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CENTRAL BANK TALK: killing softly the housing bubble with its words?

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ABSTRACT

Last year witnessed a strong concern from central banks with asset prices, with the sub-prime crisis effects still looming over the monetary and financial markets. There is now an extensive literature about the optimal response of central banks to the behaviour of asset prices but we think that rather than debating whether monetary policy should respond to asset prices, a fruitful area of research should consider other tools, besides the central bank's short term interest rate, to prevent bubbles and their consequences. With the rising importance of transparency in monetary policy making, central banks started increasingly focusing on communication as a key tool to improve the effectiveness of monetary policy. This paper analyses communication emanating from the ECB since the creation of EMU, trying to assess whether communication showed any concern with asset prices behaviour, in particular the housing market. We conclude that in the last years the ECB behaviour was characterised by a riding of the house price wave, with its communication showing a strong concern with house prices which motivated the monetary policy tightening period that we are now abandoning. We think that with the latest data showing slower increases in house prices, "soft words" about it will start to diminish and be accompanied by the end of interest rate increases.

Keywords: ECB, Communication, House Prices, Monetary Policy, Transparency.

JEL Codes: E52, E58

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1. Introduction

There is now an extensive literature concerning the optimal response of central banks to the behaviour of asset prices [e.g, Cecchetti *et al.* (2000) and Bernanke and Gertler (2001)]. The usual focus hinges on interest rates, so that traditionally the literature reduced the issue to the question if the policy instrument, besides the inflation deviations from the target and the output gap, should also be adjusted when asset prices deviated from some fundamental value. The answer to this question lies on the particular model employed but there is now an almost unanimous consensus around a negative answer given the potential turbulence and volatility that such an active approach would imply. So, should that imply that monetary policymakers must ignore the developments that take place in asset markets, namely in the equity and housing markets?. Our case is that rather than debating whether monetary policy should respond to asset prices, a more fruitful area of research should consider other tools, besides the central bank's short term interest rate, to prevent bubbles and their consequences.

We think that as an intermediate case between an activist or direct approach and a passive one, the central bank could use other tools to respond to a bubble in asset markets. By other tools we mean three basic sets: i) prudential supervision or regulation of depository institutions; ii) margin requirements; iii) communication and central bank talk. Since the first two are not in the European Central Bank (ECB) tool kit or agenda we are left with the last one.

Central bank communication functions as a mean to diminish asymmetric information between the policy maker and the markets so it should influence market expectations regarding future inflation and interest rate changes. The ECB started its operations surrounded by a considerable uncertainty about how it would implement its strategy. In this context, its communication strategy and skills assume a very high degree of importance. Naturally that central bankers don't speak of "irrational exuberance" everyday. Their cautious nature makes these kinds of comments rare. Nevertheless, we can search on the ECB various tools of communication some reference to asset prices (over)valuation and its possible impacts on the macroeconomy[1].

To measure the effects of monetary policy actions and statements on asset prices it is necessary to use high-frequency data (intraday) to avoid simultaneous equations problems and omitted variables biases. Nevertheless, that is not our problem here since we are interested in one particular type of assets, namely, property or housing markets. So, since there are no intraday (or even daily) data in those markets, we will deviate from the methodologies employed by a strand of literature reviewed below.

The structure of this paper is the following: in section two we make some remarks about central banking practice and communication, highlighting the connection between asset prices and the

[1] In terms of greater transparency, Trichet (2006) made it clear recently that the ECB would not embark on new types of strategies which include direct signals about the likely path of policy interest rates, similar to the ones followed by the Royal Bank of New Zealand or the Norges Bank. Such strategies could be understood as "open-mouth operations" in the sense gave by Guthrie and Wright (2000).

potential influence of different strategies of communication. Section three presents a review of the literature and describes our methodology. Section four performs an extensive analysis of the presence and timing of some keywords on ECB documents. Finally section five summarises and concludes the paper.

2. Central Banking and communication: some remarks

2.1. Communication as a monetary policy strategy

The literature on central bank communication has broadly followed the central bank independence literature mainly developed in the last twenty years, culminating in a new appreciation of the value of good communication as a companion to adequate policy actions. The academic and policy literature on central bank communication stresses the seminal role of communication for the effectiveness of monetary policy [see, e.g., Canzoneri (1985), King (1997), Blinder (1998) and Buiter (1999)], highlighting the various possible channels to convey information.

As stated by Jansen and de Haan (2004, p. 5), the literature has identified, at least, three reasons why central banks can benefit from proper communication: i) communication may increase the effectiveness of monetary policy, shaping long run inflation expectations; ii) communication may be used to reduce noise and uncertainty in financial markets; finally, iii) communication is necessary for an adequate central bank accountability. So, communication can help inform the public's expectations of the future course of short term interest rates, providing the policymakers with increased influence over long term rates and hence a greater ability to achieve its macroeconomic objectives. Nevertheless, as stated by Faust and Leeper (2005), one of the strongest central banking taboos is the prohibition against talking publicly about future interest rates[2].

Related to communication we have transparency that, defined as the absence of asymmetric information between policy makers and the public, is an integral part of the required accountability for independent central banks [Ehrmann and Fratzscher (2004, p. 2)]. Even if a central bank publishes a lot of information, if that information is not understandable by the public it will not be perceived as a transparent central bank. According to those authors, there are limits to how much information can be digested effectively, since too much information could crowd out the formation of private beliefs which are a crucial source of information for a central bank and thus for the

[2] As argued by Rudebusch and Williams (2006, p. 2), "*This taboo largely arises from the belief that financial markets would be prone to interpret any central bank indications about the likely future path of policy as commitments to future action, as opposed to projections based on existing information and subject to considerable change. Thus, many central banks will at best only give indirect hints or use coded language about policy inclinations in order to retain a plausible deniability in case markets are disappointed as the future unfolds*."

effectiveness of monetary policy making[3]. So, the quality of the information is crucial for the success of the communication strategy. A poor quality of the information could give conflicting signals to financial markets, prompting possible inadequate responses. Finally, communication requires credibility and a robust historical record from monetary authorities.

But, how can central bank communication serve has a monetary policy instrument? The traditional assumption when analysing and predicting monetary policy decisions is based on the idea that economic agents form expectations on the basis of a full set of available economic data and that central bank rhetoric does not include any informational value added. Ehrmann and Fratzscher (2004, p. 5), argue against this assumption saying that, in principle, a monetary authority that is sufficiently credible may be able to influence asset prices by communicating its views about its intended level and by signalling its intention to move policy if asset prices deviate from its target. This issue has sparked a debate about the time consistency of such "open mouth operations", which implies that authorities may have an incentive to give incorrect information to the markets and thus that communication can be fully credible and effective only if it is followed by policy action[4]. Since the monetary authority can use the "bully pulpit" to caution investors about developing asset bubbles, in this paper we specifically intend to identify and discuss the presence and timing of statements that show a concern with housing prices behaviour.

2.2. The communication skills and capacities of the ECB

A crucial problem that we face is how to measure communication. We want to analyse all statements relating monetary policy to housing prices or markets, made by all relevant euro-area policymakers and over a relevant time period. We consider three categories of communication: press releases and press conferences on meeting days; speeches, interviews and testimonies from members of the Executive Commission, including its President; and, finally, the ECB monthly bulletin editorials.

The monthly press conferences following the meetings of the Executive Commission are an important form of communication, given its regularity and the broad press coverage they receive. Those press conferences are followed by a Q&A session which can provide some insights about the ECB opinion and perspectives about its monetary policy stance.

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[3] Certain theoretical papers [e.g., Amato *et al.* (2002) and Morris and Shin (2002), which discusses the social value of public information] conclude that too much information provided by the central bank is detrimental to welfare. Specifically, the greater the precision of the agent's private information, the more likely it is that increased provision of public information lowers social welfare. The detrimental effect of public information arises from the fact that agents overreact to public information, placing too much weight on the public signal relative to weights that would be used by the social planner (the central bank). Nevertheless, many conclusions about the value of transparency appear to hinge on the exact specification and parameterisation of the theoretical models. Svensson (2006) argues that Amato *et al.* (2002) findings have been misinterpreted as anti-transparency results, whereas they are actually pro transparency and several other authors show that transparency is welfare-increasing in more general models [e.g., Roca (2005) and Hellwig (2005)].

[4] Much of the work in this area has focused on strategic monetary policy games, building on the works by Kydland and Prescott (1977), Barro and Gordon (1983) and Walsh (1998).

The second form of communication that we consider are speeches, interviews and testimonies from members of the Executive Commission. The regular testimonies of the President before the European Parliament receive a significant attention by market participants. The President and the other members of the Executive Commission also speak to a variety of audiences on a large number of topics, conveying important information to market participants.

Finally, as a third form of communication, we consider the Editorials from the ECB monthly bulletins. As stated by Gerlach (2005, p. 5), the reason for focusing on the Editorials, rather than the full report is because the monthly bulletins contain an exhaustive analysis of macroeconomic conditions in the euro area. While there is little doubt that the members of the Governing Council generally agree with that analysis, it is arguably best interpreted as expressing the views of ECB's senior staff. By contrast, the Editorials, which constitute the first 2-3 pages of the reports, contain a short explanation for why interest rates were or were not changed in the previous month and frequently include a summary statement of the Governing Council's view of the economy. For these reasons and given its prominence in the report, the Editorial must receive considerable scrutiny by the members of the Governing Council[5].

3. Review of the literature and methodology

3.1. Communication and asset prices

Transparency helps financial markets better anticipate monetary policy decisions and thus cause financial markets to adjust their interest rate very quickly and well before the monetary policy meetings. This view is supported by a growing literature arguing that statements do affect financial markets and can alter expectations about the future course of policy. For instance, in the euro-area, Perez-Quiros and Sicilia (2002), find that market interest rates have predicted euro-area interest rates comparatively well up to three months in advance[6]. Moreover, Bernoth and von Hagen (2004), who analyse the impact of ECB monetary policy decisions on the volatility of the Euribor futures rates, conclude that the policy decisions of the ECB have been on average predictable and by and large the communication strategy with the market has worked surprisingly well for a relatively new institution. These authors show that, since May 2001, markets were not surprised by the decisions on the rates of the ECB. But a question prevails, can central banks move asset prices in the "right" direction?.

[5] According to Rosa and Verga (2005), the Monthly Bulletin of November 2002 considers the ECB President monthly press conference and the monthly bulletin its most important communication channels: "*the former is a timely tool to concisely communicate to the press the ECB Governing Council's policy relevant assessments of recent economic developments. The latter is used by the ECB not only to convey its detailed and quantitative view of the economy, but also to describe its analytical framework that represents the basis of its decision making process*" (*op. cit.*, p. 4).

[6] According to their approach, over the period between 4 January 1999 and 6 June 2002, which included 78 meetings of the Governing Council of the ECB, the market correctly anticipated 94% of the decisions.

The empirical papers aiming to estimate the effect of central bank communication on asset prices (yield curve, equity prices and exchange rates) are recent and mainly focused on FED speeches. However, the discussion around central bank communication is mainly theoretical and references related to theoretical models estimating the impact of communication are older and numerous[7]. Theoretical papers dealing with central bank communication, and more generally with central bank transparency, do not provide a well-defined answer: indeed, conclusions diverge according to the transparency dimension considered (on the economic model, on forecasts, on preferences of the central bank, …) and according to how the economy is modelled (e.g., neoclassic vs. neokeynesian Phillips curve).

In a paper about central bank talk, Kohn and Sack (2003) attempted to collect any statements about asset price valuations made by the FED Chairman between 1996 and 2000. They found only ten such comments about equity prices. Moreover, many of those comments were not very definitive, and only two of them prompted a significant market reaction. The authors suggest that this might reflect the market view that the Chairman, while having a lot of information about the near-term direction of the economy and monetary policy, might be seen as having limited knowledge about the appropriate value of the S&P500. Another possible interpretation is that those ten comments were fairly tepid[8].

In the same vein, Bernanke *et al.* (2004) and Gurkaynak *et al.* (2004), find that US financial markets attribute considerable importance to statements that include an indication about the future path of policy[9]. Gurkaynak *et al.* (2004, p. 18) argue that viewing the effects of Federal Open Market Committee (FOMC) announcements on financial markets as driven by a single factor – changes in the federal funds target – is inadequate. They find that a second policy factor – one not associated with the current federal funds rate decision of the FOMC but instead with statements that it releases – accounts for more than three-fourths of the explainable variation in the movements of five and ten year Treasury yields around FOMC meetings. As argued by the authors, those findings do not imply that statements could represent an independent policy tool, because statements likely exert their effects on financial markets through their influence on financial market expectations of future policy actions. Gurkaynak *et al.* (2004, p. 19), conclude that this issue probably acquired more importance in recent years, when monetary policy decisions have rarely been a surprise and instead changes in the wording of statements could be the major driver of financial market responses.

Another relevant paper is due to Ehrmann and Fratzscher (2004) who focus on two central questions: first, do communication strategies by the FED, the Bank of England (BoE) and the ECB differ and how?; and second, they assess the effectiveness of communication by asking whether

[7] Frequently building on the seminal paper from Cukierman and Meltzer (1986). We can refer here the surveys on central bank transparency from Geraats (2002), Hahn (2002), Carpenter (2004) and Woodford (2005).

[8] Kohn and Sack (2003, p. 197): "*Overall, we conclude that market participants have not reacted strongly to the Chairman's comments about asset valuations*".

communication allows financial markets to better anticipate monetary policy decisions and helps central banks in moving asset prices in the desired direction. Specifically, in their paper, those two authors analyse to what extent the conditional mean and volatility of interest rates, exchange rates and stock indices have reacted to statements from the three considered central banks. The authors find that the institutions differ fundamentally in two central questions: the FED is pursuing a more individualistic strategy of communication as there is a high degree of dispersion in what the individual members of the FOMC say. By contrast, the BoE and the ECB have been following a more collegiate communication strategy in that the degree of consistency among the committee members is significantly higher. Moreover, statements by members of the ECB Governing Council also show the highest degree of consistency with monetary policy decisions as compared to the BoE Monetary Policy Committee and in particular the FOMC. In what concerns the question of how these different strategies impact the effectiveness of communication, they conclude that the approaches to transparency and communication by the Federal Reserve and by the ECB have proven to be equally successful in their effectiveness, despite having pursued very different strategies, suggesting that may not be a single best approach to central bank transparency.

Jansen and de Haan (2004) evaluate communication by ECB and Bundesbank officials during the first years of the European Economic and Monetary Union (EMU). The authors investigate three main issues (*op. cit.*, pp. 2-3): i) to what extent have comments by various European central bankers been contradictory?; ii) have different groups of central bankers followed different communication strategies surrounding governing council meetings?; and, iii) how has ECB communication evolved over time?. Jansen and de Haan (2004), find that in some respects ECB communication has improved over the years. Nevertheless, albeit communication on the interest rate has become less contradictory, statements on inflation and growth have become more diffused.

Heinemann and Ullrich (2006) also analyse the informational content of ECB rhetoric, constructing a wording indicator based on a counting of certain signal words that reflect the "hawkishness" of monetary rhetoric. That indicator is integrated into a standard Taylor type ordered probit model for the explanation of the interest rate. They show that the wording indicator can improve the model's fit when added to the standard explanatory variables but a model based solely on this indicator performs worse than the baseline. So, they conclude that "*compared to technical approaches based on standard Taylor equations and solely hard economic data the exploitation of rhetoric signals can be helpful to better explain what the central bank is doing*" (Heinemann and Ullrich, 2006, p. 21).

From this brief review of the literature, we conclude that this field is a very recent one, with few empirical applications to the case of the ECB. We depart from the literature since we are particularly interested in the connection between central bank communication and housing prices,

[9] The paper from Bernanke *et al.* (2004) can be included in a strand of literature that considers signalling a particular example of the strategy of stimulating an economy close to the zero lower bound [see also the discussion by Reifschneider and Williams (2000) and Eggertsson and Woodford (2003)].

a field where the literature is quite small, partly reflecting the difficulty of measuring that impact and partly due to the relatively recent adoption of transparency as a major characteristic of central bank policy.

3.2. Methodology and data

In our analysis of ECB's communication policy and its relation with housing markets we use data beginning in 1999 until December 2007. We analyse the transcripts of 105 press conferences, held between 1999 and December 2007. Additionally, we also scrutinize 855 speeches, hearings and interviews given by the President of the ECB's Executive Commission (291), its Vice-President (112), and its several members (452), from January 1999 until December 2007. Finally, we analyse the Editorials from the 108 ECB monthly bulletins published in that period. The type and responsible of communication from the ECB in each year are reported in Table A1 of the Appendix. Note that this listing includes not just dates on which the ECB actually changed its rates, but mainly dates on which there a statement or meeting was followed by no change on policy[10]. Our list is not necessarily comprehensive, although we consulted a large number of documents in our search.

Following Kohn and Sack (2003), we employed a set of keywords, searching for their presence in the analysed documents from the ECB and only retaining the occasions where those keywords appeared signalling a concern with "housing prices" and a more vigilant attitude, which could motivate a tightening action. So we do not consider references made in a way that do not imply a particular concern or will not prompt a particular action[11]. Finally, we also analyze the frequency of communication around ECB Governing Council meetings where interest rate changes were decided. Naturally that this classification is based on our personal judgement and involves some degree of subjectivity that doesn't rule out a wrong classification in some individual case.

As can be seen from Table A2 and A3 in the Appendix, the ECB rate was changed on 23 occasions in the sample period: it was raised 15 times and cut only in 8 occasions. On 16 occasions the change was 0.25% and on 7 occasions it was 0.50%. Interestingly, while increases tended to be small, cuts tended to be large. However, we think it is too early to tell whether this represents any kind of asymmetry in the Governing Council's behaviour.

Figure A1 also in the Appendix presents the ECB rates since 1999. As we can see, we have three periods where the ECB made significant moves in interest rates: a first short period between November 1999 and October 2000, where the main refinancing operations registered a 225 b.p. hike, then a protracted period of 25 months which ended with an accumulated 275 b.p. decrease and finally, after two and a half years, it begun in December 2005 the eighteen month period of

[10] Table A2 presents the dates where occurred a change in ECB's controlled interest rates.

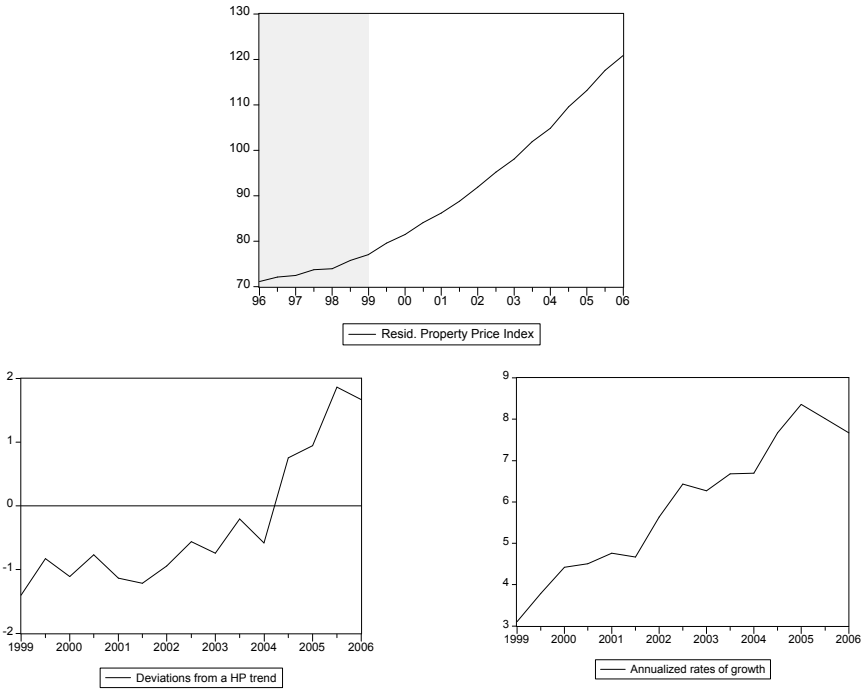
[11] The replacement in May 2003 of the two pillars by the economic and monetary analysis doesn't have any impact on our methodology.

interest rate hikes, with an accumulated increase of 200 b.p., only halted by last Summer's turmoil around the US sub-prime crisis.

And now, what about housing prices?. The construction of a housing prices index for an economy constitutes a complex task because house purchases do not happen in a centralised market. So, any interpretation should be cautious since: i) some price indices are based on estimates whereas another reflect transaction values; ii) some indices give a national picture whereas another are dependent upon regional or even local situations[12]; iii) the housing quality weighting methods change from country to country; iv) sometimes, even in the same country different indices show different behaviours[13].

Since 1996 the ECB compiles and publishes semi-annual data on housing prices for the euro area (the *Residential Property Price Index*), based on non-harmonized national data [see, ECB (2006)]. This index, its percentual deviation from a trend determined by the Hodrick-Prescott filter and its annualized rates of growth are presented in the following graphs:

Figure 1. Residential Property Price Index (source: ECB).



In historical terms we can observe a continuous increase in the index with a 59% increase since the start of the European Monetary Union. Nevertheless, this aggregate behaviour hides very distinct developments in the different euro area countries. The deceleration in euro area residential property prices since mid-2005 continued through the second half of 2006, despite residential

[12] "*One reason for the moderate volatility of national home prices is that the housing market comprises many heterogeneous regional markets. In the past some regions experienced wide swings in real home prices that were not apparent in the aggregate statistics. (...) These wide regional swings may have been influenced by fluctuations in population and income growth that would not occur at the national level*" (McCarthy and Peach, 2004, p. 10).

property market developments remaining buoyant in many parts of the euro area [see ECB (2007)]. According to the latest data, the annual growth rate of residential property prices for the euro area as a whole was 6,0% in the second half of 2006, down from 6,9% in the first half of 2005. So, 2006 witnessed the first decrease in the index rate of growth (annualized), which could signal the beginning of the end of the house price efervescence registered in the last four or five years. This fall is motivated by the housing prices behaviour in some European countries (e.g., Spain) and is correlated with the decrease witnessed is the United States which was the main factor behind the sub-prime crisis.

4. Analysis of the presence of some keywords on ECB's documents

4.1. Keywords and occurrences

We begin by presenting in Table 1 the keywords that we will search in the considered documents:

Table 1: Keywords.

house	property
housing	real estate
mortgage	residential

We perform an extensive search through all the cited ECB documents and retain those where these keywords appear integrated in sentences implying some kind of concern and pro-activist move from the ECB.

4.1.1. Montlhy Bulletin Editorials

Beginning our analysis by the ECB's Montlhy Bulletin Editorials, Table 2 presents the findings considered as interventive, classified by date and main statement.

Table 2: References made in the ECB Monthly Bulletin Editorial.

Date		Sentence
2004	August	*"the rate of mortgage loans to households is rather high"*
	September	*"the growth rate of mortgage loans to households is rather high and is associated with fairly dynamic housing market developments and real estate prices in several euro area countries"*
		"high excess liquidity and strong credit growth could become a source for strong asset price increases"
	October	*"strong house price increases in several euro area coutries"*
		"high excess liquidity and strong credit growth could become a source of substantial asset price increases"
	November	*"unsustainable asset price increases, particularly in property markets"*
		"growth rate of loans for house purchase continues to rise"
	December	*"the demand for loans for house purchase has continued to be robust, supported also by strong house price dynamics in several euro area countries"*

[13] McCarthy and Peach (2004, pp. 2-4) discuss the properties of the housing prices indices available in the US.

2005	January	*"the combination of high excess liquidity and strong credit growth could in some countries become a source of unsustainable price increases in property markets"*
2005	February	*"demand for loans for house purchase has continued to be robust, contributing to strong house price dynamics in several parts of the euro area. The combination of ample liquidity and strong credit growth could, in some parts of the euro area, become a source of unsustainable price increases in property markets"*
	March	
	April	*"strong monetary and credit growth indicates the need to carefully monitor whether risks are building up in the context of strong house price increases in some regions of the euro area"*
	June	*"loans (...) for house purchase has remained strong"*
	August	*"the growth of mortgage borrowing remains very strong. In this context, asset price dynamics, in particular in housing markets, need to be monitored closely"*
	September	*"price dynamics in a number of housing markets needs to be monitored closely"*
	October	" "
	November	" "
	December	" "
2006	January	*"need to monitor developments in the housing markets"*
	February	" "
	March	*"the annual growth rate of credit to the private sector has strengthened further (...) – especially loans for house purchase"*
	May	*"strong asset price dynamics, especially in housing markets"*
	June	*"strong dynamics in housing markets"*
	July	" "
	August	" "
	September	*"strong property market developments in many parts of the euro area"*
	October	" "
	November	" "
	December	" "
2007	January	*"continued strong property market developments in many parts of the euro area"*
	February	*"Meanwhile, in the context of rising mortgage rates throughout the euro area and slowing housing markets in some regions, the growth of household borrowing has shown some further signs of moderation in recent months, albeit remaining at still very high rates"* *"continued strong property market developments in many parts of the euro area"*
	March	*"Meanwhile, (...)"* *"continued strong property market developments in many parts of the euro area"*
	April	*"the annual growth rate of loans to the private sector, while remaining very strong at 10.3% in February, showed some further signs of moderation. Whereas in previous months this moderation reflected a decline in the growth rate of household borrowing in an environment of rising mortgage lending rates throughout the euro area and a slowing increase in house prices in some regions, in February it was due to a moderation in the growth of loans to non-financial corporations"* *"continued strong property market developments in many parts of the euro area"*
	May	*"still strong property market developments"*
	June	*"house price growth has come down somewhat, although remaining at high levels on average in the euro area"* *"still strong property market developments"*
	July	*"the stabilisation of loan growth also reflects some moderation in house price dynamics, although house price growth nonetheless remains at high levels on average in the euro area"* *"still strong property market developments"*
	August	*""* *""*
	September	*"(...) with the growth of household borrowing moderating as house price dynamics and real estate activity have slowed"*

Source: ECB Monthly Bulletins

As we can see from Table 2, in the analysed period, the first statement concerning house prices was made in August 2004 and until September 2007 only in three occasions was not the theme mentioned. Also significant is the fact that the tone of the statements became more hawkish before

the summer of 2005, starting to mention the words "monitor closely". That evidences a focus of ECB's attention on the behaviour of housing prices and the potential disrupting effects over the economy from its collapse. Notice that the ECB awakened to the behaviour in house prices rather late because as we can see in Figure 1, residential prices were increasing at relatively high rates since 2001/2002. That focus disappeared in the summer of 2007. Beginning in June with a different tone, the last appearance was in September 2007, where ECB mentioned a moderation in house prices dynamics and real estate activity.

Also, we do not present those results but we observed a rather different kind of behaviour from the ECB when dealing with the stock price bubble and its colapse in 2001-2002. In the pre-colapse period, only once did the ECB talked about "*sharp increases in stock prices"* (January 2000). Then, in the second half of 2001, the ECB began talking about "*uncertainties in the equity market*" (August) and in September 2002, a couple of months before the beginning of a period of significant policy easing, it said openly that "*the sharp declines in stock prices are having negative effects on consumer and investor confidence*". We think that behaviour evidences a different kind of attitude from the ECB towards two rallies in asset prices, at least in terms of communication.

4.1.2. Press Conferences

Scrutinizing the introductory statements made at all the ECB Montlhy Press Conferences, Table 3 presents the findings considered as interventive, classified by date and main statement.

Table 3: References made at the ECB Monthly Press Conferences.

Date		Sentence
2004	September, 2	*"the growth rate of mortgage loans to households is rather high and is associated with fairly dynamic housing market developments and real estate prices in several euro area countries"*
	October, 7	*"The annual growth rate of loans to the private sector remains robust, largely driven by the dynamism of mortgage loans. These are also supported by strong house price increases in several euro area countries"*
	November, 4	*"the growth rate of loans for house purchase continues to rise and is now approaching double digits. Persistently high excess liquidity and strong credit growth could become a source of unsustainable asset price increases, particularly in property markets"*
	December, 2	*"the demand for loans for house purchase has continued to be robust, supported also by strong house price dynamics in several euro area countries"*
2005	January, 13	*"the combination of ample liquidity and strong credit growth could, in some parts of the euro area, become a source of unsustainable price increases in property markets"*
	February, 3	*"demand for loans for house purchase has continued to be robust, contributing to strong house price dynamics in some regions of the euro area. The combination of ample liquidity and strong credit growth could, in some parts of the euro area, become a source of unsustainable price increases in property markets"*
	March, 3	*"demand for loans for house purchase has continued to be robust, contributing to strong house price dynamics in some regions of the euro area"*
	April, 7	*"strong monetary and credit growth indicates the need to carefully monitor whether risks are building up in the context of strong house price increases in some regions of the euro area"*
	June, 2	*"growth in loans (...) for house purchase has remained strong"*
	September, 1	*"(...) the growth of borrowing – especially mortgage loans – remains very robust. In this context, price dynamics in a number of housing markets needs to be monitored closely"*
	October, 6	" "
	November, 3	" "
	December, 1	" "

2006	January, 12	*"price dynamics in the housing market need to be monitored closely"*
	February, 2	*"mortgage borrowing is particularly buoyant, implying a need to monitor developments in the housing market closely"*
	March, 2	References to the strong growth in loans for house purchases
	April, 6	" "
	May, 4	*"strong asset price dynamics, especially in housing markets"*
	June, 8	*"monetary developments therefore require careful monitoring, particularly in the light of strong strong dynamics in housing markets"*
	July, 6	" "
	August, 3	" "
	August, 31	*"monetary developments therefore require careful monitoring, particularly against the background of strong property market developments in many parts of the euro area"*
	October, 5	" "
	November, 2	" "
	December, 7	" "
2007	January, 11	*"monetary developments therefore continue to require very careful monitoring, particularly against the background of improved economic conditions and continued strong property market developments in many parts of the euro area"*
	February, 8	*"Meanwhile, in the context of rising mortgage rates throughout the euro area and slowing housing markets in some regions, the growth of household borrowing has shown some further signs of moderation in recent months, albeit remaining at still very high rates"* *"(...) continued strong property market developments in many parts of the euro area"*
	March, 8	*"Meanwhile, (...)"* *"continued strong property market developments in many parts of the euro area"*
	April, 12	*"the annual growth rate of loans to the private sector, while remaining very strong at 10.3% in February, showed some further signs of moderation. Whereas in previous months this moderation reflected a decline in the growth rate of household borrowing in an environment of rising mortgage lending rates throughout the euro area and a slowing increase in house prices in some regions, in February it was due to a moderation in the growth of loans to non-financial corporations"*
	May, 10	*"still strong property market developments"*
	June, 6	*"house price growth has come down somewhat, although remaining at high levels on average in the euro area"* *"still strong property market developments"*
	July, 5	*"the stabilisation of loan growth also reflects some moderation in house price dynamics, although house price growth nonetheless remains at high levels on average in the euro area"* *"still strong property market developments"*
	September, 6	*"(...) with the growth of household borrowing moderating as house price dynamics and real estate activity have slowed"*

Source: ECB website

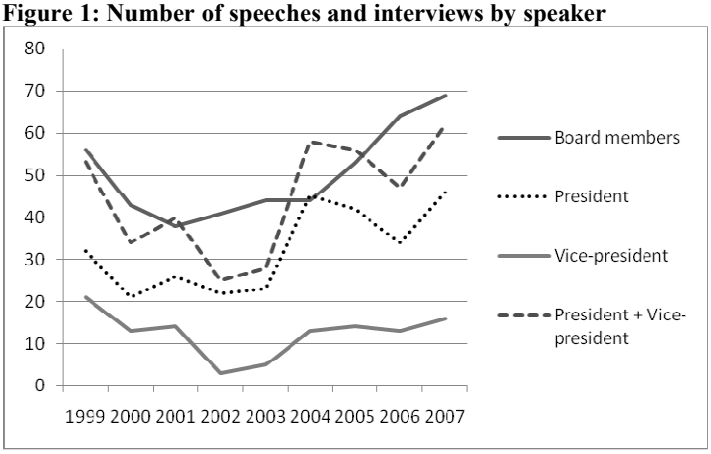
Notice that there is a recent clear repetition of sentences in the introductory statements and since those same sentences tend to appear later in the Montlhy Bulletin Editorial, the conclusions taken from Table 3 are similar to those already taken above. We think that it is important to mention that since 2005 it began to be common to hear in the Q&A sesssions questions asking the ECB to better clarify its position towards "asset price inflation", particularly emanating from housing markets[14].

[14] In the September 2006 press conference, answering to a question about strong property developments in some of the euro area countries, Trichet said "*as regards various individual countries, there are some where we have an extraordinarily dynamic real estate sector. It is important that all is done at the national level in those countries in the euro area to try to cool down this abnormal sectoral behaviour. Communication and explanation can be of help in this respect. All executive branches and surveillance authorities have to take this into consideration in their own day-to-day exercise of their responsibility. It is a real issue and problem which has to be coped with*". Answering a question at the May 2007 press conference, held in Ireland, Trichet said: "*we have, at the level of the euro area as a whole, to look very carefully at the real estate sector, at dynamism of loans to real estate for financing housing in particular. In our recent decisions and interest-rate increases we took into account this situation as one of the parameters that we have mentioned very often in the introductory remarks to the press conference"*.

4.1.3. Speeches and Interviews

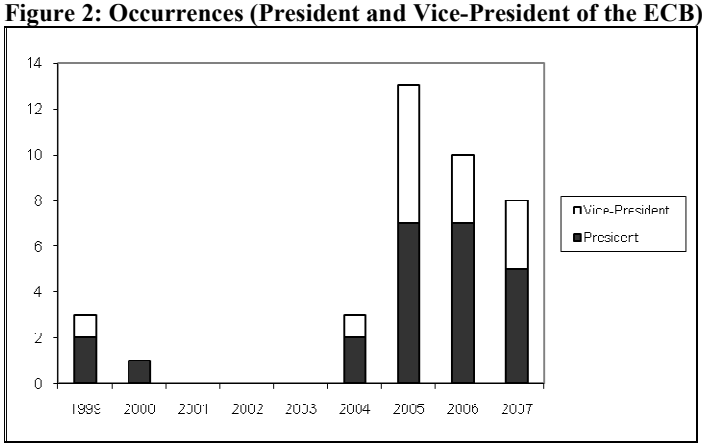
Analysing the speeches and interviews given by the ECB President and the other members of the Executive Board, we arrive to the same type of conclusions already taken above. The following figure displays the yearly number of speeches and interviews by speaker since 1999, where we can confirm a clear increase in that form of communication since 2002.

Figure 1: Number of speeches and interviews by speaker



From a total of 403 speeches and interviews by the ECB President and Vice-president, we detected references to housing prices developments and their risks over price stability in 38 of them, with the following distribution:

Figure 2: Occurrences (President and Vice-President of the ECB)



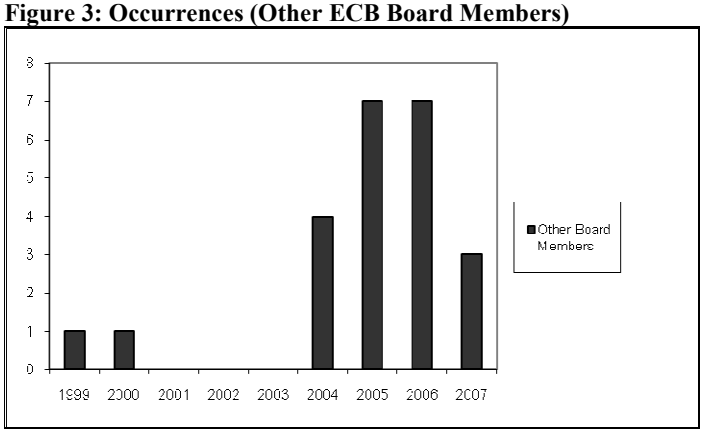
Source: ECB website

As we can see, there was a recrudescence of the "housing prices" theme in ECB presidency talk after some years of oblivion. There is also a clear simmetry between the appearance of this theme and more stringent monetary conditions[15].

[15] We do not analyse communication before 1999 but between the end of 1999 and October 2000 there was a 225 b.p. increase in ECB's rates.

Turning now the attention to the other Board Members, Figure 3 almost replicates the former, with a total of 23 occurrences out of 452 speeches and interviews, albeit there are fewer references to the implications of house price increases over price and financial stability[16]:

Figure 3: Occurrences (Other ECB Board Members)



Source: ECB website

Now we are going to establish a connection between the identified occurrences and central bank decisions. In general terms, we do not observe any change in the emission of communication from the ECB in these nine years since EMU. Figure A2 in the Appendix shows the distribution of all communication events in the considered period and, as we can see, the number of communication events is broadly stable for the President, Vice-President and other members of the Executive Board. But when we analyse the connection between ECB Governing Council meetings where interest rate changes were decided with the frequency of occurrences and their type, then some interesting facts appear. Focusing on the occasions were the ECB decided to change interest rates for the euro-area (the "relevant dates") and in the period under analysis, we have 23 such occasions. Considering a time window around those occassions, Table 4 shows the distribution of statements on the 7 days before and after the ECB's policy decision.

[16] Also 65 speeches or interviews are not translated in English..

Table 4: Frequency of communication around policy rate decisions.

Relevant dates	President		Vice-President		Other Board Members	
	before	after	before	after	before	after
08-04-1999	0	0	0	0	0	4
04-11-1999	0	3	0	1	0	2
03-02-2000	0	0	0	0	0	2
17-03-2000	0	1	0	1	2	1
28-04-2000	0	0	0	1	1	3
08-06-2000	0	1	0	0	1	0
01-09-2000	0	2	0	0	1	1
05-10-2000	0	1	0	0	1	1
10-05-2001	0	1	0	0	1	2
30-08-2001	2	0	0	1	3	1
17-09-2001	2	0	0	0	1	2
08-11-2001	0	1	1	1	0	0
05-12-2002	1	0	0	0	2	2
06-03-2003	1	0	0	1	2	2
05-06-2003	1	3	0	1	0	1
01-12-2005	2	0	0	1	0	1
02-03-2006	1	0	0	0	4	1
08-06-2006	1	1	2	0	1	3
03-08-2006	0	0	0	0	0	0
05-10-2006	1	1	0	0	0	0
07-12-2006	0	0	1	1	4	1
08-03-2007	0	0	0	0	0	2
06-06-2007	3	2	1	1	1	0

Source: ECB website

From Table 4 we can infer that there is a clear difference between the Duisenberg and Trichet periods. Since Trichet begun his Presidency in November 2003 we observe an increase in communication in the days before policy meetings where interest rate changes will be decided. On the contrary, in the Duisenberg period, in the days immediately prior to the policy meetings there is a considerably smaller amount of communication compared to other days and the intensity of communication is different before meetings than after meetings. Ehrmann and Fratzscher (2004, p. 11), also analysed these patterns of communication, concluding that with the exception of the days surronding the monetary policy meetings, there is generally a higher level of activity before than after the meeting, which can signal the attempt of the ECB to prepare markets for the upcoming meeting, at least in the Trichet period.

Now we perform this analysis considering the connection between policy meetings with interest rate changes with the occurrences already identified in this section. Table 5 presents our results, where we can confirm that almost all of the expressed concerns about house prices and its risks over price stability occur outside the time window around ECB relevant meetings. Nevertheless, around the last relevant dates we observe a increase of occurrences which coincides with the general increase in references to house prices and their implications.

Table 5: Frequency of occurrences around policy rate decisions.

Relevant dates	President	Vice-President	Other Board Members
08-04-1999	0	0	4
04-11-1999	0	0	1
03-02-2000	0	0	0
17-03-2000	0	0	0
28-04-2000	0	0	0
08-06-2000	0	0	0
01-09-2000	0	0	0
05-10-2000	0	0	0
10-05-2001	0	0	0
30-08-2001	0	0	0
17-09-2001	0	0	0
08-11-2001	0	0	0
05-12-2002	0	0	0
06-03-2003	0	0	0
05-06-2003	0	0	0
01-12-2005	1	1	1
02-03-2006	0	0	1
08-06-2006	0	1	0
03-08-2006	0	0	0
05-10-2006	1	0	0
07-12-2006	0	1	1
08-03-2007	0	0	0
06-06-2007	0	1	0

Source: ECB website

In summary, we observe an increase in ECB references to house price behaviour and their implications over the conduct of monetary policy, adding strenght to an intervention by the ECB. We can say that this conclusion is in line with the general conclusion of an increasing concern from the ECB with the housing prices behaviour in the last two or three years.

5. Conclusions

With the rising importance of transparency in monetary policy making, central banks have started focusing increasingly on communication as a key tool to improve the effectiveness of monetary policy. This paper has analysed communication emanating from the ECB since the creation of EMU, and focused its attention on housing markets trying to assess whether communication showed any concern with the behaviour of those asset prices.

Concerning housing prices, we can say that the ECB behaviour was characterised by a riding of the house price wave, that is, the ECB awaked to the increase in house prices rather late but then showed a great concern with its behaviour. From 2005 to 2007 we identified a large number of occasions where the members of the Executive Commission showed their concerns with housing prices in the euro area as a whole, as implying the need for an appropriate answer from the ECB. We argue that, at least in terms of communication, that kind of behaviour is rather different from the one observed before the equity markets bubble collapse in 2000/2001. We believe that in the

roots of the monetary policy-tightening period that we are now abandoning lies a specific concern from the ECB with the formation of a bubble in real estate markets. Since the latest data show a slower increase in house prices, we expect that "house prices" references in ECB communication will start to diminish and that will be accompanied by the end of interest rate increases.

We are aware that these conclusions open several interesting avenues for future research that deserve a more careful analysis and assessment. Namely, the question of which was the effective contribution of ECB "softly words" to a progressive reduction in house prices remains unanswered.

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APPENDIX

Table A1. Documents analysed, year and source

	Press Conferences	Speeches and Interviews		Monthly Bulletins (Editorial)
		President and Vice-president of the Executive Commission	Other members of the Executive Commission	
2007	12	62	69	12
2006	12	47	64	12
2005	11	56	53	12
2004	11	58	44	12
2003	13	28	44	12
2002	11	25	41	12
2001	11	40	38	12
2000	13	34	43	12
1999	11	53	56	12
Total	105	403	452	108

Note: Information taken from the ECB site.

Figure A1. ECB rates

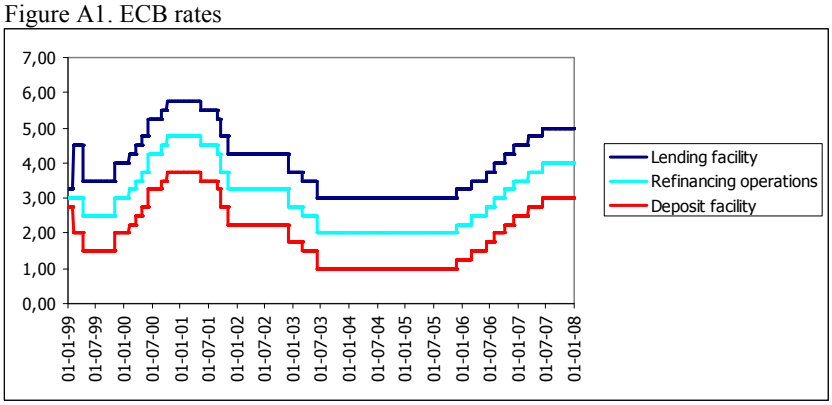


Table A2. Dates of policy rate changes

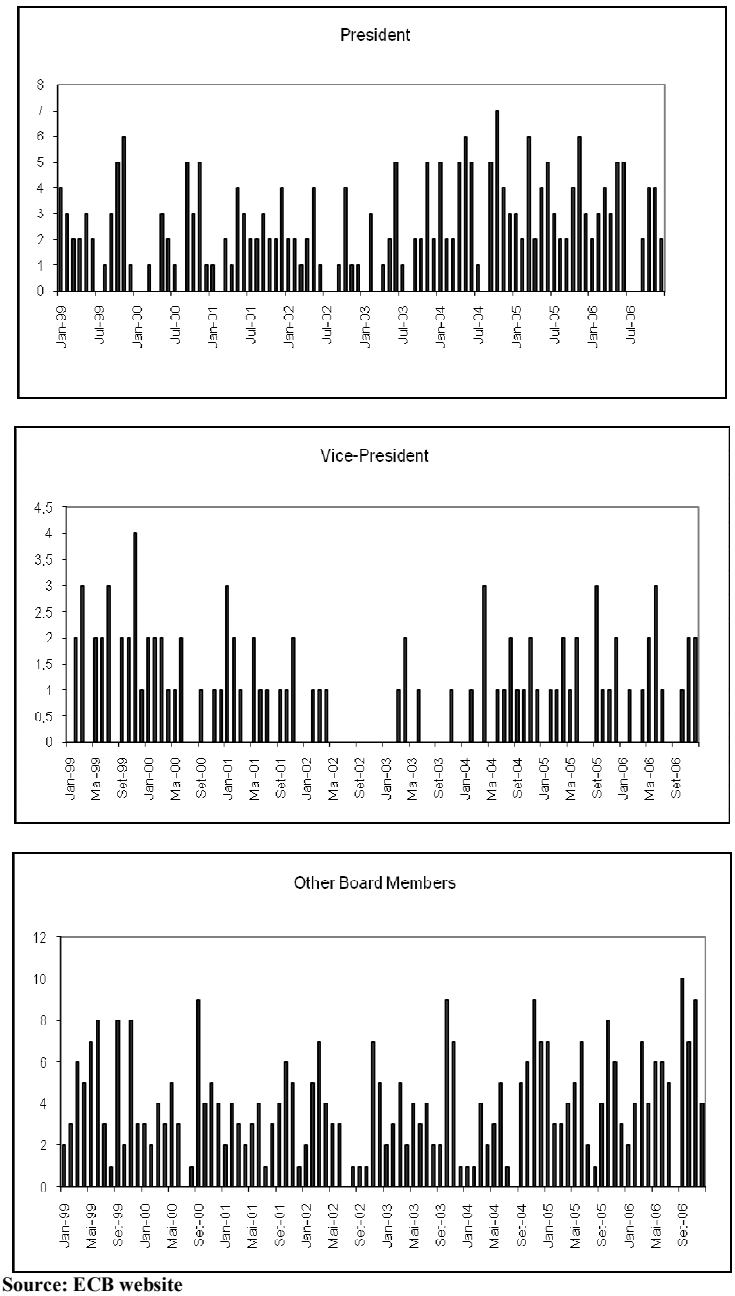
Year	Date	Year	Date	Year	Date
2007	June, 6	2003	June, 5	2000	October, 5
	March, 8		March, 6		September, 1
					June, 8
2006	December, 7	2002	December, 5		April, 28
	October, 5				March, 17
	August, 3				February, 2
	June, 8	2001	November, 8		
	March, 2		September, 17		
			August, 30	1999	November, 4
2005	December, 1		May, 5		April, 8

Note: Information taken from the ECB site.

Table A3. Changes in repo rate: January 1999 – December 2007

	Small Change (0.25%)	Large Change (0.50%)	Subtotal
Increases	13	2	15
Cuts	3	5	8
Subtotal			Total: 23

Figure A2. Number of communication events (speeches and interviews per month, by source) January 1999 – December 2007.



Source: ECB website

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