

CHRONIQUE N°24

Income return: introduction

The foundations on which our Chronicles are based, summarised in **Chronicle 5**, explain that total return can be expressed as follows:

From an accounting perspective:

$$(1) \quad tr = ir + cr \cong ir + (1 + \partial nrv) \cdot (1 + \partial occ) / (1 + \partial ir) - 1 - capex\%$$

with:

- tr : total return
- ir : income return
- cr : capital growth
- ∂nrv : the growth rate of net rental value
- ∂occ : the growth rate of occupancy rate
- ∂ir : the growth rate of income return
- $capex\%$: the capex rate (capital expenditures on capital value)

From a financial perspective:

$$(2) \quad tr = rfr + \pi$$

with:

- tr : total return
- rfr : risk-free return
- π : risk premium

Chronicles 10 to 23 deal in detail with the analysis of net operating income, which is an essential component of total return and capital return. We will now analyse the other key component of total return, namely income return and its growth rate.

As a reminder, **Chronicle 2** discusses the link between risk premium and yield gap. If we define yield gap as the difference between net income return and risk-free rate, and risk premium as the difference between total return and risk-free rate, then risk premium is equal to yield gap plus capital return:

$$(3) \text{ } ir = rfr + yg$$

with :
 ir : income return
 rfr : risk-free return
 yg : yield gap

Combining equations (1), (2) and (3) gives:

$$(4) \text{ } yg = \pi - cr \leftrightarrow \pi = yg + cr$$

All previous Chronicles are available on the IEIF website:

<https://www.ieif.fr/actualites/theories-et-modelisations-immobilieres>

The next Chronicles will offer analyses of income return from a financial perspective.

The income return will be analysed as the sum of the risk-free return and a yield gap (equation (3)). The 10-year government bond yield will typically represent the risk-free return (rfr) in our graphical illustrations. The yield gap will represent a form of compensation for the risk that the investor is willing to take by purchasing a real estate asset.

When I buy a government bond, I am guaranteed to receive income corresponding to the risk-free return " rfr ", whereas when I own a property, I receive uncertain income corresponding to the income return " $ir = rfr + yg$ ". This income return must be higher than the risk-free return in order to compensate for, for example, the risk of temporary or long-term vacancy. In this context, the greater the risk taken, the higher " yg " must be.

Chart 1

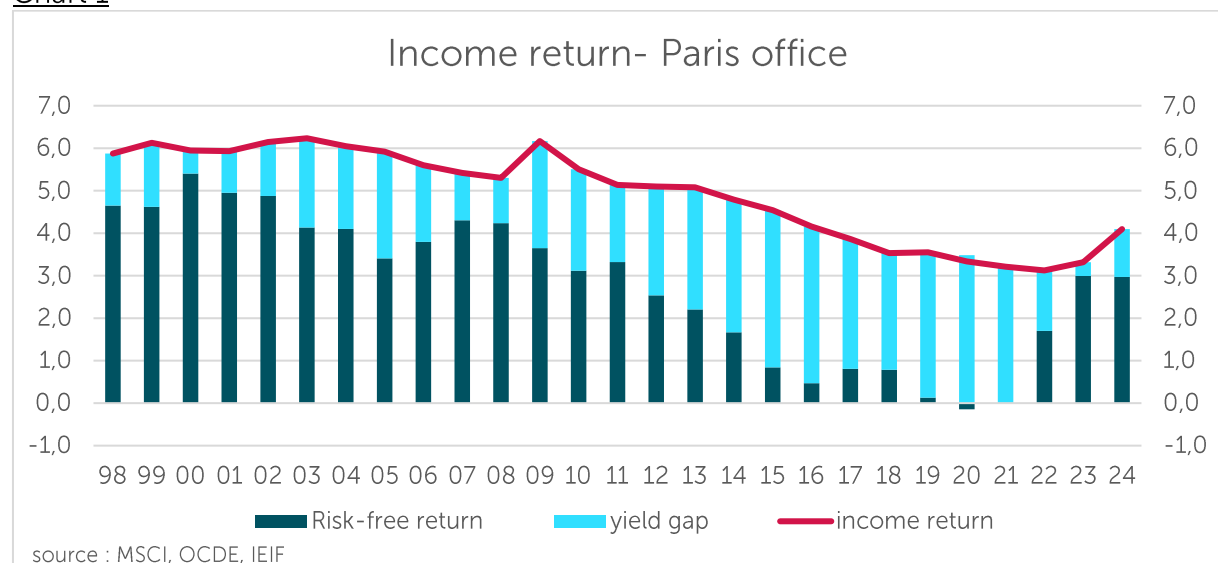
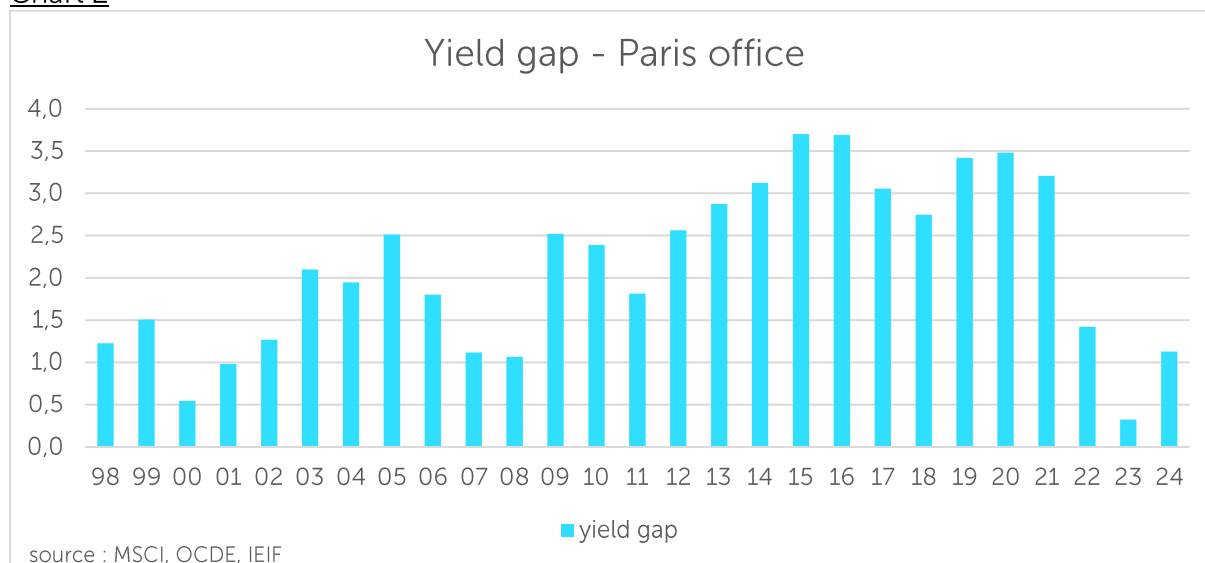


Chart 2



The change in income return is therefore expected to be the sum of two distinct underlying dynamics: the risk-free return and the yield gap.

Chart 1, showing income return, clearly illustrates the downward trend in risk-free returns, which ranged between 4% and 5% in the early 2000s and were close to 0% between 2019 and 2021, before rising sharply to 3% in 2024. Visually, we can see that income return followed a similar trajectory to risk-free returns, but at a higher level: stable at around 6% in the early 2000s, then declining until 2020-2021 before rising sharply.

Chart 2, meanwhile, shows us a rather cyclical gap, with lower levels in the 2000s than in the 2010s. Insofar as we want to see the yield gap as compensation for property risks, we can hypothesise that perhaps the Paris office market was riskier in the 2010s than it was in the 2000s.

The next Chronicles will focus on analysing, modelling and understanding the dynamics of three variables: income return, risk-free return and yield gap. We will begin by studying the dynamics of yield gap.

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.