

CHRONICLE N°29

Income return: the use of “deflated OAT” in the 2000s and 2010s

Let's start by defining “deflated OAT.” This is the yield on 10-year French government bonds, our risk-free rate, adjusted for long-term inflation.

$$(1) \text{OATd} = rfr - inf \leftrightarrow \text{OATd} = \text{OAT} - inf$$

with:

- OATd* : 10-year OAT deflated: the French risk-free rate adjusted for inflation
- rfr* : risk-free return
- inf* : the average long-term inflation rate
- OAT* : 10-year OAT: the French risk-free rate

In **Chronicle 26**, we examined why it was more appropriate to use the deflated OAT rather than the nominal OAT when analysing net income return.

Furthermore, we will refer to the difference between the net income return and the deflated risk-free rate as the deflated yield gap; see **Chronicles 26** and Figures 2 and 3 below:

$$(2) \text{nir} = \text{OATd} + \text{dyg} \leftrightarrow \text{dyg} = \text{nir} - \text{OATd}$$

with:

- nir* : net income return
- OATd* : 10-year OAT deflated: the French risk-free rate adjusted for inflation
- dyg* : deflated yield gap

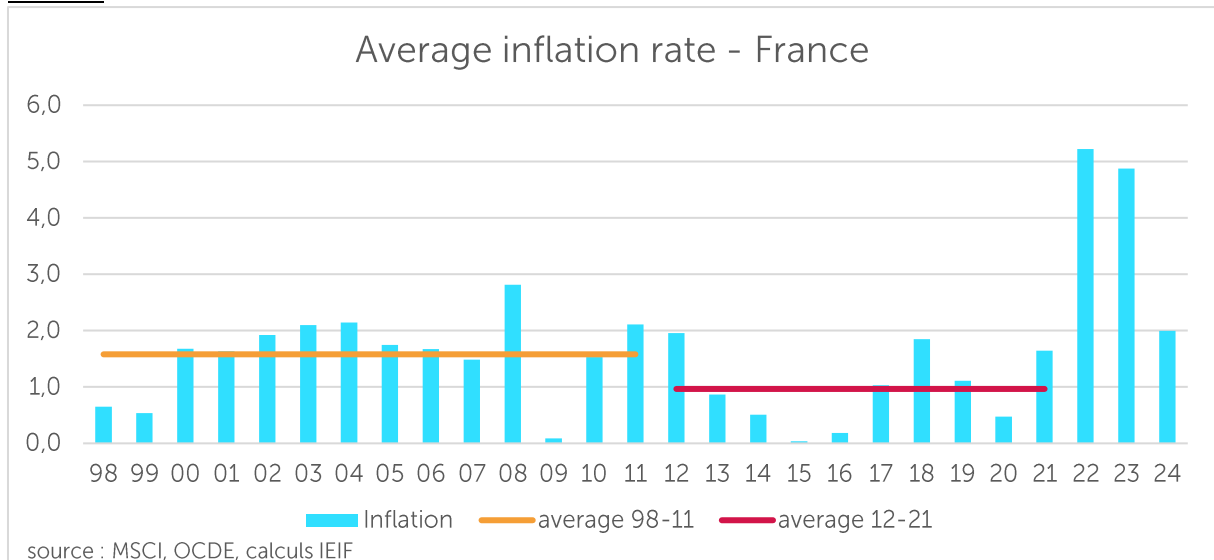
If we extend the analysis of the deflated yield gap to the two periods highlighted in **Chronicle 28** (1998–2011 and 2012–2021), the question is whether this indicator remains relevant despite the structural break observed between these two periods.

Which inflation rate should be used for these two periods?

Let us begin by examining the inflation patterns specific to each of the two periods.

As inflation was significantly lower between 2012 and 2021 than between 1998 and 2011, it is not possible to use the average of 1.6% applied to the first period. Indeed, over the second period, average inflation stood at around 1% (Chart 1).

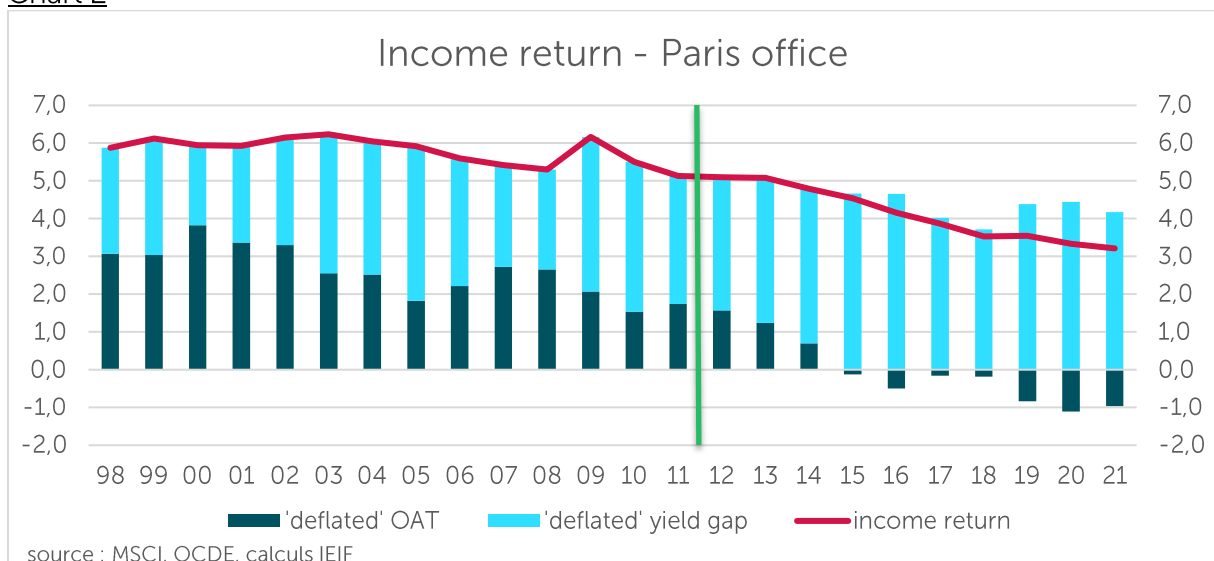
Chart 1



We therefore deflate the OAT by 1.6% over the period 1998–2011 and by 1% over the period 2012–2021.

Consequently, the deflated OAT, which remained significantly above 1% over the first period, turns negative over the second. In other words, the risk-free rate no longer protects against inflation (Chart 2).

Chart 2



The deflated yield gap: is the divergence set to continue?

The key question, then, is this:

does adjusting the OAT for inflation eliminate the break observed in the yield gap between the 2000s and the 2010s?

The answer is no.

Despite the use of the deflated OAT, the break in the level of the yield gap persists between the 2000s and the 2010s, although it is less pronounced. Indeed:

- the undeflated yield gap (Chart 3) is around 150 basis points (bp)
- the deflated yield gap is reduced to around 100 bp (Chart 4)

This reduction is significant, but it does not call into question the fundamental diagnosis. The break cannot be explained primarily by an increase in property risk, but more likely by monetary and financial factors (**Chronicle 28**).

Chart 3

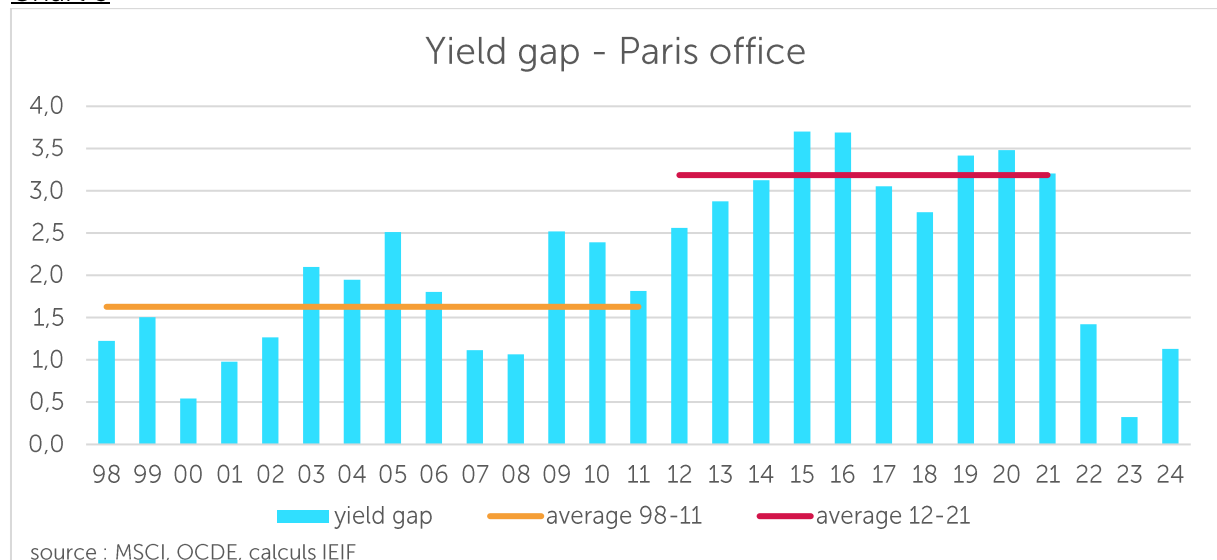
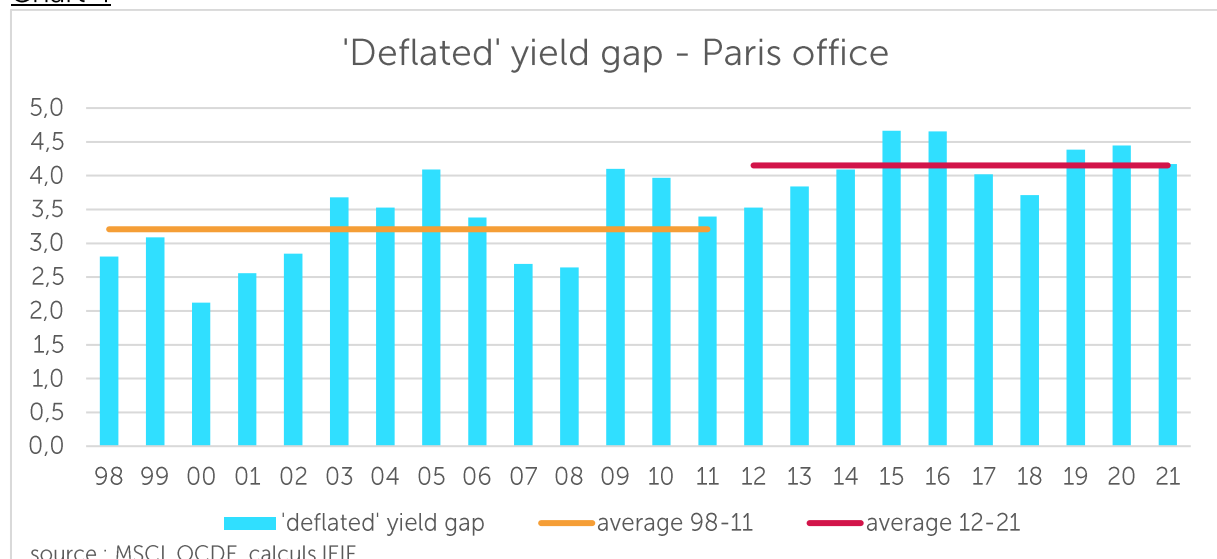


Chart 4



We will continue our analysis of the adjustment for the yield gap by inflation. Although this adjustment does not fully explain the break, it does reduce its magnitude.

Furthermore, there are other methods for accounting for the effect of inflation, which we will examine in our forthcoming Chronicles.

These chronicles are linked to my activity at the IEIF, a Paris based think tank on real estate where I conduct research into the modelling of major property variables.

For those less familiar with property analysis, these chronicles can be a source of information and a knowledge base. For experts in the field, their purpose is to launch discussions and exchanges on the various subjects I cover.

Some of the chronicles will be based on known and familiar elements, while others will deal with research elements and present some of the results of my work.