

## CHRONICLE N°16

### Net operating income: discussion of the assumption that rent indexation and growth in management costs are identical

In previous Chronicles we made the simplifying assumption that rent indexation was equal to the rate of growth in management costs.

- Rent indexation = management cost growth rate ( $ri\%=mc\%$ )

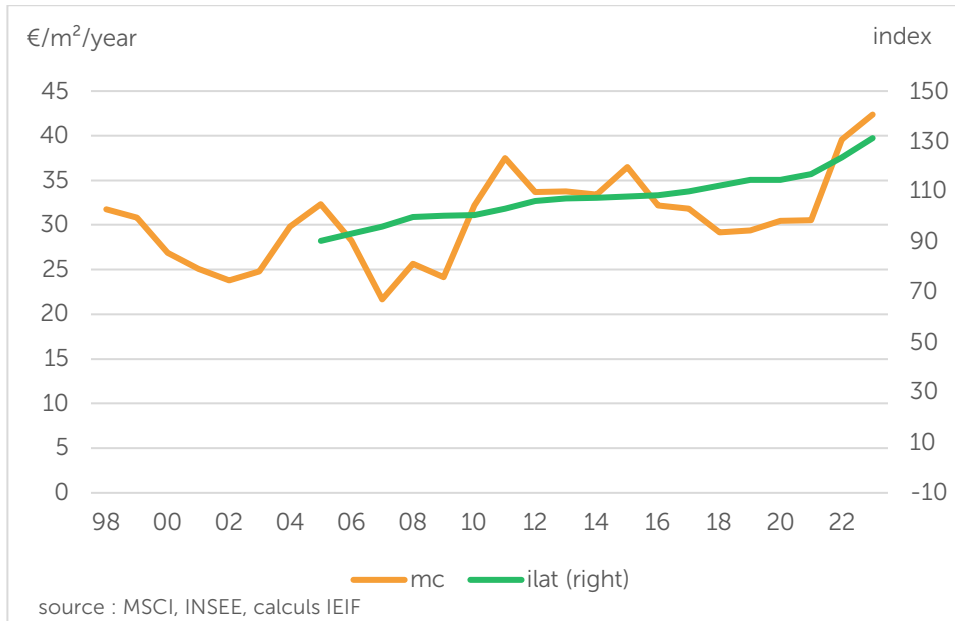
There is no reason why this should be true.

Let's look at an example (which cannot be generalised, as each market may behave differently). As we have done since the beginning, we will work on the Paris office market sector, selected by MSCI, for the net operating costs series. As far as rent indexation is concerned, since we are in the French market, we will use the *ilat* (see Chronicle No. 10).

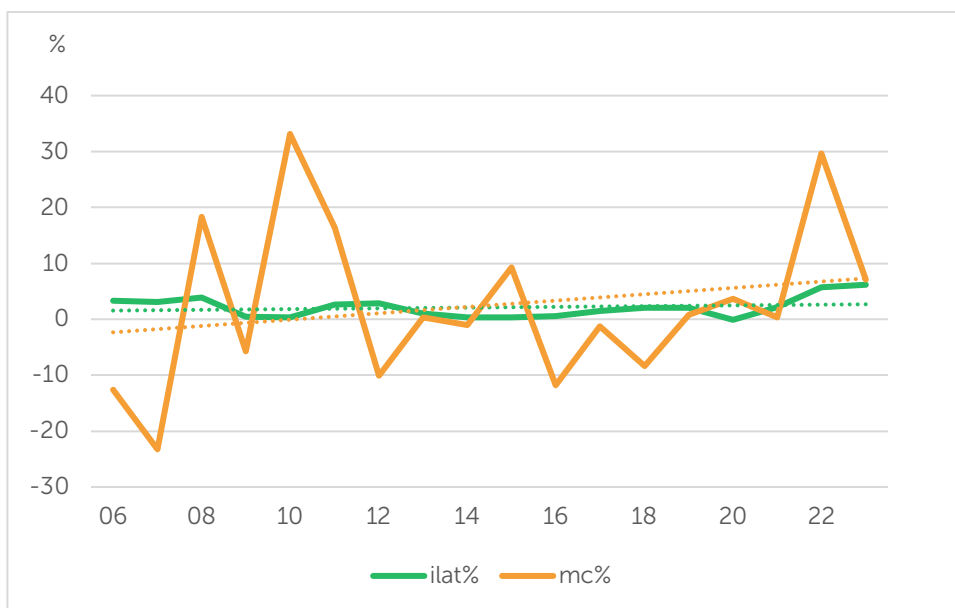
**The *ilat*, produced by INSEE**, is an aggregate of indices: 50% Consumer Price Index (CPI) + 25% Construction Cost Index (ICC) + 25% GDP Price Index. While the consumer price index and the GDP price index are broad indices that are highly representative of price trends in France, the ICC targets construction, and therefore a whole range of energy-intensive intermediate goods (cement, concrete, steel, glass, etc.). The ICC is therefore highly sensitive to changes in energy prices.

**Net operating costs as defined by MSCI** essentially cover taxes, insurance and other fixed costs, maintenance costs, tenant search costs, and management and administration costs.

Let's look at these two series in terms of levels and then rates of change.



There is a strong similarity in the upward trend, with very high variability in management costs. The acceleration in inflation at the end of the period is also visible. Let's take a closer look at these trends, based on their growth rates.



At first glance, it might seem difficult to compare these two series, given the differences in their variability. However, when we add their linear trend (dotted line) we see that they are both similar and different. In this example, management costs are growing slightly faster than rent indexation.

In fact, the average growth rate between 2006 and 2023 is 2.1% for ilat and 2.5% for management costs.

Whereas, if I stop in 2021, before the inflationary phase, these same average growth rates (2006-2021) were 1.6% for ilat and only 0.5% for management costs.

This does not tell the same story at all, and this high degree of variability is problematic when it comes to drawing general and definitive conclusions.

### **Management costs seem to have been under control overall until 2021, and the arrival of the inflationary phase has generated a significant catch-up.**

*If you have any explanations for this phenomenon (control then catch-up), please feel free to share them in comments on LinkedIn.*

Let's now look at the actual impact of these different growth differentials, between ilat and management costs, on net operating income in the absence of support measures and vacancy (Chronicle No. 13). As you will recall, in that Chronicle we assumed that rent indexation was equal to the rate of growth in management costs, which meant that, all other things being equal, the rate of growth in net rental income was equal to rent indexation.

We know that this assumption is wrong, but does it call into question the approximation that, **all other things being equal, the rate of growth in rental income is almost equal to the indexation of rents?**

Let's go back to the equations in **Chronicle 13**:

$$\begin{array}{ll} \text{Period 1} & : noi_{0,1} = nrv_{0,1} - mc_{0,1} \\ \text{Period 2} & : noi_{1,2} = nrv_{1,2} - mc_{1,2} = nrv_{0,1} \cdot (1 + ri\%) - mc_{0,1} \cdot (1 + mc\%) \end{array}$$

with:

- $noi$  : net operating income
- $nrv$  : net rental value
- $mc$  : management costs
- $ri\%$  : rent indexation
- $mc\%$  : management costs growth rate

To illustrate the small impact of this difference in growth rates, I'll continue with the example of MSCI's Paris offices.

I'm going to take the minimum, average and maximum data for net rental values and management costs to cover the whole range of past data. With regard to the respective growth rates of ilat and management costs, I will highlight two very different cases:

2006-2023: ilat% = 2.1% and mc% = 2.5%  
and 2006-2021: ilat% = 1.6% and mc% = 0.5%.

Table 1:  $ri\% = 2.1\%$  and  $mc\% = 2.5\%$ .

	Period 1			Period 2			noi%	gap ri%-noi%
	nrv	mc	noi1	nrv.(1+ri%)	mc.(1+mc%)	noi2		
Min	406,7	21,7	385,0	415,2	22,2	393,0	2,0775	0,0225
Avg	493,6	31,8	461,8	504,0	32,6	471,4	2,0725	0,0275
Max	654,8	42,4	612,4	668,5	43,5	625,0	2,0723	0,0277

Source MSCI calculations IEIF

Table 2:  $ri\% = 1.6\%$  and  $mc\% = 0.5\%$ .

	Period 1			Period 2			noi%	gap ri%-noi%
	nrv	mc	noi1	nrv.(1+ri%)	mc.(1+mc%)	noi2		
Min	406,7	21,7	385,0	413,2	21,8	391,4	1,6620	-0,0620
Avg	493,6	31,8	461,8	501,5	32,0	469,6	1,6757	-0,0757
Max	654,8	42,4	612,4	665,2	42,6	622,6	1,6762	-0,0762

Source MSCI calculations IEIF

It can be seen that, in the range of actual values, the differences between indexation, in this case 2.1% or 1.6%, and the effective growth rate of net operating income (noi%) are very small, of the order of a hundredth of a percent...

This is to be expected, given that management costs account for only a small proportion of the rent (around 5 to 7%). Changes in management costs therefore have little impact compared with changes in rent.

**Therefore, even if the assumption that management cost growth rates are identical to rent indexation is wrong, we can still consider that indexation, all other things being equal, remains a very good approximation, on average, of the growth rate of net rental income.**

And, in the general case (see Chronicle no. 15), we find that:

$$(1) \leftrightarrow noi\%_{t,t+1} \cong (1 + ri\%) \cdot \frac{occ\%_{t,t+1}}{occ\%_{t-1,t}} - 1$$

with :  $occ\%$  : occupancy rate:  $occ\% = (1 - vac\%)$

**Under all the simplifying assumptions made since Chronicle 11, the core of net income growth depends essentially on rent indexation and occupancy rate growth.**

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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.