, p. 36.
69. Two weeks earlier, on August 20th, 1686 it was decided that 20000 ducats of the Republic, in the possession of the VOC, would be counterstamped with the letter B (= Batavia) to prevent similar ducats being put into circulation by private individuals. 70000 pieces were then imported, which were withdrawn from circulation in 1690. M. Nahuys, *Numismatique des Indes néerlandaises*, pp. 233 & 236; H.V. Codrington, *Ceylon coins and currency. Memoirs of the Colombo Museum*, Colombo, 1924.
70. There remain extremely few countermarked ducats and half-ducats. A Philip IV half-ducaton, struck in Brussels for Brabant in 1638, countermarked with a horseman facing left, was found in the collection of the *Bataviaasch Genootschap*, then in the sale catalogue of the Stephanik collection in 1904, lot 6442 (de Witte no. 1023). M. de Man, *Gestempelde Soeratsche ropijen*, p. 290, n.1. In that sale it was bought by Moquette. This coin was later sold by Jacques Schulman, Auction 289, March 7-8, 1989, and then offered for sale by Jean Elsen & ses Fils in their sale 99, March 28th, 2009, lot 2761.
71. E. Netscher & J.A. van Der Chijs, *De Munten van Nederlandsch-Indie*, p. 40; M. de Man, *Gestempelde Soeratsche ropijen*, p. 291.
72. M. Nahuys, *Numismatique des Indes néerlandaises*, p. 236. It concerned rupees of Surat of which Dapper spoke in these terms in 1672: “The *ropias*, or *rukie*, *rupias* and *rupias chagamy* valued at 24 Holland stuivers are of good composition and circulate in the whole Surat area. The *mamoedys*, another silver coin valued at ten and a half stuivers, is struck at Surat from bad silver and are allowed to circulate in only a few towns.” Dapper, *Asia of nauwkeurige beschrijving van het Rijk des Grooten Mogols*, Amsterdam, 1672, cited by M. de Man, *Gestempelde Soeratsche ropijen*, p. 296.
73. The countermarked rupees were struck by Aurangzib (1659-1707).
74. The heading of the ordinance is: “Notification concerning the acceptance into circulation of the silver rupees of Surat at the value of 28 heavy stuivers.” With regard to the countermark, the order states: “To prevent all sinister practices or other wrong machinations, it was agreed, in the presence of two delegates, one of the honorable Department of Justice, the other a bourgeois from the Respectable College of Aldermen, that the silver rupees would be noted and their obverse countermarked with the mark of a little horseman riding to the left.” Cited by M. de Man, *Gestempelde Soeratsche ropijen*, p. 296.