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EUROSISTEMA

# Measuring the commercial property prices in Italy: evidence from a transaction based approach

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# Outline of the presentation

1. Main features of the commercial property market in Italy
2. A review of available sources on commercial property prices in Italy
3. Towards the computation of a quarterly index: preliminary results
4. Some simple validation tests and recent trends
5. Agenda for future research



# 1a. Main features of the RE in Italy

<b>Stock and transactions of construction units in Italy - 2016</b>					
<i>(thousands of units where not otherwise specified)</i>					
<b>Destination of use</b>	<b>Stock</b>	<b>% shares</b>	<b>Transactions</b>	<b>% shares</b>	<b>Turnover</b>
	<b>(A)</b>		<b>(B)</b>		<b>(B/A)</b>
<b>Residential</b>	33882	51,3	444	46,1	1,31%
<b>Box, cellars and others</b>	23440	35,5	345	35,8	1,47%
<b>Office</b>	664	1,0	9	0,9	1,36%
<b>Retail</b>	2833	4,3	26	2,7	0,92%
<b>Industrial</b>	776	1,2	9	0,9	1,16%
<b>Not else classified</b>	4438	6,7	130	13,5	2,93%
<b>Total</b>	66008	100	964	100	1,46%

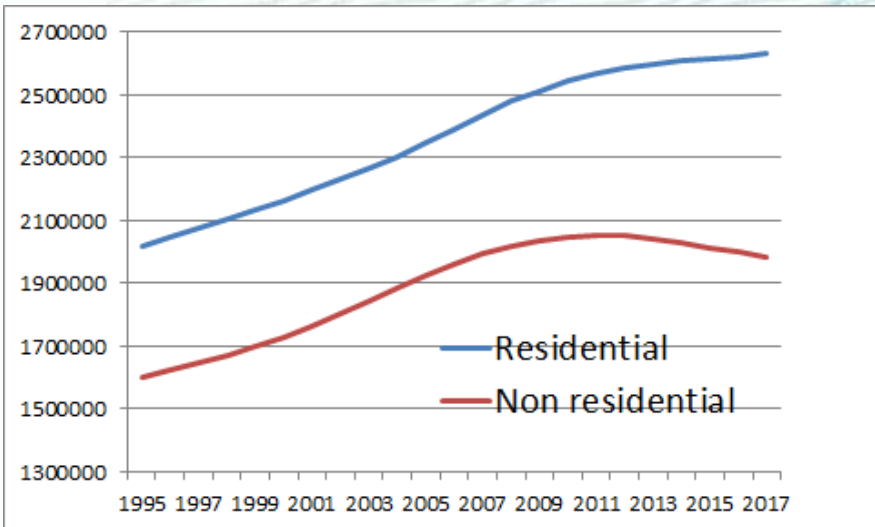
In 2016 construction units in the Office, Retail and Industrial markets stood for 6.5% of total stock and 4.5% of total transactions (respectively against 87% and 82% for dwellings+box, cellars and others).

The turnover index (transactions to stock ratio) was relatively higher for the Office units than for the Industrial and Retail ones; for the three types the index averaged 1.2% (almost 1.4% in Residential + box).

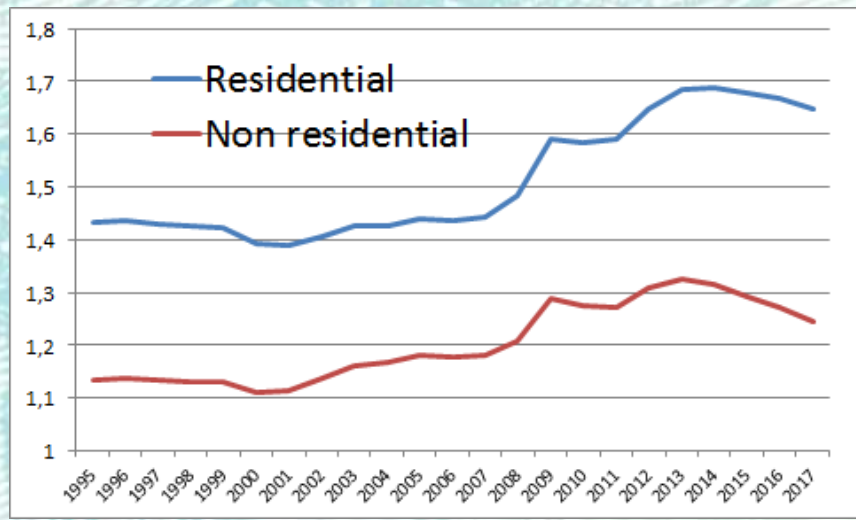
# 1b. Main features of non residential market in Italy

## Construction stock in national accounts

Millions euro; chained values, 2010 reference year



Ratios to GDP



According to national accounts, in 2017 the chained value of the stock of non residential constructions was around 200billions euro against around 260 for residential stock, with a widening gap since 2009.

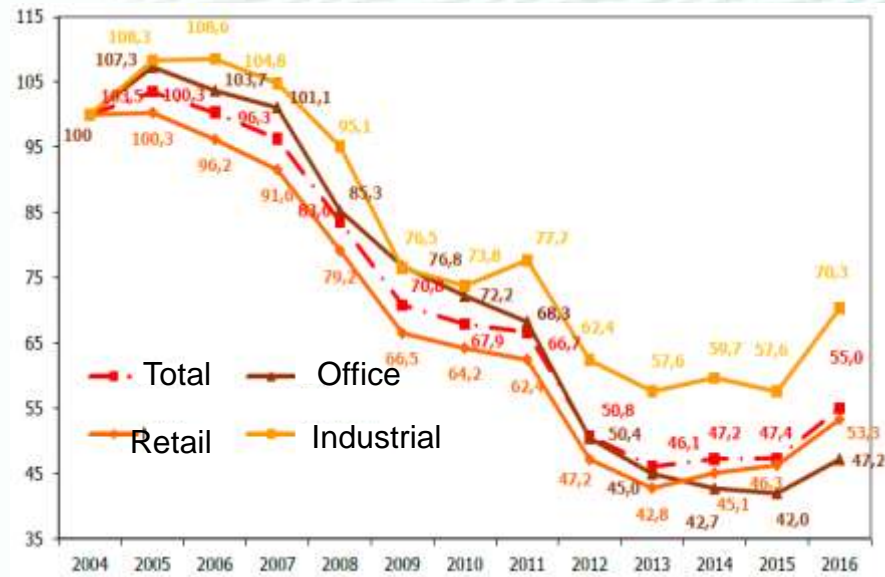
The ratio to GDP, after the brisk increase since 2000, started to decline in 2014; in 2017 it was slightly above 1.2 for non residential stock and 1.6 for the residential units.



# 1c. Main features of non residential market in Italy

## Recent developments on the non residential markets

Number of transactions; indices 2004=100



Ratios of transactions to stock



Since the Financial crisis all components registered a huge drop in the number of transactions and in the "mobility" of ownership as proxied by the turnover index (ratio of number of transactions to stock of units)...

...with a partial recovery started in 2014 in the retail and industrial segments, gradually interesting also the remaining components

## 2a. Data sources on commercial property market in Italy

✓ No official data currently available.

✓ Three main sources of experimental data:

two private research institutes (*Nomisma* and *Scenari Immobiliari*)



a government agency (*Agenzia del Territorio*) jointly with *Assilea*  
(Association of Italian leasing operators)

✓ All of them follow a transaction based approach, but with

- **different methodologies**

*Nomisma* collects data on prices actually paid in transactions directly from a sample of real estate agencies;

*Scenari Immobiliari* computes average prices based on public advertisements: under the assumption that a property is sold when it ceases to be offered, its sale price is estimated by a mathematical model that considers the time it has been on the market and any change in the price (calculated by reference to a single location) during the period concerned

*Agenzia del Territorio* (plus *Assilea*) collects data from individual transactions and leasing contracts



## 2b. Data sources on commercial property market in Italy

(Continued)

- **different time and space coverage**

*Nomisma* collects data since the early nineties for 13 large municipalities and 13 intermediate ones;

*Scenari Immobiliari* computes average prices since the middle nineties for virtually all province capital and major non capital municipalities

*Agenzia del Territorio* (plus Assilea) computes aggregate data since 2007 for virtually all the country, but with a partial coverage of total transactions: in 2010 registered contracts have been 8000 or some 20% of the total value of estimated turnover; experimental data are available since 2003.

- **different frequencies and timeliness**

*Nomisma* releases semiannual data one month later the end of reference period

*Scenari Immobiliari* releases monthly data with one month delay

*Agenzia del Territorio* (plus Assilea) publishes: i) annual weighted data with 5 months delay (covering years since 2007); ii) semiannual individual (for periods since S1-2003) with around three and four months delay respectively for the first and the second semester

## 2c. Data sources on commercial property market in Italy

(Continued)

- **different market segments**

*Nomisma* monitors Retail and Office units, providing simple average prices for the two types in isolation;

*Scenari Immobiliari* monitors Retail, Office and Industrial units, but destination is not codified and follows the unit description reported in the public advertisements; data are publicly available for the sole Total market

*Agenzia del Territorio* (plus Assilea) covers Retail, Office and Industrial units and adopts the same unit classification as in the codes of the national register (*Catasto*)

	Office		Retail			Industrial
Tipologie edilizie	Uffici	Istituti di credito	Negozi	Edifici commerciali	Alberghi	Capannoni
Categorie Catastali	A10	D5	C1 e C3	D8	D2	D1 e D7



# 3a. Computing a quarterly indicator for commercial property prices in Italy

Desired properties:

- i) representativeness of country-wide trends
- ii) clear delineation of targeted markets
- iii) high reliability and accountability
- iv) good time coverage
- v) high frequency and timeliness

Our computation strategy :

starting from the annual data from *Agenzia del Territorio-Assilea* (AdT henceforth), that match properties i) to iii), exploiting contents of alternative sources to progressively move towards properties iv) and v)



## 3b. Computing a quarterly indicator for commercial property prices in Italy

**First step:** aggregate individual data released by AdT at the semiannual frequency to retropolate annual data from 2007 back to 2003; retrieve “AdT” semiannual data for the whole country, covering Office, Retail, Industry and Total (weighted average over the three) since S1\_2003.

We adopted a weighting scheme based on capital stock (or total transaction) shares of province capitals, with the elementary unit obtained as the simple mean of individual data available per province capital and market segment » Between 2007 and 2010 yearly averages of semiannual data match original annual data

**Second step:** retropolate semiannual “AdT” data from S1\_2003 back to S1\_1995 based on trend of *Nomisma* data; retrieve a long series of semiannual data for the whole country and the Office, Retail and Total non residential units.

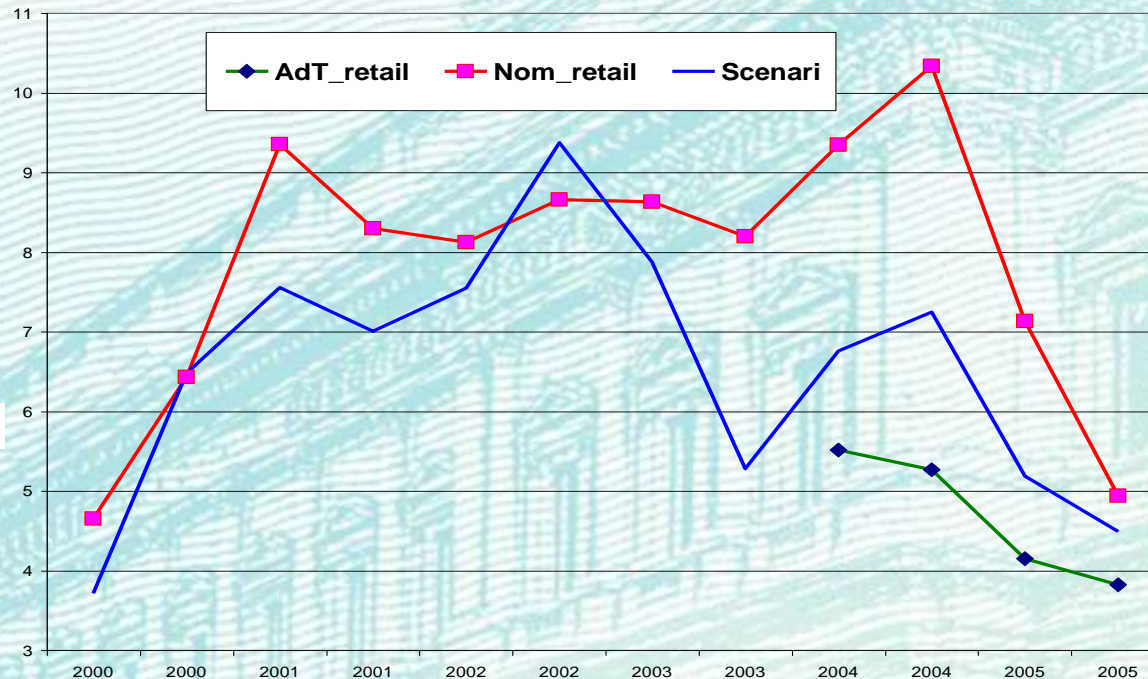
We first calculated “Nomisma-AdT” series for Office and Retail units since S1\_1995, then we obtained the weighted average of the two to proxy trend of Total units for periods earlier than S1\_2003.

**Third step:** obtain a quarterly indicator of commercial prices through temporal disaggregation of semiannual series based on Istat data for construction costs and Scenari Immobiliari data for prices of non-residential property; indicators refer to Office, Retail and Total units since Q1\_1995 (Industry data starts in Q1\_2003)



# 3c. Computing a quarterly indicator for commercial property prices in Italy

## Price Indicators for Retail Units (Total for Scenari Immobiliari) (% changes y-o-y)



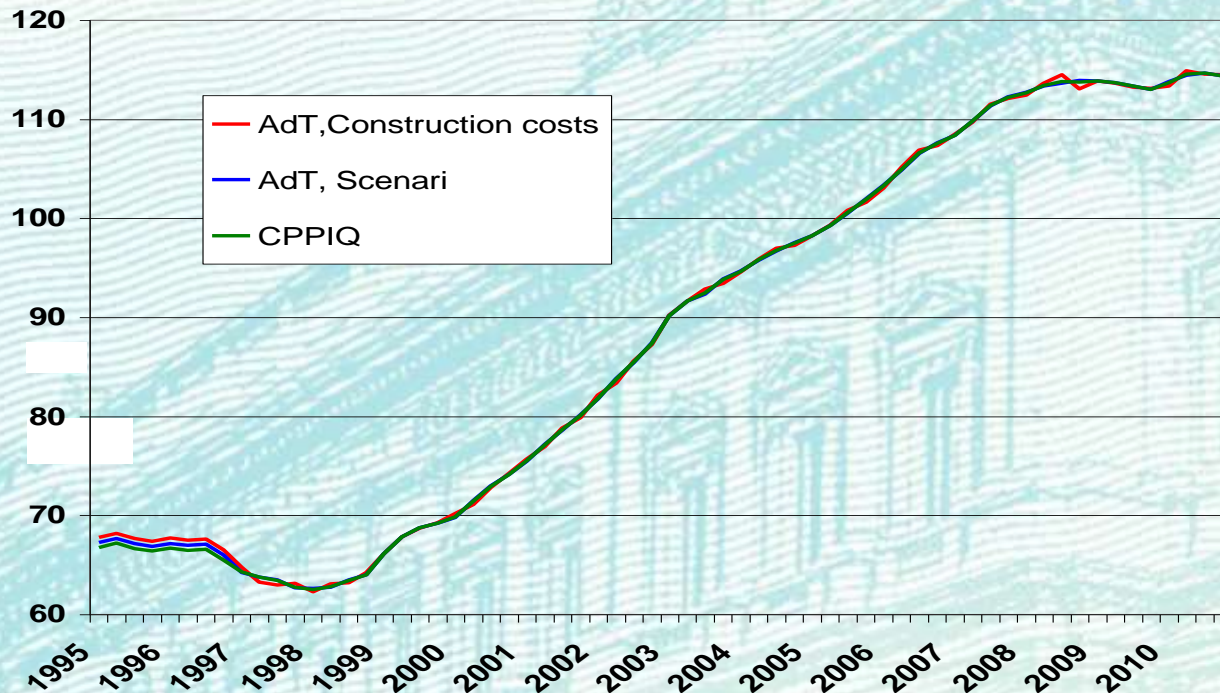
**Example:** the retail segment of non-residential market

Apart from temporary discrepancies, the three indicators signal a similar trend whenever they overlap. We strictly prefer to work with a AdT data, if available (memento ideal properties i)-iii)).

# 3d. Computing a quarterly indicator for commercial property prices in Italy

## A quarterly indicator for commercial property prices

(Total non residential market; index 2005=100)



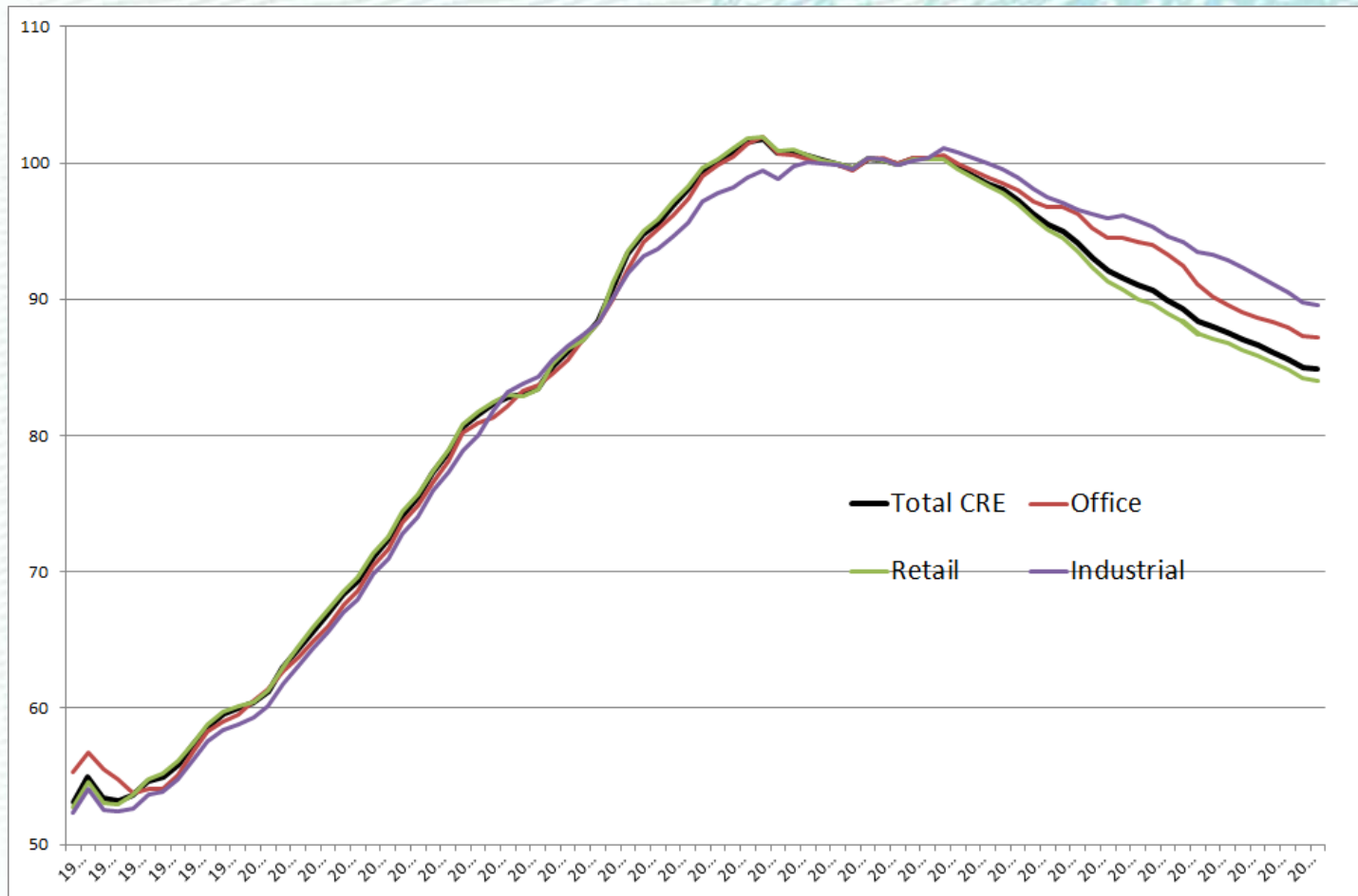
The quarterly indicator is indirectly estimated based on construction costs from Istat and on commercial property prices from *Scenari Immobiliari*. Results are only marginally different if only one of the two quarterly driver is adopted.



# 3d. Computing a quarterly indicator for commercial property prices in Italy

## The Bol experimental index of CRE prices

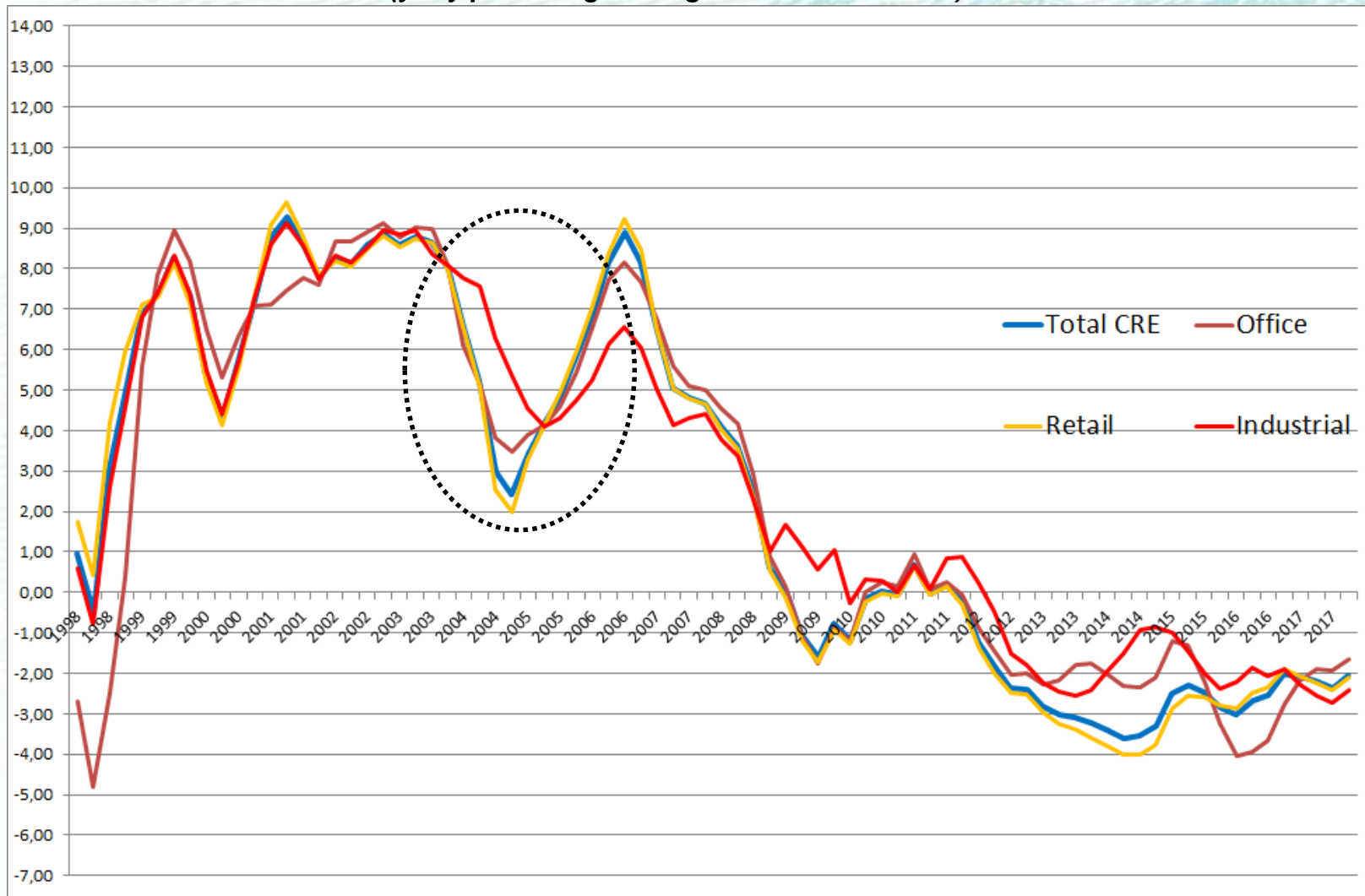
(levels at current values; indices 2010=100)



# 3d. Computing a quarterly indicator for commercial property prices in Italy

## The Bol experimental index of CRE prices

(y-o-y percentage changes at current values)

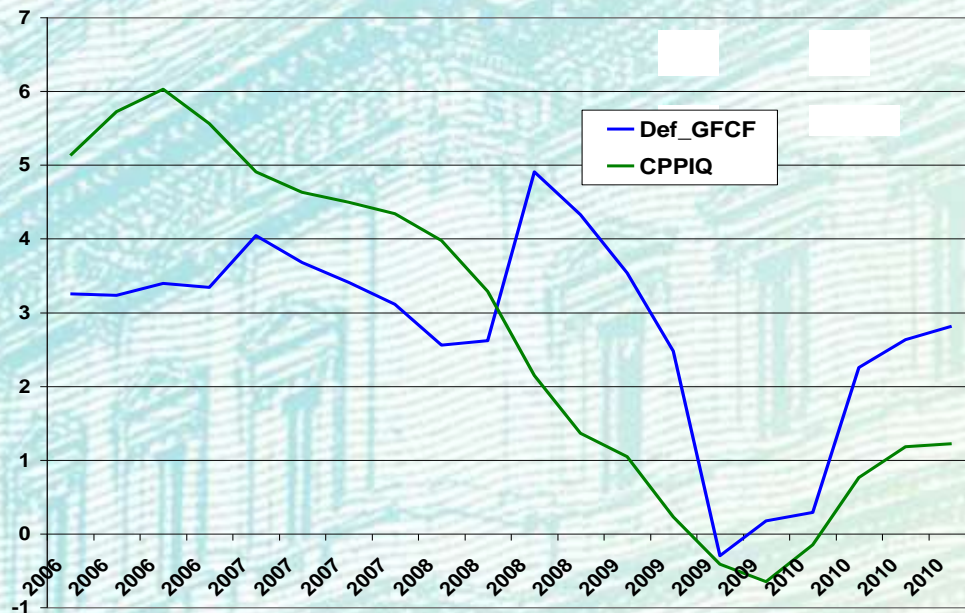
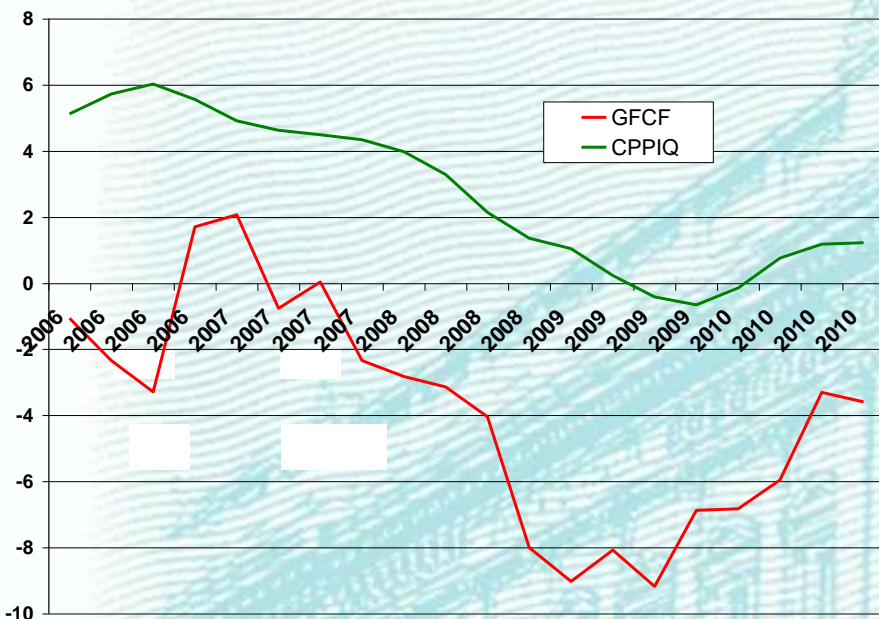




# 4b. Simple validation tests of the preliminary quarterly CPPI in Italy (confirmed by fresh evidence)

**Commercial property prices and non residential investment** (% changes y-o-y)

**Commercial property prices and deflator of non residential investment** (% changes y-o-y)



Comparison with gross fixed capital formation in non-residential construction does not reject the information content of commercial property prices, as for both investment and its deflator in national accounts.

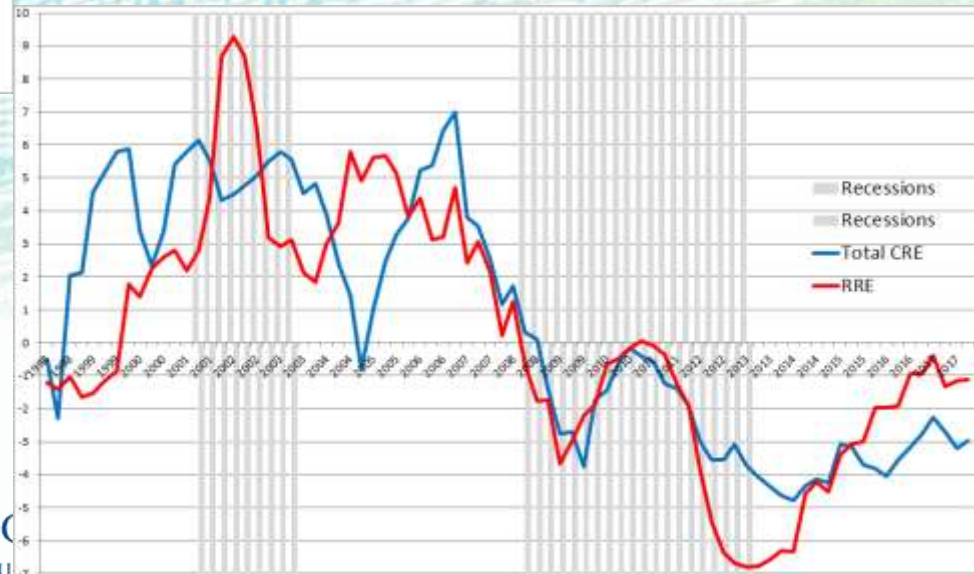
# 3d. Computing a quarterly indicator for commercial property prices in Italy

## The Bol experimental index of CRE prices vs RRE price index

(chained values; levels 2010=100)



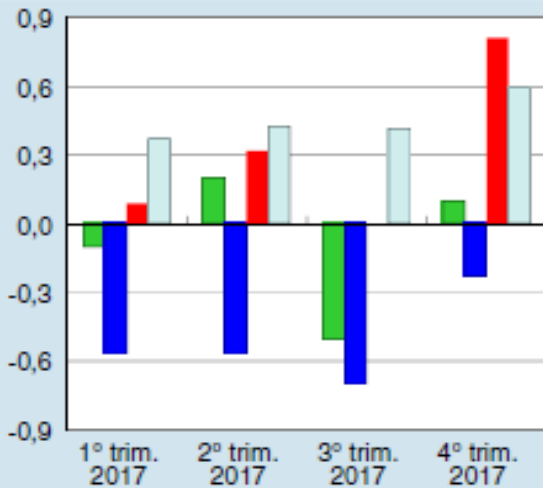
(chained values; y-o-y percentage changes)





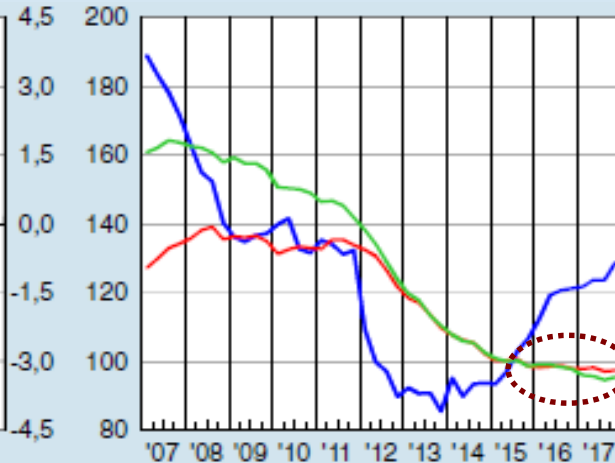
# The RE outlook is improving slowly...

(a) Total properties  
(percentage changes  
on previous period)



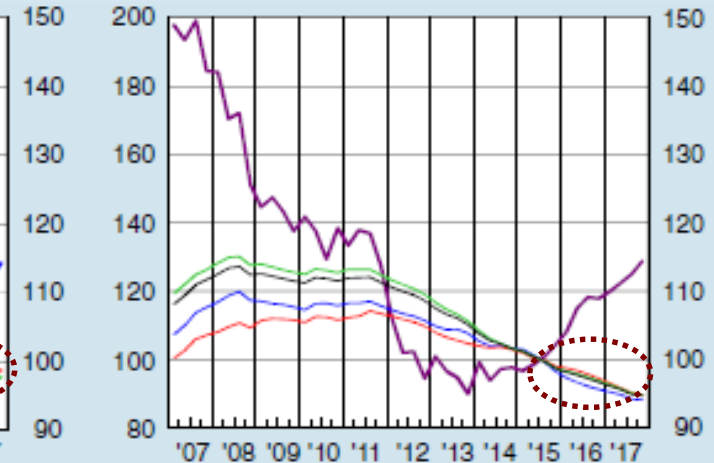
- House prices
- Non-residential property prices
- Residential property sales (2)
- Non-residential property sales (2)

(b) Residential property  
(indices: 2010=100)



- Number of sales
- Prices
- Real prices (3)

(c) Non-residential property  
(indices: 2010=100)



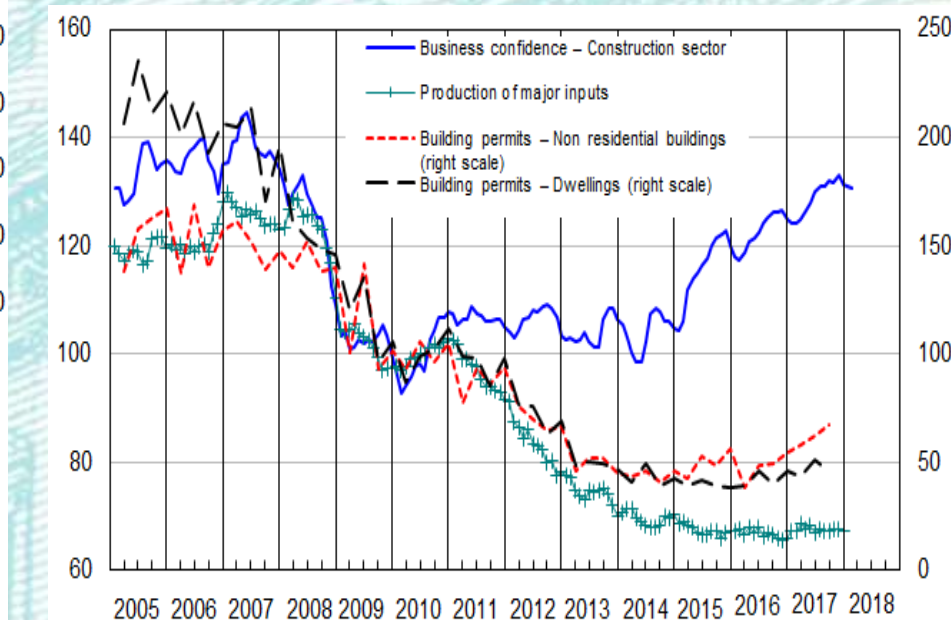
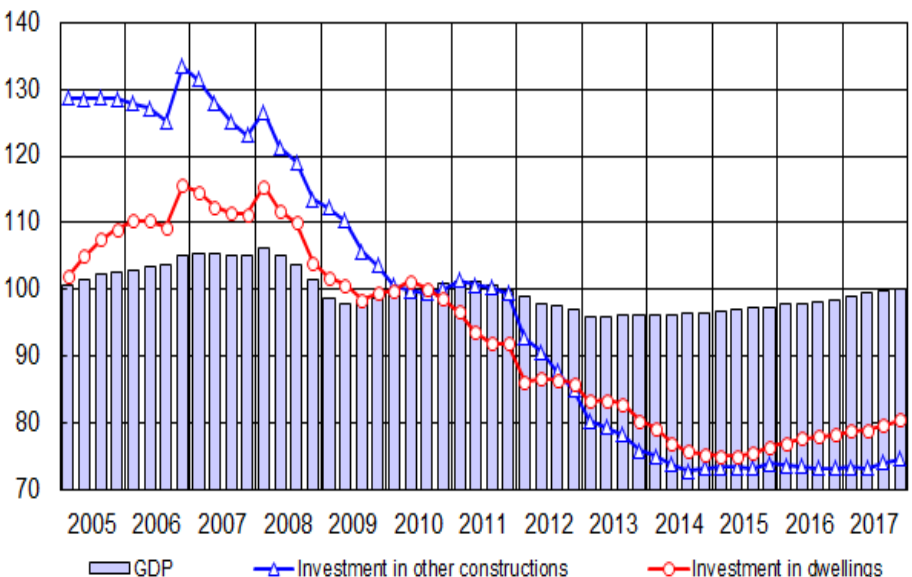
- Total number of sales
- Prices, tertiary property segment (4) (5)
- Prices, industrial property (4) (6)
- Prices, commercial property (4) (7)
- Prices, total market (4)

Although demand is picking up in both the residential and the commercial property markets, price trends are still negative, with sign of stabilization at the end of 2017.

Since the end of 2015 the gap of prices with respect to the recovery in demand is widening more in the CRE, likely to the still large number of unsold/idle units.

# ...more in quantity trends (including investment)

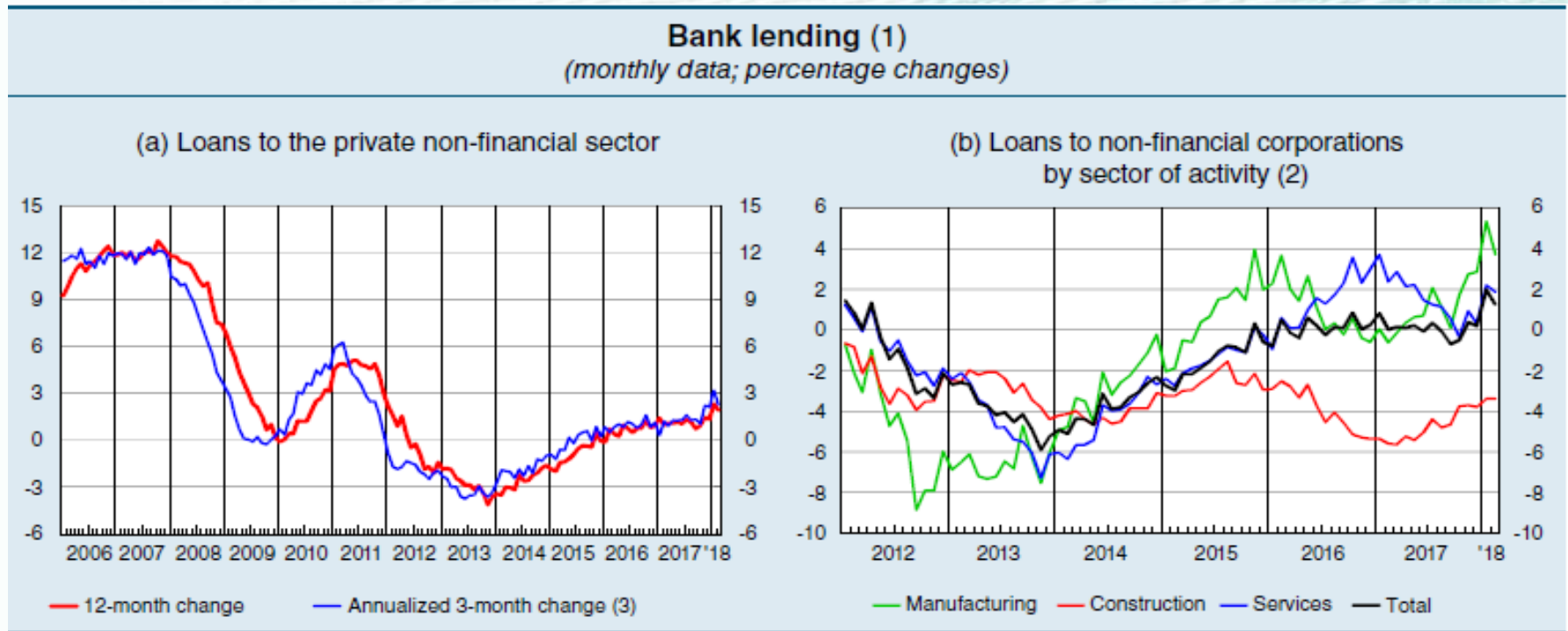
## GDP, construction GFCF and key short term indicators (levels 2010=100)



In line with the improved confidence of developers, construction (and investment) activity has resumed a moderate growth over the last year, possibly signal more positive perspectives on the Italian RE...with CRE still lagging somewhat behind



# The fall in public investment and the difficult conditions to credit are still negative factors



**Growth in bank lending to firms** stood at the annualized rate of 2.1 per cent in the three months ending in February 2018 and our surveys indicate a **strengthening in the demand for bank credit**, as a result of the stronger fixed capital formation.

However the increase in loans involved manufacturing and, to a lesser extent, service firms, as credit to construction firms kept reducing.

## 5. Agenda for future research

At the current stage of research, the quarterly indicator of commercial property prices in Italy is a preliminary outcome, that mostly suggests that combining pieces of information currently available from several sources can be a promising strategy towards a transaction based price index.

On top of the agenda for future research it is a sounder validation of the source data through a severe scrutiny of the underlying methodology. Some progress in this direction has been already achieved with *Agenzia del Territorio* and *Scenari Immobiliari*, but much work is still to be done.

In the same vein, comparison with advanced evaluation based data could provide further insights.

An accurate econometric analysis could compare the performance of transactions vs valuation based commercial prices to explain developments of non residential investments in Italy. Moreover, estimating a structural model could help understanding the risk of misalignments and...

...constant quality adjustment? Very challenging!







**....çok teşekkür**



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