



Seignorage

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As of May 10, 2007, copper, nickel and zinc were priced as follows (data courtesy of the London Metal Exchange www.lme.com):

Copper \$3.64/pound
Nickel \$23.95/pound
Zinc \$1.86/pound

According to the United States Mint (<http://www.usmint.gov>), cents (pennies) weigh 2.500 g and are composed of 2.5% copper with the balance (97.5%) zinc. Nickels weigh 5.000 g and are 25% nickel with the balance (75%) copper.

Simple arithmetic shows that a penny contains about 0.0502¢ of copper and 0.9995¢ of zinc — in other words, each penny has 1.0497¢ of metal.

$$2.500 \text{ g} \times 1 \text{ lb.}/453.59 \text{ g} \times 0.025 \text{ Cu} \times 364\text{¢}/\text{lb.} = 0.0502\text{¢}$$

$$2.500 \text{ g} \times 1 \text{ lb.}/453.59 \text{ g} \times 0.975 \text{ Zn} \times 186\text{¢}/\text{lb.} = 0.9995\text{¢}$$

And each nickel contains 3.009¢ of copper and 6.600¢ of zinc — in other words, each nickel has 9.609¢ of metal.

$$5.000 \text{ g} \times 1 \text{ lb.}/453.59 \text{ g} \times 0.75 \text{ Cu} \times 364\text{¢}/\text{lb.} = 3.009\text{¢}$$

$$5.000 \text{ g} \times 1 \text{ lb.}/453.59 \text{ g} \times 0.25 \text{ Ni} \times 2395\text{¢}/\text{lb.} = 6.600\text{¢}$$

For comparison, just two months earlier, the metal prices were:

Copper \$2.72/pound
Nickel \$19.74/pound
Zinc \$1.52/pound

Then, a penny contained 0.04¢ of copper and 0.88¢ of zinc, or 0.92¢ of metal (less than 1¢). A nickel contained 2.25¢ of copper and 5.44¢ of zinc, or 7.67¢ of metal (still greater than 5¢).



“Seignorage” is the term applied to the profit that governments make on the issuance of coins and paper money. It is also sometimes spelled “seigniorage” or “seigneurage.”

For example, the fifty state quarter series was introduced in the United States in the late 1990s. It cost the mint less than five cents for each quarter produced. The U.S. Treasury estimated that it earned over \$5 billion in seigniorage from the quarters thus far produced.

The new gold presidential dollars are expected to be far more profitable for the government.

In March 2007, we have seen that this value was positive for the penny. But today’s situation is different — it is one of the historically very rare instances of negative seigniorage — the government loses money on each nickel it places in circulation, and once processing costs are added in, they lose money on cents as well.

That is why, in December 2006, the U.S. Mint introduced new regulations that prohibit, with certain exceptions, the melting or treatment of all pennies and nickels. The regulations also generally prohibit the unlicensed exportation of these coins (so that they cannot be melted overseas).

So while the plater struggles with materials costs, the basic coin of the realm faces its own struggles. *P&SF*