The goal of external reference pricing (ERP) is to set the price of a drug in a given country in reference to a panel price in other countries. A price decrease in a country referenced by others - usually to control public health spending - leads to additional losses in turnover in other markets. Furthermore, price drops could also adversely affect the trade balance of the reference country if the products are exported. This study measured the impact of French medication price reductions on pharmaceutical turnover in France and ten other European countries. A more specific secondary analysis was performed on products which are manufactured in France and exported to the analyzed countries.

RESULTS
The number of price decreases varied considerably from country to country: the total number of price reductions in the Netherlands was 25. In Greece and Slovakia, it was 24, whereas in Switzerland and Austria there were 2 and 5 price reductions, respectively (1).

There was a strong correlation (p<0.001) between the number of price decreases in France and in the ten countries examined. Products which underwent multiple price decreases in France also experienced many price decreases in other countries. Furthermore, few price decreases in France led to fewer price decreases in the other countries. This observation confirmed the use of the ERP mechanism to set the price in different countries (2).

The turnover of the 12 products was €1,264 Bn in 2012 in France, and €402 M for the 10 countries. This imbalance can be explained by the market share of France in comparison with the other selected countries. Within the period analyzed, the loss of turnover in France was €552 M compared to €257 M in the ten countries. As a result, this study demonstrates that €1 of sales decrease in France leads to a decrease of €0.46 in the selected countries (3).

For the five products which were produced in France and exported, the loss of turnover was €187 M in France and €231 M in the ten other countries for the period analyzed. The previous explained effect was amplified for products exported from France with an induced decline of €0.81 (4).

CONCLUSION
This study reveals a strong correlation between the number of price decreases in France and those in the ten countries studied. Southern and Eastern European countries, such as Greece and Slovakia, are more likely to review drug prices than Austria and Switzerland where the number of price reductions is much lower.

Quantitatively, a €1 sales decrease in France leads to a decrease of €0.46 in other countries, and even €0.81 for drugs produced in France and exported. As a consequence, the impact of the ERP mechanism on the French export turnover is indirect but real. The French trade balance is also impacted.

LIMITATIONS
These results are exploratory and should be taken with caution. They should be benchmarked against other product/country samples. Moreover, the relation between price decreases in France and other European countries was based on hypothesis. The study cannot exclude that some price reductions are due to ERP reductions in a country other than France, or for a reason completely different from ERP. However, since the impact of French price decreases beyond 12 months was not considered, this could compensate for the approximation.