

The following comments are a translation and an update of an internal document prepared in 2002 following problems with registration of negative “real interest” in the national accounts of Israel.

Comments on interest in the national accounts under significant inflation

The SNA93 recommends separating nominal interest on un-indexed loans into 2 components under significant inflation. As has been shown by Ezra Hadar and Pablo Mandler – even low rates of inflation are “significant” in this respect.

The SNA gives 2 different recommendations for separating these two components:

1. In paragraph 7.110 it is recommended to compute “real interest” by deducting from the nominal interest the component that is equal to the loss of purchasing power on the monetary value of the principal during the accounting period (Peter Hill’s method).
2. In Annex B to chapter 19 items 8 to 23 it is recommended to compute “interest prime” by deducting from nominal interest the component of protection against inflation of the principal of the asset, which is actually included in nominal interest (Andre Vanoli’s method).

The first method is essentially an ex post approach, while the second is an ex ante approach. This difference in approaches leads to the main difference between the two methods: Since the protection component according to the second method (Vanoli’s) is the amount included ex ante (“actually”), this component may be smaller than what was needed ex post. In such a case the “interest prime” is 0. Vanoli rationalizes this by explaining that there are 2 contracts – one concerning the capital services and one concerning the protection of the value of the capital.

According to the first method (Hill’s), the protection component may in certain cases be larger than the nominal interest agreed upon in advance. In such cases the “real interest” will be negative - that is the lender in fact “pays” the borrower to take the loan.

Another difference between the two approaches has been clarified by Peter Hill in his manual on inflation accounting from 1996. Hill explains that there can be no nominal holding gains or losses on loans in national currency – the price of a unit of currency cannot change. This means that there has to be a flow from the borrower to the lender of compensation for loss of purchasing power - a capital transfer. Vanoli's approach is to accept that the loans have a price, which means that there may be holding gains or losses and one has to register the protection component in the revaluation account.

It is worthwhile mentioning that there are some practical problems with using “interest prime” – since the method is asymmetrical (when the protection component is large “interest prime” is 0) the results are dependant upon the period chosen for measurement. “Interest prime” computed on a monthly basis differs from “interest prime” computed on an annual basis. Such a problem does not occur when using “real interest”.

Below a certain method of registration is proposed, and some comments to the wording of the current SNA are also given.

Proposal for registration in cases where inflation is higher than nominal interest

One might explain the transaction that takes place between the borrower and the lender, as follows:

The borrower enters an agreement with the lender to get something worth an amount of X in period t , if he pays $(X + \text{nominal } r)$ in period $t+1$. The lender wants to retain the purchasing power of X and receives a price in return for giving the borrower X for one period (a service). There is an implicit agreement that a general price change affects the value of the principle for the lender as well as the borrower – this implicit agreement is the explanation of the high interest rates of un-indexed loans under inflation. One can also assume that both parts have expectations about inflation in the next period, and that they are aware of the fact that there is a certain probability that the actual inflation will be higher or lower than their expectations.

In fact we are talking about a transaction, where the payment is decided upon in advance of the actual supply of the service and the payment, so that it is not so strange that the residual that is obtained after the purchasing power of the principal is preserved as implicitly agreed upon, may be negative.

What happens if the residual is negative? If we were talking about a sale of goods – there would be a gift from the store selling goods. The same should be true in this case: if the real interest paid is positive, the borrower is paying a price in return for getting the service. If the nominal interest is lower than the amount needed to preserve the purchasing power of X, two things have happened: the service has been given free of charge, and in addition the lender has given something worth X in return for an amount lower than X – the difference is a gift to the borrower (the lender has transferred a certain sum to the borrower without getting anything in return). If we accept this explanation, on one hand we agree with Vanoli's approach that the price of the service can only be 0 or higher, but on the other hand we also accept that in some cases the lender transfers real sources to the borrower.

To reflect the agreement between the lender and the borrower it is useful to see the loan as something that has a price similar to a portfolio – one might describe the loan as a “virtual portfolio”. Both sides are aware of the fact that the purchasing power is affected by general price changes, and that they agree that the purchasing power of the loan should be preserved. Such an approach is similar to Vanoli's approach, and means that the payments of the protection component is registered as repayment of principal.

Comments to the wording in the current SNA

Chapter 19 Annex B

par. 3:

“Real interest is derived from nominal interest by taking account of real holding gains/losses on the underlying assets/liabilities. For this reason, however, real interest may not be introduced in the central framework”. The case seems to be exactly opposite – since nominal interest includes an element of holding gains/losses – this element should not be included, and only the other element – real interest – should be included.

Par. 5:

The explanation in this paragraph does not make much sense for the cases where there is no index-linkage, unless you add the explanation of ex ante and ex post – if no it should be the same thing. Perhaps the word “actual” means actual ex ante.

Par. 8:

What is significant – in our view any rate of inflation is significant as regards nominal interest.

Par. 9:

Contracts are mentioned – an indication that we are talking about ex ante. The idea with 2 contracts seems to be made to avoid the issue of negative real interest.

Par. 13:

Here ex post inflation is taken – not in line with the whole idea of ex ante. The case seems to be exactly as for real interest – only here no negative interest is used.

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