

***In from the storm?
Dutch housing markets
weathering the crisis.***

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Housing markets around the world: The Netherlands are in mid-field.

The Economist house-price indicators
% change

	Latest on a year earlier	Q4 2008	1997- 2010*	Under(-)/ over(+) valued†
Hong Kong	27.7	-4.6	-16	49.1
Singapore	24.5	-4.7	9	19.6
Australia	13.6	-4.1	197	56.1
China	10.7	0.5	<i>na</i>	2.7
Britain	9.0	-14.9	180	31.2
South Africa	6.6	0.5	417	<i>na</i>
Switzerland	6.2	3.7	31	-7.1
Sweden	5.8	-2.0	159	37.0
New Zealand	1.1	-8.9	105	<i>na</i>
Canada	0.9	-0.1	68	21.8
United States (Case-Shiller ten-city index)	<i>nil</i>	-19.2	97	3.9
Germany	-0.4	1.1	<i>na</i>	-14.6
Netherlands	-2.0	-5.4	86	20.4
United States (Case-Shiller national index)	-2.5	-18.2	63	-3.7
Belgium	-3.0	2.7	149	30.9
Japan	-4.0	-2.6	-36	-33.7
Italy	-4.1	1.1	96	13.1
France	-4.3	-3.0	133	39.7
United States (FHFA)	-4.7	-4.3	74	13.1
Spain	-6.3	-3.2	166	53.4
Denmark	-13.1	-10.5	91	17.5
Ireland	-18.5	-9.7	142	24.5

*Or most recent available figure †Against long-run average of price-to-rents ratio
Sources: ABSA; ESRI; Hypoport; Japan Real Estate Institute; Nationwide; Nomisma; NVM; FHFA; Quotable Value; Stadim; Swiss National Bank; Standard & Poor's; Thomson Reuters; government offices; *The Economist*

**Growth in 1997-2010
strong, but not
exceptional**

**Latest cool down
relatively mild.**

**Still: "Dutch homes are
overvalued by 20%."**

Source: The Economist, April 15, 2010

Overarching Questions

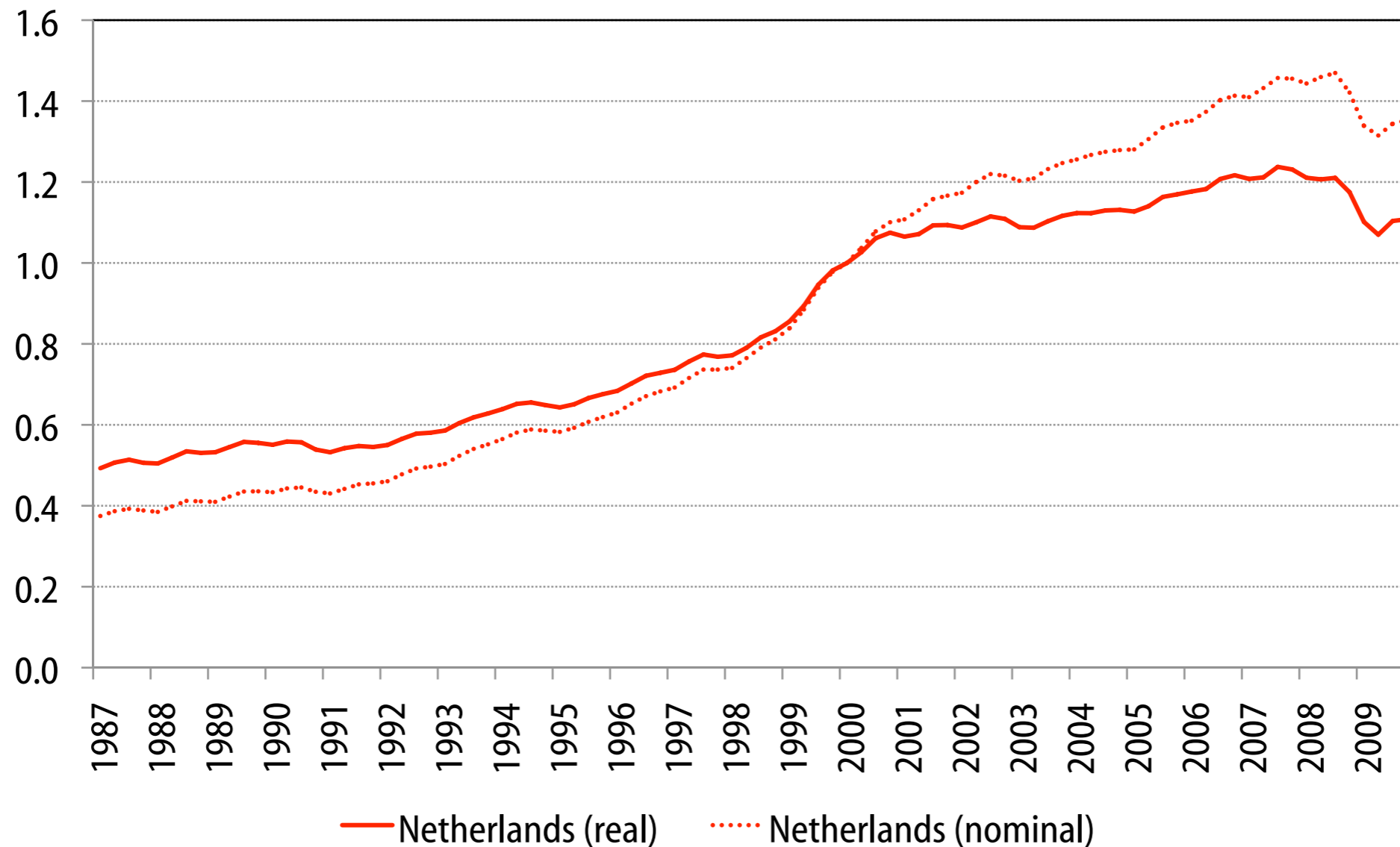
Are (were) Dutch home prices overvalued?

Will we experience a correction?

What do the markets 'think' about Dutch residential real estate?

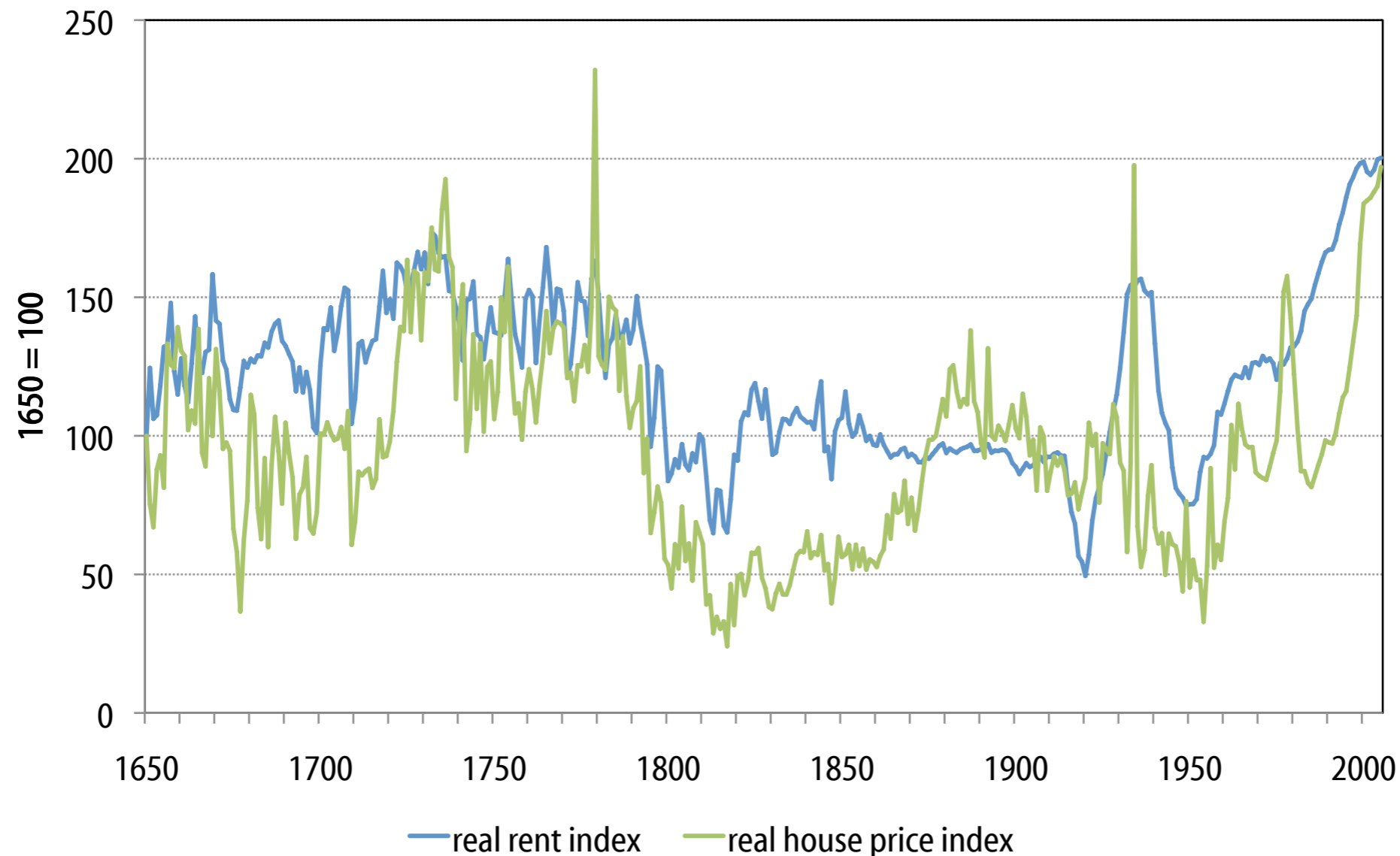
Home values doubled in the last 20 years.

Can this be sustainable? Are prices inflated beyond fundamentals?



Taking a long view: A'dam house prices and rents, 1650-2010

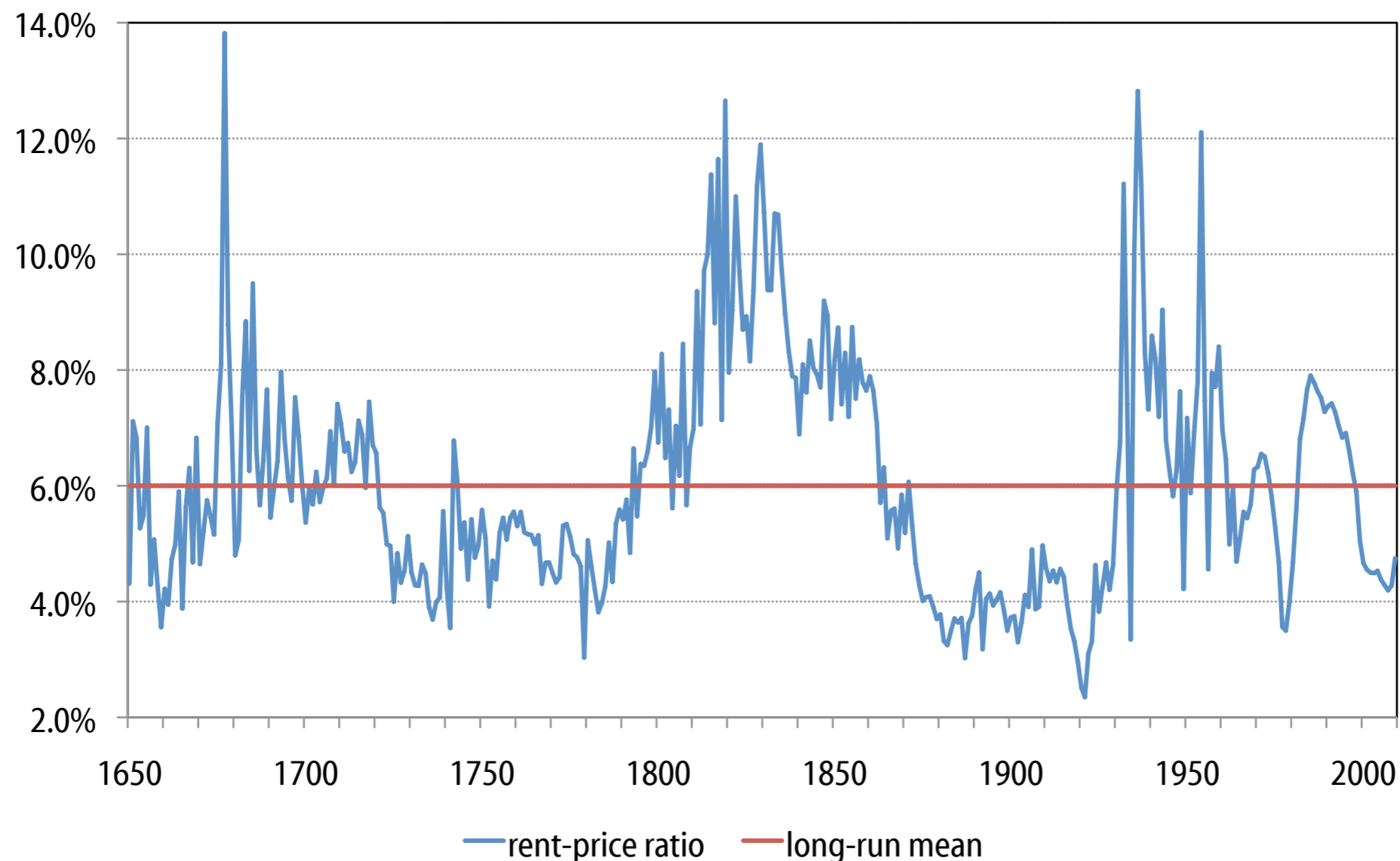
Prices and rents are very stable, reverting to mean for 300 years.
Growth is a relatively recent phenomenon.



Source: See Ambrose, Eichholtz and Lindenthal (2010)

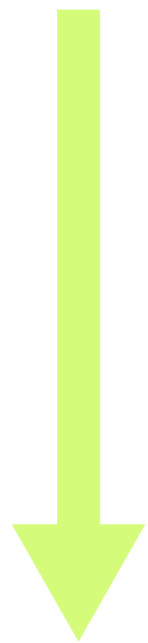
Rent-price ratio is stable in the long run.

Substantial deviations possible, both in time and magnitude.
It takes decades for bubbles to deflate.



Decomposing rent-price ratio into its determinants

Analysis builds on J. Campbell and Shiller (1988 and 2001), Brunnermeier and Julliard (2008), and S. Campbell et al (2009).



$$R_{h,t+1} = \frac{P_{t+1} + L_{t+1}}{P_t}$$

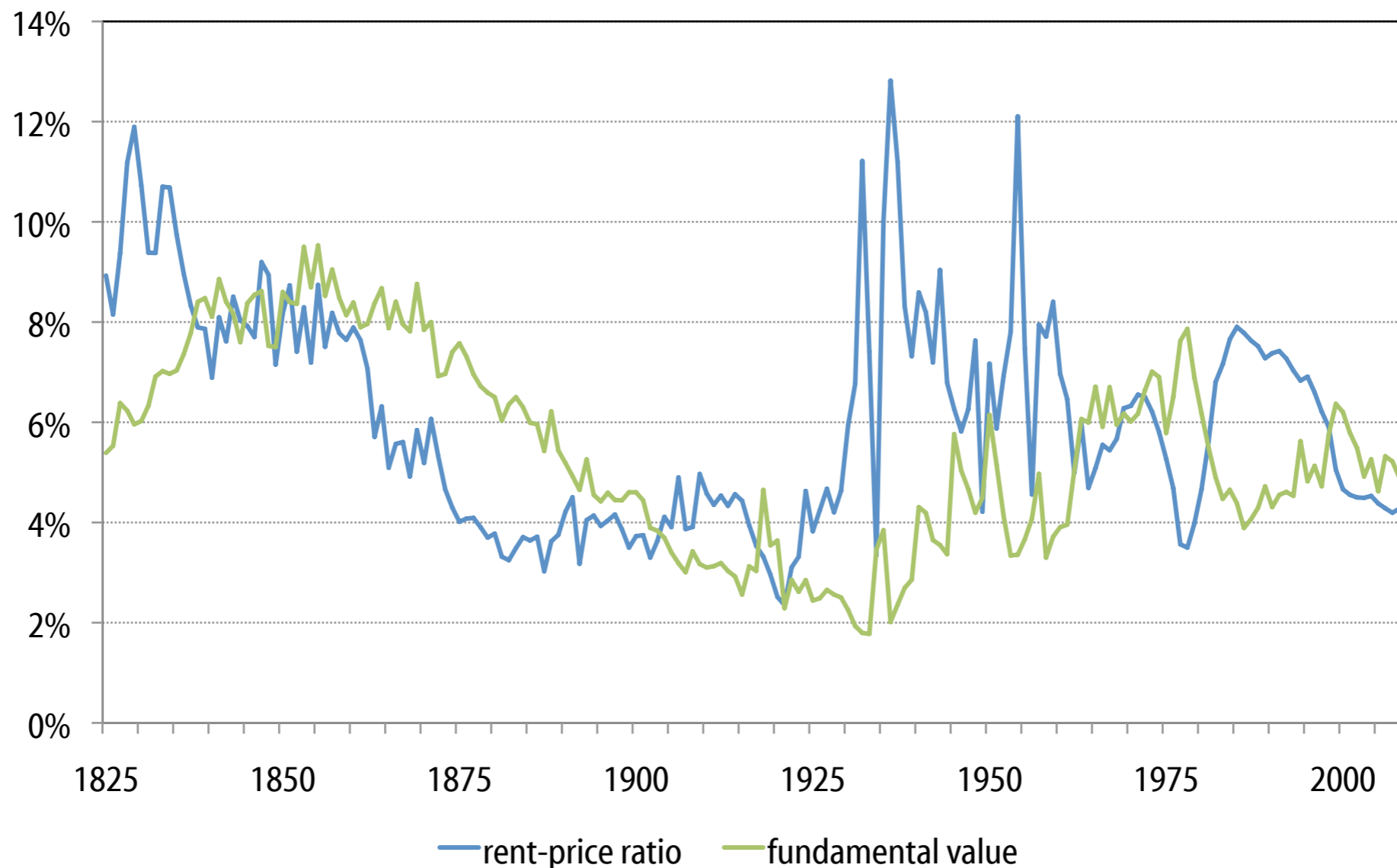
$$l_t - p_t = k + E_t \left[\sum_{j=0}^{\infty} \rho^j r_{h,t+1+j} - \sum_{j=0}^{\infty} \rho^j \Delta l_{t+1+j} \right]$$

$$l_t - p_t = k + \sum_{\tau=1}^{\infty} \rho^{\tau-1} \hat{E}_t [i_{t+\tau}] + \sum_{\tau=1}^{\infty} \rho^{\tau-1} \hat{E}_t [\pi_{h,t+\tau}] - \sum_{\tau=1}^{\infty} \rho^{\tau-1} \hat{E}_t [\Delta l_{t+\tau}]$$

Rent-price ratio can be expressed by expected interest rates, risk premium on housing, and changes in rent levels.

Overall, fundamentals explain rent-price ratio well.

For 1900-2009, we estimate future changes in rents, bond yields and risk premia through a VAR(1) model.

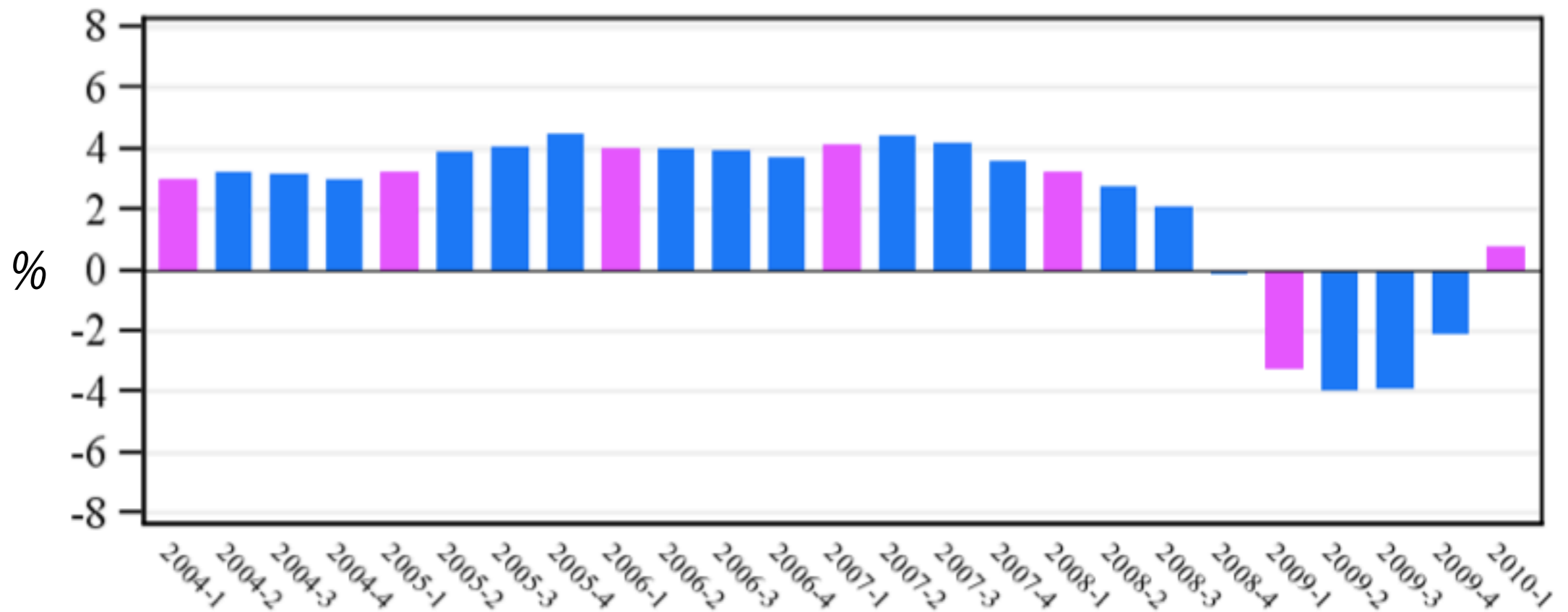


Source: Ambrose, Eichholtz and Lindenthal (2010)

The losses in transaction prices are over.

So far, the 'crisis' was brief and mild.

Change in nominal median transaction prices compared to year before, 2004-2010

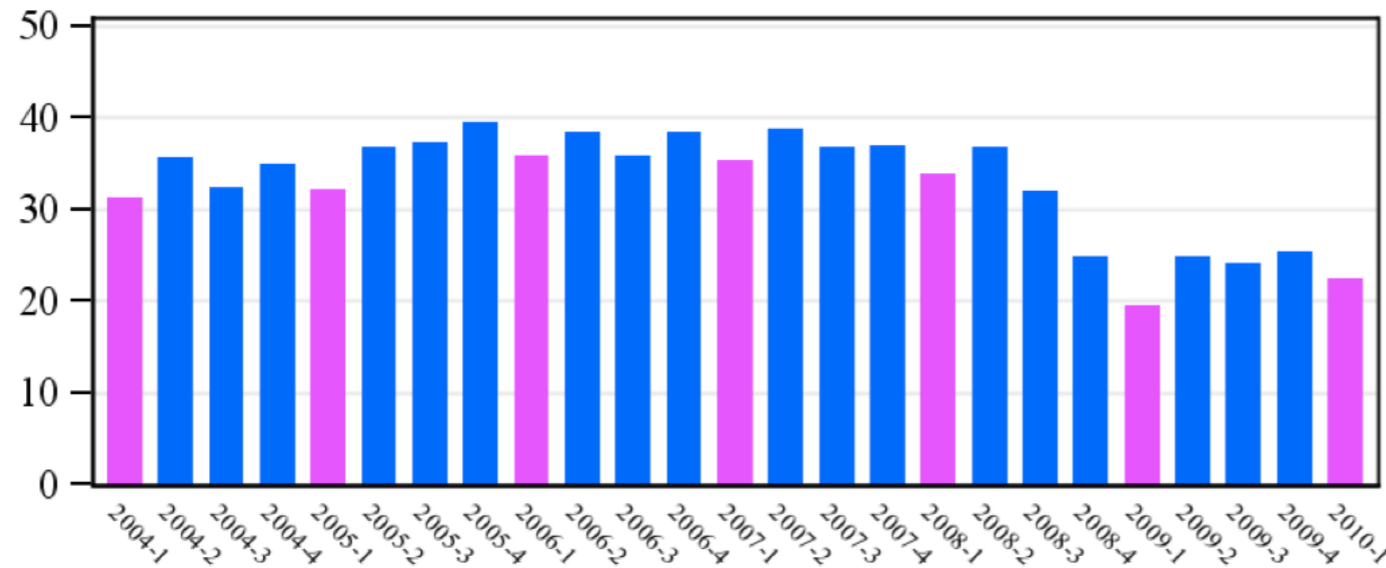


However, markets remain dry, liquidity lost.

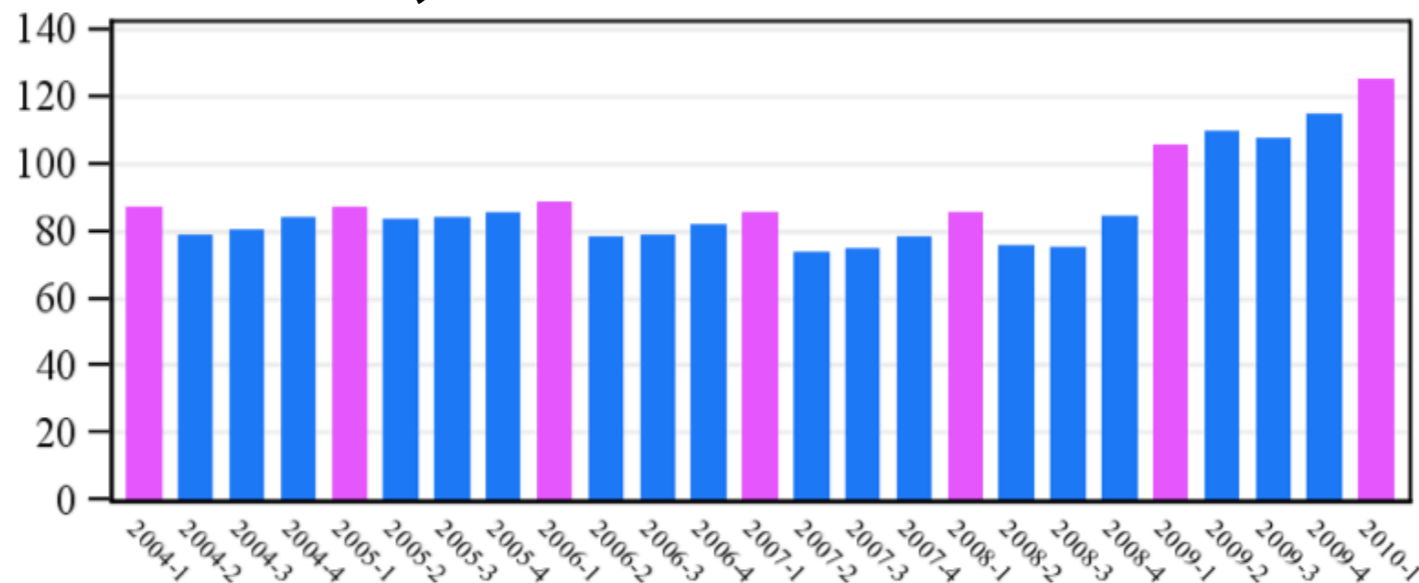
The number of transactions is still relatively low.

Time on market remains at all time highs.

Number of transaction per quarter (in '000)



Time on market (in days)

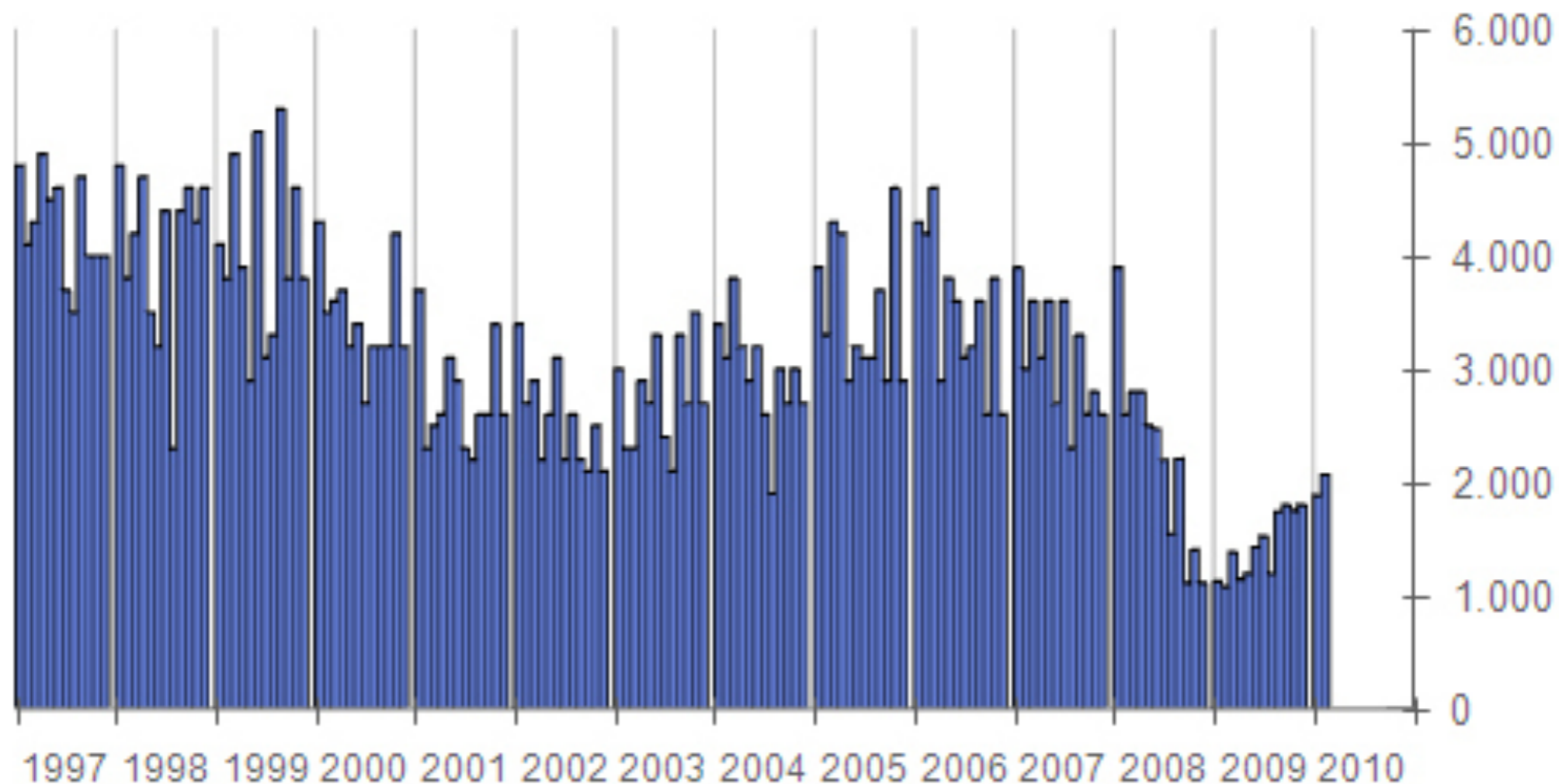


Sales in of newly constructed homes at record lows.

However, recovery is underway.

Verleende (afbouw)certificaten nieuwbouw per maand

NVB

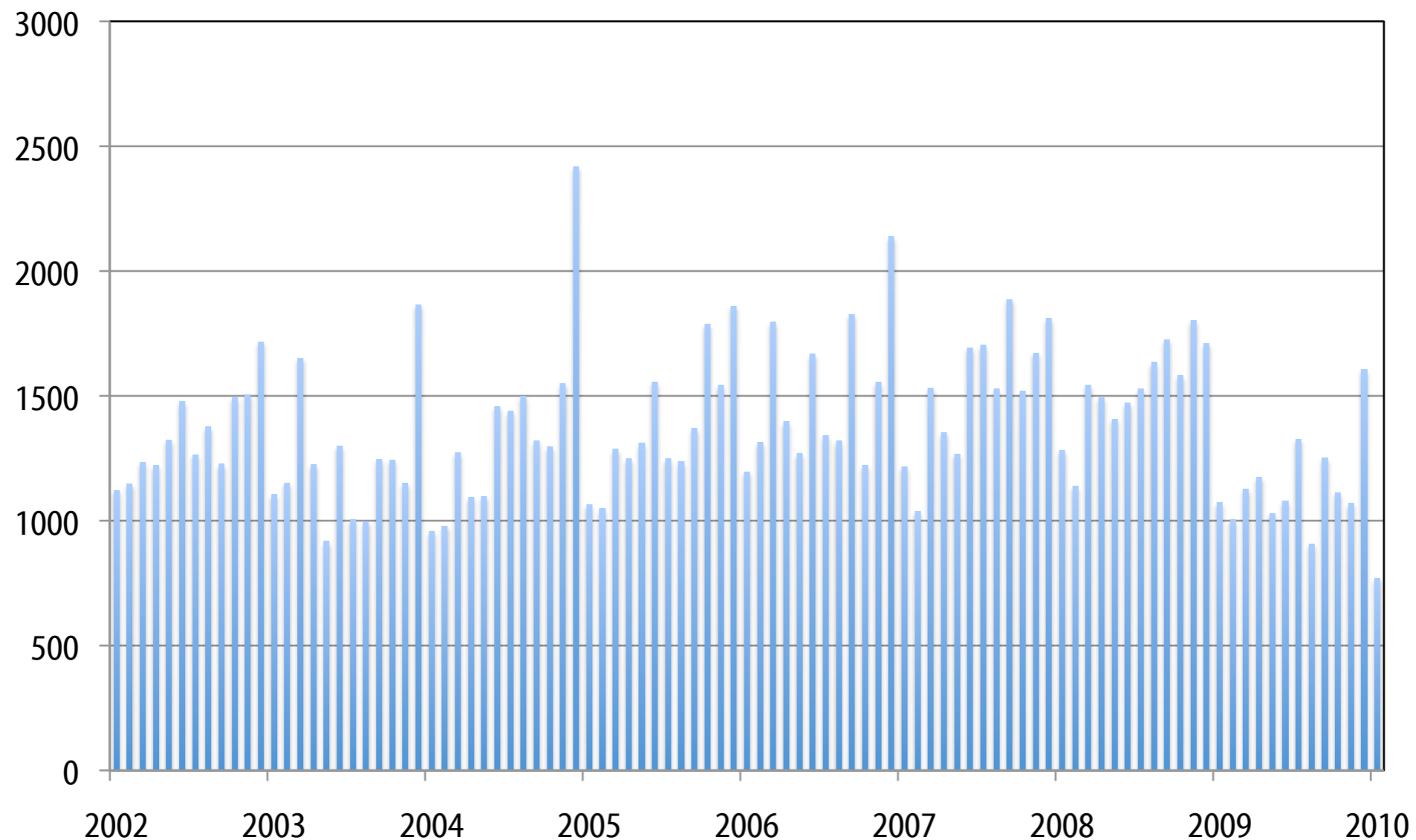


Source: NVB

Number of permits for new construction robust, but 2009 was a weak year.

Developers seem to remain optimistic.

Number of building permits for new residential construction.



Summing it up: All bright in The Netherlands?

Current House prices are supported by fundamentals.

- If prices had been inflated, they did correct in 2009. No further losses expected.

Housing market indicators look positive

- Prices reverted to growth.
- Building permits are robust.
- But, markets lost liquidity, sales of new construction are weak.
- Building activity solid.