

## World trade under the spell of the peso

Spain and the gold and silver fever in the New World  
By Lukas M. Schneider

*After their first wave of conquests, the Conquistadors in America soon found that the flow of gold taken from the natives had dried up, and that gold and silver would have to be mined. The exploitation of the silver mines was the foundation for the rise of the peso – the huge numbers in which it was produced and its global range made possible a boom in world trade.*

### “They thirst for gold like hungry swine”

Both the imports of gold from Africa and the production of silver in Central Europe faltered towards the end of the Middle Ages. The shortage of precious metals triggered an enormous process of expansion, since merchants were dependent on the availability of gold and silver, which were much sought after as a means of payment when trading in oriental luxuries.

In the case of the Genoese explorer Christopher Columbus too, the hunger for gold was one of the main motives for his four voyages to the West Indies. “Gold makes one rich, and he who has it does what he wishes in the world, and goes so far that gold opens the way for souls to enter Paradise,” Columbus wrote in his journal. This view was true of all other Spanish undertakings. It was reported of Hernán Cortés that as soon as he arrived in Mexico, he immediately enquired of a messenger from emperor Moctezuma whether there were any gold deposits. When the messenger confirmed the existence of gold, the Spanish conquistador ordered him in no uncertain terms: “Send me some gold, for I and my companions are suffering from a disease that can be cured by gold.”

The inhabitants of the conquered Aztec empire came to feel the full force of that hunger for gold. Just like all the indigenous cultures of South America, they became the victims of Spanish greed. But thanks to a number of Franciscan friars who were sympathetic to Aztec culture and learnt the Aztec language, we know how the conquered Aztecs experienced that greed: “They thirst for gold like hungry swine”, some of them told the monks.

### Potosí: the motor of American silver production

In the first phase of conquest, gold was obtained by looting the treasures of the inhabitants. The vast quantities of gold and silver collected over centuries were melted down, distributed and shipped to Spain. Naturally this source was soon exhausted, and the Spaniards began to look for other, untapped means of supply. Despite frequent mentions of the riches of the New World, the production of precious metals in the first few decades after the discovery of America was comparatively meagre. Veins of silver that reached the surface were scratched out with simple tools. This means of exploitation was cheap but not economic, and was no longer worthwhile once the great silver mines were discovered towards the end of the 1540s: Zacatecas (1546) and Guanajuato (1550) in northern Mexico, and the Potosí silver mine (1545) in the uplands of Bolivia.

The riches of Potosí were already legendary in the 16th century. Some reports state that at its peak, even horseshoes were made of silver. It was said that for the Corpus Christi celebrations of 1658 the paving stones were removed and entirely replaced by silver bars. In Miguel Cervantes’s world-famous novel “Don Quixote”, the source of American silver even became proverbial – Don

Quixote says to his assistant Sancho Panza: “That’s worth a Potosí”. The fame of the rich silver deposits led to a rapid rise in population. In 1573, a mere 30 years after its foundation, Potosí had 150,000 inhabitants and was thus one of the largest towns in the world. Silver from Potosí provided about 70 per cent of European coinage silver between 1570 and 1620. Wealth flowed in streams, and swarms of treasure-seekers settled in the inhospitable area – the Cerro Rico, almost 5,000 metres above sea level, became a Mecca for people seeking to make their fortunes from its precious metals.

### Mercury: a refinement of mining

The necessity of driving shafts ever deeper into the mountains to obtain silver ores posed considerable problems for the mine promoters. It was relatively easy to drive galleries into the earth, but there was usually a lack of adequate pit-props, ventilation and drainage. And the process of smelting the ore in primitive blast furnaces was too costly at those sparsely wooded heights, and was economic only with ores with a high silver content. It was only possible to achieve a big increase in production once considerable investments had been made and European miners had brought the technological developments of the Old World to the New World and adapted them to the conditions they found there.

One great improvement was the *patio* process invented by Bartolomé de Medina in the 1550s. This amalgamating process permitted silver to be obtained from ores with a low silver content. The finely ground ore was spread on the ground in a large, stone-paved courtyard (*patio*), and water, mercury (quicksilver), salt, copper sulphate and iron sulphate were added in a certain proportion. For days, the resulting mixture was ridden over and constantly pushed into little heaps, which made possible the chemical reaction of amalgamation between the silver and the mercury.

This new method of obtaining pure metal considerably lowered costs. In addition, the discovery of rich mercury deposits at Huancavelica, 1200 kilometres from Potosí, meant that the mines were no longer dependent on imports from Spain. Transporting the mercury was a difficult undertaking; the liquid metal was carried in leather bags on mules and llamas to the silver mine.

### Working till they dropped - the suffering of the miners

The use of mercury had severe consequences for the health of the miners. Between 1616 and 1619 the crown agent Juan de Solórzano undertook an investigation of the conditions in the mercury mines of Huancavelica, which disclosed appalling conditions: “The poison eats its way into the very marrow of the body and weakens all the limbs; it causes a constant trembling, and the workers die as a rule in the course of four years.” Despite these clear findings, no decisive measures were taken to protect the workers. In Spanish law, all subterranean resources were crown property; their exploitation, however, was open to private persons, who had to register their digging rights in a precisely defined legal procedure. For these concessions the crown charged a fifth of the proceeds. Owing to the rising costs of investment, this sum was later reduced to a tenth.

The *mita*, a system of forced labour established by the viceroy Francisco de Toledo in the 1570s, intended to even out the burden on the indigenous population, remained the most important influence on the labour market in Peru till well into the 18th century. In Potosí the system lasted as late as 1812. By contrast, researches into Mexican mining centres have showed that forced labour there had already begun to lose its importance as early as the 17th century, being replaced by free, paid labour. The work in the mines was immensely hard. In order to survive the privations to some extent, the *mineros* chewed large numbers of leaves of the coca plant, which contains substances that stimulate the body. The planting of coca thus became an important complementary branch of the Peruvian economy.

The organisation of the mining of precious metals was different in one important respect from that in central Europe: whereas miners in Saxony or the Tyrol organised themselves at an early date into trade unions, the miners in colonial Latin America mostly had to cope on their own; neither guilds nor unions were formed.

### Silver-smuggling - a national pastime

The control of deliveries of precious metals was the responsibility of the *Casa de la Contratación*, which was the highest authority for transatlantic exchange from its foundation (1503) till the abolition of the trading monopoly (1778). Its statistics, however, have to be taken with a pinch of salt, since they do not include the metal that remained in America, nor that destined for the Pacific trade via Manila, nor metal that was smuggled. We now know that the amount of silver smuggled was enormous. Smuggling escalated to such an extent that the Spanish authorities were forced to admit the ineffectiveness of their countermeasures and abolish the registration of silver in 1660. Silver-smuggling had become a kind of national pastime in which all social classes indulged and made a profit, from ordinary sailor to admiral.

The transport of the precious metals to Europe was carried out using an elaborate convoy system. The *Carrera de las Indias* arranged for two fleets to leave every year for the Spanish colonies to receive the rich cargo. One convoy sailed to Vera Cruz in New Spain, while the other headed for the harbour of Portobelo on the isthmus of Panama. The silver from Potosí was first taken by mule to Callao on the Pacific coast and thence by ship to the isthmus, where it was once more loaded on to mules and carried to Portobelo on the Atlantic coast.

### The extent of Spanish-American silver production

The outstanding importance of the South American silver mines for the Spanish economy was well known to politicians. In the state archives of other European powers, it is easy to find statements attributing the power of Spain to the exploitation of the South American silver and gold mines. Thus Sir Benjamin Rudyard stated unambiguously to the British House of Commons in 1624: "It is not its great territories that make Spain so rich. For it is very well known that Spain itself is poor in people and devoid of all natural resources. No, Sir, it is her American mines which deliver the food with which she feeds her immeasurably insatiable hunger for world domination."

Till well into the 18th century, precious metals constituted between 90 and 99 per cent of all exports to Spain. Even at the end of the colonial era they retained their dominant position and continued to make up between 80 and 90 per cent of imports. In the 18th century Mexico became the largest silver producer, leaving Potosí far behind. The mining region of Guanajuato delivered as much silver as the whole viceroyalty of Peru. Especially in the last third of the 18th century there was a great boom in silver production, resulting from the discovery of new deposits, the reopening of abandoned mining areas, tax reductions and a reduction in the price of mercury.

### The peso becomes the reserve currency of world trade

Precious metals from South America created the preconditions for the establishment of the early modern world trading system. From the second half of the 16th century, silver imports increased the supply of precious metals available to the European economy several times over and supported the process of monetarisation. The most popular and widely known coin became the *real de a ocho* or *peso*. It became the standard Spanish silver coin and became the prime means of payment in world trade, even though initially, just like the gulden (florin) and the taler, it was not exactly adopted with enthusiasm.

But the behaviour of the market changed in the course of time. Anyone who possessed pesos could buy goods anywhere in the world. Especially in China, the Spanish coins were extremely popular. They reached China from Acapulco via Manila, where they were received by Chinese merchants. Just like the dollar today, the peso, as a currency traded worldwide, fulfilled as it were the role of a reserve currency. Latin American silver contributed to the early growth of a worldwide economic area.

The first mint in the Spanish colonies was established in 1535 in Mexico City. The foundation of further *casas de moneda* was slow to follow. In the viceroyalty of Peru, Lima was chosen as the first site for a mint, but its situation turned out to be unsuitable owing to the difficulties of transporting the raw silver from the mining centres to the processing centre. Therefore the building of a mint was begun in Potosí itself, which began to mint a large percentage of the local production in the 1580s. Further mints were founded in the 17th century: in Santa Fé de Bogotá (1620), Guatemala (1733), Santiago de Chile (1744) and Popayán (1749).

### Late flowering: mining in the time of the Bourbon reforms

The nationalisation of the coinage in the 18th century is regarded as one of the most important measures taken in the course of the Spanish reforms under the Bourbon dynasty. But this process was by no means steady. Even when the first *casa de moneda* had been taken into state control, private entrepreneurs continued to be entrusted with the foundation and management of new mints at their own expense. In the course of the reforms, the Spanish crown also concerned itself with an improvement in the quality of coins. To prevent forgery these were now made round, with a portrait of the reigning king on one side. Thanks to these reforms, the crown's profits from minting coins rose considerably.

But even the boom in the production of silver from South America could no longer give the *ancien régime* new life. After the crown was granted to Napoleon's brother Joseph Bonaparte, the rule of the Bourbons in Spain came to an ignominious end in 1808, and with it ended the triumphal progress of the peso in the world.