

**Definition** (Category **Curr**). The *category of currencies* **Curr** is specified by:

1. *Objects*: a collection of currencies  $\mathbf{C}$ .
2. *Morphisms*: given two currencies  $\mathbf{c}_1, \mathbf{c}_2 \in \mathbf{C}$ , morphisms between them are currency exchangers  $\langle a, b \rangle$  from  $\mathbf{c}_1$  to  $\mathbf{c}_2$ .
3. *Identity morphism*: given an object  $\mathbf{c} \in \mathbf{C}$ , its identity morphism is the currency exchanger  $\langle 1, 0 \rangle$ . We also call such morphisms “trivial currency exchangers”.
4. *Composition of morphisms*: the composition of morphisms is given by the formula ??.