

Analysis of price changes

1. We looked for evidence of a waterbed effect in the prices set by the 12 largest distributors for their personal loans and PLPPI products over 60 months. In particular, we looked at (a) the level of credit and PLPPI prices and (b) incidences of PLPPI price changes.
2. We looked at three sets of correlations, where we would expect particular correlations to be seen if there were a waterbed effect between PLPPI and personal loan APRs.
3. We found that there is evidence of negative correlation between the price levels of credit (personal loans) and the associated PLPPI over time for individual products, as shown in Table 1. This means that for an individual product we observe that as PLPPI prices rise (fall) the credit price is lower (higher). This is consistent with a waterbed.

TABLE 1 Correlation coefficients between levels of prices

<i>Econometric methodology</i>	<i>Correlation coefficient</i>
Fixed effects	-0.7***
Fixed effects, weighted by PLPPI sales	-0.5***
Fixed effects, monthly dummies	-0.1***
Fixed effects, weighted, monthly dummies	Negligible

Source: CC analysis.

Notes:

1. *** implies that result is statistically significant at 1 per cent level.
2. The correlation coefficient is the percentage decrease in credit prices associated with a 1 per cent increase in PLPPI prices.

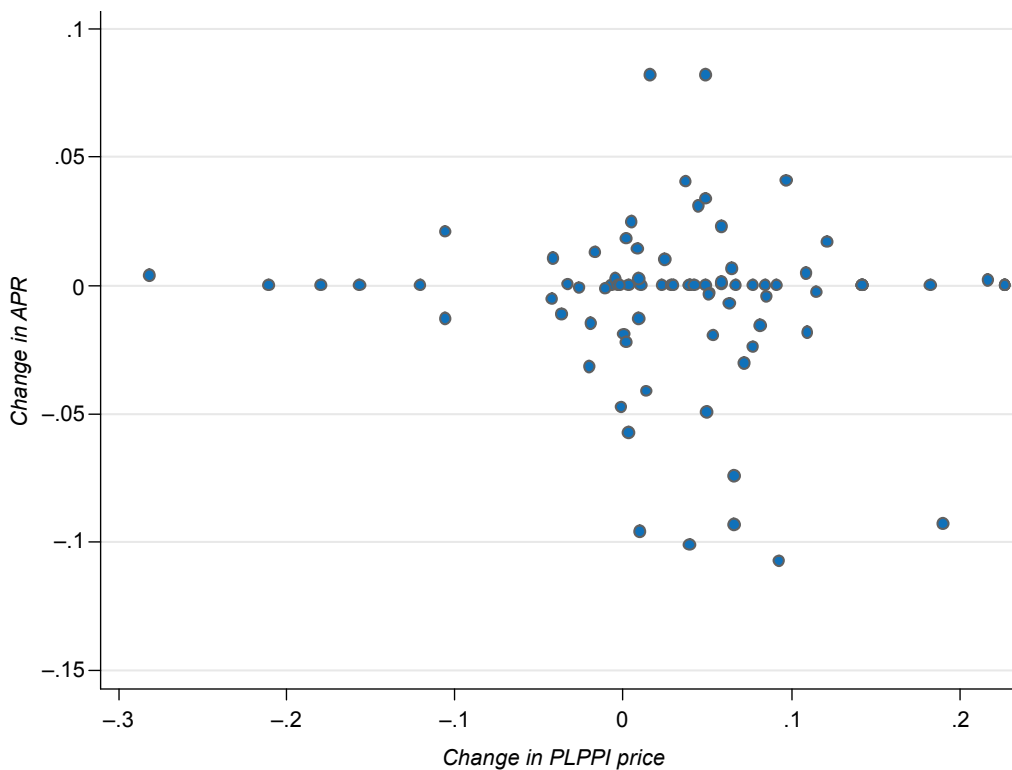
4. However, it is a weak result, as there may be other circumstances and trends that could lead to lower credit prices and higher PPI prices over time. We also have a large range in the size of products and these results could therefore be driven by very small products. To overcome these potential problems, we included monthly dummy variables, for each of the 60 months in the dataset, to represent wider trends

and weight observations by their volume of sales. Doing this, we find no significant correlation.

5. As price changes, particularly for PPI, are discrete events, we might expect evidence that, if there is a waterbed effect in pricing, a rise in PPI would occur at the same time as a drop in credit price. However, we found no significant correlation, as illustrated by Figure 1, between such price changes. This finding provides no direct support for the existence of a waterbed effect.

FIGURE 1

Scatter plot of change to APR on each occasion that PLPPI price is changed



Source: CC analysis.

6. We cannot draw any strong conclusions from this evidence. The results we have found may be observed because the waterbed is not in effect. However, it may be the case that other factors, which we are unable to control for, are disguising the relationship between prices. In particular, given the relatively recent nature of our dataset, we are unable to observe the impact of the introduction of PLPPI being sold

alongside personal loans. It is this original event where we might have been most likely to observe a price impact leading to a waterbed effect. In our data, we observe only small adjustments to prices, which are more likely to have been caused by other factors.