REAL ESTATE THEORY AND MODELLING

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CHRONICLE N°27

Income return: the yield gap in the 2010s

The difference between the net income return and the risk-free rate (the 10-year government bond rate) is referred to as the yield gap (see **Chronicles 2 and 24**, Figure 1):

$$(1)\ ir = rfr + yg \leftrightarrow yg = ir - rfr$$

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

Chronicle 25 showed that during the 2000s, the yield gap in Paris office market fluctuated around a long-term average of 150 basis points and that its short-term dynamics closely followed the growth rate of rents.

What about the 2010s?

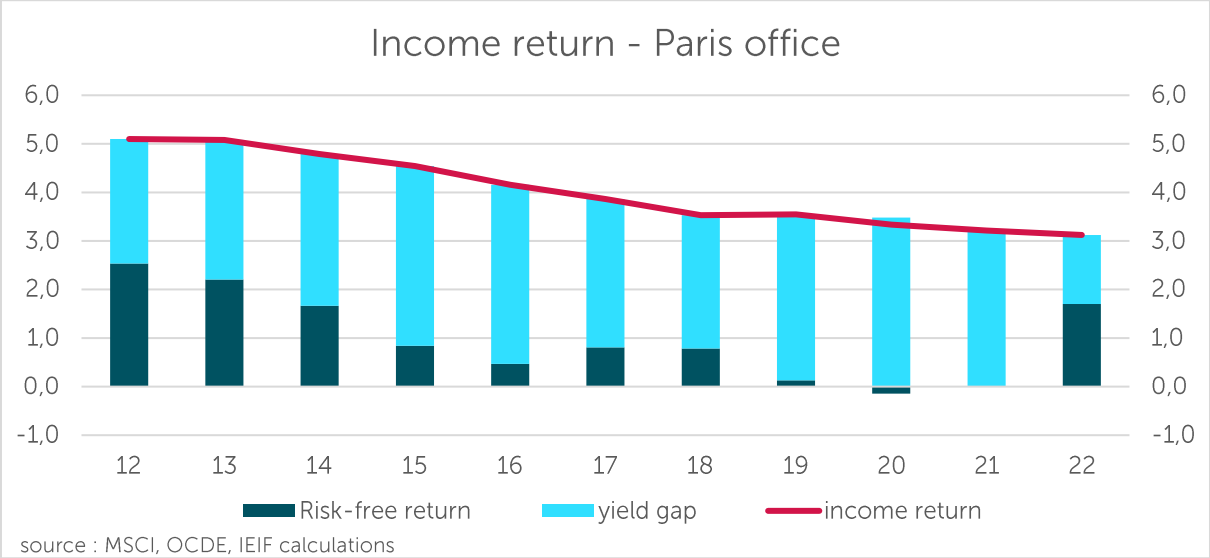
We will discuss the structural break—marked by a doubling of this long-term average—in **Chronicle 28**. For now, let's focus on the similarities and differences in the dynamics around this average.

The yield gap as the sum of cyclical and structural risk factors

Unlike in the 2000s, the gap in the 2010s has widened significantly, to around 300 basis points (Chart 2). This major structural shift will be the subject of our next Chronicle.

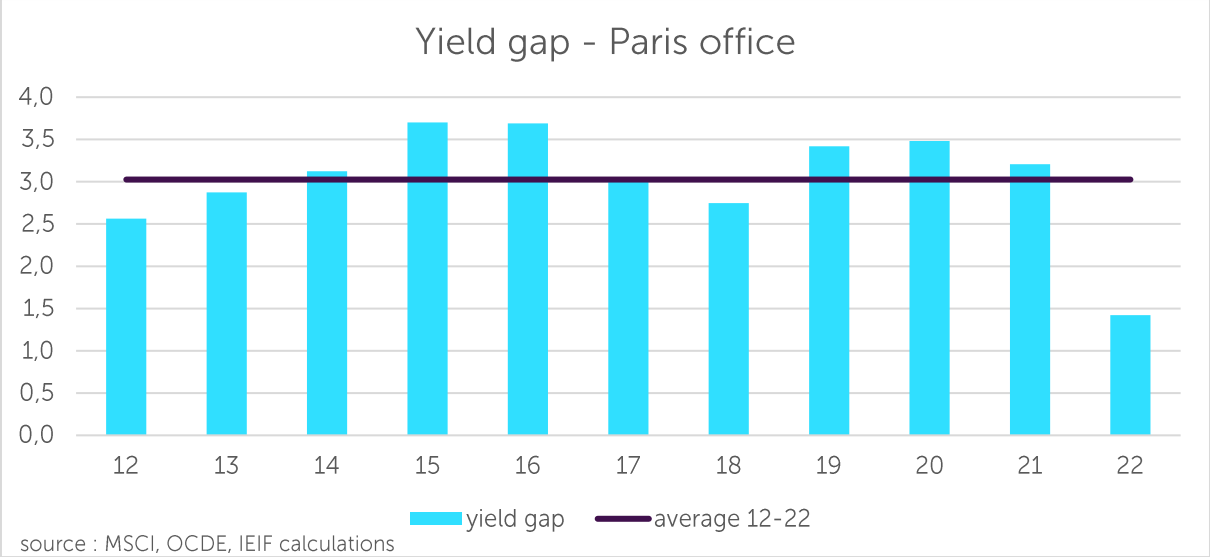
Logically, the gap between the observed rate and its long-term average should reflect the real estate market short term evolutions: when rents are under pressure, perceived risk decreases and the gap narrows below its average; conversely, in periods of weak growth, it widens above its average.

Chart 1



source : MSCI, OCDE, IEIF calculations

Chart 2



source : MSCI, OCDE, IEIF calculations

We postulate that the yield gap results from two distinct dynamics: a long-term component, which is stable and represented by the historical average of the spread, and a short-term component, which is sensitive to the real estate market cyclical risk factors. The yield gap can therefore be modelled as follows:

$$(2)\ yg = yg(ST) + yg(LT) = rf(cycl.) + rf(struc.)$$

with:

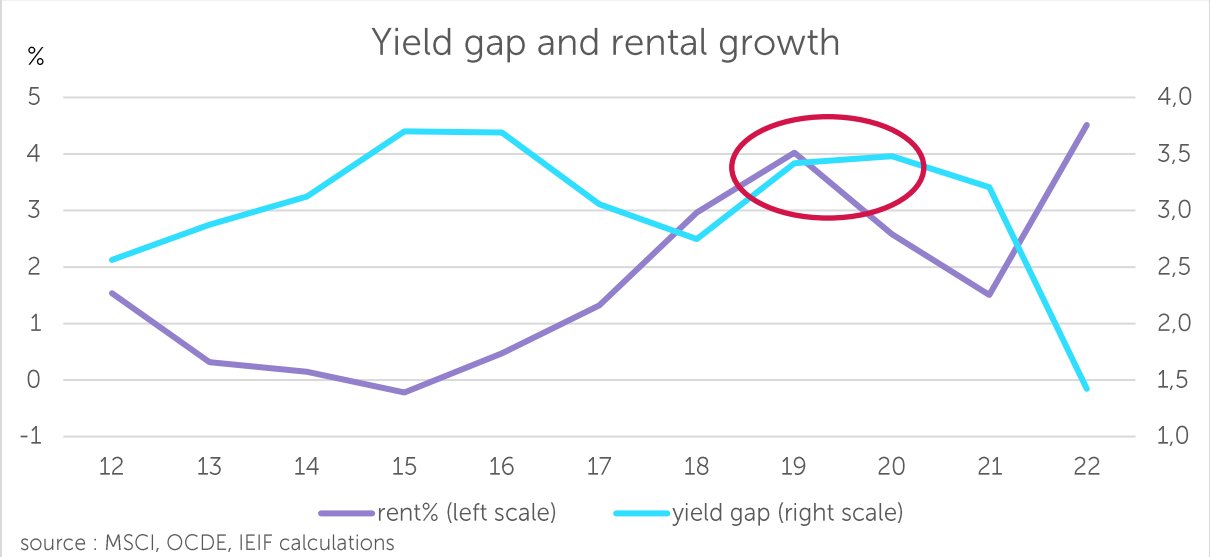
yg	: yield gap
yg(ST)	: short-term explanations
yg(LT)	: long-term explanations
rf(cycl.)	: cyclical risk factors
rf(struc.)	: structural risk factors

The implications and explanations of this modelling were detailed in **Chronicle 25**.

In the illustration below, I focus solely on rent dynamics as an indicator of cyclical risk, although other factors – depending on the market, period or product type – may also play a decisive role. Nevertheless, rent dynamics remain a key indicator for assessing the economic health of a market.

Chart 3 confirms, up to 2018 and then from 2021 onwards, the strong inverse correlation between the rate of growth in rents and the yield gap: when rent growth slows, the yield gap tends to widen, and vice versa.

Chart 3



source : MSCI, OCDE, IEIF calculations

But then, how should we interpret the atypical points observed in 2019 and 2020, which seems to break with this logic?

The entire increase in the yield gap observed in 2019 can be explained by the sharp fall in the risk-free rate.

An apparent paradox: a high yield gap despite rents rising.
In 2019 and 2020, the levels and variations in the yield gap should normally have reflected a struggling property market, resulting in weak rent growth or even a decline. However, in 2019, there was a marked acceleration in average rents (+3.5%). In 2020, although the pace of increase slowed, growth remained strong (+2.6%).

The pandemic: an insufficient explanation.
If we were to limit ourselves to 2020, the answer would be obvious: the health crisis introduced a major macroeconomic risk, pushing the yield gap upwards despite the resilience of the property market. But this reasoning does not hold true for 2019, as the pandemic only emerged in December 2019 and did not significantly affect the economy until 2020. So how can we explain the anomaly in 2019?

The key role of the risk-free rate.
A close examination of Chart 1 reveals that between 2018 and 2019, the net income return remained stable at 3.5%, while the risk-free rate fell on average from
0.8% to 0.1%, then to -0.1% in 2020. The sharp decline in 2019 was the result of active government bond repurchase policies by the Central Bank to stimulate economic growth. Thus, the entire increase in the yield gap in 2019 was due to the rapid and unprecedented decline in the risk-free rate, which reached historically low, even negative, levels.

Towards a new avenue of analysis.
This observation led me to reconsider the impact of the 'abnormal' evolution of the risk-free rate, rather than searching in vain for new real estate risk factors to justify the increase in the yield gap.

A key to understanding the 2000s and 2010s.
At the end of this series of Chronicles, we will see that this same factor sheds light on the anomaly of 2019, partially that of 2020 (where the Covid-19 effect persists, which is logical), and the difference in average levels between the 2000s and 2010s — a subject we will explore in more depth in our next Chronicle.

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.